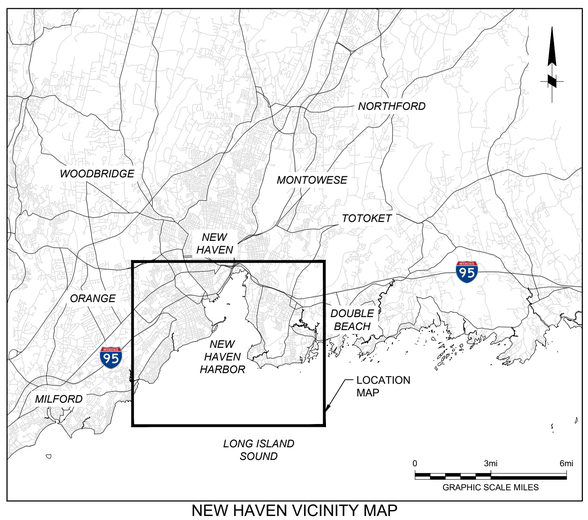
APPENDIX D: Plan View Drawings and Geologic Cross Sections

SUBSURFACE EXPLORATION

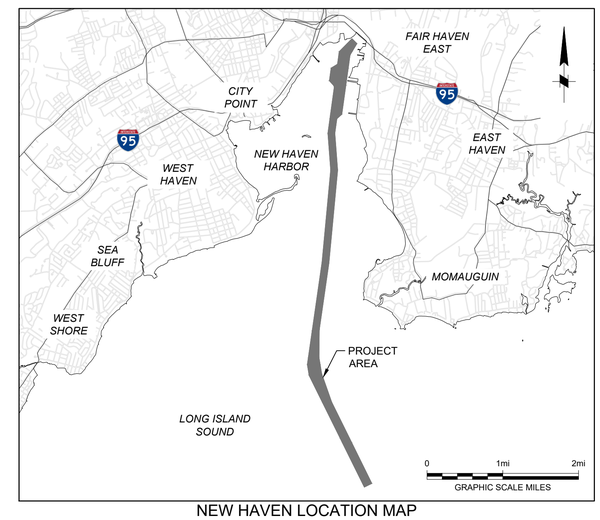
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

TASK ORDER NO. W912WJ24F0024
CONTRACT NO. W912DS22D0017



NEW HAVEN VICINITY MAP

INDEX OF DRAWINGS			
PLATE	TYPE	TITLE	SHEET NO.
1	PLAN	TITLE SHEET	G-001
2	PLAN	PROJECT LOCATION MAP	G-002
3 TO 8	PLAN	GEOPHYSICAL TRACKLINES	P-001 TO P-006
9 TO 14	PLAN	GEOTECHNICAL CORE LOCATIONS	P-007 TO P-012
15	PLAN	ROCK CORE RESULTS SUMMARY PLAN VIEW	P-013
16 TO 21	PLAN	SOIL BORING RESULTS SUMMARY PLAN VIEW	P-014 TO P-019
22	PLAN	SOLID: TOP OF ROCK FOOTPRINT DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -40 MLLW	P-020
23	PLAN	SOLID: TOP OF ROCK FOOTPRINT DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -42 MLLW	P-021
24	PLAN	SOLID: TOP OF ROCK FOOTPRINT DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -44 MLLW	P-022
25	PLAN	LINKS: TOP OF ROCK FOOTPRINT DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -44 MLLW	P-023
26 TO 28	PLAN	TOP OF ROCK CONTOURS	P-024 TO P-026
29 TO 61	SECTIONS	CHANNEL GEOLOGIC CROSS SECTIONS STA. 0+00 TO 64+50	S-001 TO S-033
62 TO 110	SECTIONS	CHANNEL GEOLOGIC CROSS SECTIONS STA. 65+00 TO 113+25 (ROCK AREA)	S-034 TO S-082
111 TO 218	SECTIONS	CHANNEL GEOLOGIC CROSS SECTIONS STA. 113+50 TO 324+50	S-083 TO S-190
219	PLAN	CAD CELL GEOTECHNICAL BORING LOCATIONS	P-027
220	PROFILES	CAD CELL GEOLOGIC PROFILES	PR-001



NEW HAVEN LOCATION MAP

NOTES:

1. THESE DRAWINGS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THE INFORMATION PRESENTED IN THIS DRAWING SET REPRESENTS THE RESULTS OF GEOPHYSICAL SURVEYS COMPLETED MAY 14, 2024 AND A GEOTECHNICAL INVESTIGATION COMPLETED AUGUST 31, 2024, PERFORMED BY GAHAGAN & BRYANT ASSOCIATES, INC. (GBA), AND CAN ONLY BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. REUSE OF THIS INFORMATION BY CLIENT OR OTHERS BEYOND THE SPECIFIC SCOPE OF WORK FOR WHICH IT WAS ACQUIRED SHALL BE AT THE SOLE RISK OF THE USER AND WITHOUT LIABILITY TO GBA.
3. SOME INFORMATION PRESENTED IN THIS DRAWING SET ARE THE RESULTS OF GEOPHYSICAL INTERPRETATION AND ANALYSIS. INCLUSION OF REPRESENTATIONS OF THOSE INTERPRETATIONS AT A SPECIFIC LOCATION DOES NOT INDICATE OR SUGGEST THE ABSENCE OF HAZARDS, ANOMALIES, INFRASTRUCTURE, APPURTENANCES, AND OTHER OBJECTS ON OR BENEATH THE SEABED IN ANY OTHER LOCATION.
4. THESE DRAWINGS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE, INCLUDING CONTOURS AND FOOTPRINTS, IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. CONTOURS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX
SHEET 1 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCL
SIZE: ANSI 'D'
SCALE: AS SHOWN

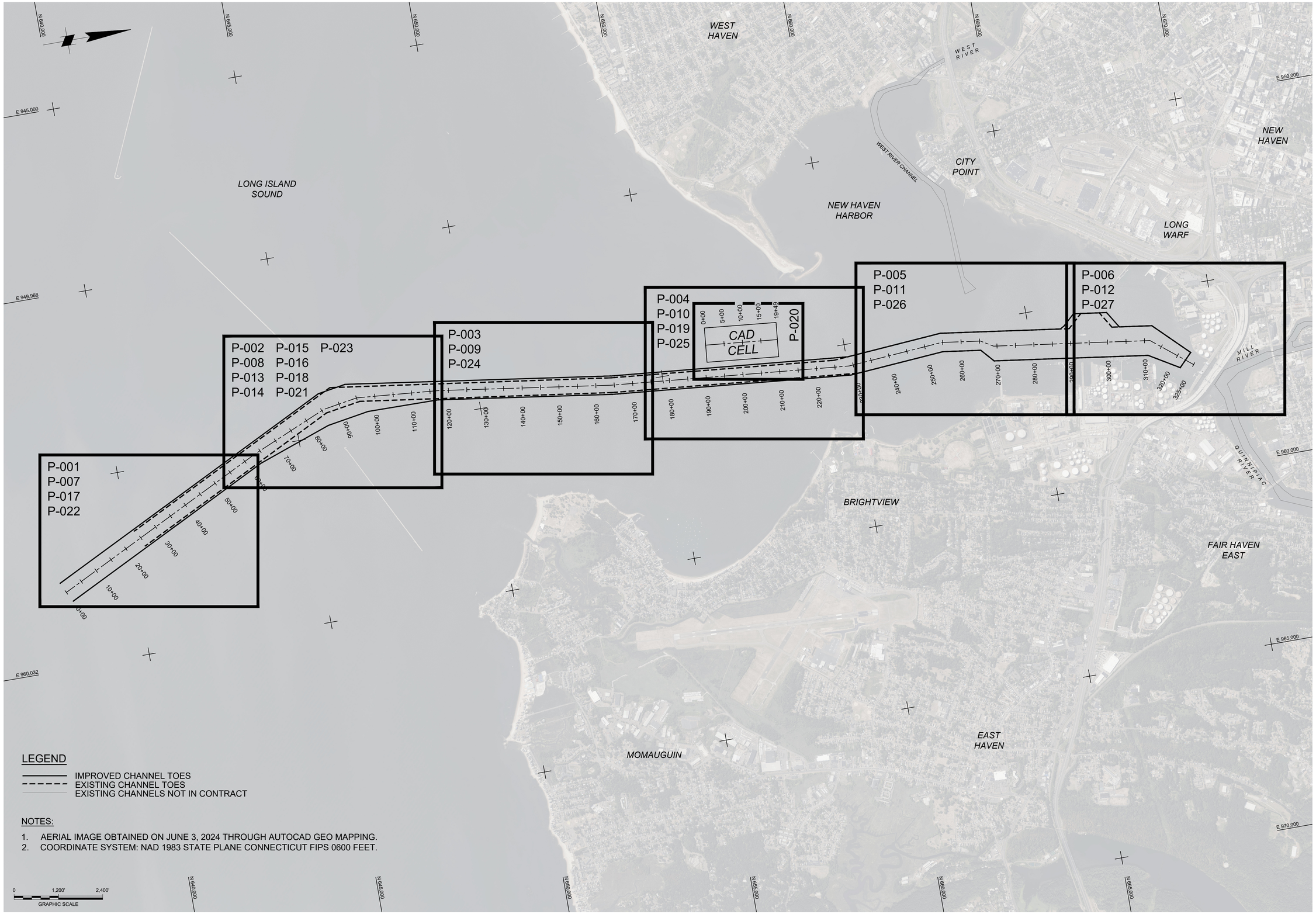
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 900B Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5565

PREPARED FOR: Coastal Partners

SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

TITLE SHEET

SHEET ID
G-001



LEGEND

- IMPROVED CHANNEL TOES
- EXISTING CHANNEL TOES
- EXISTING CHANNELS NOT IN CONTRACT

NOTES:

1. AERIAL IMAGE OBTAINED ON JUNE 3, 2024 THROUGH AUTOCAD GEO MAPPING.
2. COORDINATE SYSTEM: NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET.

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX-XX
SHEET 2 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOUG
SIZE: ANSI D
SCALE: AS SHOWN

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Suite F
Baltimore, MD 21237
Phone (410) 682-5595

PREPARED FOR:
Coastal Partners

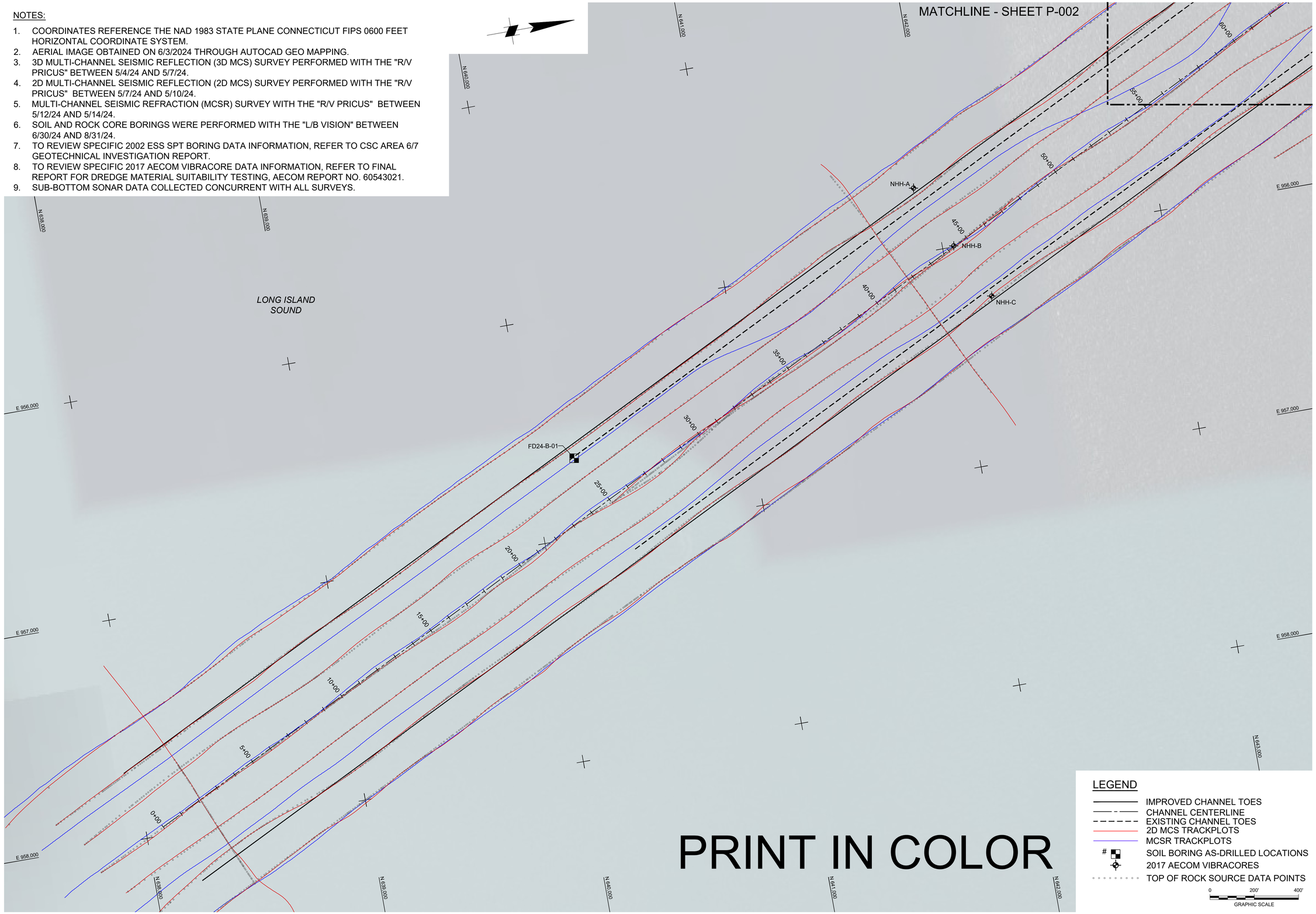
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

PROJECT LOCATION MAP

SHEET ID
G-002

NOTES:

1. COORDINATES REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
2. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
3. 3D MULTI-CHANNEL SEISMIC REFLECTION (3D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/4/24 AND 5/7/24.
4. 2D MULTI-CHANNEL SEISMIC REFLECTION (2D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/7/24 AND 5/10/24.
5. MULTI-CHANNEL SEISMIC REFRACTION (MCSR) SURVEY WITH THE "R/V PRICUS" BETWEEN 5/12/24 AND 5/14/24.
6. SOIL AND ROCK CORE BORINGS WERE PERFORMED WITH THE "L/B VISION" BETWEEN 6/30/24 AND 8/31/24.
7. TO REVIEW SPECIFIC 2002 ESS SPT BORING DATA INFORMATION, REFER TO CSC AREA 6/7 GEOTECHNICAL INVESTIGATION REPORT.
8. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
9. SUB-BOTTOM SONAR DATA COLLECTED CONCURRENT WITH ALL SURVEYS.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCJ
SIZE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX
SHEET 3 OF 220
SCALE: AS SHOWN

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
6008 Yellow Brick Rd.
Suite C
Baltimore, MD 21237
Phone (410) 882-5595

PREPARED FOR:
Capital Partners
Construction Management

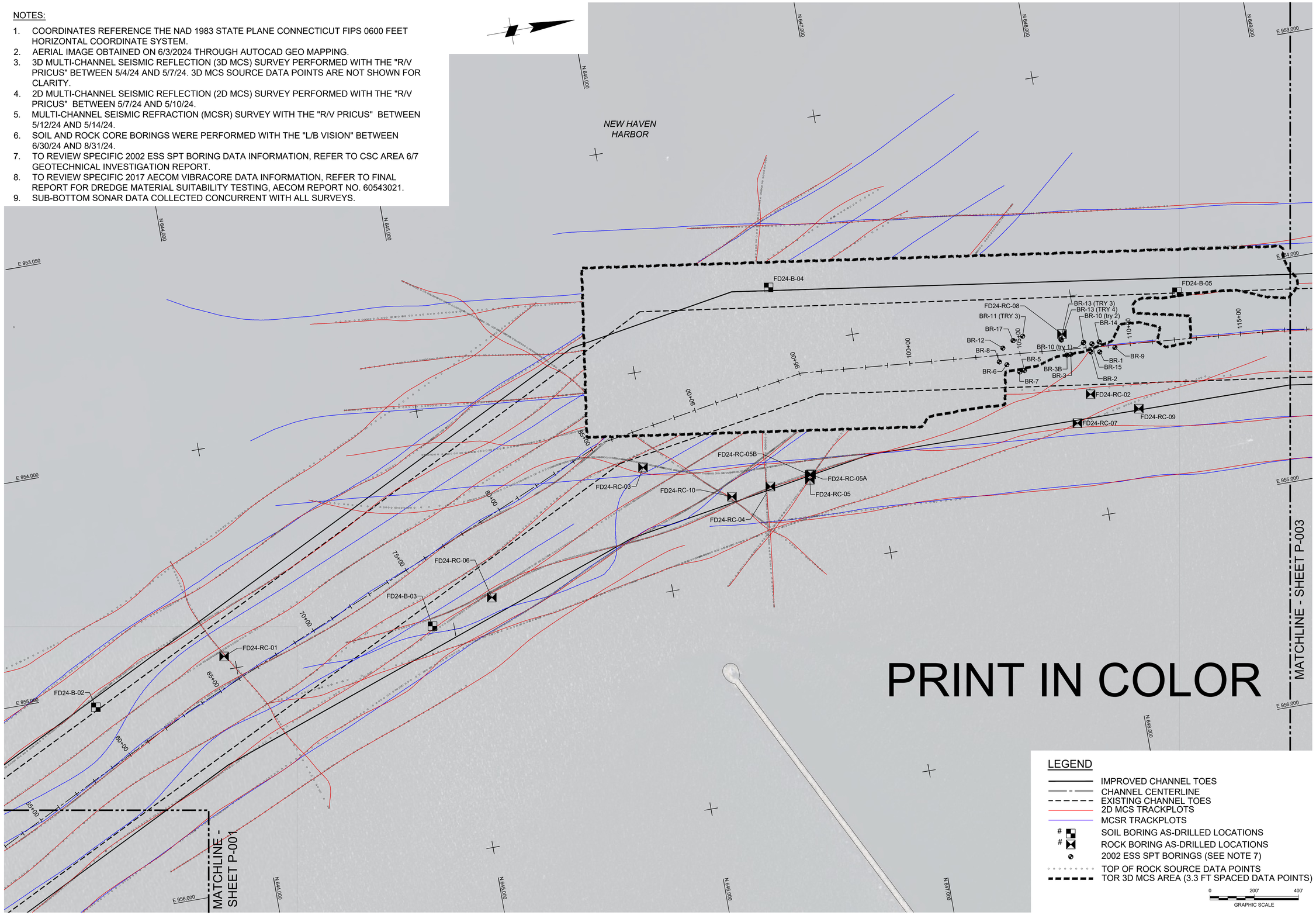
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOPHYSICAL TRACKLINES

SHEET ID
P-001

NOTES:

1. COORDINATES REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
2. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
3. 3D MULTI-CHANNEL SEISMIC REFLECTION (3D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/4/24 AND 5/7/24. 3D MCS SOURCE DATA POINTS ARE NOT SHOWN FOR CLARITY.
4. 2D MULTI-CHANNEL SEISMIC REFLECTION (2D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/7/24 AND 5/10/24.
5. MULTI-CHANNEL SEISMIC REFRACTION (MCSR) SURVEY WITH THE "R/V PRICUS" BETWEEN 5/12/24 AND 5/14/24.
6. SOIL AND ROCK CORE BORINGS WERE PERFORMED WITH THE "L/B VISION" BETWEEN 6/30/24 AND 8/31/24.
7. TO REVIEW SPECIFIC 2002 ESS SPT BORING DATA INFORMATION, REFER TO CSC AREA 6/7 GEOTECHNICAL INVESTIGATION REPORT.
8. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
9. SUB-BOTTOM SONAR DATA COLLECTED CONCURRENT WITH ALL SURVEYS.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX
SHEET 4 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: VM
SUBMITTED BY: BJC
SIZE: ANSI D
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9005 Yellow Brick Rd. Unit 1, Baltimore, MD 21237, Phone (410) 882-5595

PREPARED FOR: Gardiner Geo-Technical Consultants

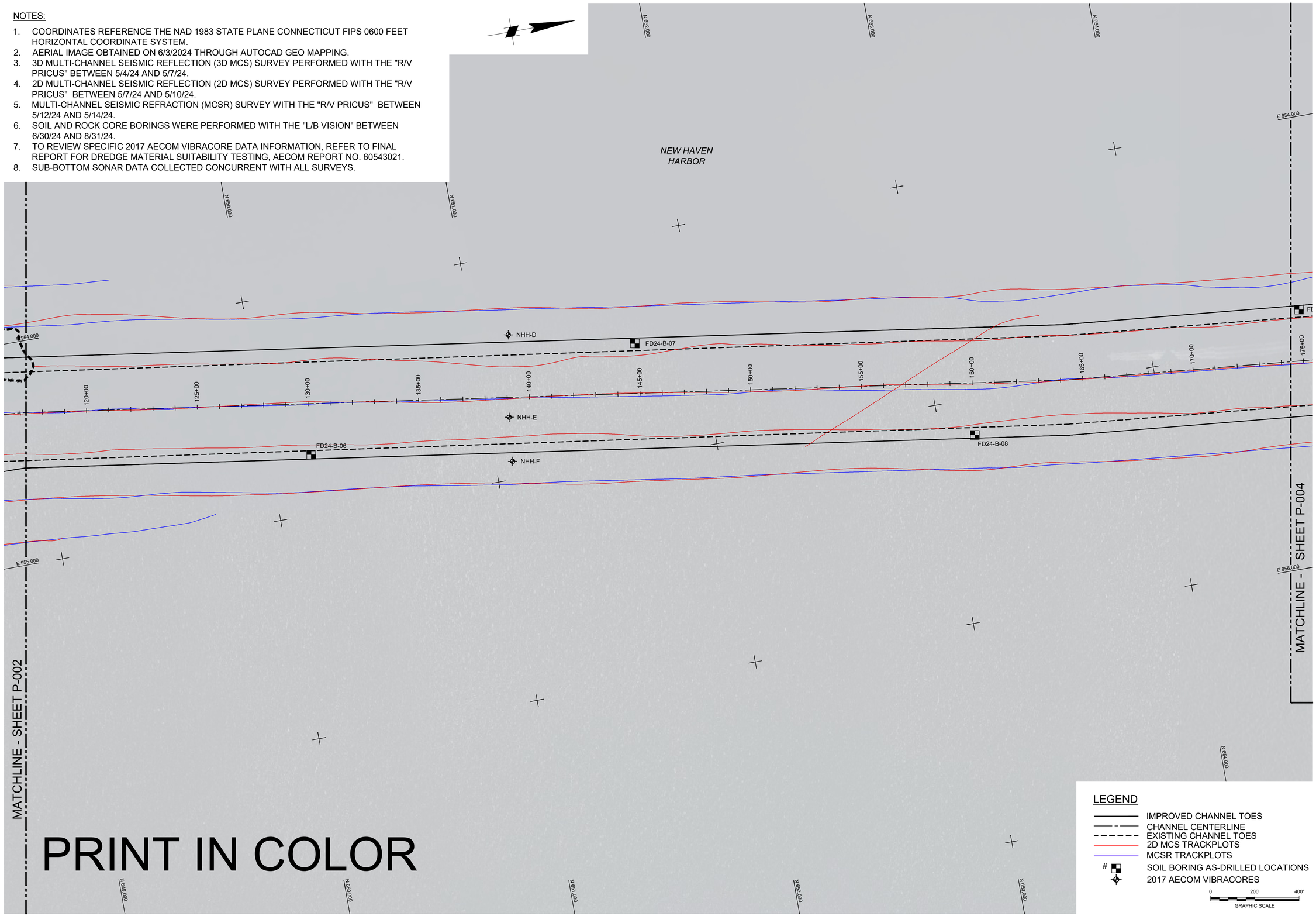
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOPHYSICAL TRACKLINES

SHEET ID
P-002

NOTES:

1. COORDINATES REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
2. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
3. 3D MULTI-CHANNEL SEISMIC REFLECTION (3D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/4/24 AND 5/7/24.
4. 2D MULTI-CHANNEL SEISMIC REFLECTION (2D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/7/24 AND 5/10/24.
5. MULTI-CHANNEL SEISMIC REFRACTION (MCSR) SURVEY WITH THE "R/V PRICUS" BETWEEN 5/12/24 AND 5/14/24.
6. SOIL AND ROCK CORE BORINGS WERE PERFORMED WITH THE "L/B VISION" BETWEEN 6/30/24 AND 8/31/24.
7. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
8. SUB-BOTTOM SONAR DATA COLLECTED CONCURRENT WITH ALL SURVEYS.



PRINT IN COLOR

LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- 2D MCS TRACKPLOTS
- MCSR TRACKPLOTS
- # SOIL BORING AS-DRILLED LOCATIONS
- 2017 AECOM VIBRACORES

0 200' 400'
GRAPHIC SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX-XX
SHEET 5 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit 10
Baltimore, MD 21237
Phone (410) 882-5595

PREPARED FOR:
Coastal Partners
Science & Technology in Support of Planning

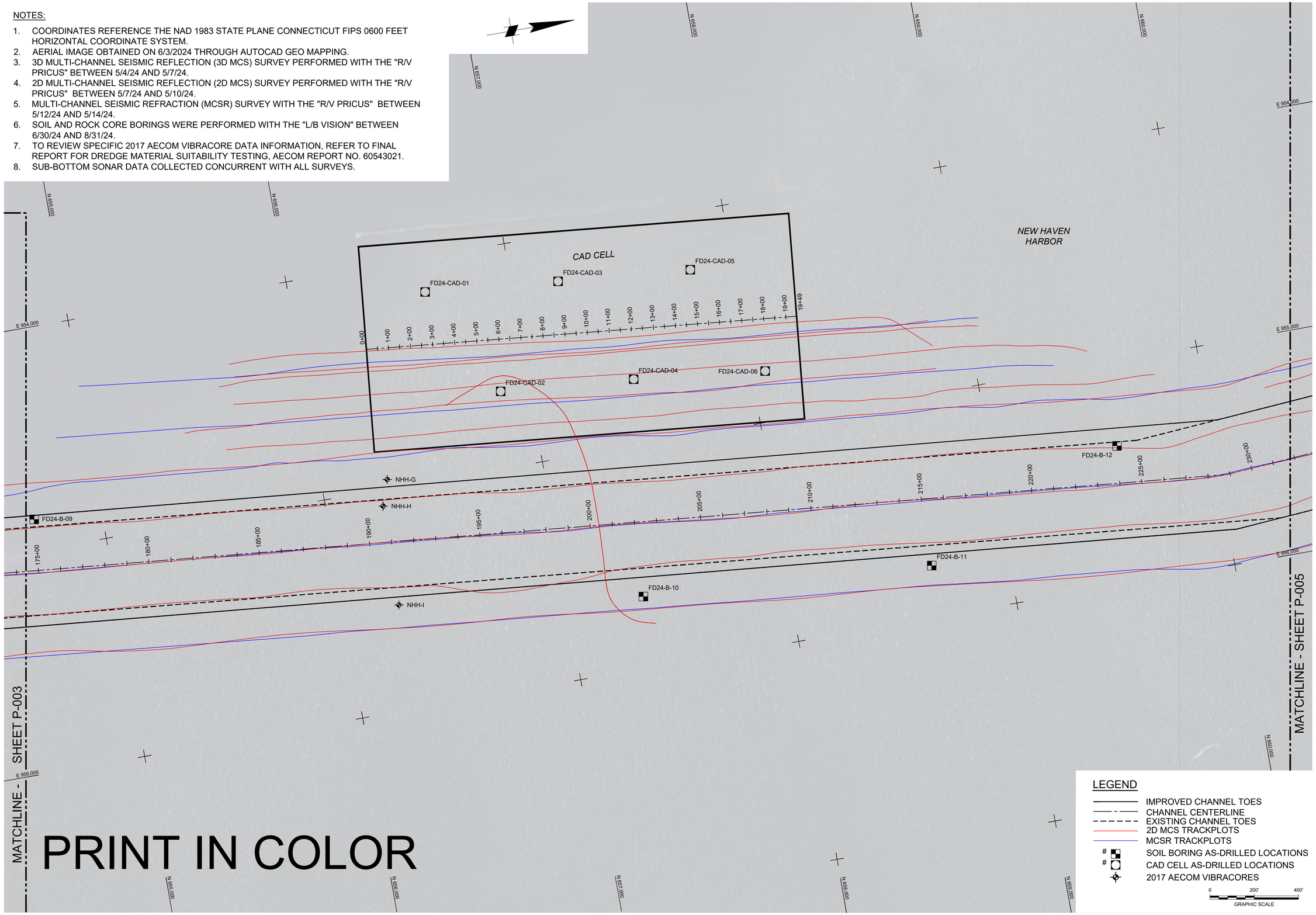
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOPHYSICAL TRACKLINES

SHEET ID
P-003

NOTES:

1. COORDINATES REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
2. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
3. 3D MULTI-CHANNEL SEISMIC REFLECTION (3D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/4/24 AND 5/7/24.
4. 2D MULTI-CHANNEL SEISMIC REFLECTION (2D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/7/24 AND 5/10/24.
5. MULTI-CHANNEL SEISMIC REFRACTION (MCSR) SURVEY WITH THE "R/V PRICUS" BETWEEN 5/12/24 AND 5/14/24.
6. SOIL AND ROCK CORE BORINGS WERE PERFORMED WITH THE "L/B VISION" BETWEEN 6/30/24 AND 8/31/24.
7. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
8. SUB-BOTTOM SONAR DATA COLLECTED CONCURRENT WITH ALL SURVEYS.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX-XX
SHEET 6 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCZ
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9003 Yellow Brick Rd. Suite D, Baltimore, MD 21237, Phone (410) 882-5595

PREPARED FOR: Coastal Science & Construction Research

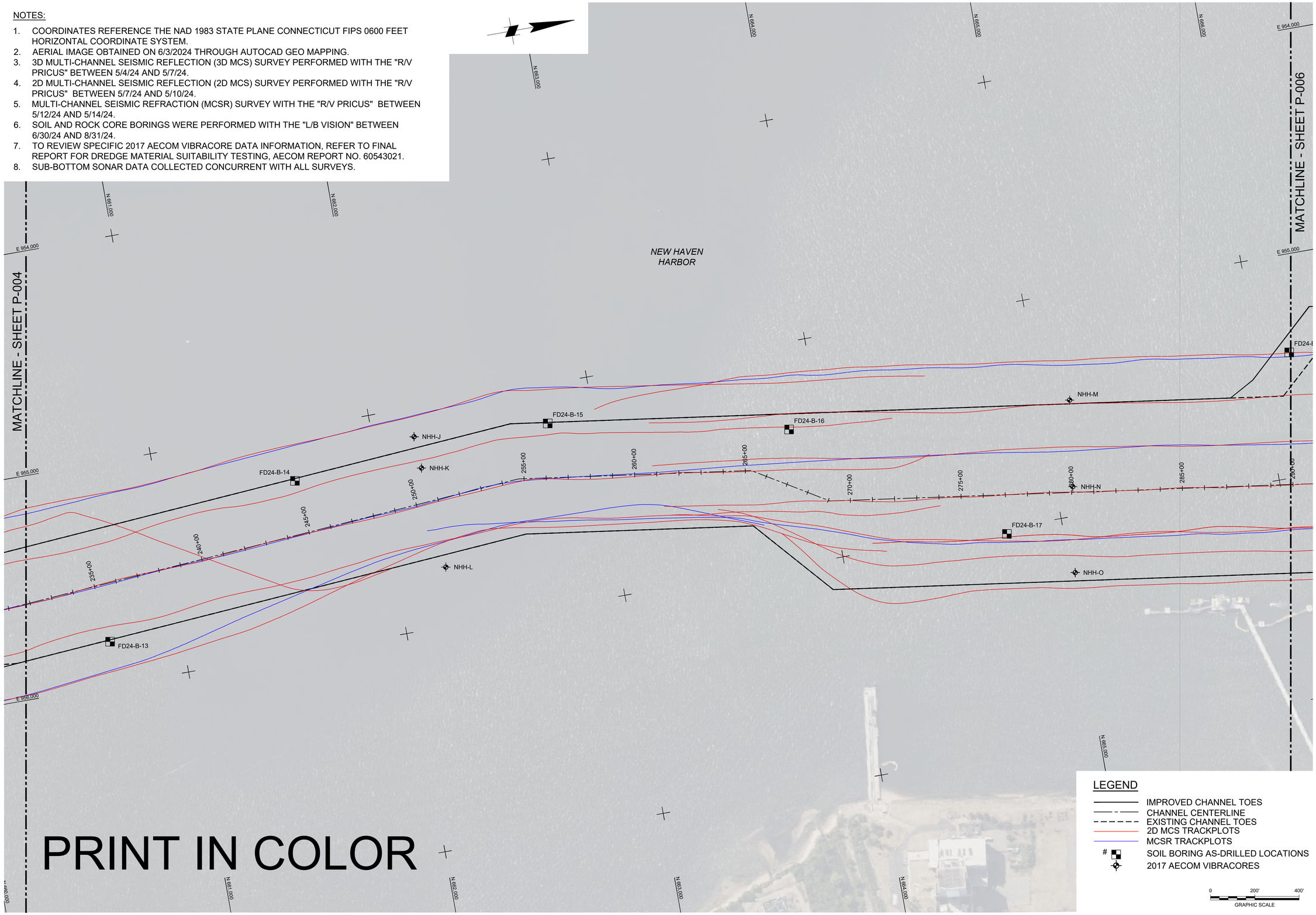
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOPHYSICAL TRACKLINES

SHEET ID
P-004

NOTES:

1. COORDINATES REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
2. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
3. 3D MULTI-CHANNEL SEISMIC REFLECTION (3D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/4/24 AND 5/7/24.
4. 2D MULTI-CHANNEL SEISMIC REFLECTION (2D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/7/24 AND 5/10/24.
5. MULTI-CHANNEL SEISMIC REFRACTION (MCSR) SURVEY WITH THE "R/V PRICUS" BETWEEN 5/12/24 AND 5/14/24.
6. SOIL AND ROCK CORE BORINGS WERE PERFORMED WITH THE "L/B VISION" BETWEEN 6/30/24 AND 8/31/24.
7. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
8. SUB-BOTTOM SONAR DATA COLLECTED CONCURRENT WITH ALL SURVEYS.



PRINT IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9003 Yellow Brick Rd. Suite C, Baltimore, MD 21237, Phone (410) 682-5595

PREPARED FOR: Coastal Science & Engineering

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOZ
DATE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWU24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX-XX
SHEET 7 OF 220
SCALE: AS SHOWN

SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

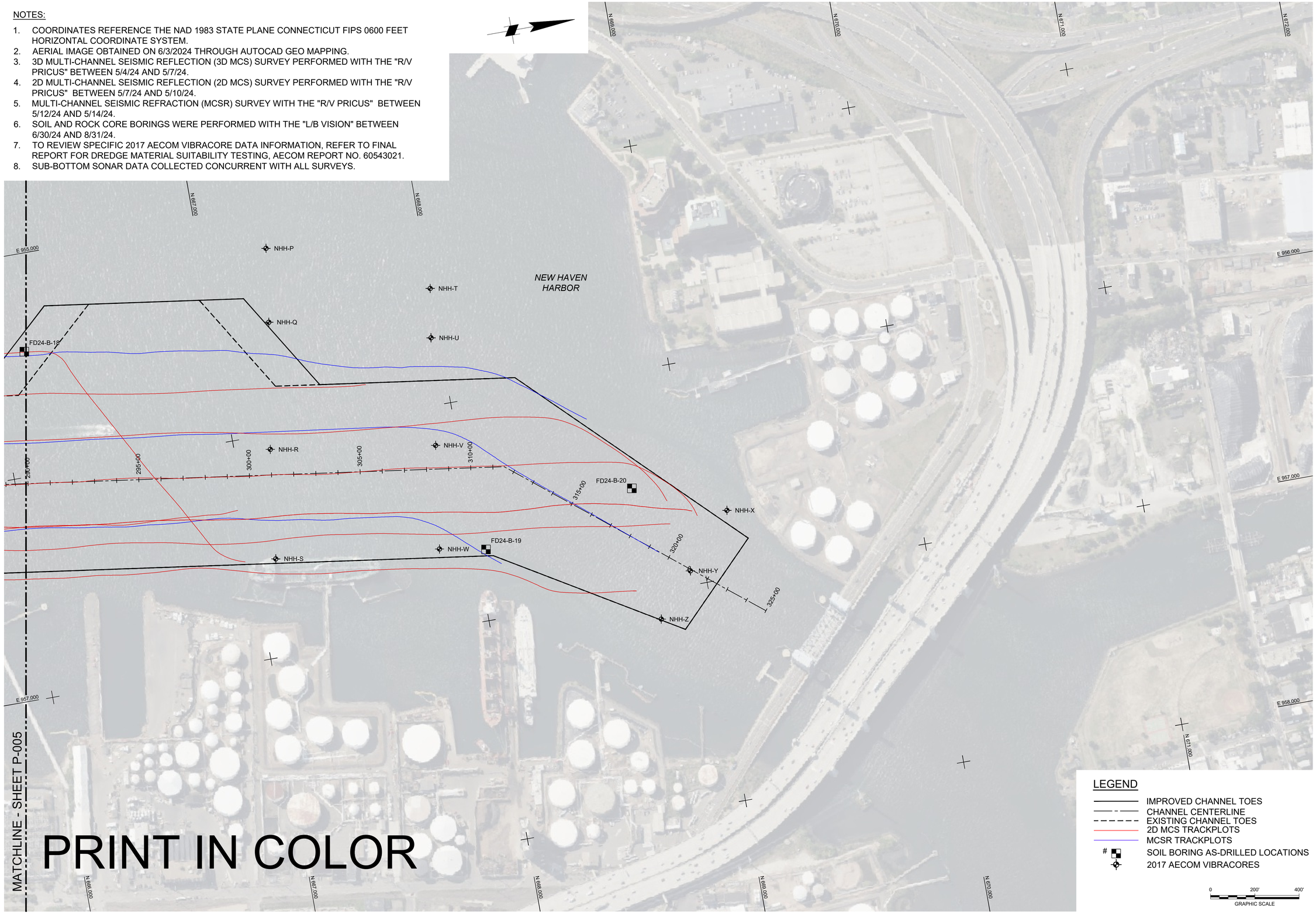
GEOPHYSICAL TRACKLINES

SHEET ID

P-005

NOTES:

1. COORDINATES REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
2. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
3. 3D MULTI-CHANNEL SEISMIC REFLECTION (3D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/4/24 AND 5/7/24.
4. 2D MULTI-CHANNEL SEISMIC REFLECTION (2D MCS) SURVEY PERFORMED WITH THE "R/V PRICUS" BETWEEN 5/7/24 AND 5/10/24.
5. MULTI-CHANNEL SEISMIC REFRACTION (MCSR) SURVEY WITH THE "R/V PRICUS" BETWEEN 5/12/24 AND 5/14/24.
6. SOIL AND ROCK CORE BORINGS WERE PERFORMED WITH THE "L/B VISION" BETWEEN 6/30/24 AND 8/31/24.
7. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
8. SUB-BOTTOM SONAR DATA COLLECTED CONCURRENT WITH ALL SURVEYS.



PRINT IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IV-24-F-0024
CONTRACT NO.: W912DS-22-D-0017
DRAWING CODE: XXX-XXX-XX
SHEET 8 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCL
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit C Baltimore, MD 21237 Phone (410) 882-5595

PREPARED FOR: Coastal Partners Connecting People to Coastal Water

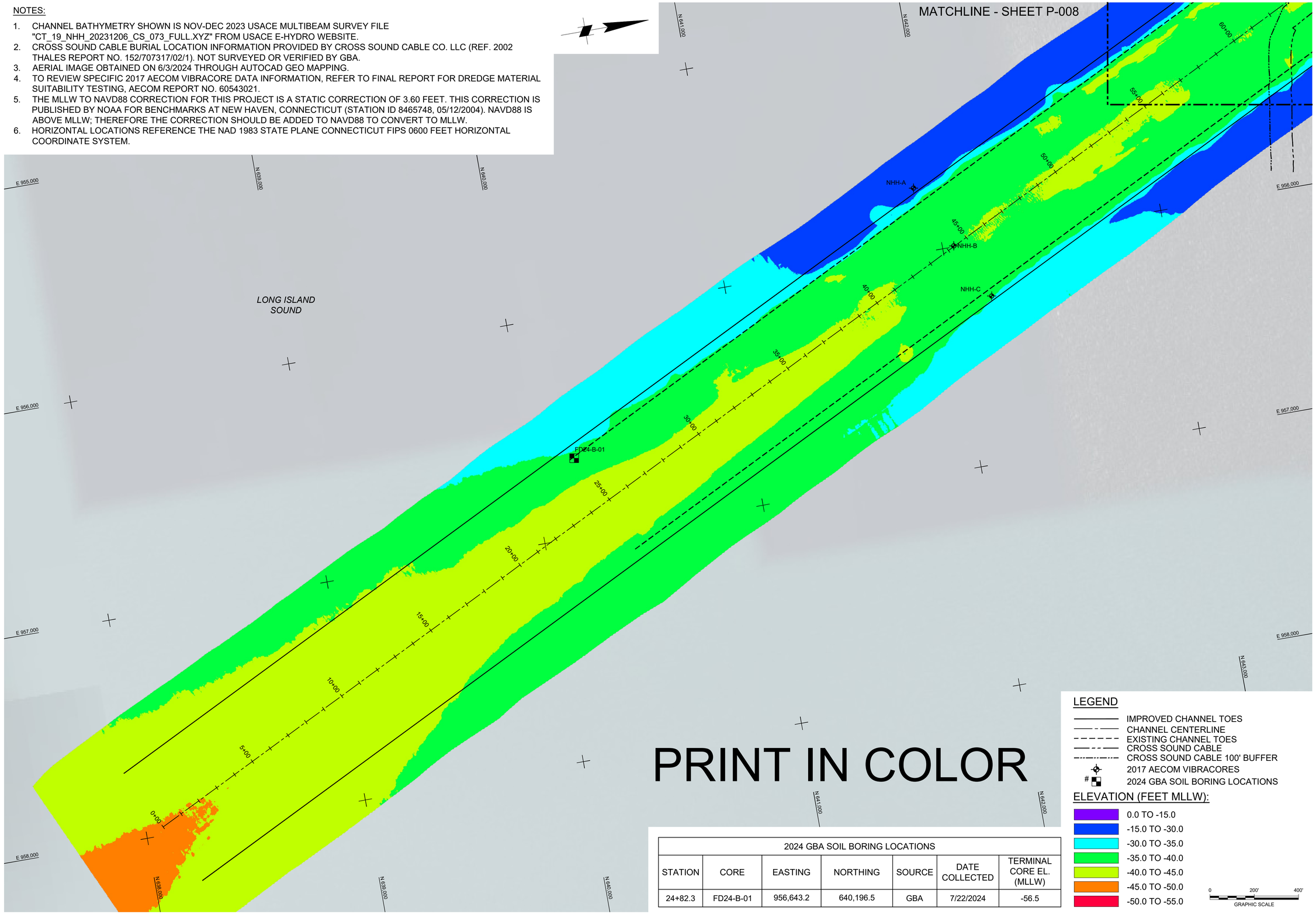
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOPHYSICAL TRACKLINES

SHEET ID
P-006

NOTES:

1. CHANNEL BATHYMETRY SHOWN IS NOV-DEC 2023 USACE MULTIBEAM SURVEY FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM USACE E-HYDRO WEBSITE.
2. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BY CROSS SOUND CABLE CO. LLC (REF. 2002 THALES REPORT NO. 152/707317/02/1). NOT SURVEYED OR VERIFIED BY GBA.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
5. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
6. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



PRINT IN COLOR

2024 GBA SOIL BORING LOCATIONS						
STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE EL. (MLLW)
24+82.3	FD24-B-01	956,643.2	640,196.5	GBA	7/22/2024	-56.5

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: DCU
SHEET 9 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit 1
Baltimore, MD 21237
Phone (410) 682-3595

PREPARED FOR:
Gardiner Thomas Consultants, Inc.

SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOTECHNICAL CORE LOCATIONS

SHEET ID
P-007

NOTES:

1. CHANNEL BATHYMETRY SHOWN IS NOV-DEC 2023 USACE MULTIBEAM SURVEY FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM USACE E-HYDRO WEBSITE.
2. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BY CROSS SOUND CABLE CO. LLC (REF. 2002 THALES REPORT NO. 152/707317/02/1). NOT SURVEYED OR VERIFIED BY GBA.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
6. TO REVIEW SPECIFIC 2002 ESS SPT BORING DATA INFORMATION, REFER TO CSC AREA 6/7 GEOTECHNICAL INVESTIGATION REPORT.

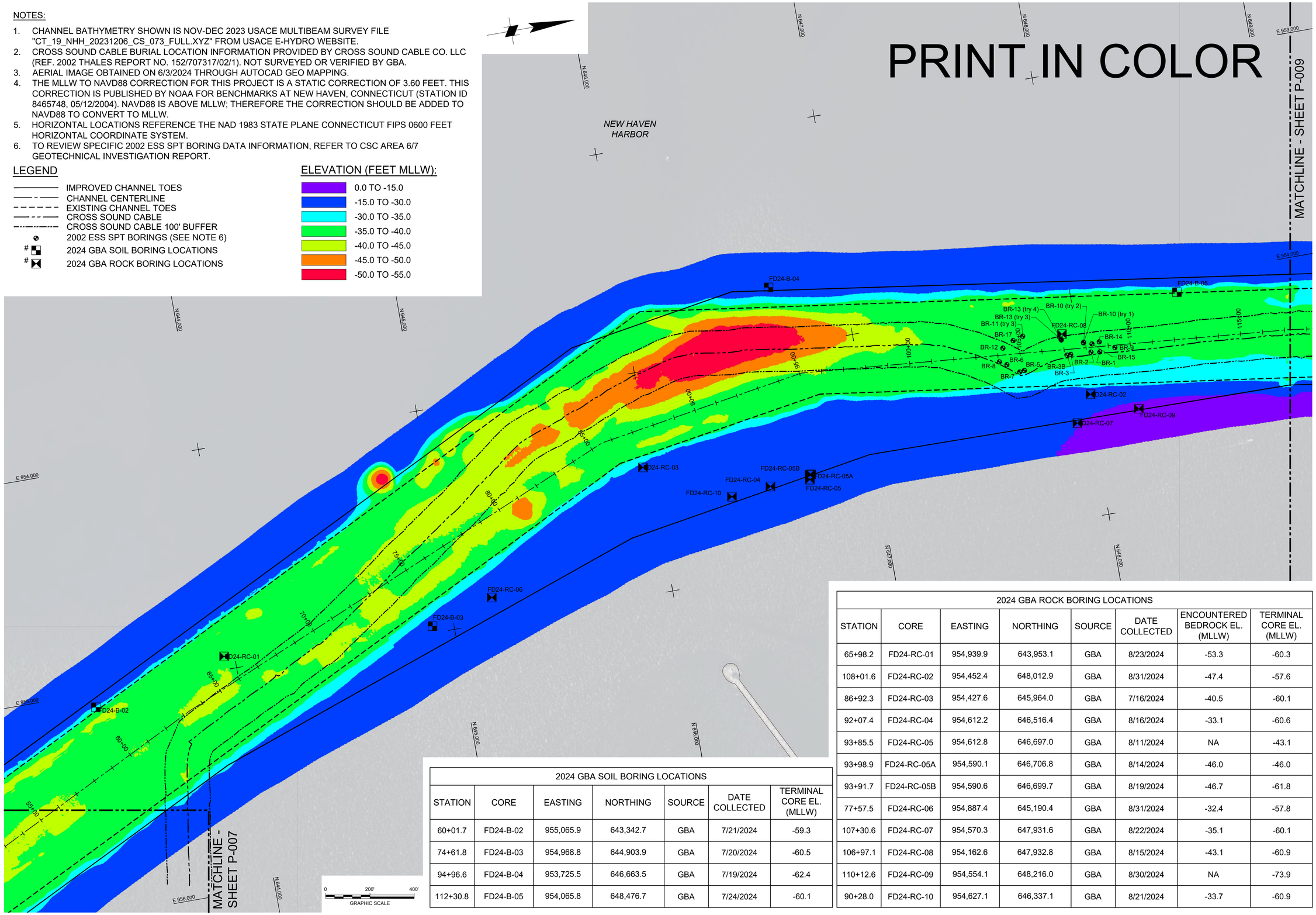
LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- CROSS SOUND CABLE
- CROSS SOUND CABLE 100' BUFFER
- 2002 ESS SPT BORINGS (SEE NOTE 6)
- # 2024 GBA SOIL BORING LOCATIONS
- # 2024 GBA ROCK BORING LOCATIONS

ELEVATION (FEET MLLW):

- 0.0 TO -15.0
- -15.0 TO -30.0
- -30.0 TO -35.0
- -35.0 TO -40.0
- -40.0 TO -45.0
- -45.0 TO -50.0
- -50.0 TO -55.0

PRINT IN COLOR



2024 GBA SOIL BORING LOCATIONS

STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE EL. (MLLW)
60+01.7	FD24-B-02	955,065.9	643,342.7	GBA	7/21/2024	-59.3
74+61.8	FD24-B-03	954,968.8	644,903.9	GBA	7/20/2024	-60.5
94+96.6	FD24-B-04	953,725.5	646,663.5	GBA	7/19/2024	-62.4
112+30.8	FD24-B-05	954,065.8	648,476.7	GBA	7/24/2024	-60.1

2024 GBA ROCK BORING LOCATIONS

STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	ENCOUNTERED BEDROCK EL. (MLLW)	TERMINAL CORE EL. (MLLW)
65+98.2	FD24-RC-01	954,939.9	643,953.1	GBA	8/23/2024	-53.3	-60.3
108+01.6	FD24-RC-02	954,452.4	648,012.9	GBA	8/31/2024	-47.4	-57.6
86+92.3	FD24-RC-03	954,427.6	645,964.0	GBA	7/16/2024	-40.5	-60.1
92+07.4	FD24-RC-04	954,612.2	646,516.4	GBA	8/16/2024	-33.1	-60.6
93+85.5	FD24-RC-05	954,612.8	646,697.0	GBA	8/11/2024	NA	-43.1
93+98.9	FD24-RC-05A	954,590.1	646,706.8	GBA	8/14/2024	-46.0	-46.0
93+91.7	FD24-RC-05B	954,590.6	646,699.7	GBA	8/19/2024	-46.7	-61.8
77+57.5	FD24-RC-06	954,887.4	645,190.4	GBA	8/31/2024	-32.4	-57.8
107+30.6	FD24-RC-07	954,570.3	647,931.6	GBA	8/22/2024	-35.1	-60.1
106+97.1	FD24-RC-08	954,162.6	647,932.8	GBA	8/15/2024	-43.1	-60.9
110+12.6	FD24-RC-09	954,554.1	648,216.0	GBA	8/30/2024	NA	-73.9
90+28.0	FD24-RC-10	954,627.1	646,337.1	GBA	8/21/2024	-33.7	-60.9

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912IWJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: DCU
SUBMITTED BY: DCU
SHEET 10 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9003 Yellow Brick Rd. Unit 1, Baltimore, MD 21237, Phone (410) 882-5595

PREPARED FOR: Geotechnical Consultants

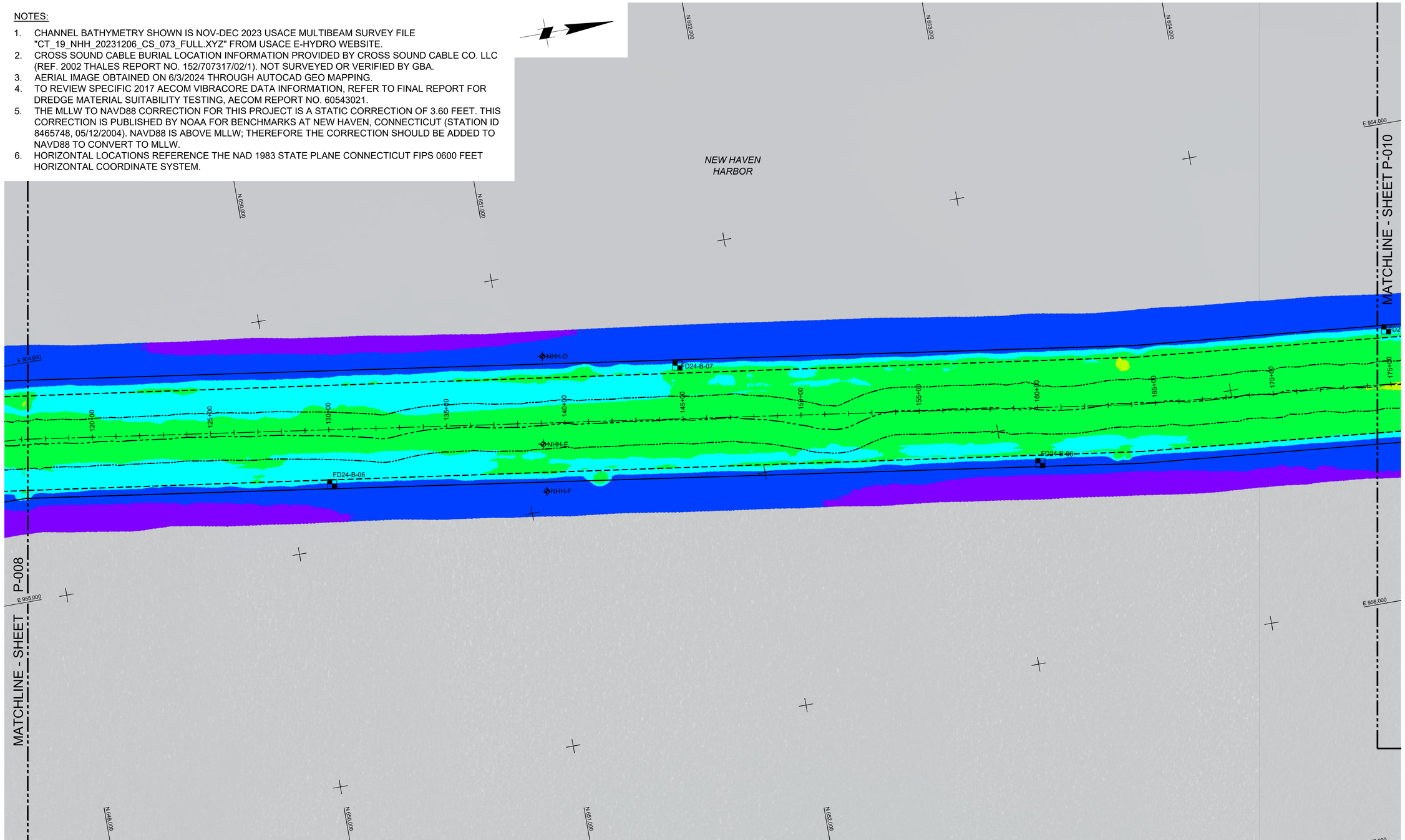
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOTECHNICAL CORE LOCATIONS

SHEET ID
P-008

NOTES:

1. CHANNEL BATHYMETRY SHOWN IS NOV-DEC 2023 USACE MULTIBEAM SURVEY FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM USACE E-HYDRO WEBSITE.
2. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BY CROSS SOUND CABLE CO. LLC (REF. 2002 THALES REPORT NO. 152/707317/02/1). NOT SURVEYED OR VERIFIED BY GBA.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
5. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
6. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



2024 GBA SOIL BORING LOCATIONS						
STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE EL. (MLLW)
130+07.5	FD24-B-06	954,731.2	650,187.6	GBA	8/10/2024	-49.1
144+83.4	FD24-B-07	954,490.3	651,713.3	GBA	7/10/2024	-60.5
160+04.9	FD24-B-08	955,163.2	653,153.8	GBA	7/23/2024	-69.2

LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- CROSS SOUND CABLE
- CROSS SOUND CABLE 100' BUFFER
- 2017 AECOM VIBRACORES
- # 2024 GBA SOIL BORING LOCATIONS

0 200' 400'
GRAPHIC SCALE

ELEVATION (FEET MLLW):

- 0.0 TO -15.0
- -15.0 TO -30.0
- -30.0 TO -35.0
- -35.0 TO -40.0
- -40.0 TO -45.0
- -45.0 TO -50.0
- -50.0 TO -55.0

PRINT IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: DQU
SUBMITTED BY: DQU
SHEET 11 OF 220
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9005 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-8595

PREPARED FOR:
GeoTechnics

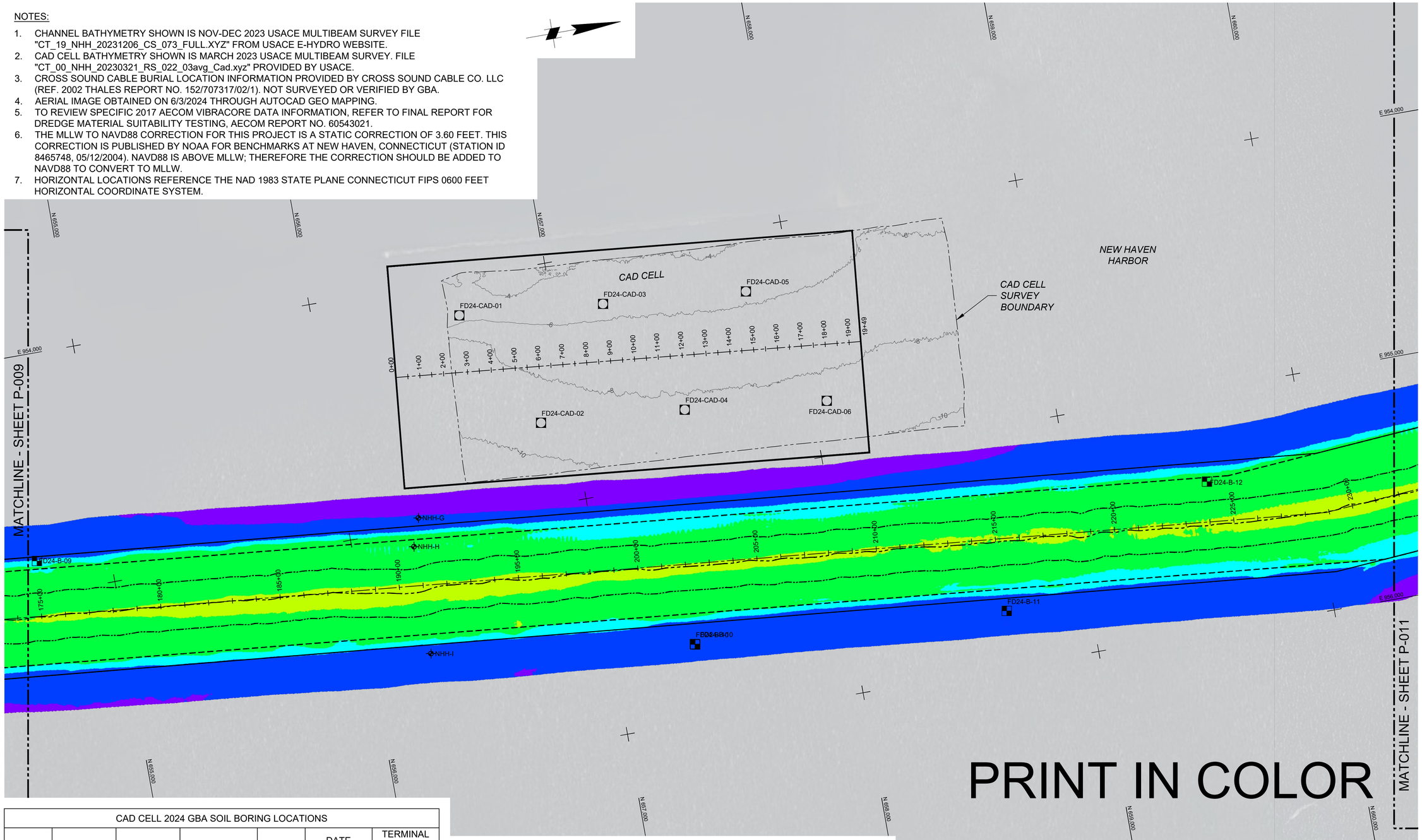
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOTECHNICAL CORE LOCATIONS

SHEET ID
P-009

NOTES:

1. CHANNEL BATHYMETRY SHOWN IS NOV-DEC 2023 USACE MULTIBEAM SURVEY FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM USACE E-HYDRO WEBSITE.
2. CAD CELL BATHYMETRY SHOWN IS MARCH 2023 USACE MULTIBEAM SURVEY. FILE "CT_00_NHH_20230321_RS_022_03avg_Cad.xyz" PROVIDED BY USACE.
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BY CROSS SOUND CABLE CO. LLC (REF. 2002 THALES REPORT NO. 152/707317/02/1). NOT SURVEYED OR VERIFIED BY GBA.
4. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
5. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
6. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
7. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



CAD CELL 2024 GBA SOIL BORING LOCATIONS						
STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE EL. (MLLW)
2+84.4	FD24-CAD-01	954,152.9	656,611.0	GBA	7/13/2024	-100.8
5+90.1	FD24-CAD-02	954,654.4	656,869.4	GBA	7/9/2024	-101.6
8+86.7	FD24-CAD-03	954,209.8	657,210.7	GBA	8/1/2024	-101.0
11+93.5	FD24-CAD-04	954,704.6	657,470.8	GBA	7/7/2024	-103.0
14+86.6	FD24-CAD-05	954,261.7	657,808.3	GBA	7/28/2024	-102.6
17+88.6	FD24-CAD-06	954,770.9	658,062.2	GBA	7/5/2024	-101.5

2024 GBA SOIL BORING LOCATIONS						
STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE EL. (MLLW)
174+98.6	FD24-B-09	954,858.9	654,693.6	GBA	7/12/2024	-60.7
202+13.8	FD24-B-10	955,679.3	657,343.8	GBA	7/11/2024	-60.0
215+23.1	FD24-B-11	955,766.9	658,650.7	GBA	7/3/2024	-59.9
224+00.7	FD24-B-12	955,379.1	659,568.5	GBA	7/25/2024	-60.4

LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- CROSS SOUND CABLE
- CROSS SOUND CABLE 100' BUFFER
- CAD CELL CONTOURS
- 2017 AECOM VIBRACORES
- 2024 GBA SOIL BORING LOCATIONS
- 2024 GBA CAD CELL BORING LOCATIONS

ELEVATION (FEET MLLW):

- 0.0 TO -15.0
- -15.0 TO -30.0
- -30.0 TO -35.0
- -35.0 TO -40.0
- -40.0 TO -45.0
- -45.0 TO -50.0
- -50.0 TO -55.0

0 200' 400'
GRAPHIC SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: DCU
SHEET 12 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Suite A Baltimore, MD 21237 Phone (410) 882-5565

PREPARED FOR: Cardinal Partners

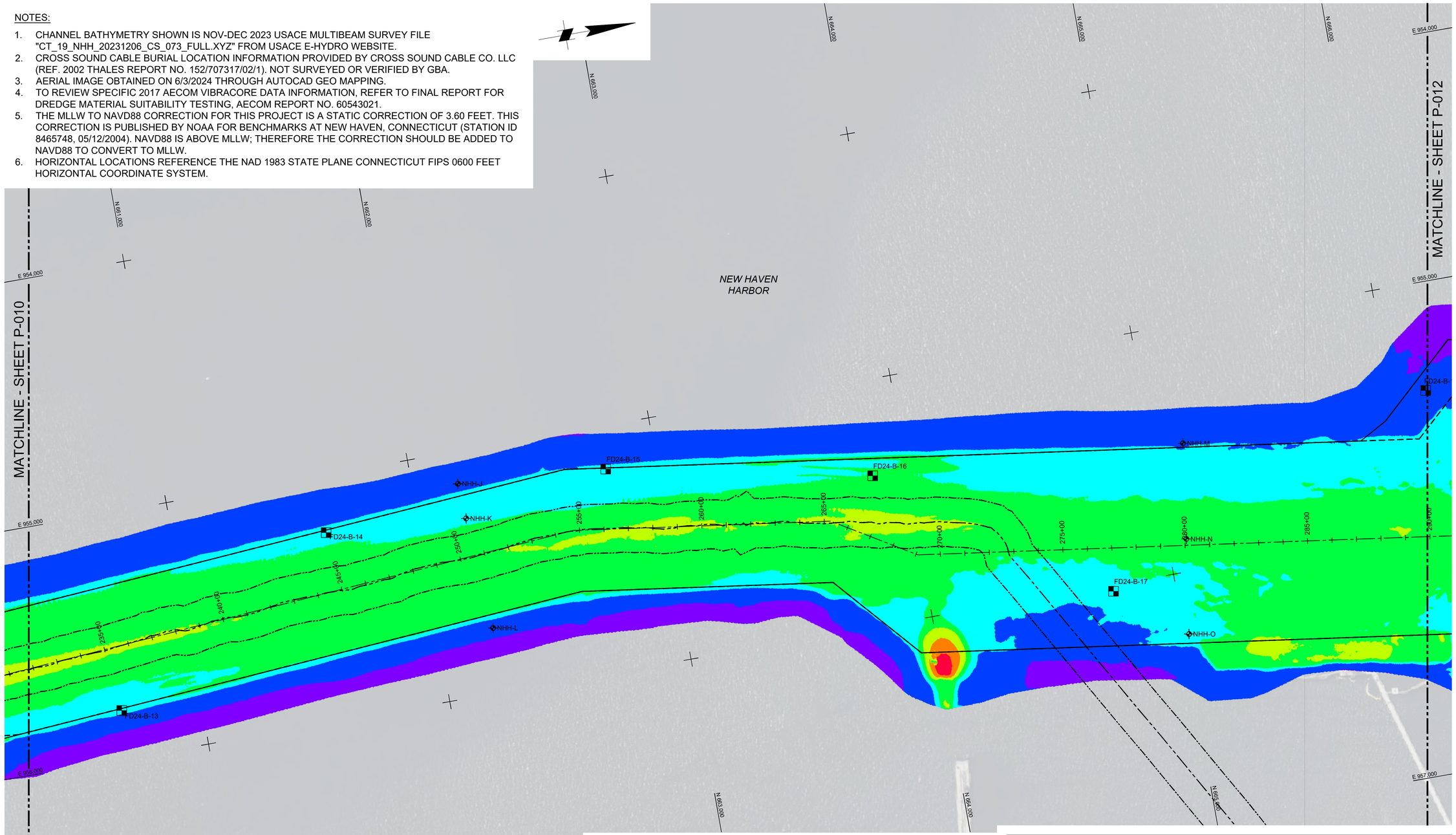
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOTECHNICAL CORE LOCATIONS

SHEET ID
P-010

NOTES:

1. CHANNEL BATHYMETRY SHOWN IS NOV-DEC 2023 USACE MULTIBEAM SURVEY FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM USACE E-HYDRO WEBSITE.
2. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BY CROSS SOUND CABLE CO. LLC (REF. 2002 THALES REPORT NO. 152/707317/02/1). NOT SURVEYED OR VERIFIED BY GBA.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
5. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
6. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



PRINT IN COLOR

LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- CROSS SOUND CABLE
- CROSS SOUND CABLE 100' BUFFER
- 2017 AECOM VIBRACORES
- # 2024 GBA SOIL BORING LOCATIONS

ELEVATION (FEET MLLW):

- 0.0 TO -15.0
- -15.0 TO -30.0
- -30.0 TO -35.0
- -35.0 TO -40.0
- -40.0 TO -45.0
- -45.0 TO -50.0
- -50.0 TO -55.0

0 200' 400'
GRAPHIC SCALE

2024 GBA SOIL BORING LOCATIONS

STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE EL. (MLLW)
235+07.2	FD24-B-13	955,804.1	660,674.7	GBA	7/2/2024	-61.2
244+95.2	FD24-B-14	955,233.2	661,622.6	GBA	7/26/2024	-61.1
256+16.3	FD24-B-15	955,175.7	662,791.5	GBA	8/7/2024	-61.3
266+19.3	FD24-B-16	955,391.6	663,859.7	GBA	8/5/2024	-60.0
277+01.0	FD24-B-17	956,025.9	664,746.8	GBA	8/5/2024	-60.7
290+04.3	FD24-B-18	955,439.9	666,144.3	GBA	7/1/2024	-61.6

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: DCU
SUBMITTED BY: DCU
SHEET 13 OF 220
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit B Baltimore, MD 21237 Phone (410) 882-5595

PREPARED FOR: Geotechnical Consultants

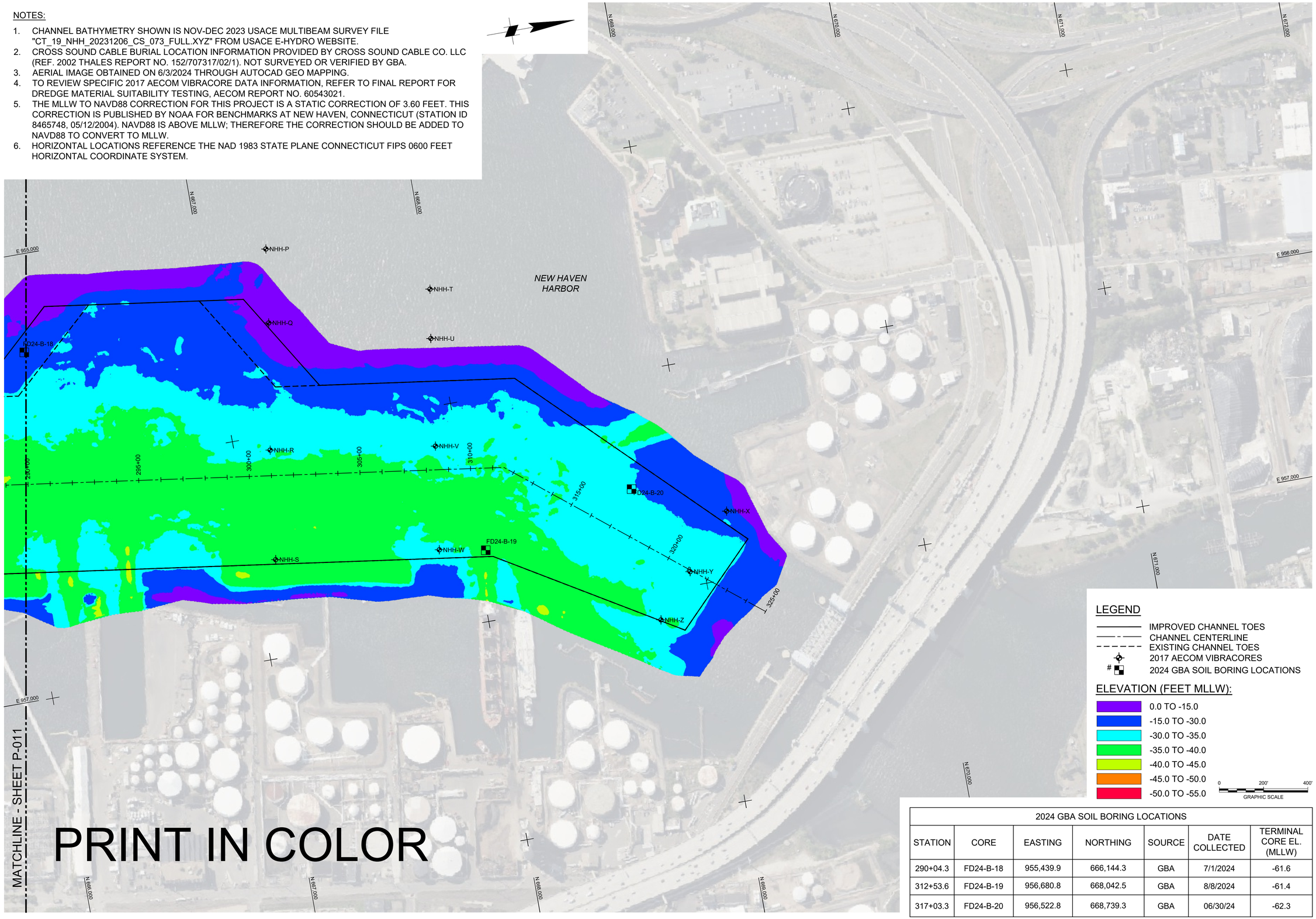
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOTECHNICAL CORE LOCATIONS

SHEET ID
P-011

NOTES:

1. CHANNEL BATHYMETRY SHOWN IS NOV-DEC 2023 USACE MULTIBEAM SURVEY FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM USACE E-HYDRO WEBSITE.
2. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BY CROSS SOUND CABLE CO. LLC (REF. 2002 THALES REPORT NO. 152/707317/02/1). NOT SURVEYED OR VERIFIED BY GBA.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.
5. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
6. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



2024 GBA SOIL BORING LOCATIONS						
STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE EL. (MLLW)
290+04.3	FD24-B-18	955,439.9	666,144.3	GBA	7/1/2024	-61.6
312+53.6	FD24-B-19	956,680.8	668,042.5	GBA	8/8/2024	-61.4
317+03.3	FD24-B-20	956,522.8	668,739.3	GBA	06/30/24	-62.3

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: CDCH
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IV-24-F-0024
CONTRACT NO.: W912DS-22-D-0017
DRAWING CODE: D-01
SHEET 14 OF 220

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit B Baltimore, MD 21237 Phone (410) 882-5595

PREPARED FOR: Gardiner Geotechnical Consultants

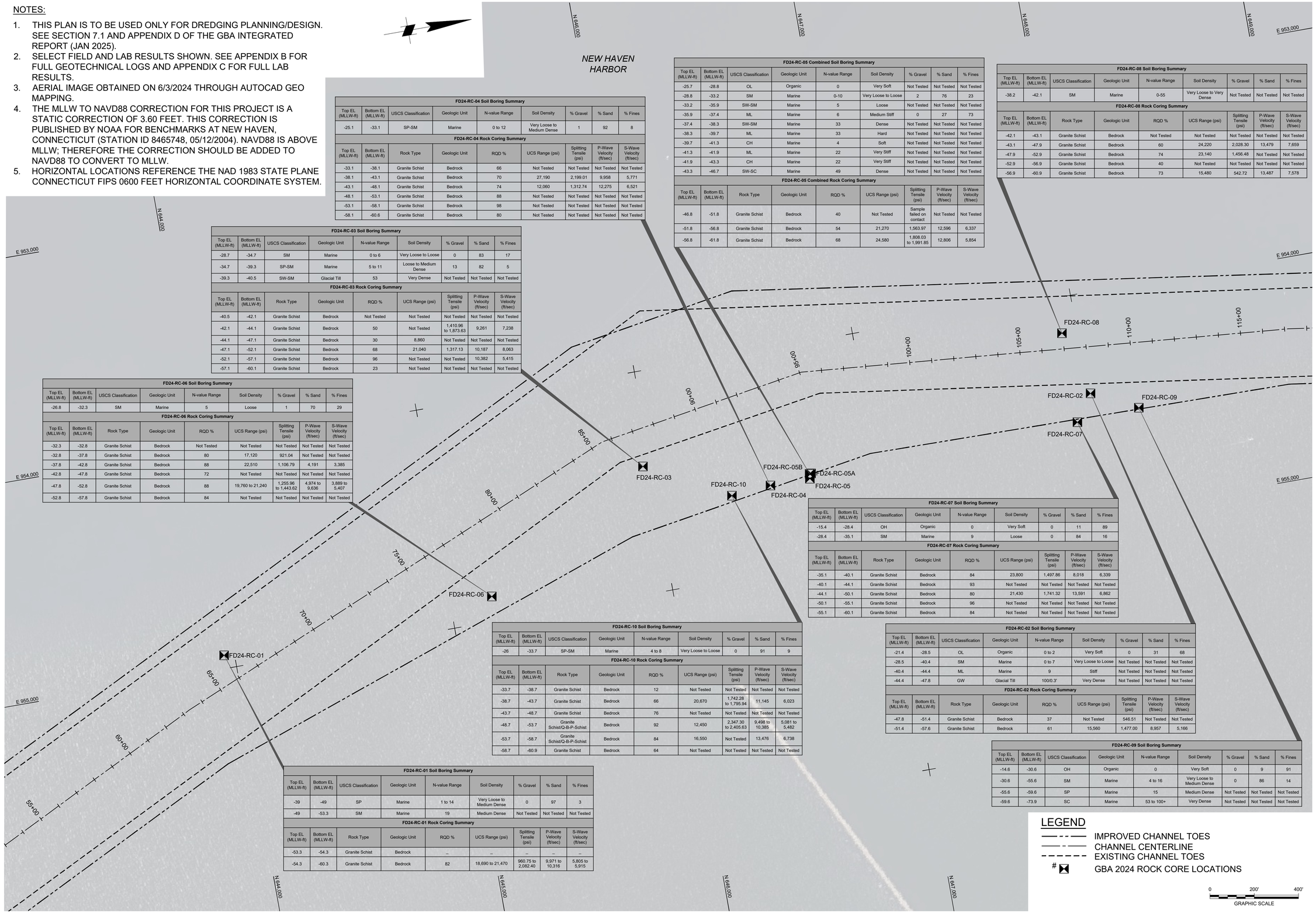
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

GEOTECHNICAL CORE LOCATIONS

SHEET ID
P-012

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
2. SELECT FIELD AND LAB RESULTS SHOWN. SEE APPENDIX B FOR FULL GEOTECHNICAL LOGS AND APPENDIX C FOR FULL LAB RESULTS.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



FD24-RC-04 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-25.1	-33.1	SP-SM	Marine	0 to 12	Very Loose to Medium Dense	1	92	8

FD24-RC-04 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-33.1	-38.1	Granite Schist	Bedrock	66	Not Tested	Not Tested	Not Tested	Not Tested
-38.1	-43.1	Granite Schist	Bedrock	70	27,190	2,199.01	9,958	5,771
-43.1	-48.1	Granite Schist	Bedrock	74	12,060	1,312.74	12,275	6,521
-48.1	-53.1	Granite Schist	Bedrock	88	Not Tested	Not Tested	Not Tested	Not Tested
-53.1	-58.1	Granite Schist	Bedrock	98	Not Tested	Not Tested	Not Tested	Not Tested
-58.1	-60.6	Granite Schist	Bedrock	80	Not Tested	Not Tested	Not Tested	Not Tested

FD24-RC-05 Combined Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-25.7	-28.8	OL	Organic	0	Very Soft	Not Tested	Not Tested	Not Tested
-28.8	-33.2	SM	Marine	0-10	Very Loose to Loose	2	76	23
-33.2	-35.9	SW-SM	Marine	5	Loose	Not Tested	Not Tested	Not Tested
-35.9	-37.4	ML	Marine	6	Medium Stiff	0	27	73
-37.4	-38.3	SW-SM	Marine	33	Dense	Not Tested	Not Tested	Not Tested
-38.3	-39.7	ML	Marine	33	Hard	Not Tested	Not Tested	Not Tested
-39.7	-41.3	CH	Marine	4	Soft	Not Tested	Not Tested	Not Tested
-41.3	-41.9	ML	Marine	22	Very Stiff	Not Tested	Not Tested	Not Tested
-41.9	-43.3	CH	Marine	22	Very Stiff	Not Tested	Not Tested	Not Tested
-43.3	-46.7	SW-SC	Marine	49	Dense	Not Tested	Not Tested	Not Tested

FD24-RC-05 Combined Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-46.8	-51.8	Granite Schist	Bedrock	40	Not Tested	Sample failed on contact	Not Tested	Not Tested
-51.8	-56.8	Granite Schist	Bedrock	54	21,270	1,563.97	12,596	6,337
-56.8	-61.8	Granite Schist	Bedrock	68	24,580	1,808.03 to 1,991.85	12,806	5,854

FD24-RC-08 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-38.2	-42.1	SM	Marine	0-55	Very Loose to Very Dense	Not Tested	Not Tested	Not Tested

FD24-RC-08 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-42.1	-43.1	Granite Schist	Bedrock	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
-43.1	-47.9	Granite Schist	Bedrock	60	24,220	2,028.30	13,479	7,659
-47.9	-52.9	Granite Schist	Bedrock	74	23,140	1,456.48	Not Tested	Not Tested
-52.9	-56.9	Granite Schist	Bedrock	40	Not Tested	Not Tested	Not Tested	Not Tested
-56.9	-60.9	Granite Schist	Bedrock	73	15,480	542.72	13,487	7,578

FD24-RC-03 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-28.7	-34.7	SM	Marine	0 to 6	Very Loose to Loose	0	83	17
-34.7	-39.3	SP-SM	Marine	5 to 11	Loose to Medium Dense	13	82	5
-39.3	-40.5	SW-SM	Glacial Till	53	Very Dense	Not Tested	Not Tested	Not Tested

FD24-RC-03 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-40.5	-42.1	Granite Schist	Bedrock	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
-42.1	-44.1	Granite Schist	Bedrock	50	Not Tested	1,410.96 to 1,873.63	9,261	7,238
-44.1	-47.1	Granite Schist	Bedrock	30	8,860	Not Tested	Not Tested	Not Tested
-47.1	-52.1	Granite Schist	Bedrock	68	21,040	1,317.13	10,187	8,063
-52.1	-57.1	Granite Schist	Bedrock	96	Not Tested	Not Tested	10,382	5,415
-57.1	-60.1	Granite Schist	Bedrock	23	Not Tested	Not Tested	Not Tested	Not Tested

FD24-RC-06 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-26.8	-32.3	SM	Marine	5	Loose	1	70	29

FD24-RC-06 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-32.3	-32.8	Granite Schist	Bedrock	Not Tested	Not Tested	Not Tested	Not Tested	Not Tested
-32.8	-37.8	Granite Schist	Bedrock	80	17,120	921.04	Not Tested	Not Tested
-37.8	-42.8	Granite Schist	Bedrock	88	22,510	1,106.79	4,191	3,385
-42.8	-47.8	Granite Schist	Bedrock	72	Not Tested	Not Tested	Not Tested	Not Tested
-47.8	-52.8	Granite Schist	Bedrock	88	19,760 to 21,240	1,255.96 to 1,443.62	4,974 to 9,636	3,889 to 5,407
-52.8	-57.8	Granite Schist	Bedrock	84	Not Tested	Not Tested	Not Tested	Not Tested

FD24-RC-07 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-15.4	-28.4	OH	Organic	0	Very Soft	0	11	89
-28.4	-35.1	SM	Marine	9	Loose	0	84	16

FD24-RC-07 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-35.1	-40.1	Granite Schist	Bedrock	84	23,800	1,497.86	8,018	6,339
-40.1	-44.1	Granite Schist	Bedrock	93	Not Tested	Not Tested	Not Tested	Not Tested
-44.1	-50.1	Granite Schist	Bedrock	80	21,430	1,741.32	13,591	6,862
-50.1	-55.1	Granite Schist	Bedrock	96	Not Tested	Not Tested	Not Tested	Not Tested
-55.1	-60.1	Granite Schist	Bedrock	84	Not Tested	Not Tested	Not Tested	Not Tested

FD24-RC-10 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-26	-33.7	SP-SM	Marine	4 to 8	Very Loose to Loose	0	91	9

FD24-RC-10 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-33.7	-38.7	Granite Schist	Bedrock	12	Not Tested	Not Tested	Not Tested	Not Tested
-38.7	-43.7	Granite Schist	Bedrock	66	20,670	1,742.28 to 1,795.94	11,145	6,023
-43.7	-48.7	Granite Schist	Bedrock	76	Not Tested	Not Tested	Not Tested	Not Tested
-48.7	-53.7	Granite Schist/Q-B-P-Schist	Bedrock	92	12,450	2,347.30 to 2,405.63	9,498 to 10,385	5,081 to 5,482
-53.7	-58.7	Granite Schist/Q-B-P-Schist	Bedrock	84	16,550	Not Tested	13,476	6,738
-58.7	-60.9	Granite Schist	Bedrock	64	Not Tested	Not Tested	Not Tested	Not Tested

FD24-RC-02 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-21.4	-28.5	OL	Organic	0 to 2	Very Soft	0	31	68
-28.5	-40.4	SM	Marine	0 to 7	Very Loose to Loose	Not Tested	Not Tested	Not Tested
-40.4	-44.4	ML	Marine	9	Stiff	Not Tested	Not Tested	Not Tested
-44.4	-47.8	GW	Glacial Till	100/0.3'	Very Dense	Not Tested	Not Tested	Not Tested

FD24-RC-02 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-47.8	-51.4	Granite Schist	Bedrock	37	Not Tested	546.51	Not Tested	Not Tested
-51.4	-57.6	Granite Schist	Bedrock	61	15,560	1,477.00	8,957	5,166

FD24-RC-09 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-14.6	-30.6	OH	Organic	0	Very Soft	0	9	91
-30.6	-55.6	SM	Marine	4 to 16	Very Loose to Medium Dense	0	86	14
-55.6	-59.6	SP	Marine	15	Medium Dense	Not Tested	Not Tested	Not Tested
-59.6	-73.9	SC	Marine	53 to 100+	Very Dense	Not Tested	Not Tested	Not Tested

FD24-RC-01 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-39	-49	SP	Marine	1 to 14	Very Loose to Medium Dense	0	97	3
-49	-53.3	SM	Marine	19	Medium Dense	Not Tested	Not Tested	Not Tested

FD24-RC-01 Rock Coring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	Rock Type	Geologic Unit	RQD %	UCS Range (psi)	Splitting Tensile (psi)	P-Wave Velocity (ft/sec)	S-Wave Velocity (ft/sec)
-53.3	-54.3	Granite Schist	Bedrock	_	_	_	_	_
-54.3	-60.3	Granite Schist	Bedrock	82	18,690 to 21,470	960.75 to 2,082.40	9,971 to 10,316	5,805 to 5,915

LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- # GBA 2024 ROCK CORE LOCATIONS

0 200' 400'
GRAPHIC SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IV-24-F-0024
CONTRACT NO.: W912DS-22-D-0017
DRAWING CODE: XXX-XXX-XX
SHEET 15 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DEZ
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Suite D
Baltimore, MD 21237
Phone (410) 882-5565

PREPARED FOR: Central Partners Construction Group

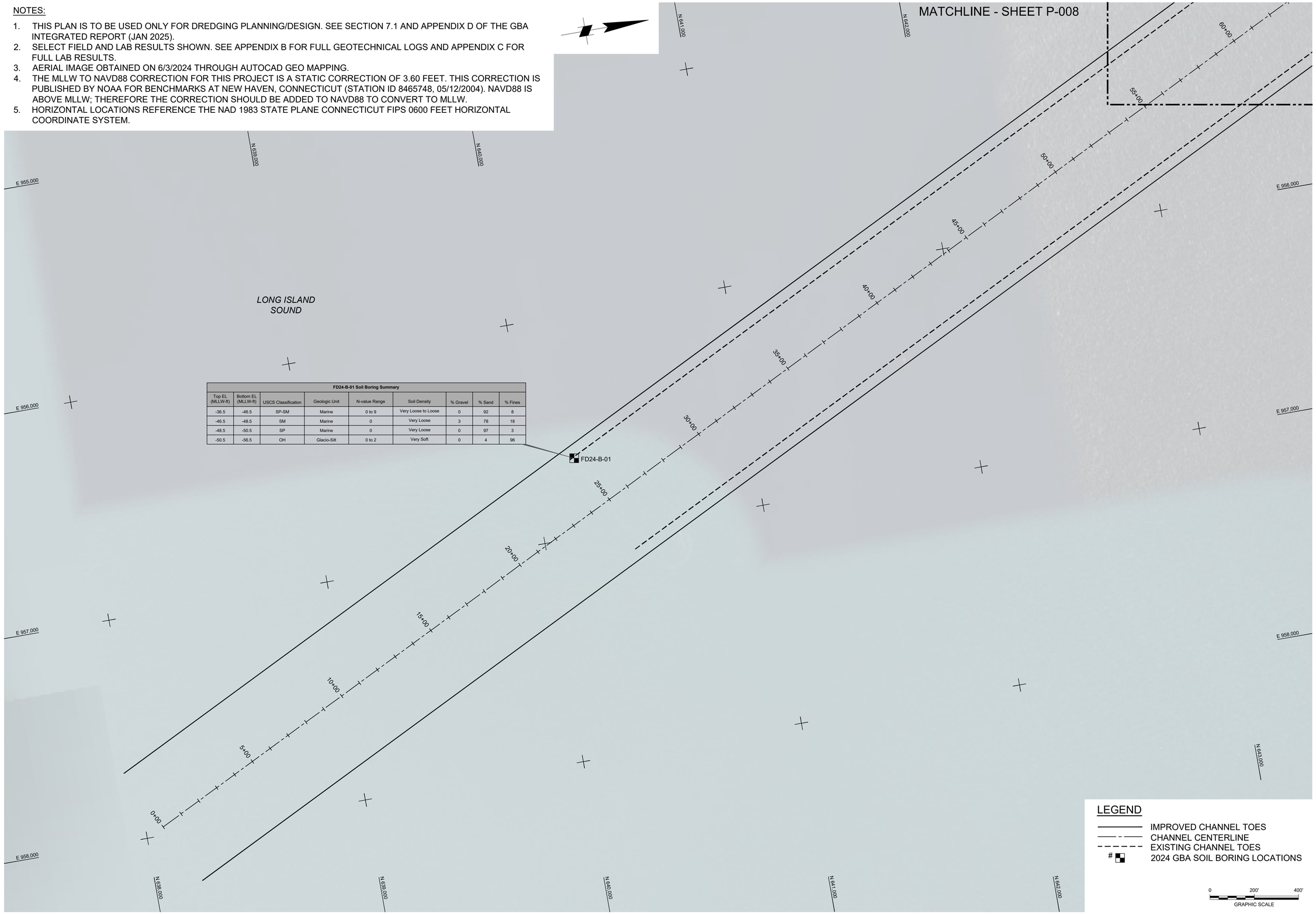
SUBSURFACE EPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

ROCK CORE RESULTS SUMMARY PLAN VIEW

SHEET ID
P-013

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
2. SELECT FIELD AND LAB RESULTS SHOWN. SEE APPENDIX B FOR FULL GEOTECHNICAL LOGS AND APPENDIX C FOR FULL LAB RESULTS.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



FD24-B-01 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-36.5	-46.5	SP-SM	Marine	0 to 9	Very Loose to Loose	0	92	8
-46.5	-48.5	SM	Marine	0	Very Loose	3	78	18
-48.5	-50.5	SP	Marine	0	Very Loose	0	97	3
-50.5	-56.5	OH	Glacio-Silt	0 to 2	Very Soft	0	4	96

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: DQU
SUBMITTED BY: DQU
SHEET 16 OF 220
SCALE: AS SHOWN
SIZE: ANSI D

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit 1
Baltimore, MD 21237
Phone (410) 682-5595

PREPARED FOR:
Gardiner Geo-Technical Consultants

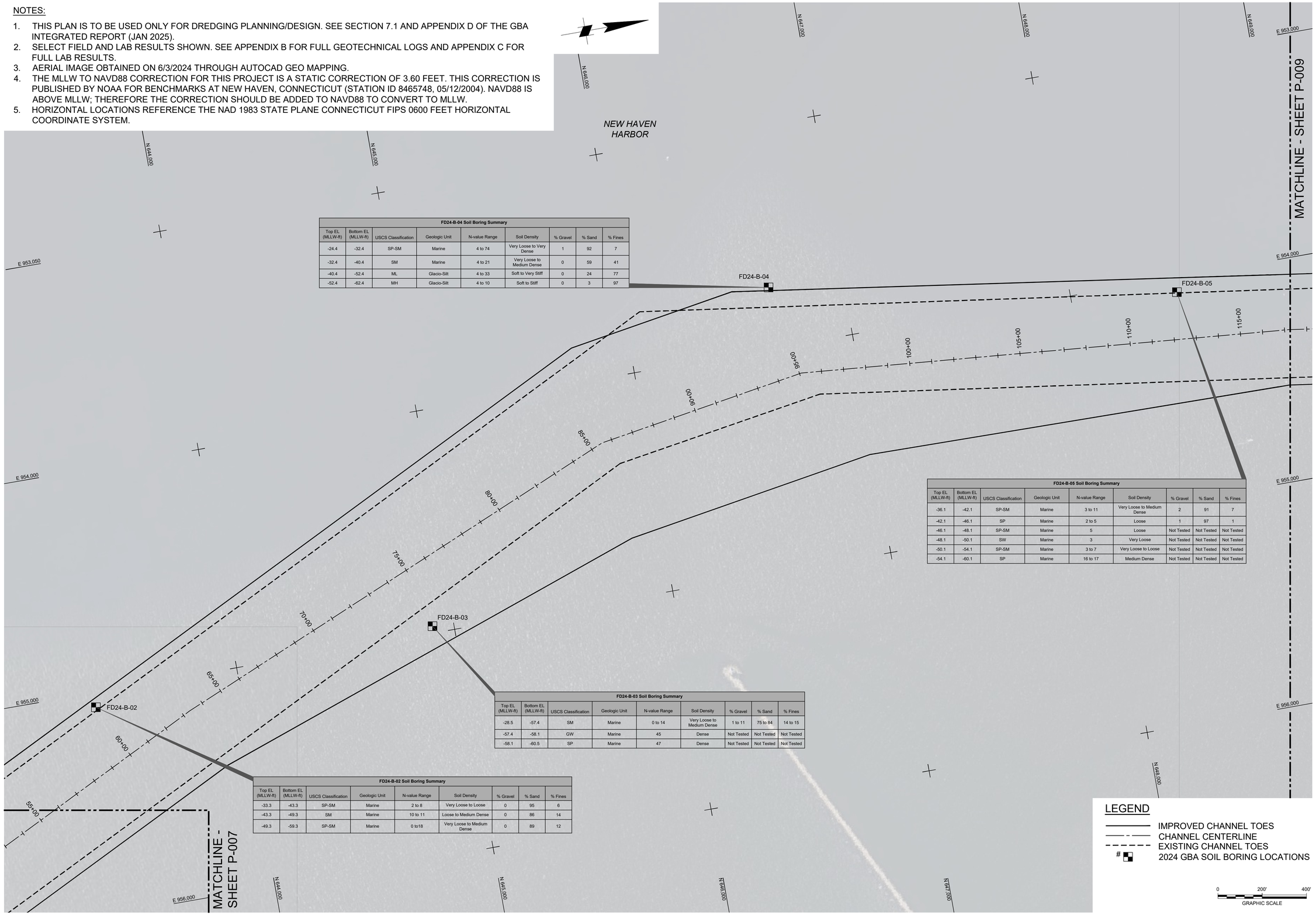
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

SOIL BORING RESULTS SUMMARY PLAN VIEW

SHEET ID
P-014

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
2. SELECT FIELD AND LAB RESULTS SHOWN. SEE APPENDIX B FOR FULL GEOTECHNICAL LOGS AND APPENDIX C FOR FULL LAB RESULTS.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



FD24-B-04 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-24.4	-32.4	SP-SM	Marine	4 to 74	Very Loose to Very Dense	1	92	7
-32.4	-40.4	SM	Marine	4 to 21	Very Loose to Medium Dense	0	59	41
-40.4	-52.4	ML	Glacio-Silt	4 to 33	Soft to Very Stiff	0	24	77
-52.4	-62.4	MH	Glacio-Silt	4 to 10	Soft to Stiff	0	3	97

FD24-B-05 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-36.1	-42.1	SP-SM	Marine	3 to 11	Very Loose to Medium Dense	2	91	7
-42.1	-46.1	SP	Marine	2 to 5	Loose	1	97	1
-46.1	-48.1	SP-SM	Marine	5	Loose	Not Tested	Not Tested	Not Tested
-48.1	-50.1	SW	Marine	3	Very Loose	Not Tested	Not Tested	Not Tested
-50.1	-54.1	SP-SM	Marine	3 to 7	Very Loose to Loose	Not Tested	Not Tested	Not Tested
-54.1	-60.1	SP	Marine	16 to 17	Medium Dense	Not Tested	Not Tested	Not Tested

FD24-B-03 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-28.5	-57.4	SM	Marine	0 to 14	Very Loose to Medium Dense	1 to 11	75 to 84	14 to 15
-57.4	-58.1	GW	Marine	45	Dense	Not Tested	Not Tested	Not Tested
-58.1	-60.5	SP	Marine	47	Dense	Not Tested	Not Tested	Not Tested

FD24-B-02 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-33.3	-43.3	SP-SM	Marine	2 to 8	Very Loose to Loose	0	95	6
-43.3	-49.3	SM	Marine	10 to 11	Loose to Medium Dense	0	86	14
-49.3	-59.3	SP-SM	Marine	0 to18	Very Loose to Medium Dense	0	89	12

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: DCU
SUBMITTED BY: DCU
SHEET 17 OF 220
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Suite A
Baltimore, MD 21237
Phone (410) 882-5595

PREPARED FOR:
Geotechnical Branch

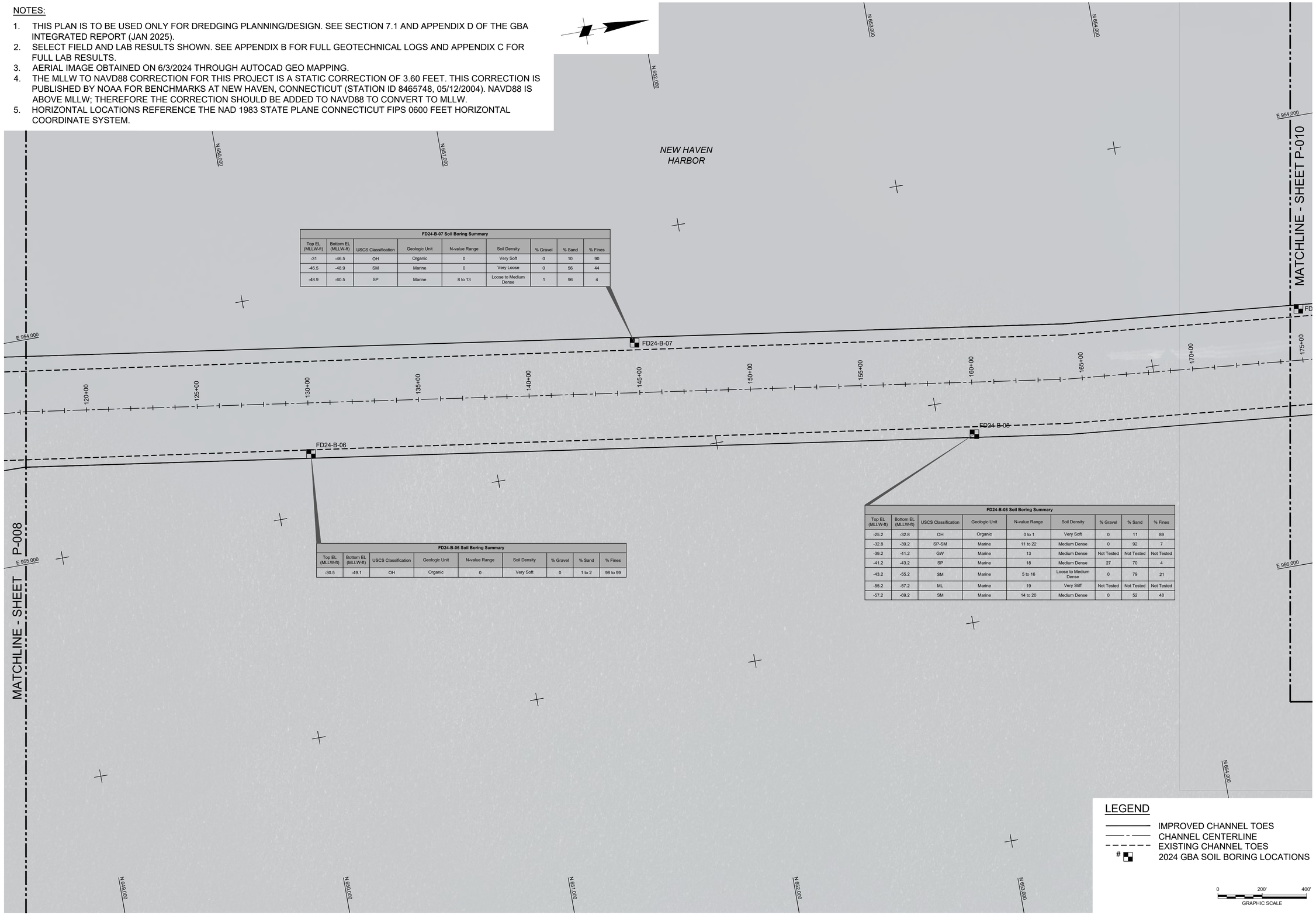
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

SOIL BORING RESULTS SUMMARY PLAN VIEW

SHEET ID
P-015

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
2. SELECT FIELD AND LAB RESULTS SHOWN. SEE APPENDIX B FOR FULL GEOTECHNICAL LOGS AND APPENDIX C FOR FULL LAB RESULTS.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



FD24-B-07 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-31	-46.5	OH	Organic	0	Very Soft	0	10	90
-46.5	-48.9	SM	Marine	0	Very Loose	0	56	44
-48.9	-60.5	SP	Marine	8 to 13	Loose to Medium Dense	1	96	4

FD24-B-06 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-30.5	-49.1	OH	Organic	0	Very Soft	0	1 to 2	98 to 99

FD24-B-08 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-25.2	-32.8	OH	Organic	0 to 1	Very Soft	0	11	89
-32.8	-39.2	SP-SM	Marine	11 to 22	Medium Dense	0	92	7
-39.2	-41.2	GW	Marine	13	Medium Dense	Not Tested	Not Tested	Not Tested
-41.2	-43.2	SP	Marine	18	Medium Dense	27	70	4
-43.2	-55.2	SM	Marine	5 to 16	Loose to Medium Dense	0	79	21
-55.2	-57.2	ML	Marine	19	Very Stiff	Not Tested	Not Tested	Not Tested
-57.2	-69.2	SM	Marine	14 to 20	Medium Dense	0	52	48

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: DCU
SUBMITTED BY: DCU
SHEET 18 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit 1
Baltimore, MD 21237
Phone (410) 882-5595

PREPARED FOR:
Geotechnical Business Area of Expertise

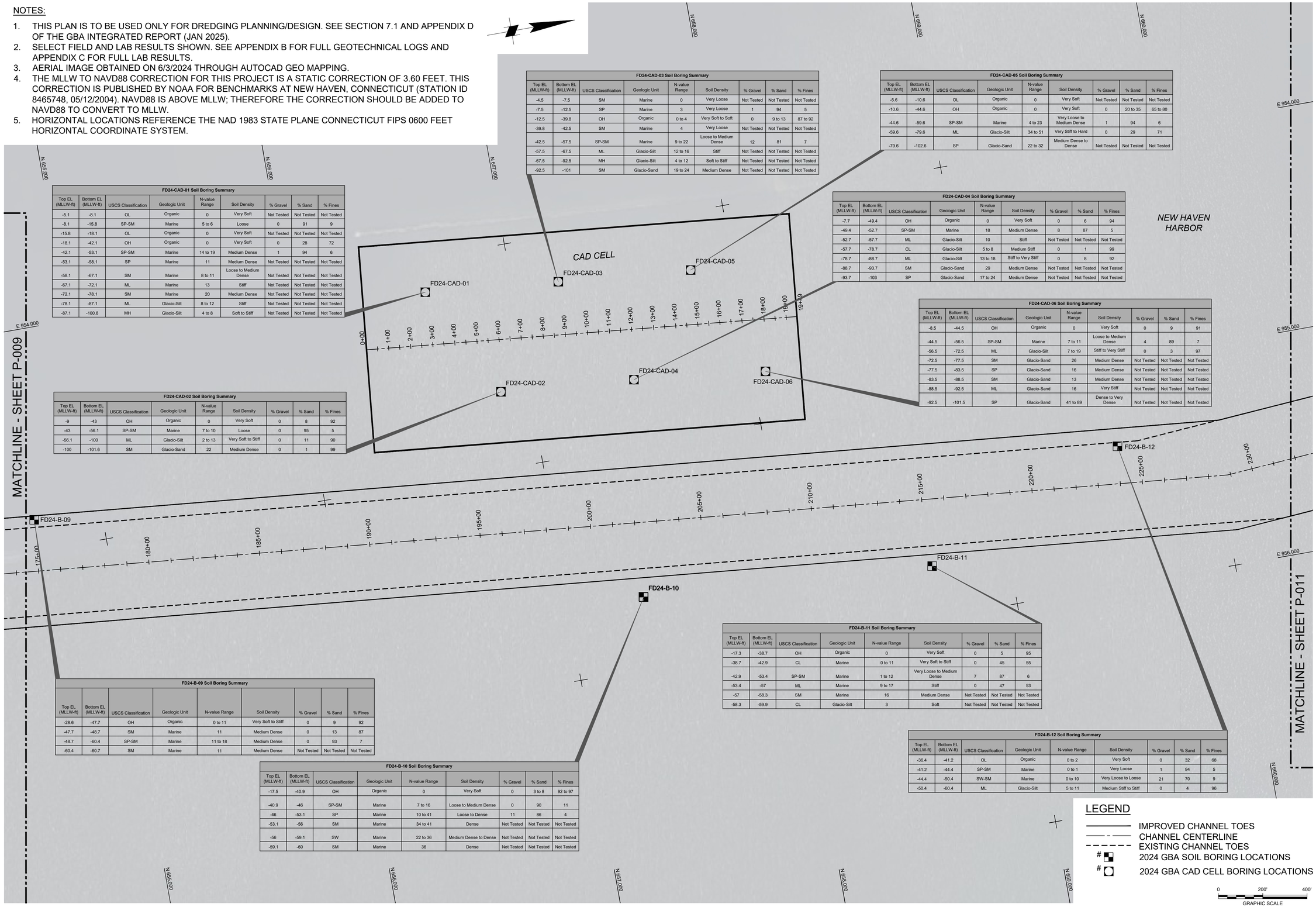
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

SOIL BORING RESULTS SUMMARY PLAN VIEW

SHEET ID
P-016

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
2. SELECT FIELD AND LAB RESULTS SHOWN. SEE APPENDIX B FOR FULL GEOTECHNICAL LOGS AND APPENDIX C FOR FULL LAB RESULTS.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



FD24-CAD-01 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-5.1	-8.1	OL	Organic	0	Very Soft	Not Tested	Not Tested	Not Tested
-8.1	-15.8	SP-SM	Marine	5 to 6	Loose	0	91	9
-15.8	-18.1	OL	Organic	0	Very Soft	Not Tested	Not Tested	Not Tested
-18.1	-42.1	OH	Organic	0	Very Soft	0	28	72
-42.1	-53.1	SP-SM	Marine	14 to 19	Medium Dense	1	94	6
-53.1	-58.1	SP	Marine	11	Medium Dense	Not Tested	Not Tested	Not Tested
-58.1	-67.1	SM	Marine	8 to 11	Loose to Medium Dense	Not Tested	Not Tested	Not Tested
-67.1	-72.1	ML	Marine	13	Stiff	Not Tested	Not Tested	Not Tested
-72.1	-78.1	SM	Marine	20	Medium Dense	Not Tested	Not Tested	Not Tested
-78.1	-87.1	ML	Glacio-Silt	8 to 12	Stiff	Not Tested	Not Tested	Not Tested
-87.1	-100.8	MH	Glacio-Silt	4 to 8	Soft to Stiff	Not Tested	Not Tested	Not Tested

FD24-CAD-02 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-9	-43	OH	Organic	0	Very Soft	0	8	92
-43	-56.1	SP-SM	Marine	7 to 10	Loose	0	95	5
-56.1	-100	ML	Glacio-Silt	2 to 13	Very Soft to Stiff	0	11	90
-100	-101.6	SM	Glacio-Sand	22	Medium Dense	0	1	99

FD24-CAD-03 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-4.5	-7.5	SM	Marine	0	Very Loose	Not Tested	Not Tested	Not Tested
-7.5	-12.5	SP	Marine	3	Very Loose	1	94	5
-12.5	-39.8	OH	Organic	0 to 4	Very Soft to Soft	0	9 to 13	87 to 92
-39.8	-42.5	SM	Marine	4	Very Loose	Not Tested	Not Tested	Not Tested
-42.5	-57.5	SP-SM	Marine	9 to 22	Loose to Medium Dense	12	81	7
-57.5	-67.5	ML	Glacio-Silt	12 to 16	Stiff	Not Tested	Not Tested	Not Tested
-67.5	-92.5	MH	Glacio-Silt	4 to 12	Soft to Stiff	Not Tested	Not Tested	Not Tested
-92.5	-101	SM	Glacio-Sand	19 to 24	Medium Dense	Not Tested	Not Tested	Not Tested

FD24-CAD-04 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-7.7	-49.4	OH	Organic	0	Very Soft	0	6	94
-49.4	-52.7	SP-SM	Marine	18	Medium Dense	8	87	5
-52.7	-57.7	ML	Glacio-Silt	10	Stiff	Not Tested	Not Tested	Not Tested
-57.7	-78.7	CL	Glacio-Silt	5 to 8	Medium Stiff	0	1	99
-78.7	-88.7	ML	Glacio-Silt	13 to 18	Stiff to Very Stiff	0	8	92
-88.7	-93.7	SM	Glacio-Sand	29	Medium Dense	Not Tested	Not Tested	Not Tested
-93.7	-103	SP	Glacio-Sand	17 to 24	Medium Dense	Not Tested	Not Tested	Not Tested

FD24-CAD-05 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-5.6	-10.6	OL	Organic	0	Very Soft	Not Tested	Not Tested	Not Tested
-10.6	-44.6	OH	Organic	0	Very Soft	0	20 to 35	65 to 80
-44.6	-59.6	SP-SM	Marine	4 to 23	Very Loose to Medium Dense	1	94	6
-59.6	-79.6	ML	Glacio-Silt	34 to 51	Very Stiff to Hard	0	29	71
-79.6	-102.6	SP	Glacio-Sand	22 to 32	Medium Dense to Dense	Not Tested	Not Tested	Not Tested

FD24-CAD-06 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-8.5	-44.5	OH	Organic	0	Very Soft	0	9	91
-44.5	-56.5	SP-SM	Marine	7 to 11	Loose to Medium Dense	4	89	7
-56.5	-72.5	ML	Glacio-Silt	7 to 19	Stiff to Very Stiff	0	3	97
-72.5	-77.5	SM	Glacio-Sand	26	Medium Dense	Not Tested	Not Tested	Not Tested
-77.5	-83.5	SP	Glacio-Sand	16	Medium Dense	Not Tested	Not Tested	Not Tested
-83.5	-88.5	SM	Glacio-Sand	13	Medium Dense	Not Tested	Not Tested	Not Tested
-88.5	-92.5	ML	Glacio-Sand	16	Very Stiff	Not Tested	Not Tested	Not Tested
-92.5	-101.5	SP	Glacio-Sand	41 to 89	Dense to Very Dense	Not Tested	Not Tested	Not Tested

FD24-B-09 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-28.6	-47.7	OH	Organic	0 to 11	Very Soft to Stiff	0	9	92
-47.7	-48.7	SM	Marine	11	Medium Dense	0	13	87
-48.7	-60.4	SP-SM	Marine	11 to 18	Medium Dense	0	93	7
-60.4	-60.7	SM	Marine	11	Medium Dense	Not Tested	Not Tested	Not Tested

FD24-B-10 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-17.5	-40.9	OH	Organic	0	Very Soft	0	3 to 8	92 to 97
-40.9	-46	SP-SM	Marine	7 to 16	Loose to Medium Dense	0	90	11
-46	-53.1	SP	Marine	10 to 41	Loose to Dense	11	86	4
-53.1	-56	SM	Marine	34 to 41	Dense	Not Tested	Not Tested	Not Tested
-56	-59.1	SW	Marine	22 to 36	Medium Dense to Dense	Not Tested	Not Tested	Not Tested
-59.1	-60	SM	Marine	36	Dense	Not Tested	Not Tested	Not Tested

FD24-B-11 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-17.3	-38.7	OH	Organic	0	Very Soft	0	5	95
-38.7	-42.9	CL	Marine	0 to 11	Very Soft to Stiff	0	45	55
-42.9	-53.4	SP-SM	Marine	1 to 12	Very Loose to Medium Dense	7	87	6
-53.4	-57	ML	Marine	9 to 17	Stiff	0	47	53
-57	-58.3	SM	Marine	16	Medium Dense	Not Tested	Not Tested	Not Tested
-58.3	-59.9	CL	Glacio-Silt	3	Soft	Not Tested	Not Tested	Not Tested

FD24-B-12 Soil Boring Summary								
Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-36.4	-41.2	OL	Organic	0 to 2	Very Soft	0	32	68
-41.2	-44.4	SP-SM	Marine	0 to 1	Very Loose	1	94	5
-44.4	-50.4	SW-SM	Marine	0 to 10	Very Loose to Loose	21	70	9
-50.4	-60.4	ML	Glacio-Silt	5 to 11	Medium Stiff to Stiff	0	4	96

LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- # 2024 GBA SOIL BORING LOCATIONS
- # 2024 GBA CAD CELL BORING LOCATIONS

0 200' 400'
GRAPHIC SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: DCU
SHEET 19 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA 9009 Yellow Brick Rd. Suite A Baltimore, MD 21237 Phone (410) 682-5595 ENGINEERS ★ SURVEYORS

PREPARED FOR: Coastal Protection & Restoration Division

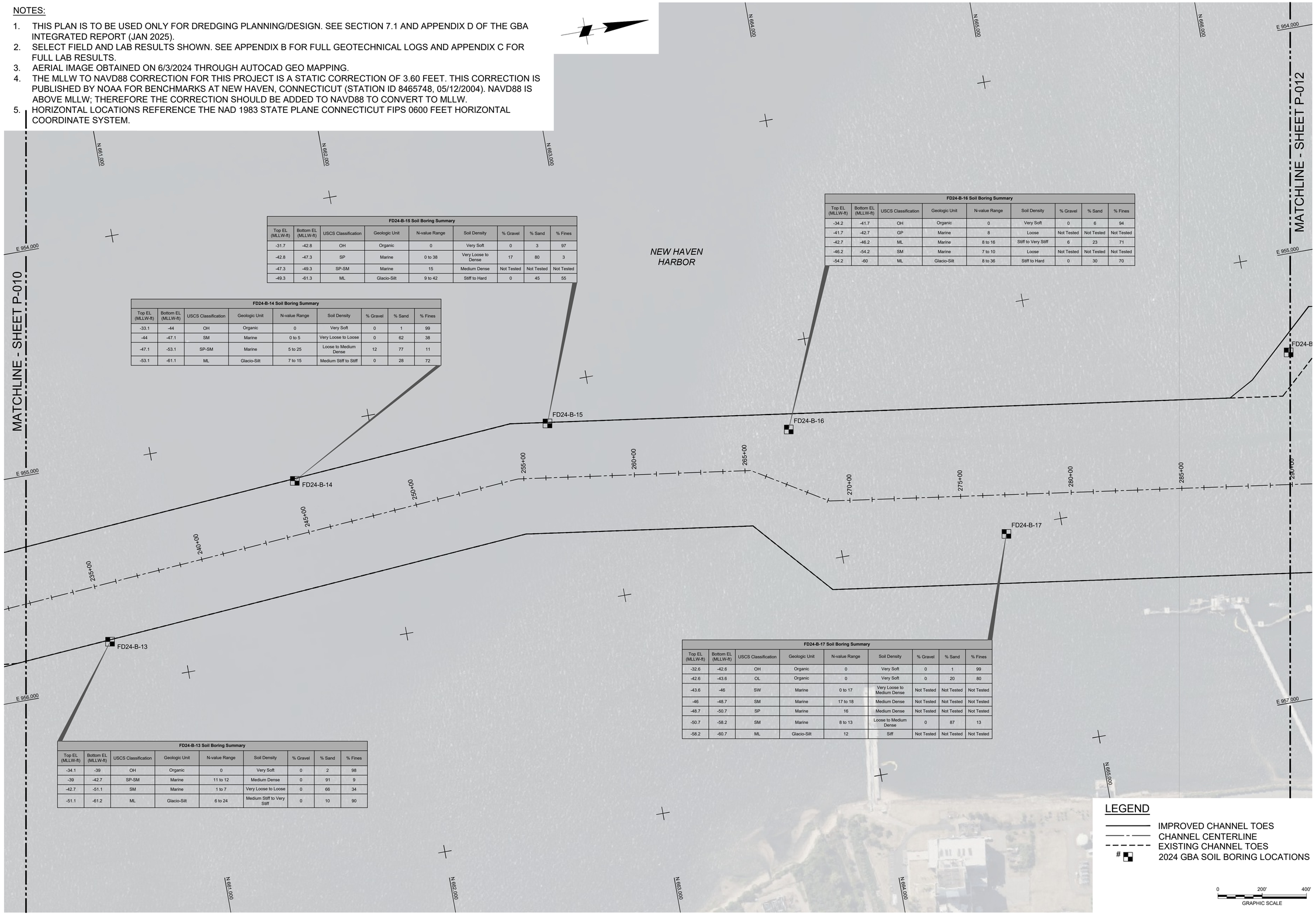
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

SOIL BORING RESULTS SUMMARY PLAN VIEW

SHEET ID
P-017

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
2. SELECT FIELD AND LAB RESULTS SHOWN. SEE APPENDIX B FOR FULL GEOTECHNICAL LOGS AND APPENDIX C FOR FULL LAB RESULTS.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



FD24-B-15 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-31.7	-42.8	OH	Organic	0	Very Soft	0	3	97
-42.8	-47.3	SP	Marine	0 to 38	Very Loose to Dense	17	80	3
-47.3	-49.3	SP-SM	Marine	15	Medium Dense	Not Tested	Not Tested	Not Tested
-49.3	-61.3	ML	Glacio-Silt	9 to 42	Stiff to Hard	0	45	55

FD24-B-14 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-33.1	-44	OH	Organic	0	Very Soft	0	1	99
-44	-47.1	SM	Marine	0 to 5	Very Loose to Loose	0	62	38
-47.1	-53.1	SP-SM	Marine	5 to 25	Loose to Medium Dense	12	77	11
-53.1	-61.1	ML	Glacio-Silt	7 to 15	Medium Stiff to Stiff	0	28	72

FD24-B-16 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-34.2	-41.7	OH	Organic	0	Very Soft	0	6	94
-41.7	-42.7	GP	Marine	8	Loose	Not Tested	Not Tested	Not Tested
-42.7	-46.2	ML	Marine	8 to 16	Stiff to Very Stiff	6	23	71
-46.2	-54.2	SM	Marine	7 to 10	Loose	Not Tested	Not Tested	Not Tested
-54.2	-60	ML	Glacio-Silt	8 to 36	Stiff to Hard	0	30	70

FD24-B-17 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-32.6	-42.6	OH	Organic	0	Very Soft	0	1	99
-42.6	-43.6	OL	Organic	0	Very Soft	0	20	80
-43.6	-46	SW	Marine	0 to 17	Very Loose to Medium Dense	Not Tested	Not Tested	Not Tested
-46	-48.7	SM	Marine	17 to 18	Medium Dense	Not Tested	Not Tested	Not Tested
-48.7	-50.7	SP	Marine	16	Medium Dense	Not Tested	Not Tested	Not Tested
-50.7	-58.2	SM	Marine	8 to 13	Loose to Medium Dense	0	87	13
-58.2	-60.7	ML	Glacio-Silt	12	Stiff	Not Tested	Not Tested	Not Tested

FD24-B-13 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-34.1	-39	OH	Organic	0	Very Soft	0	2	98
-39	-42.7	SP-SM	Marine	11 to 12	Medium Dense	0	91	9
-42.7	-51.1	SM	Marine	1 to 7	Very Loose to Loose	0	66	34
-51.1	-61.2	ML	Glacio-Silt	6 to 24	Medium Stiff to Very Stiff	0	10	90

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9003 Yellow Brick Rd. Unit F, Baltimore, MD 21237, Phone (410) 682-5595

PREPARED FOR: Coastal Partners

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE:
SHEET 20 OF 220

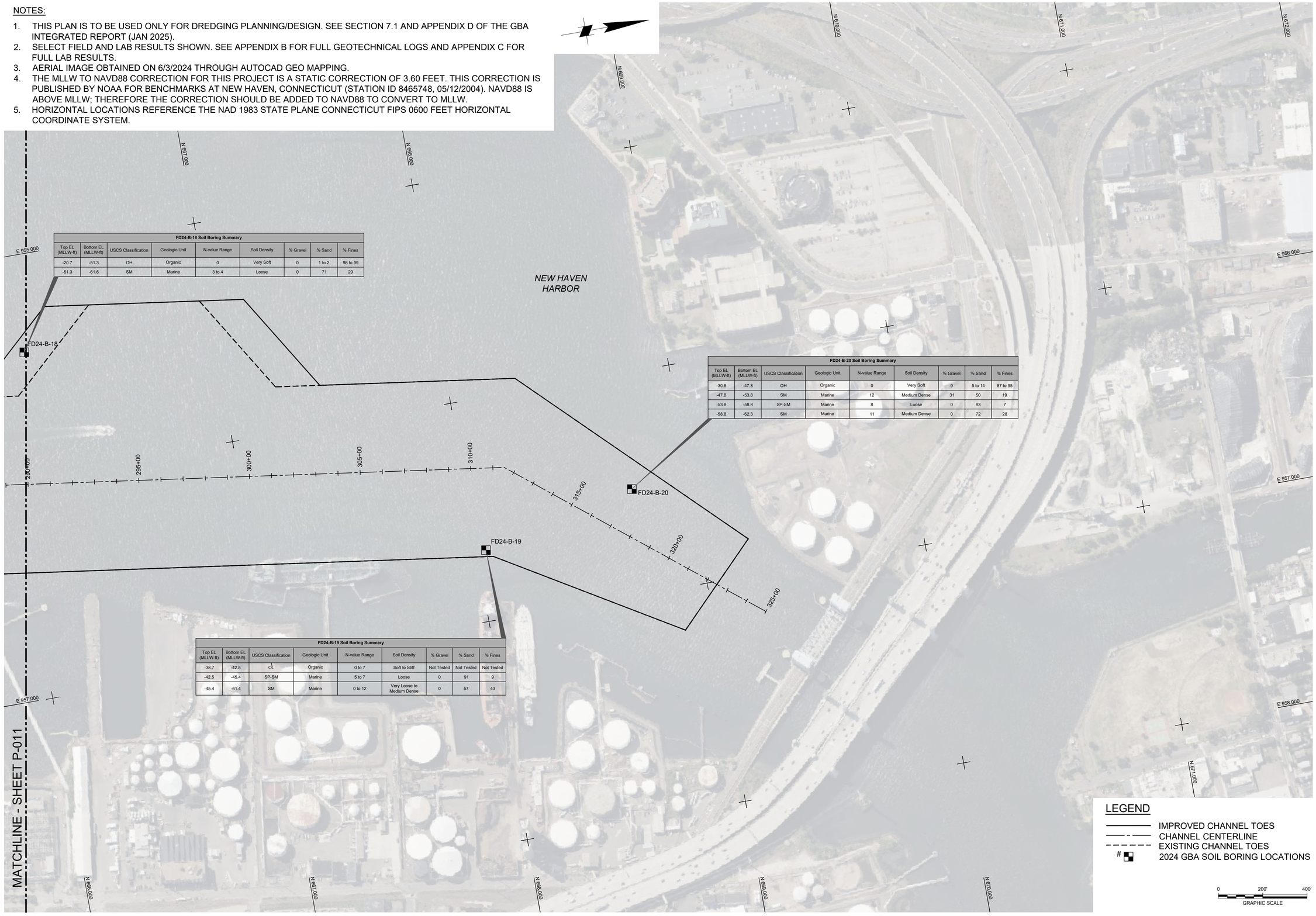
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

SOIL BORING RESULTS SUMMARY PLAN VIEW

SHEET ID
P-018

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
2. SELECT FIELD AND LAB RESULTS SHOWN. SEE APPENDIX B FOR FULL GEOTECHNICAL LOGS AND APPENDIX C FOR FULL LAB RESULTS.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



FD24-B-18 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-20.7	-51.3	OH	Organic	0	Very Soft	0	1 to 2	98 to 99
-51.3	-61.6	SM	Marine	3 to 4	Loose	0	71	29

FD24-B-20 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-30.8	-47.8	OH	Organic	0	Very Soft	0	5 to 14	87 to 95
-47.8	-53.8	SM	Marine	12	Medium Dense	31	50	19
-53.8	-58.8	SP-SM	Marine	8	Loose	0	93	7
-58.8	-62.3	SM	Marine	11	Medium Dense	0	72	28

FD24-B-19 Soil Boring Summary

Top EL (MLLW-ft)	Bottom EL (MLLW-ft)	USCS Classification	Geologic Unit	N-value Range	Soil Density	% Gravel	% Sand	% Fines
-38.7	-42.5	OL	Organic	0 to 7	Soft to Stiff	Not Tested	Not Tested	Not Tested
-42.5	-45.4	SP-SM	Marine	5 to 7	Loose	0	91	9
-45.4	-61.4	SM	Marine	0 to 12	Very Loose to Medium Dense	0	57	43

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWU24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: DCU
SHEET 21 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY:
GBA
6008 Yellow Brick Rd.
Unit 1
Baltimore, MD 21237
ENGINEERS ★ SURVEYORS
Phone (410) 882-5595

PREPARED FOR:
Gateway Partners
Connecting Communities Forward

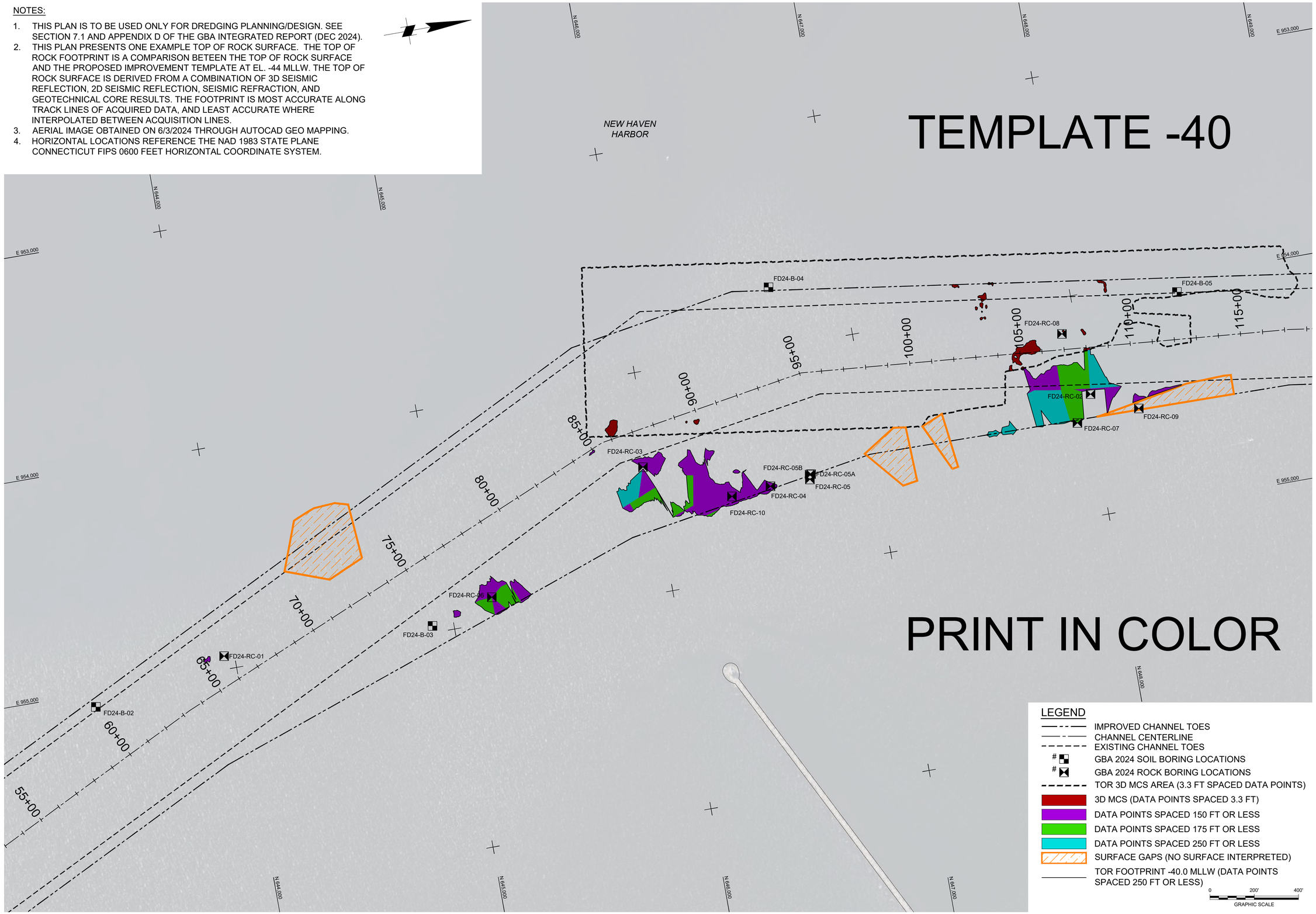
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

SOIL BORING RESULTS SUMMARY PLAN VIEW

SHEET ID
P-019

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THIS PLAN PRESENTS ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK FOOTPRINT IS A COMPARISON BETEEN THE TOP OF ROCK SURFACE AND THE PROPOSED IMPROVEMENT TEMPLATE AT EL. -44 MLLW. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. THE FOOTPRINT IS MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit D Baltimore, MD 21237 Phone (410) 682-5565

PREPARED FOR: Connecticut Coastal Engineering Consortium

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: ECC
SIZE: ANSI 'D'
SCALE: 1:1

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX-XX
SHEET 22 OF 220

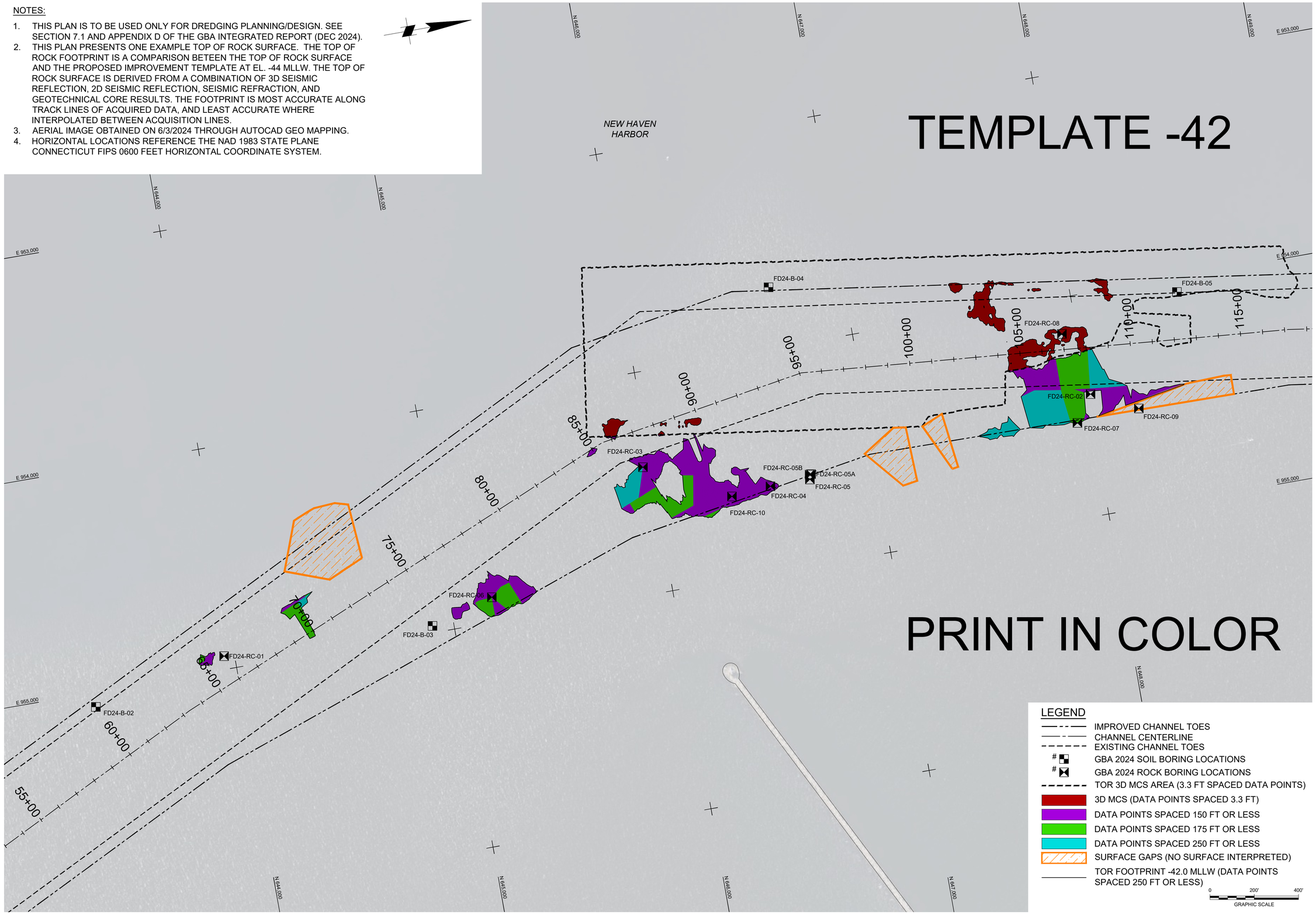
SUBSURFACE EPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

TOP OF ROCK FOOTPRINT
DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -40 MLLW

SHEET ID
P-020

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THIS PLAN PRESENTS ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK FOOTPRINT IS A COMPARISON BETEEN THE TOP OF ROCK SURFACE AND THE PROPOSED IMPROVEMENT TEMPLATE AT EL. -44 MLLW. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. THE FOOTPRINT IS MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX-XX
SHEET 23 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DRR
SIZE: ANSI D
SCALE: 1:1

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9093 Yellow Brick Rd. Suite 100 Baltimore, MD 21237 Phone (410) 882-3595

PREPARED FOR:
Coastal Services Center

SUBSURFACE EPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

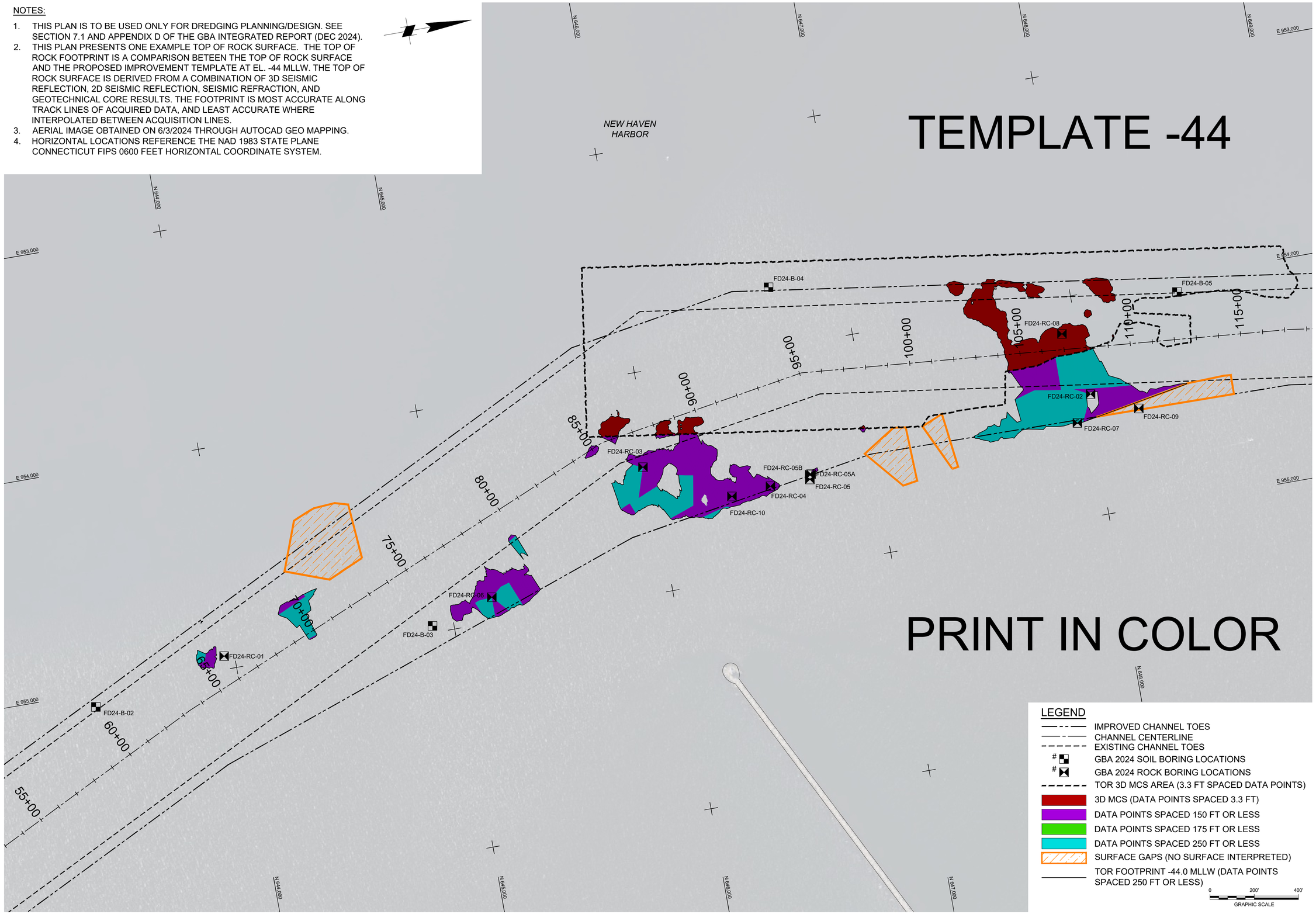
TOP OF ROCK FOOTPRINT
DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -42 MLLW

SHEET ID
P-021

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THIS PLAN PRESENTS ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK FOOTPRINT IS A COMPARISON BETEEN THE TOP OF ROCK SURFACE AND THE PROPOSED IMPROVEMENT TEMPLATE AT EL. -44 MLLW. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. THE FOOTPRINT IS MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.

TEMPLATE -44



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DJR
SIZE: ANSI D
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX
SHEET 24 OF 211

PREPARED BY:
GBA
9093 Yellow Brick Rd.
Suite 100
Baltimore, MD 21237
ENGINEERS ★ SURVEYORS
Phone (410) 882-3595

PREPARED FOR:
Gaudenzia Foundation, Inc.

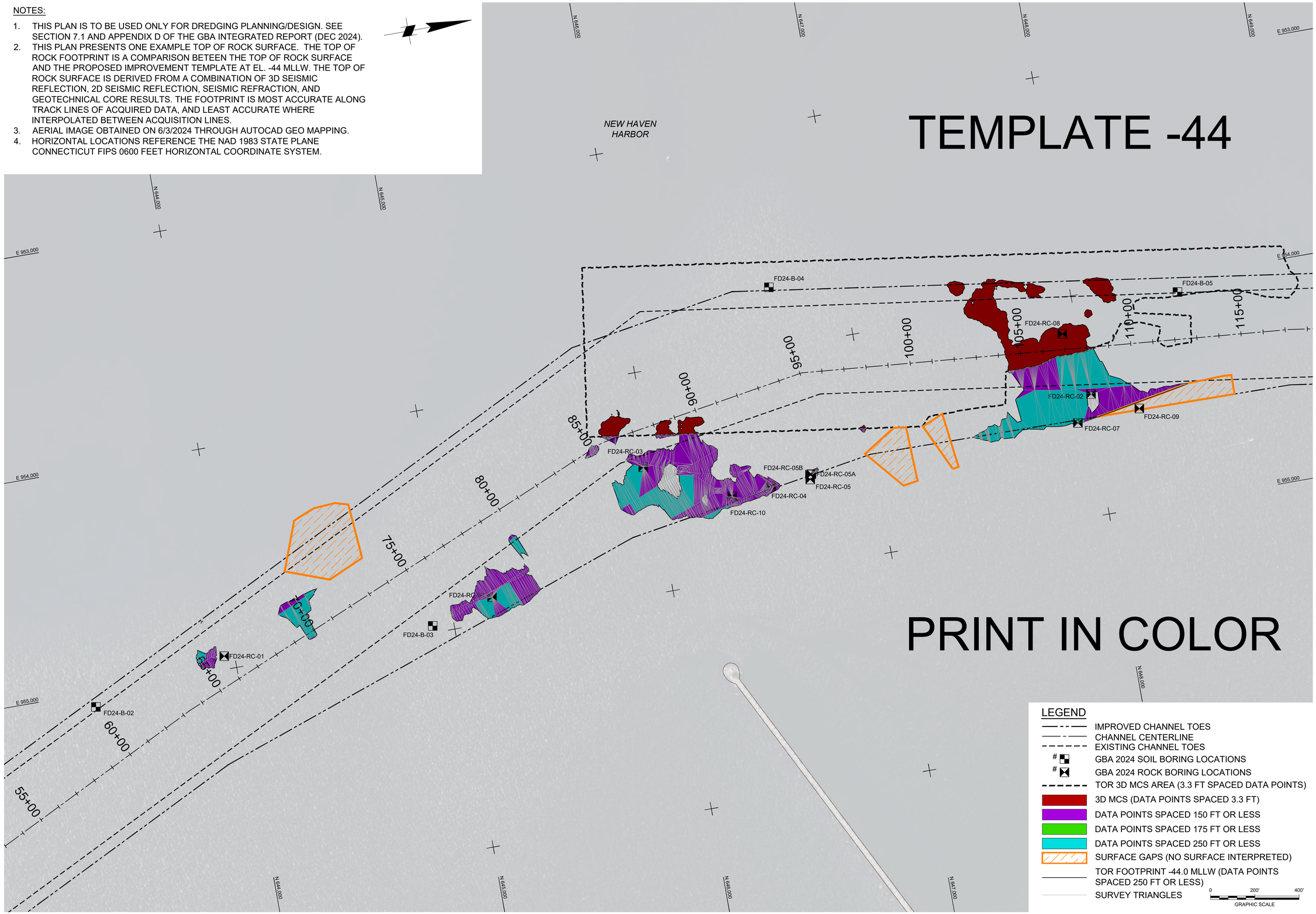
SUBSURFACE EPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

TOP OF ROCK FOOTPRINT
DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -44 MLLW

SHEET ID
P-022

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THIS PLAN PRESENTS ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK FOOTPRINT IS A COMPARISON BETEEN THE TOP OF ROCK SURFACE AND THE PROPOSED IMPROVEMENT TEMPLATE AT EL. -44 MLLW. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. THE FOOTPRINT IS MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.
3. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
4. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9005 Yellow Brick Rd.
USACE
Baltimore, MD 21237
Phone (410) 882-3595

PREPARED FOR:
Coastal Services Center

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DJR
SIZE: ANSI D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX
SHEET 25 OF 211

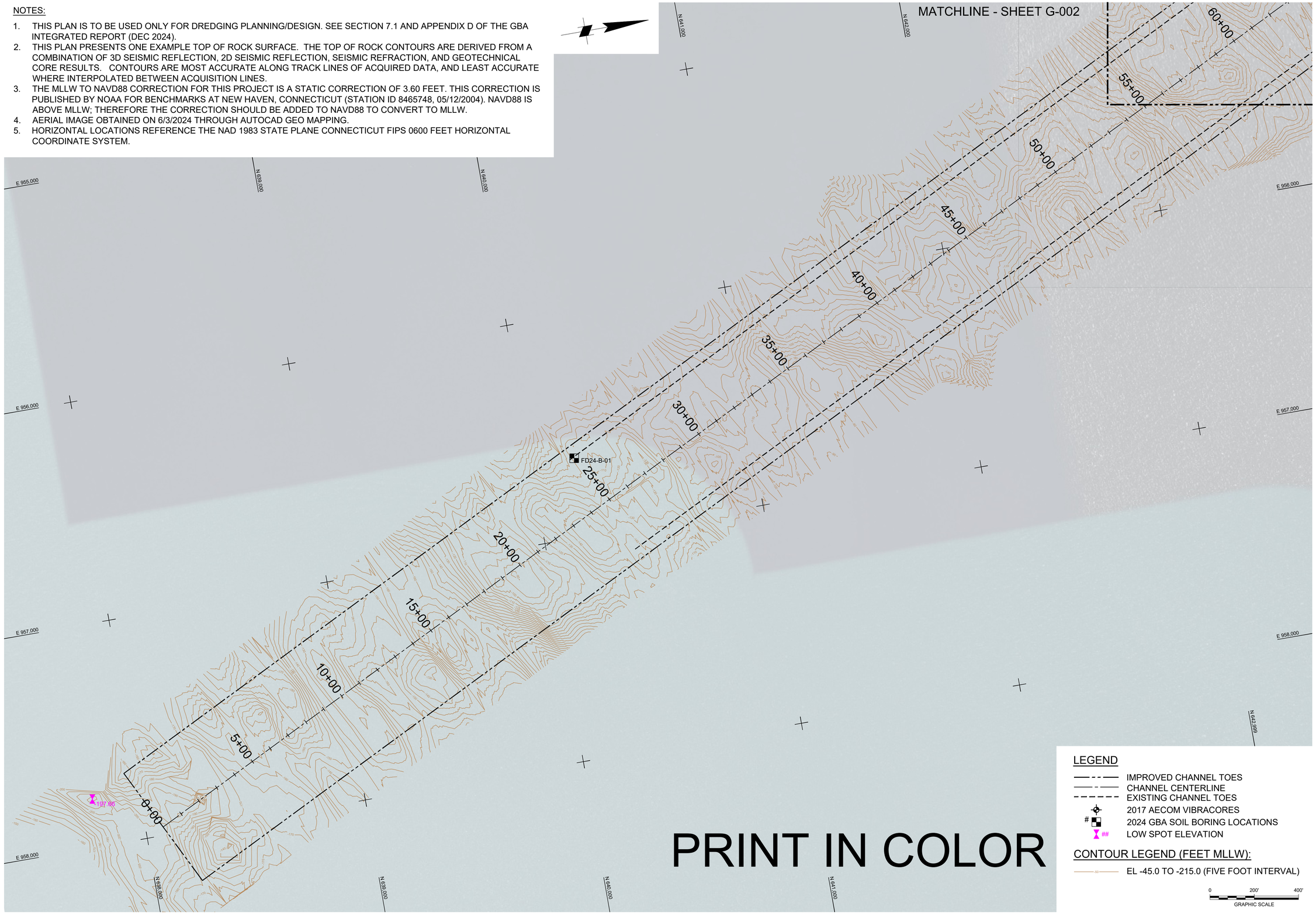
SUBSURFACE EPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

TOP OF ROCK FOOTPRINT
DEFINED BY ROCK ABOVE THE IMPROVED TEMPLATE AT EL. -44 MLLW

SHEET ID
P-023

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THIS PLAN PRESENTS ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK CONTOURS ARE DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. CONTOURS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.
3. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
4. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



PRINT IN COLOR

LEGEND

- IMPROVED CHANNEL TOES
- CHANNEL CENTERLINE
- EXISTING CHANNEL TOES
- 2017 AECOM VIBRACORES
- # 2024 GBA SOIL BORING LOCATIONS
- ## LOW SPOT ELEVATION

CONTOUR LEGEND (FEET MLLW):

- EL -45.0 TO -215.0 (FIVE FOOT INTERVAL)

0 200' 400'
GRAPHIC SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX-XX
SHEET 26 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit C Baltimore, MD 21237 Phone (410) 682-5595

PREPARED FOR: Coastal Science & Engineering

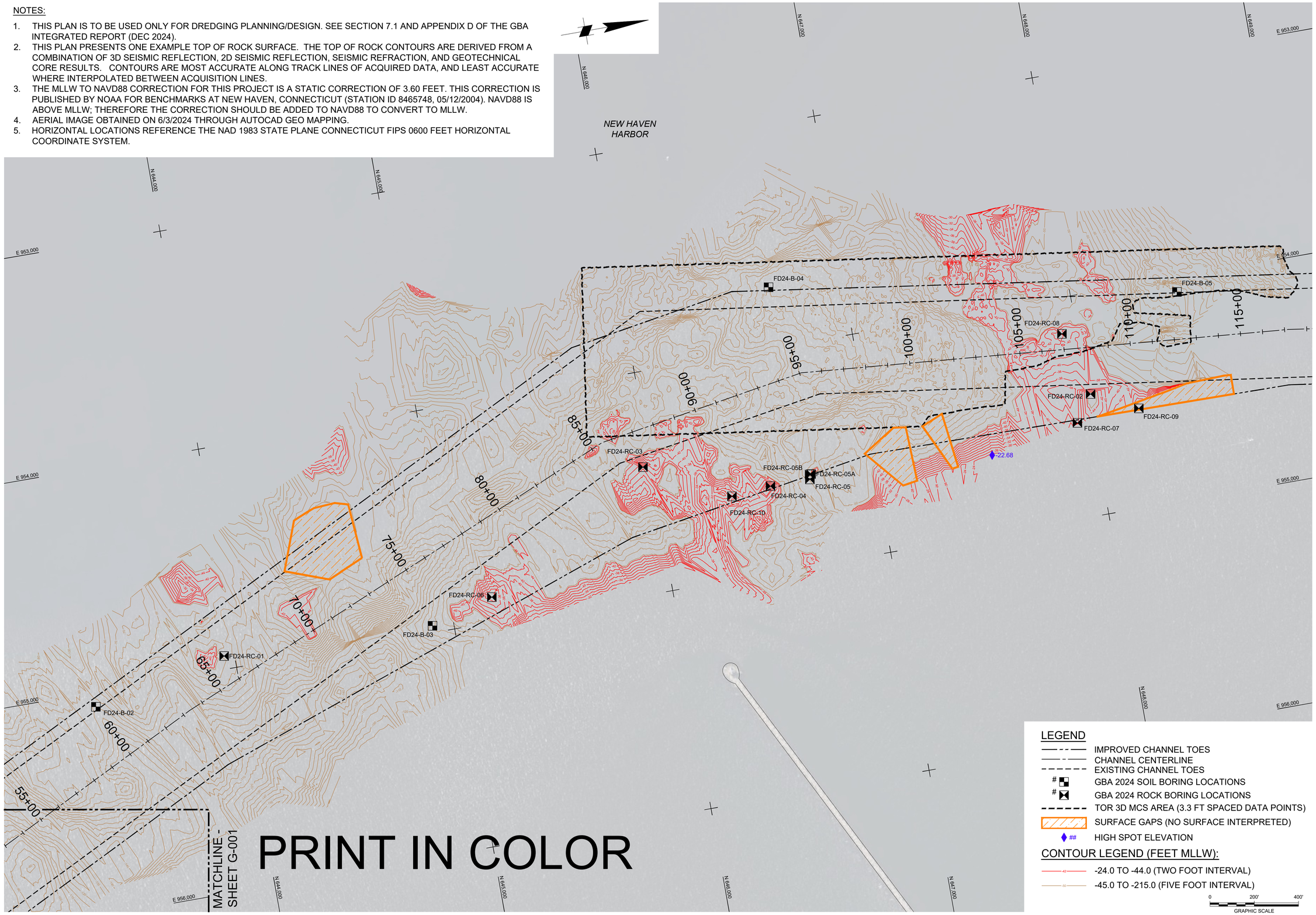
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

TOP OF ROCK CONTOURS

SHEET ID
P-024

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THIS PLAN PRESENTS ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK CONTOURS ARE DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. CONTOURS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.
3. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
4. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9065 Yellow Brick Rd. Unit C Baltimore, MD 21237 Phone (410) 682-3595

PREPARED FOR: Gardiner Geo-Technical Consultant

DESIGNED BY: USACE		ISSUE DATE: JANUARY 2025	
DRAWN BY: ECC		TASK ORDER NO.: W912WJ24F0024	
CHECKED BY: BJC		CONTRACT NO.: W912DS22D0017	
SUBMITTED BY:		DRAWING CODE: XXX-XXX	
SIZE: ANSI 'D'	SCALE: AS SHOWN	SHEET 27 OF 220	

SUBSURFACE EPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

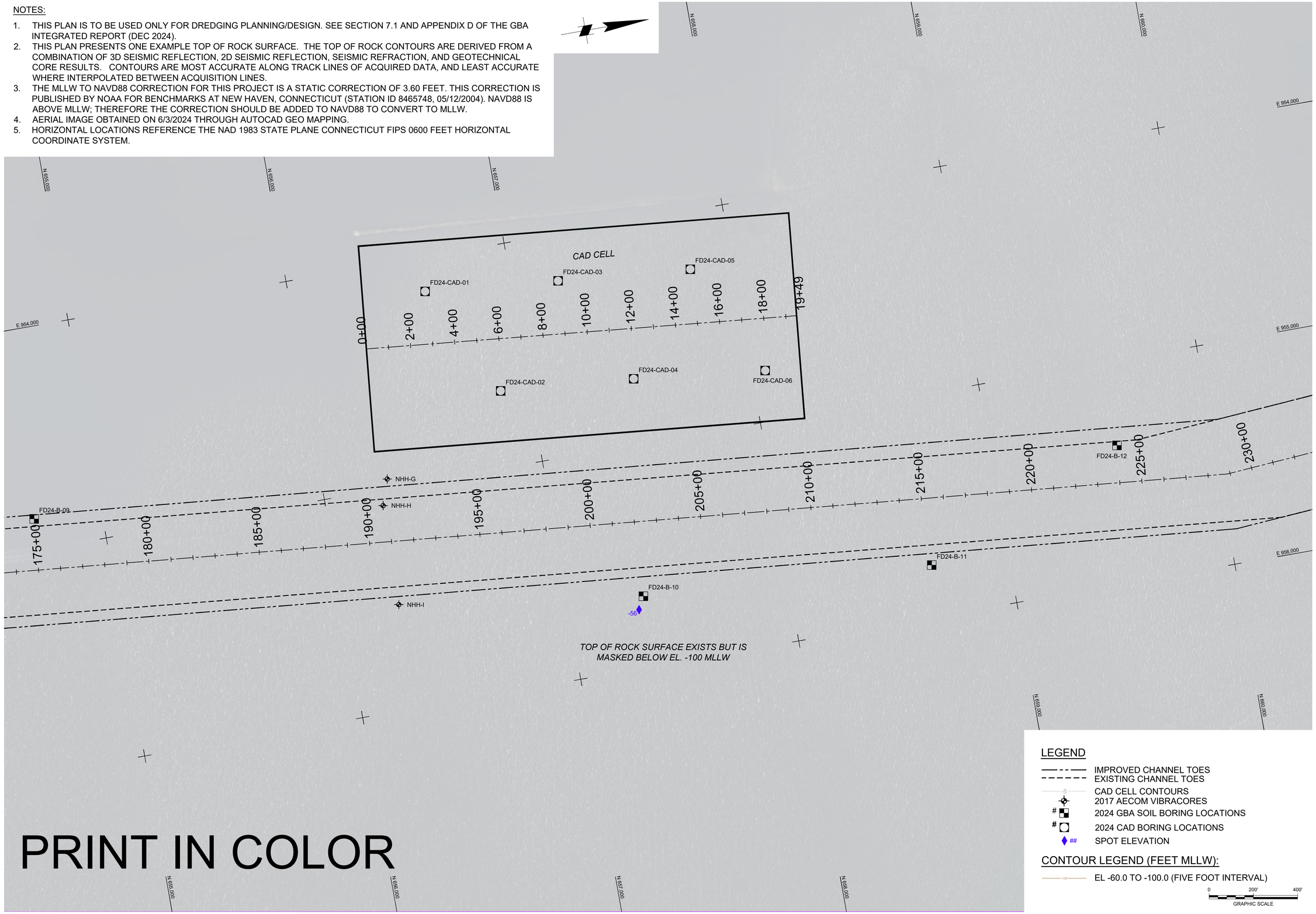
TOP OF ROCK CONTOURS

SHEET ID

P-025

NOTES:

1. THIS PLAN IS TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (DEC 2024).
2. THIS PLAN PRESENTS ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK CONTOURS ARE DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. CONTOURS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.
3. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCHMARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
4. AERIAL IMAGE OBTAINED ON 6/3/2024 THROUGH AUTOCAD GEO MAPPING.
5. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.



LEGEND

- IMPROVED CHANNEL TOES
- EXISTING CHANNEL TOES
- CAD CELL CONTOURS
- 2017 AECOM VIBRACORES
- # 2024 GBA SOIL BORING LOCATIONS
- # 2024 CAD BORING LOCATIONS
- ## SPOT ELEVATION

CONTOUR LEGEND (FEET MLLW):

- EL -60.0 TO -100.0 (FIVE FOOT INTERVAL)

0 200' 400'
GRAPHIC SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCZ
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: XXX-XXX
SHEET 28 OF 220

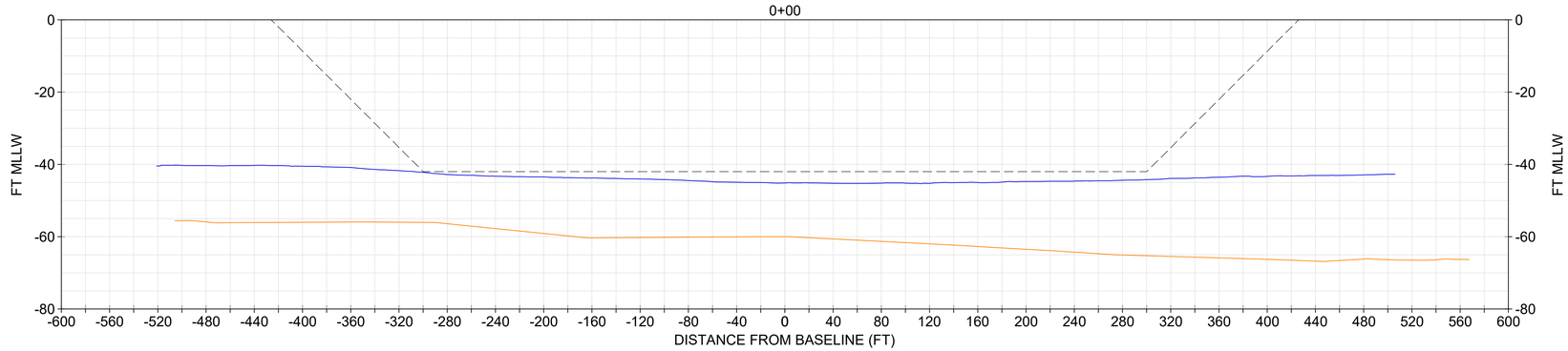
PREPARED BY:
GBA
9009 Yellow Brick Rd.
Suite 1
Baltimore, MD 21237
Phone (410) 682-5595
ENGINEERS ★ SURVEYORS

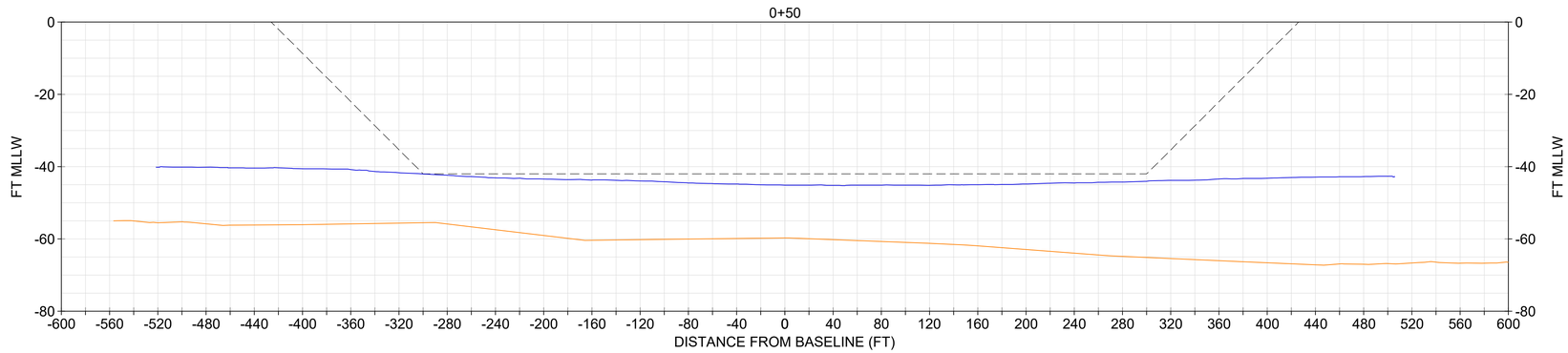
PREPARED FOR:
Coastal Protection & Restoration Division

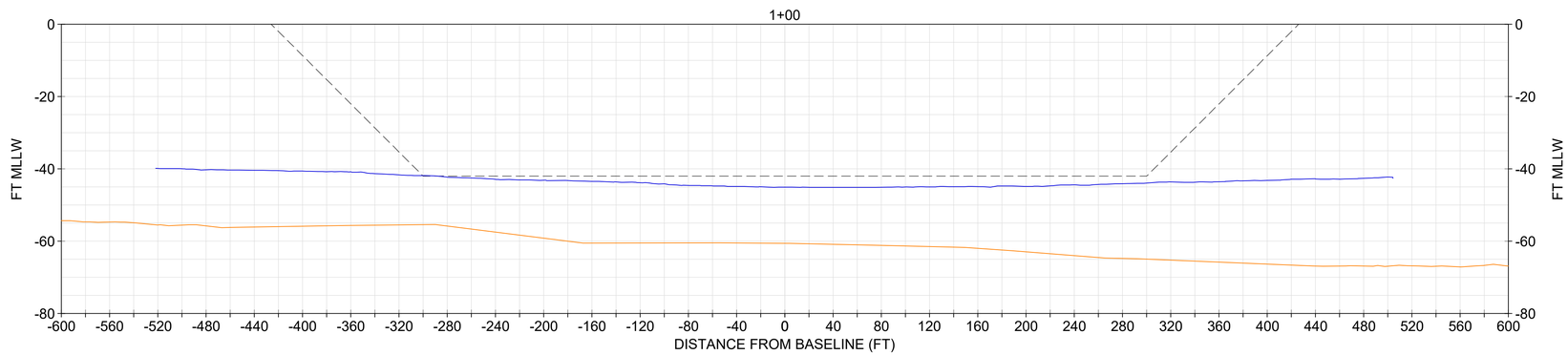
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

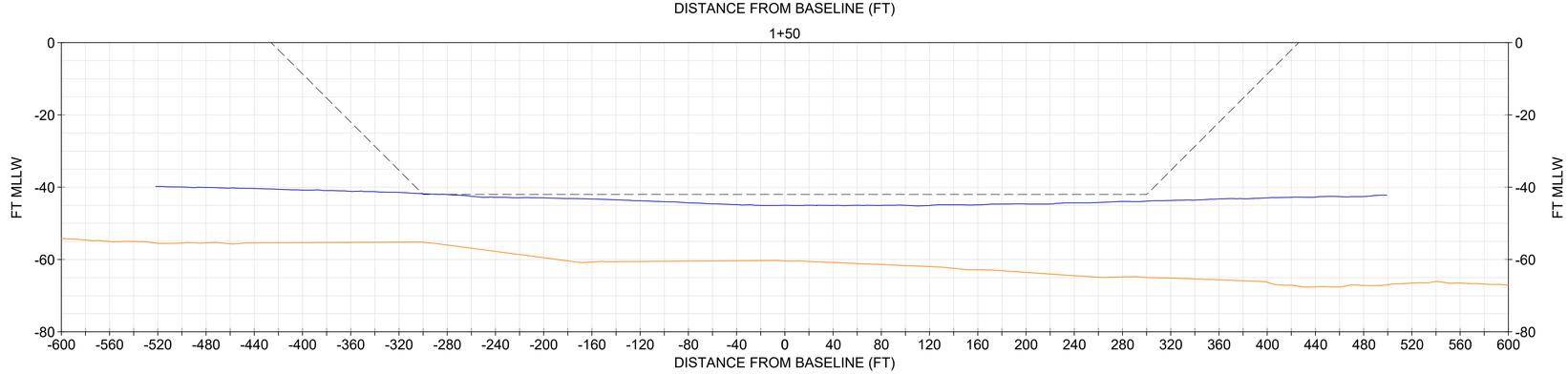
TOP OF ROCK CONTOURS

SHEET ID
P-026









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 22 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

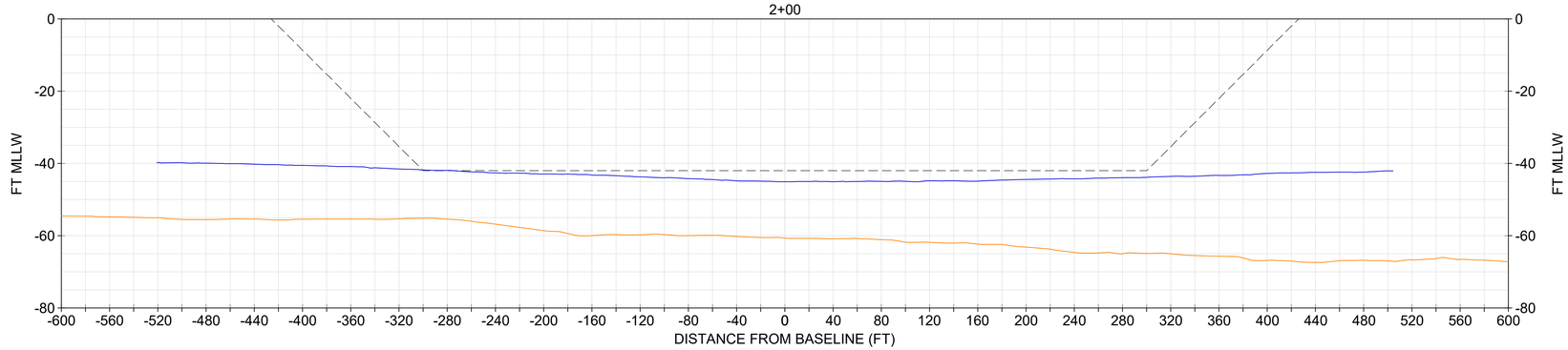
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

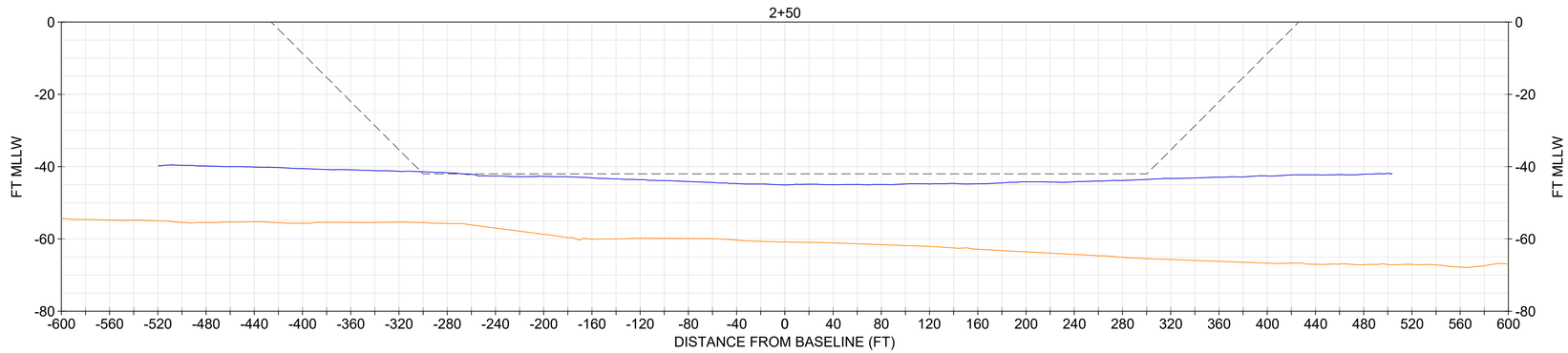
PREPARED FOR:
Coastal Partners
CONNECTICUT

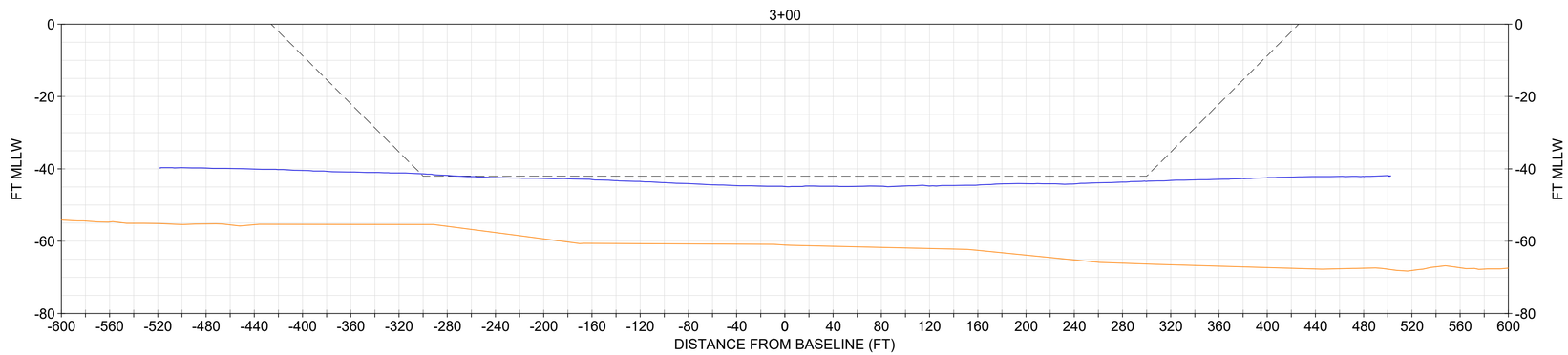
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

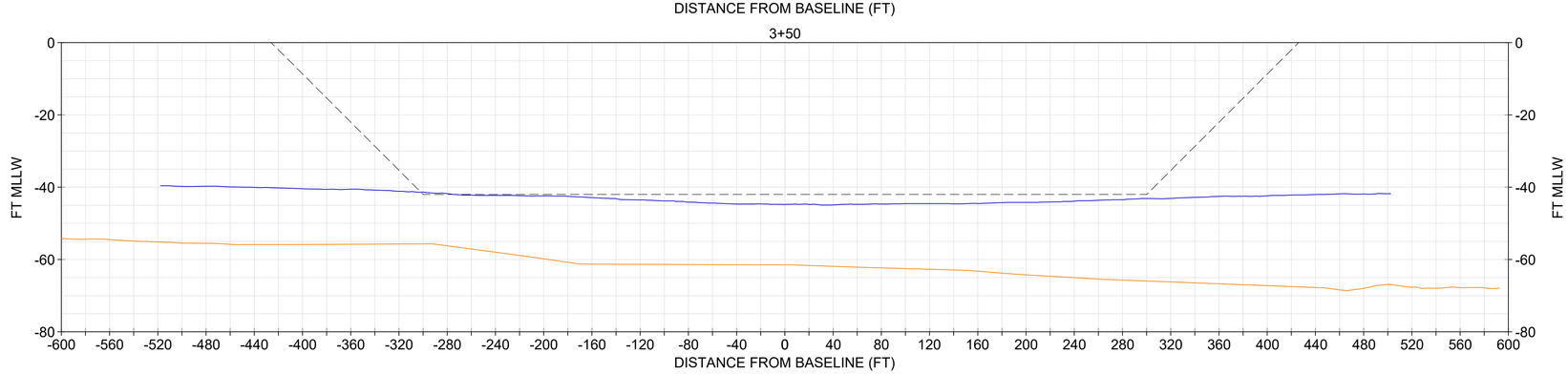
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-001









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 23 OF 220

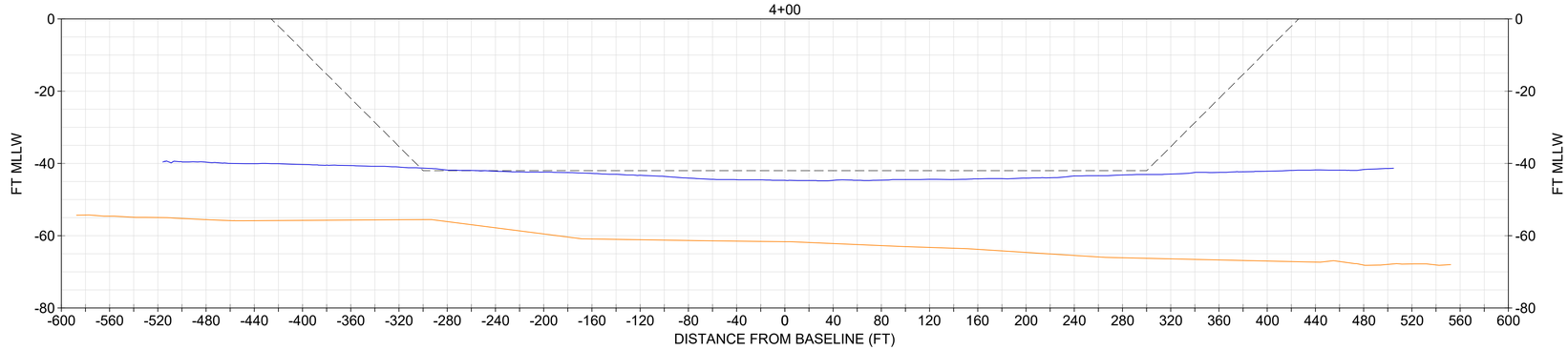
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

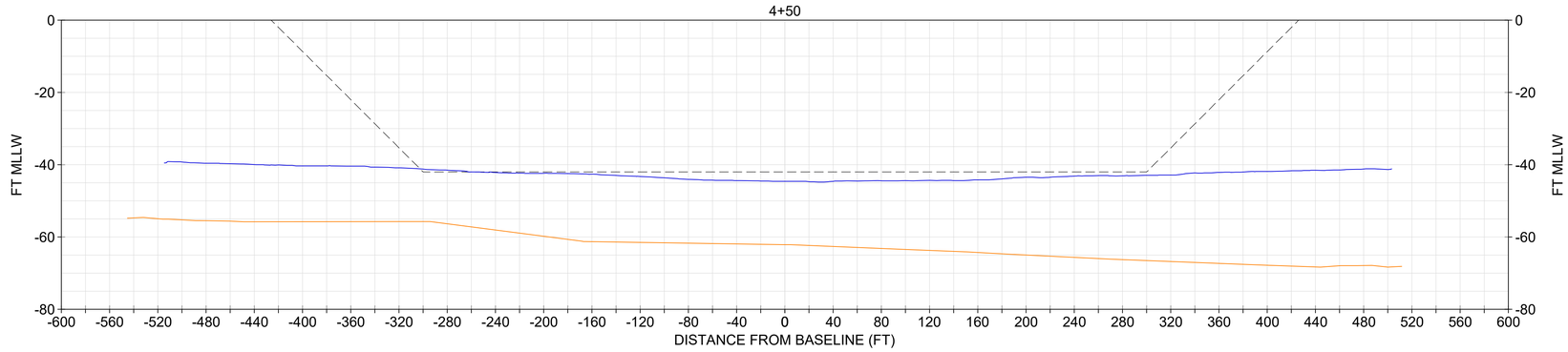
PREPARED FOR: Coastal Partners

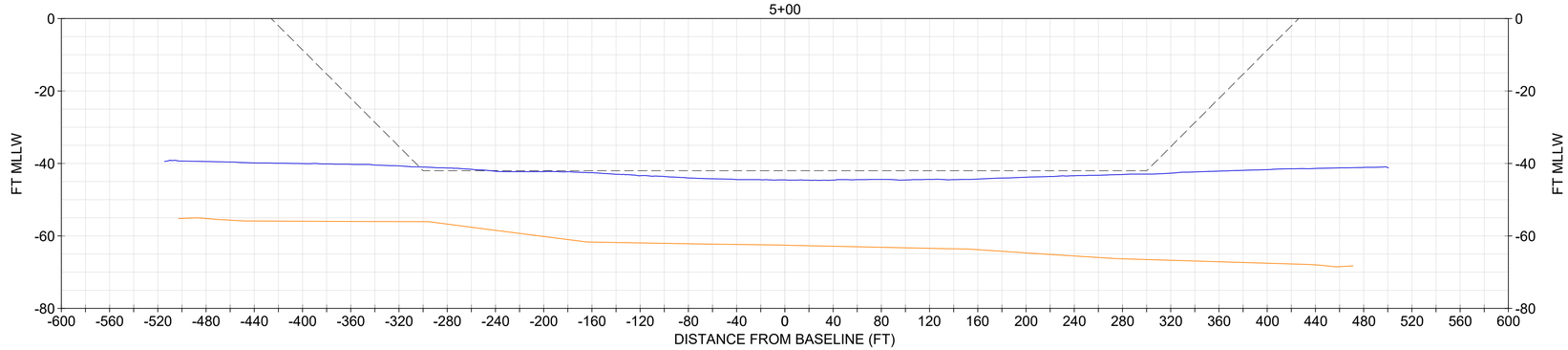
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

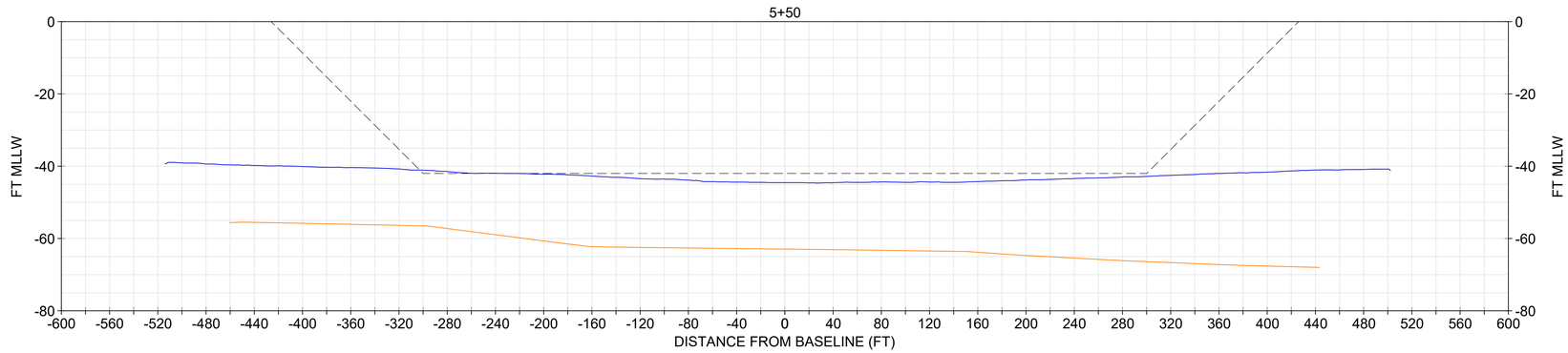
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-002









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 24 OF 220

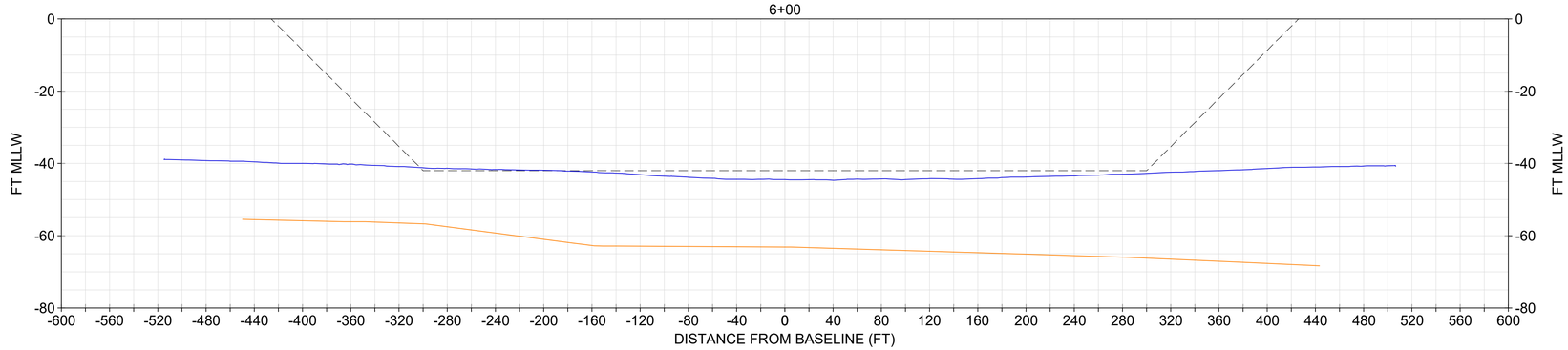
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

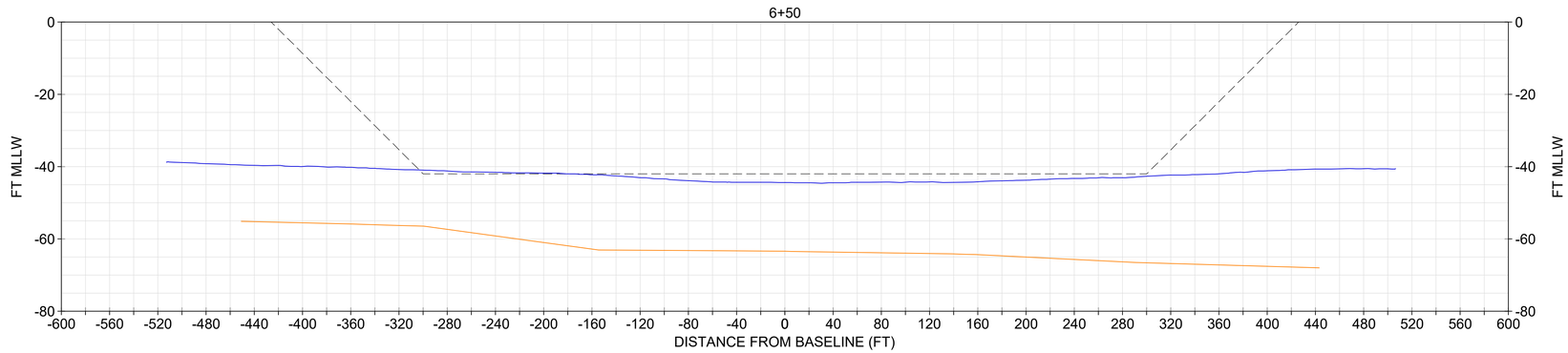
PREPARED FOR: Coastal Partners

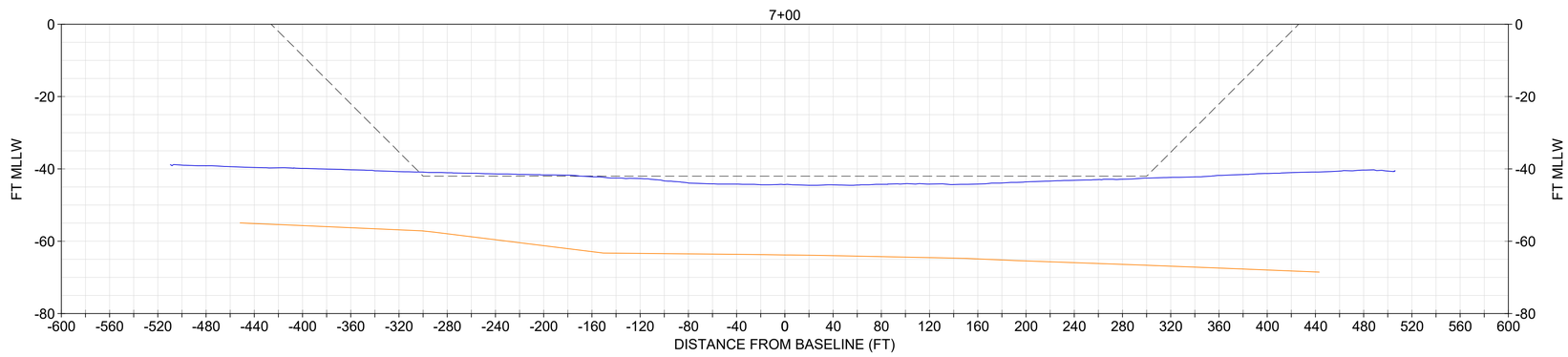
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

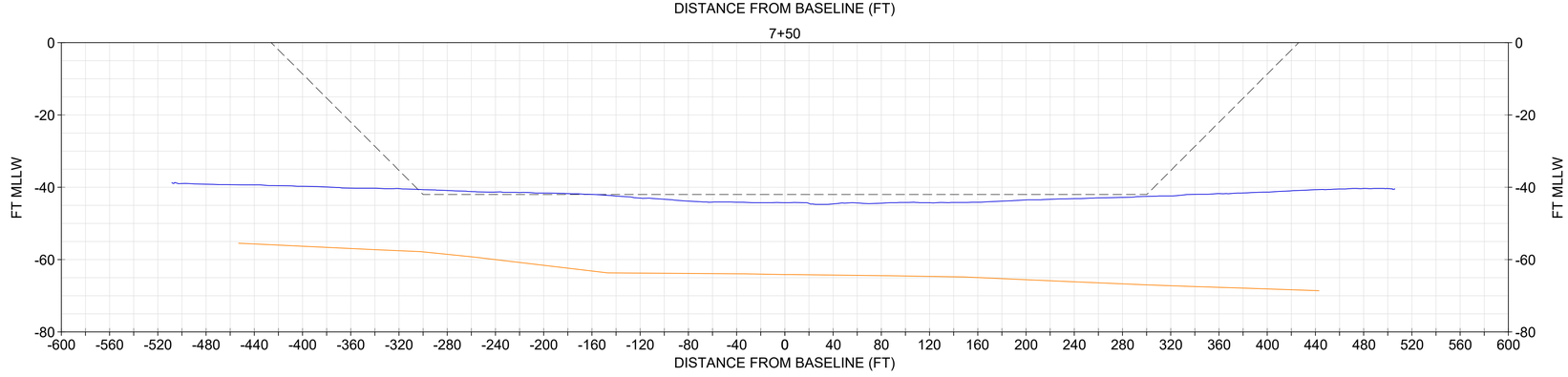
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-003









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 25 OF 220

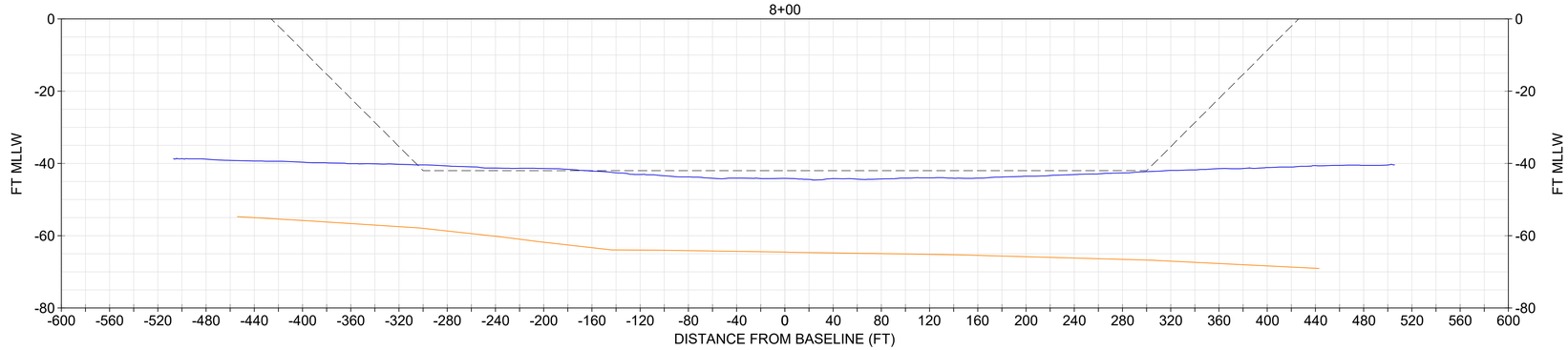
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

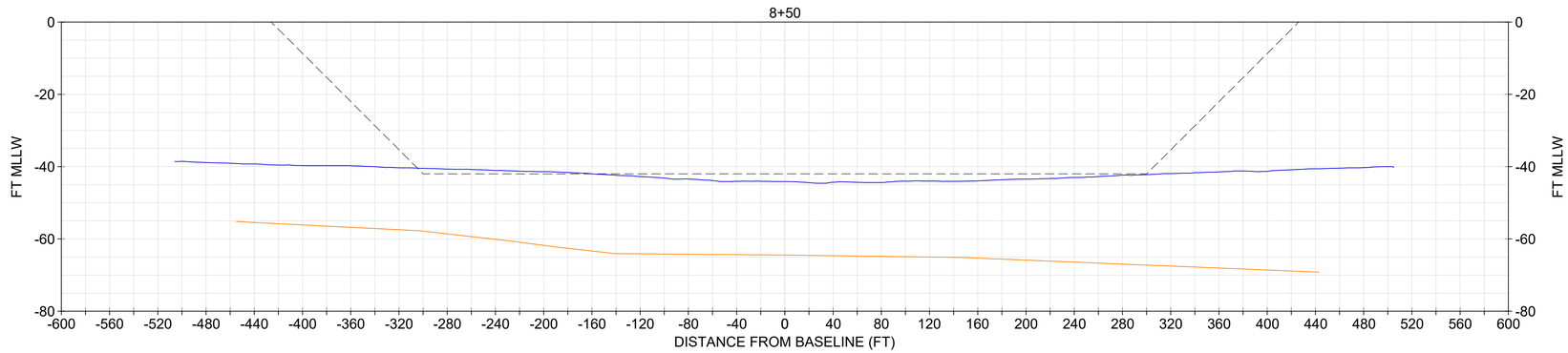
PREPARED FOR: Capital Partners DEVELOPMENT GROUP

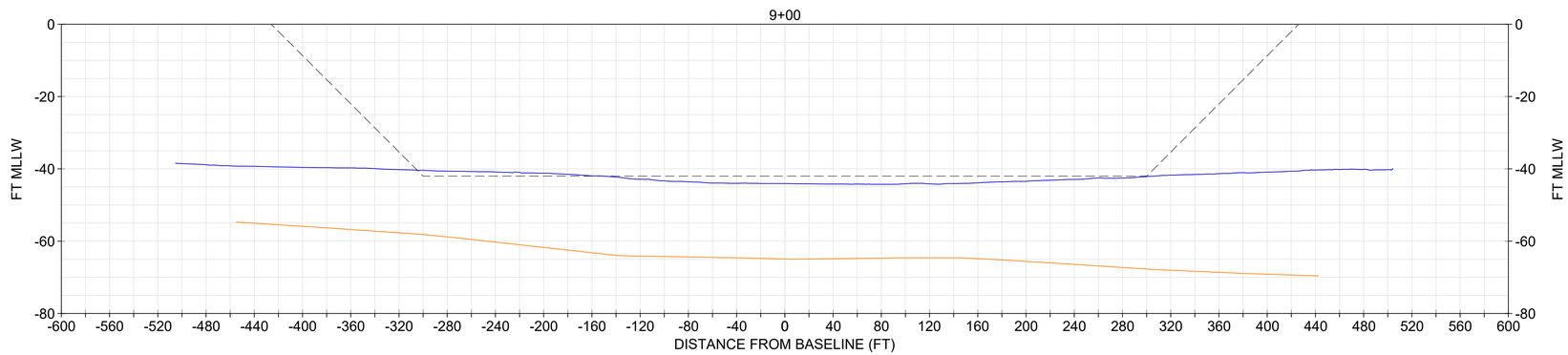
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

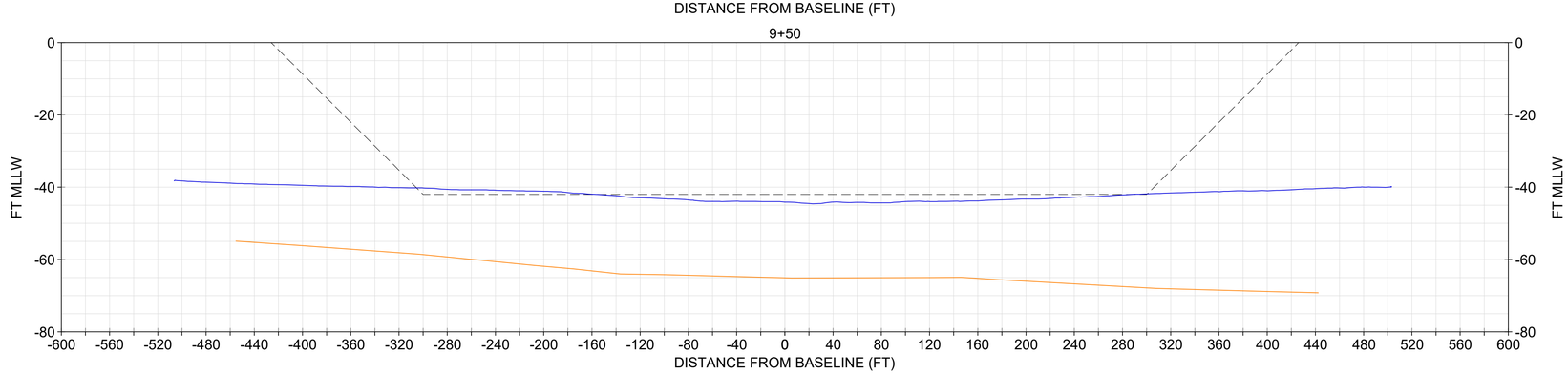
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-004









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

VERTICAL SCALE 0 20' 40'
HORIZONTAL SCALE 0 60' 120'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 26 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

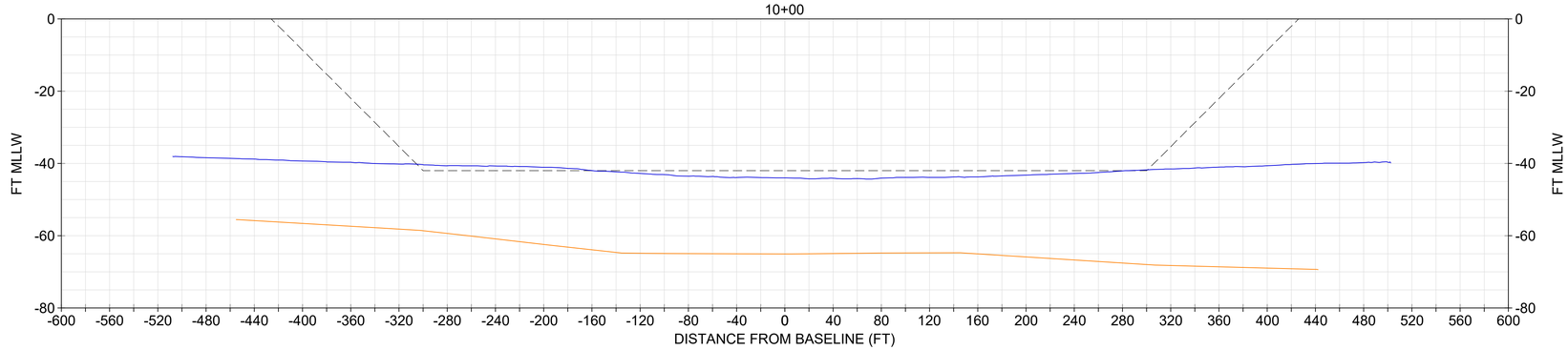
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

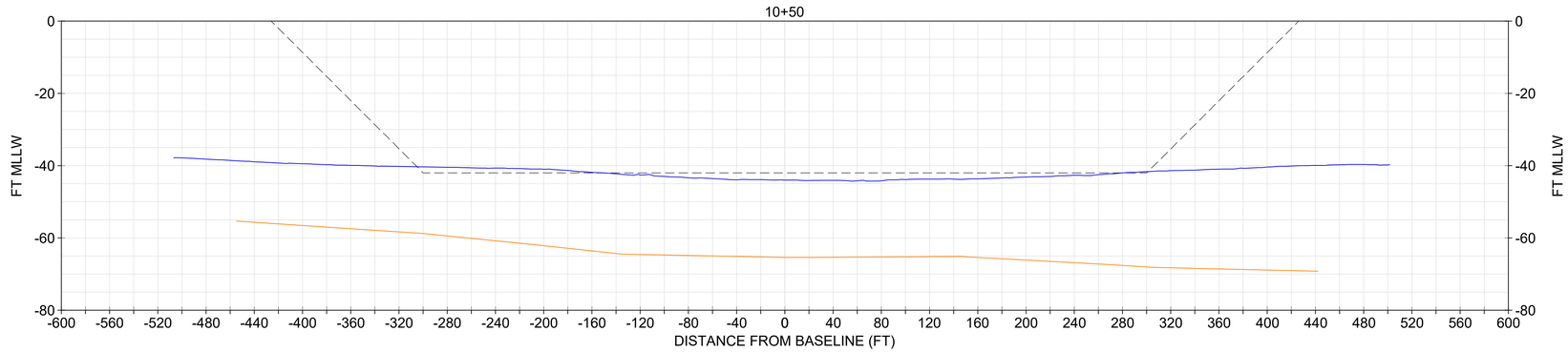
PREPARED FOR: Coastal Partners

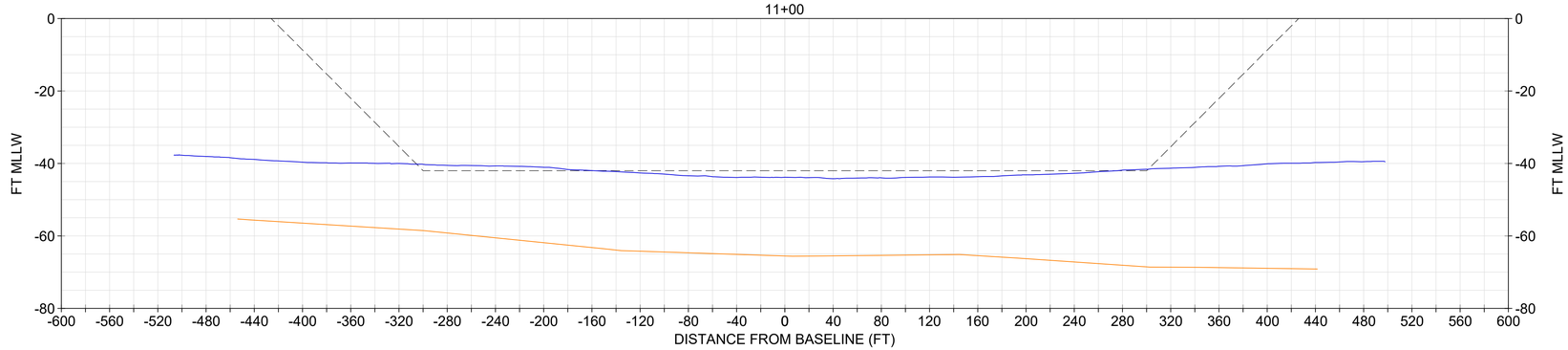
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

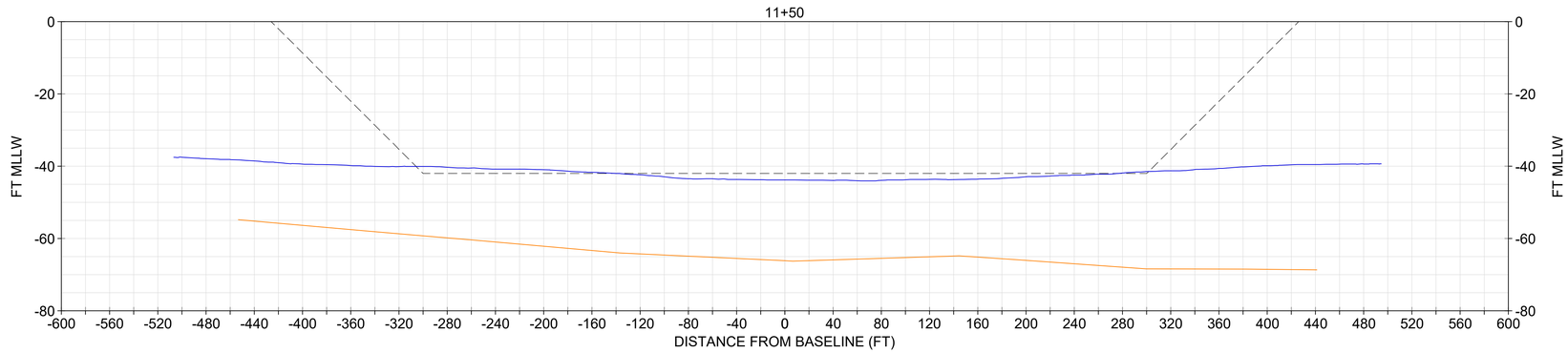
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-005









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 27 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

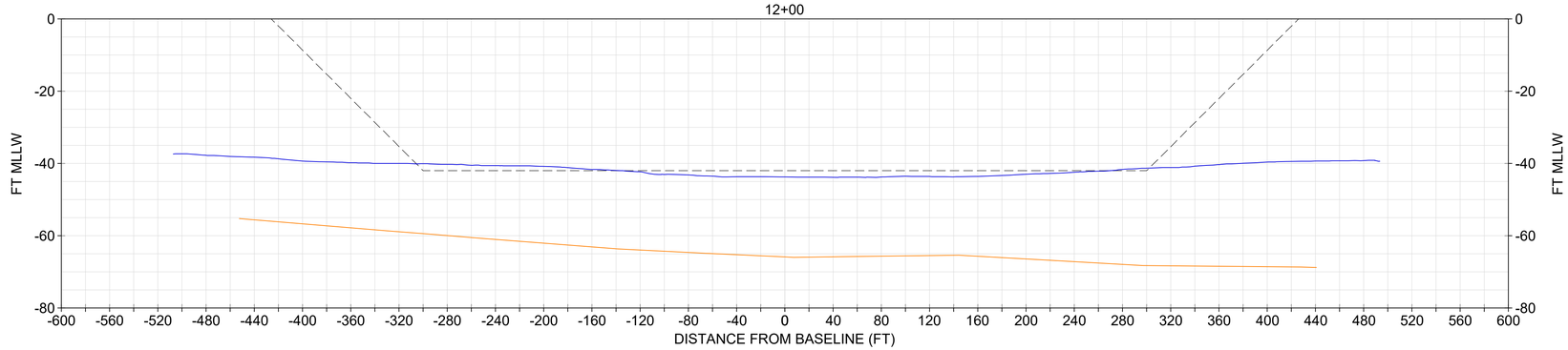
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

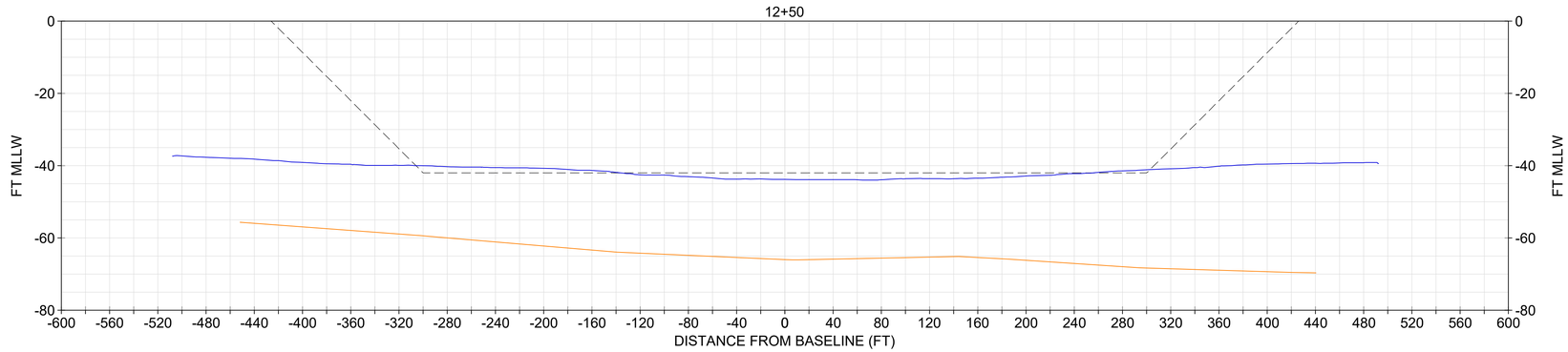
PREPARED FOR:
Coastal Partners
CONNECTING PEOPLE TO THE SHORE

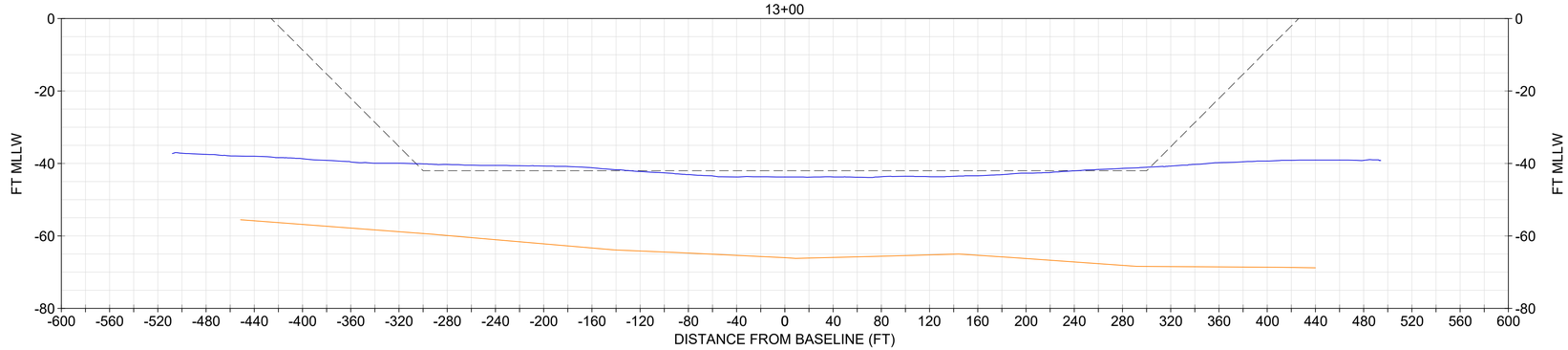
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

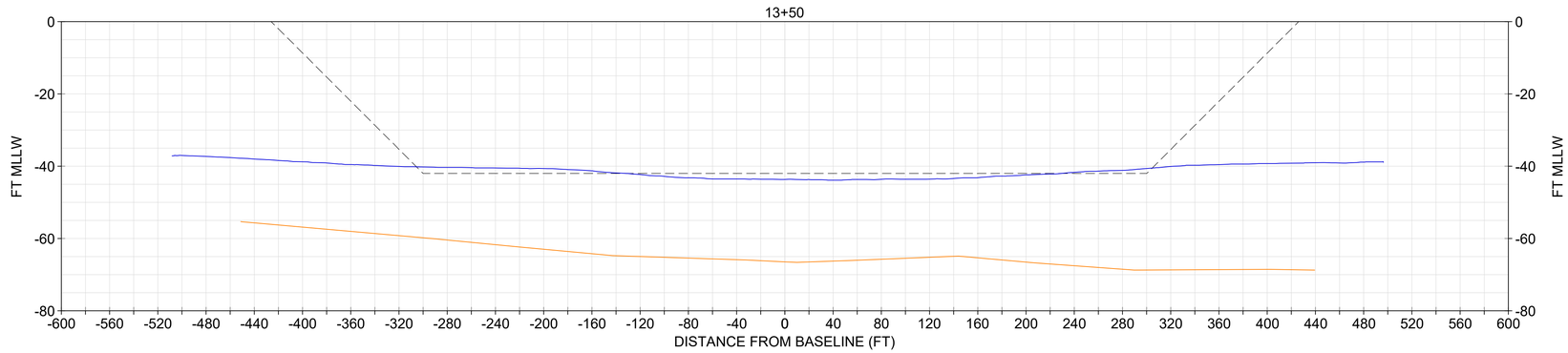
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-006









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

VERTICAL SCALE 0 20' 40'
HORIZONTAL SCALE 0 60' 120'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 28 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

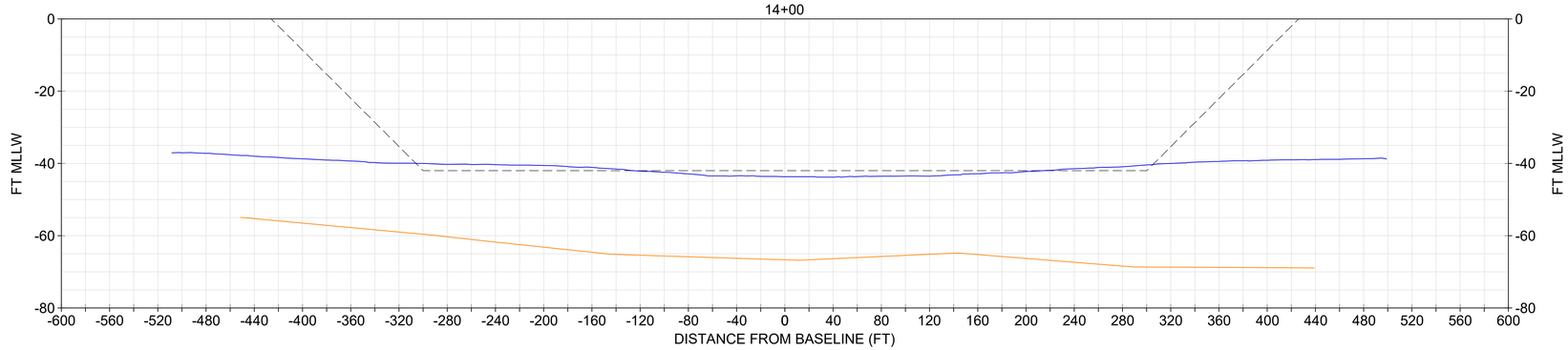
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
6008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

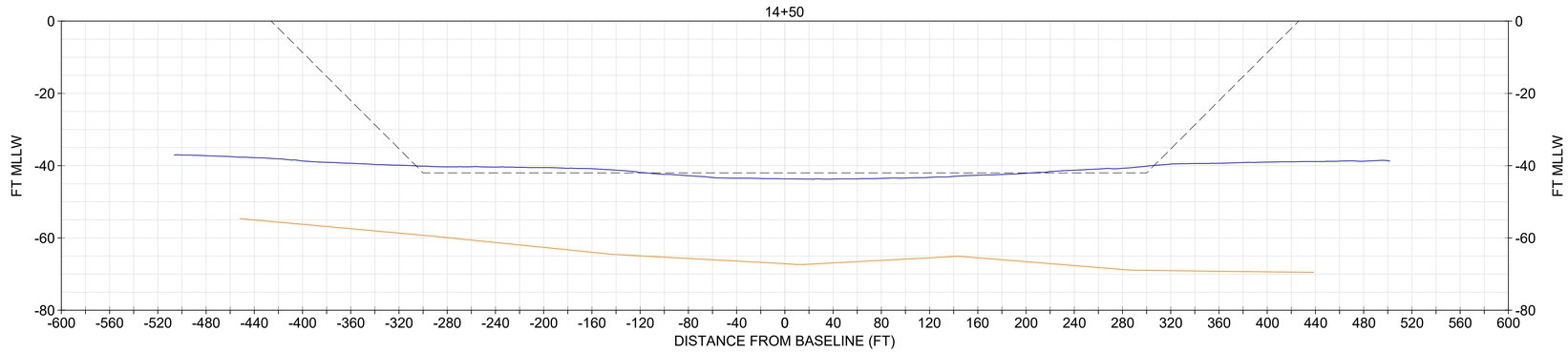
PREPARED FOR: Coastal Partners

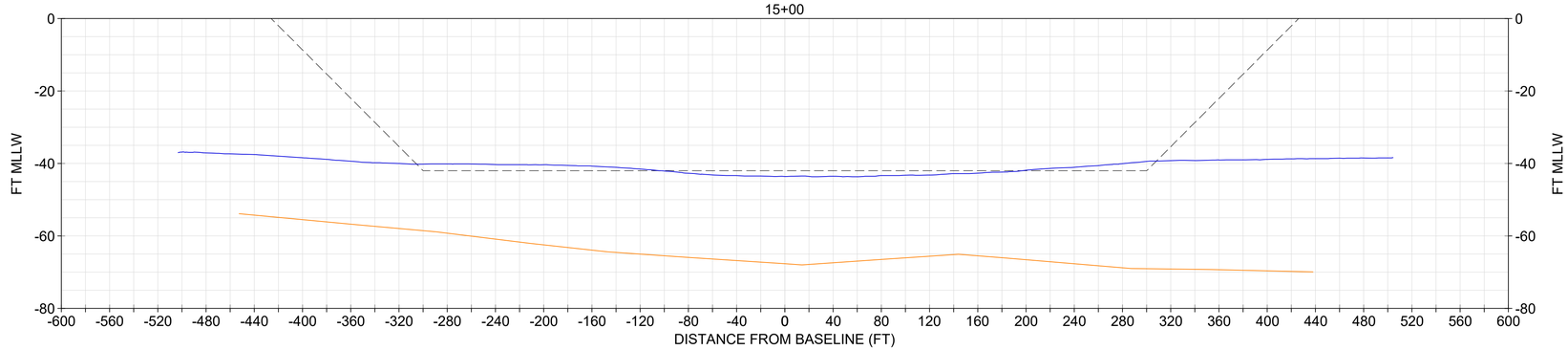
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

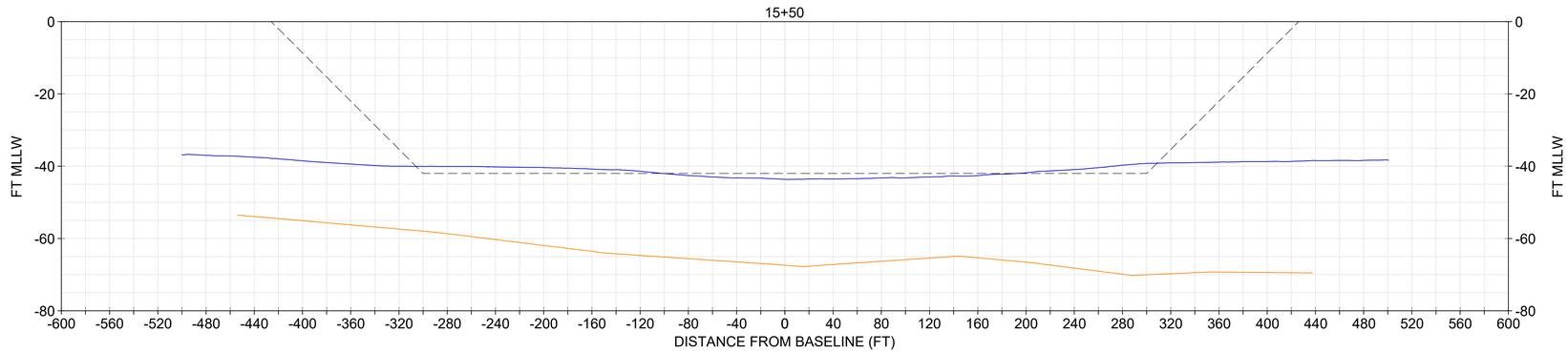
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-007









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 29 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

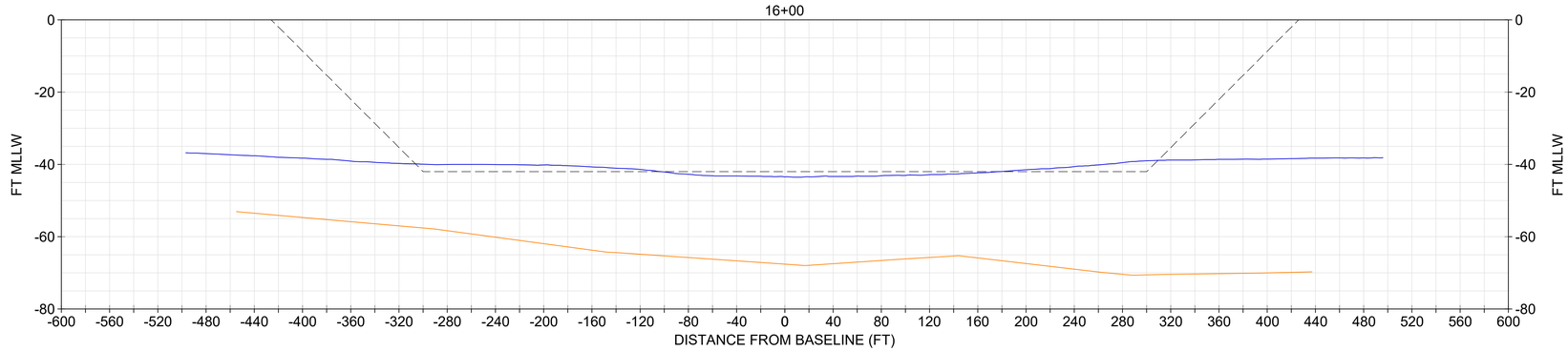
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

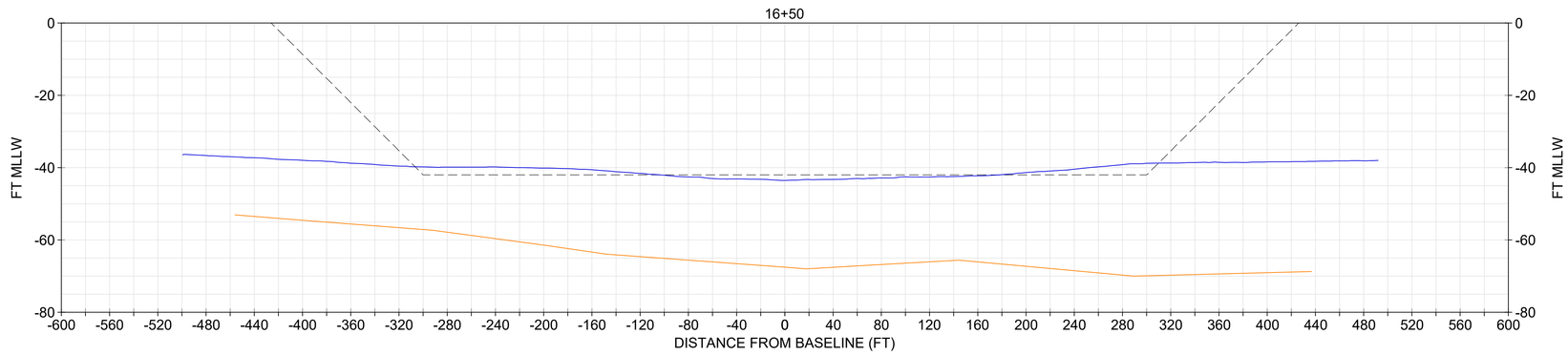
PREPARED FOR: Coastal Partners

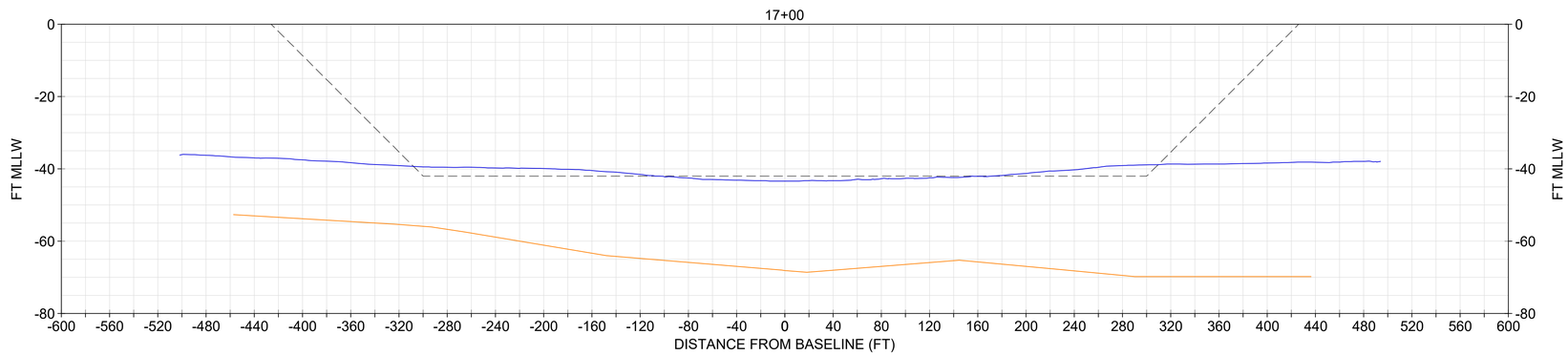
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

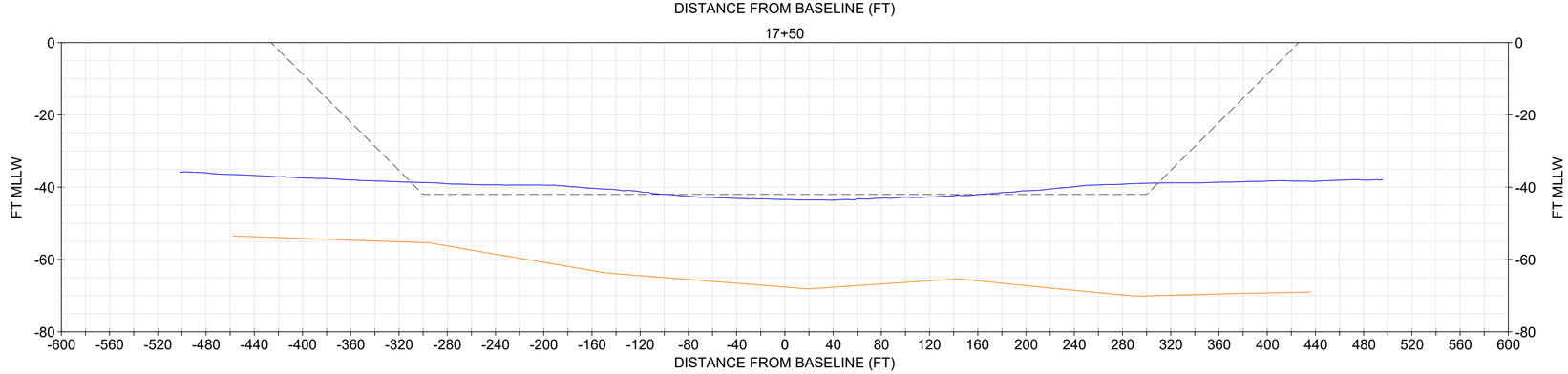
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-008









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 30 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

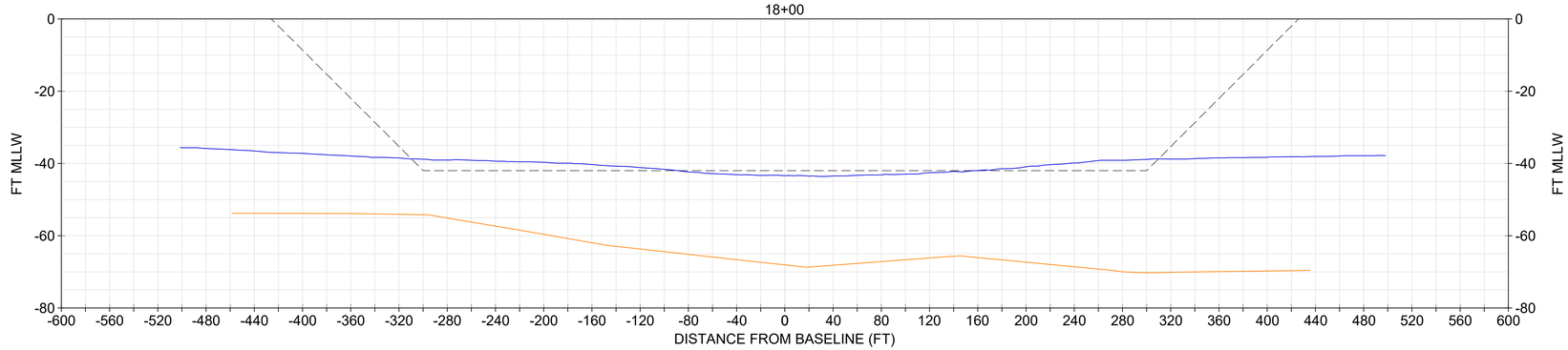
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

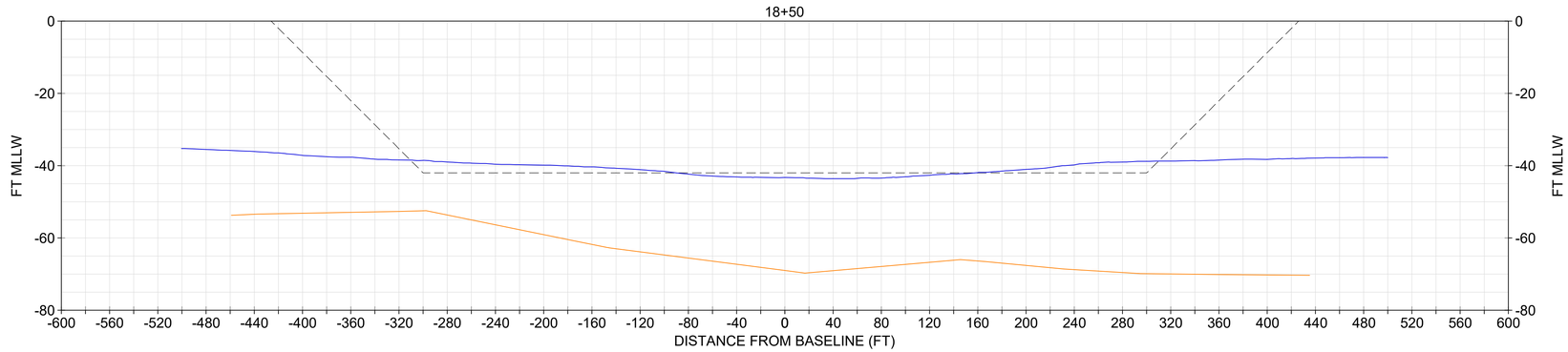
PREPARED FOR: Coastal Partners

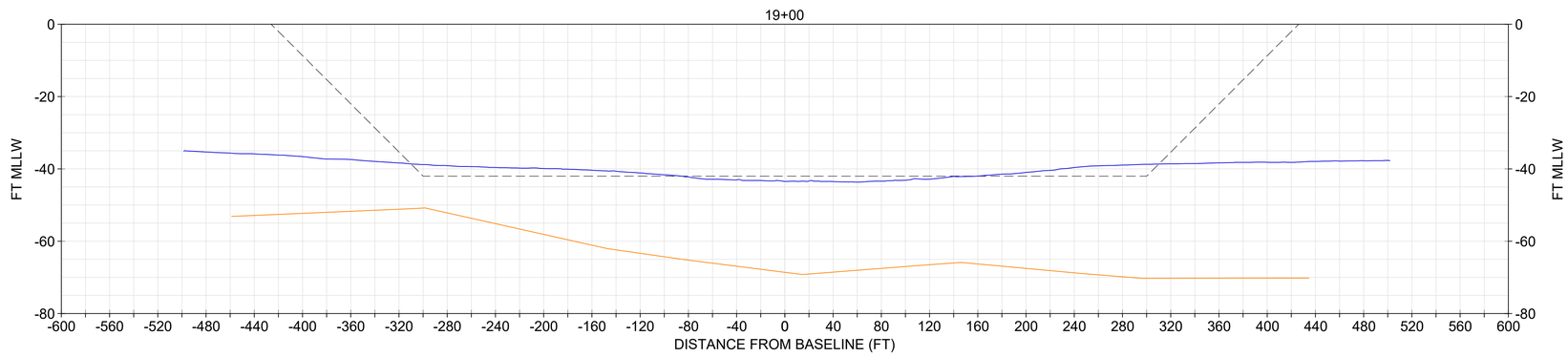
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

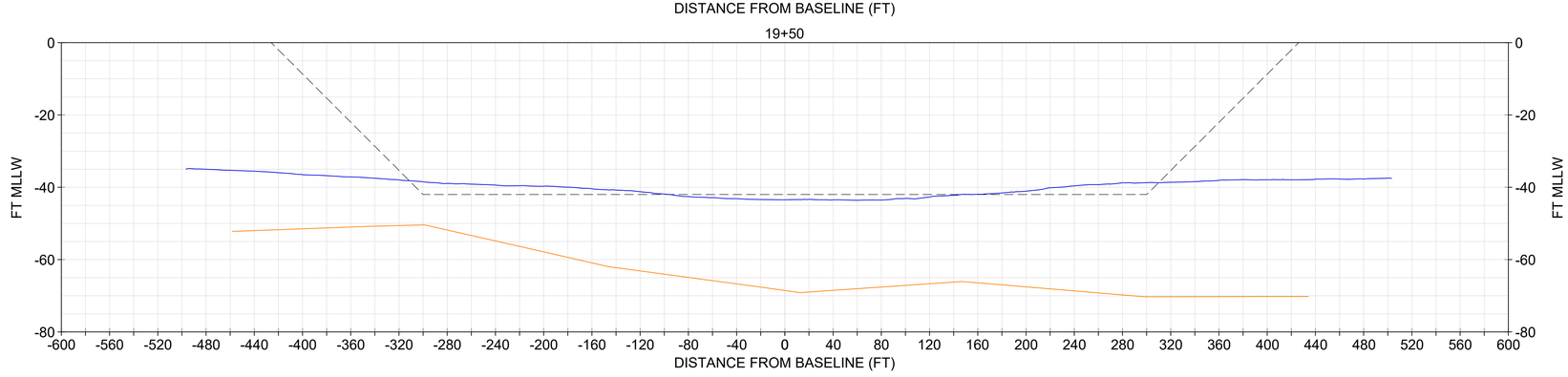
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-009









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 31 OF 220

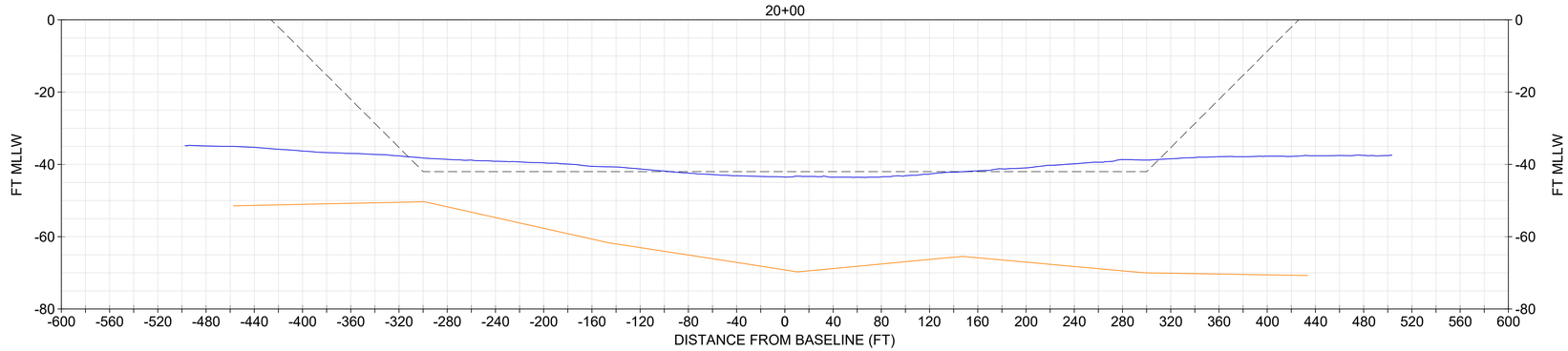
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

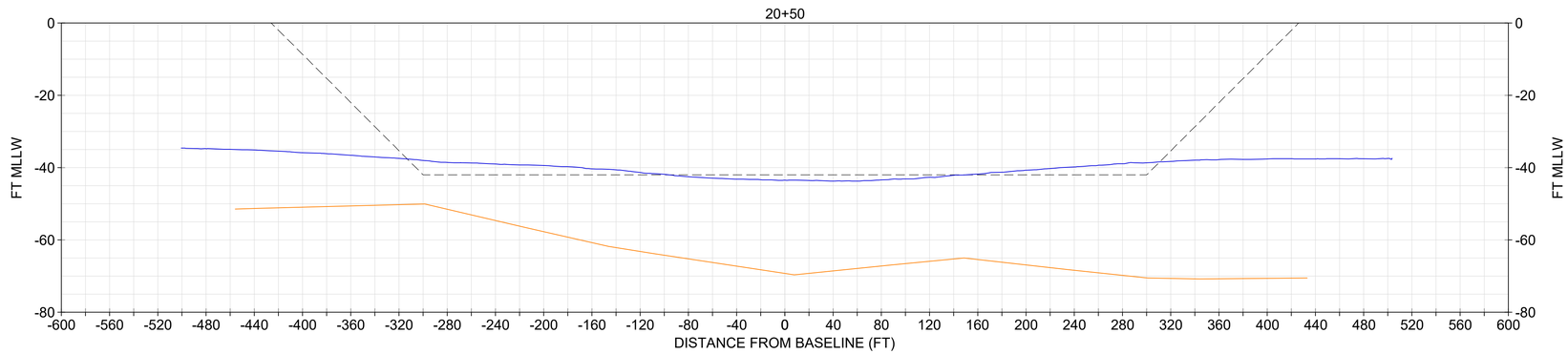
PREPARED FOR: Coastal Partners

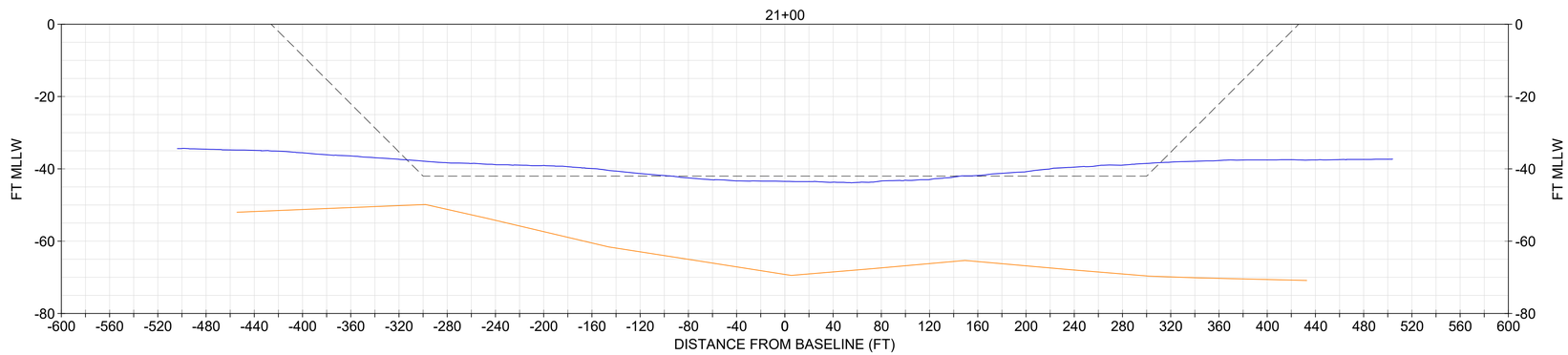
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

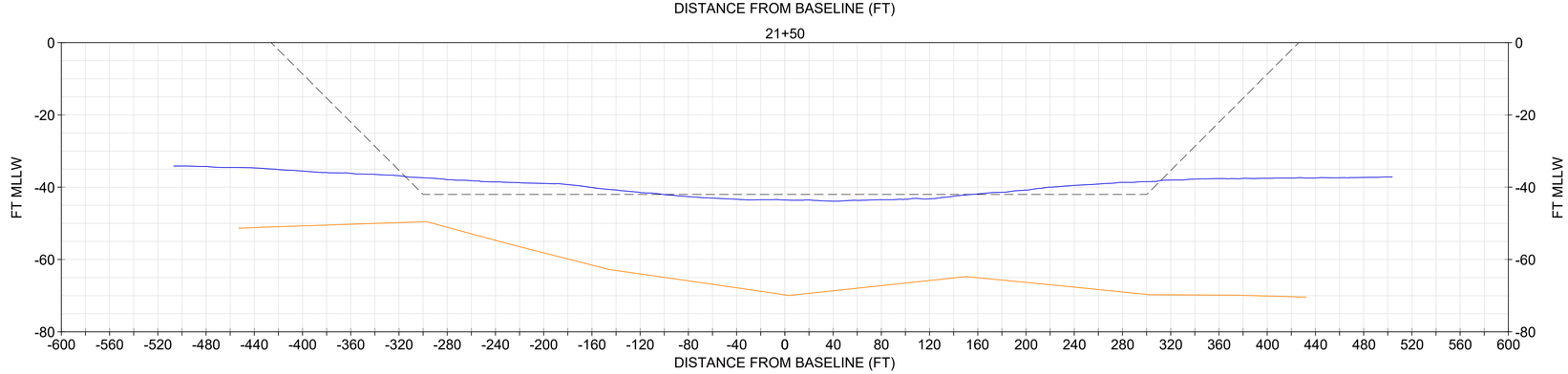
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-010









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: -
SUBMITTED BY: DOU
SHEET 32 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

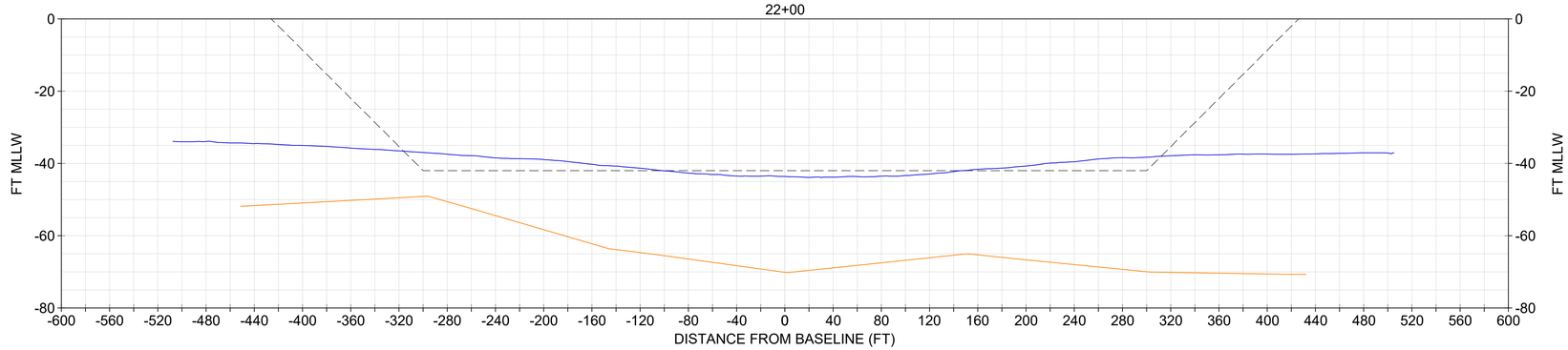
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

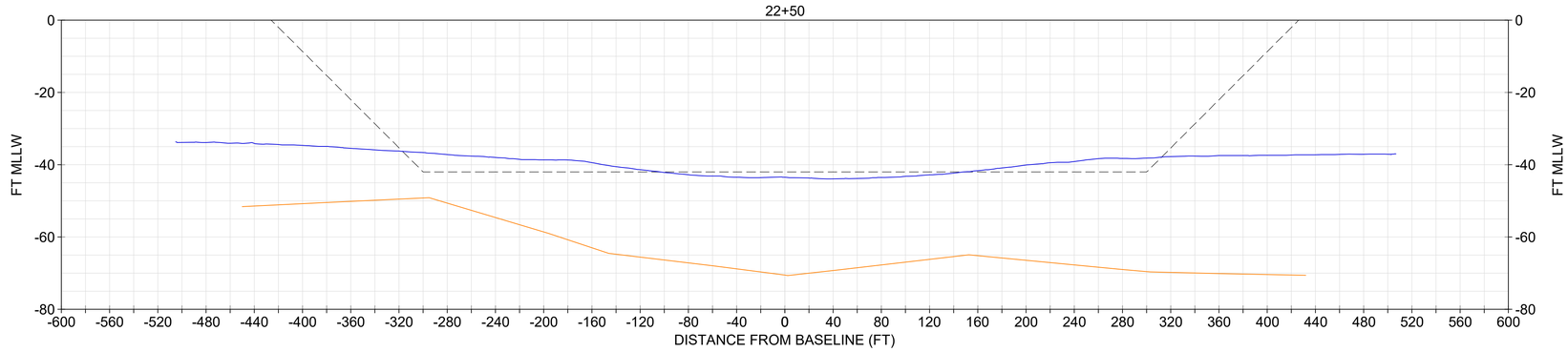
PREPARED FOR: Coastal Partners

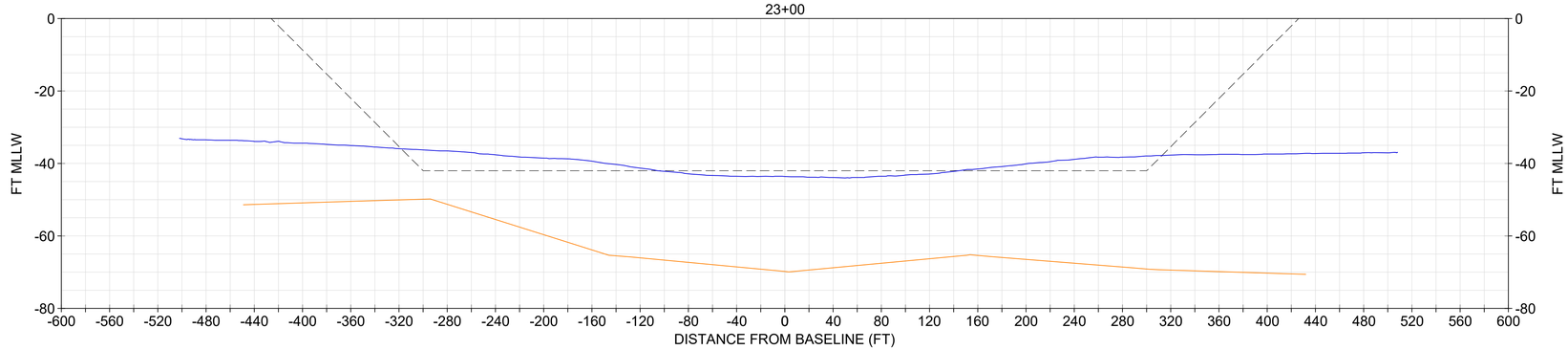
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

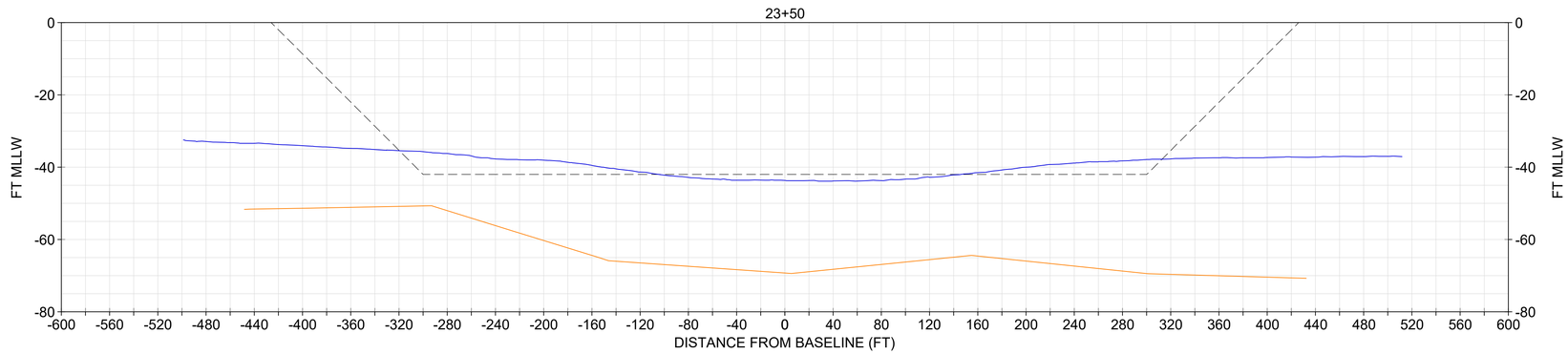
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-011









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: -
SUBMITTED BY: DOU
SHEET 33 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

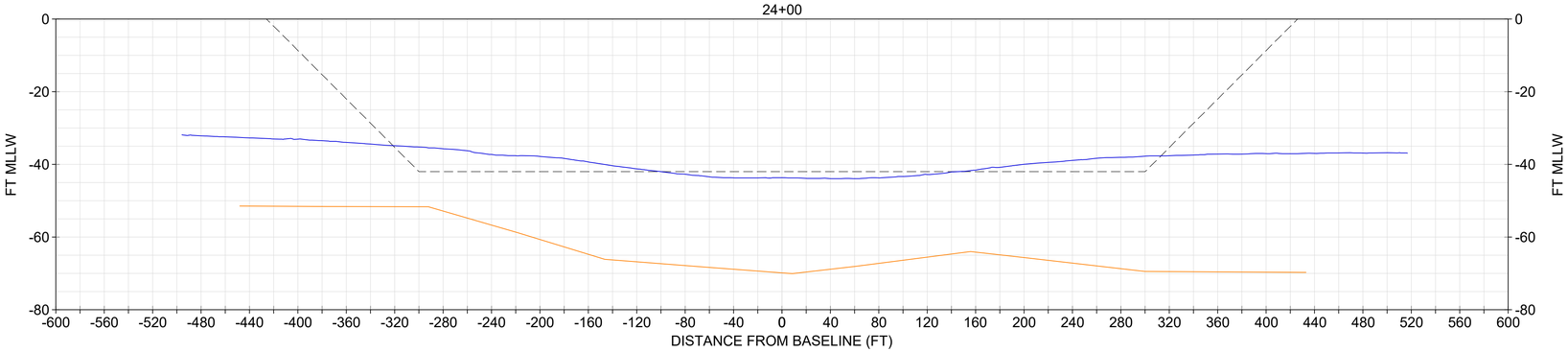
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

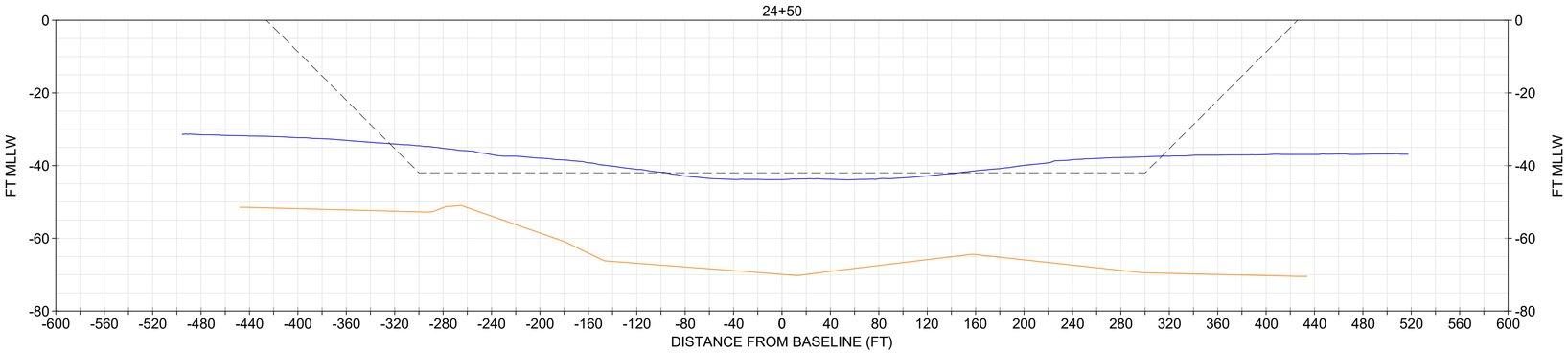
PREPARED FOR: Coastal Partners

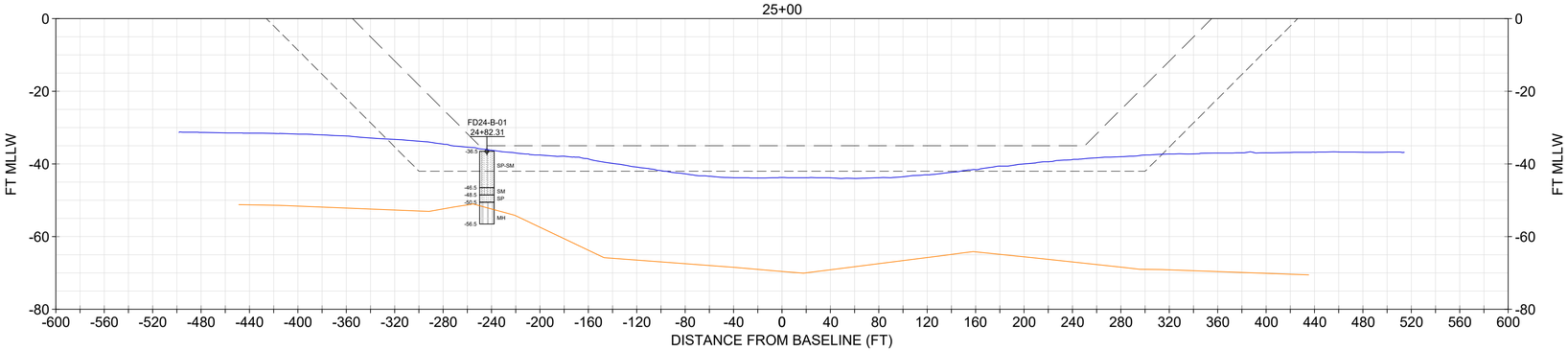
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

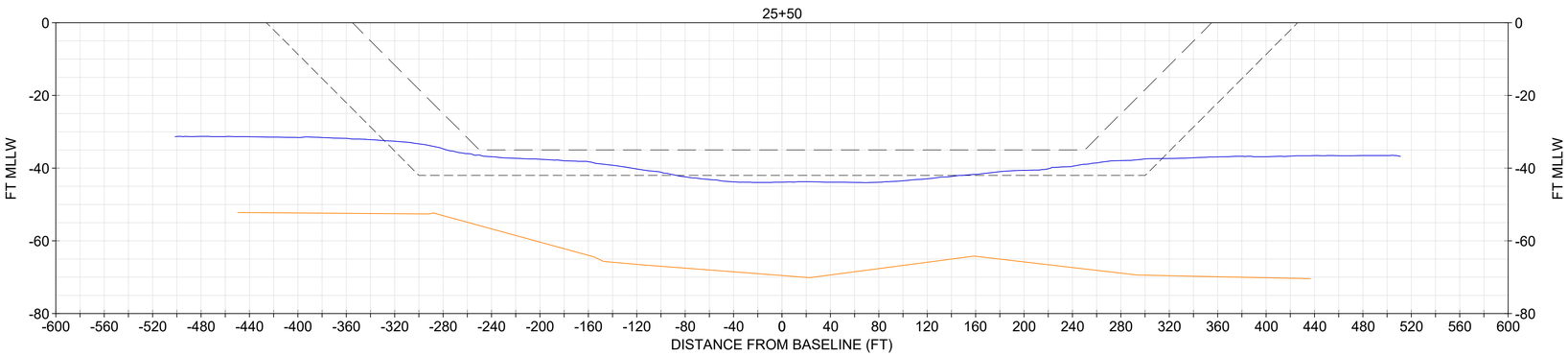
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-012









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-01	-36.5	-56.5	GBA	7/22/2024

CORE LEGEND
- SP-SM (POORLY GRADED SAND WITH SILT)
- SM (SILTY SAND)
- SP (POORLY GRADED SAND)
- MH (ELASTIC SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: -
SUBMITTED BY: DCU
SHEET 34 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

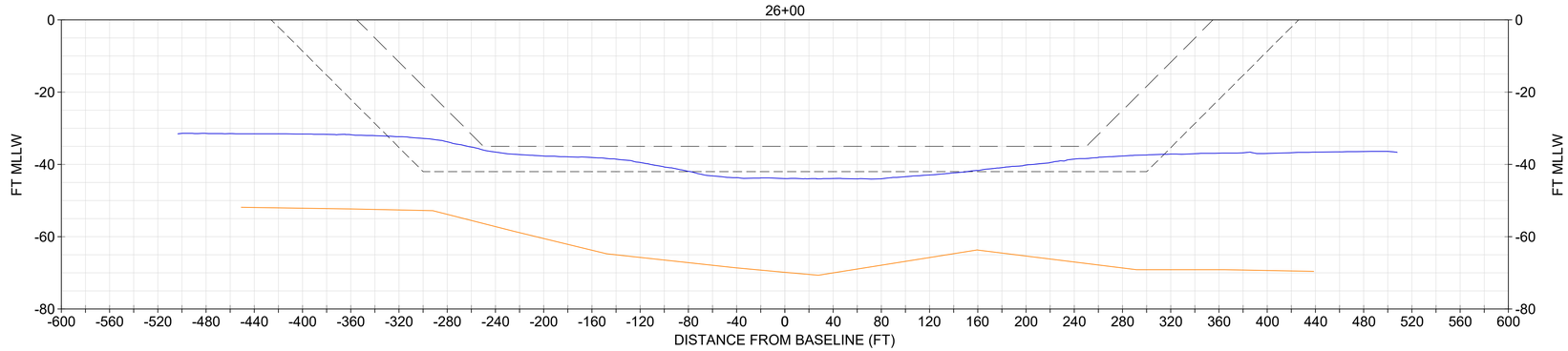
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

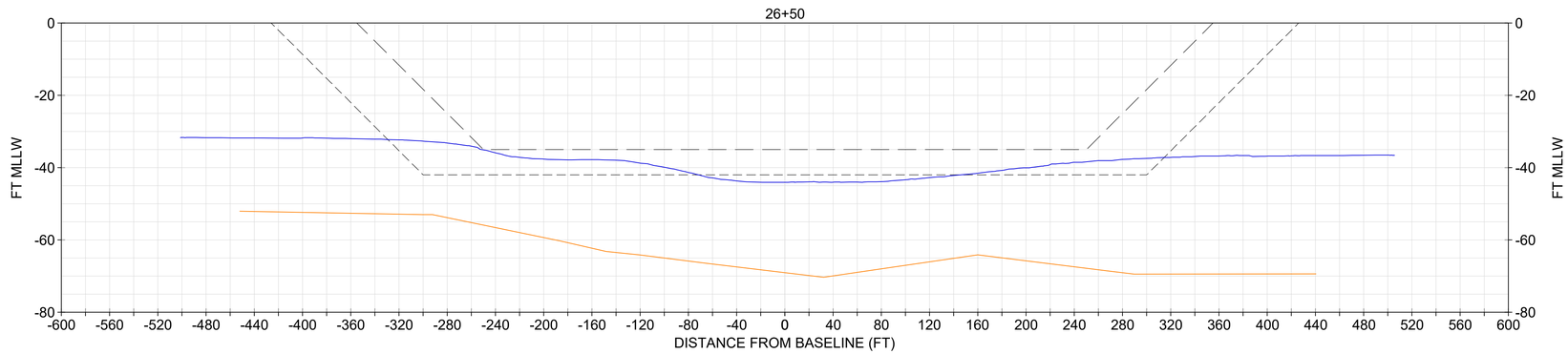
PREPARED FOR: Coastal Partners

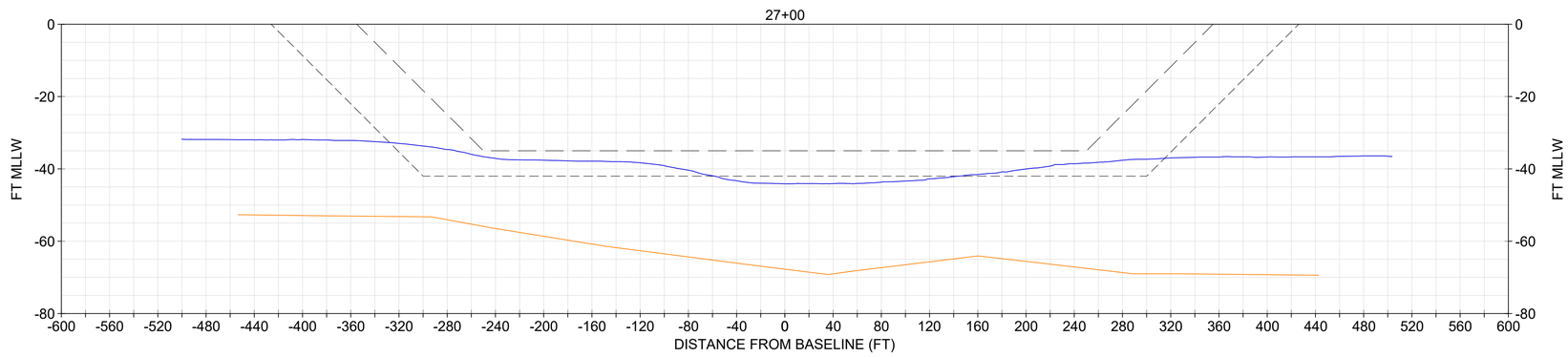
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

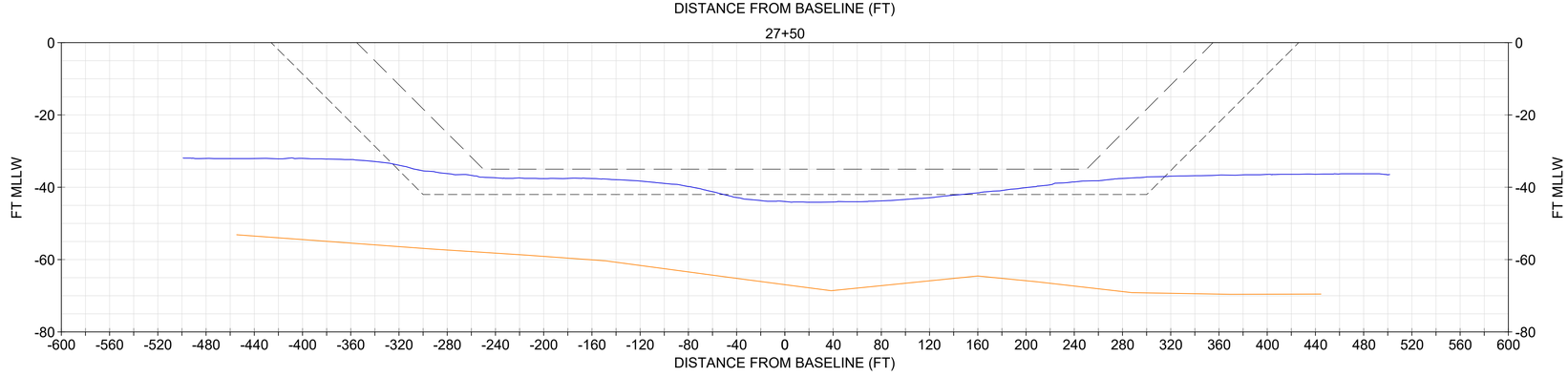
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-013









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 35 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

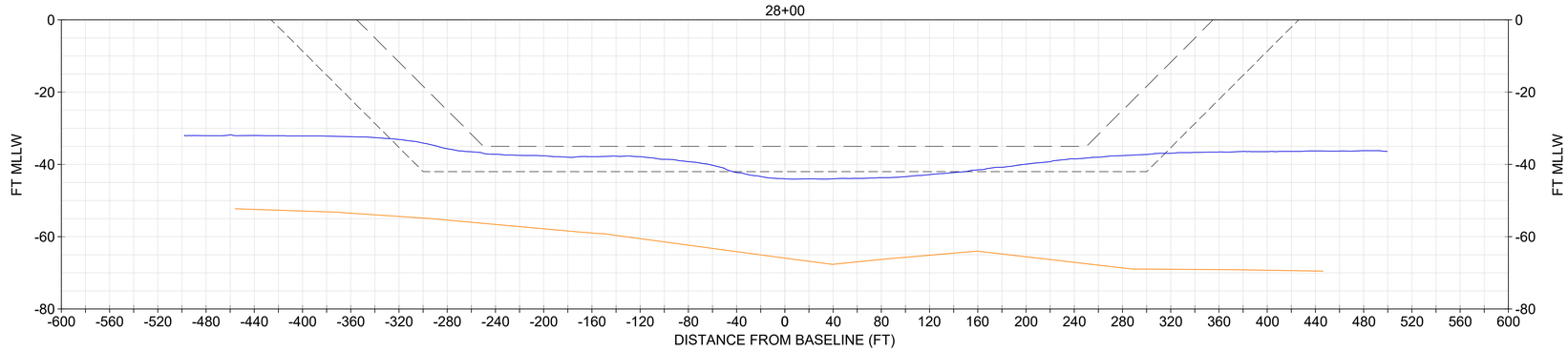
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
6008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

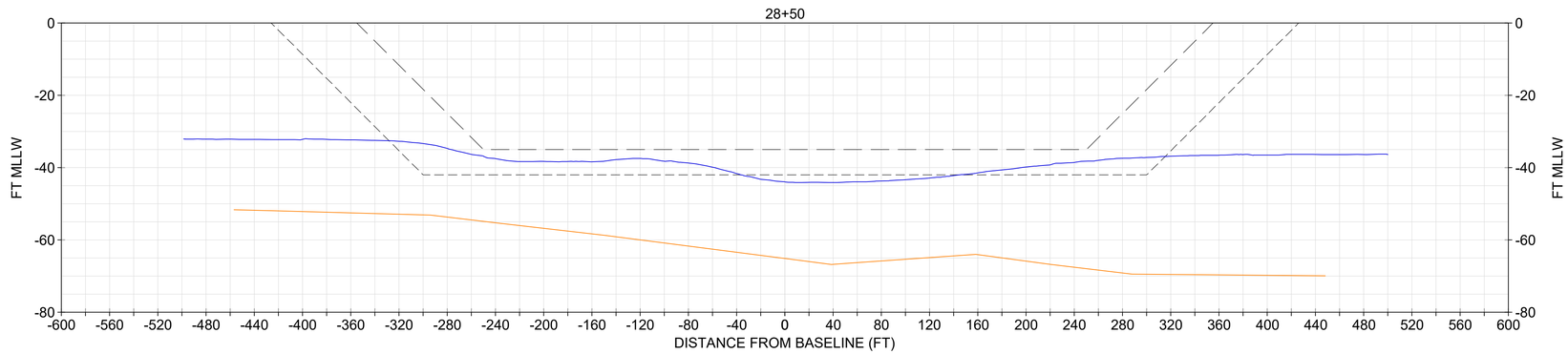
PREPARED FOR: Coastal Partners

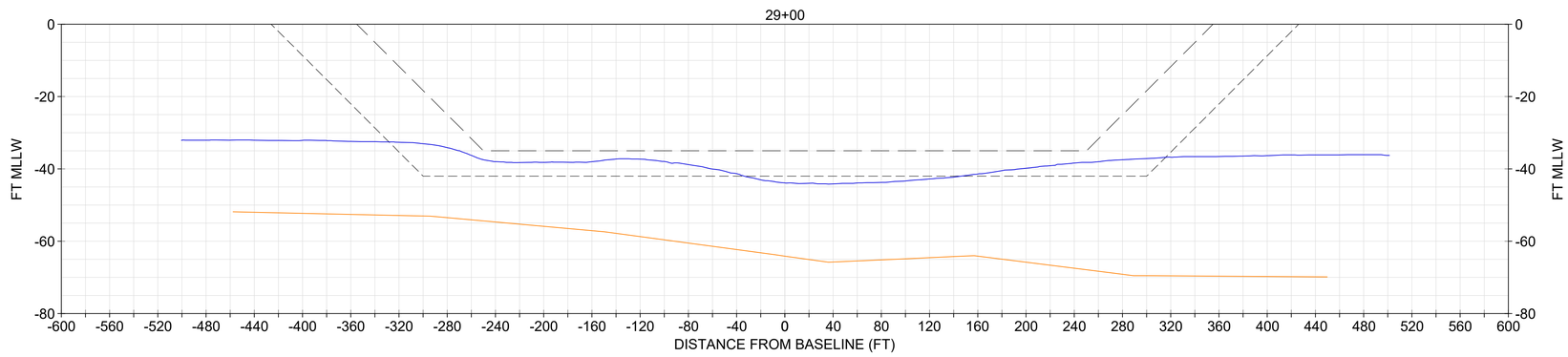
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

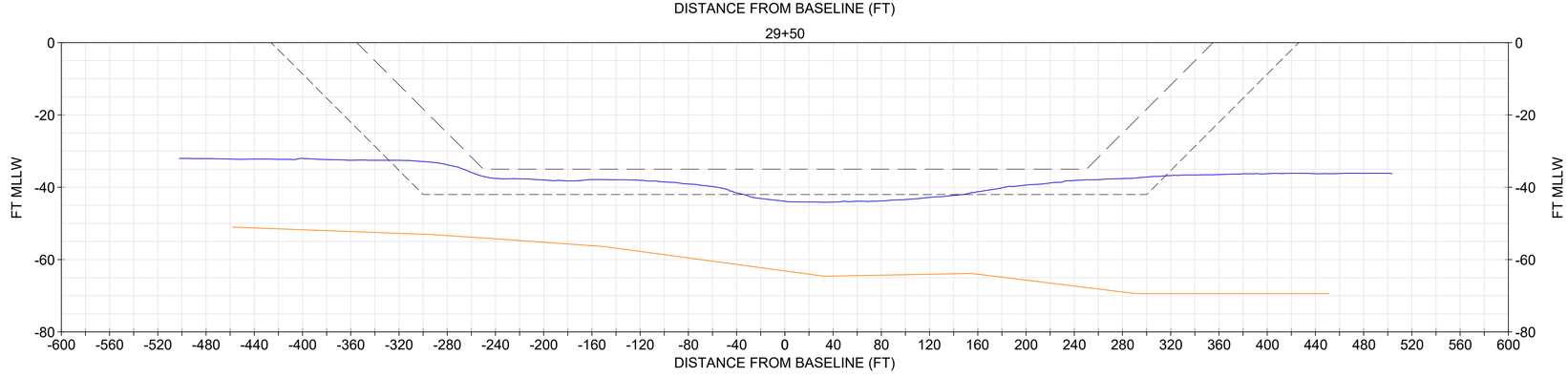
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-014









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 36 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

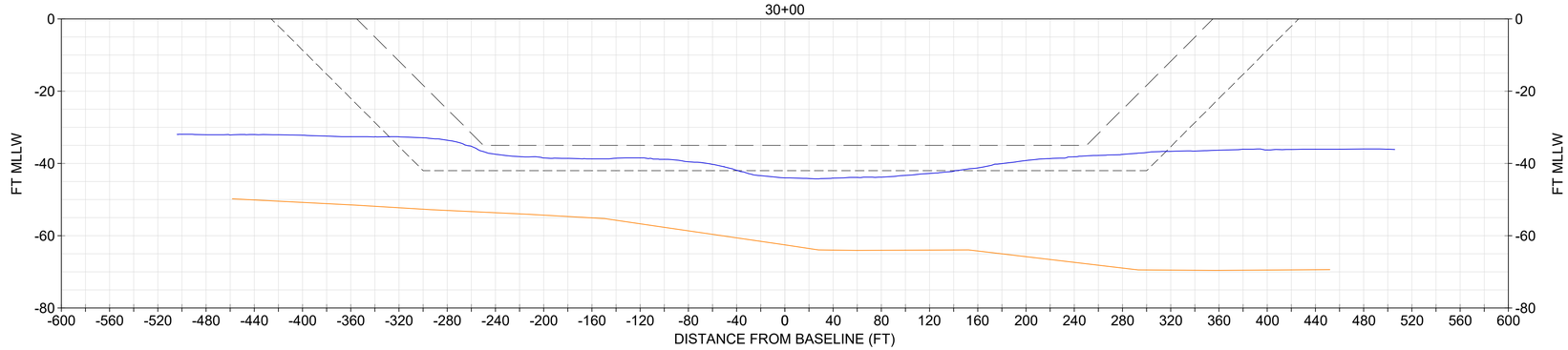
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

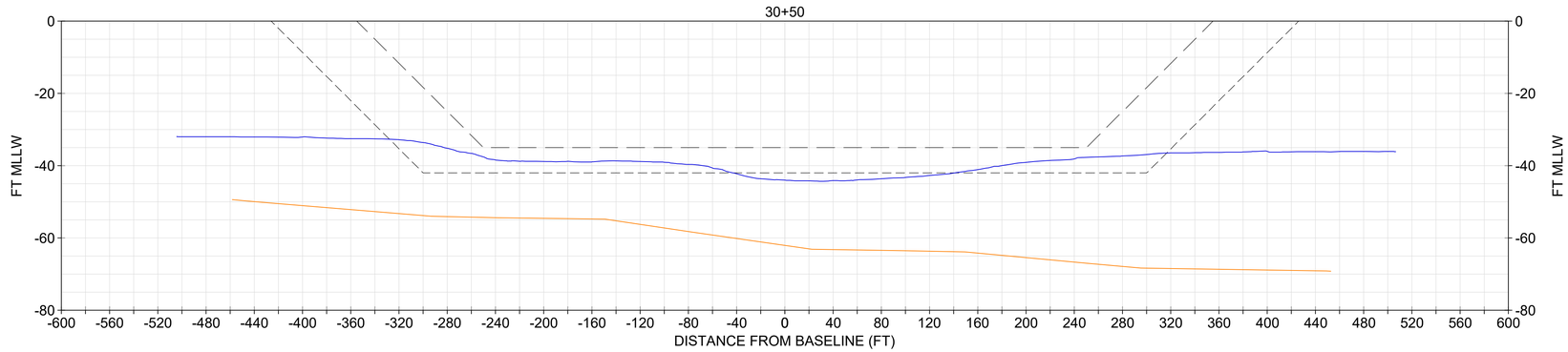
PREPARED FOR: Coastal Partners

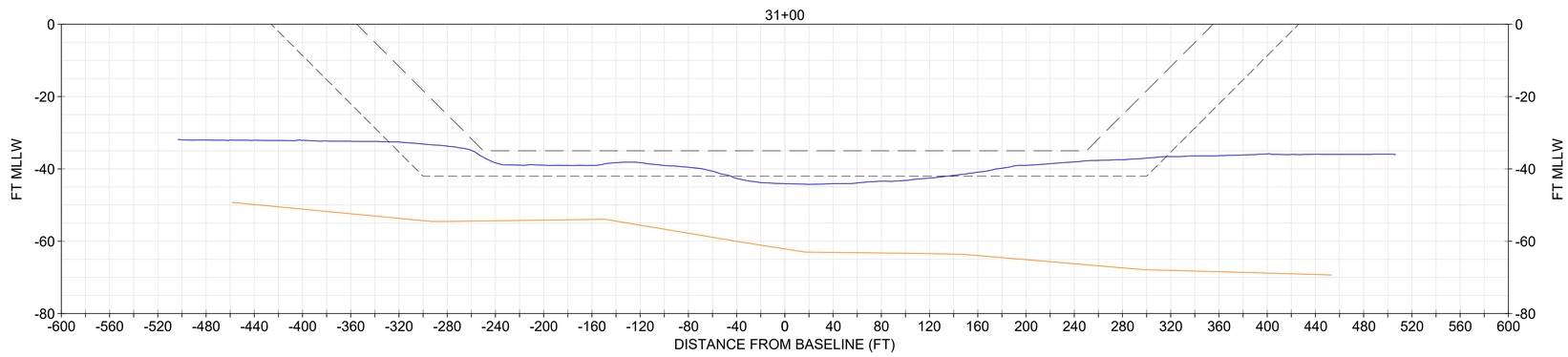
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

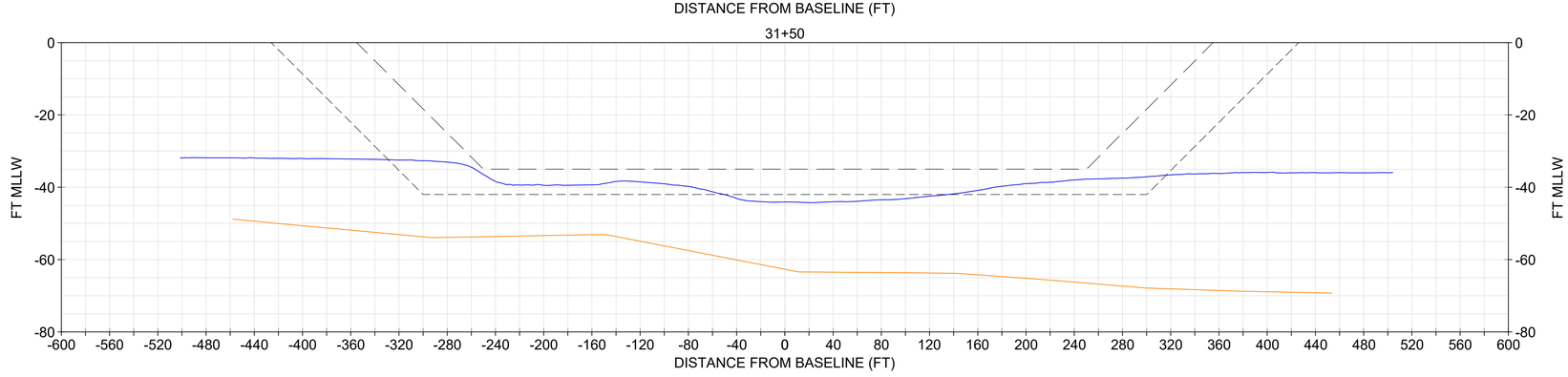
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-015









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 37 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

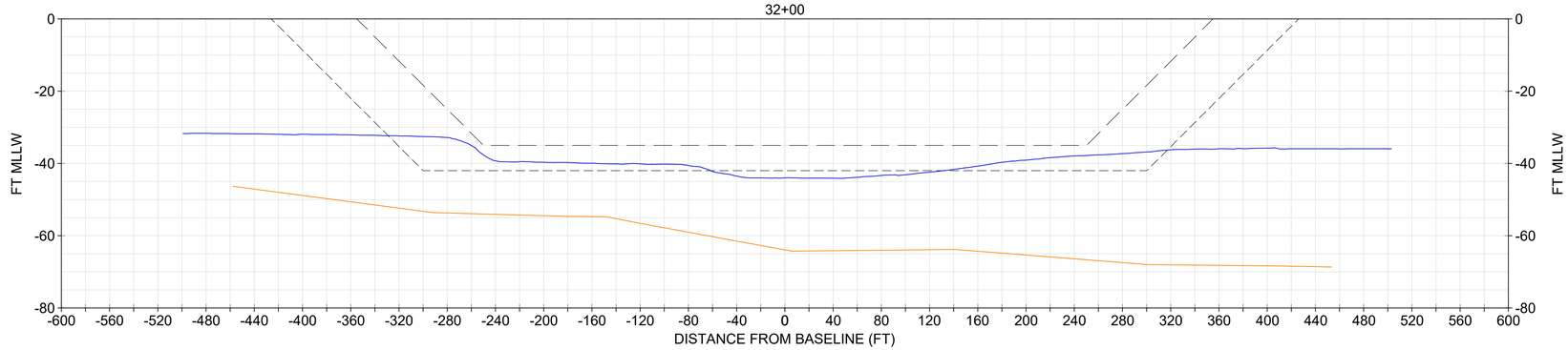
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

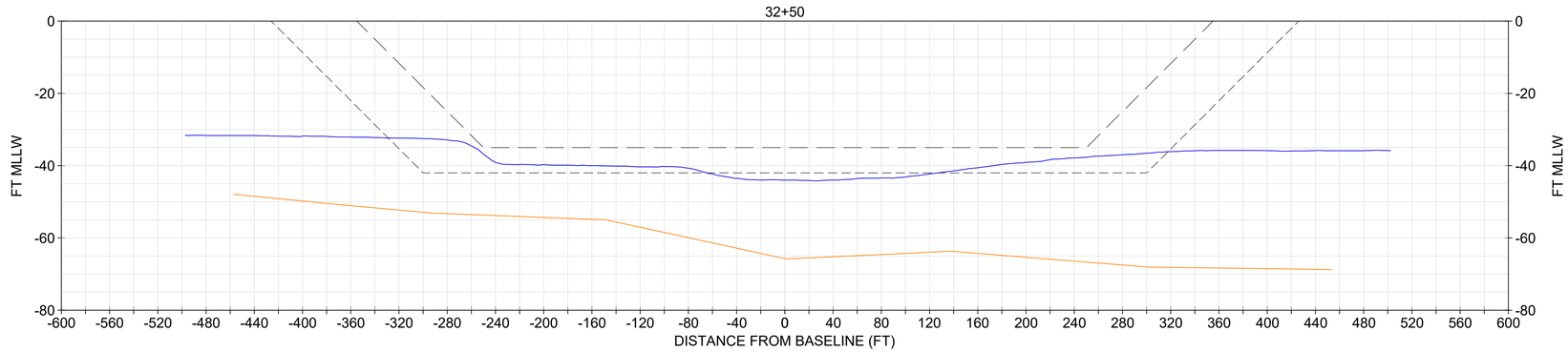
PREPARED FOR:
Coastal Partners
ESTUARY PROTECTION

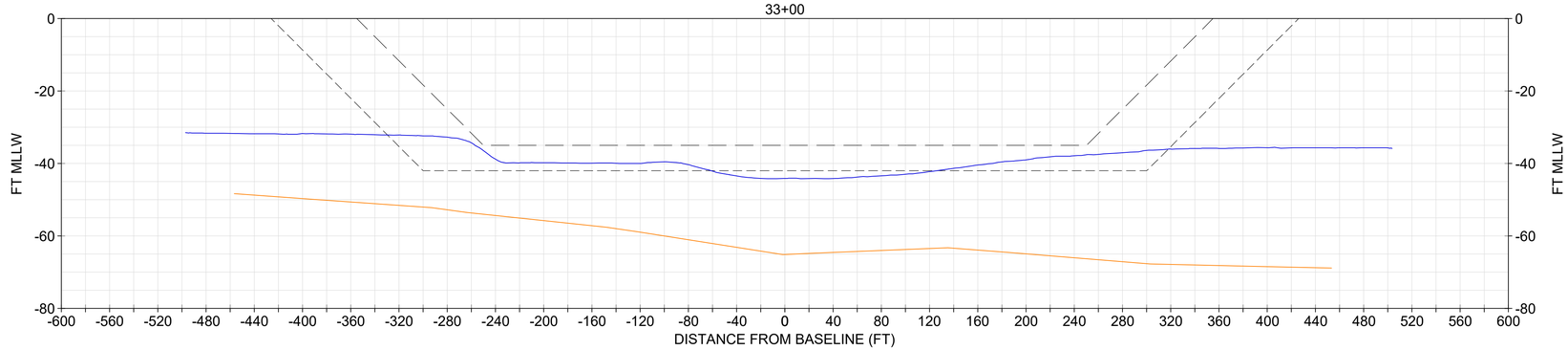
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

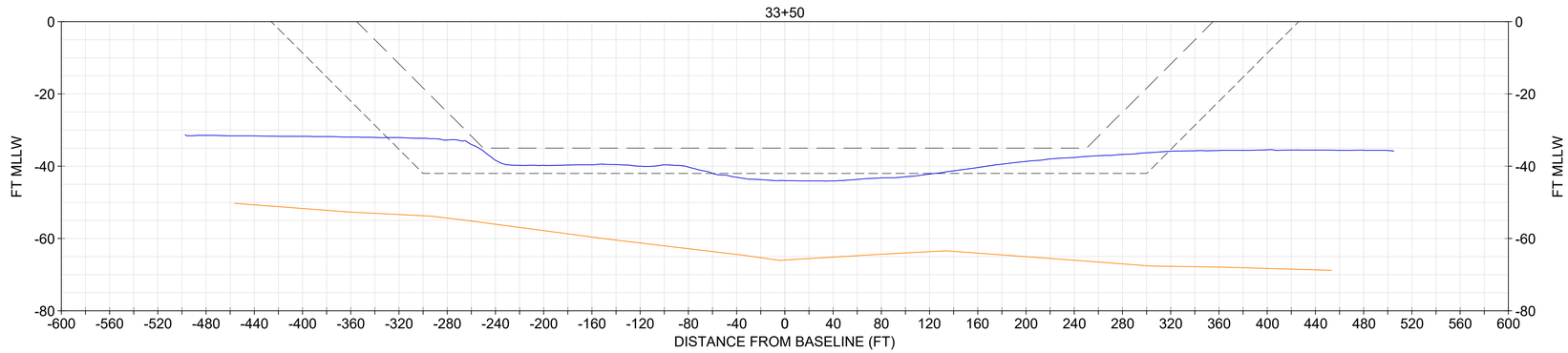
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-016









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 38 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

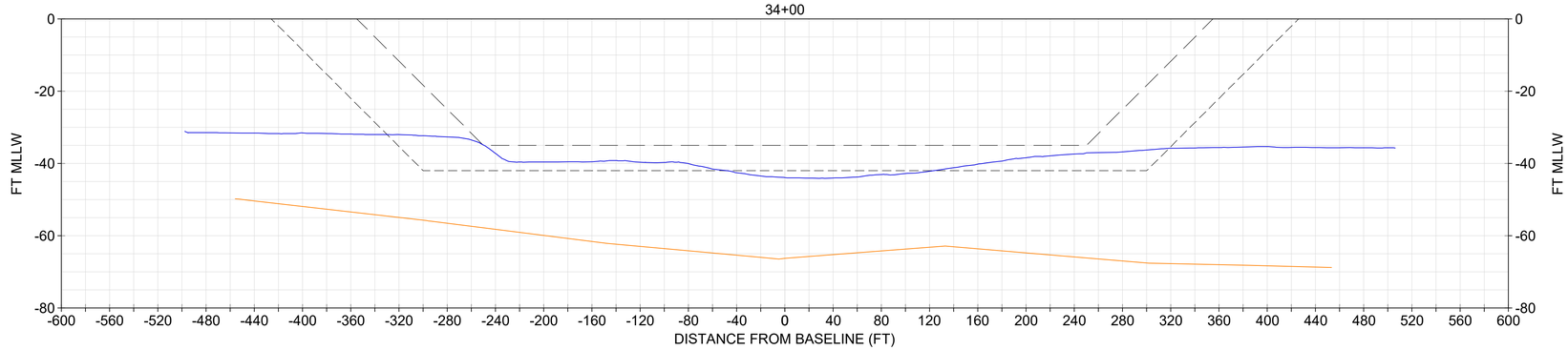
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 1003 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

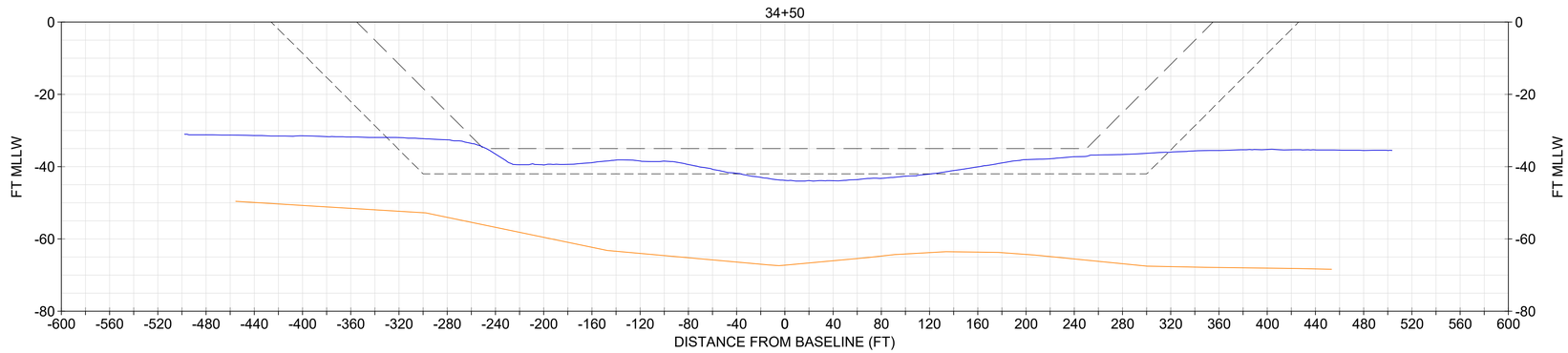
PREPARED FOR: Coastal Partners

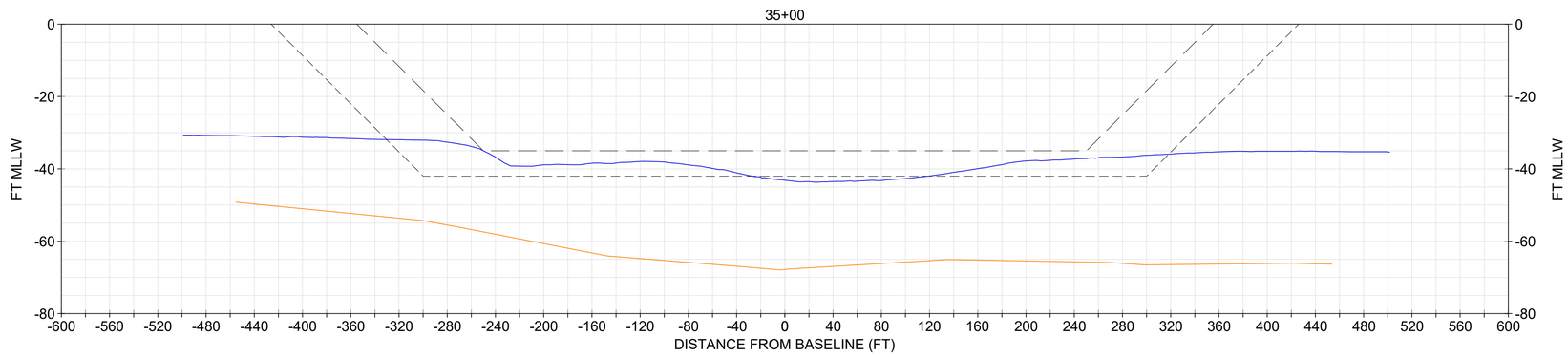
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

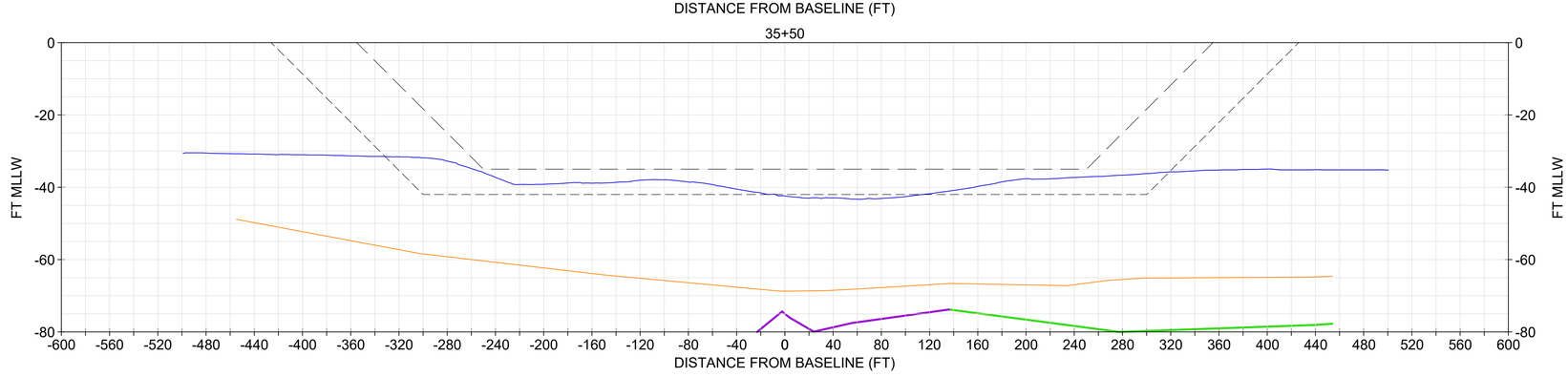
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-017









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 39 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

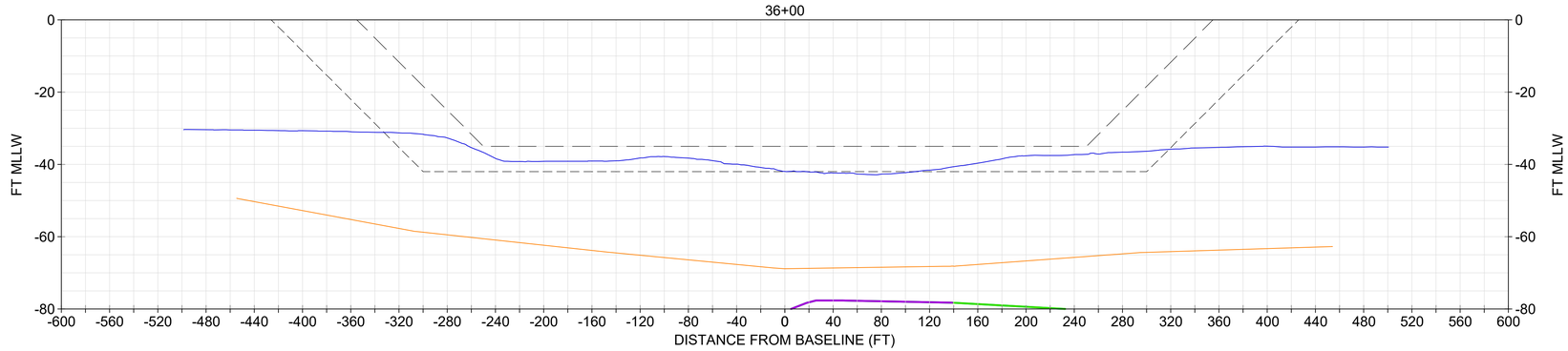
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

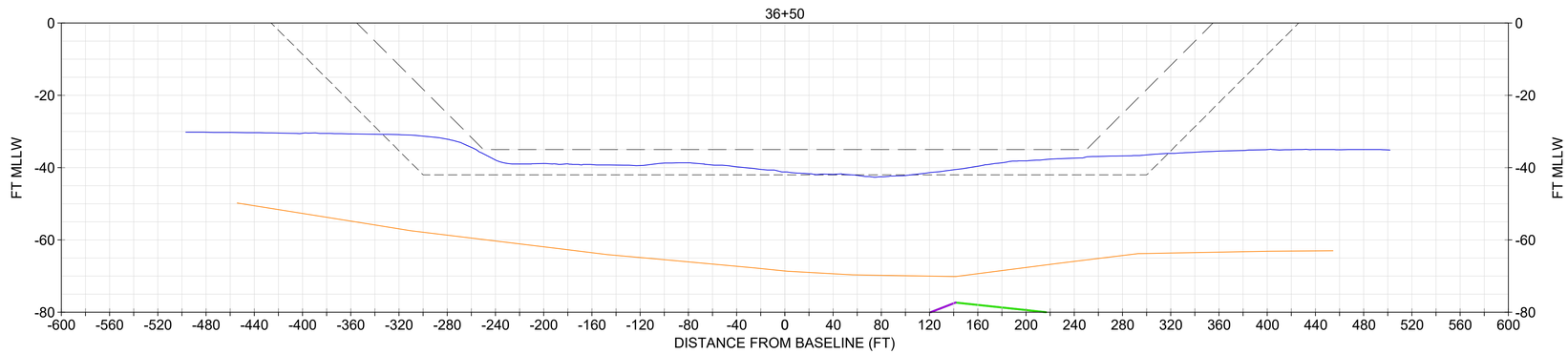
PREPARED FOR: Coastal Partners

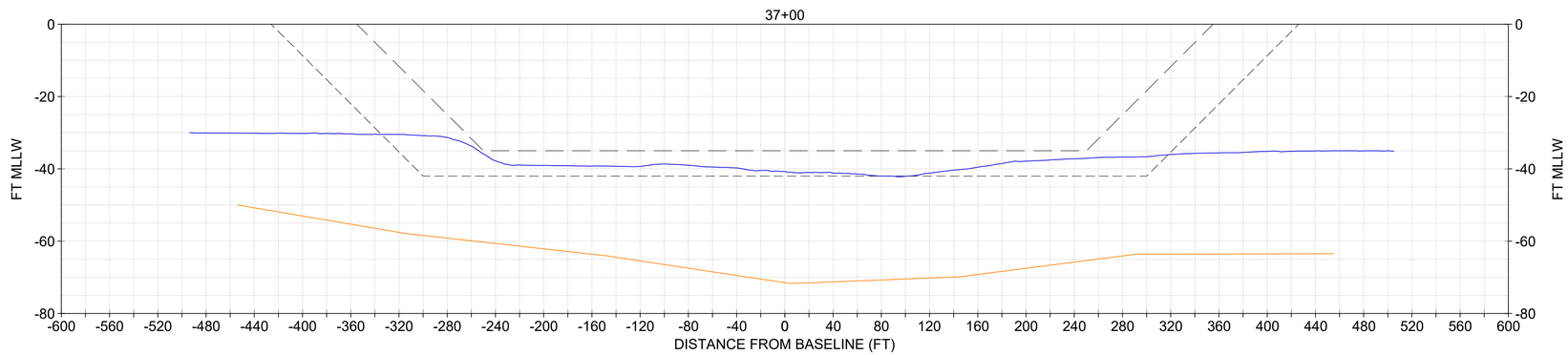
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

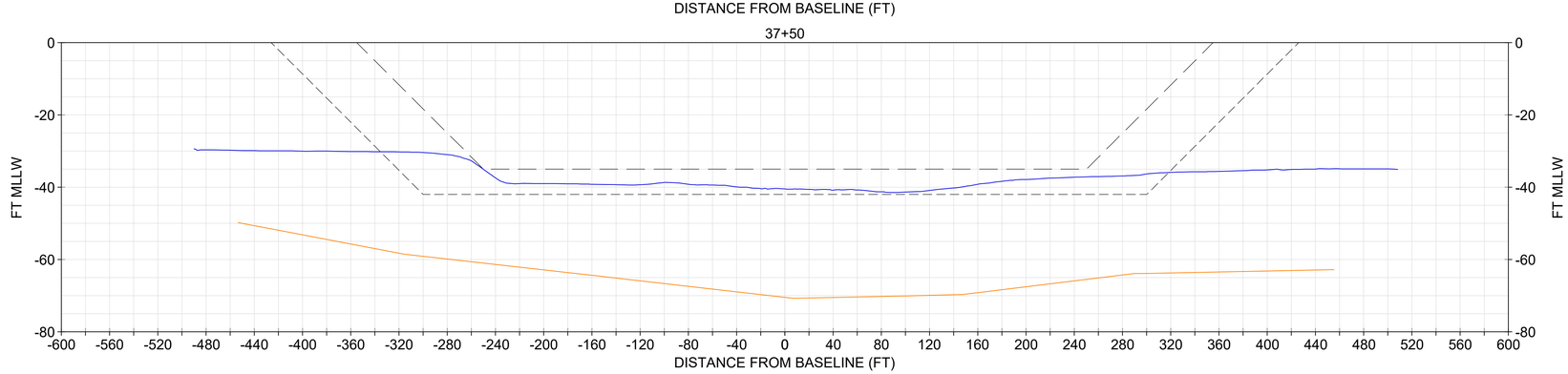
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-018









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 40 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

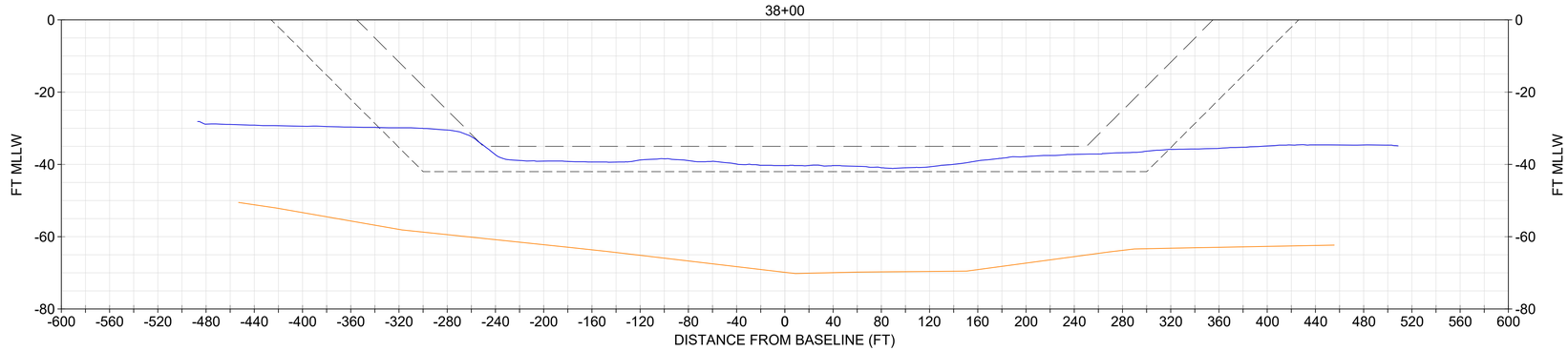
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

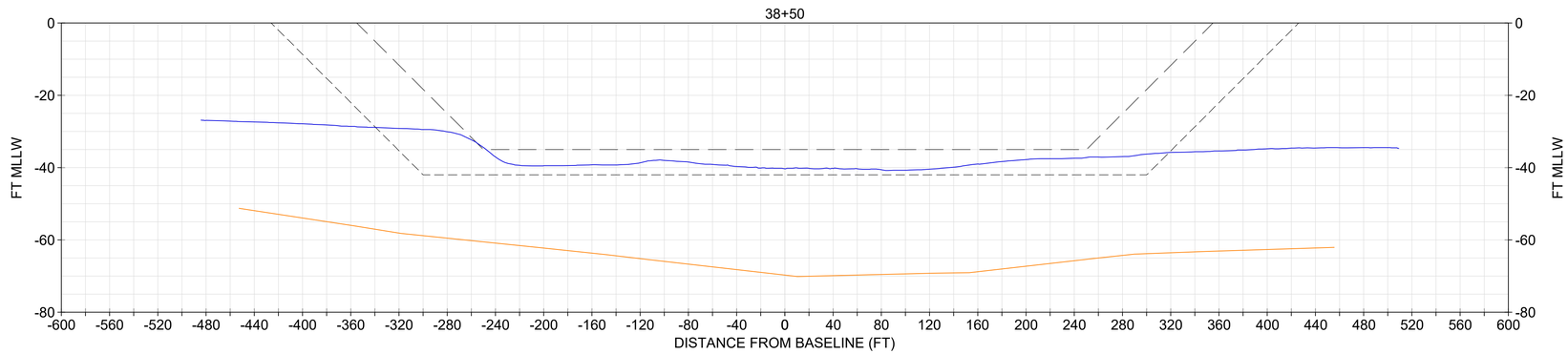
PREPARED FOR: Coastal Partners

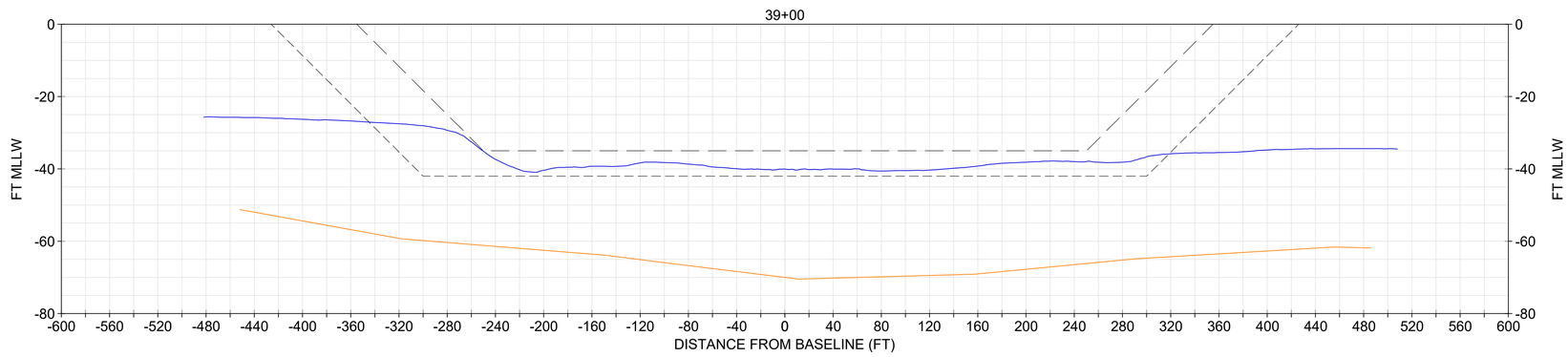
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

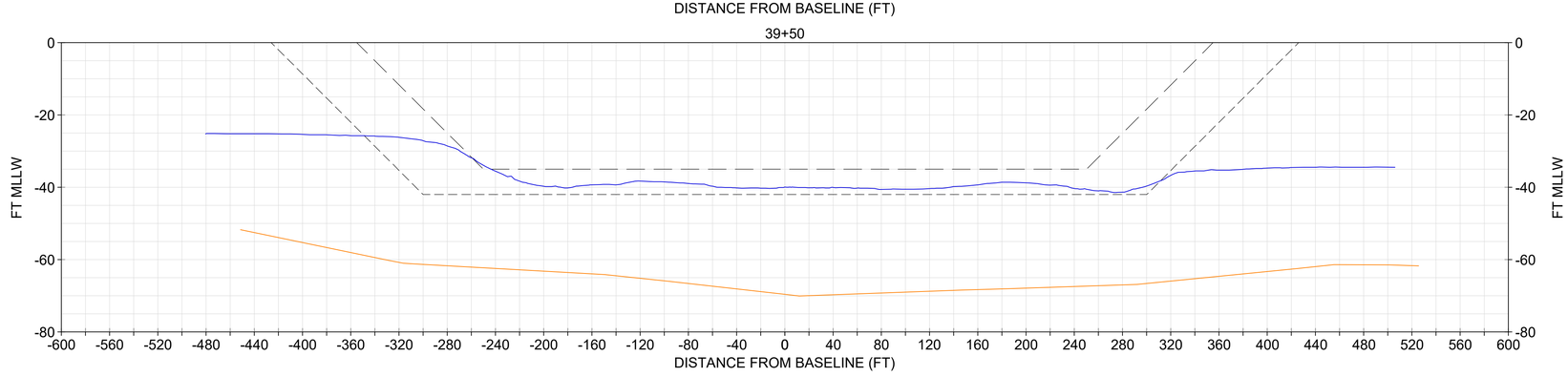
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-019









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 41 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

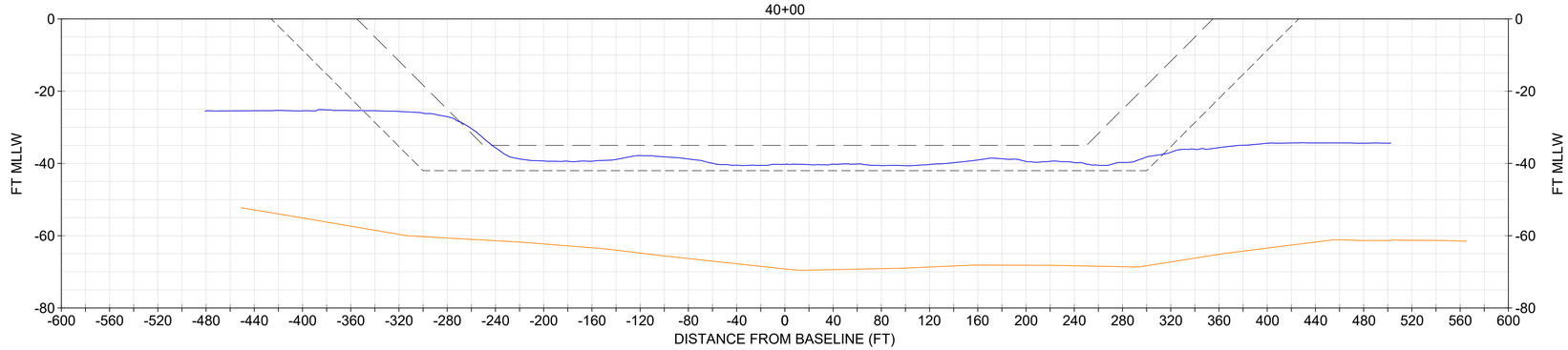
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

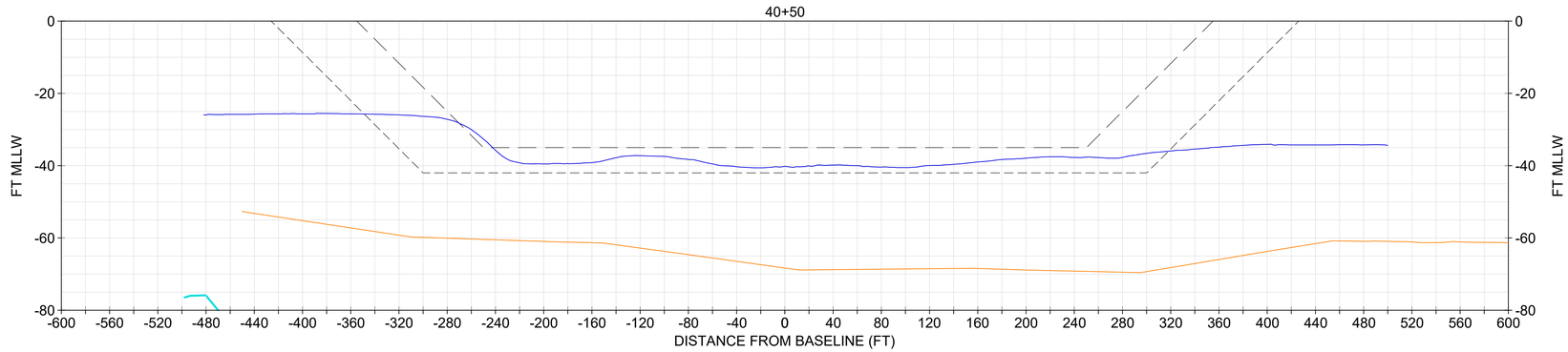
PREPARED FOR: Coastal Partners

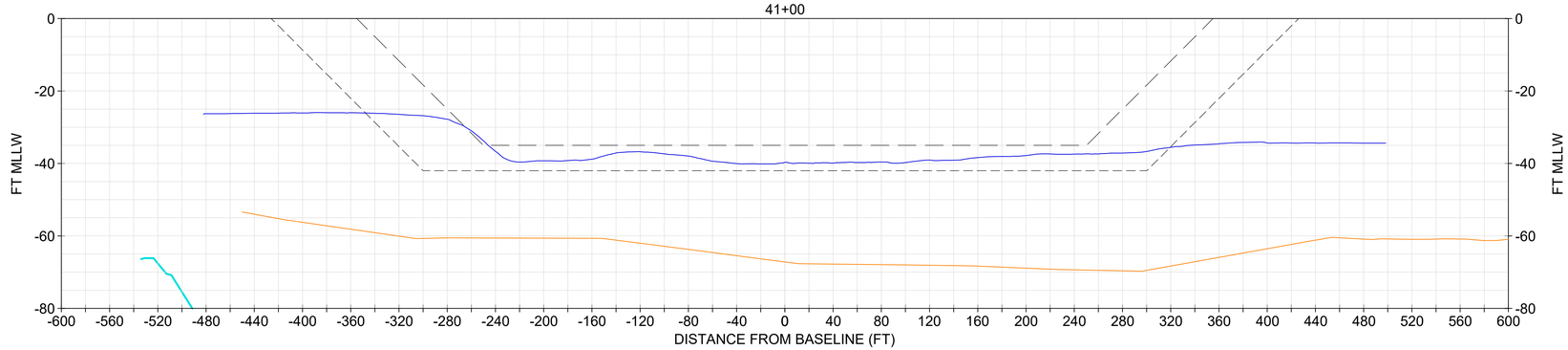
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

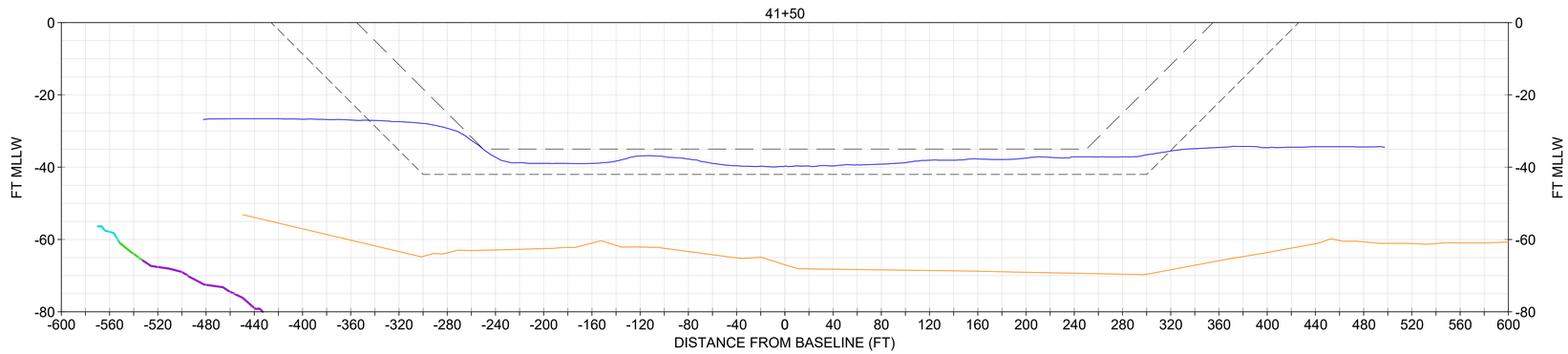
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-020









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 42 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

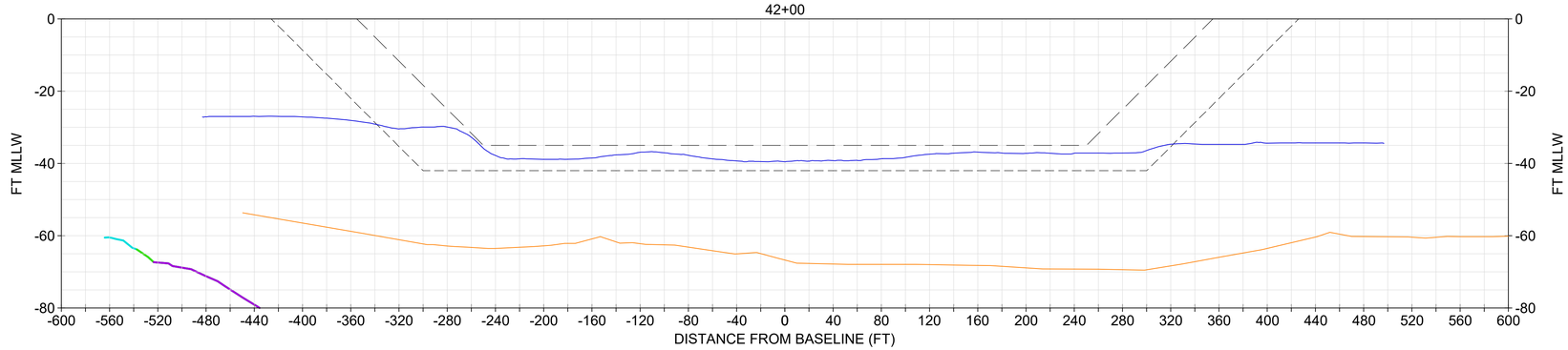
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

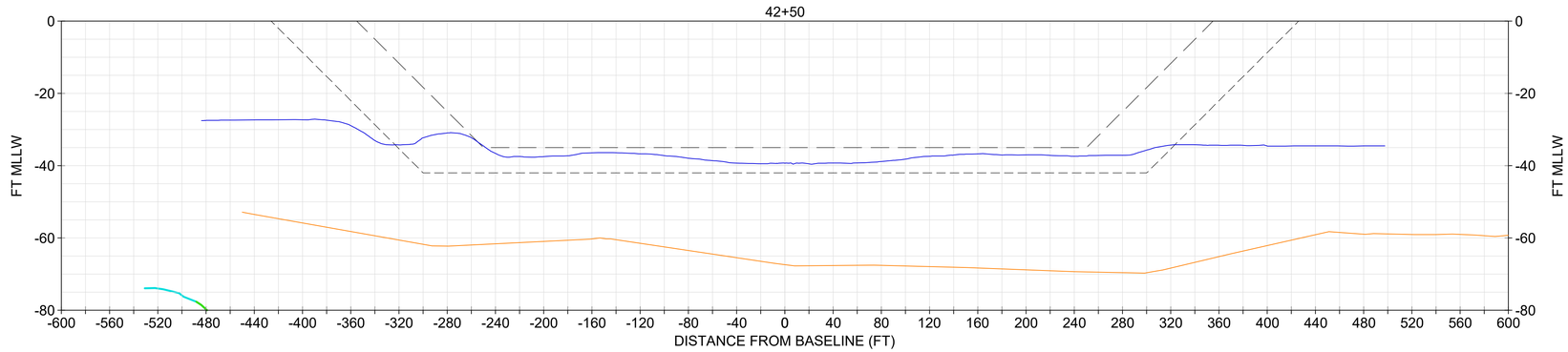
PREPARED FOR: Coastal Partners

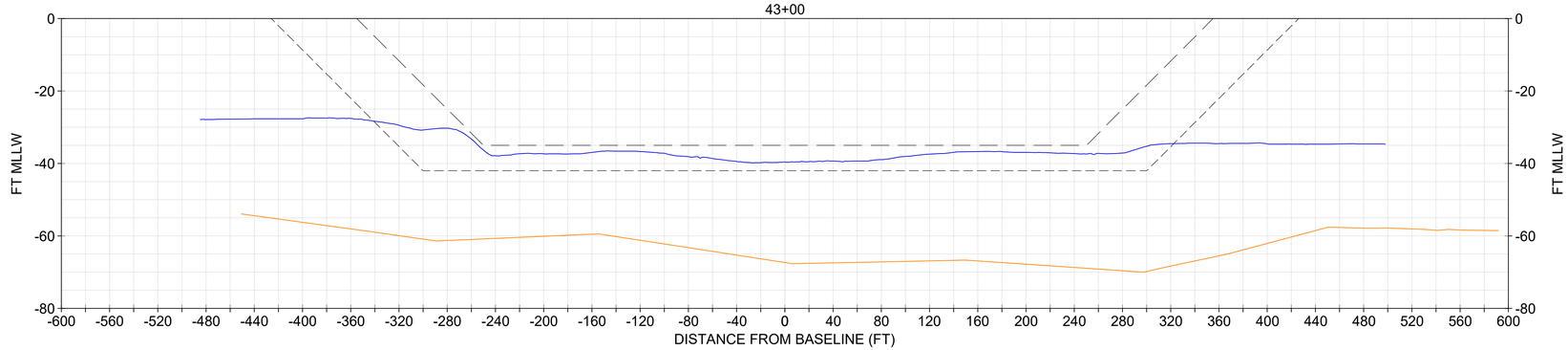
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

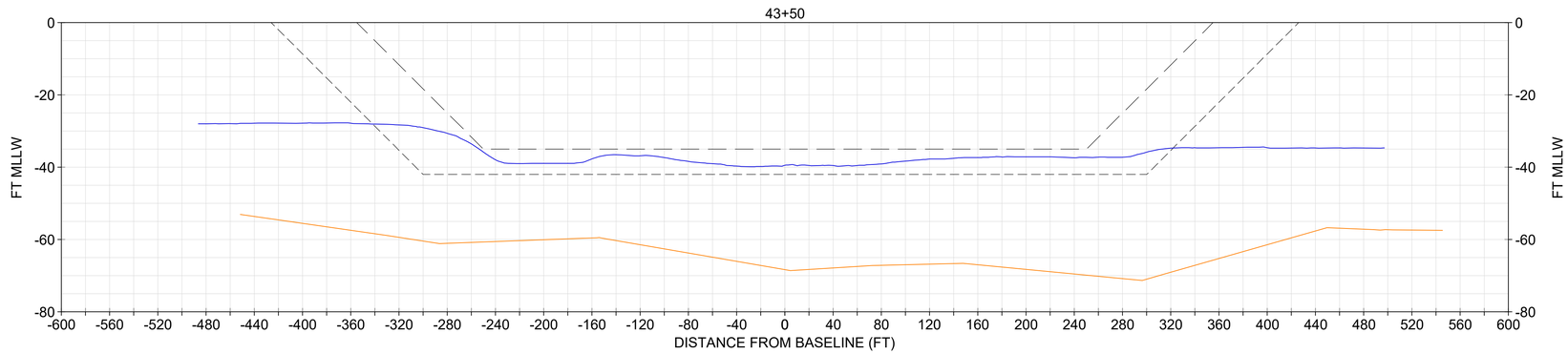
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-021









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 43 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

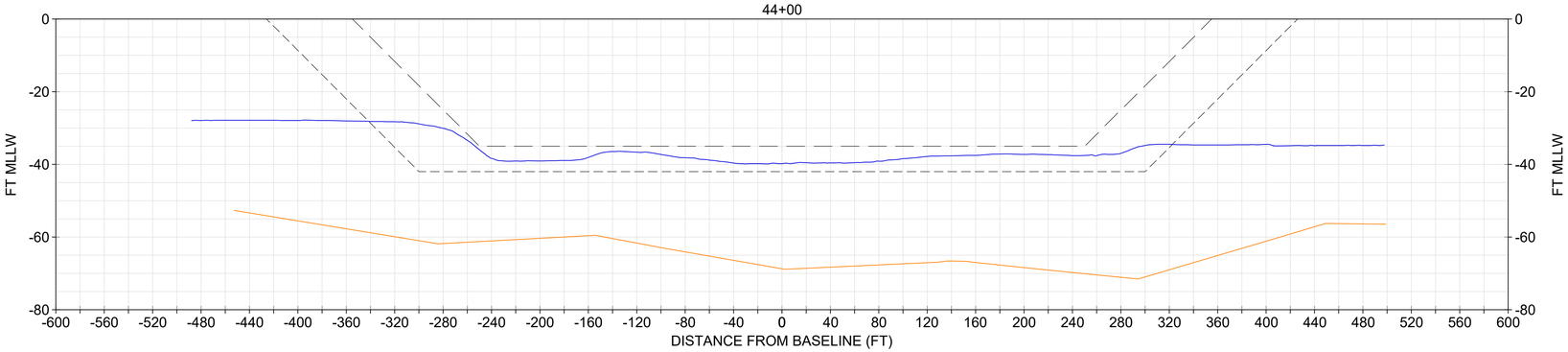
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
6008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

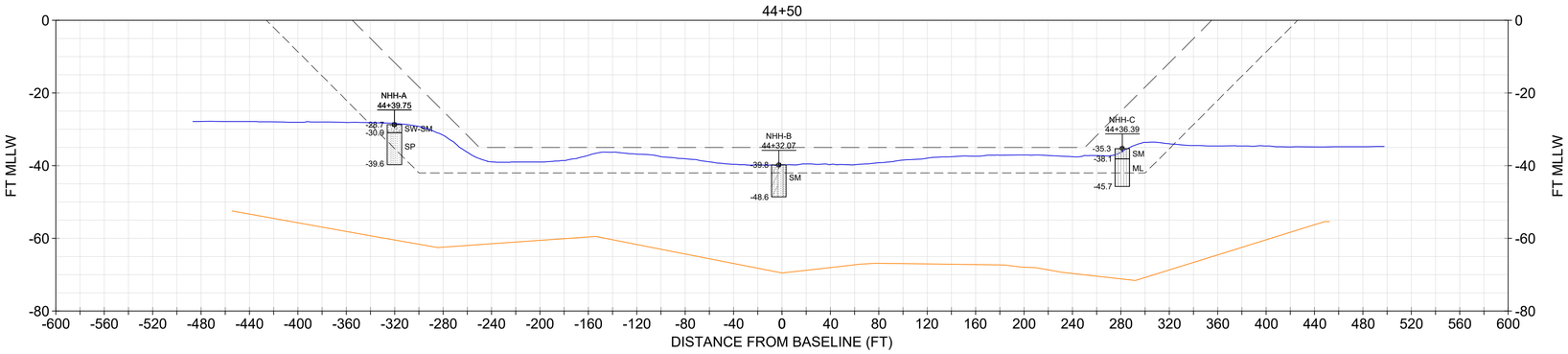
PREPARED FOR: Coastal Partners

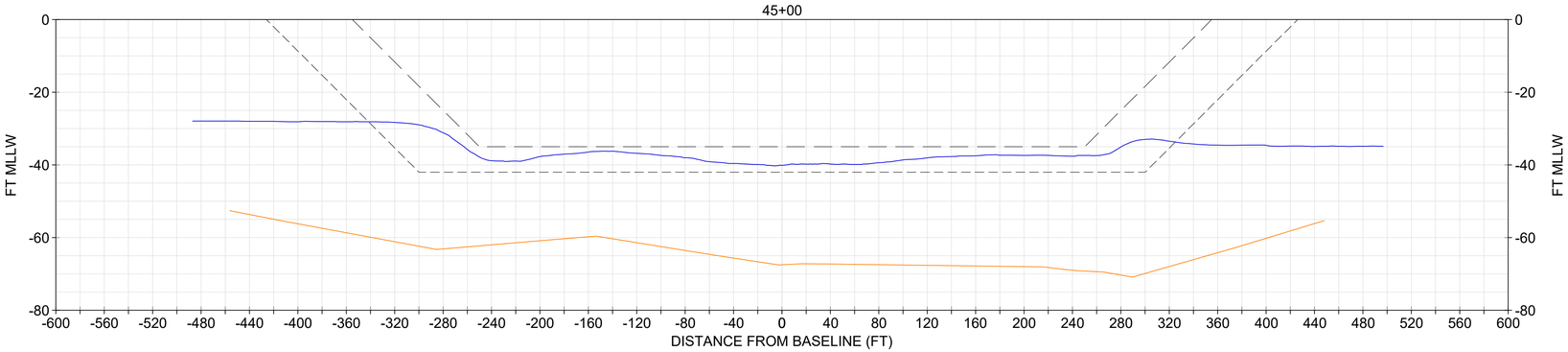
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

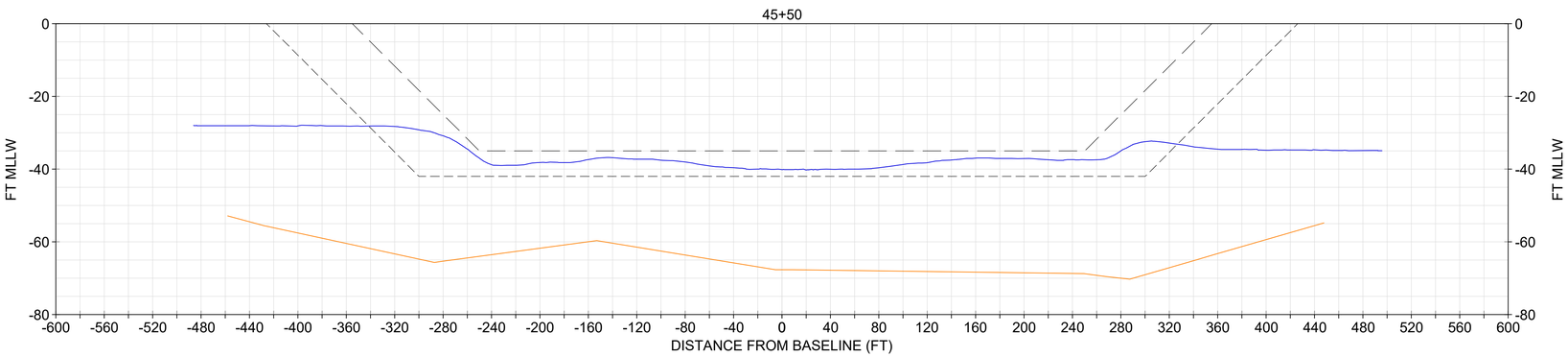
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-022









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-A	-28.7	-39.6	AECOM	2017
NHH-B	-39.8	-48.6	AECOM	2017
NHH-C	-35.3	-45.7	AECOM	2017

CORE LEGEND
- SW-SM (WELL GRADED SAND WITH SILT)
- SM (SILTY SAND)
- SP (POORLY GRADED SAND)
- ML (SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 44 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

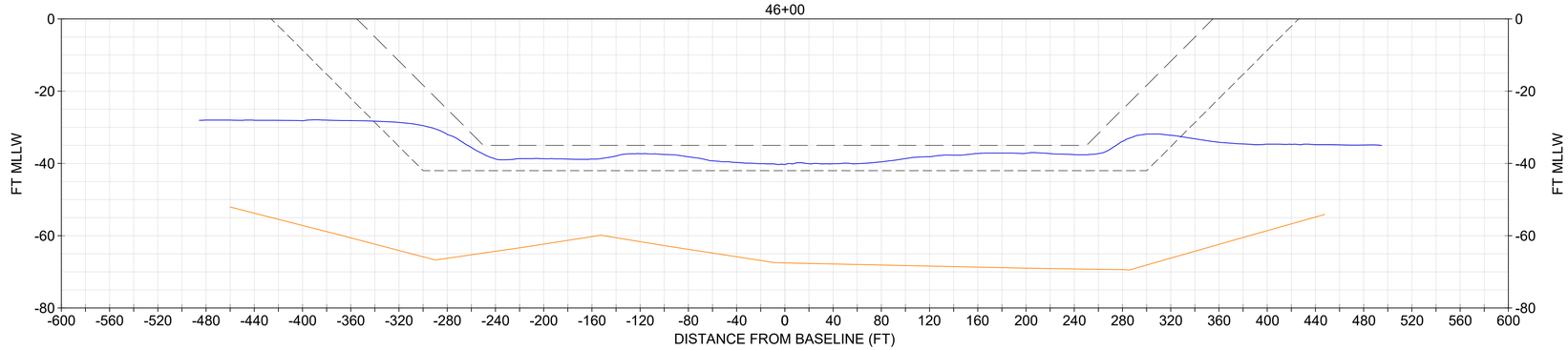
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

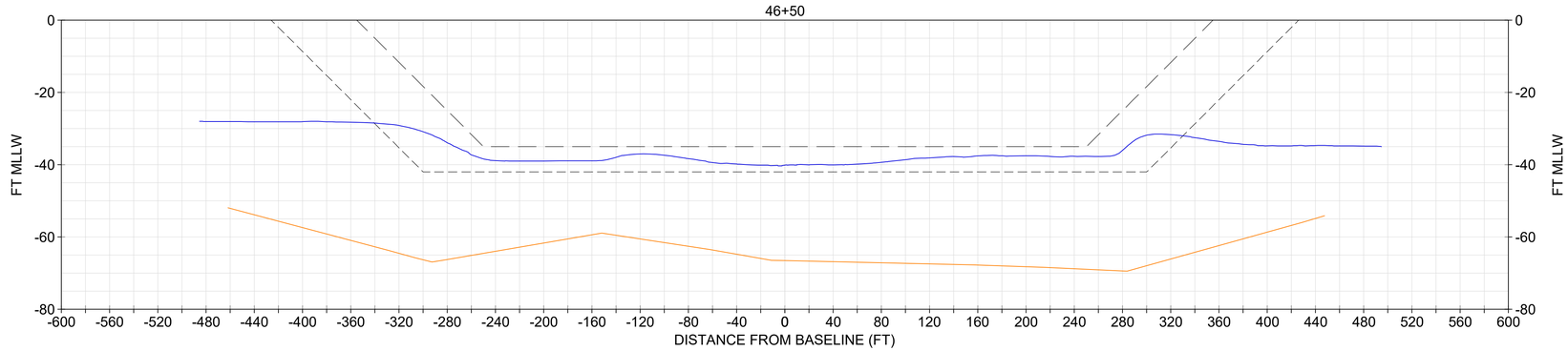
PREPARED FOR: Capital Partners

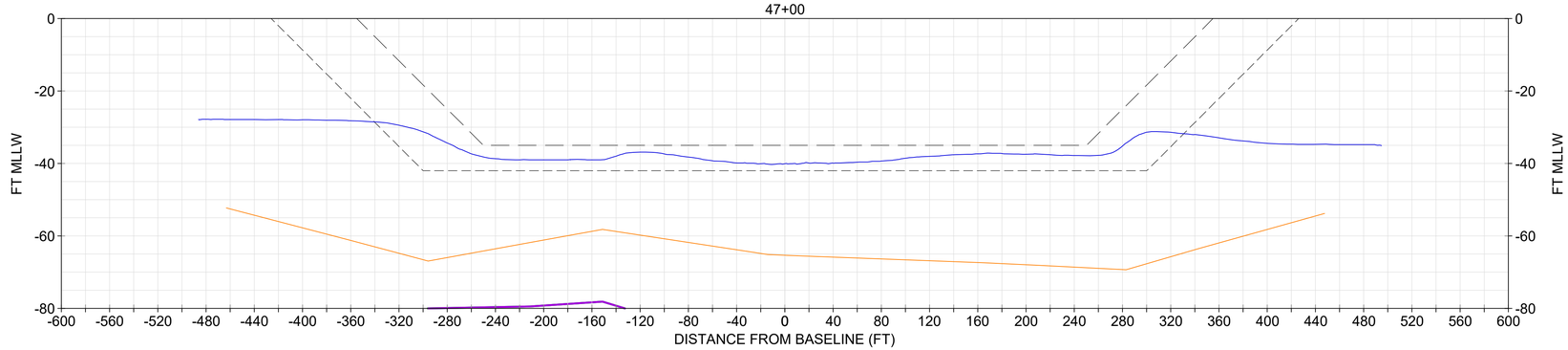
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

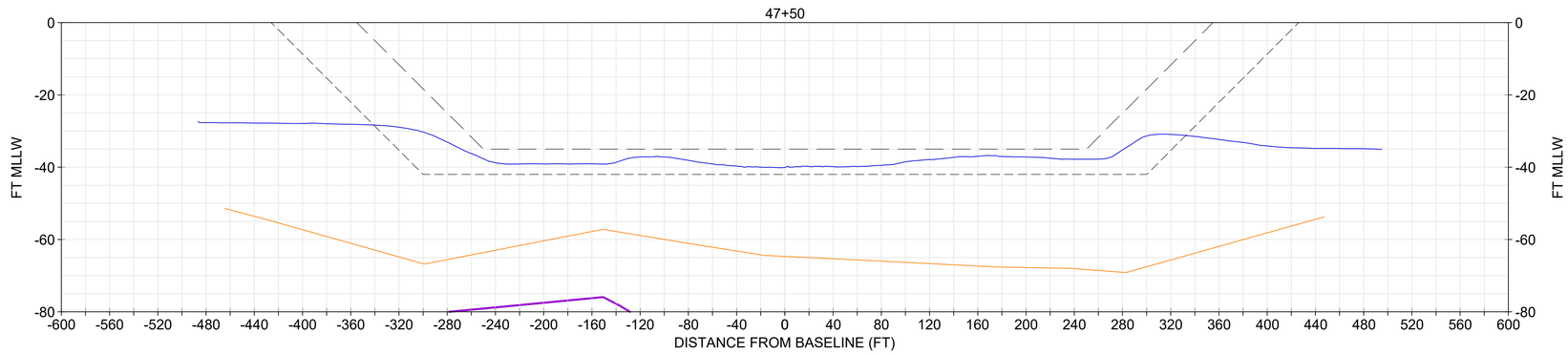
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-023









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 45 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

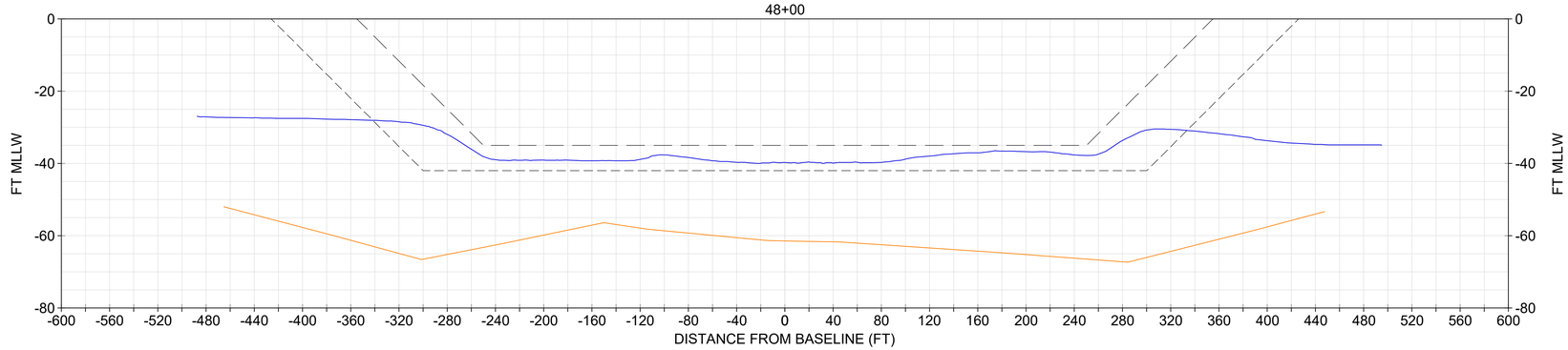
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

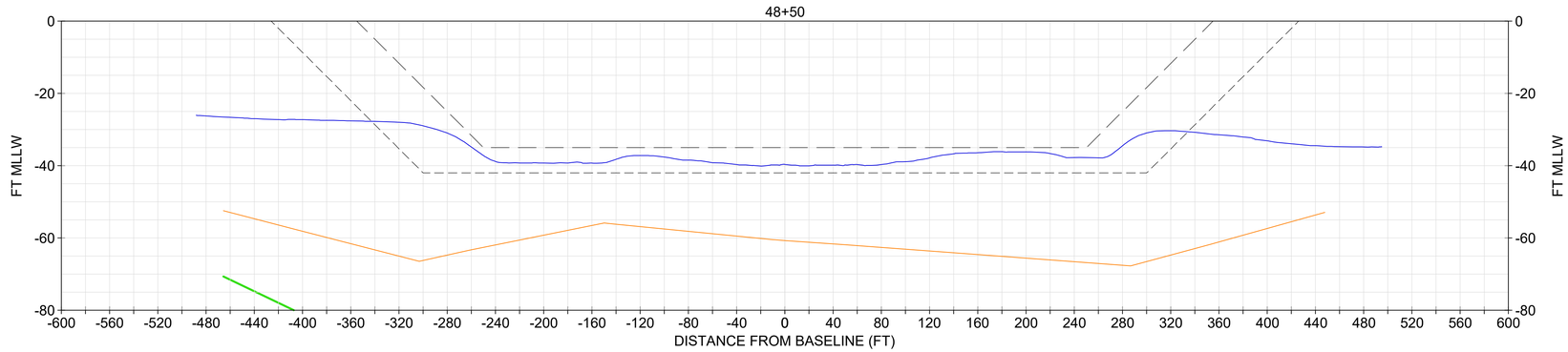
PREPARED FOR: Coastal Partners

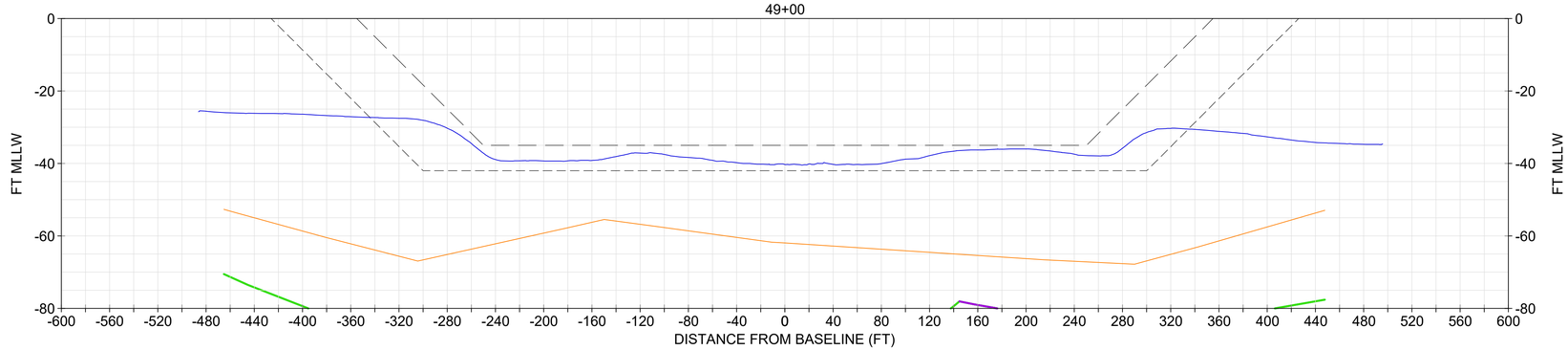
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

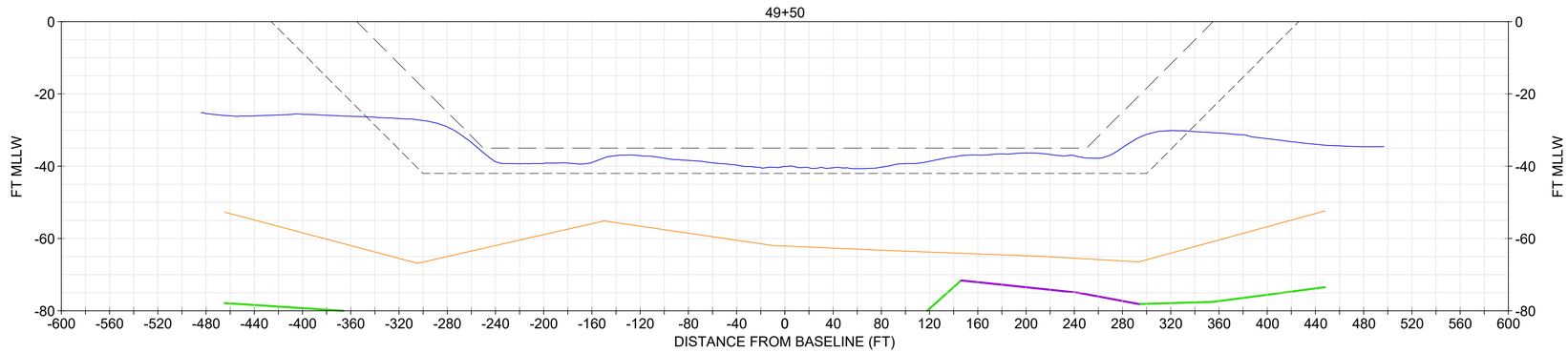
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-024









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 46 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

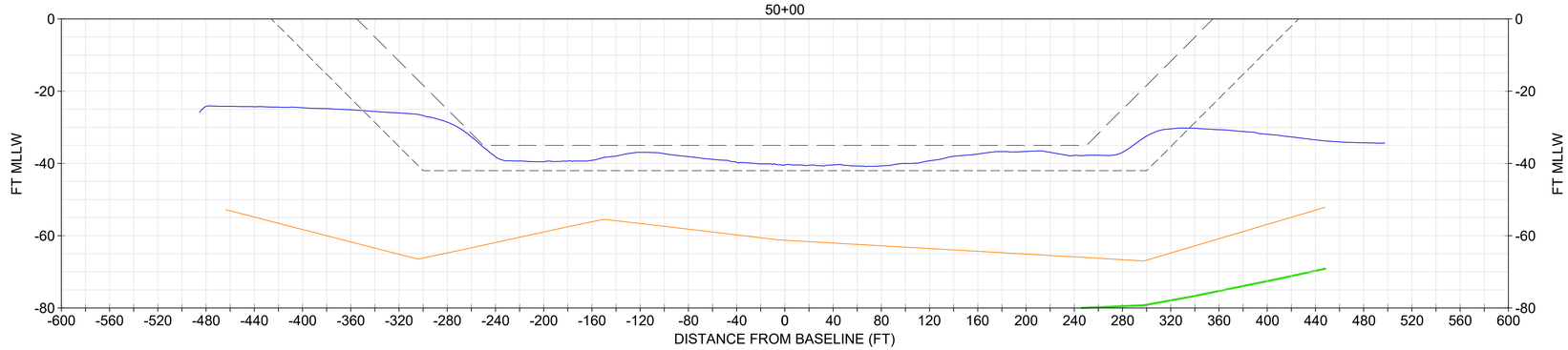
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

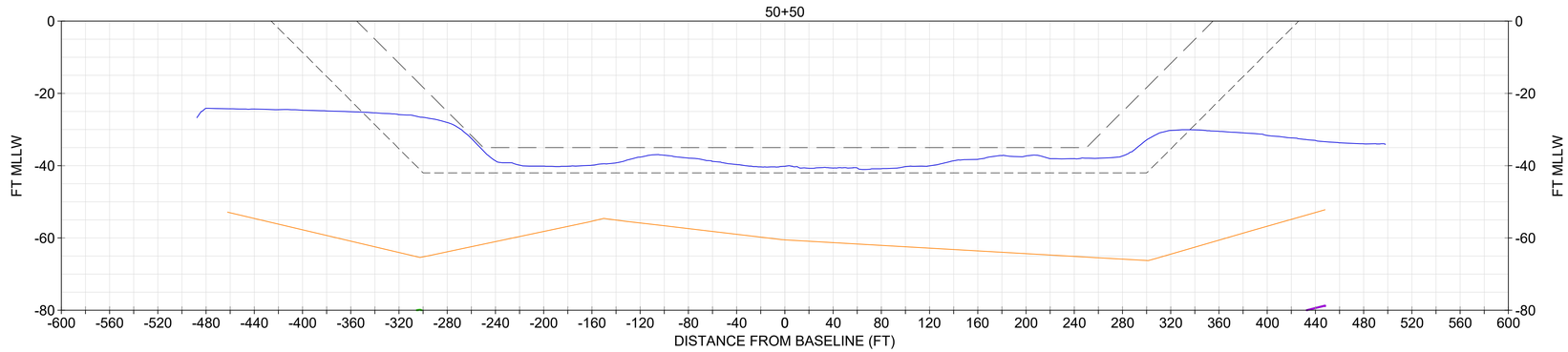
PREPARED FOR: Coastal Partners

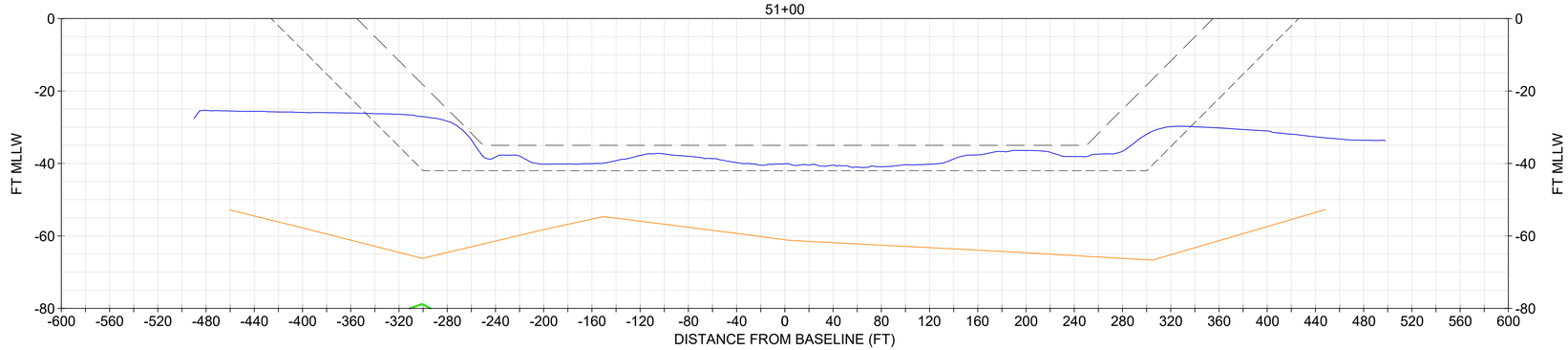
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

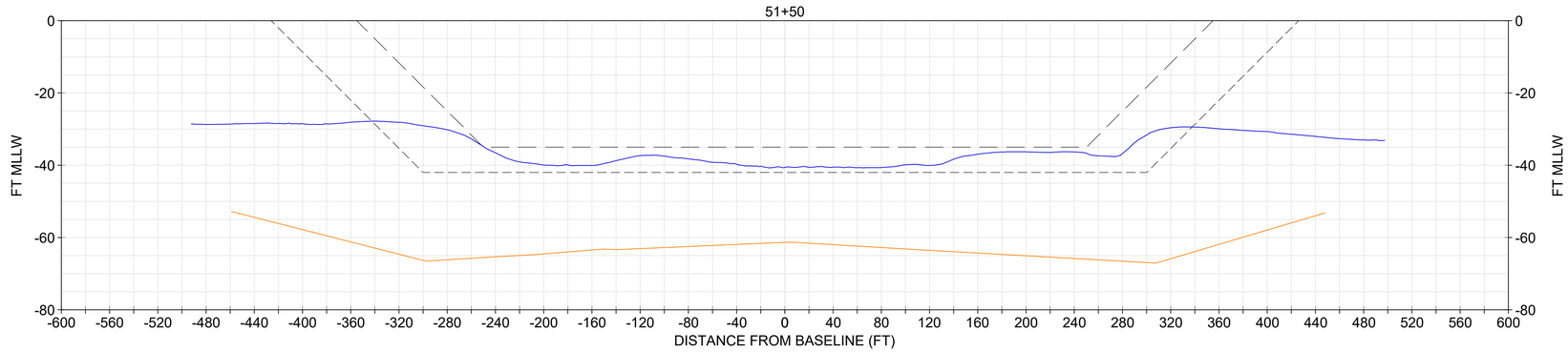
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-025









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 47 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

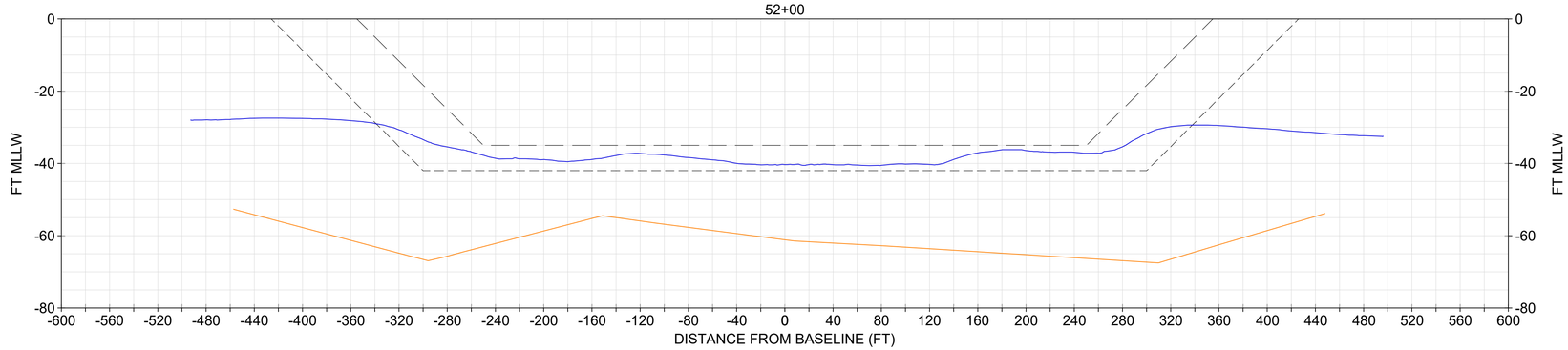
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

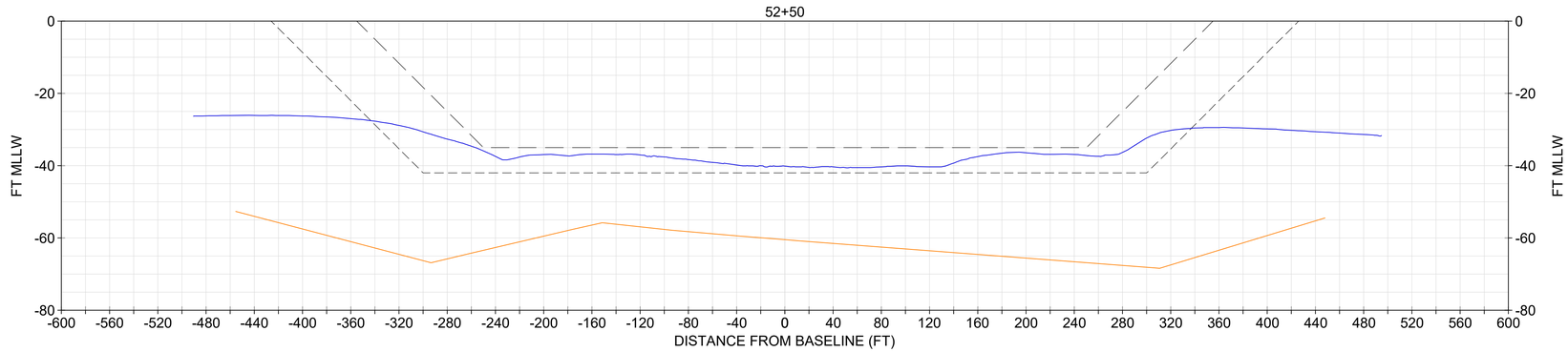
PREPARED FOR:
Coastal Partners
CONSTRUCTION MANAGER

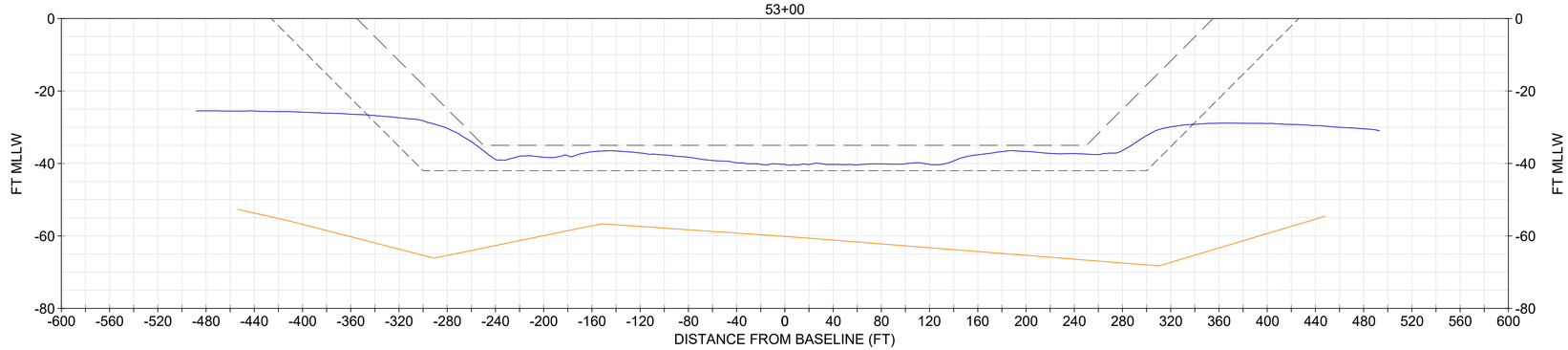
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

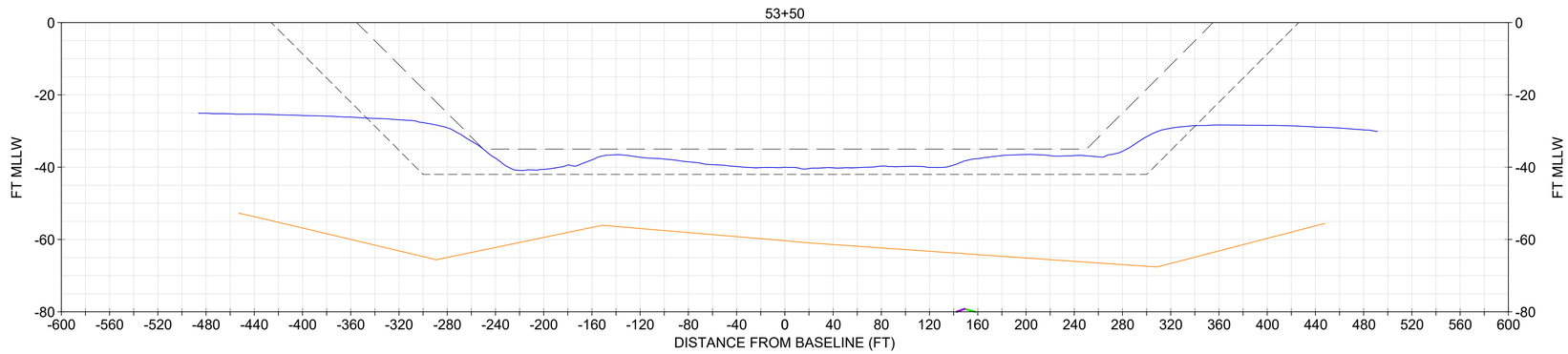
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-026









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 48 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

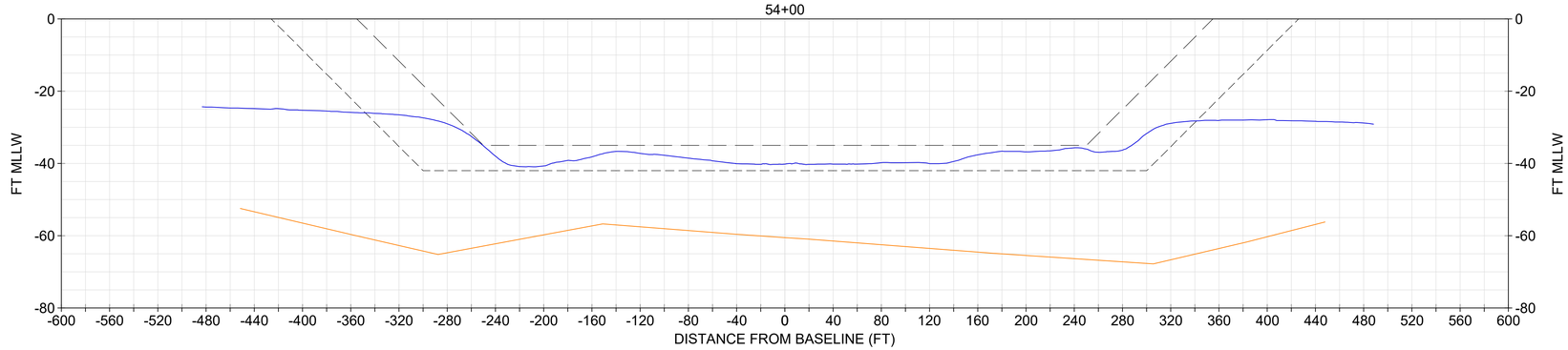
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

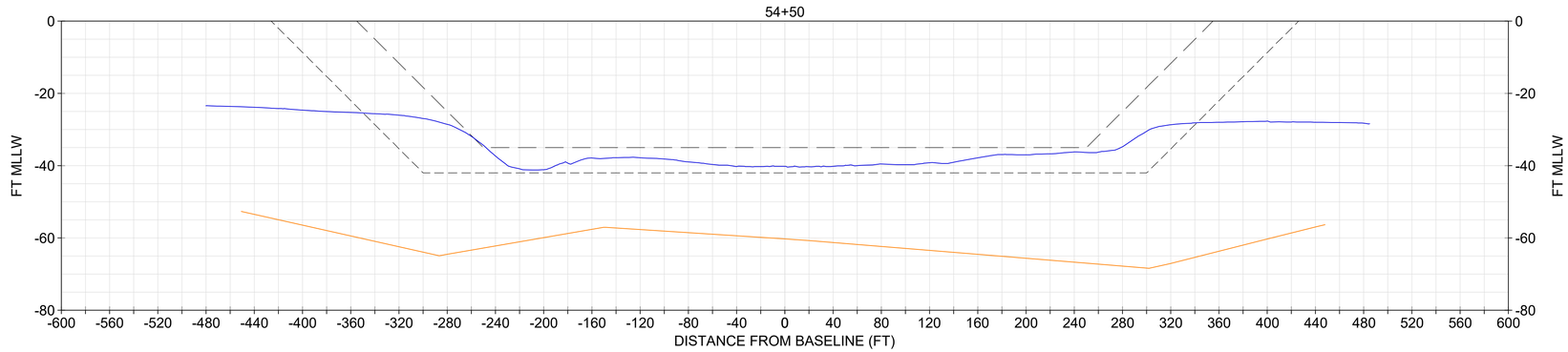
PREPARED FOR: Coastal Partners

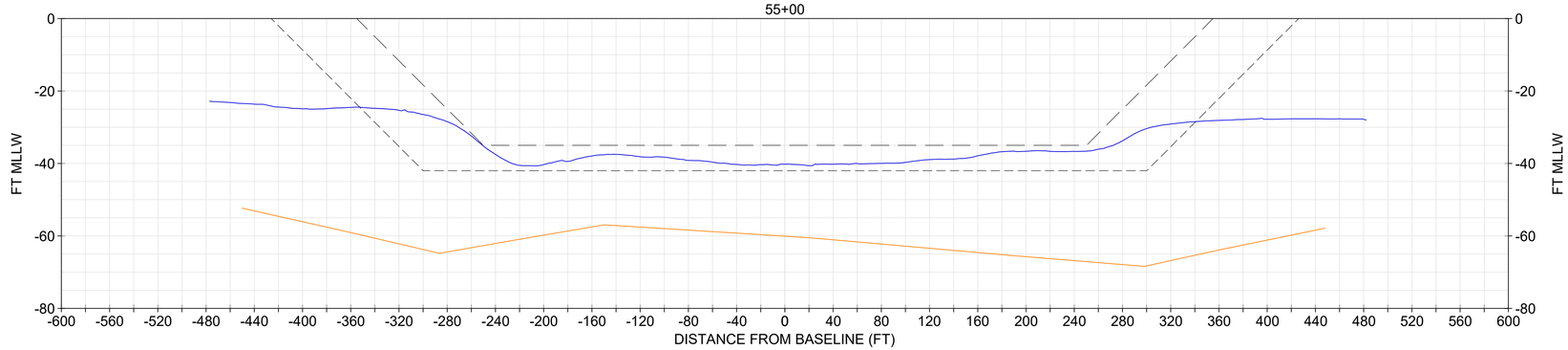
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

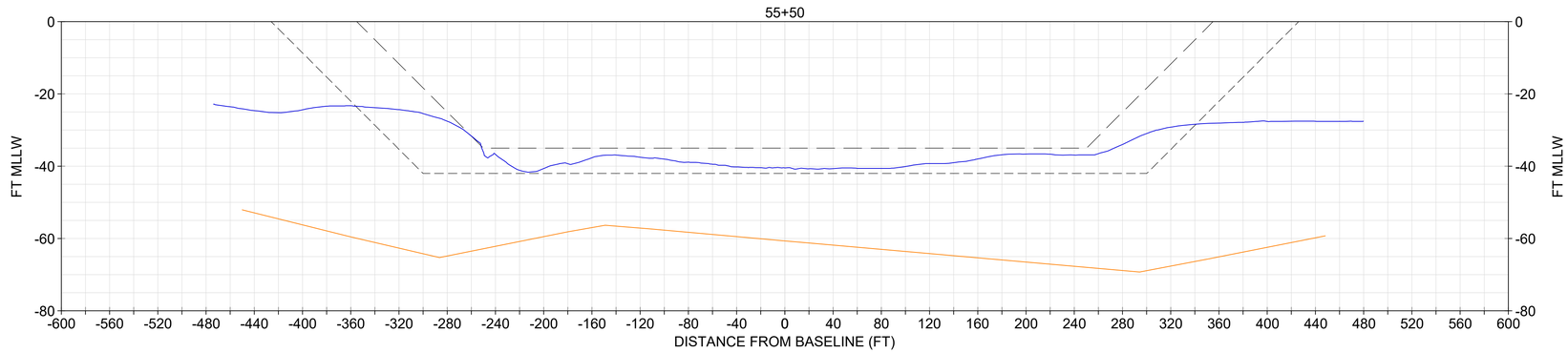
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-027









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 49 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

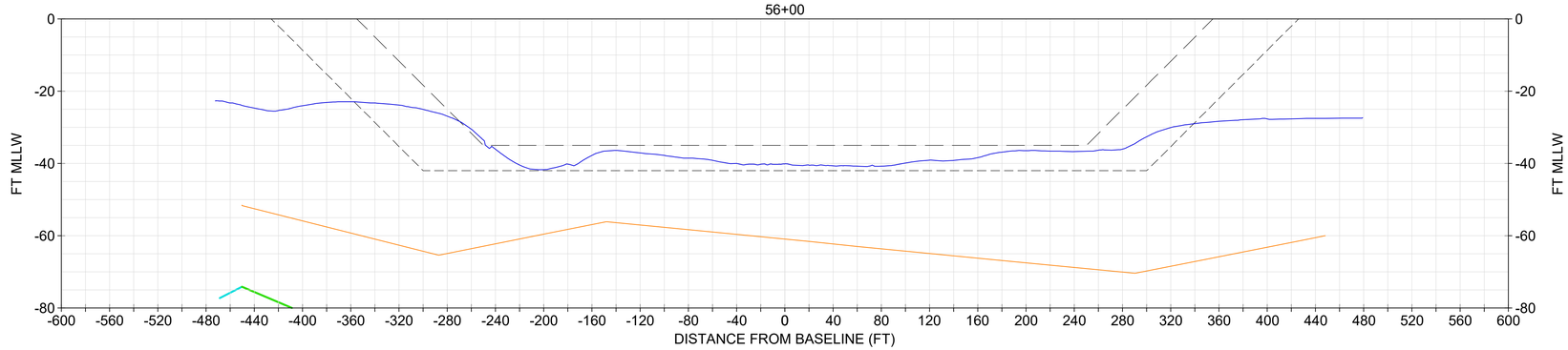
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

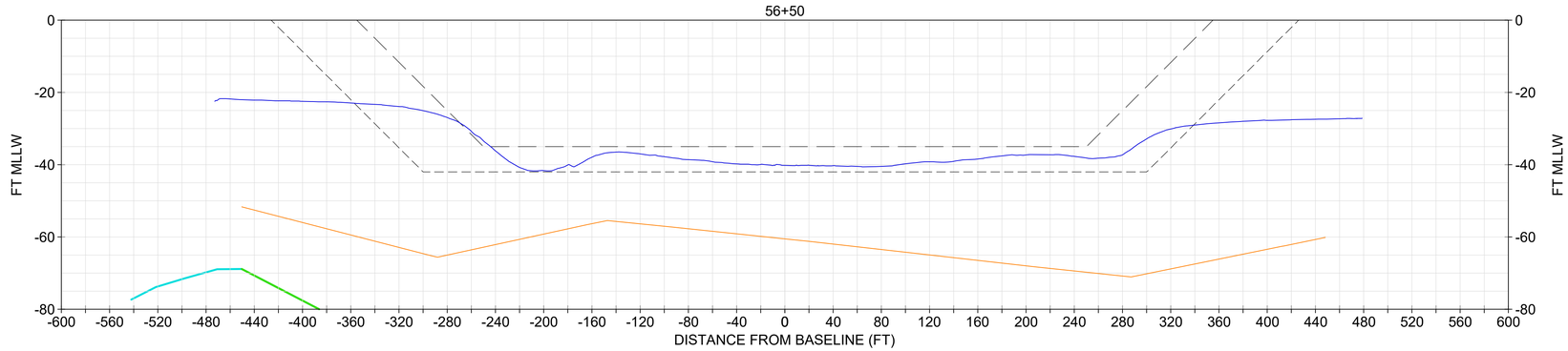
PREPARED FOR: Coastal Partners

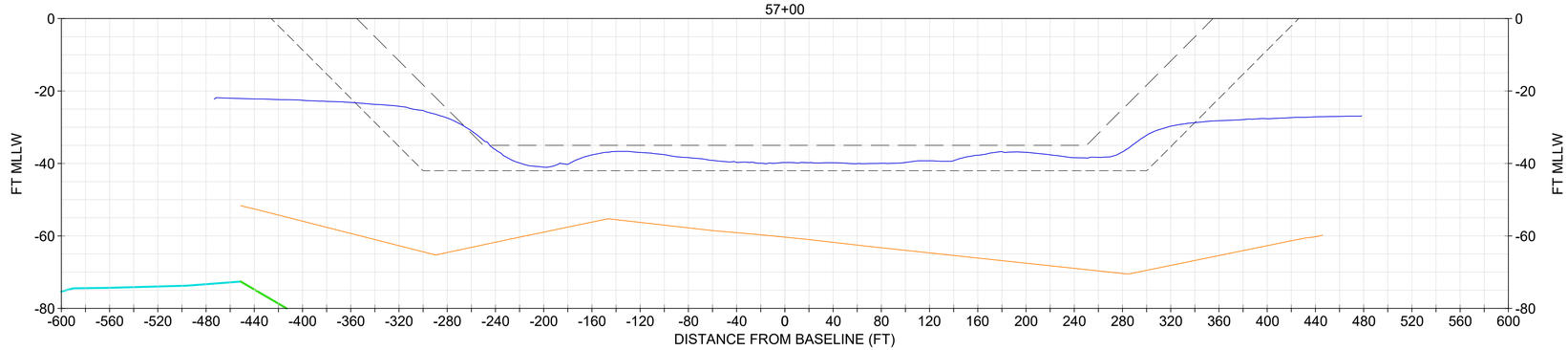
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

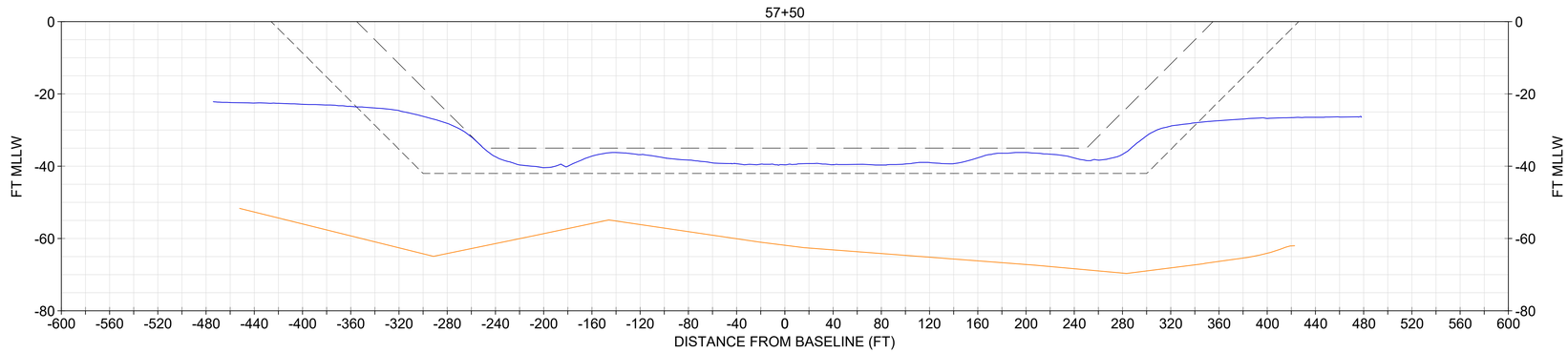
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-028









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 50 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

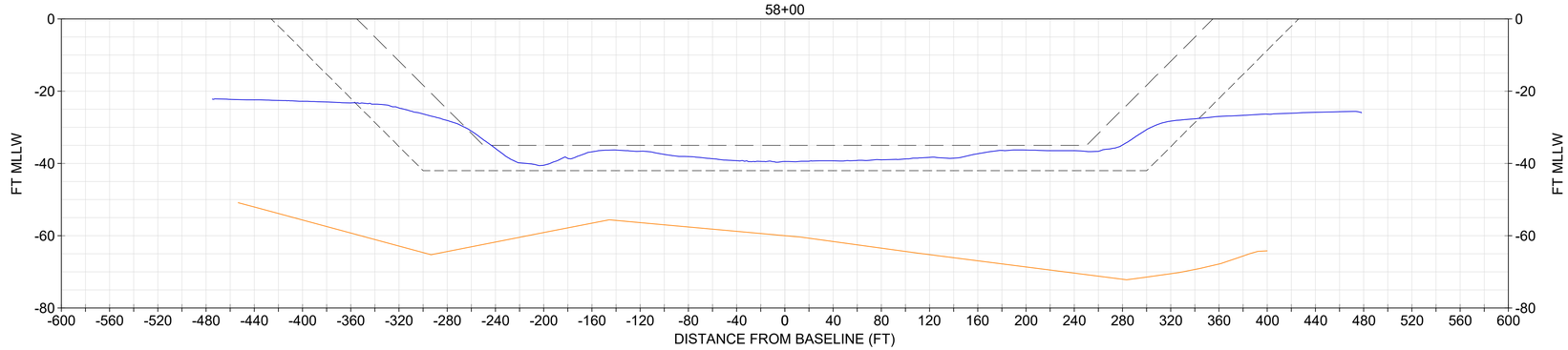
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

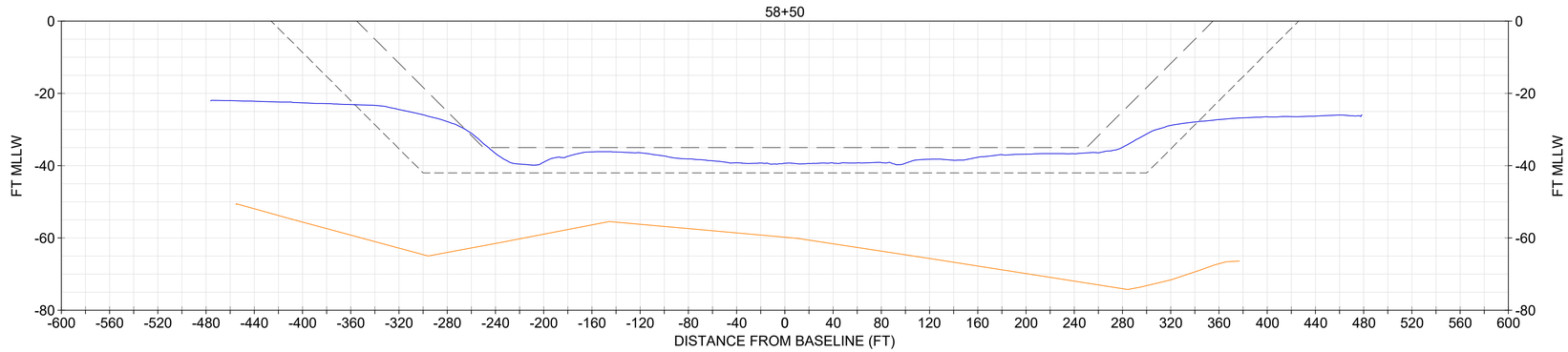
PREPARED FOR: Capital Partners

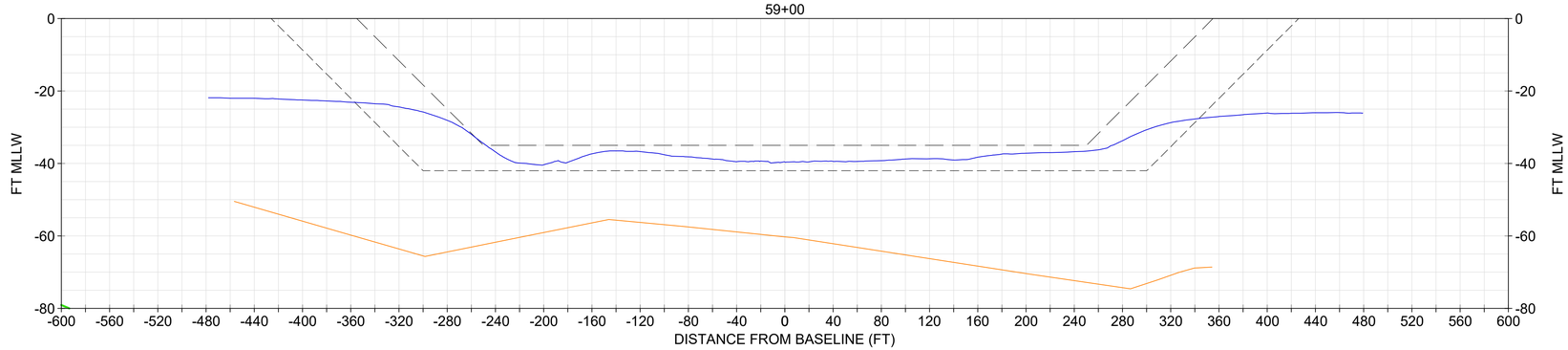
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

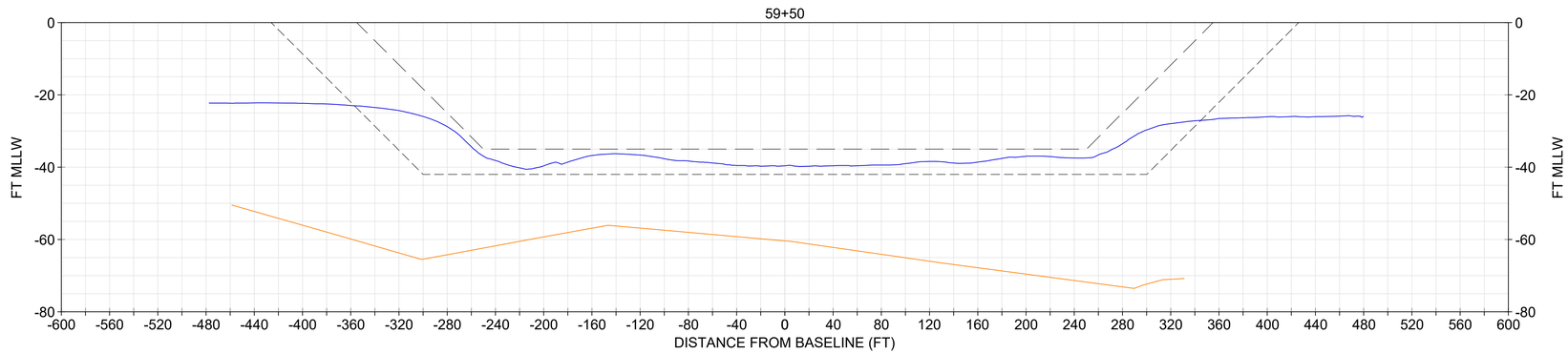
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-029









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 51 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

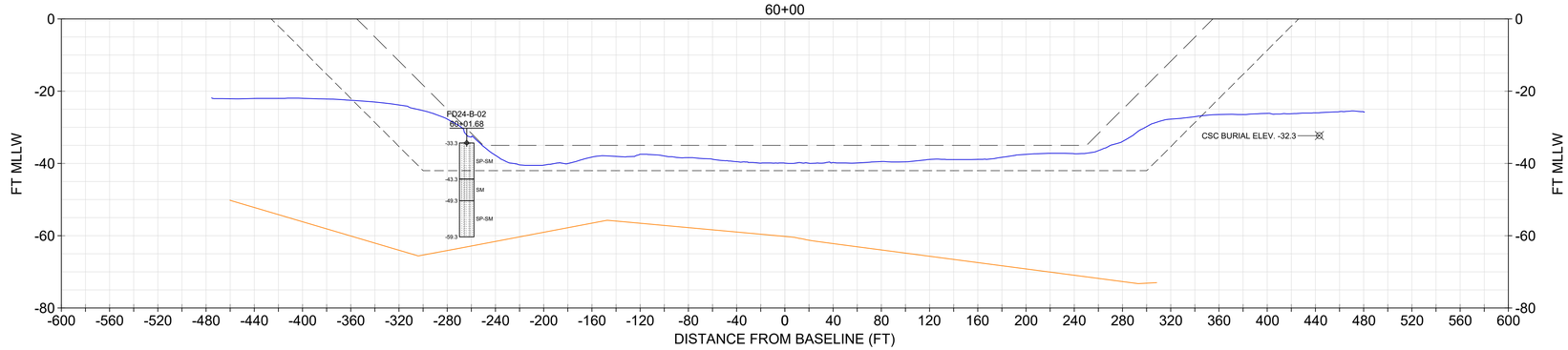
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

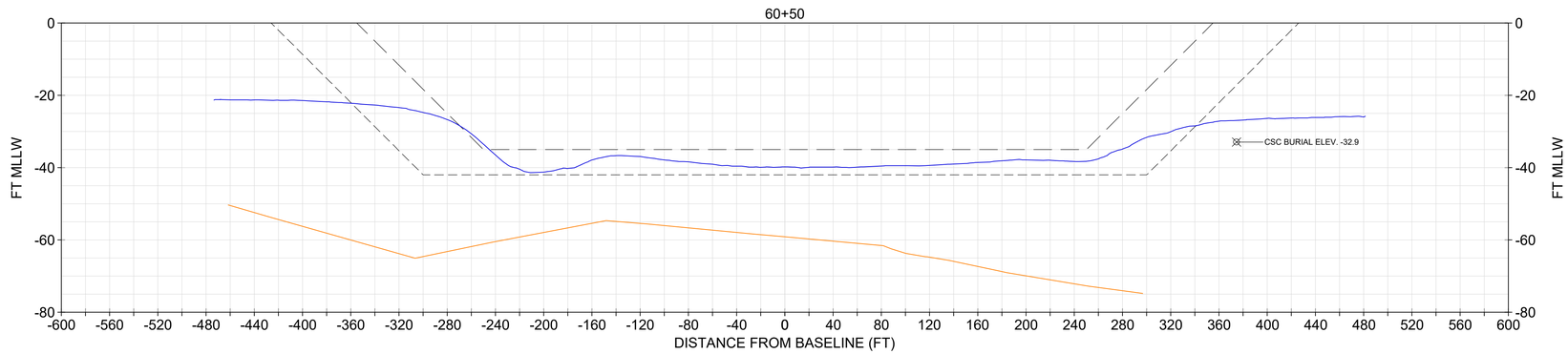
PREPARED FOR: Coastal Partners

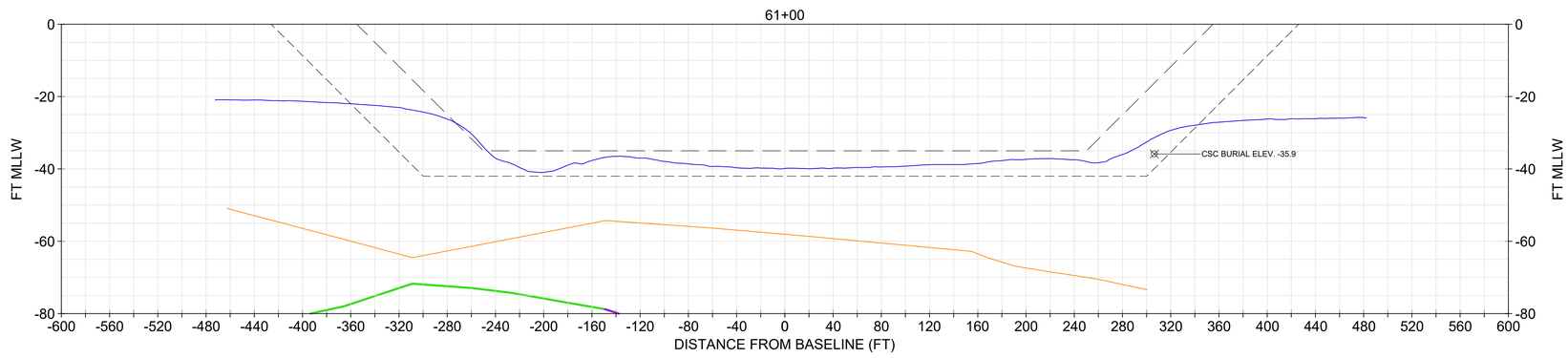
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

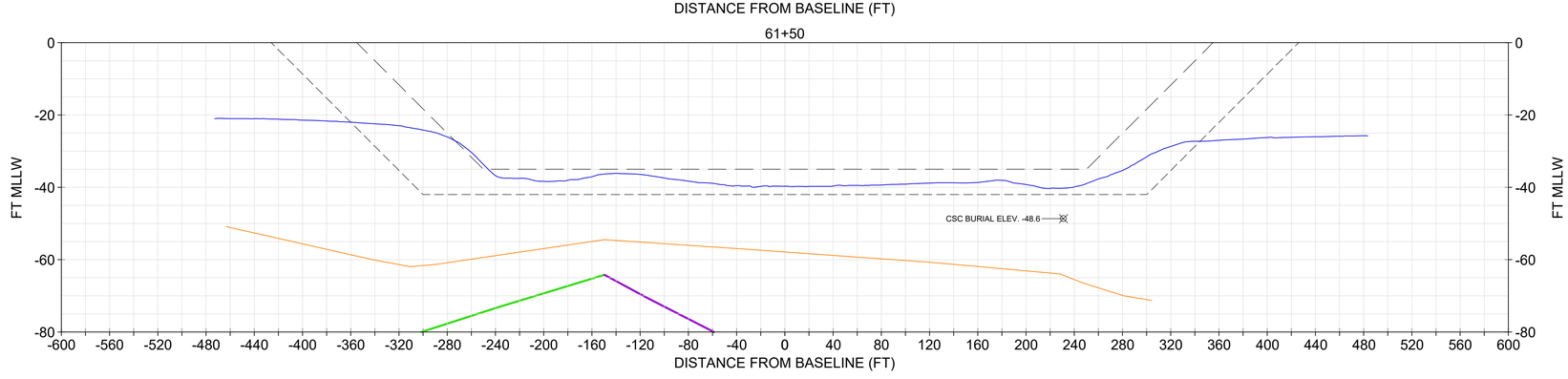
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-030









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-02	-33.3	-59.3	GBA	7/21/2024

CORE LEGEND
- SP-SM (POORLY GRADED SAND WITH SILT)
- SM (SILTY SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 52 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

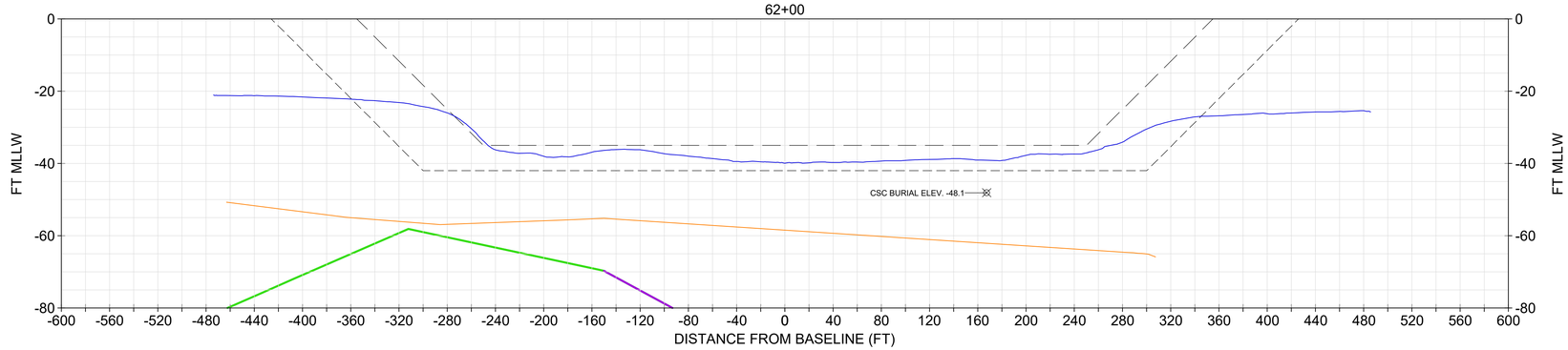
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

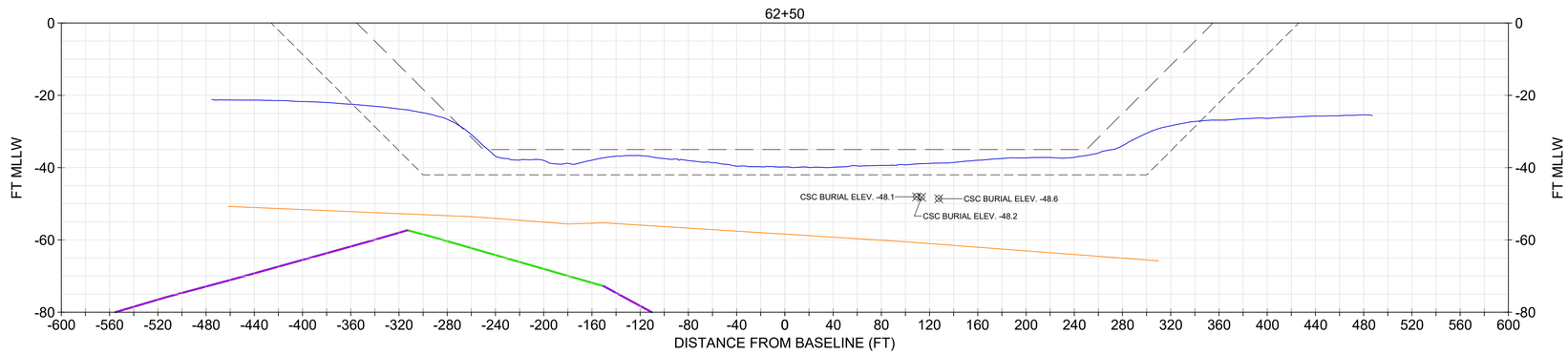
PREPARED FOR: Coastal Partners

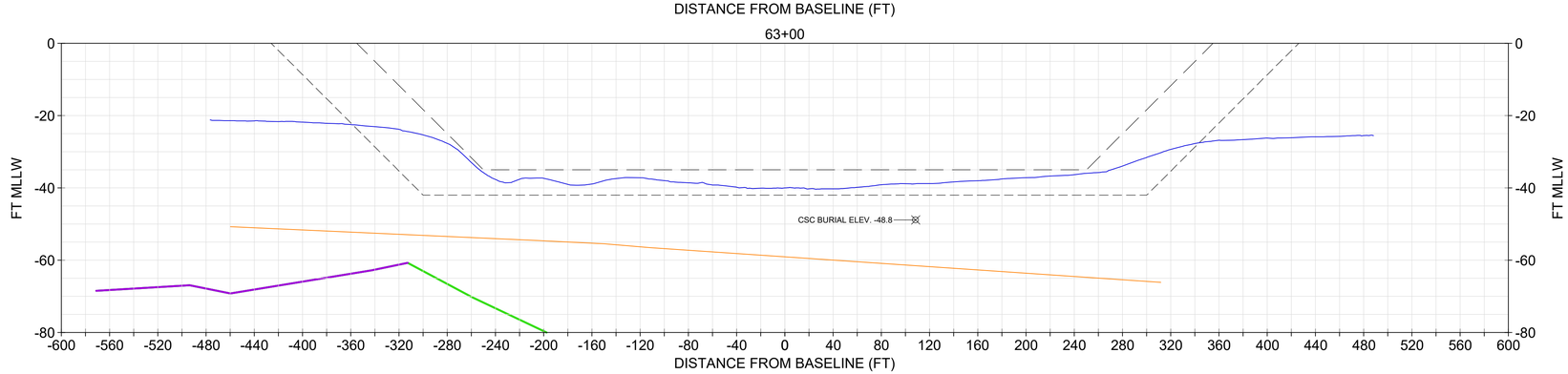
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

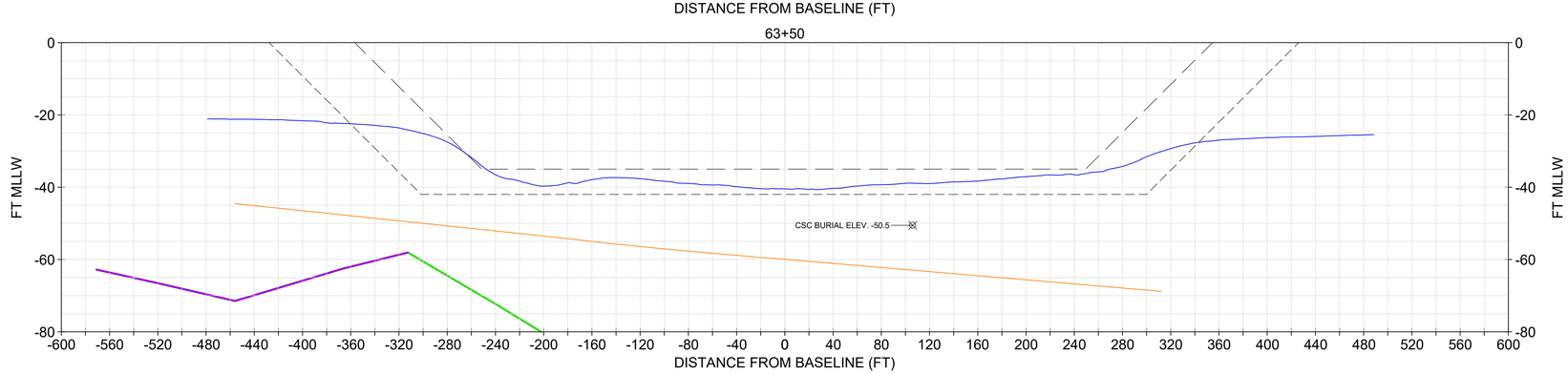
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-031









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 53 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

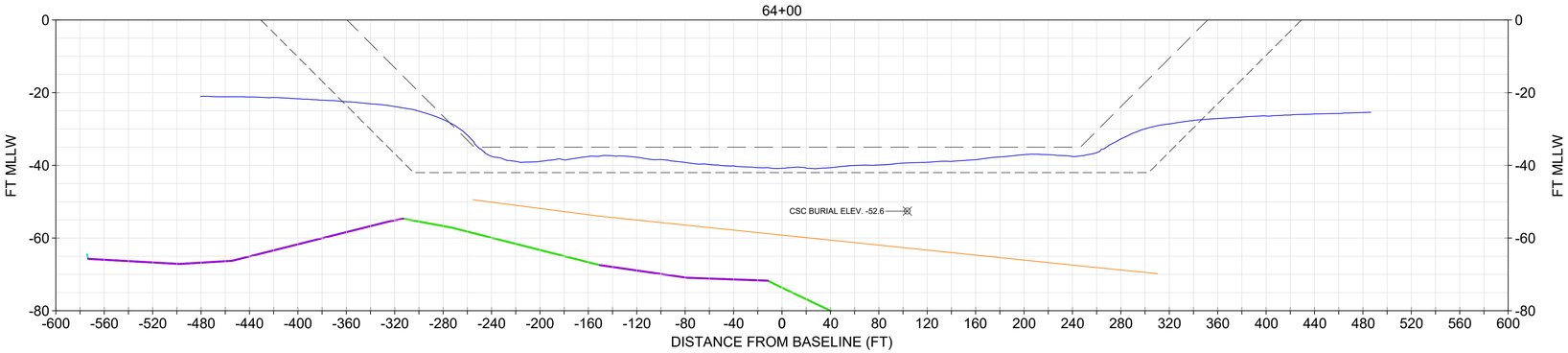
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

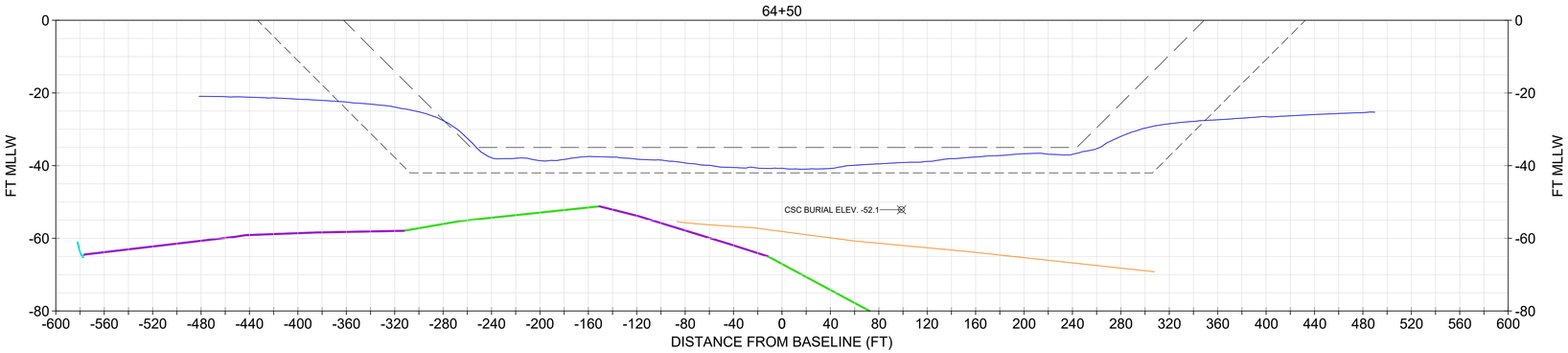
PREPARED FOR:
Capital Partners
CT DEPARTMENT OF TRANSPORTATION

SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-032





NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 54 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI 'D'
SCALE: AS SHOWN

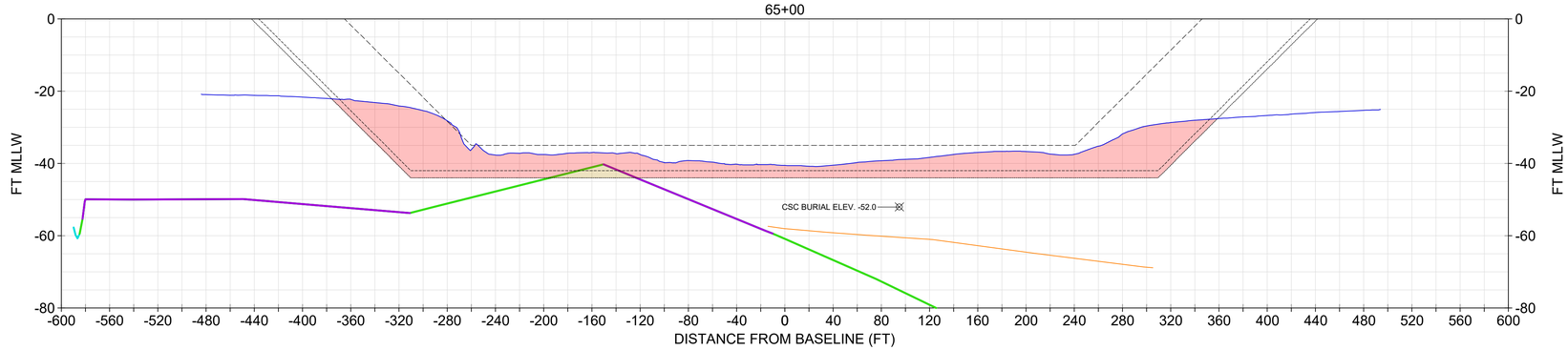
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit F Baltimore, MD 21237 Phone (410) 882-5595

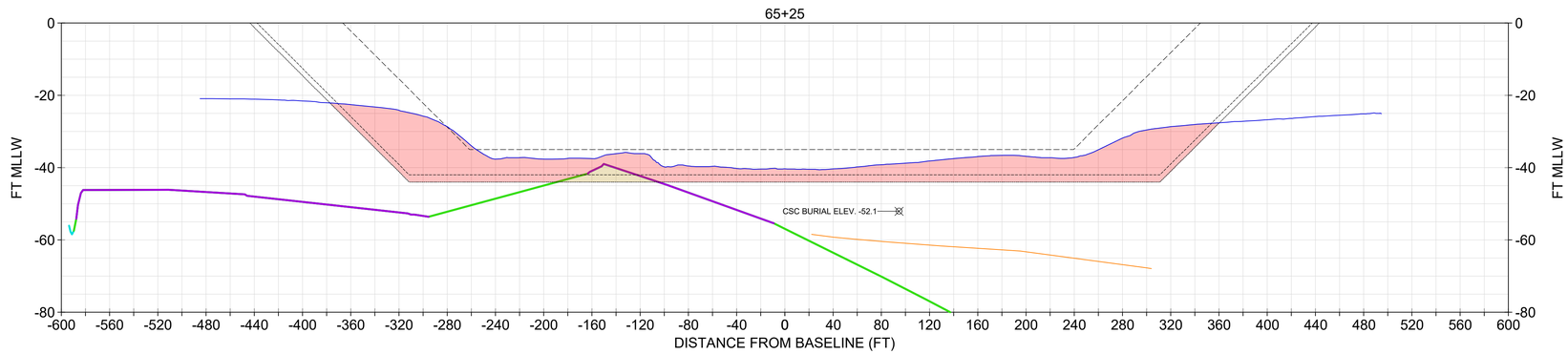
PREPARED FOR: Gardiner Geotechnical Consultants

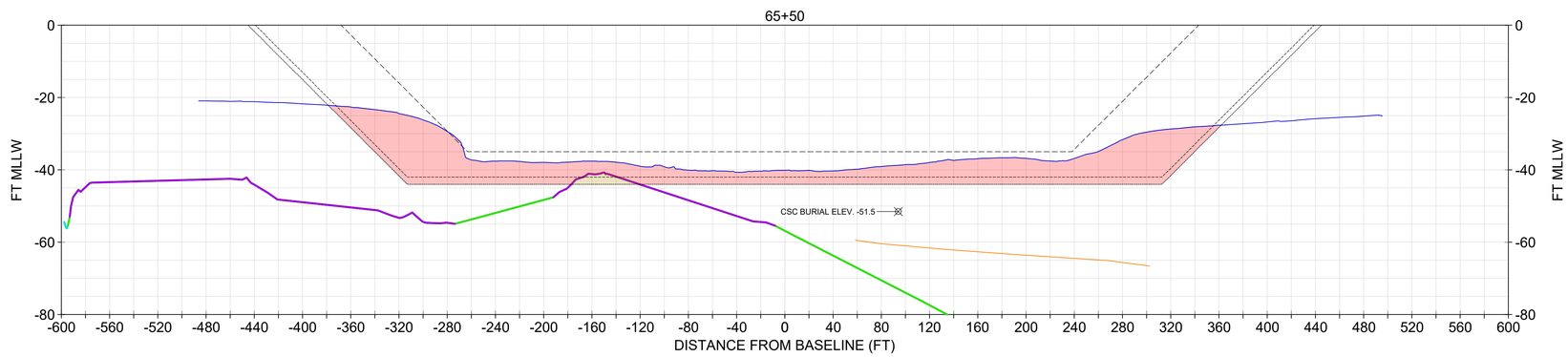
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

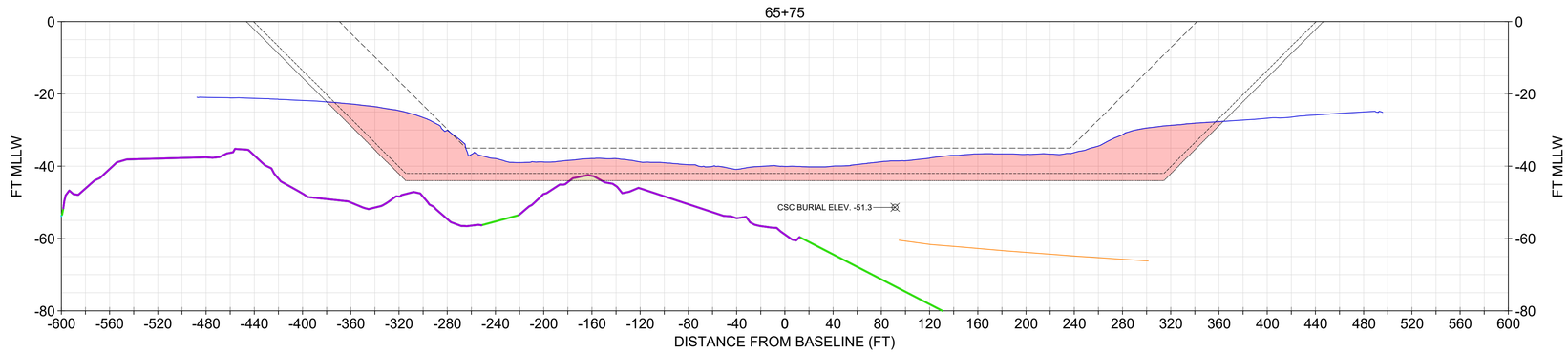
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-033









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 55 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

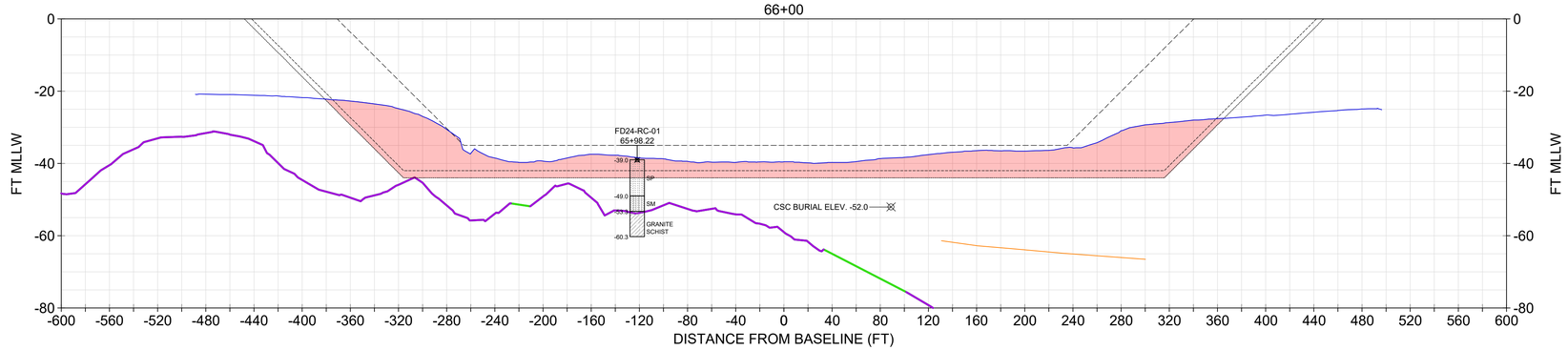
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

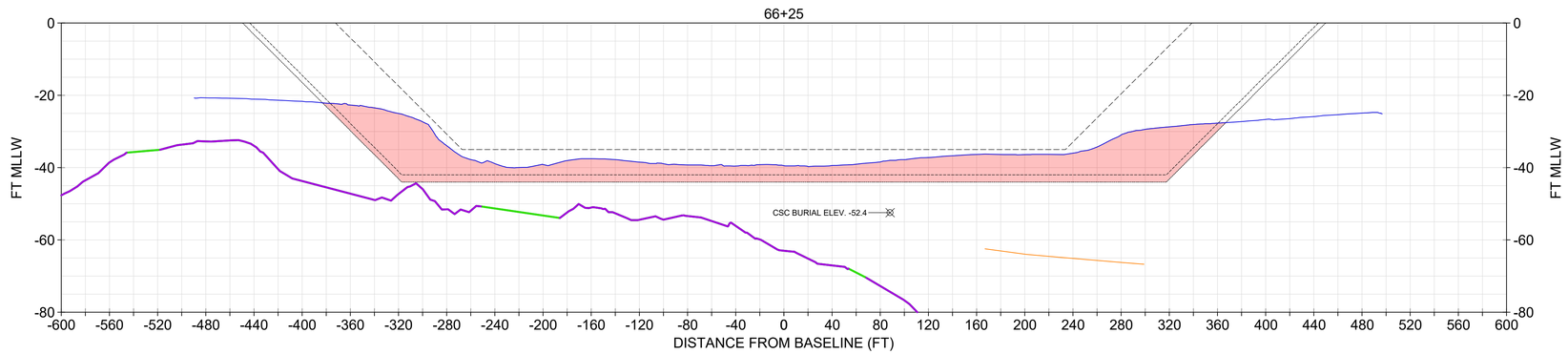
PREPARED FOR: Coastal Partners

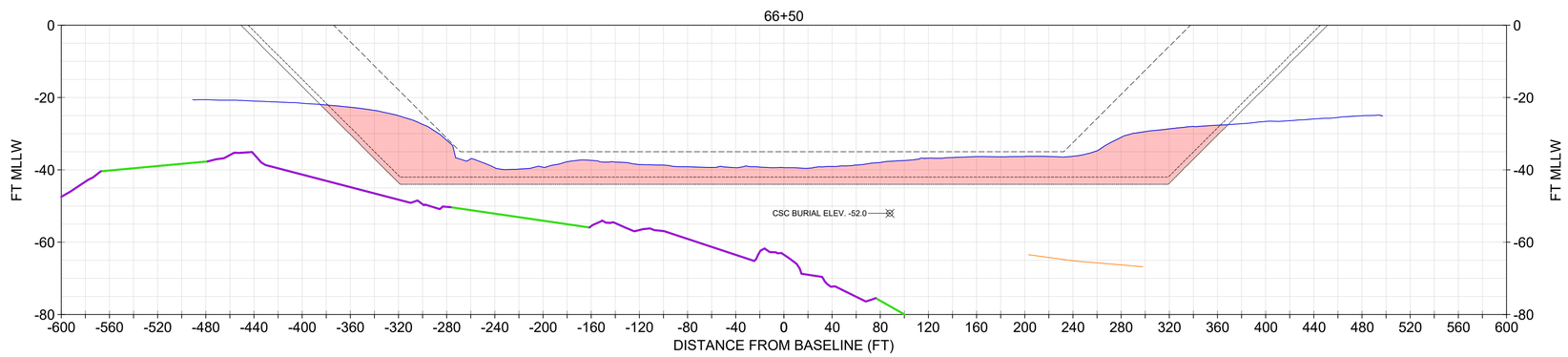
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

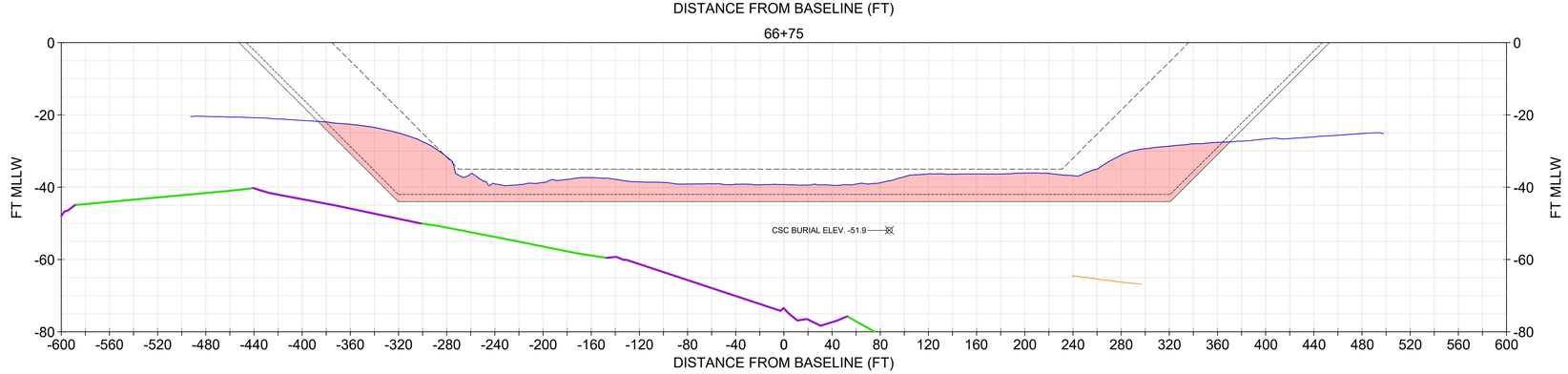
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-034









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-01	-39.0	-60.3	GBA	8/23/2024

CORE LEGEND

- GRANITE SCHIST
- SM (SILTY SAND)
- SP (POORLY GRADED SAND)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 56 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

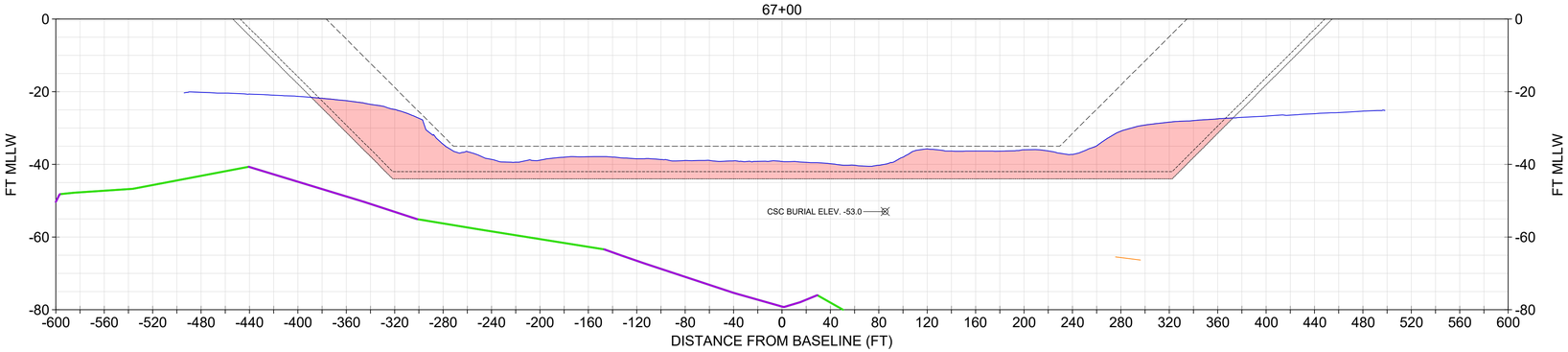
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

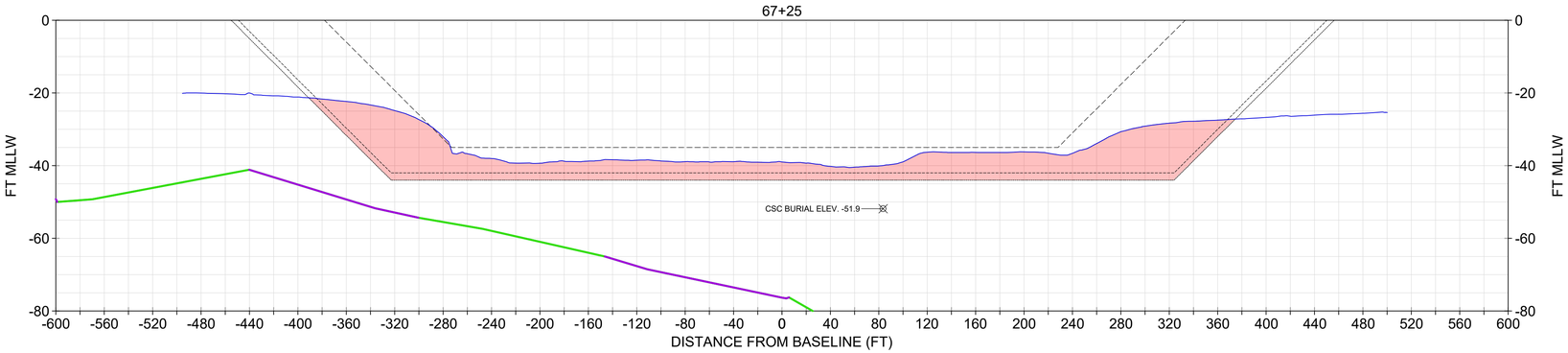
PREPARED FOR: Coastal Partners

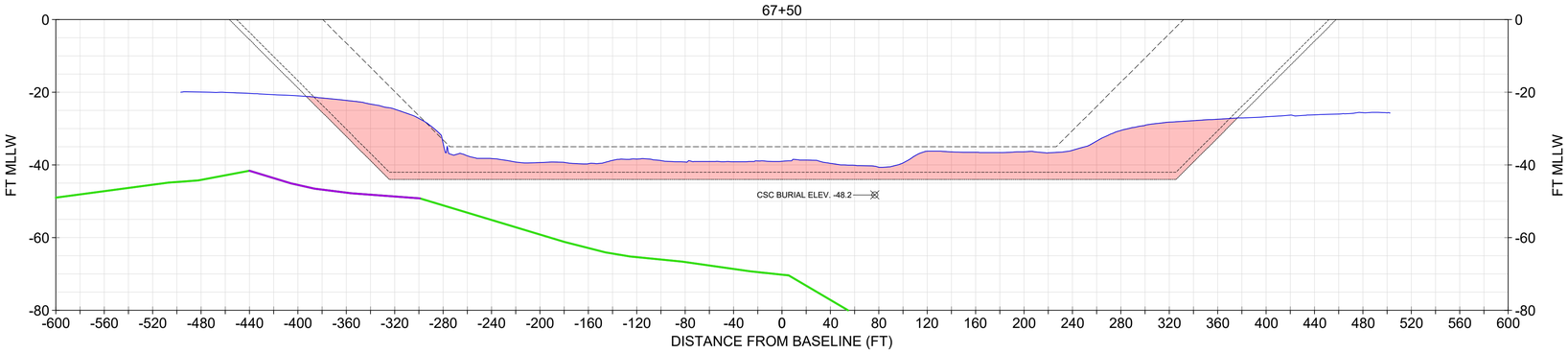
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

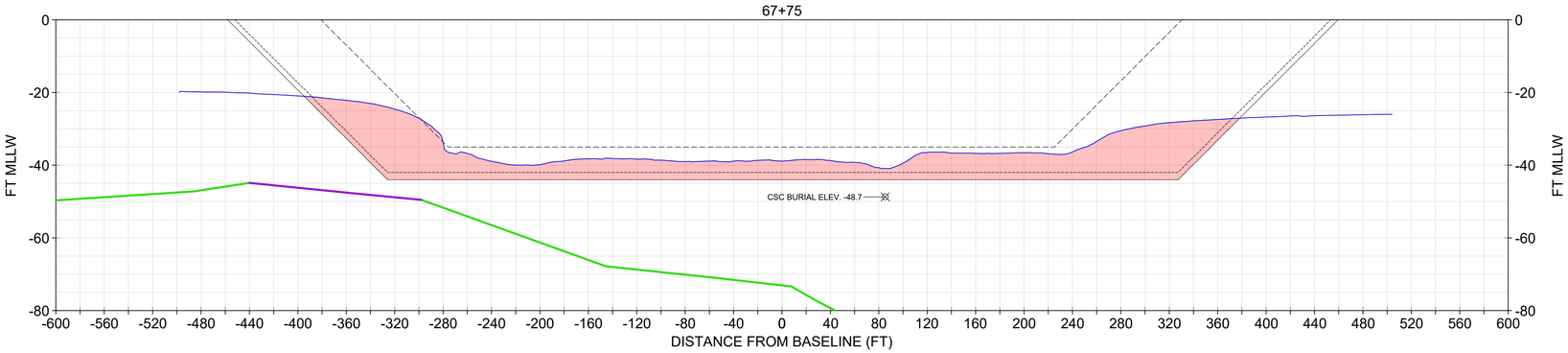
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-035









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 57 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

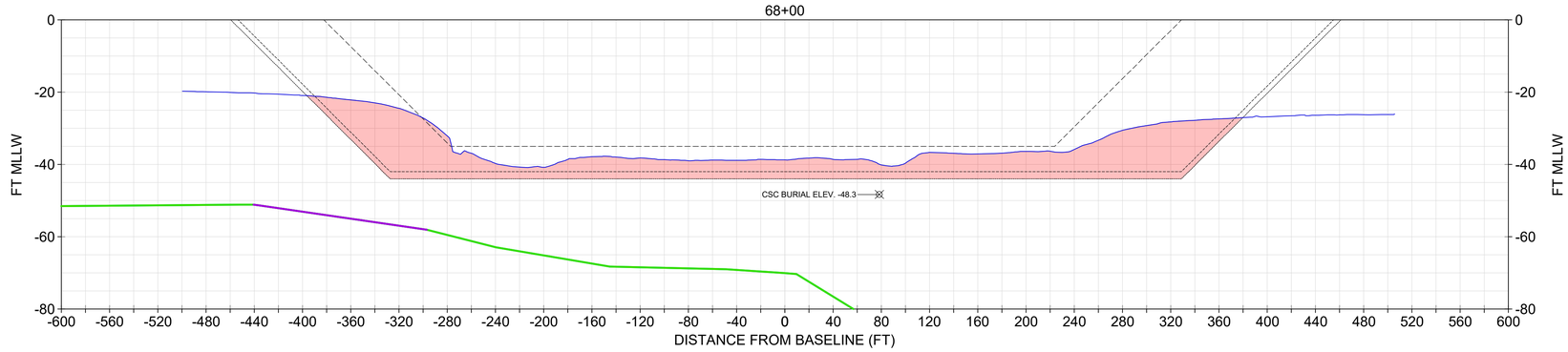
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

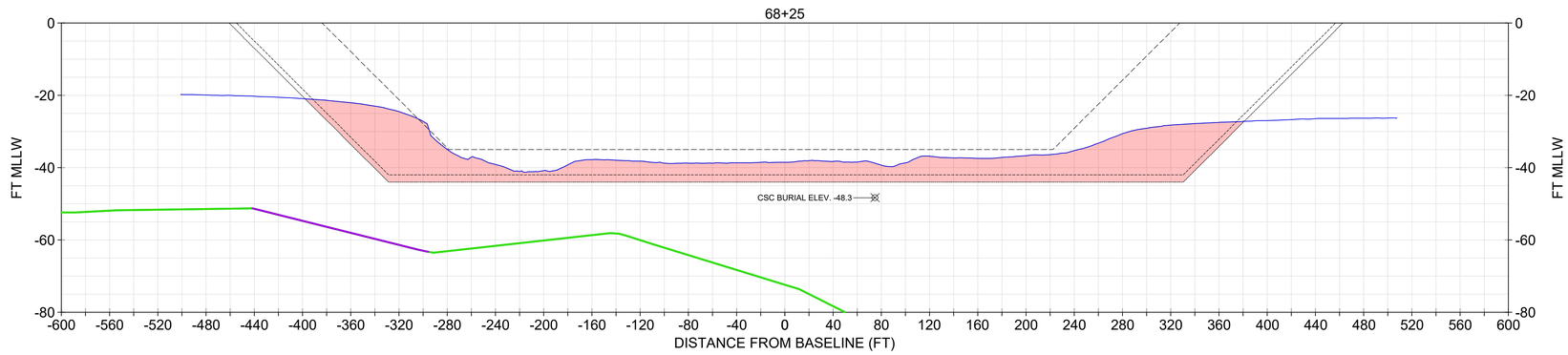
PREPARED FOR: Coastal Partners

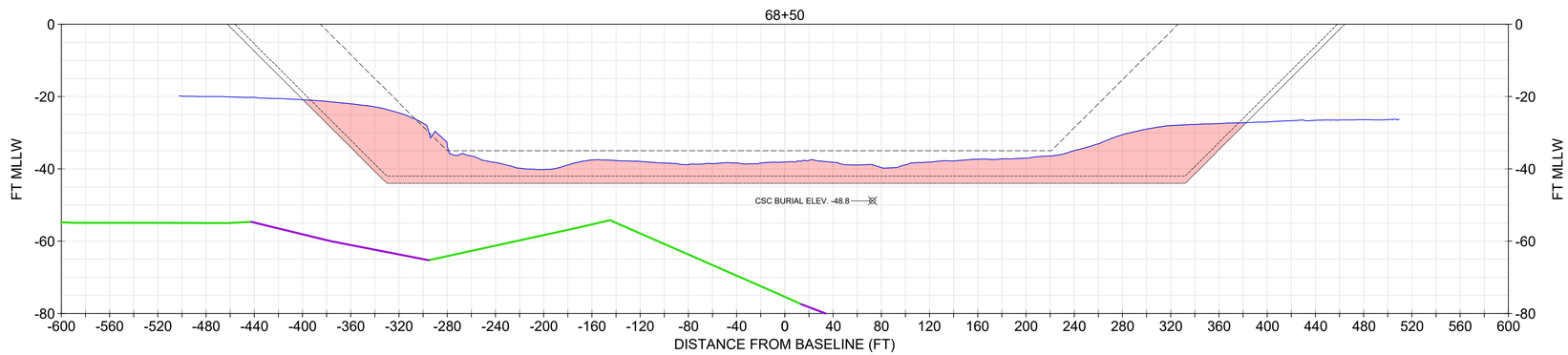
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

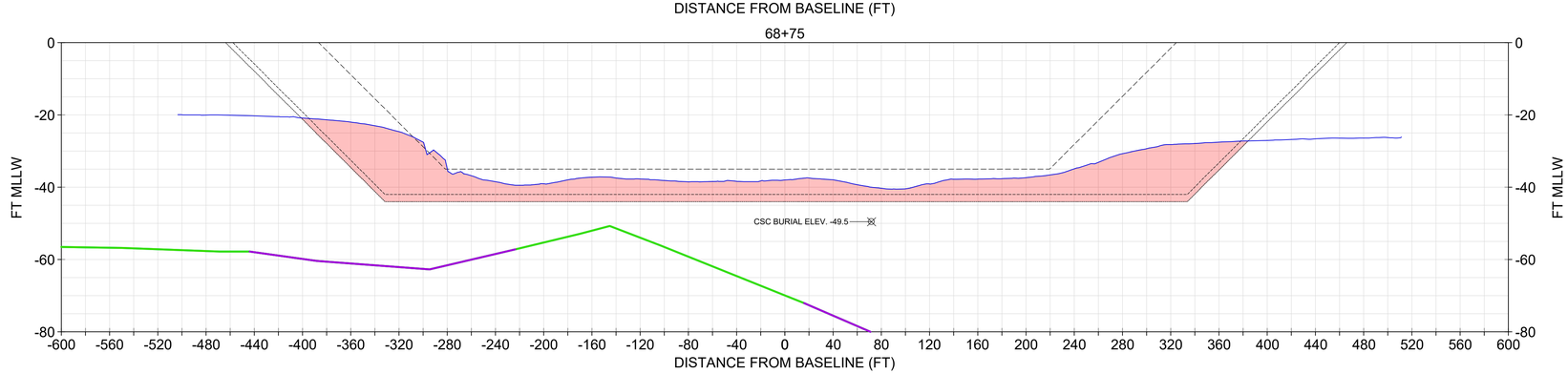
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-036









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 58 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

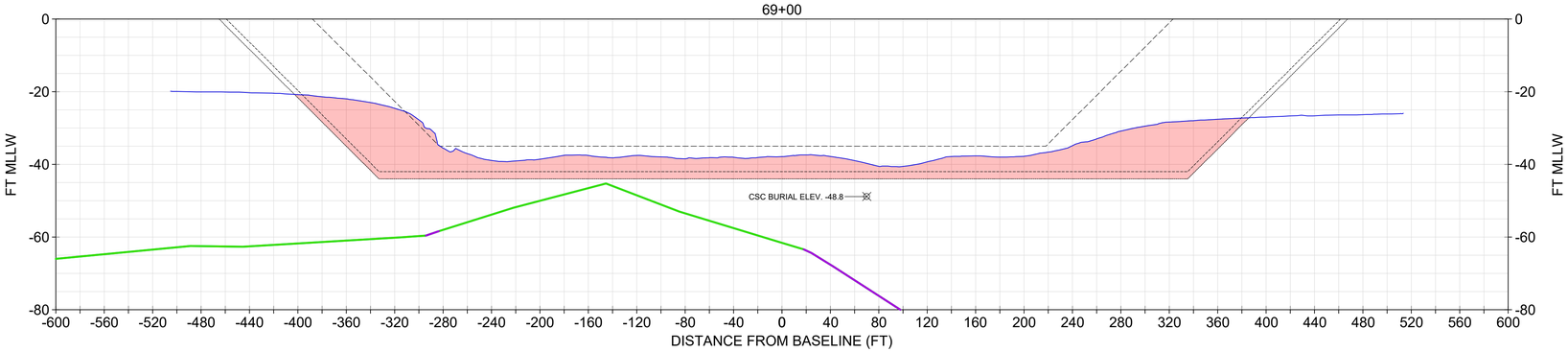
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

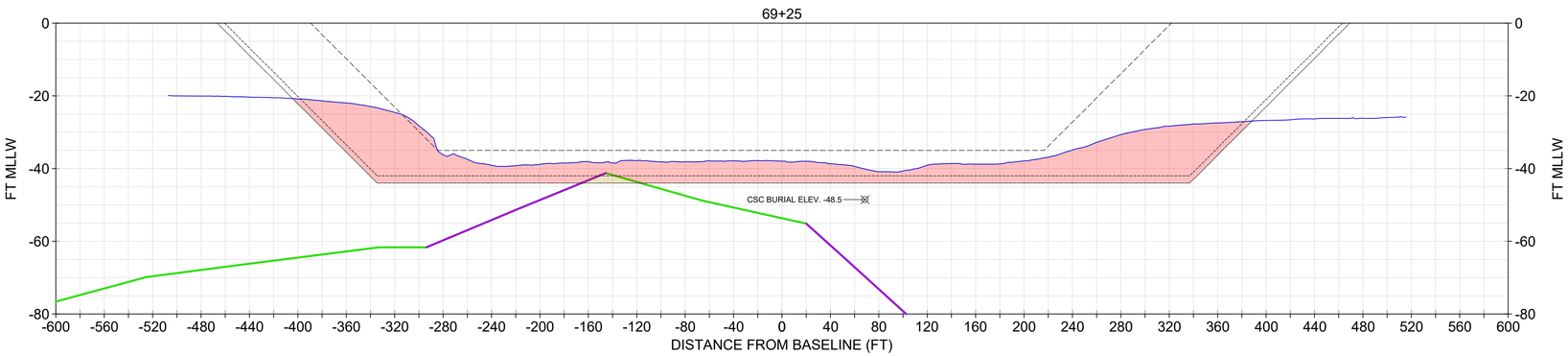
PREPARED FOR: Coastal Partners

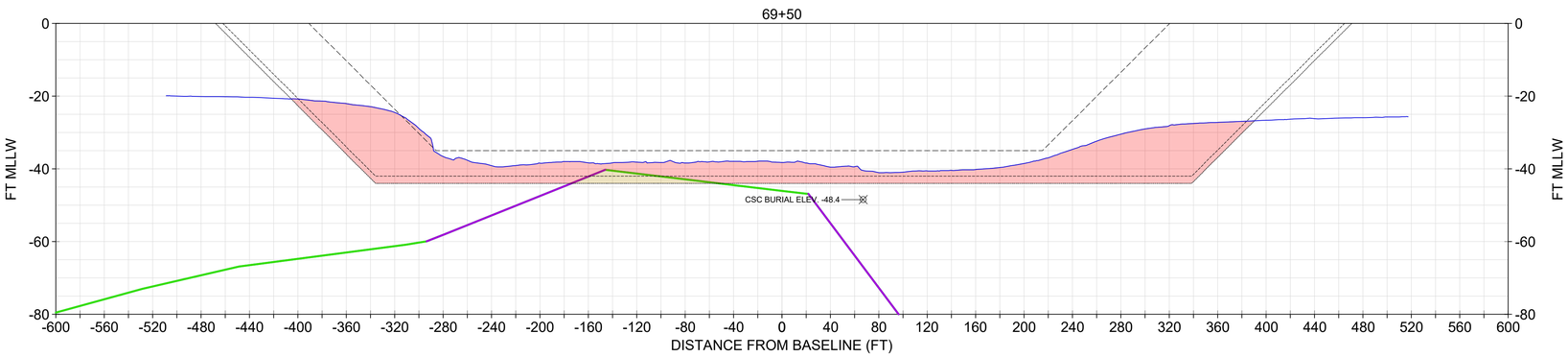
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

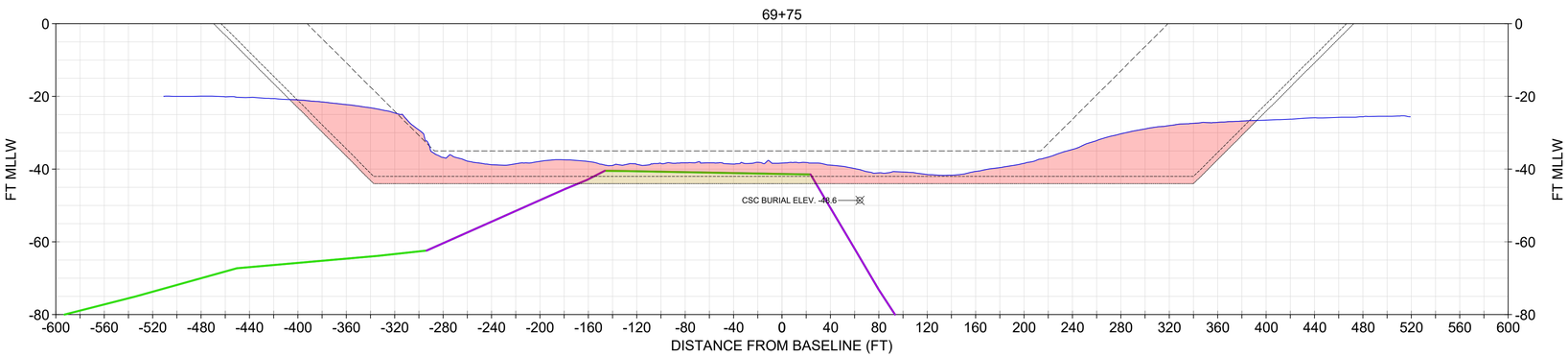
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-037









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 59 OF 220
SCALE: AS SHOWN

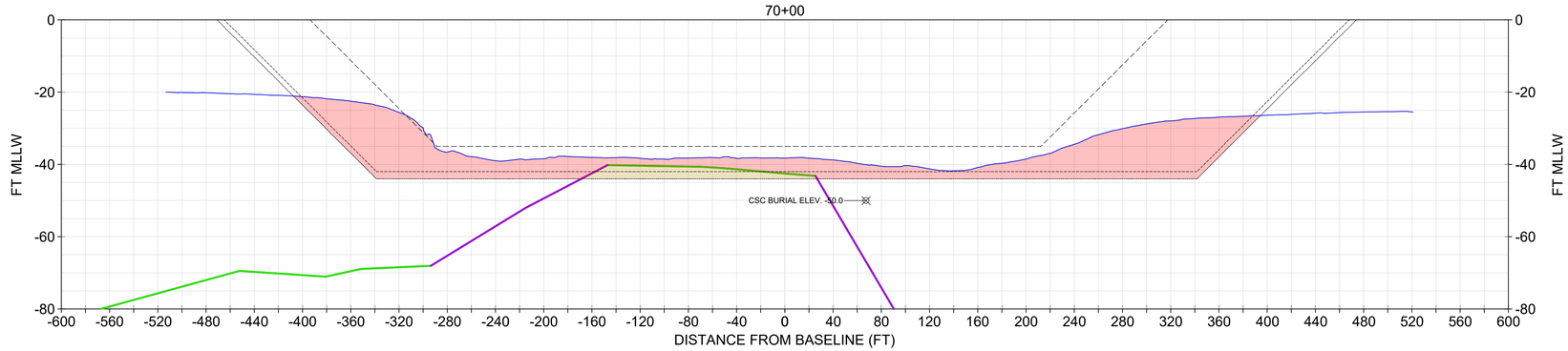
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

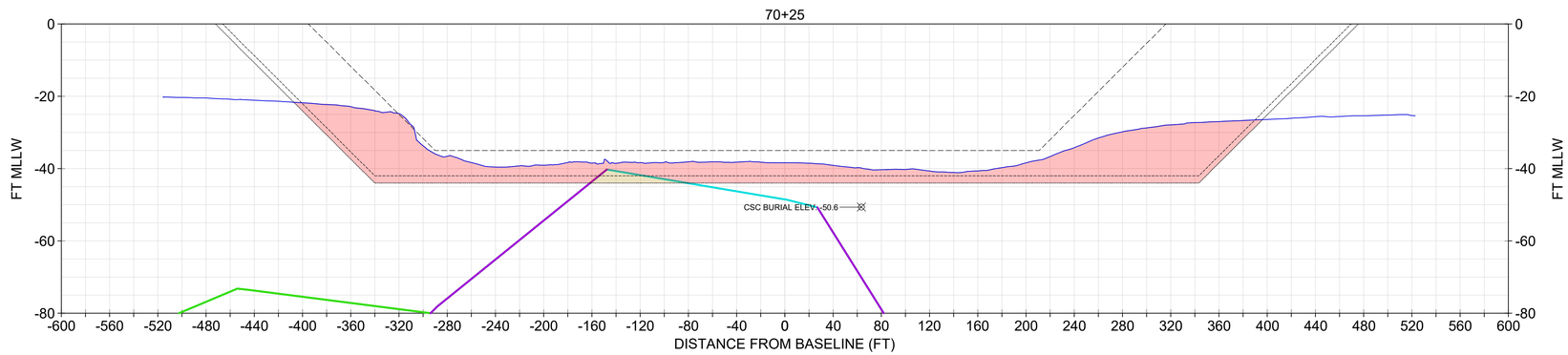
PREPARED FOR: Cross Sound Ferries

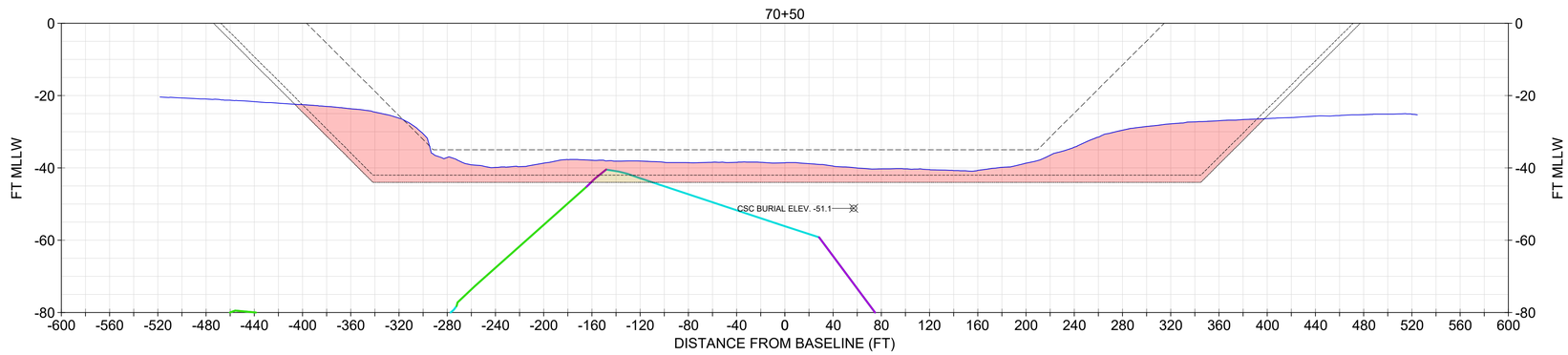
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

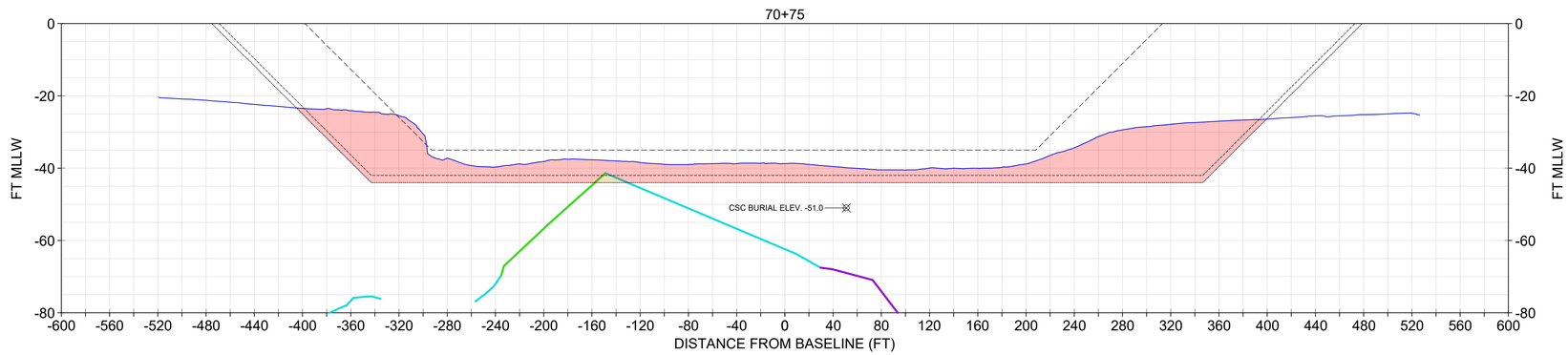
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-038









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 60 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

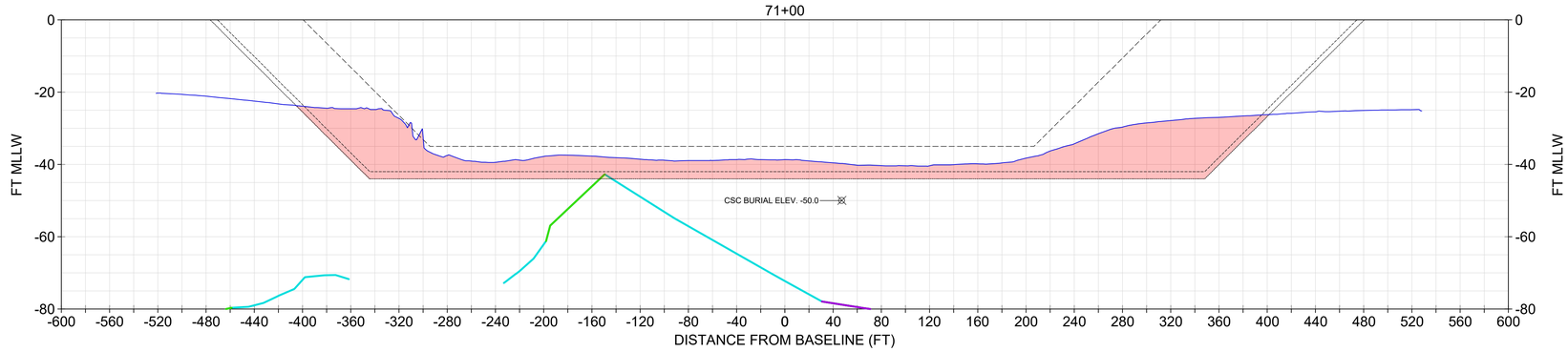
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

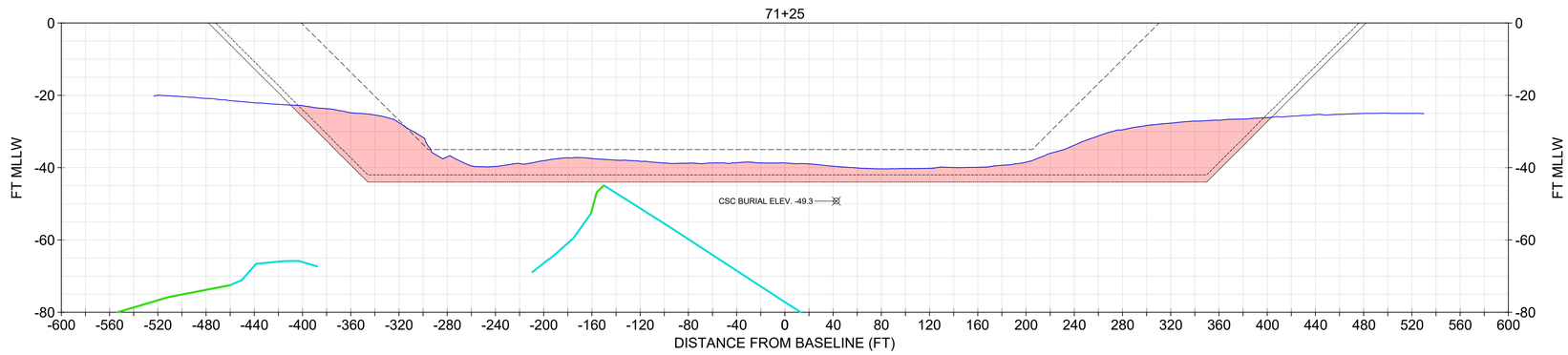
PREPARED FOR: Coastal Partners

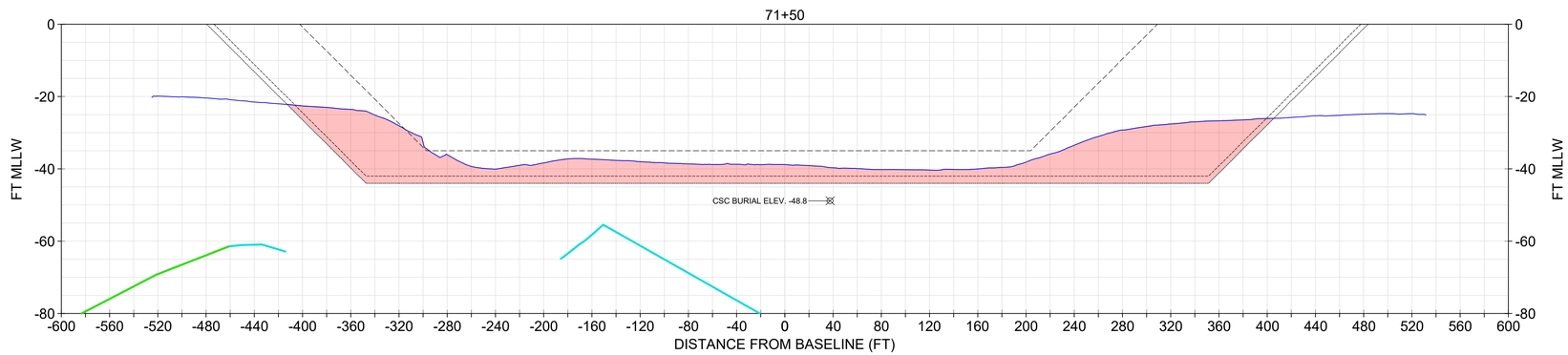
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

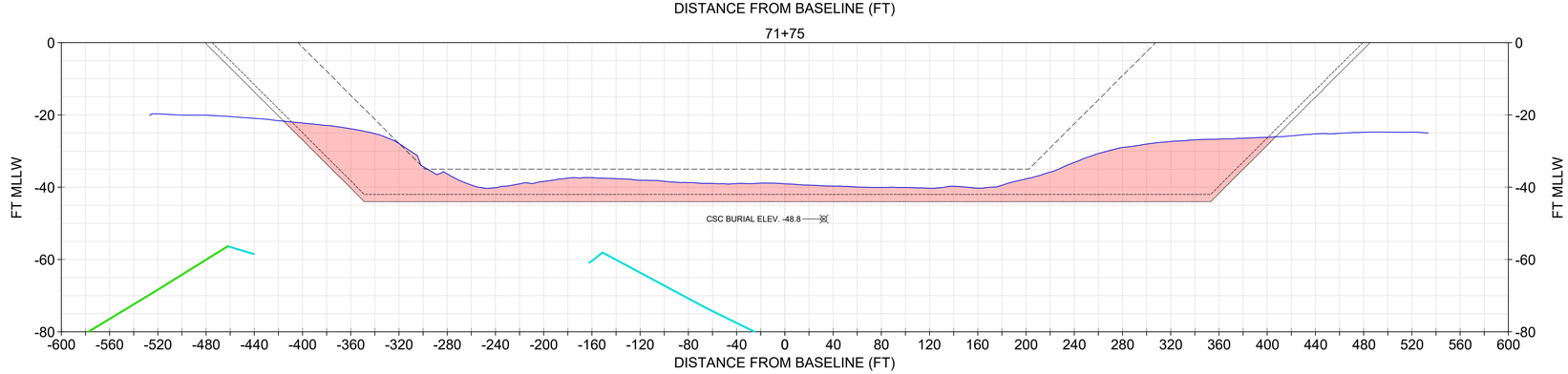
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-039









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 61 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

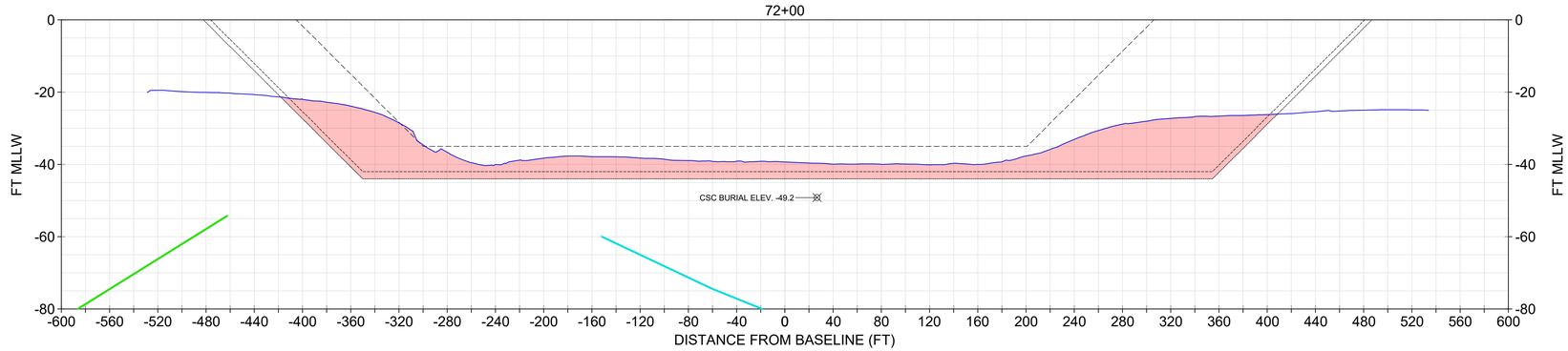
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

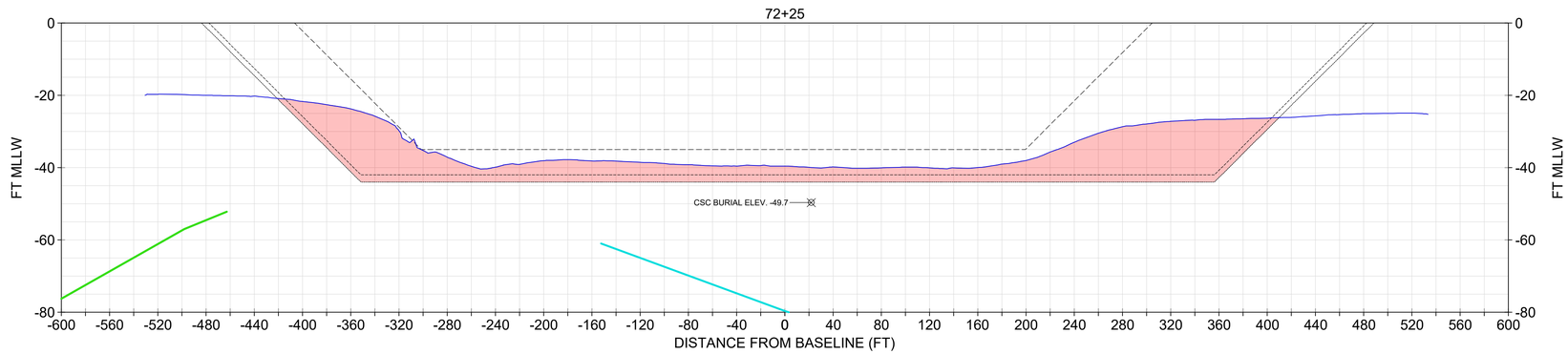
PREPARED FOR: Coastal Partners

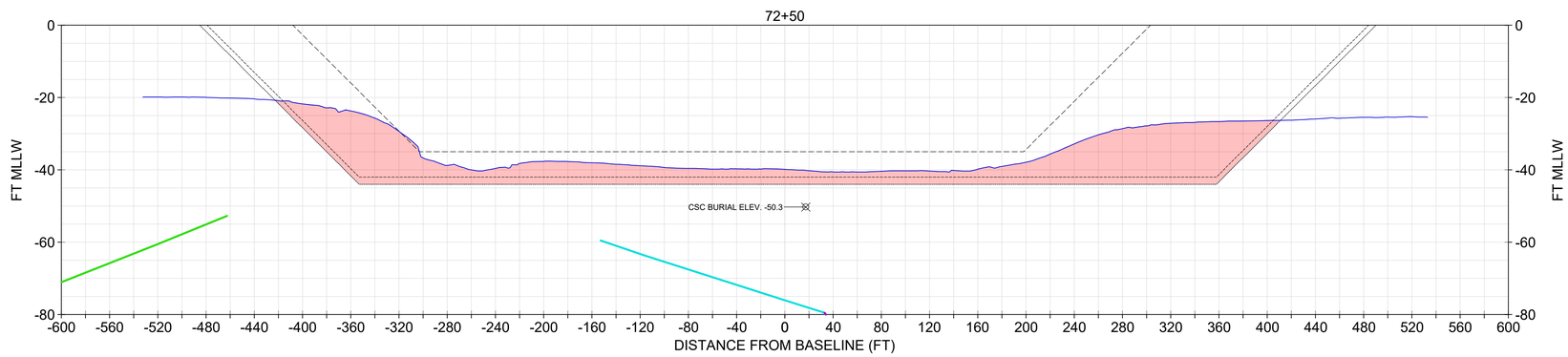
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

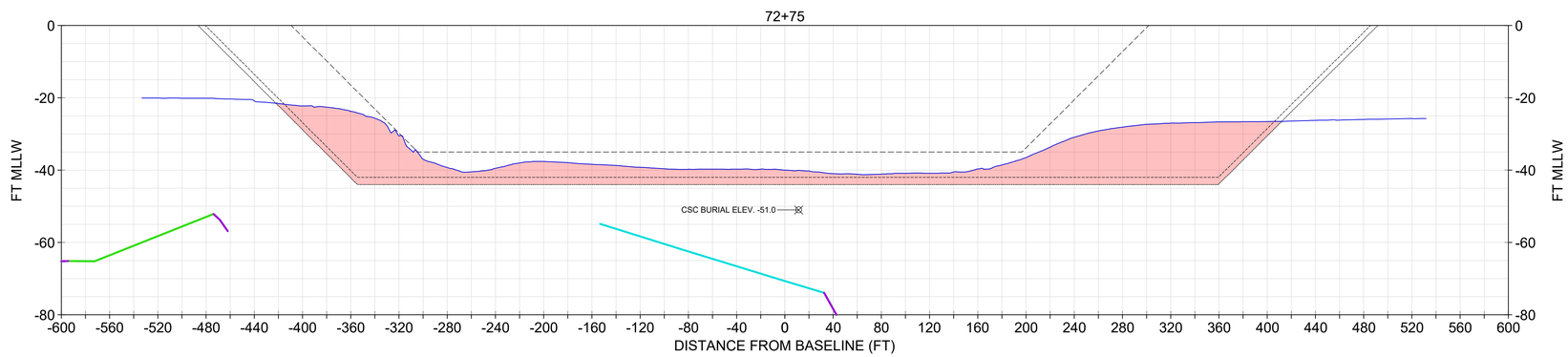
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-040









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 62 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

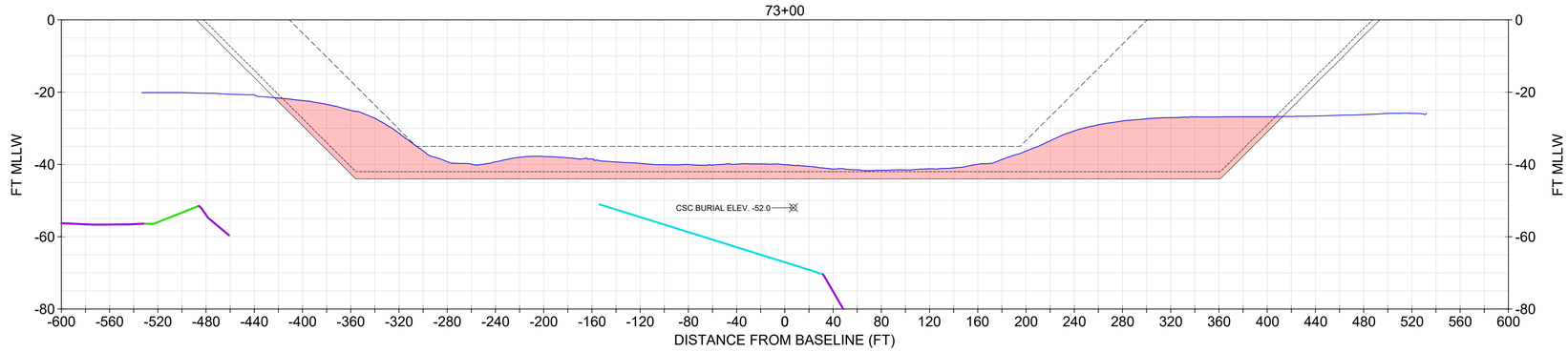
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

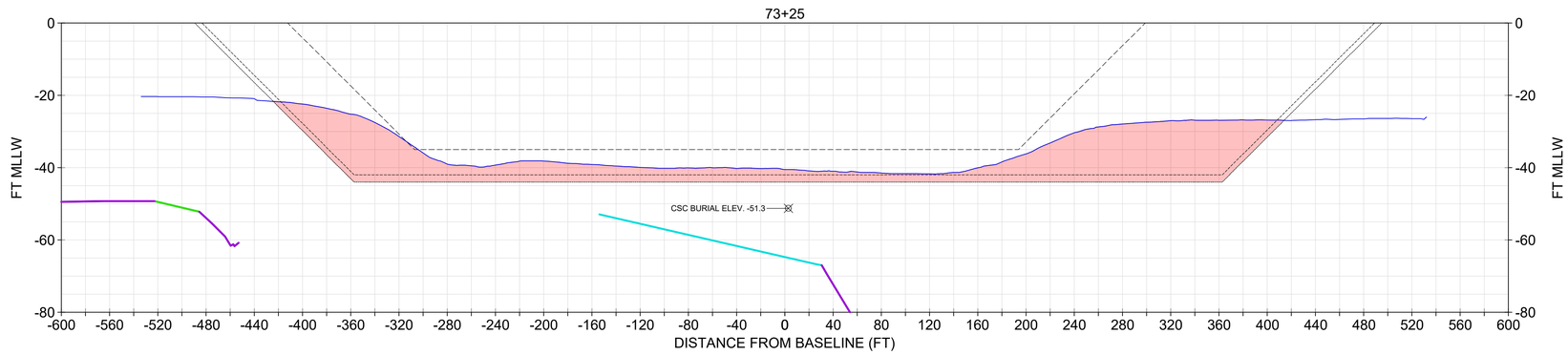
PREPARED FOR: Coastal Partners

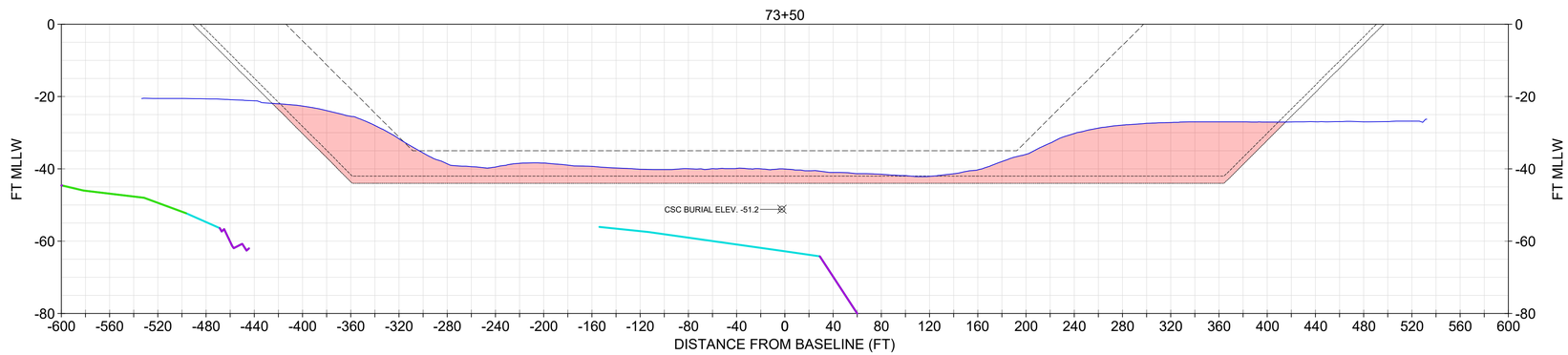
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

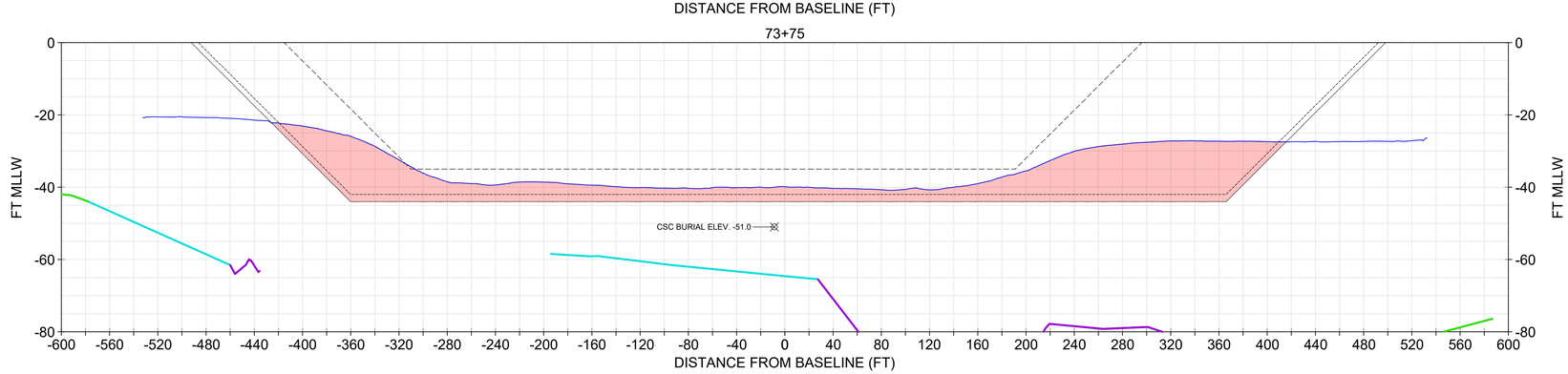
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-041









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 63 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

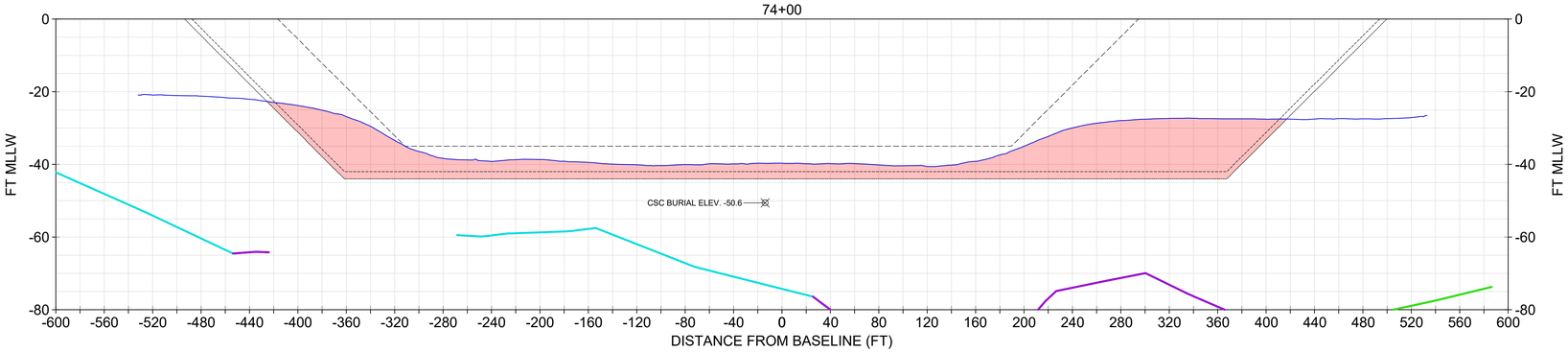
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

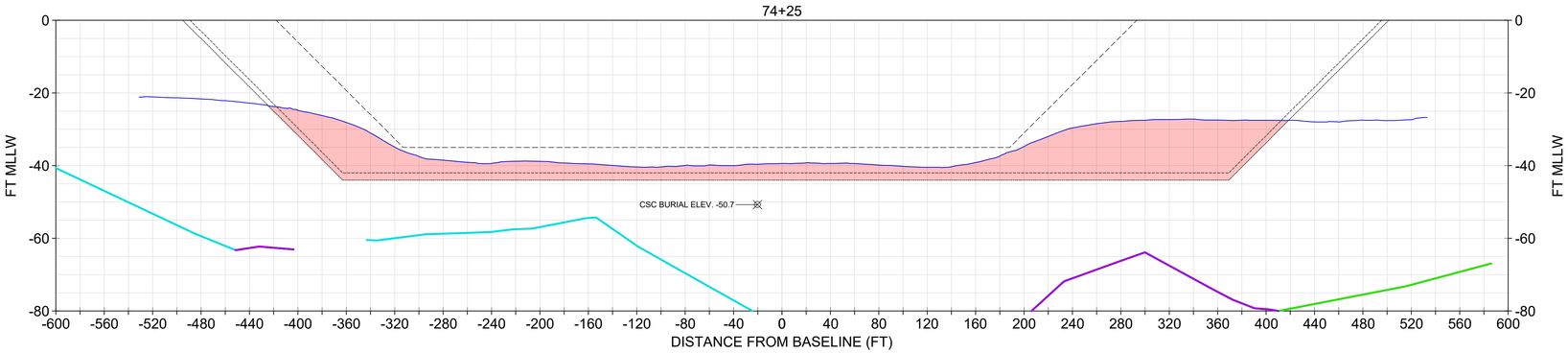
PREPARED FOR: Coastal Partners

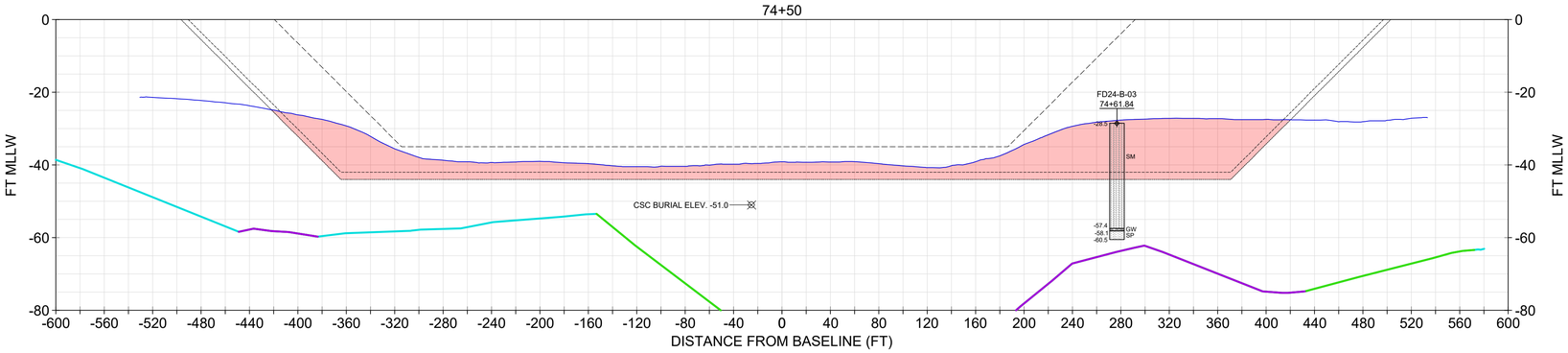
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

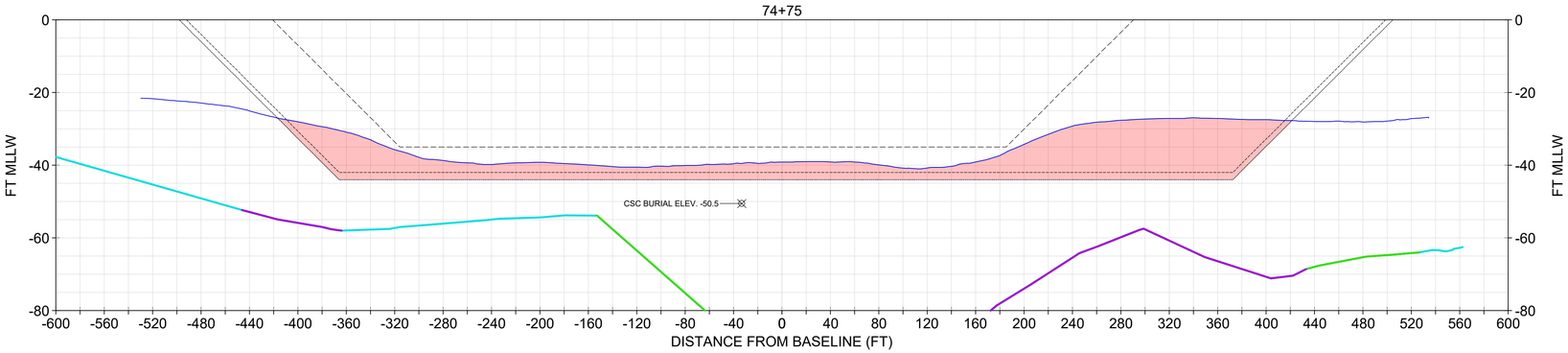
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-042









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-03	-28.5	-60.5	GBA	7/20/2024

CORE LEGEND

- GW (WELL GRADED GRAVEL)
- SM (SILTY SAND)
- SP (POORLY GRADED SAND)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 64 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

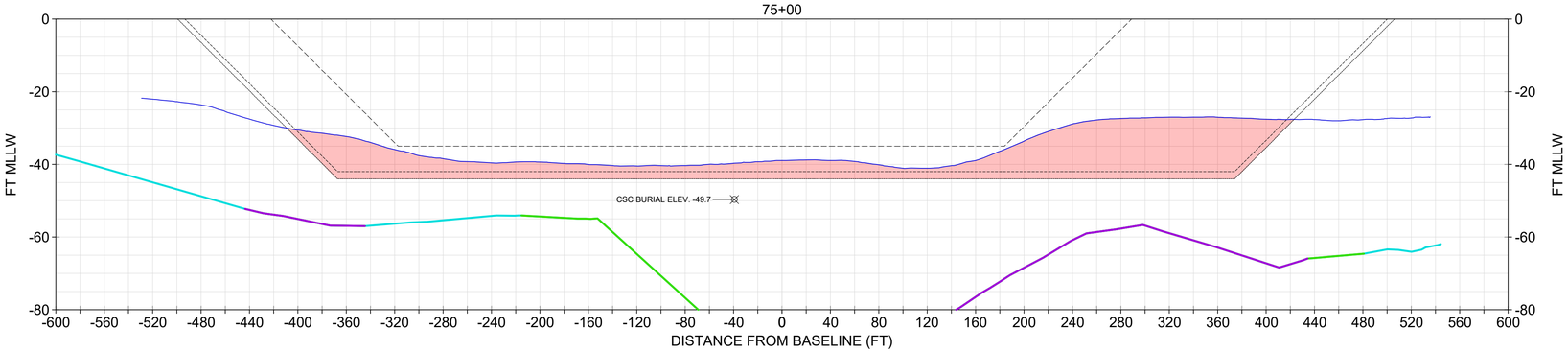
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9009 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5565

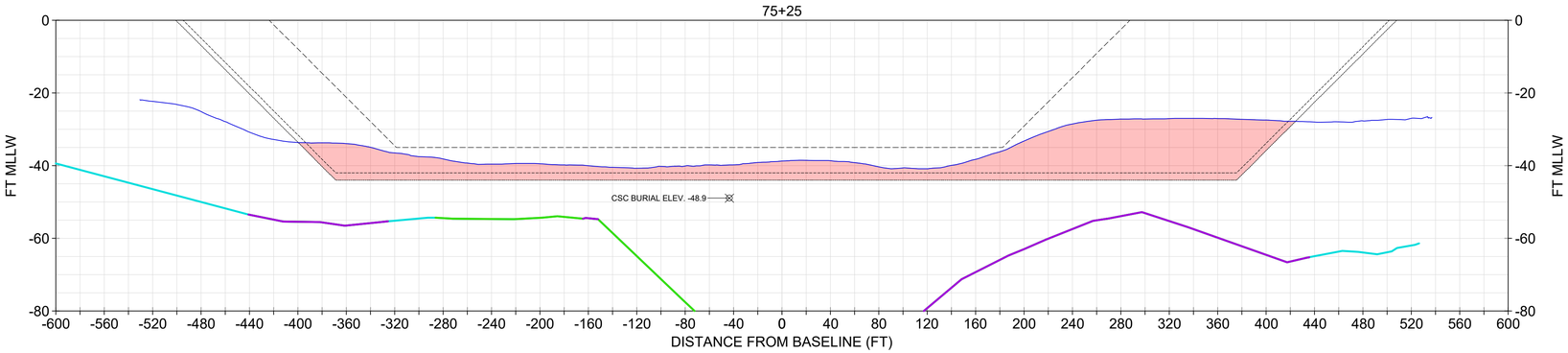
PREPARED FOR: Coastal Partners

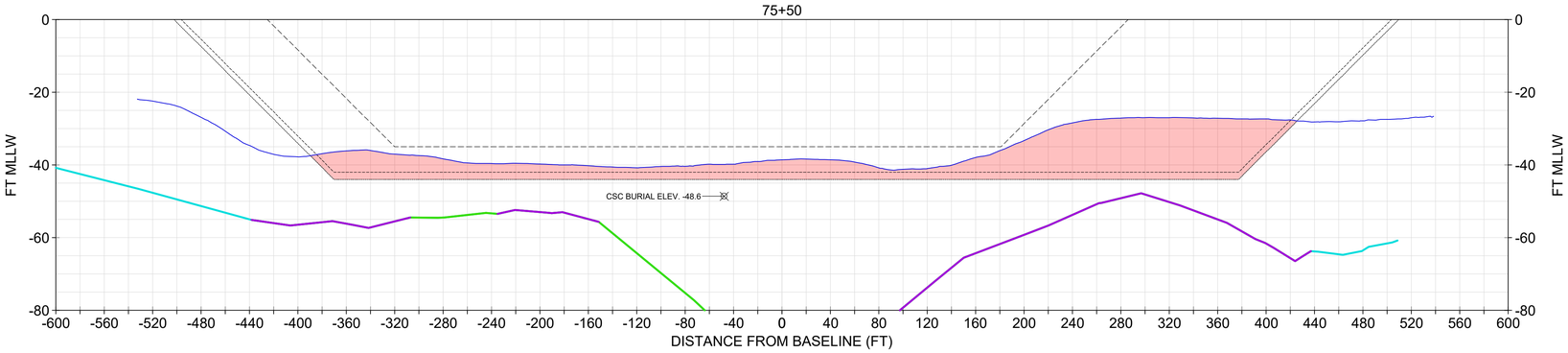
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

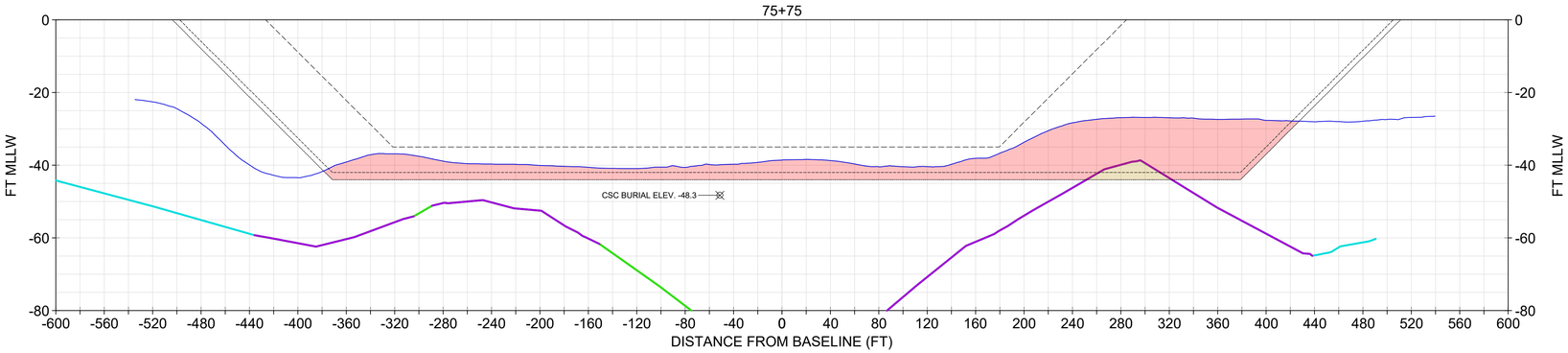
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-043









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 65 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

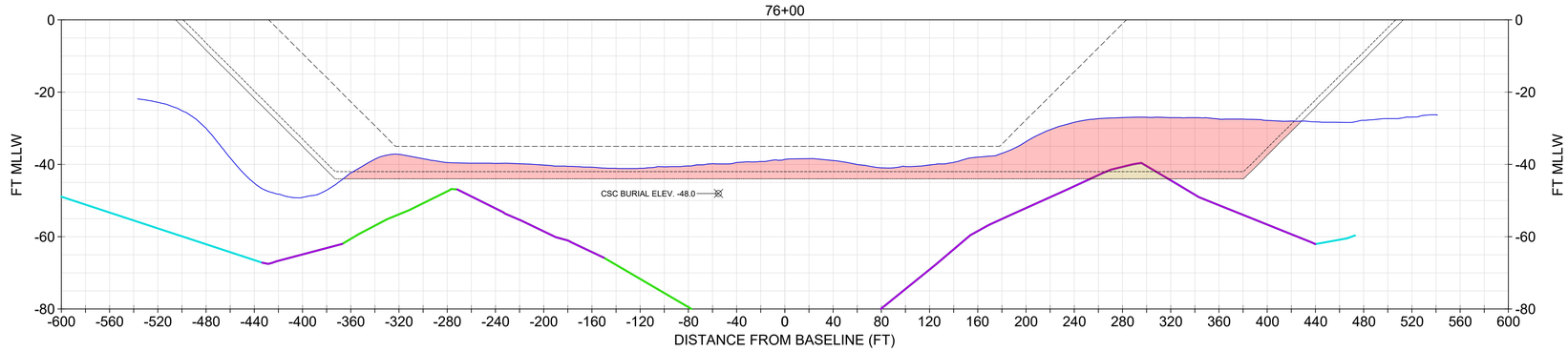
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

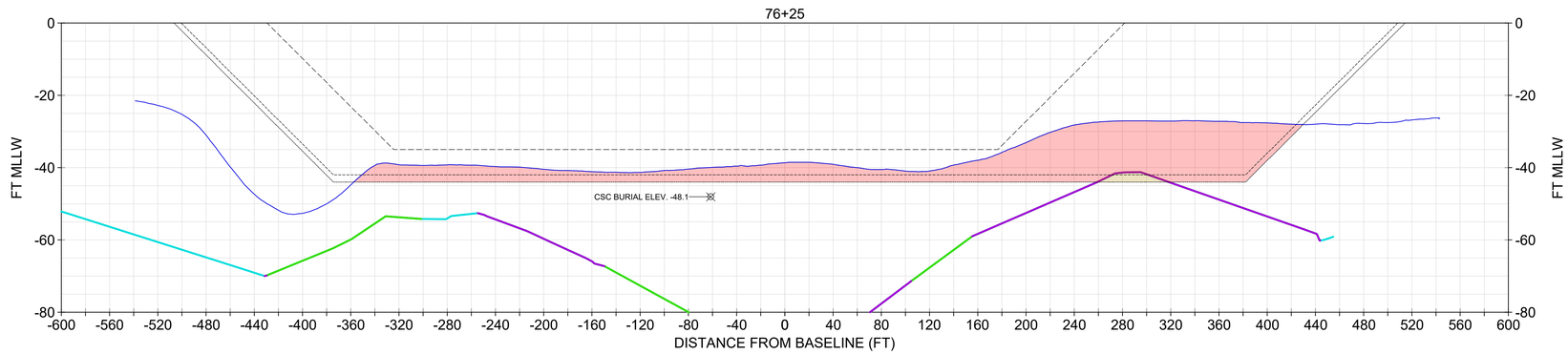
PREPARED FOR: Coastal Partners

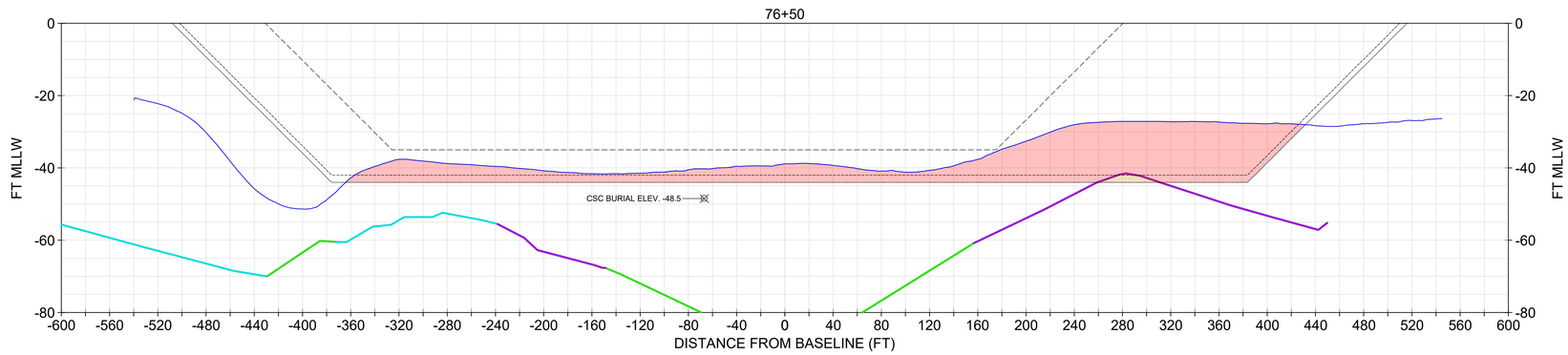
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

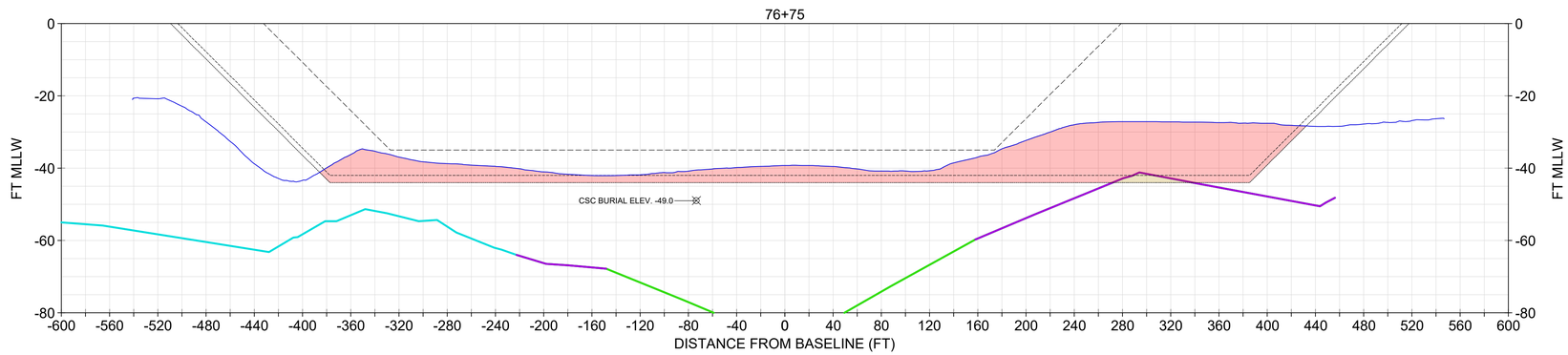
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-044









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 66 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

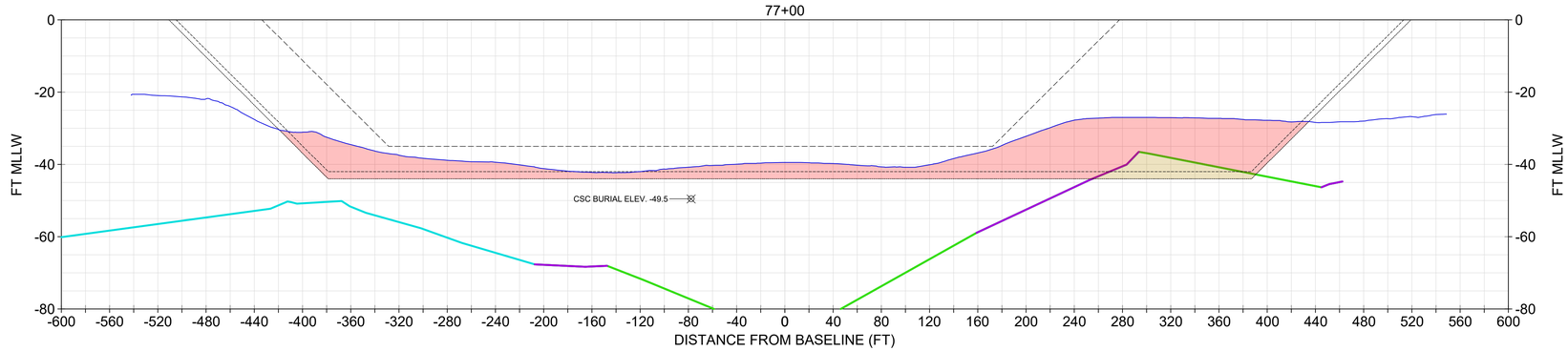
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

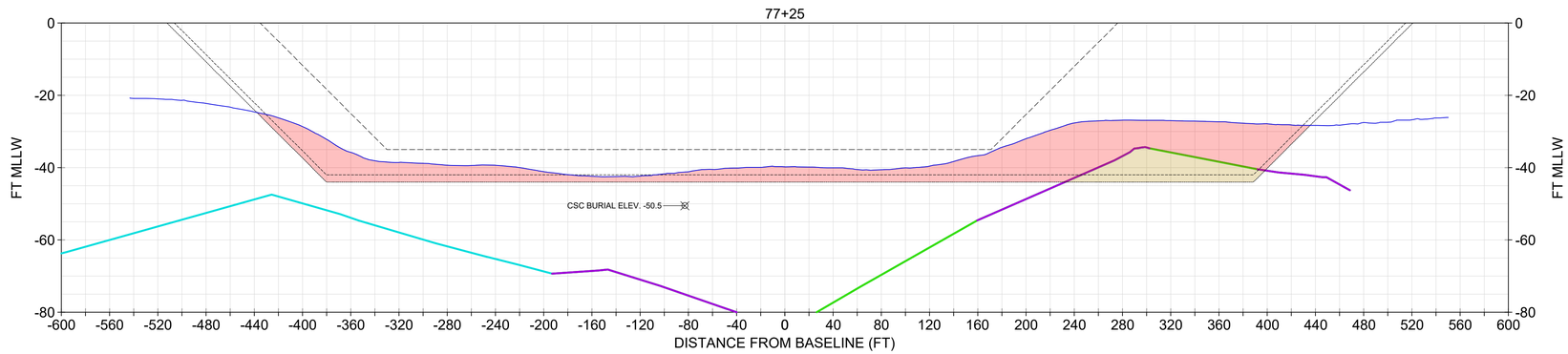
PREPARED FOR: Coastal Partners

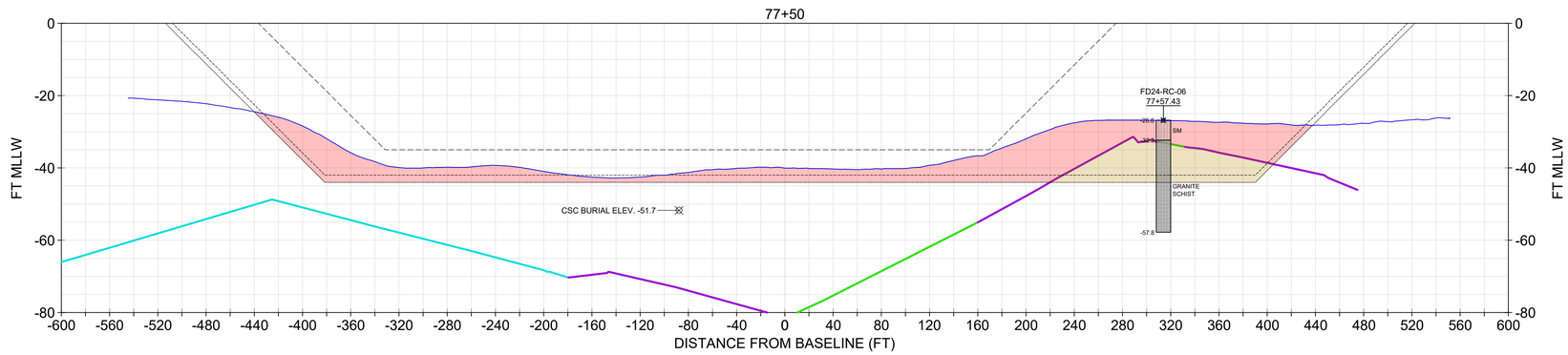
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

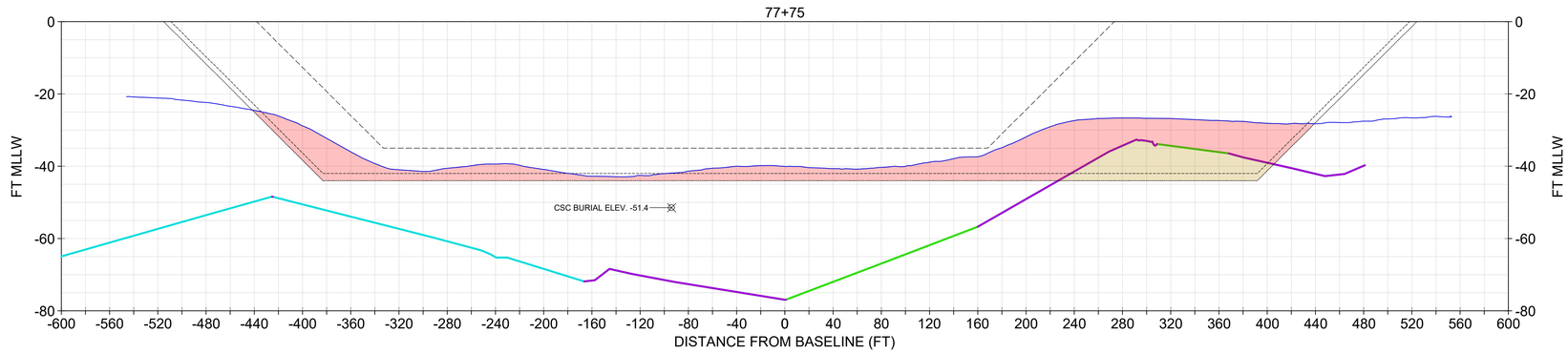
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-045









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-06	-26.8	-57.8	GBA	PLANNED

CORE LEGEND

- SM (SILTY SAND)
- GRANITE SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 67 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

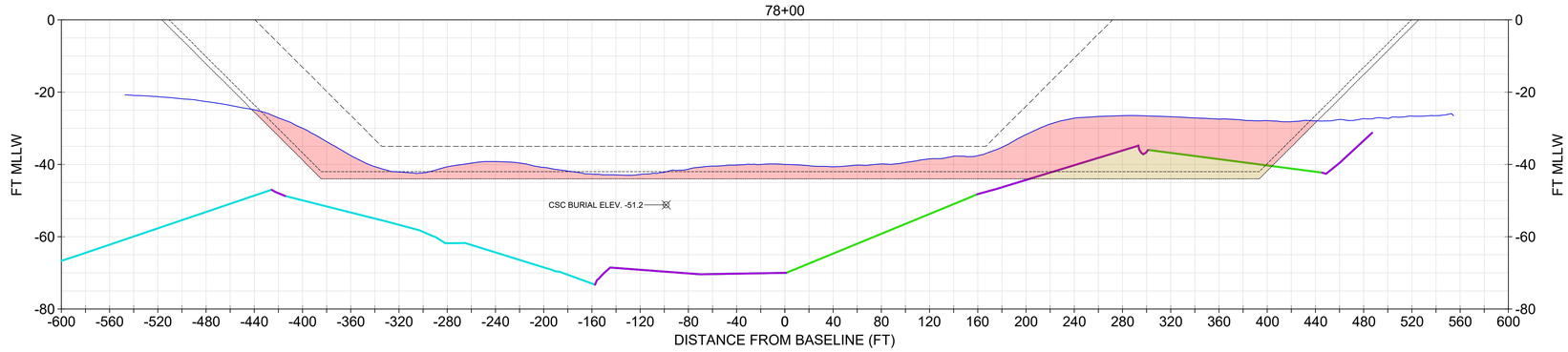
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9009 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5565

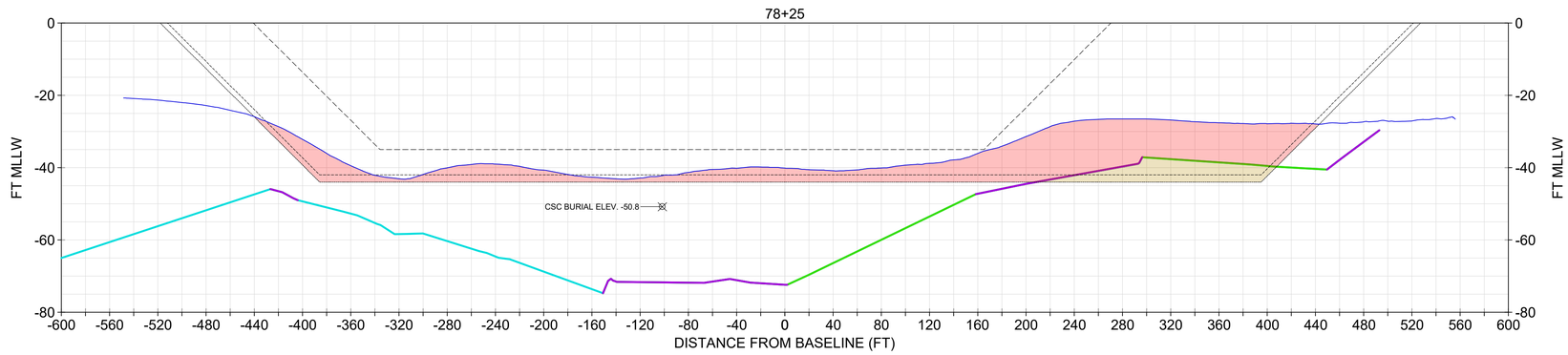
PREPARED FOR: Cross Sound Ferries

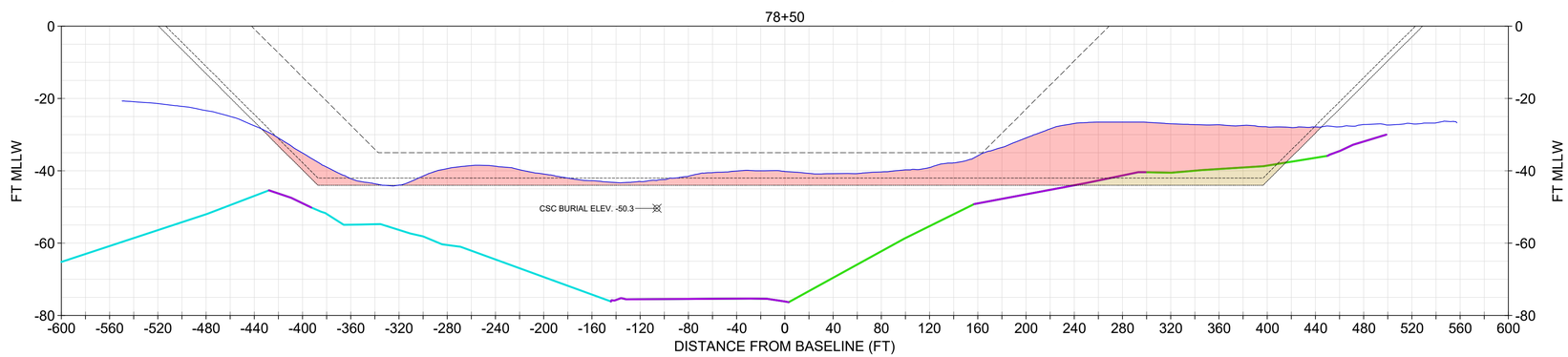
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

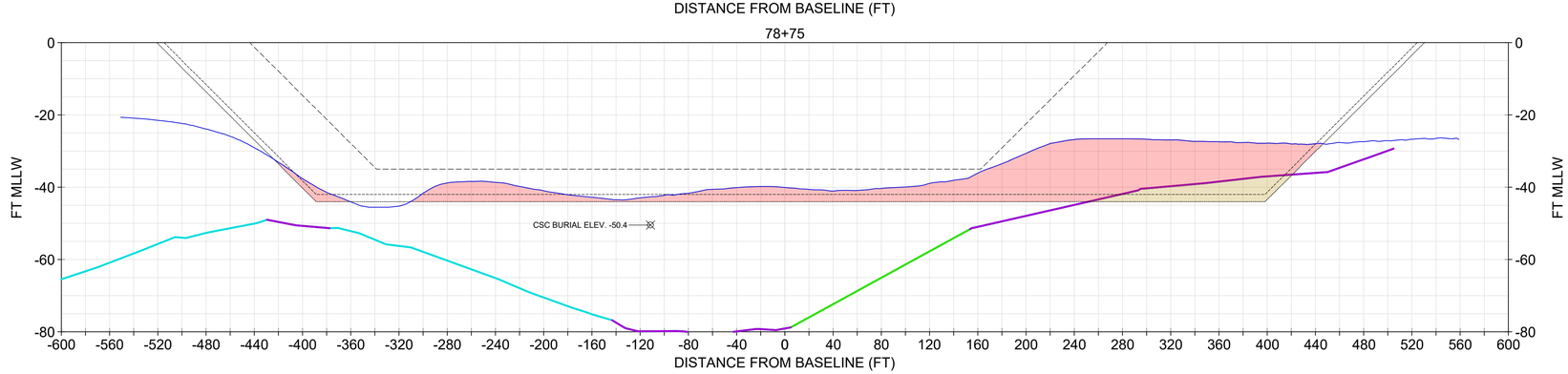
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-046









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 68 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

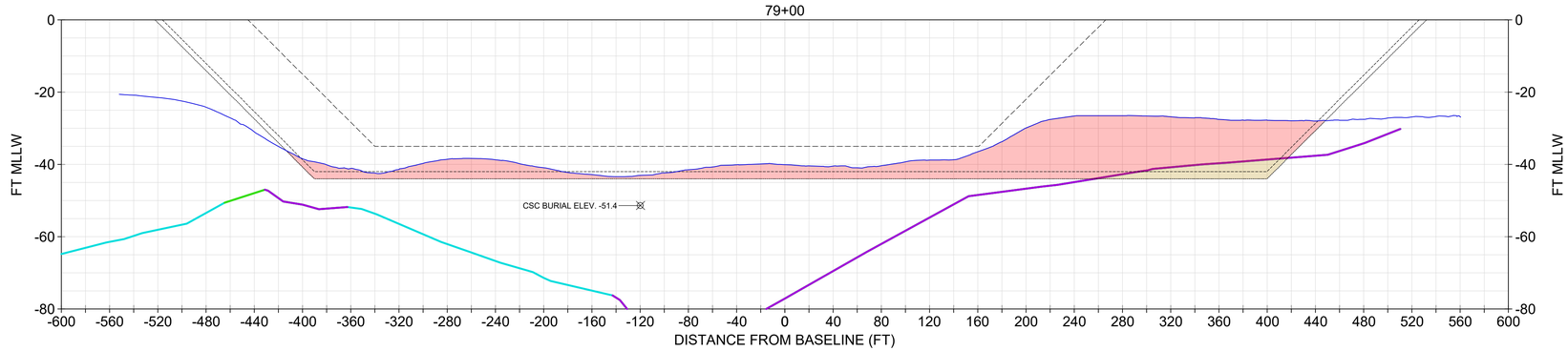
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

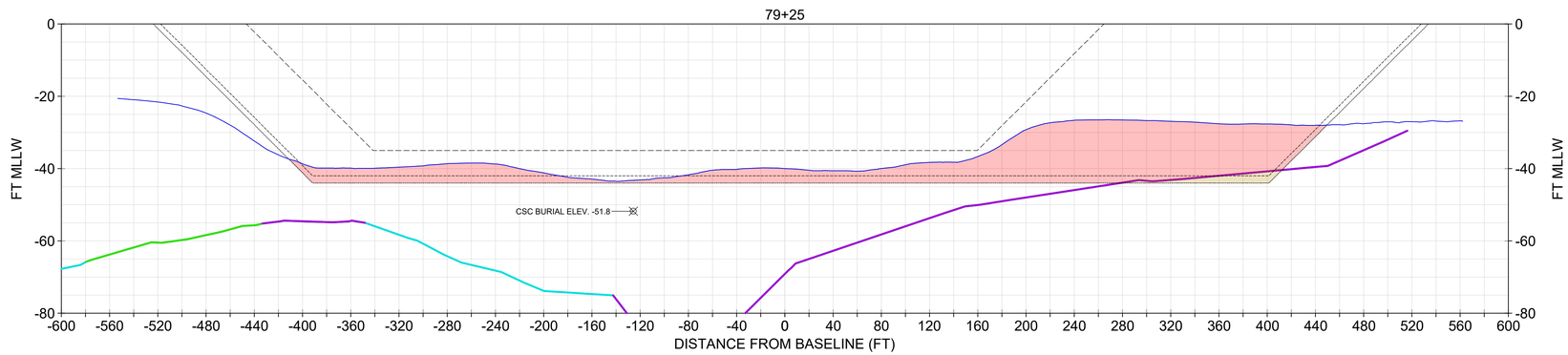
PREPARED FOR: Coastal Partners

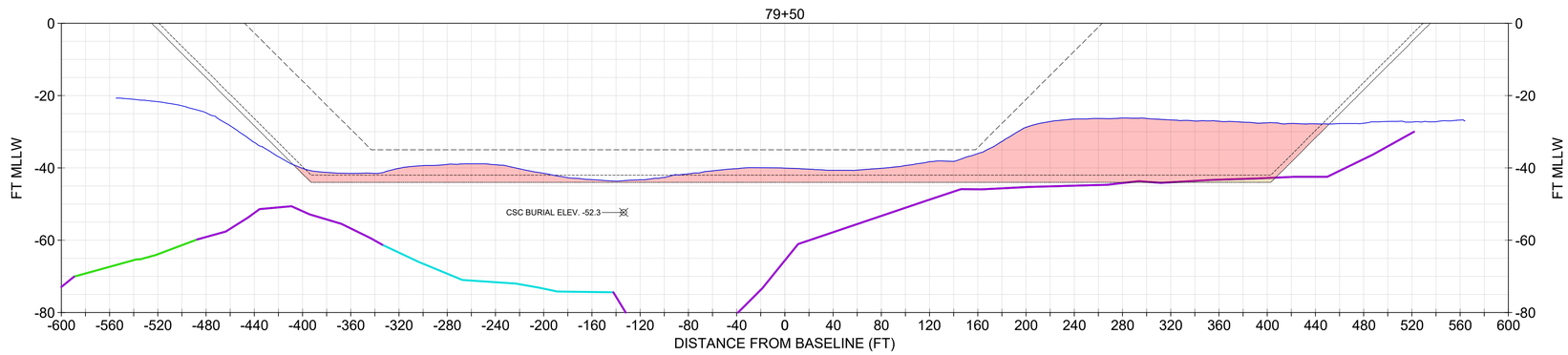
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

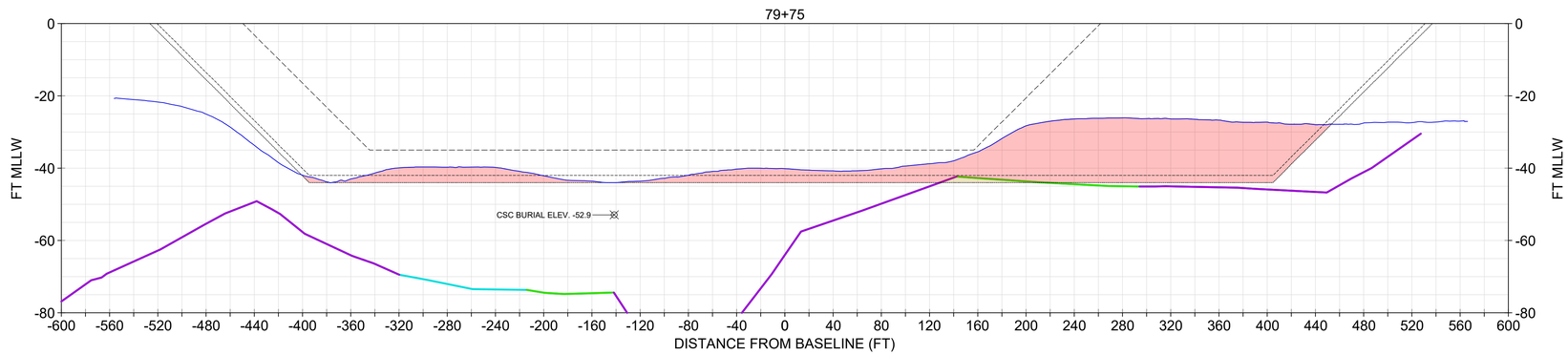
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-047









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCZ
SIZE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 69 OF 220
SCALE: AS SHOWN

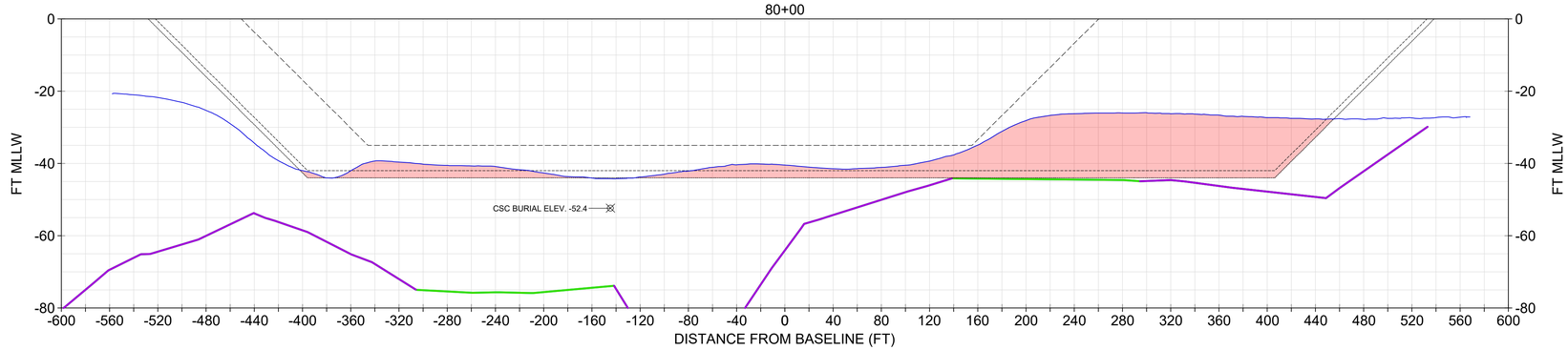
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

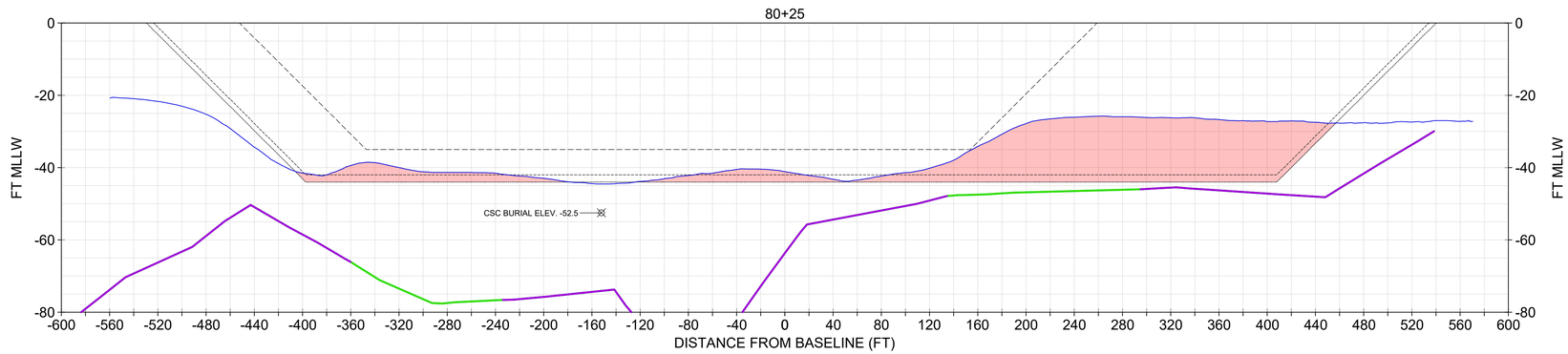
PREPARED FOR: Coastal Partners

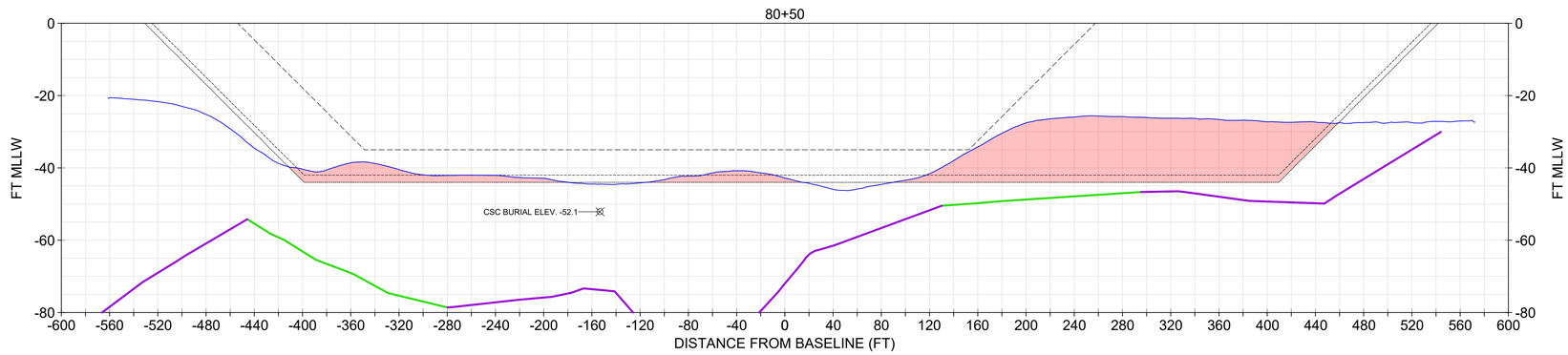
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

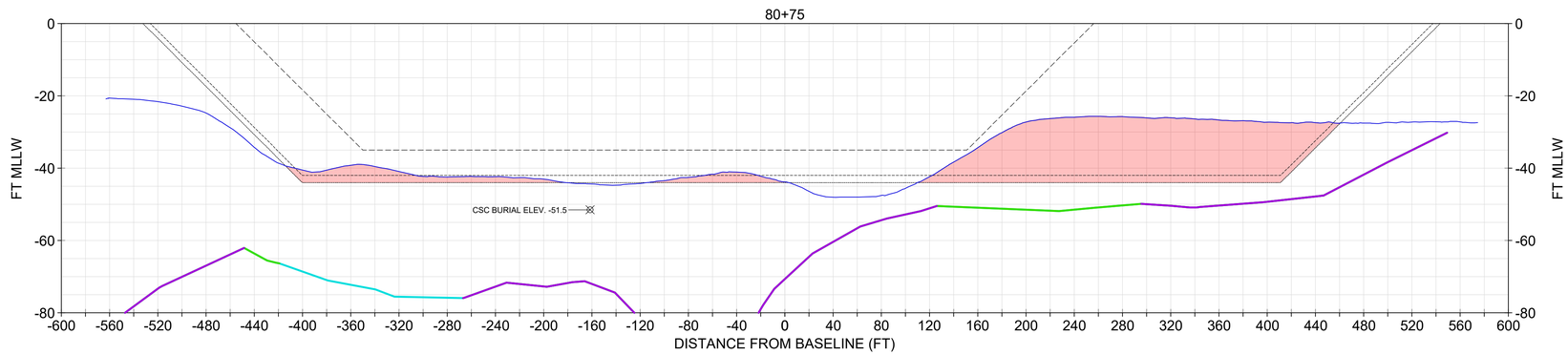
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-048









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 70 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

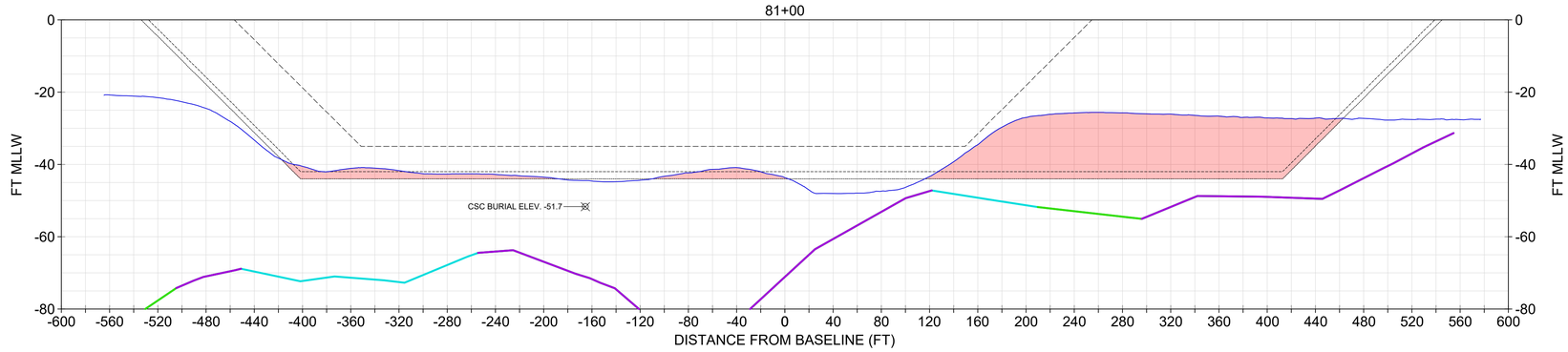
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

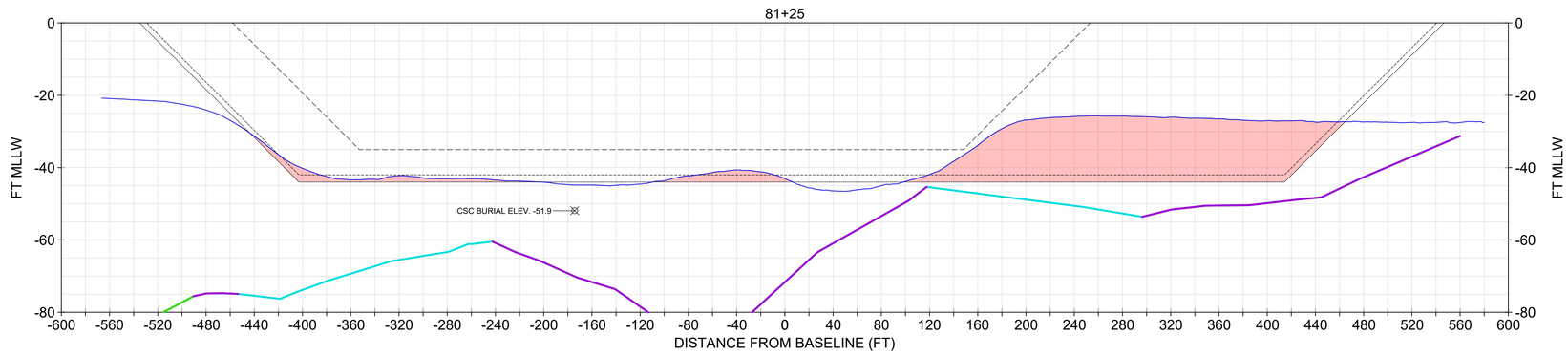
PREPARED FOR: Coastal Partners

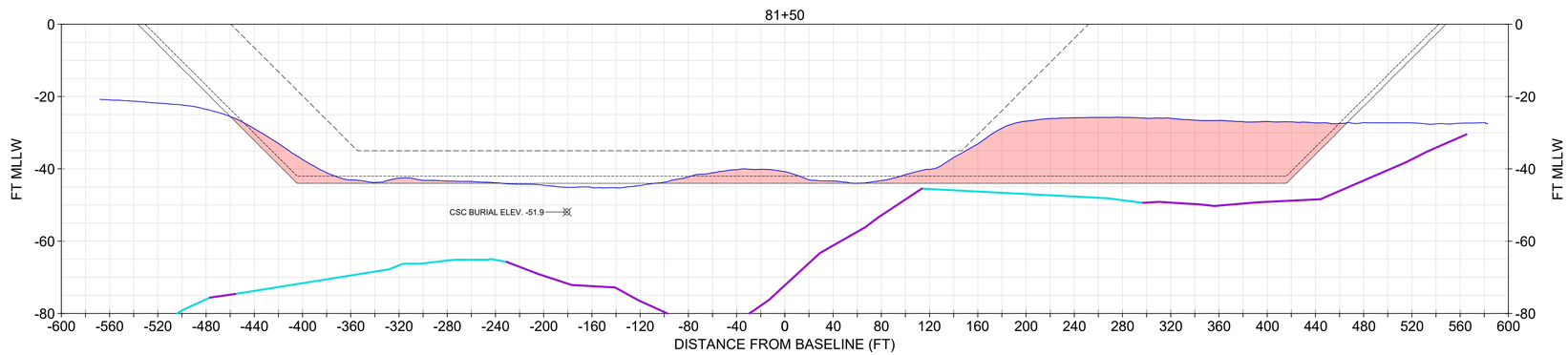
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

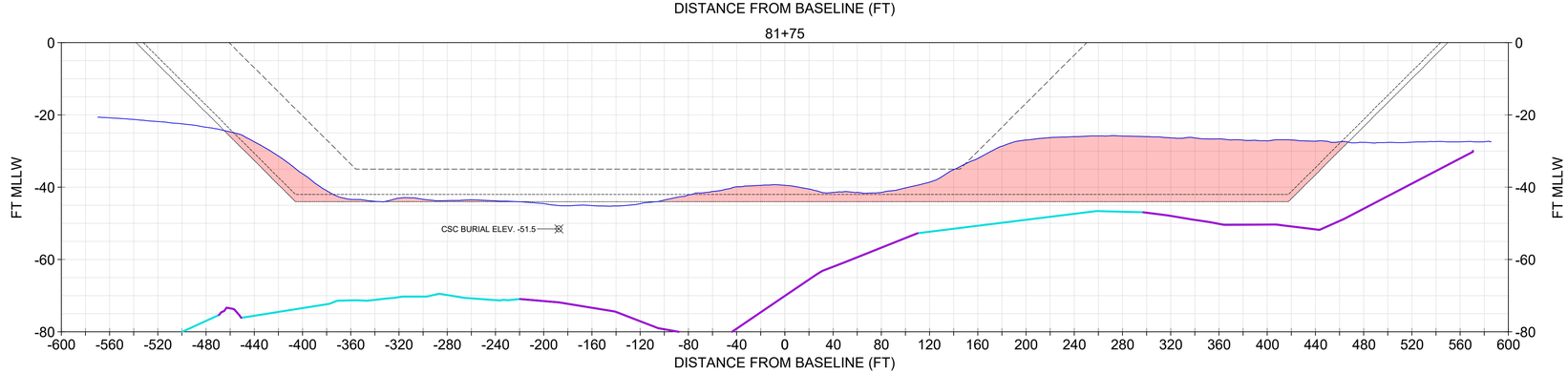
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-049









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 71 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

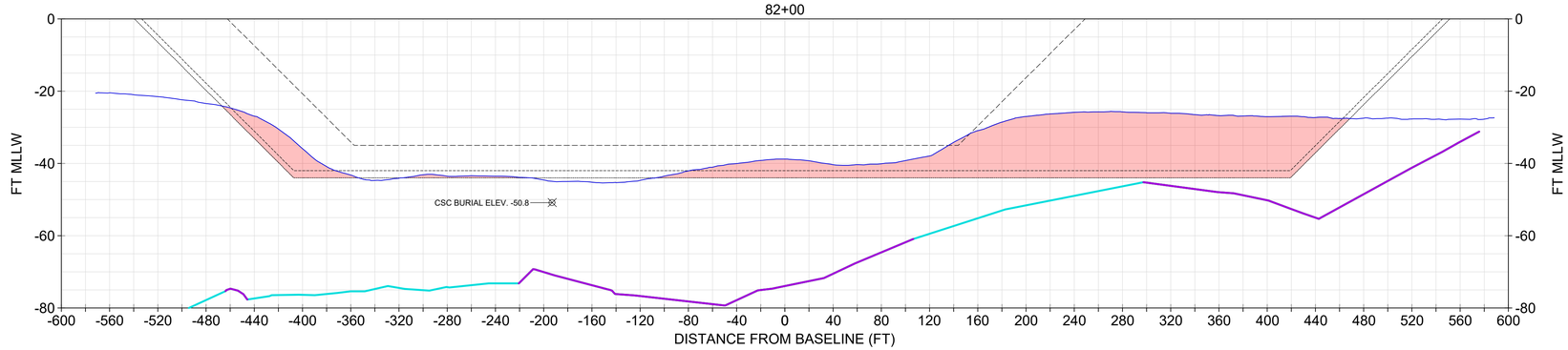
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A, Baltimore, MD 21237 Phone (410) 882-5595

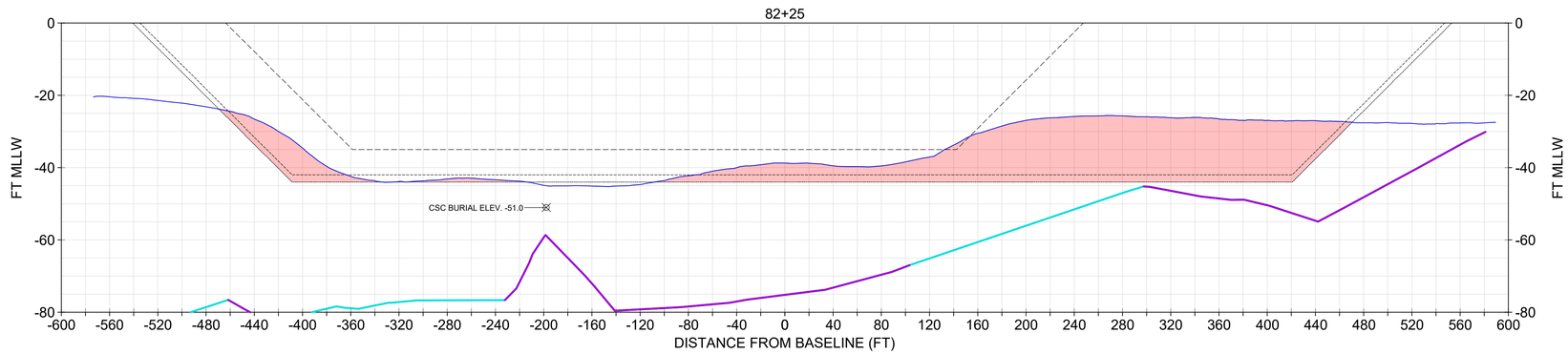
PREPARED FOR: Coastal Partners

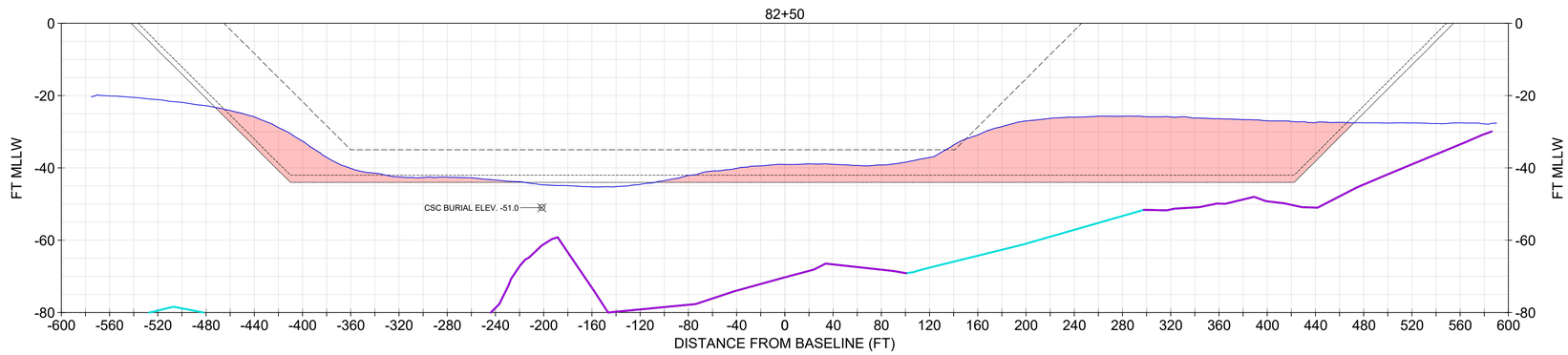
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

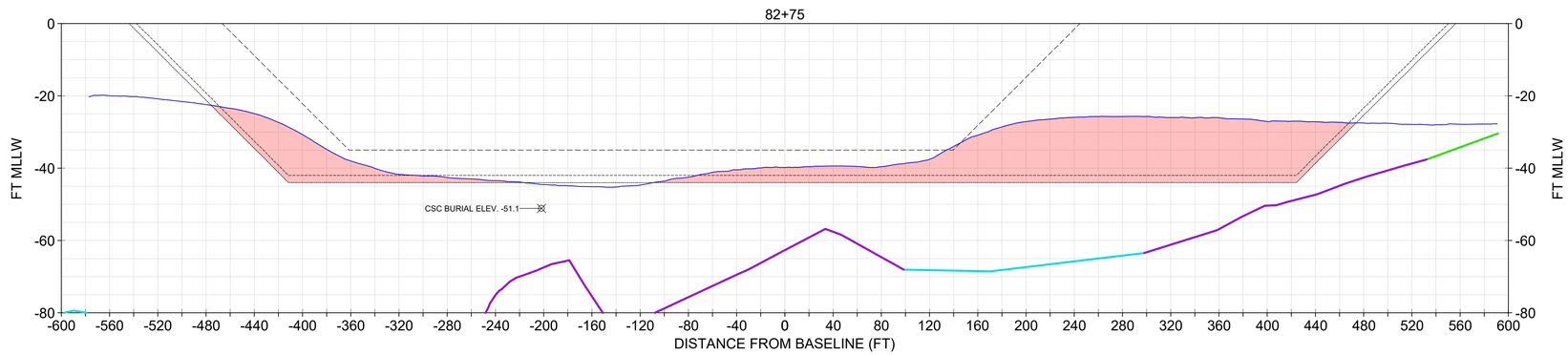
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-050









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

VERTICAL SCALE 0 20' 40'

HORIZONTAL SCALE 0 60' 120'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 72 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

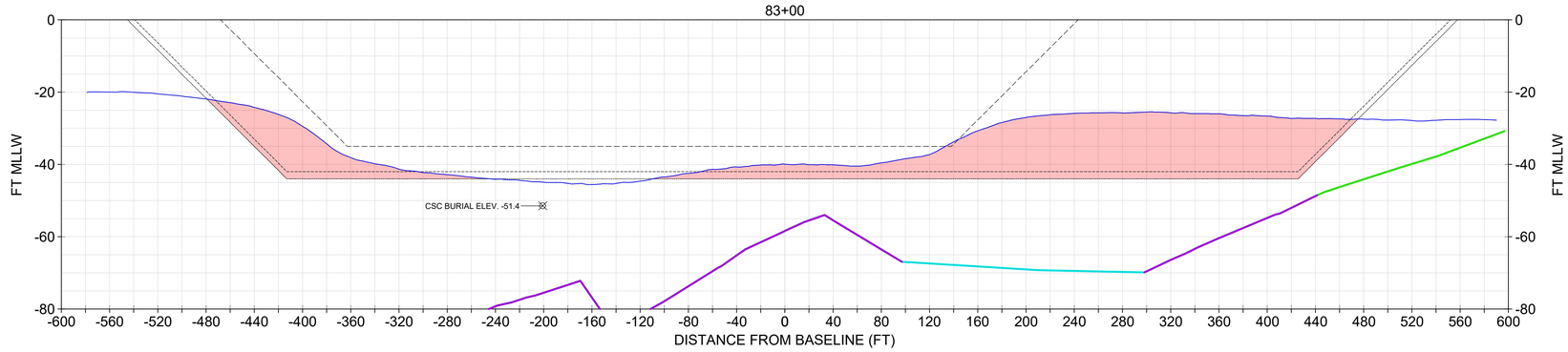
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

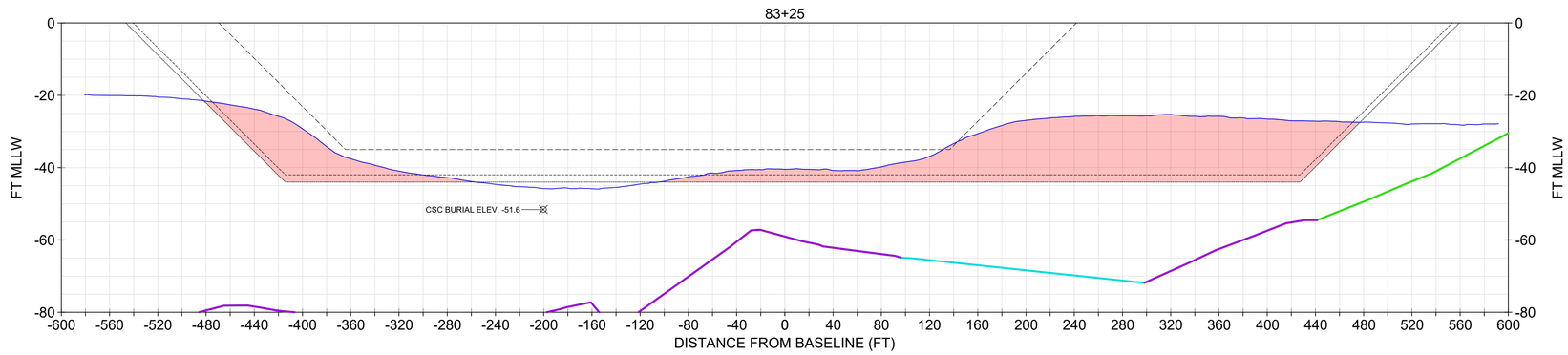
PREPARED FOR: Coastal Partners

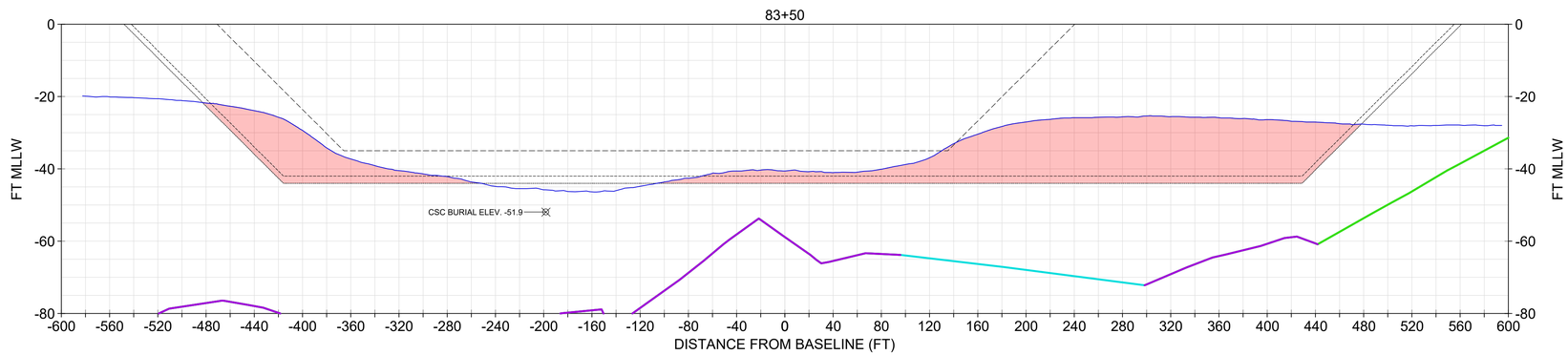
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

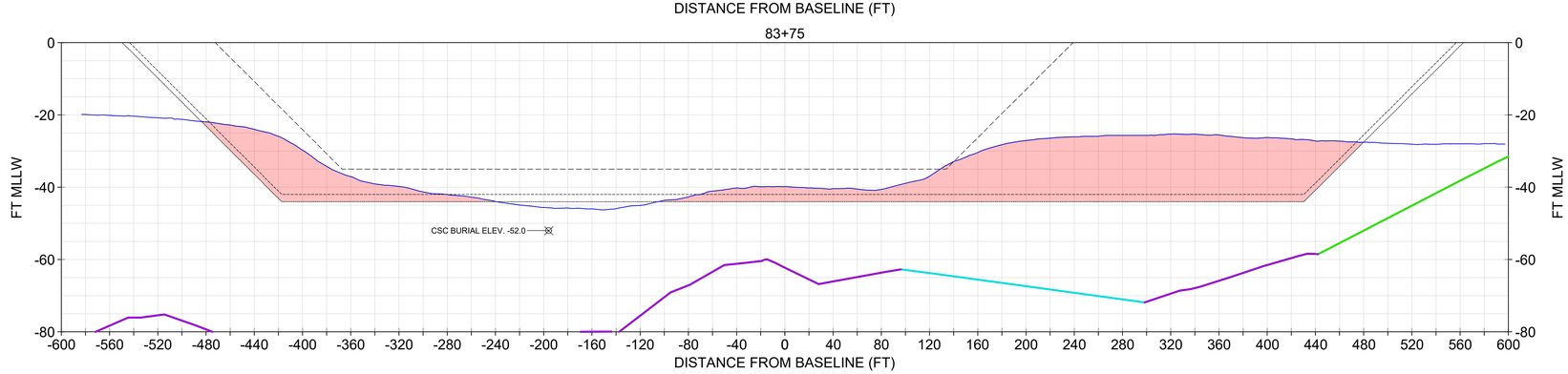
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-051









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 73 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

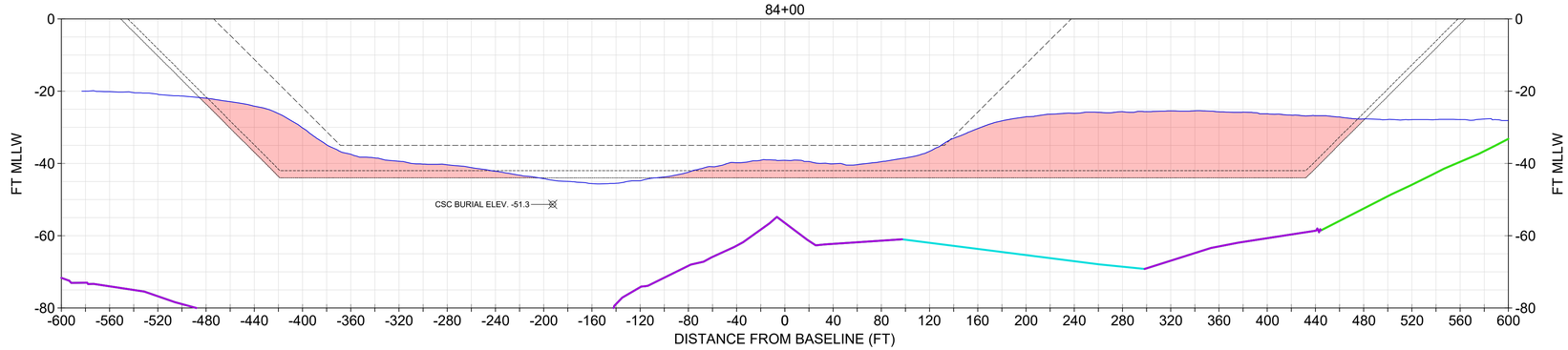
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

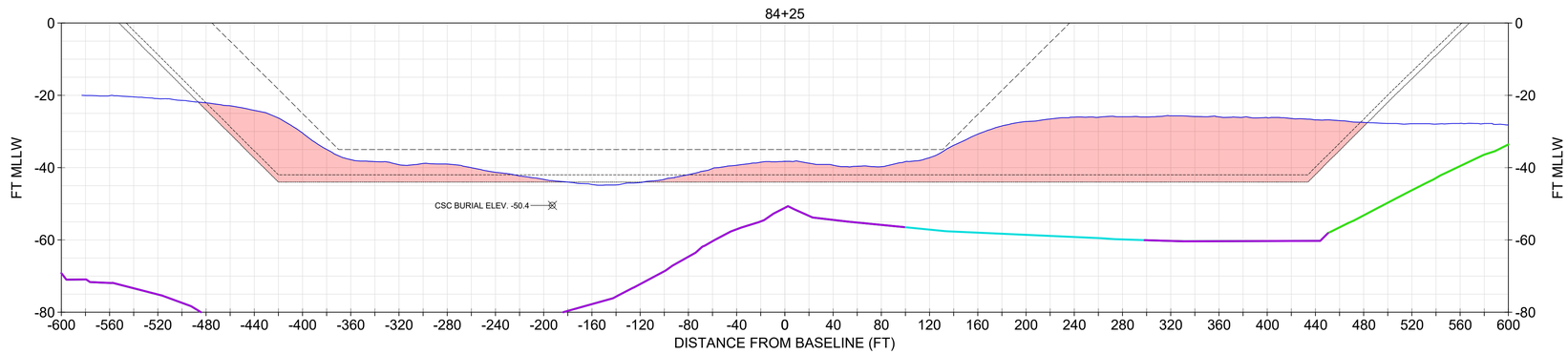
PREPARED FOR: Coastal Partners

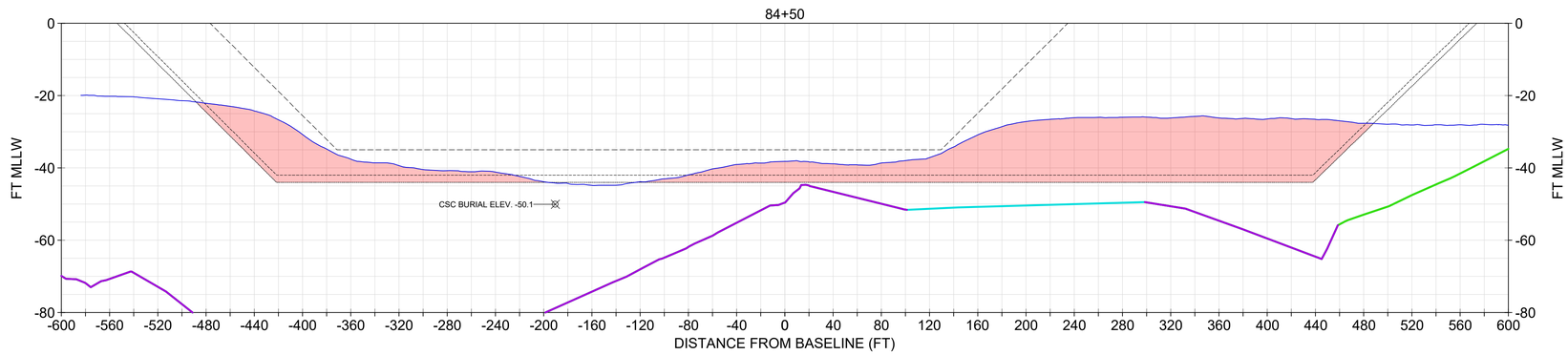
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

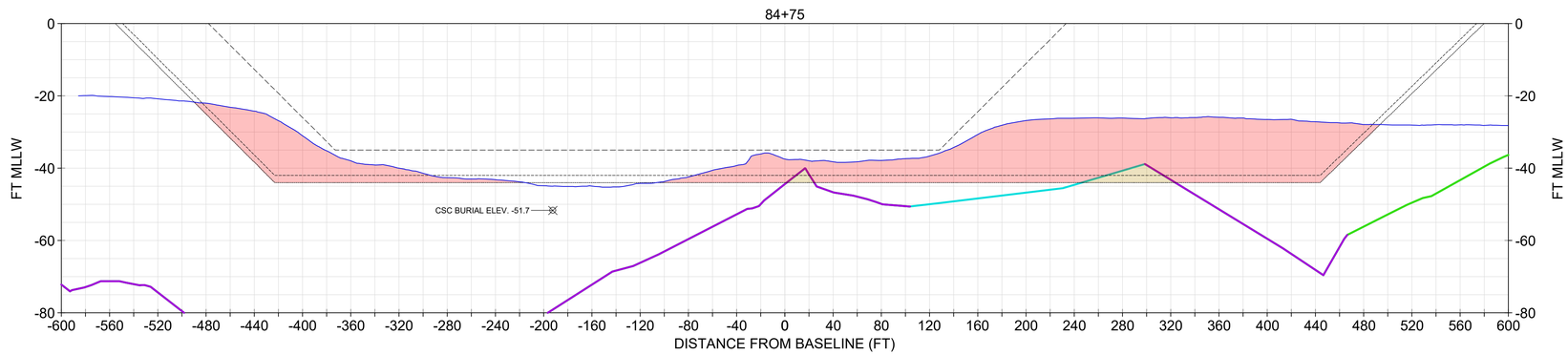
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-052









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 74 OF 220

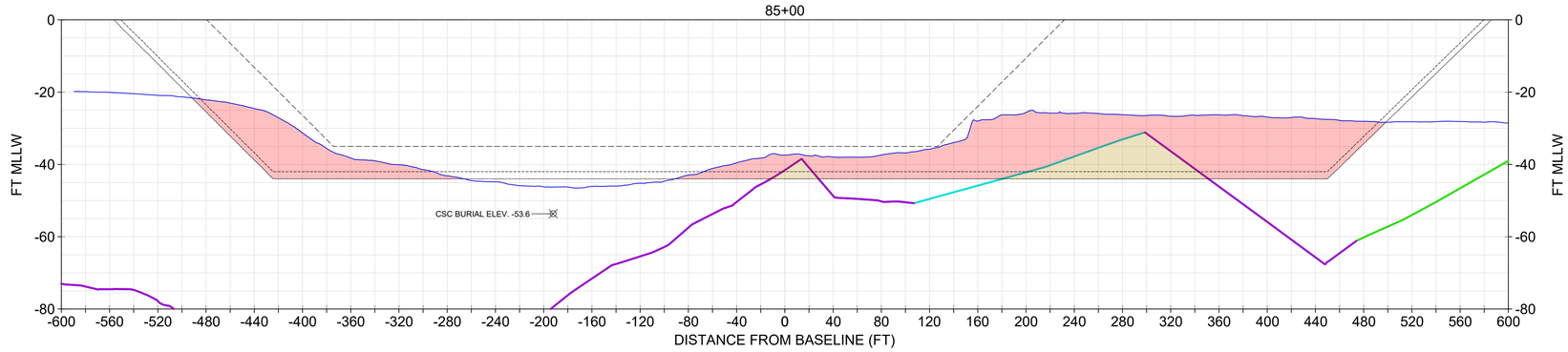
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

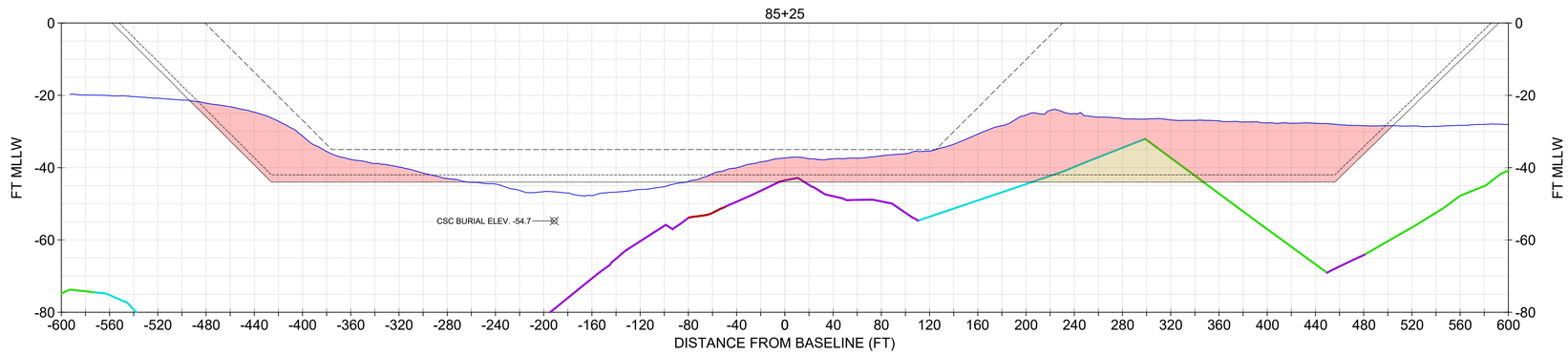
PREPARED FOR: Coastal Partners

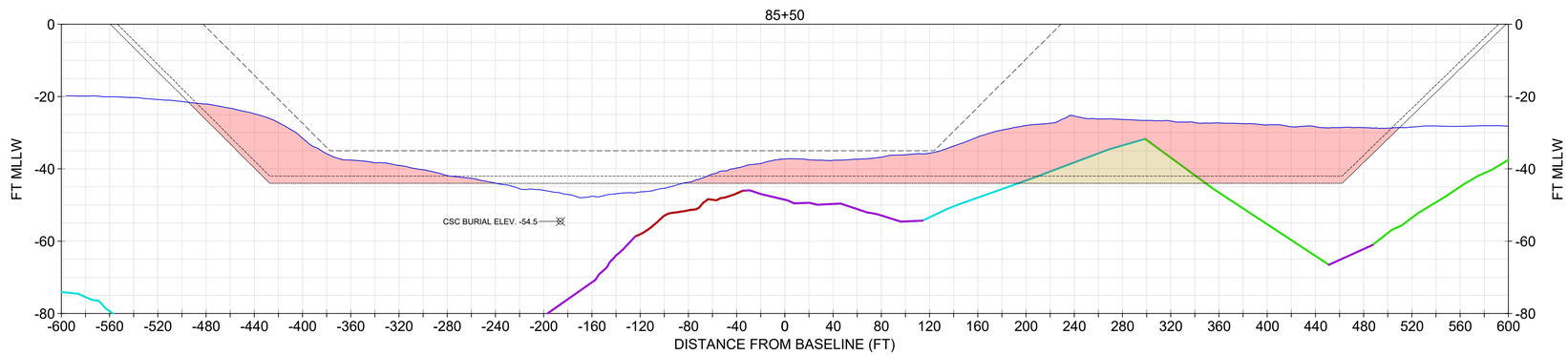
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

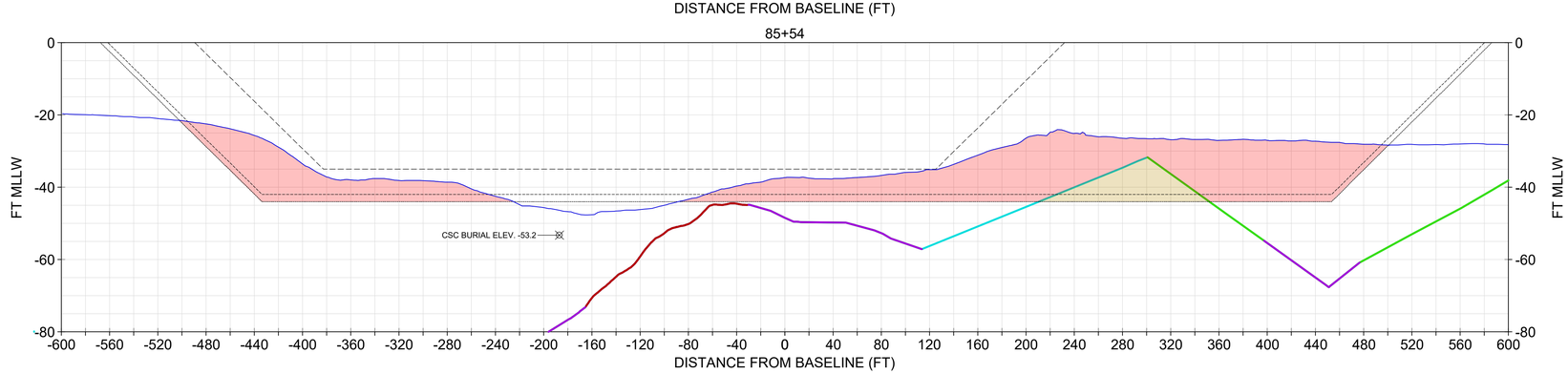
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-053









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 75 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

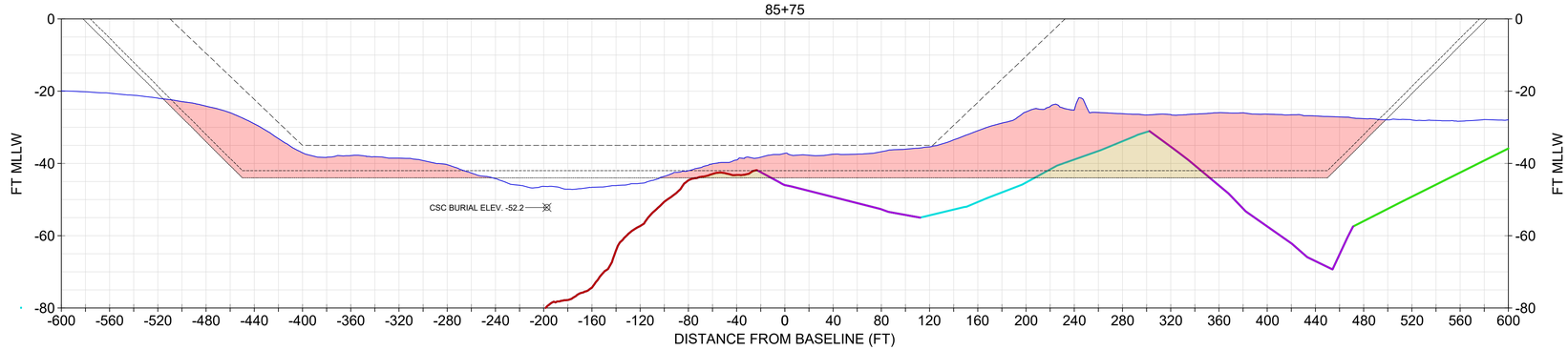
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

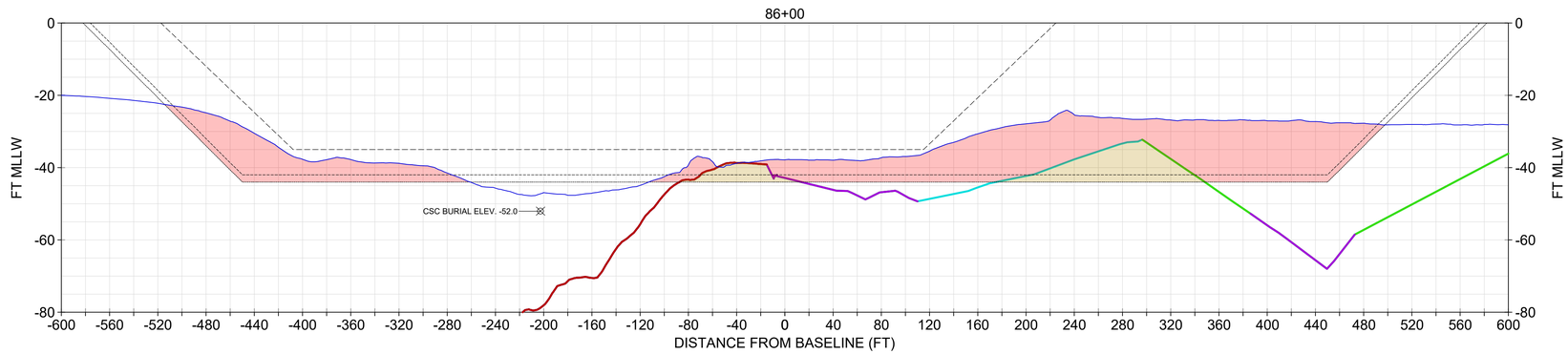
PREPARED FOR: Coastal Partners

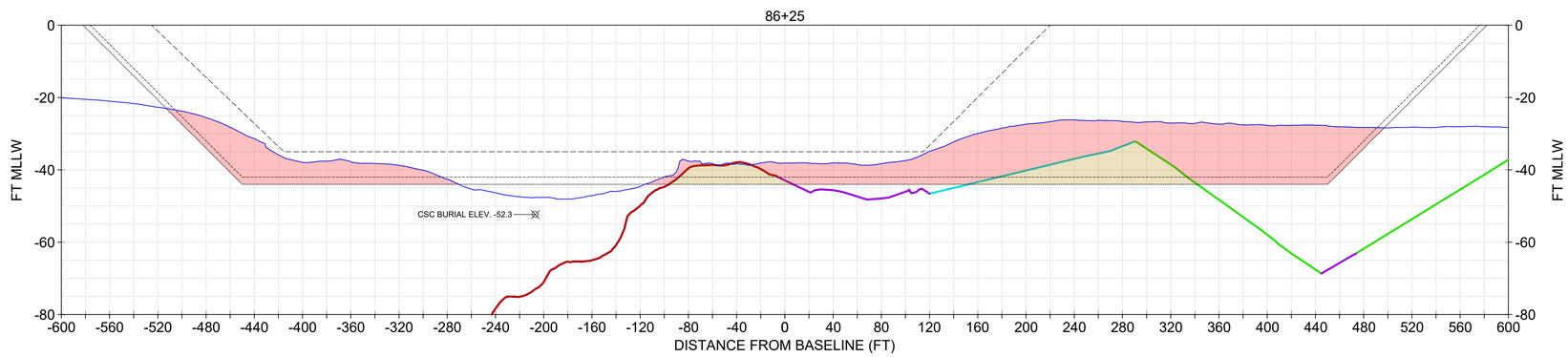
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

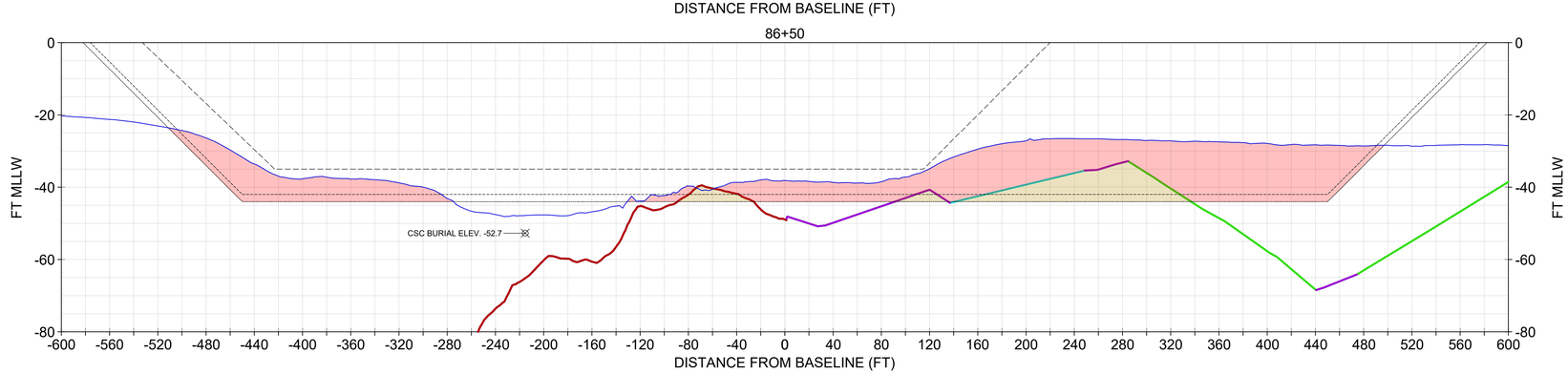
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-054









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 76 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

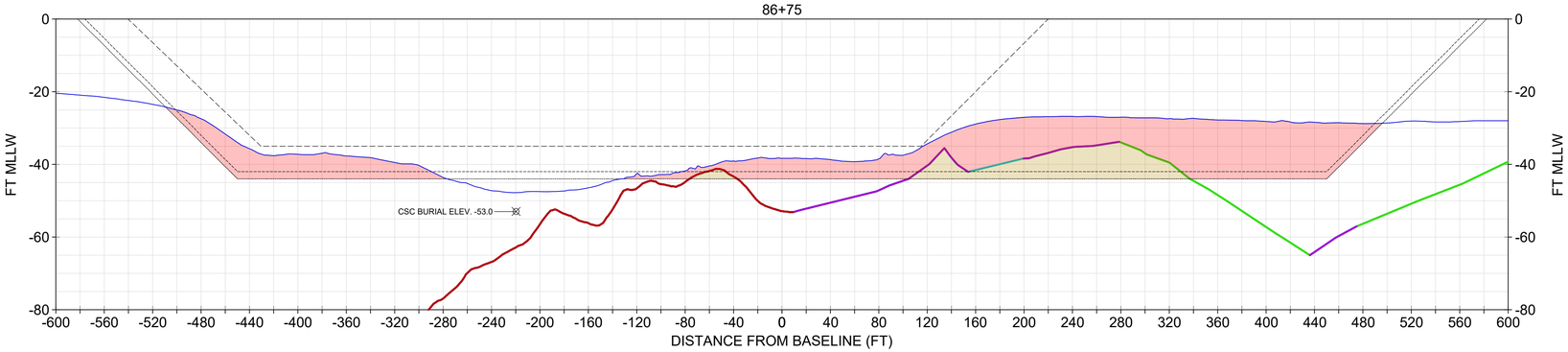
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5956

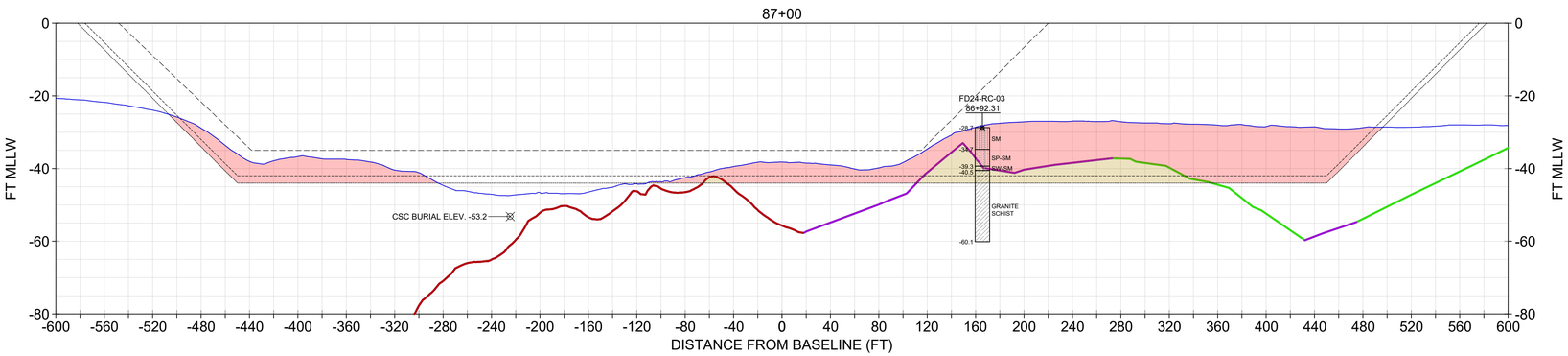
PREPARED FOR: Coastal Partners

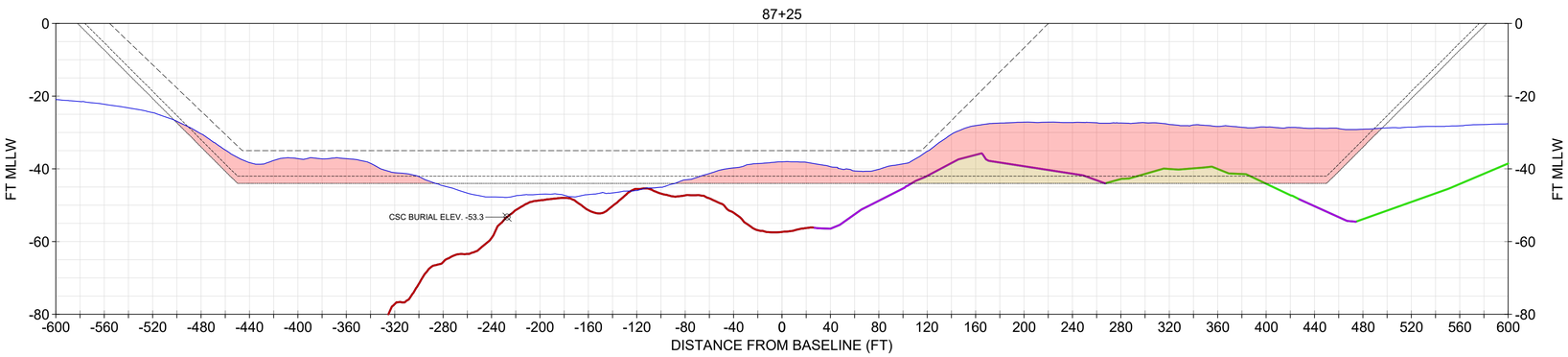
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

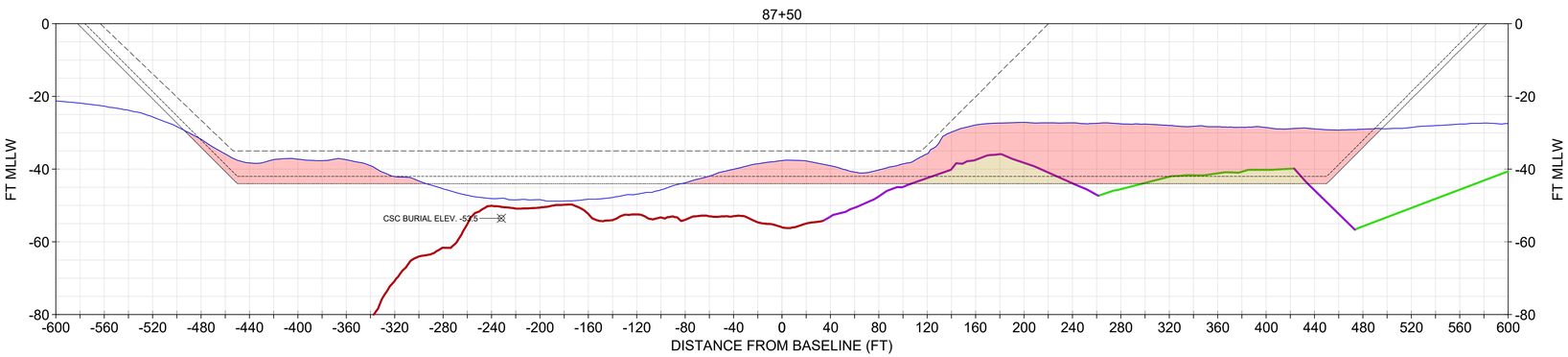
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-055









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-03	-28.7	-60.1	GBA	7/16/2024

CORE LEGEND

- SM (SILTY SAND)
- SP-SM (POORLY GRADED SAND WITH SILT)
- SW-SM (WELL GRADED SAND WITH SILT)
- GRANITE SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 77 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

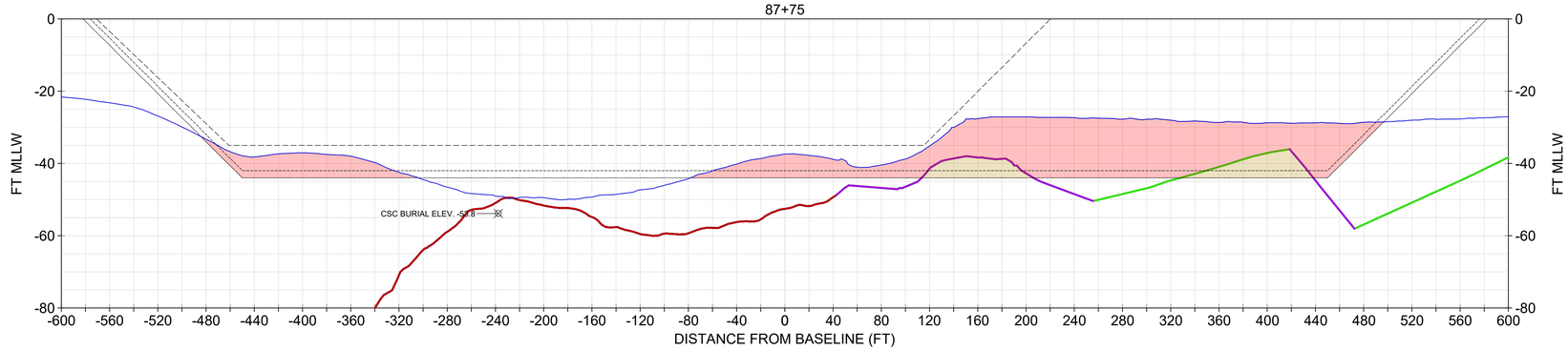
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

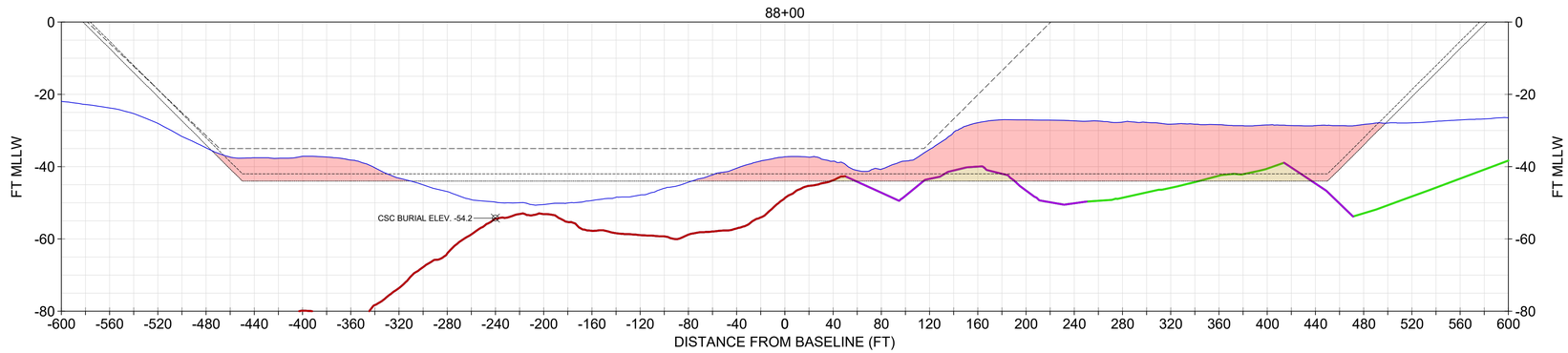
PREPARED FOR: Coastal Partners

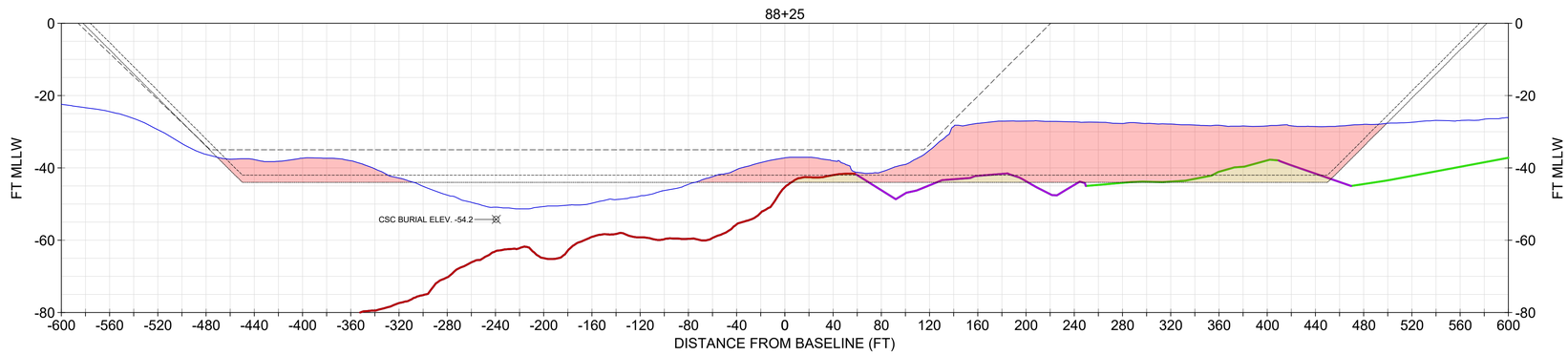
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

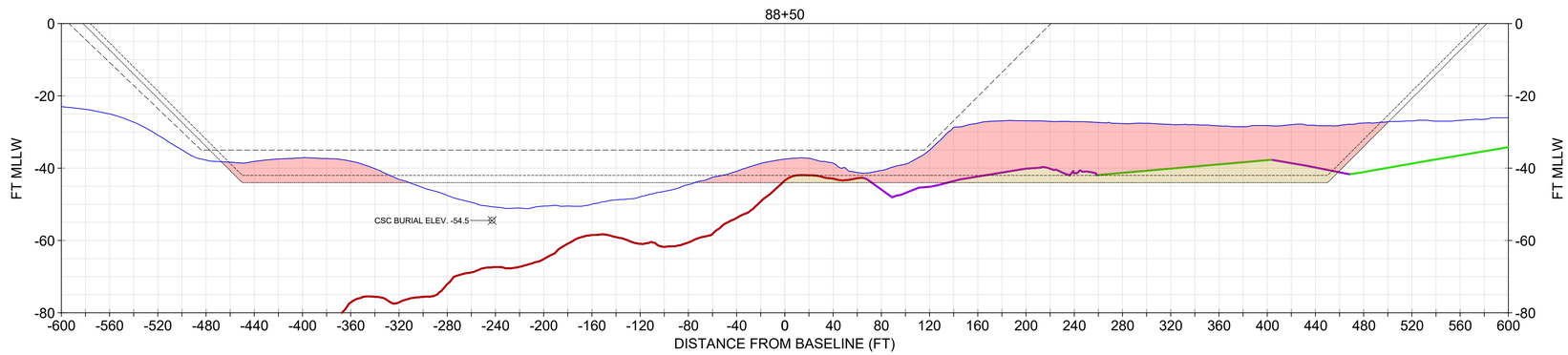
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-056









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 78 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

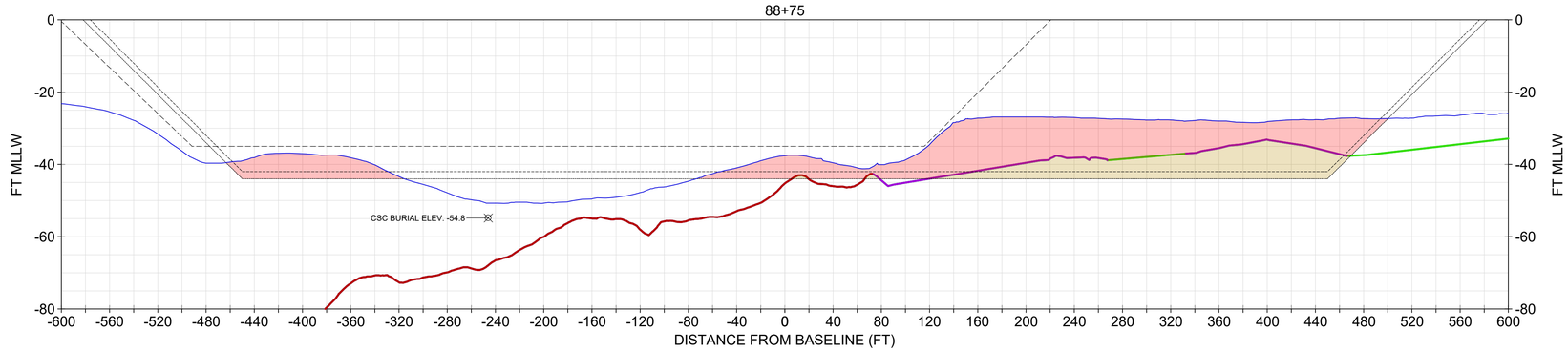
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

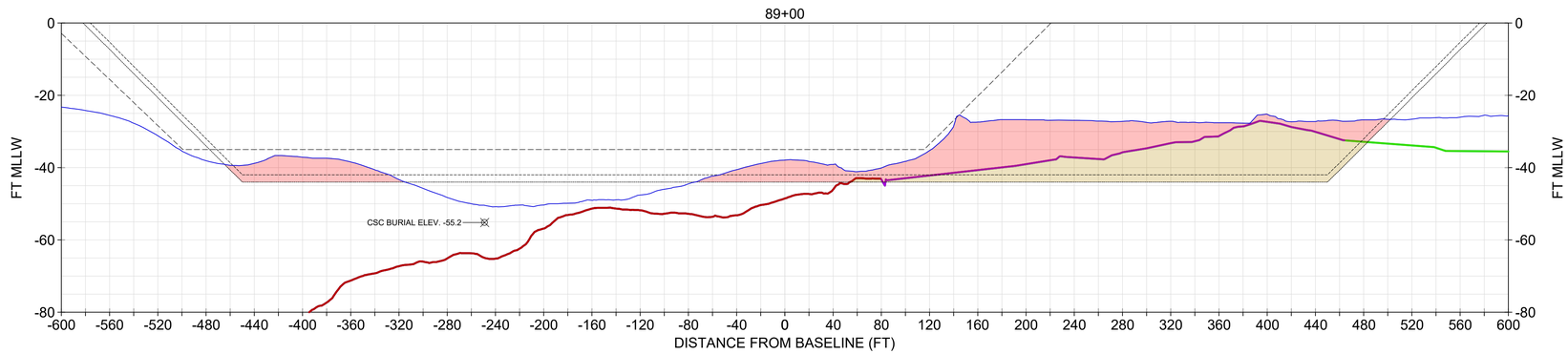
PREPARED FOR: Coastal Partners

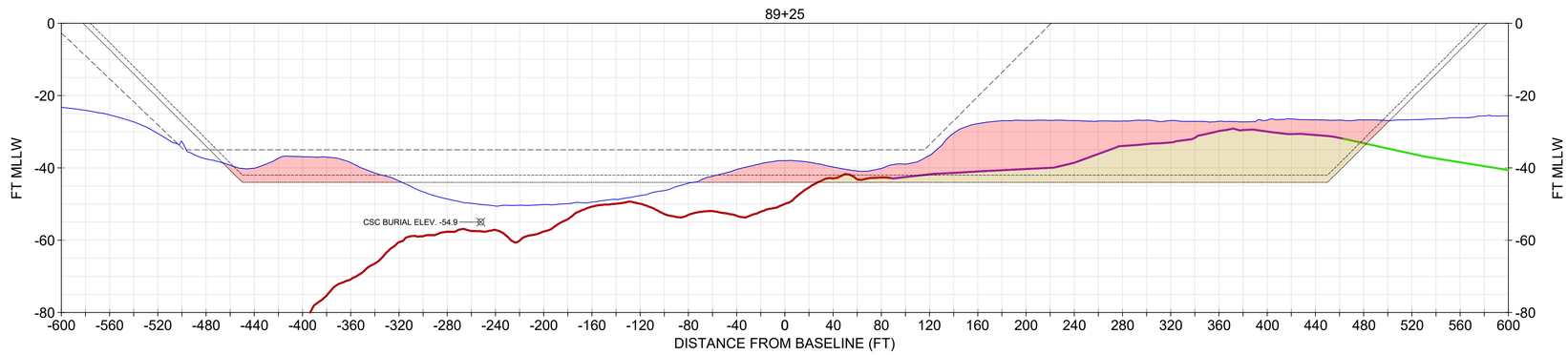
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

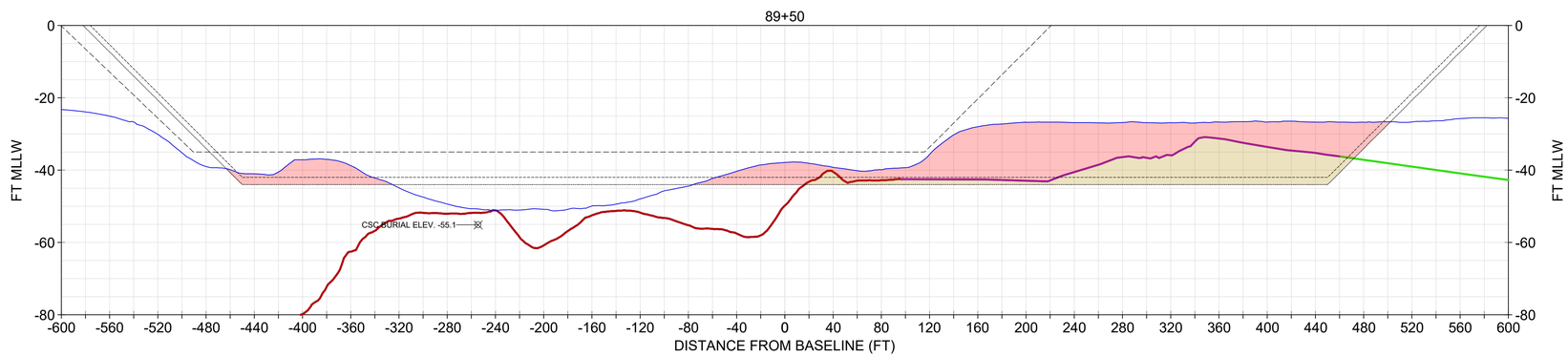
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-057









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 79 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

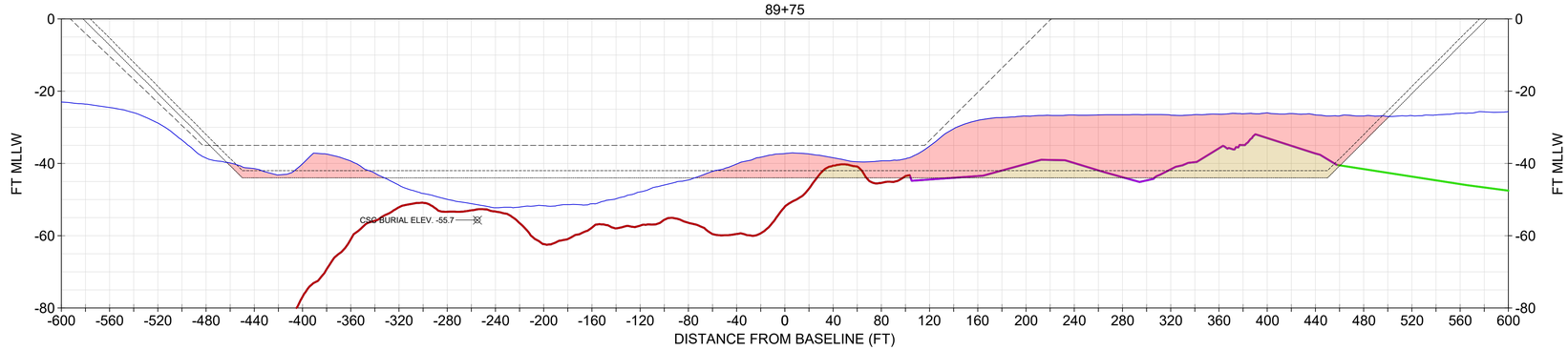
PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9008 Yellow Brick Rd. Unit A, Baltimore, MD 21237, Phone (410) 882-5565

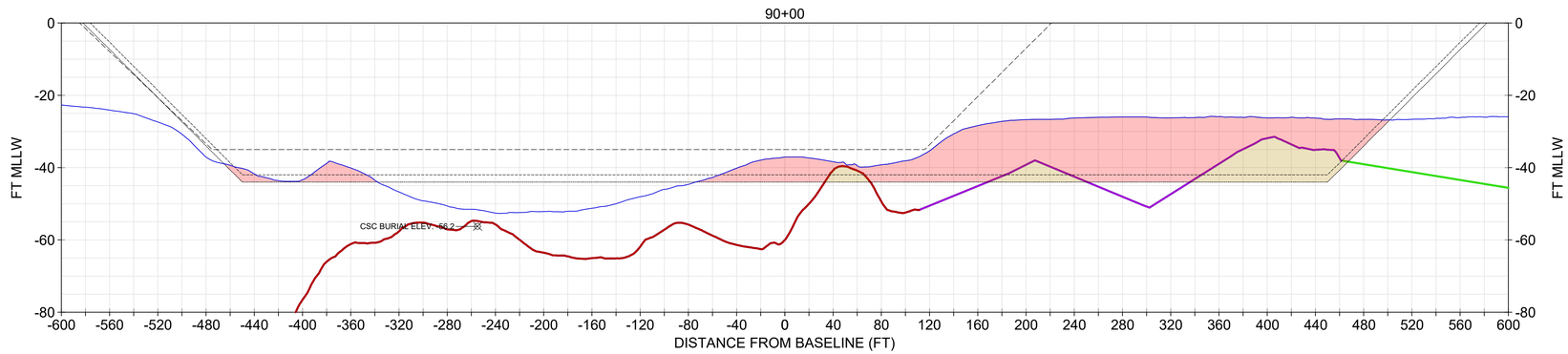
PREPARED FOR: Coastal Partners

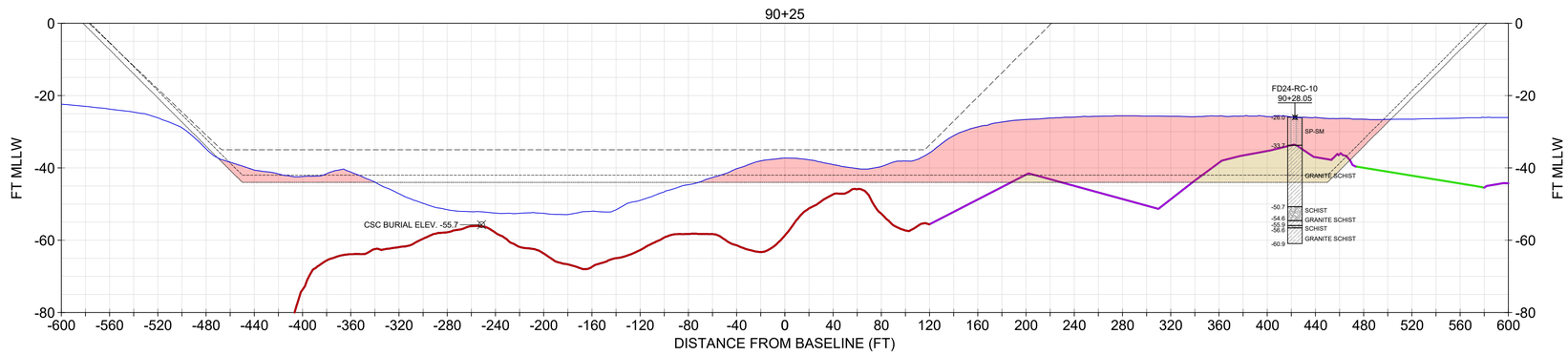
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

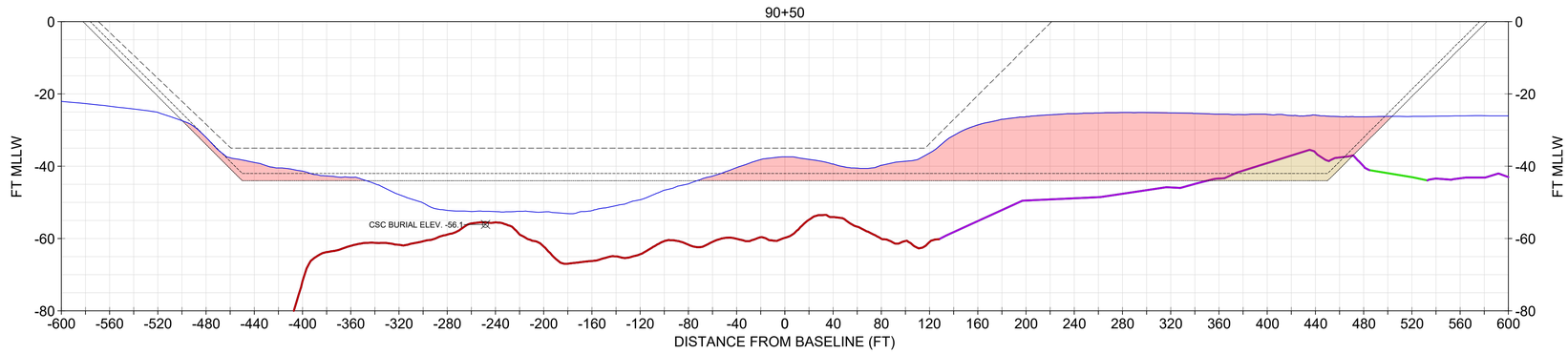
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-058









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-10	-26.0	-60.9	GBA	8/21/2024

CORE LEGEND

- SP-SM (POORLY GRADED SAND WITH SILT)
- GRANITE SCHIST
- SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 80 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN

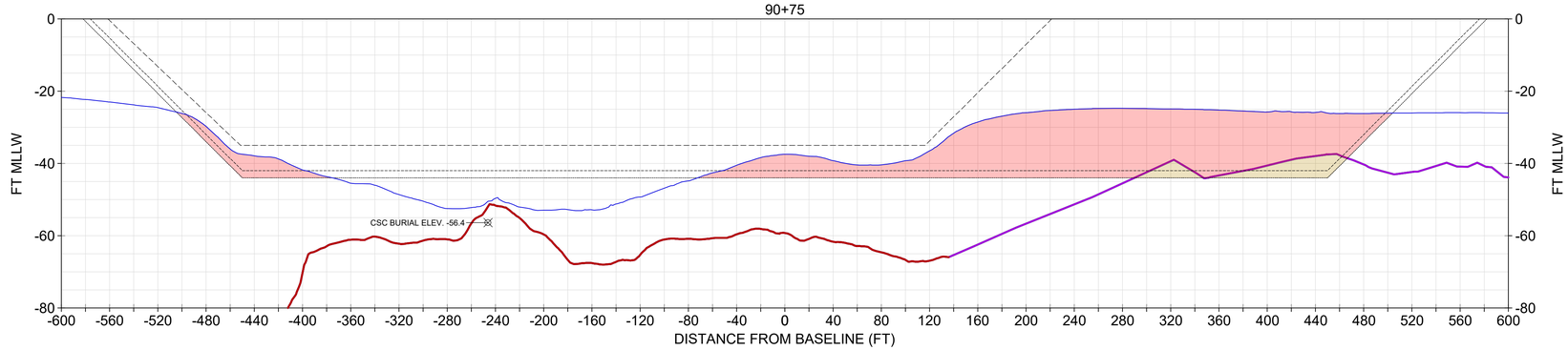
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9009 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5956

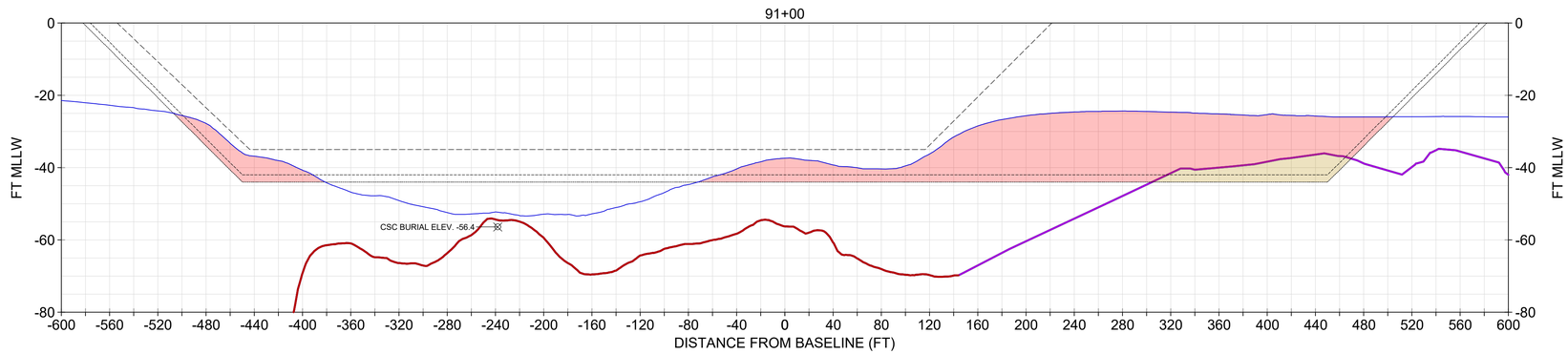
PREPARED FOR: Cross Sound Ferries

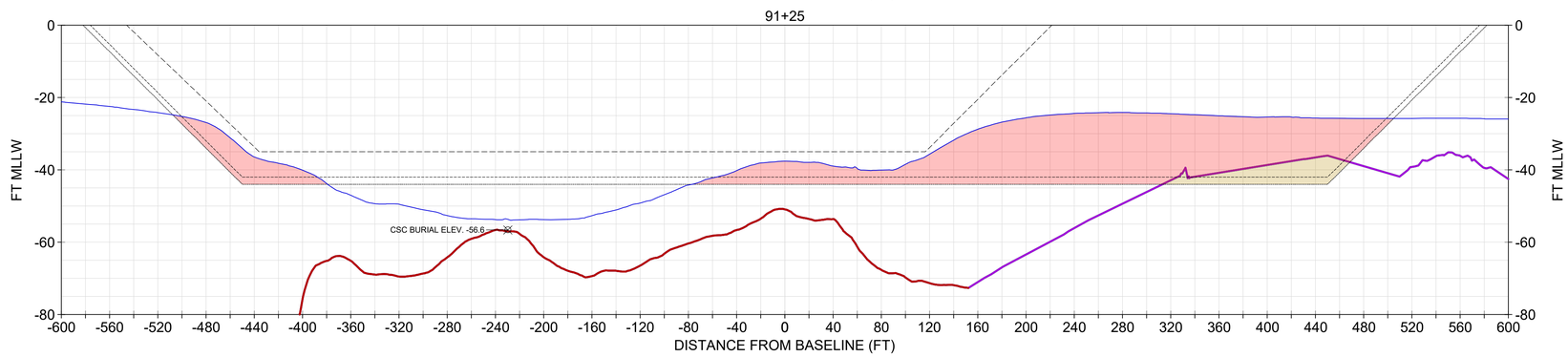
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

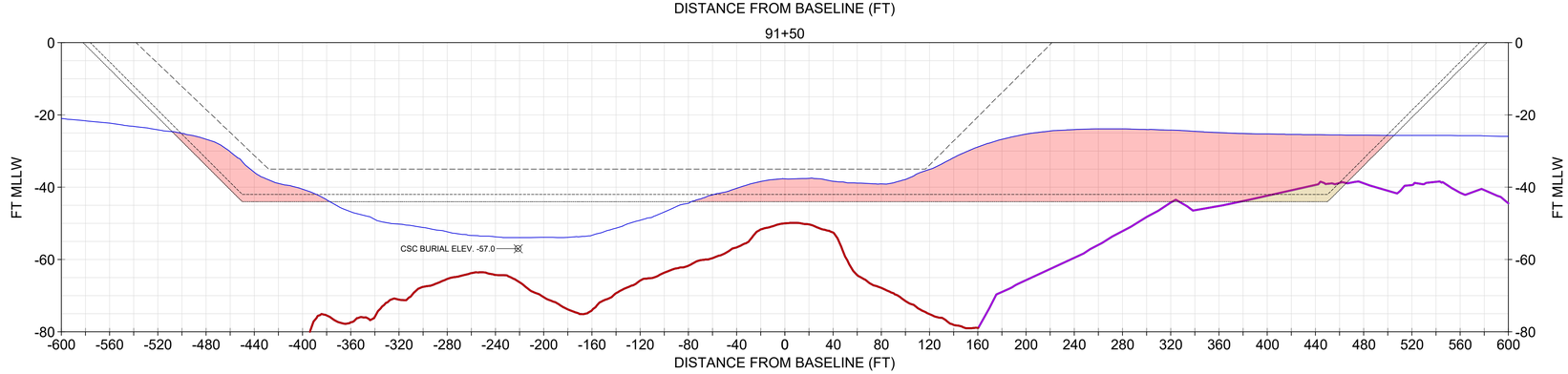
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-059









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 81 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

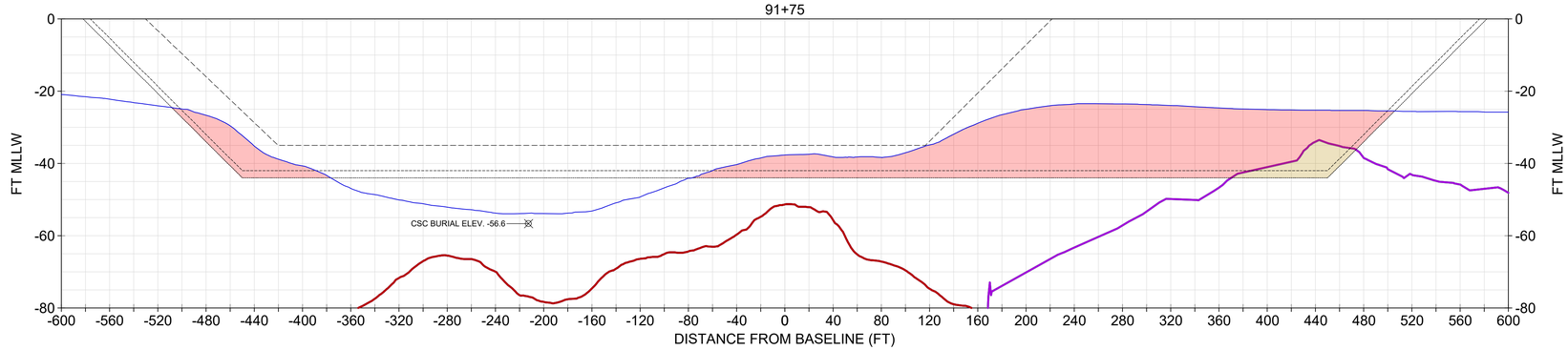
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5956

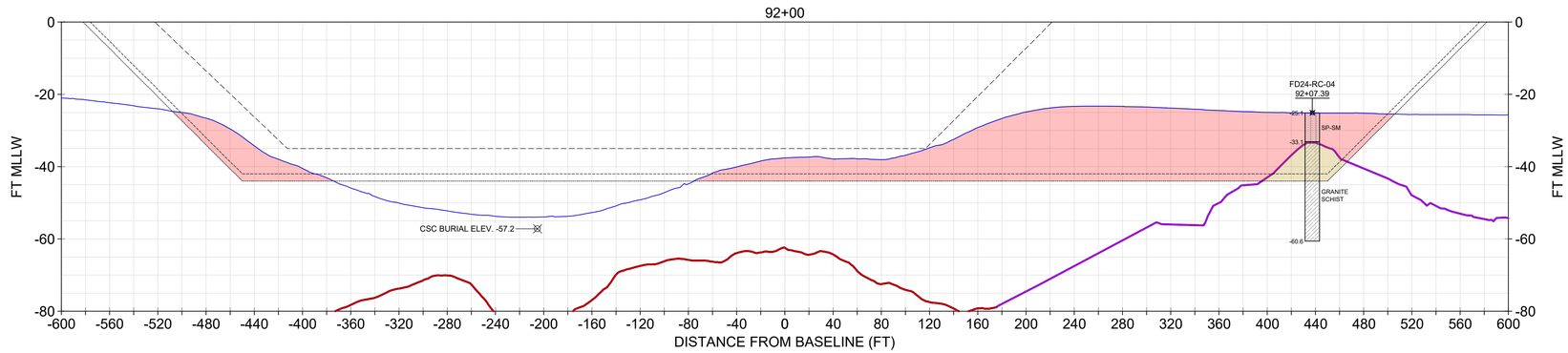
PREPARED FOR: Coastal Partners

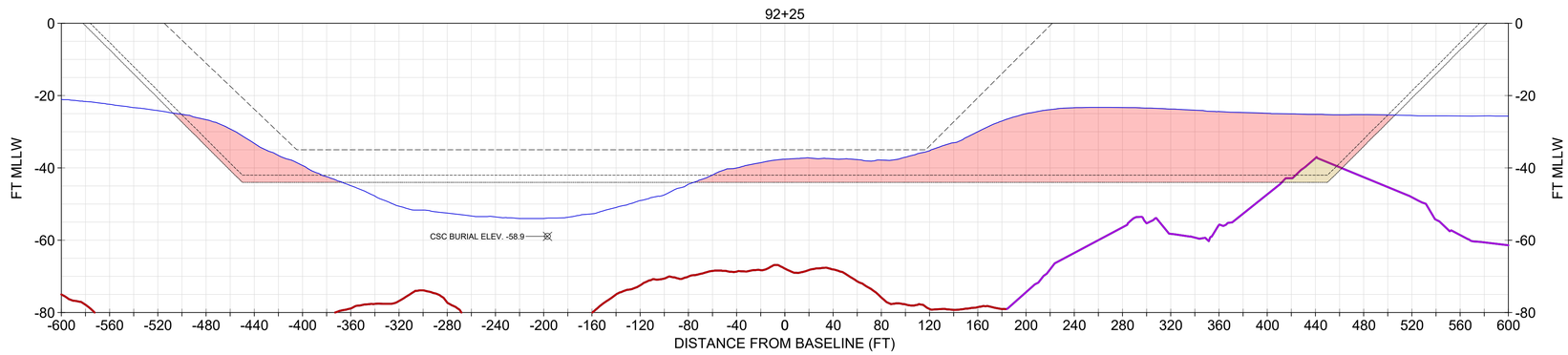
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

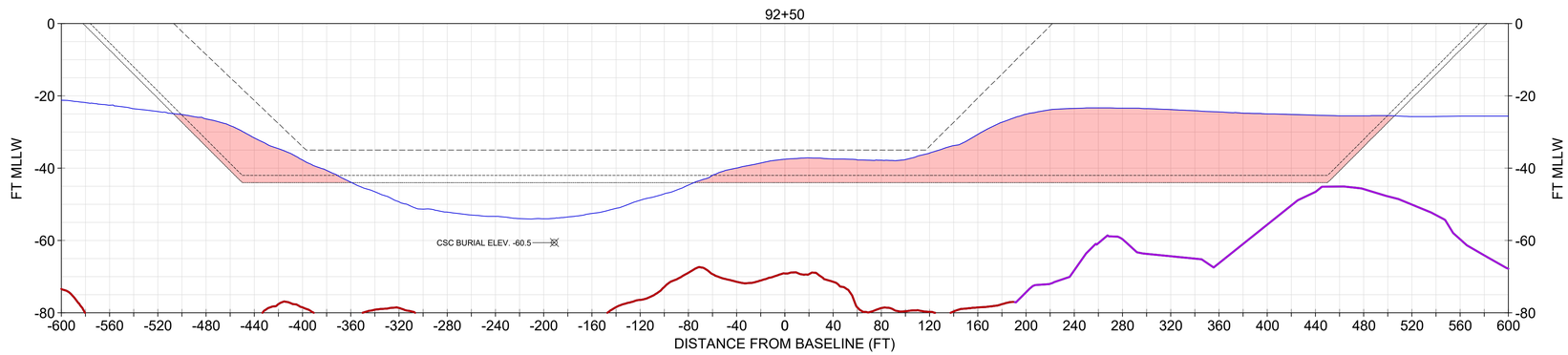
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-060









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-04	-25.1	-60.6	GBA	8/16/2024

CORE LEGEND

- SP-SM (POORLY GRADED SAND WITH SILT)
- GRANITE SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 82 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

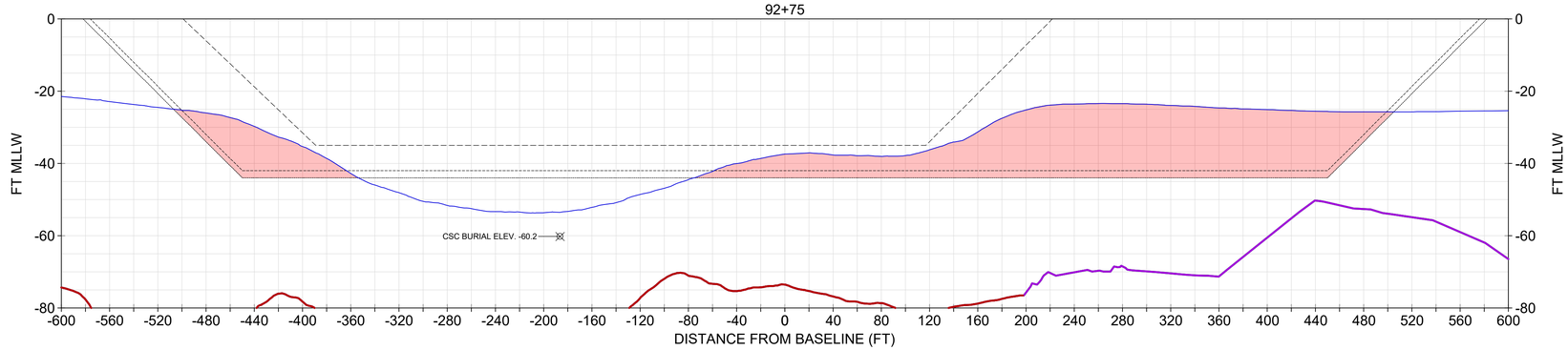
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

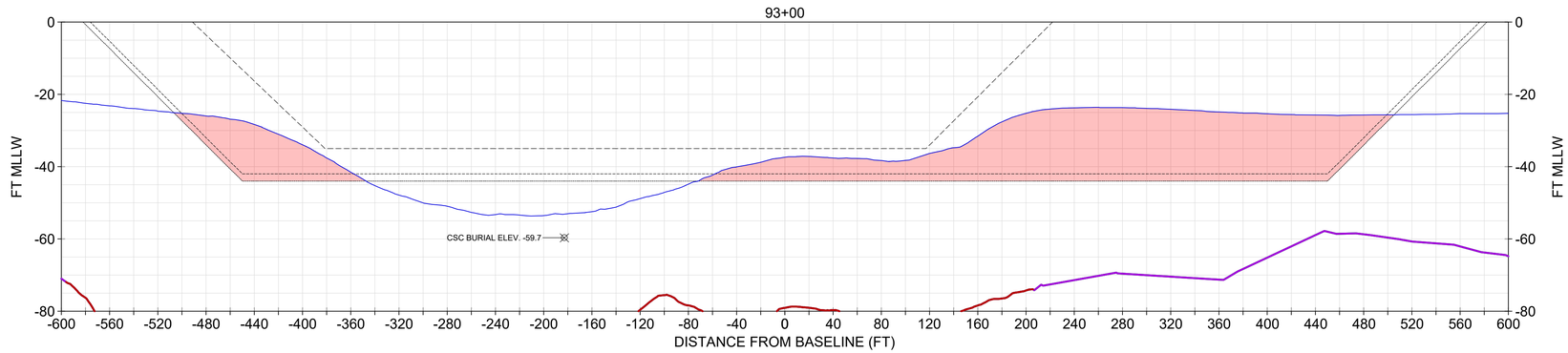
PREPARED FOR: Coastal Partners

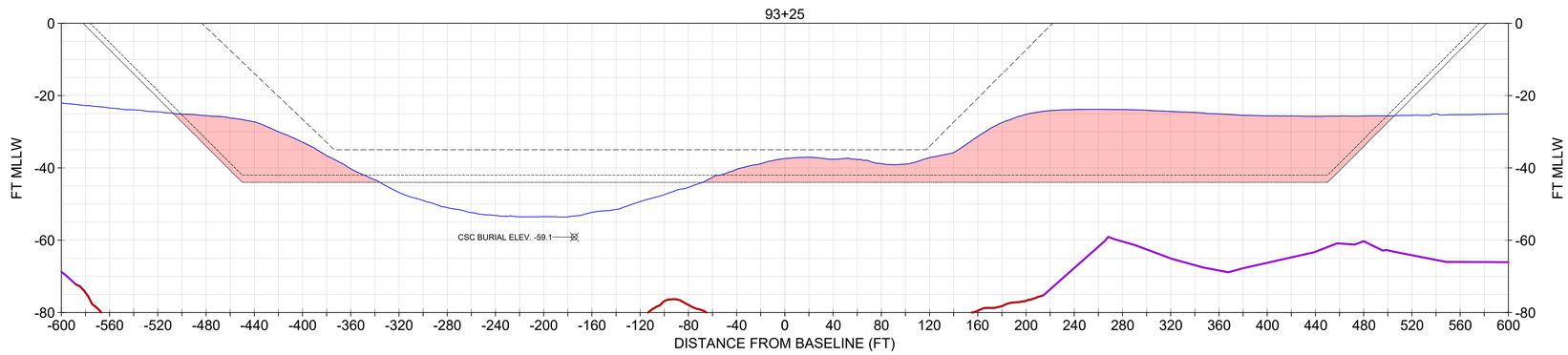
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

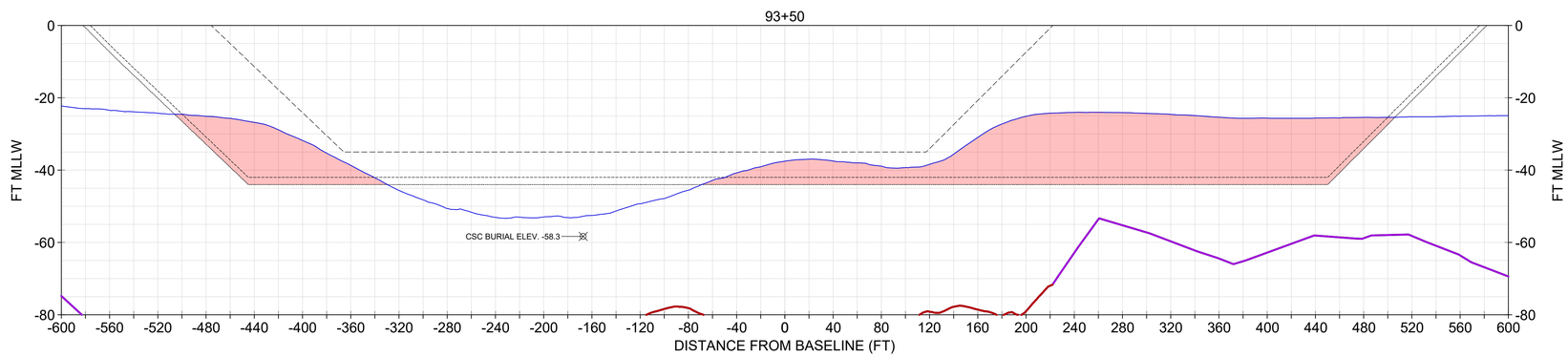
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-061









NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCZ
SIZE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 83 OF 220
SCALE: AS SHOWN

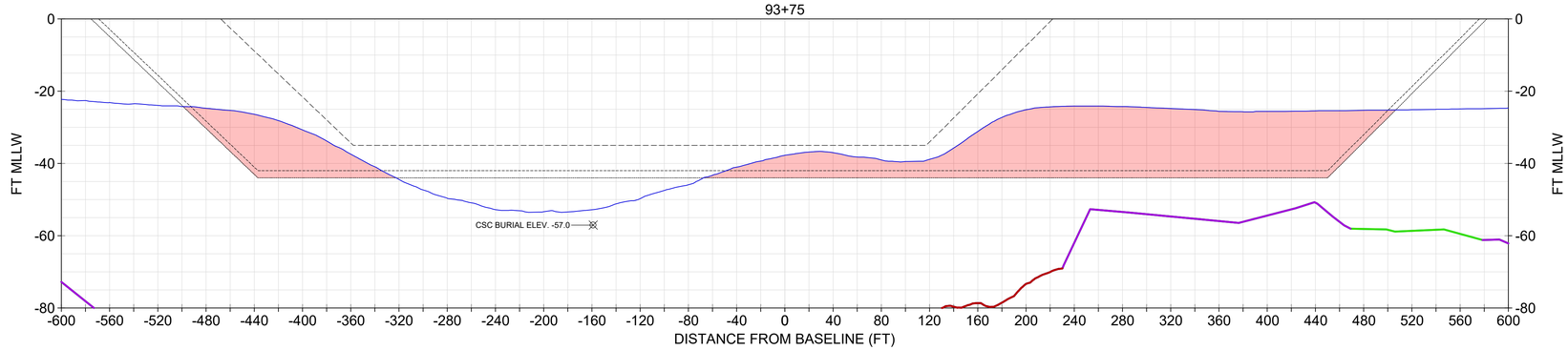
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5956

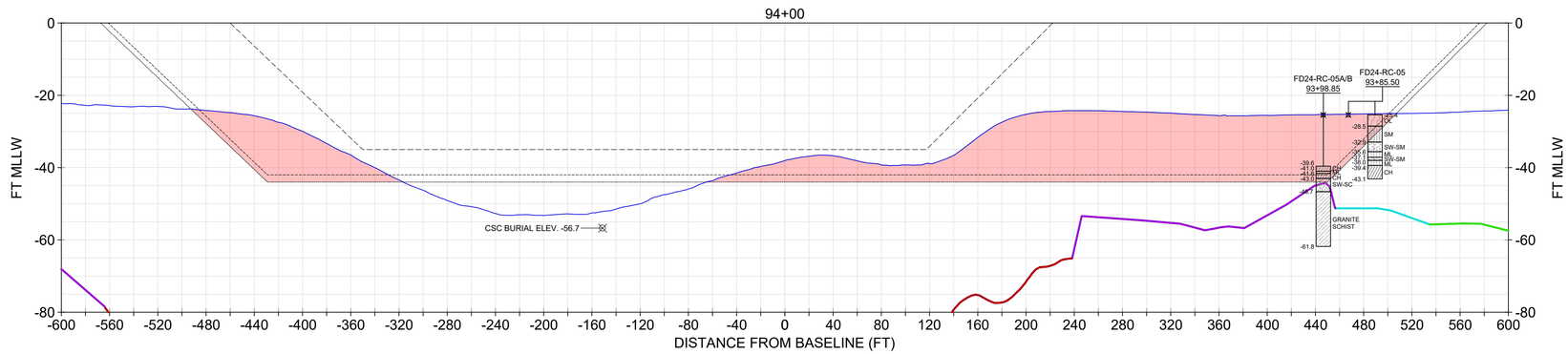
PREPARED FOR: Coastal Partners

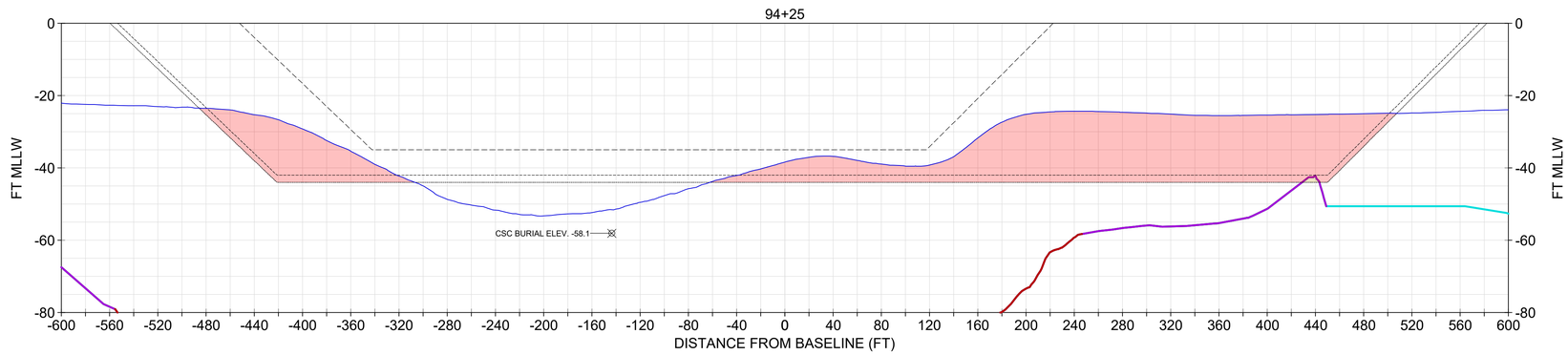
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

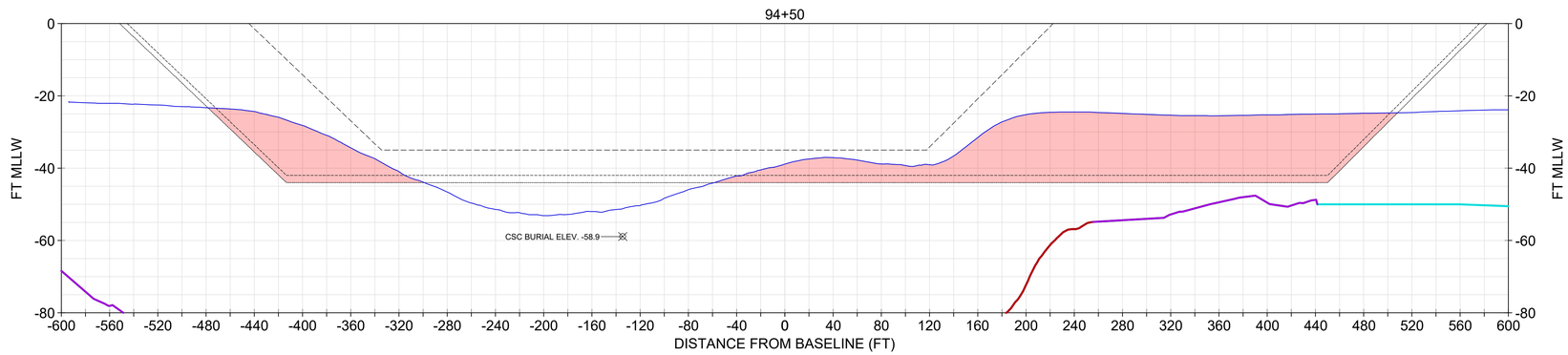
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-062









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-05	-25.4	-43.1	GBA	8/11/2024
FD24-RC-05A	-25.4	-46.1	GBA	8/14/2024
FD24-RC-05B	-25.7	-61.8	GBA	8/19/2024

CORE LEGEND

- OL (ORGANIC SILT AND CLAY)
- SM (SILTY SAND)
- SW-SM (WELL GRADED SAND WITH SILT)
- ML (SILT)
- CH (FAT CLAY)
- SW-SC (WELL GRADED SAND WITH CLAY)
- GRANITE SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 84 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

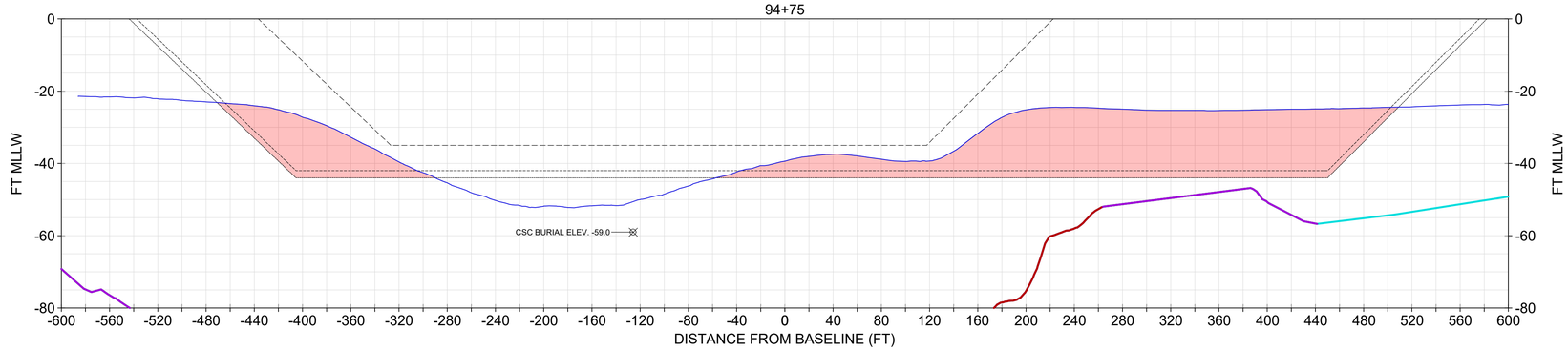
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5565

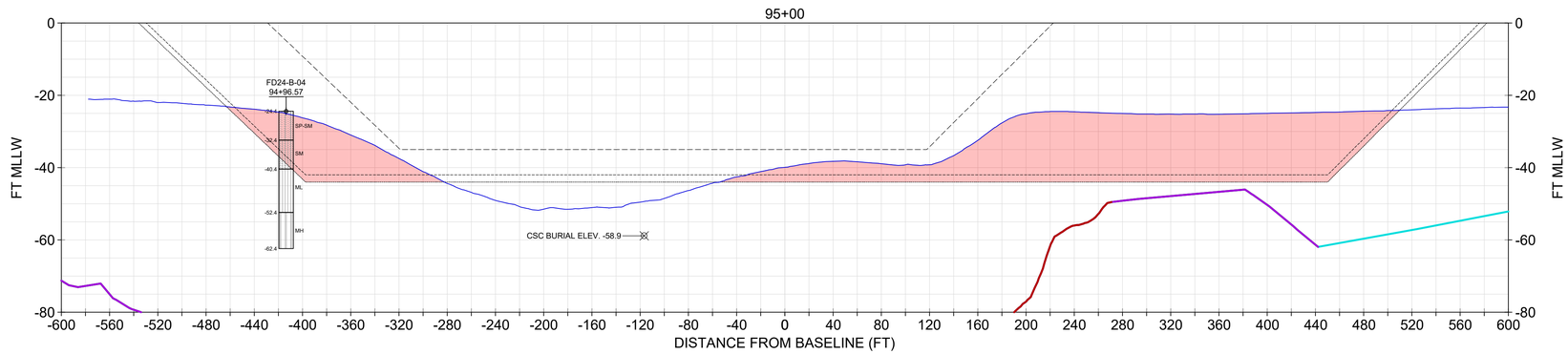
PREPARED FOR: Coastal Partners

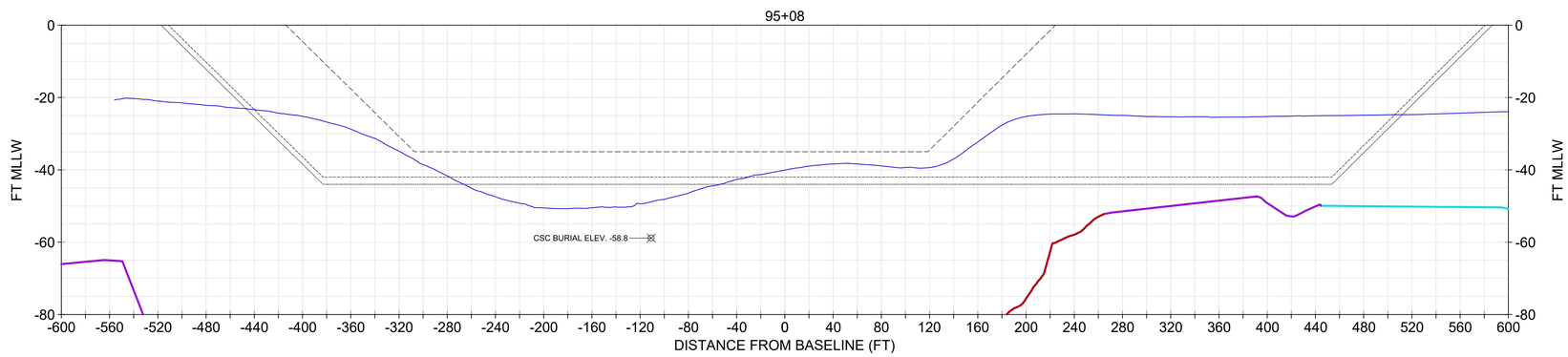
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

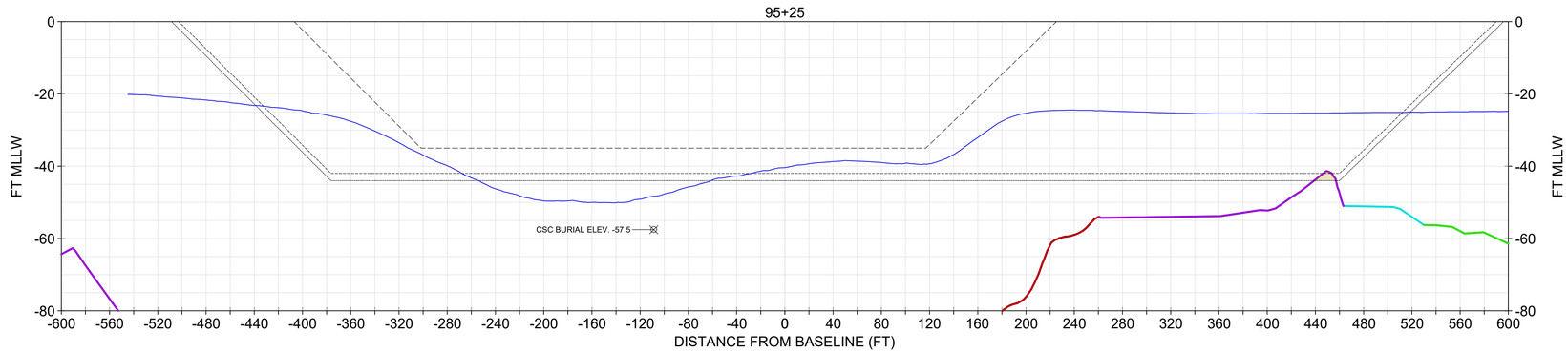
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-063









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
5. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-04	-24.4	-62.4	GBA	7/19/2024

CORE LEGEND

- SP-SM (POORLY GRADED SAND WITH SILT)
- SM (SILTY SAND)
- ML (SILT)
- MH (ELASTIC SILT)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 65 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

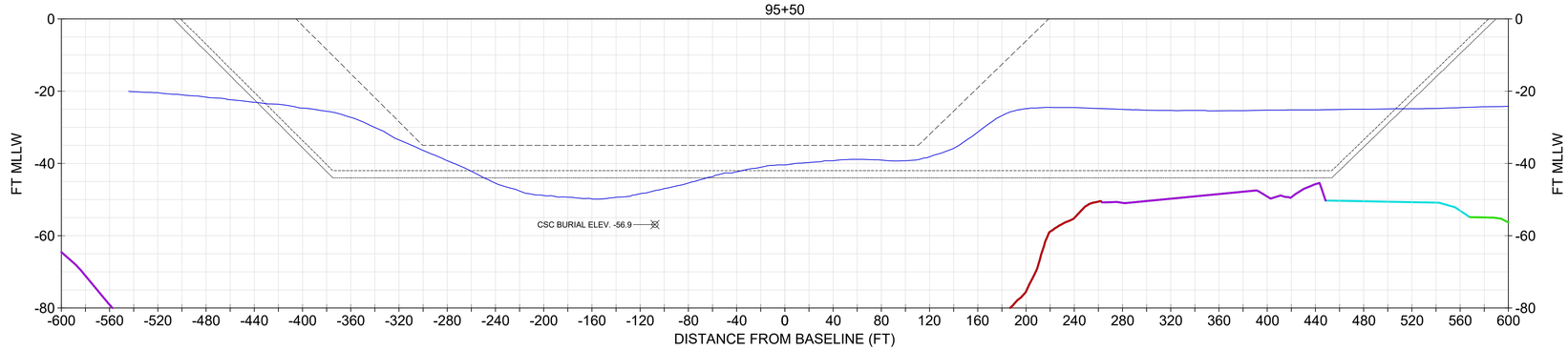
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit B Baltimore, MD 21237 Phone (410) 882-5956

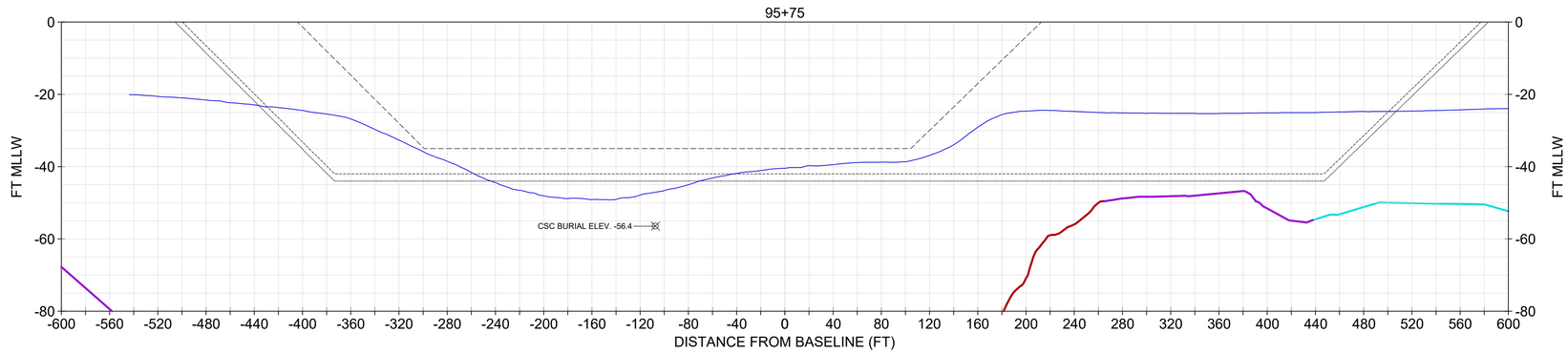
PREPARED FOR: Coastal Partners

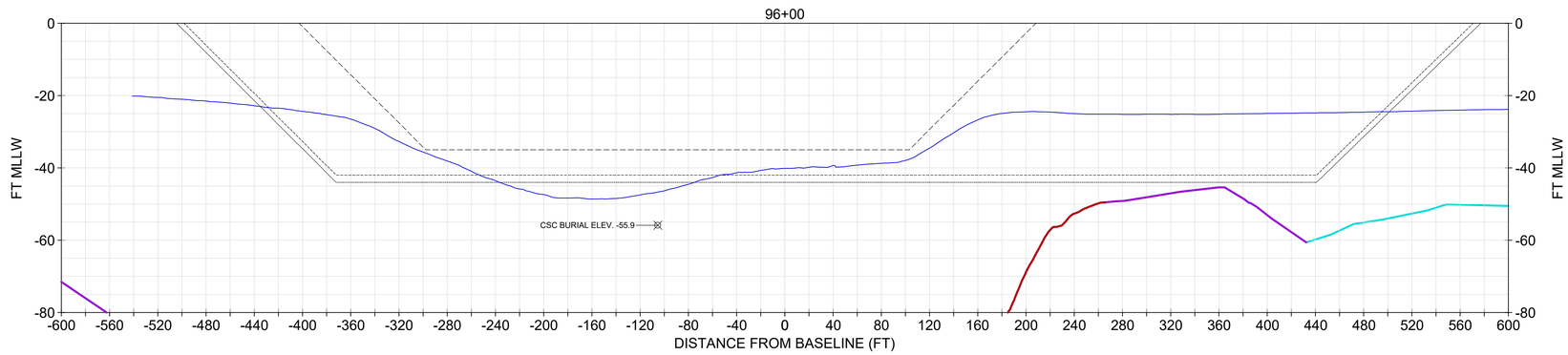
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

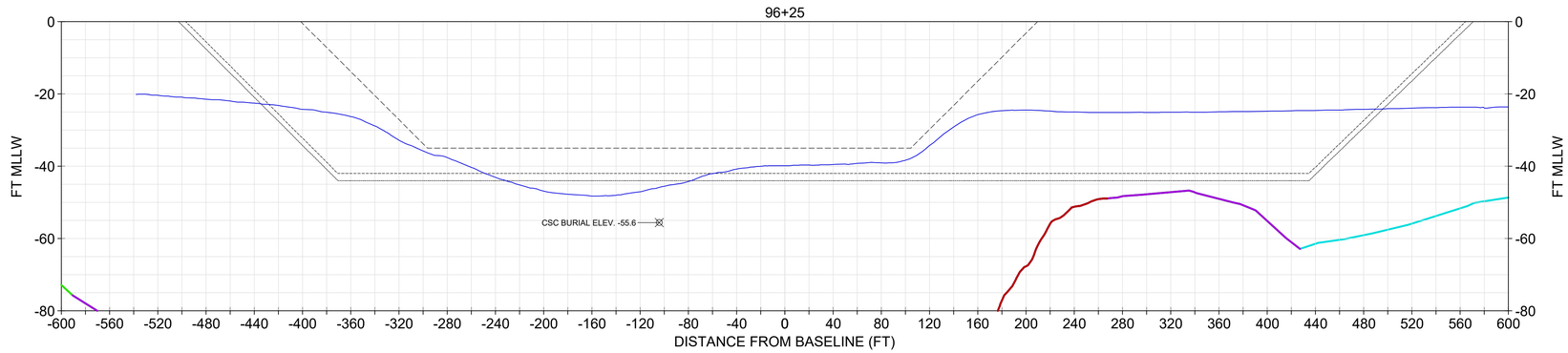
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-064









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
5. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
6. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWU24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 93 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

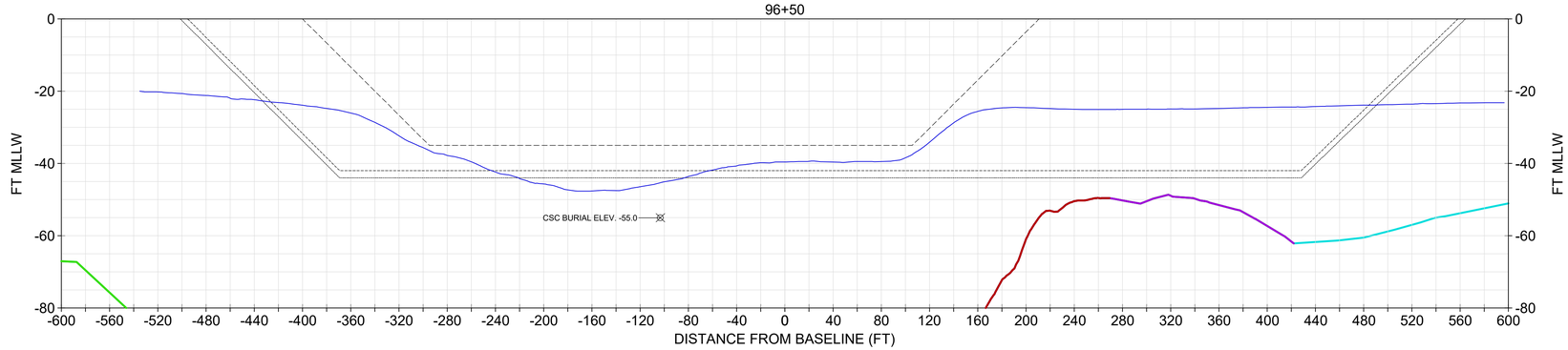
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

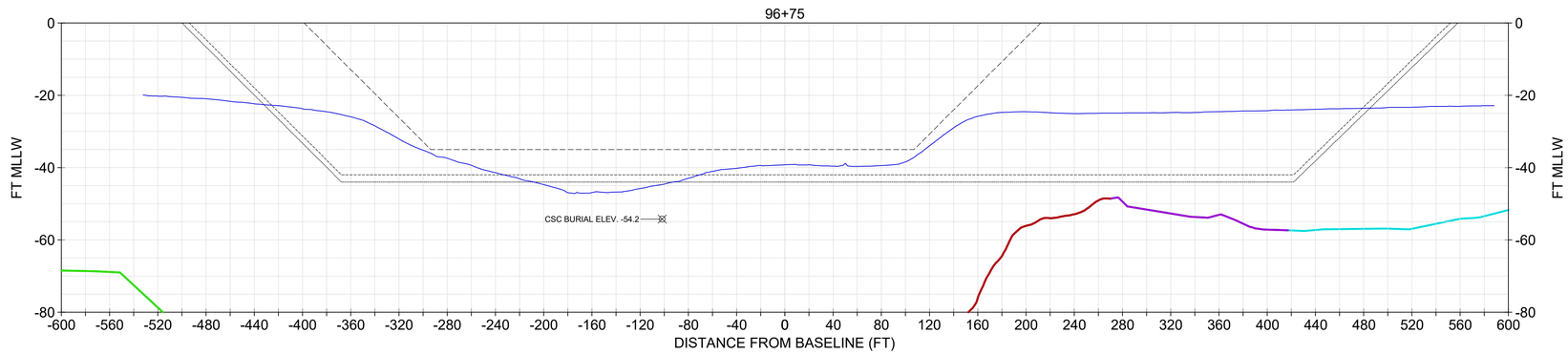
PREPARED FOR: Coastal Partners

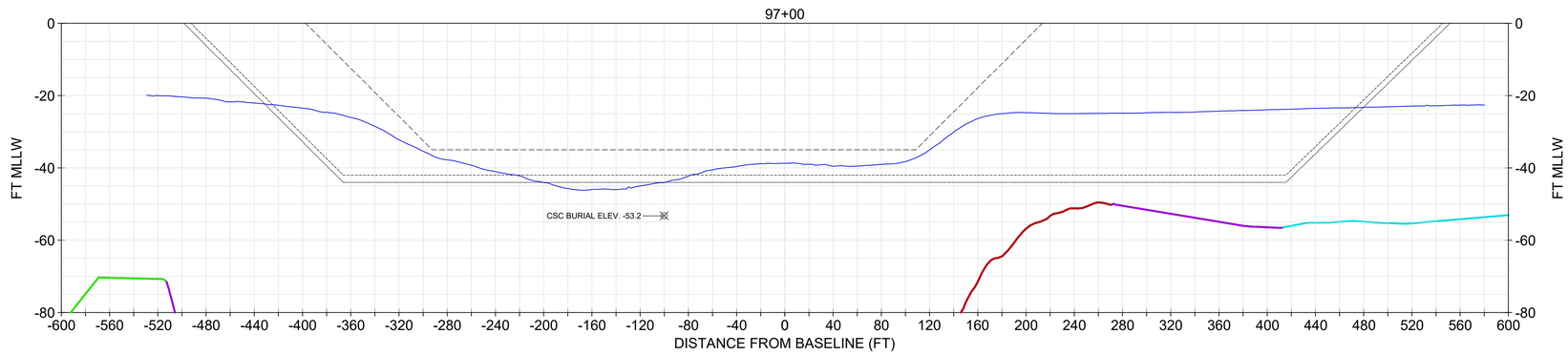
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

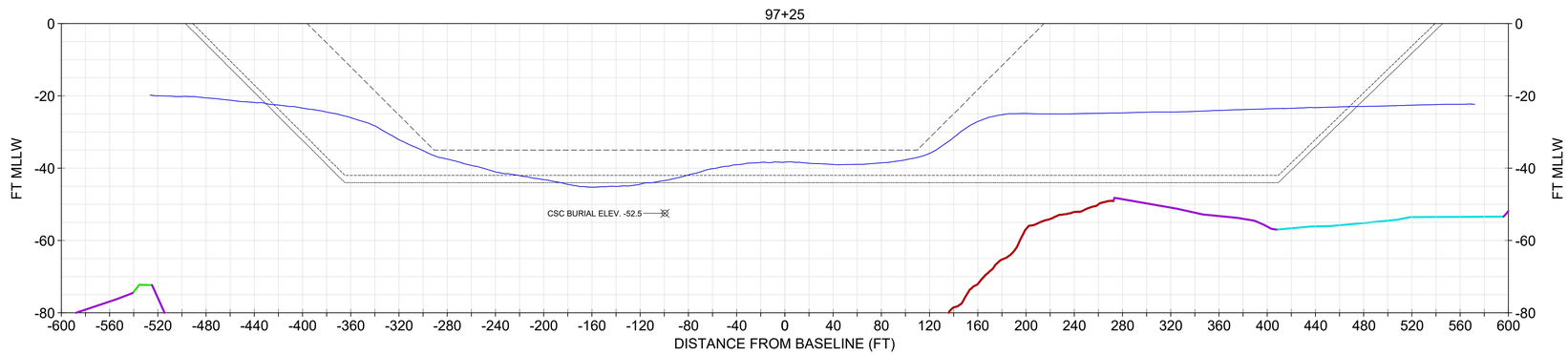
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-065









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
5. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
6. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 94 OF 220
SCALE: AS SHOWN

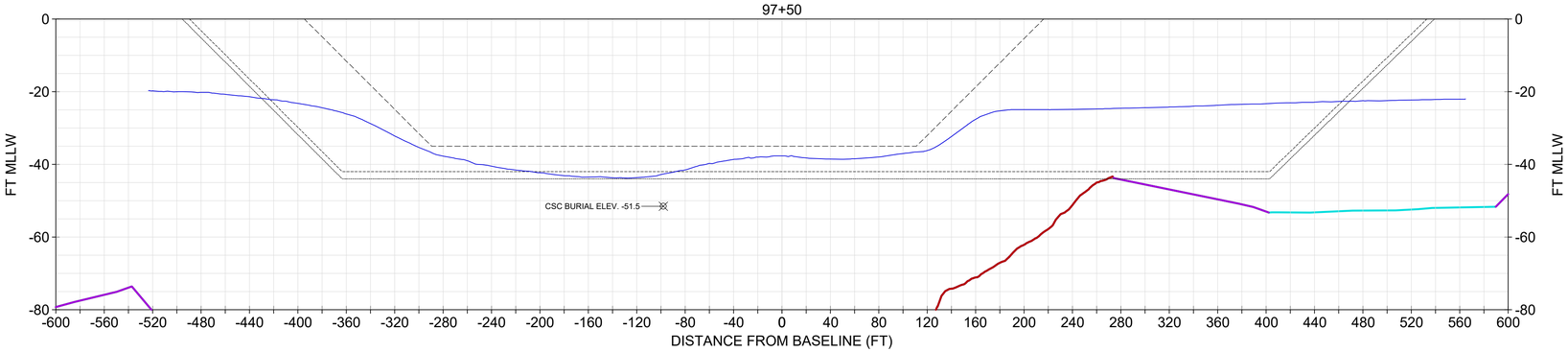
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

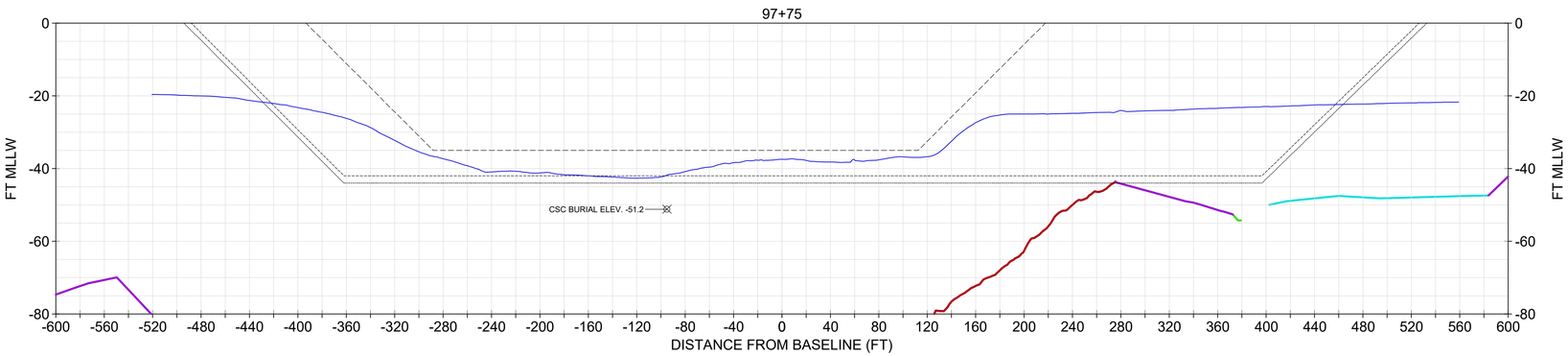
PREPARED FOR: Coastal Partners

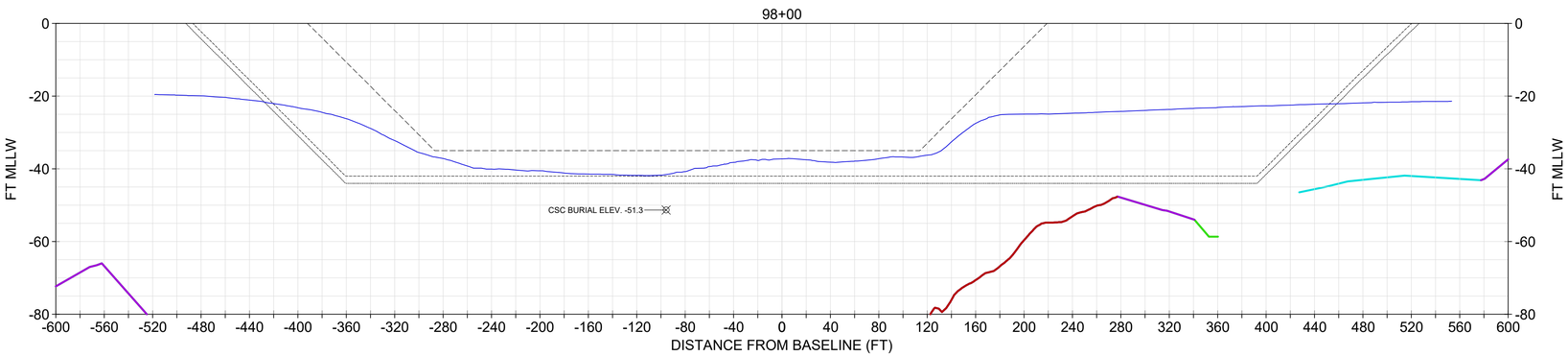
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

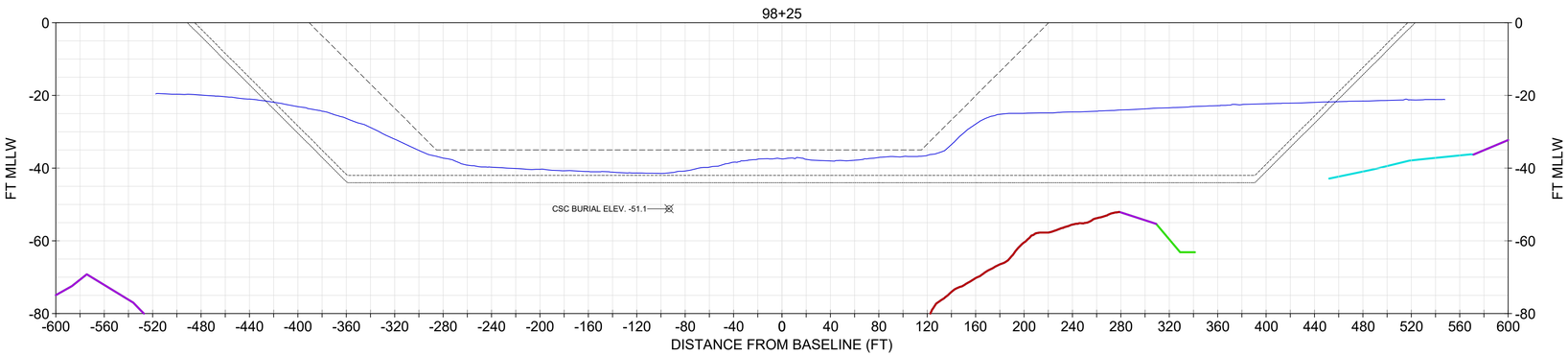
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-066









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
5. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
6. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 95 OF 220

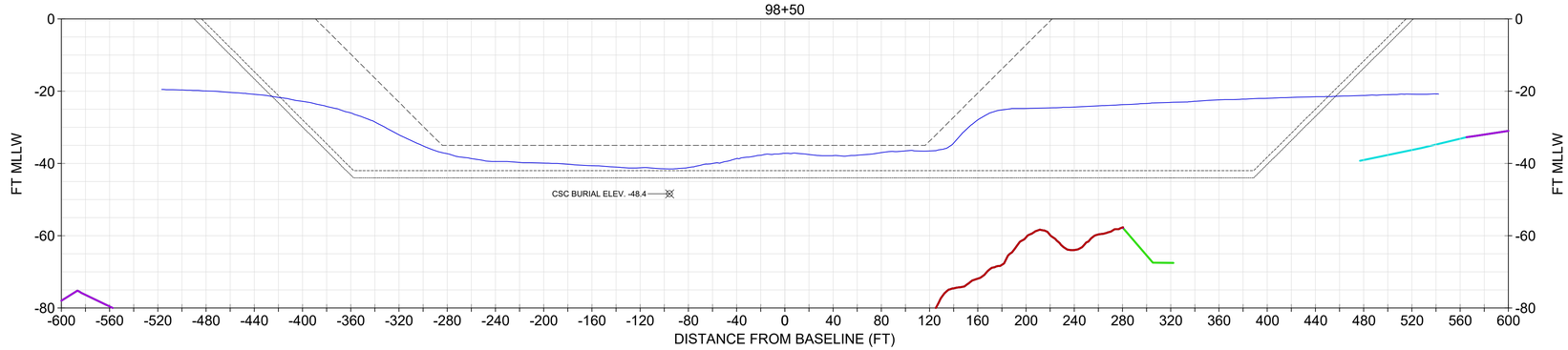
PREPARED BY:
GBA
9008 Yellow Brick Rd.
Unit E
Baltimore, MD 21237
Phone (410) 882-5565
ENGINEERS ★ SURVEYORS

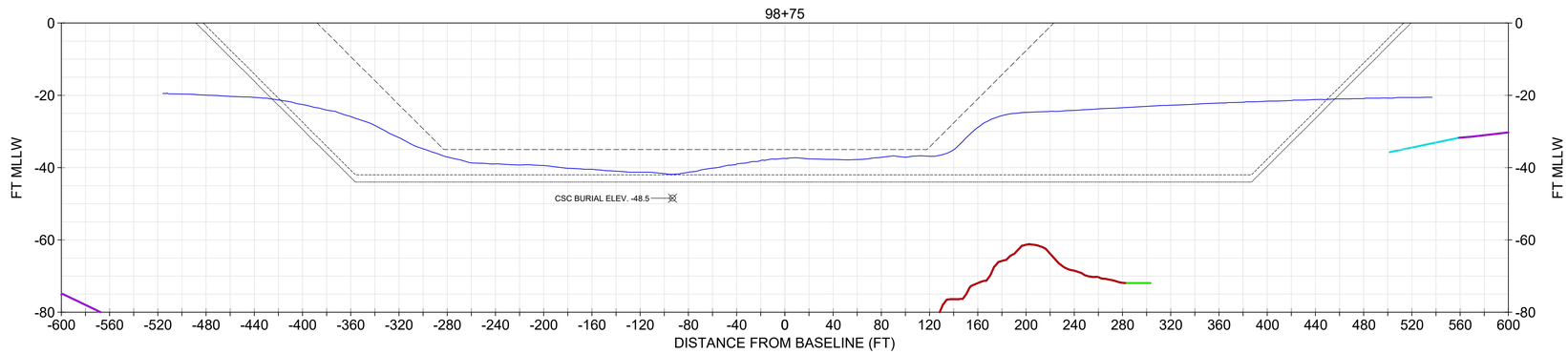
PREPARED FOR:
Coastal Partners
CT DEEP & USACE

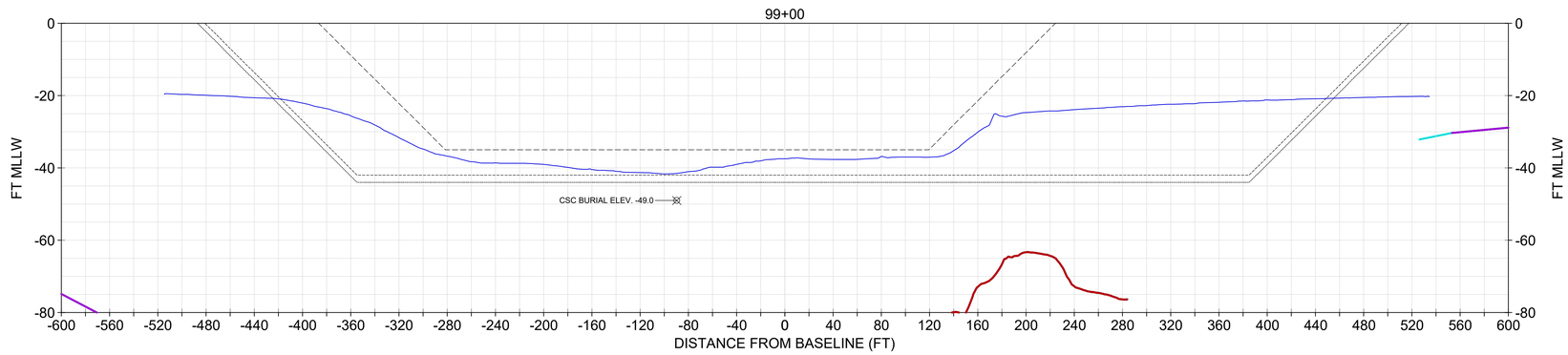
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

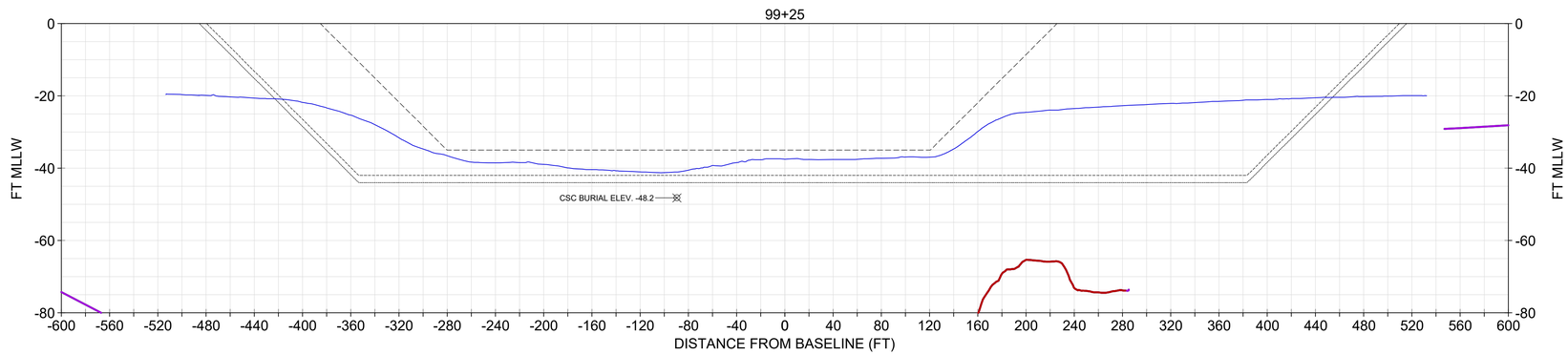
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-067









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
5. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
6. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 96 OF 220

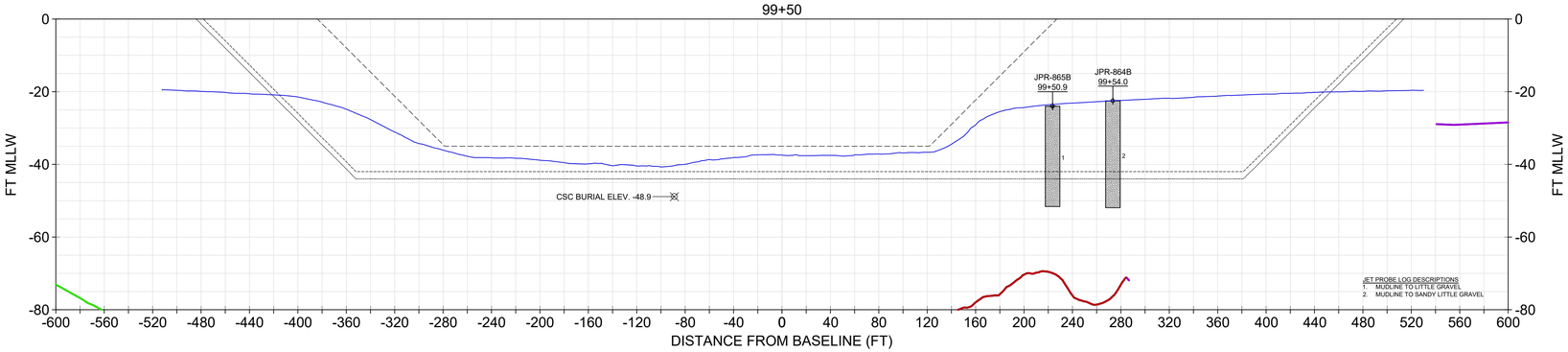
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

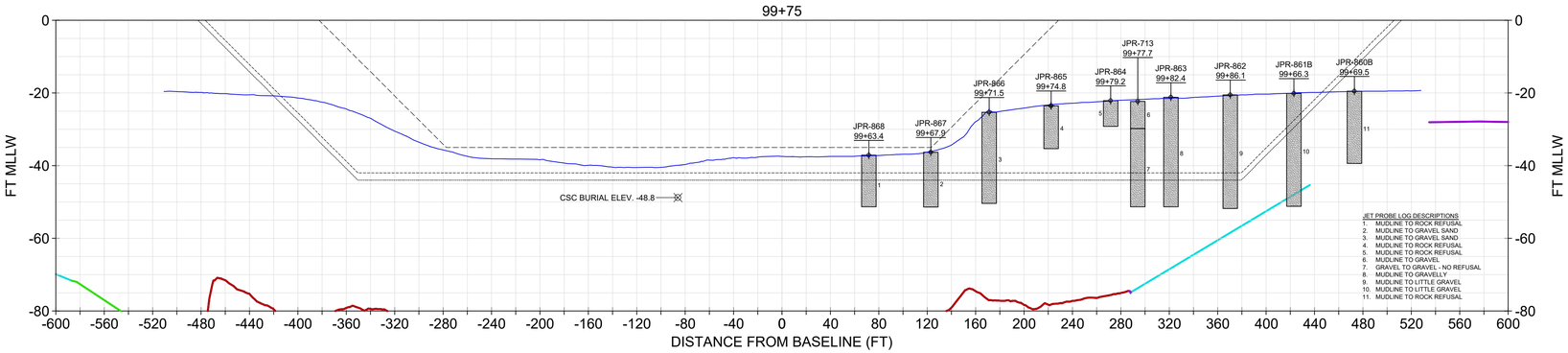
PREPARED FOR: Coastal Partners

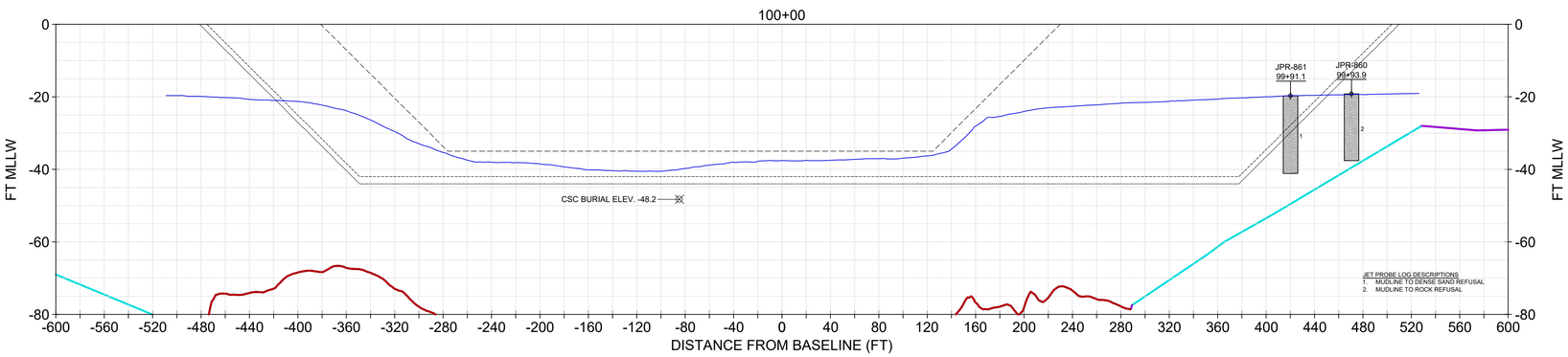
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

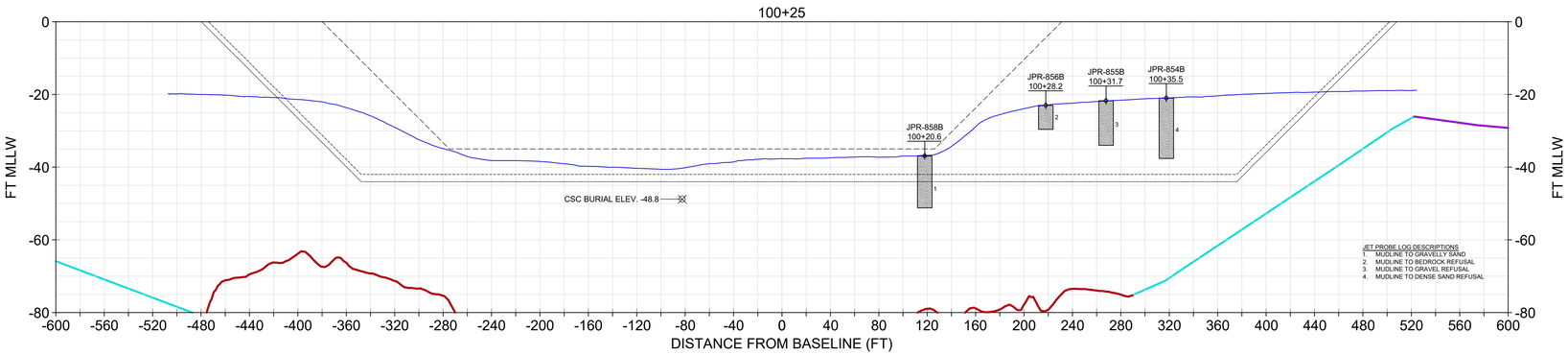
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-068









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
5. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
6. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
7. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 97 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

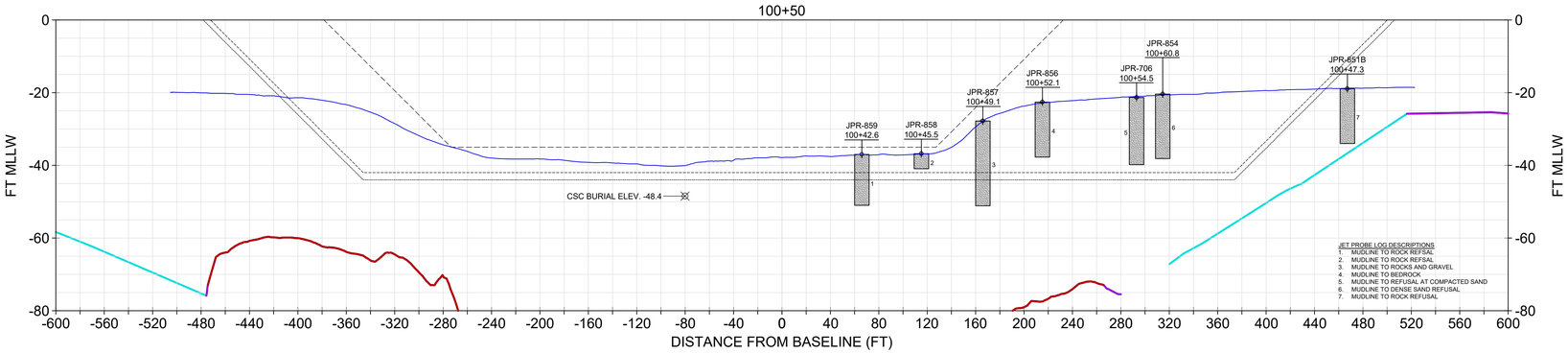
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

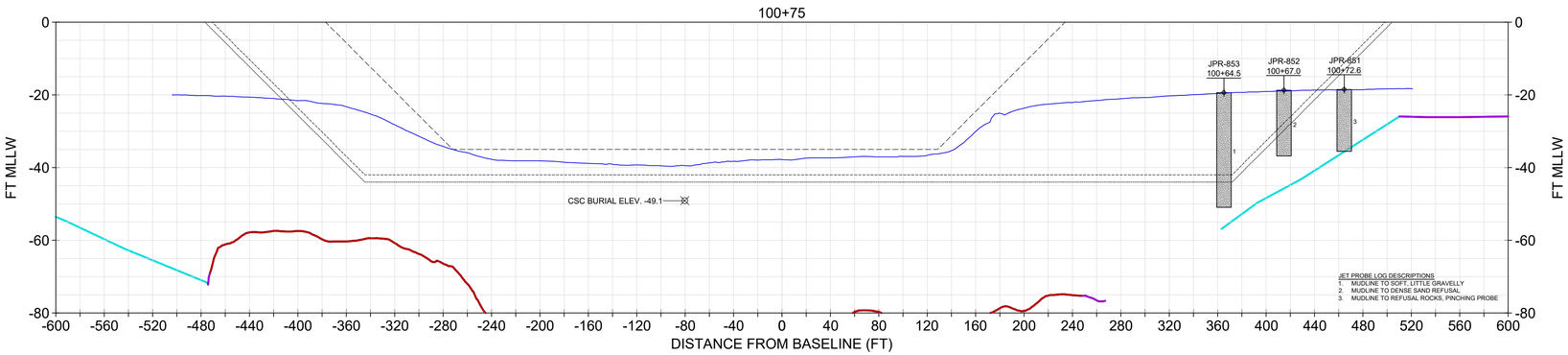
PREPARED FOR: Cross Sound Cable COMPANY

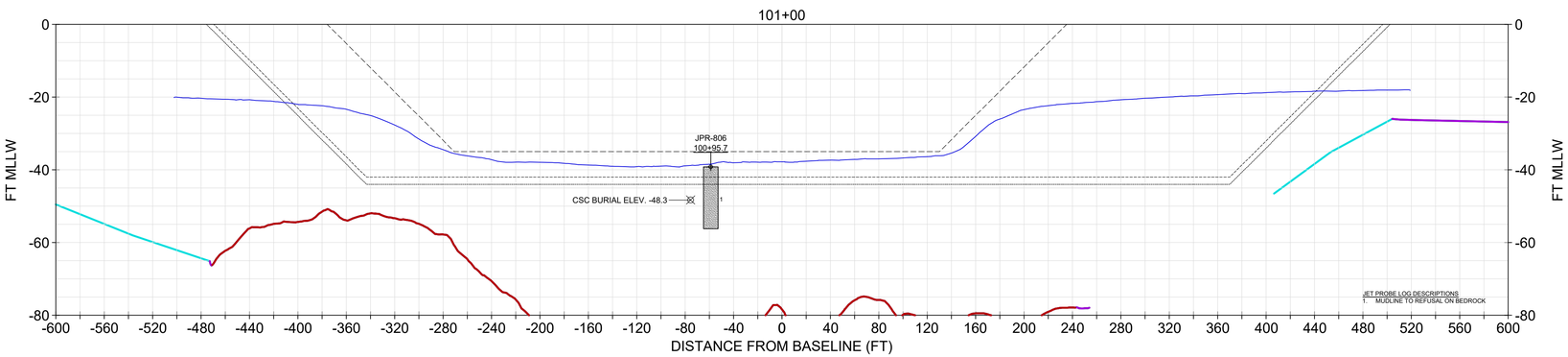
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

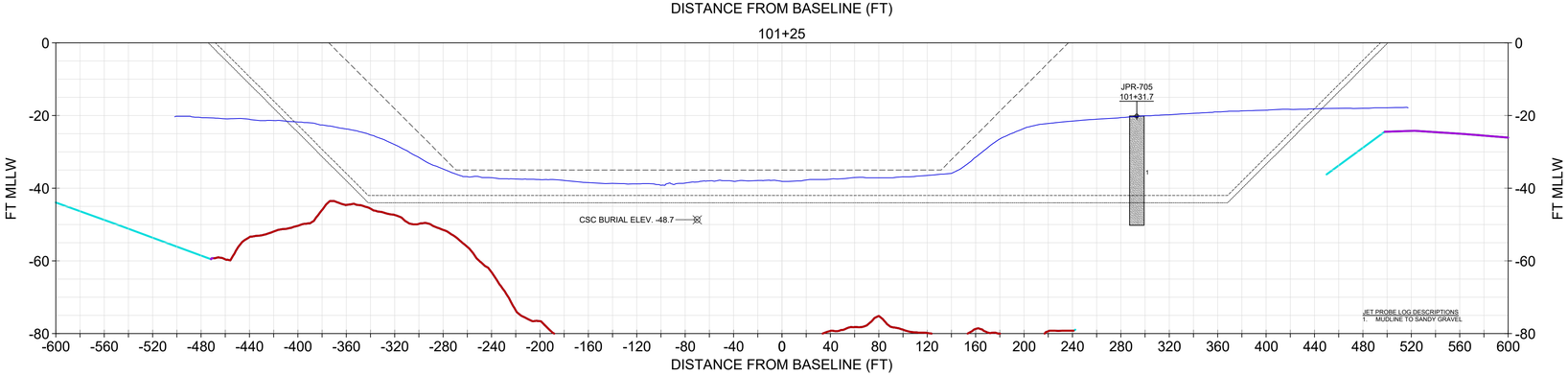
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-069









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
5. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
6. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
7. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 98 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

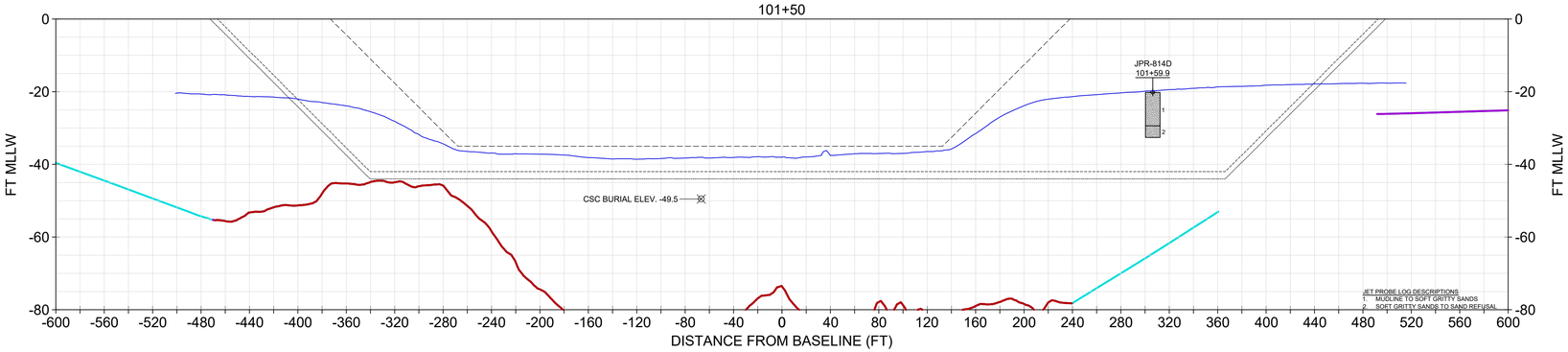
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit 1 Baltimore, MD 21237 Phone (410) 882-5595

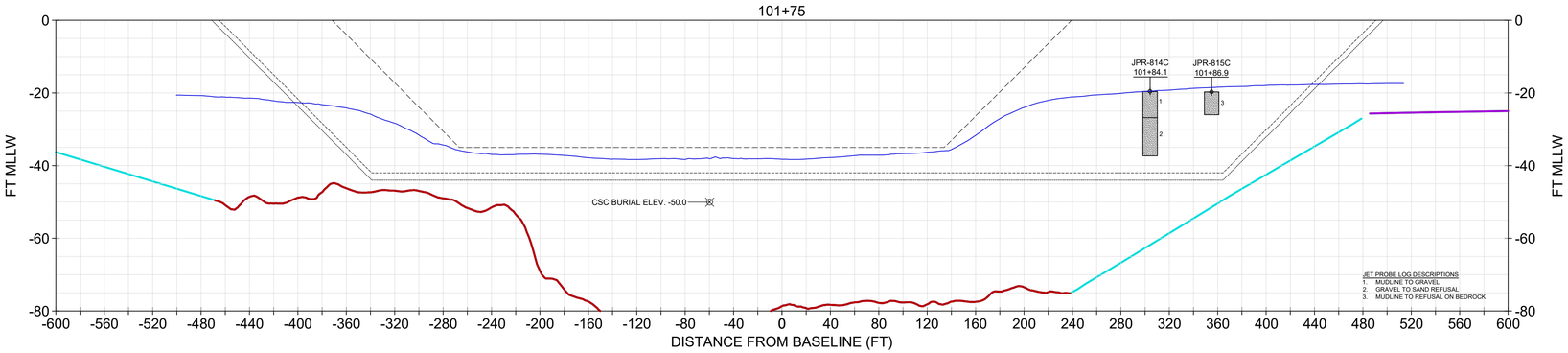
PREPARED FOR: Gardiner Geotechnical Consultants

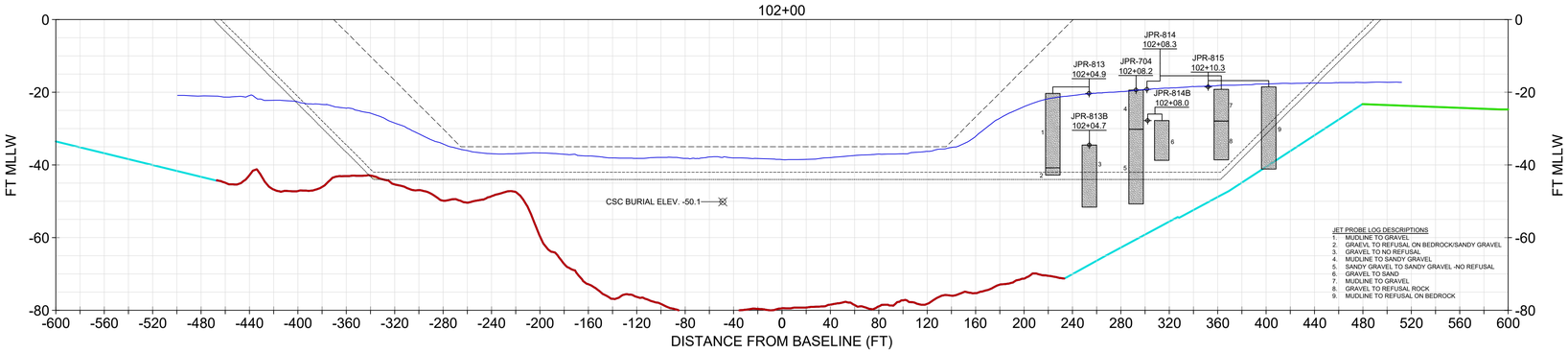
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

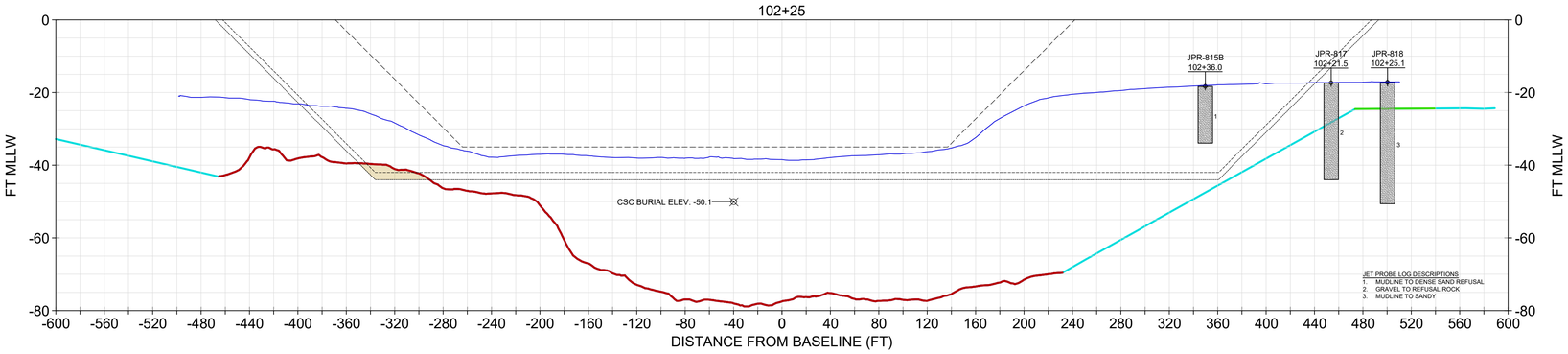
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-070









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
5. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
6. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
7. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCZ
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 99 OF 220

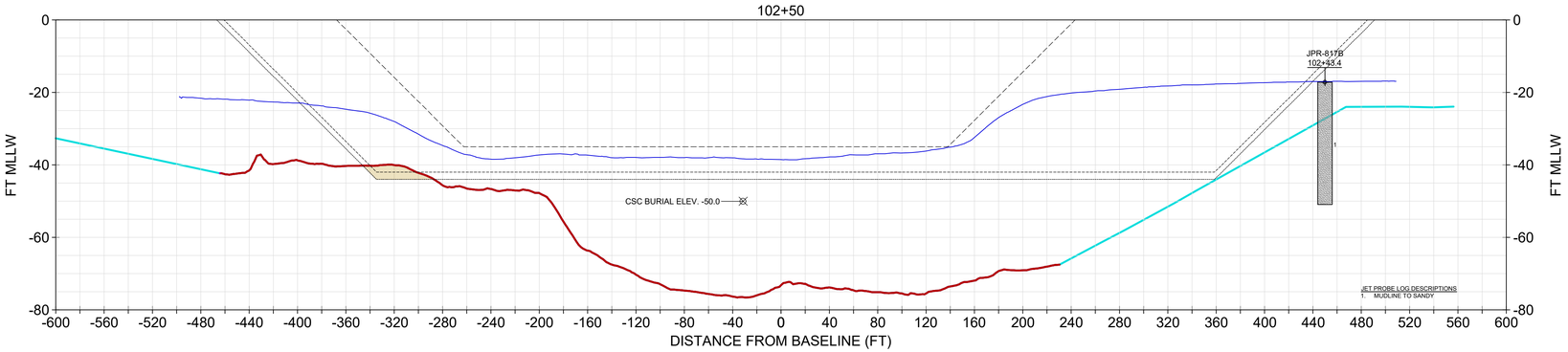
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

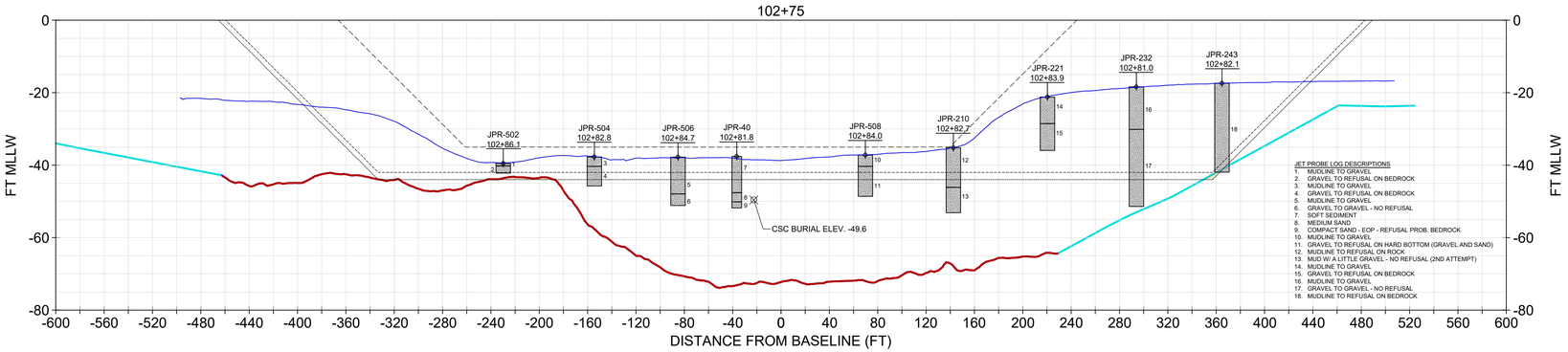
PREPARED FOR: Cashin Partners

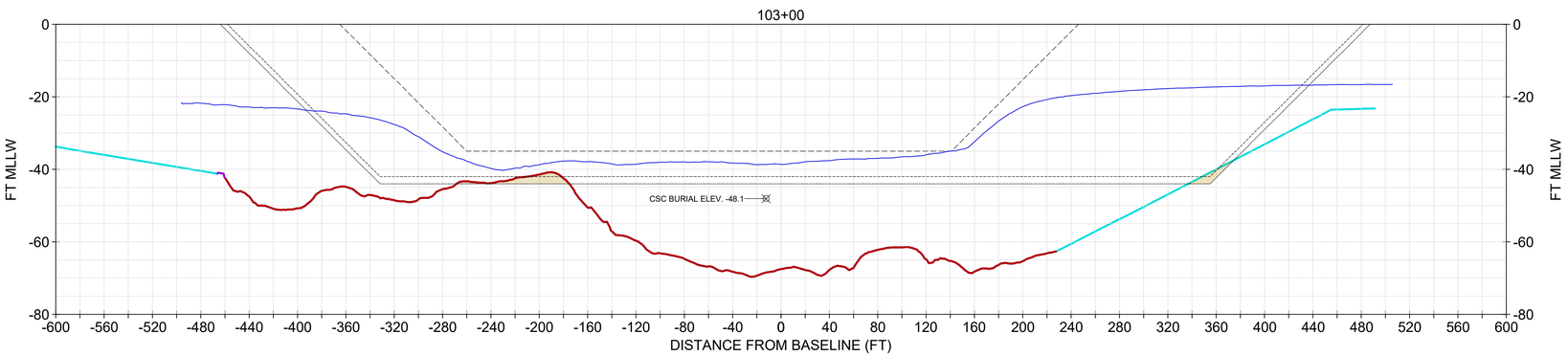
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

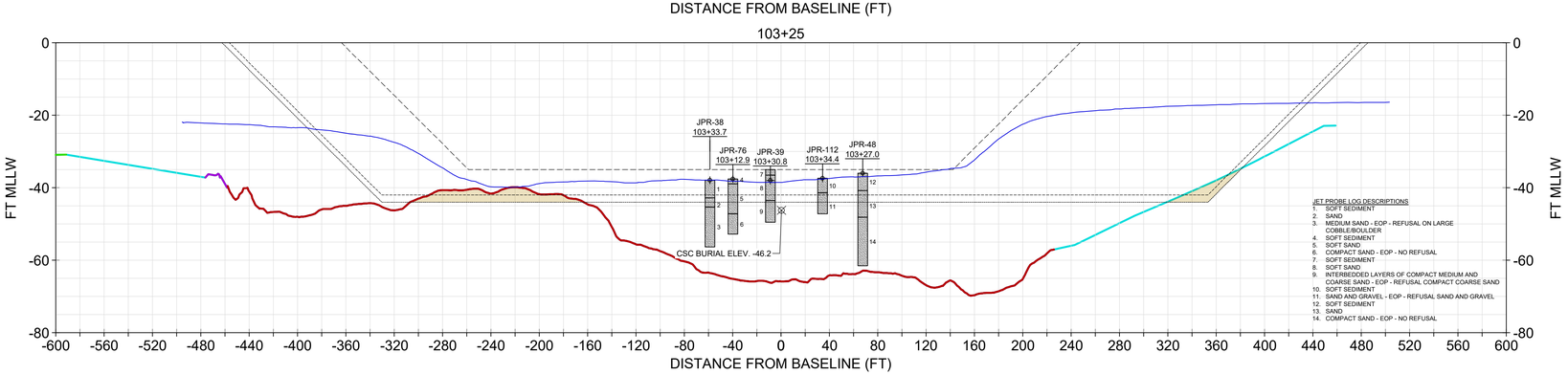
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-071









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
6. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
7. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
8. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 100 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

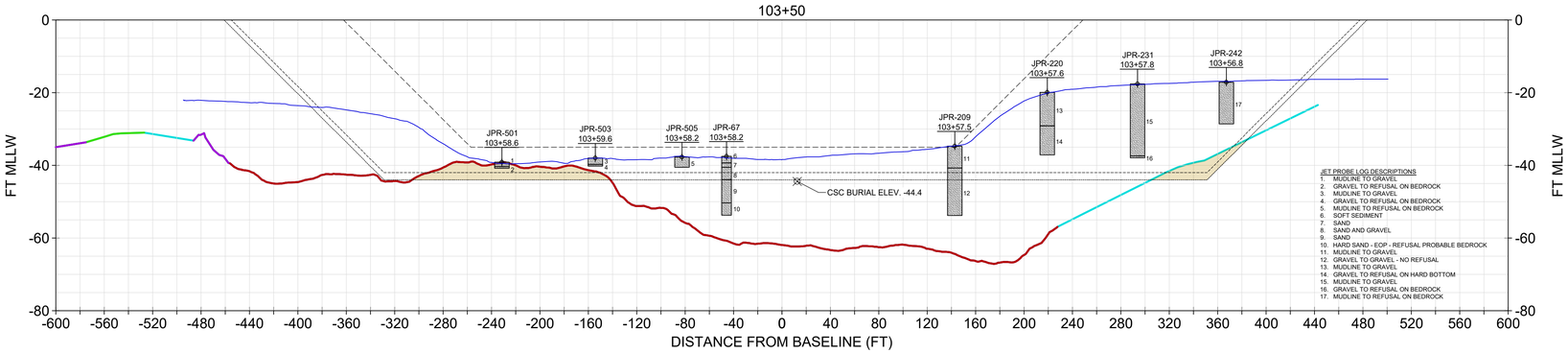
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit 1 Baltimore, MD 21237 Phone (410) 882-5595

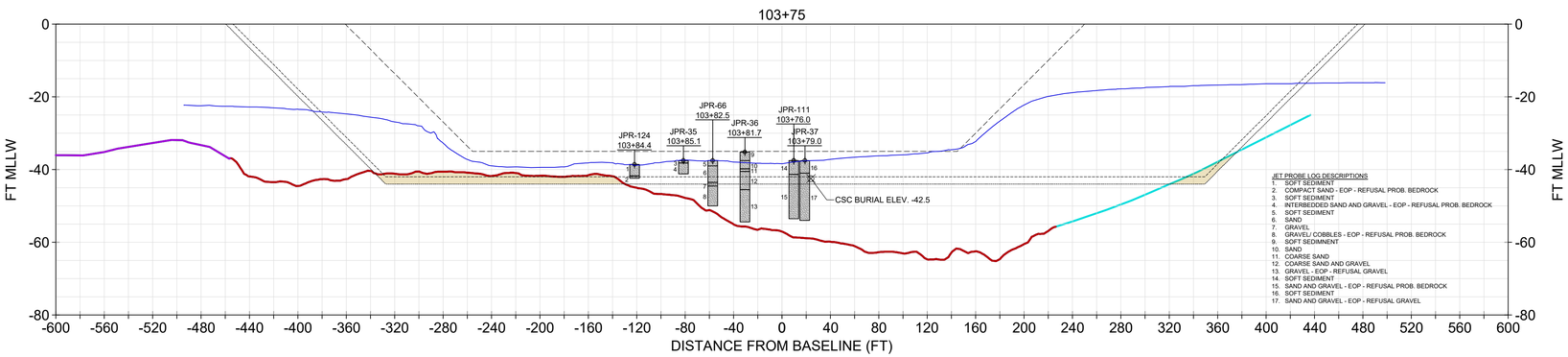
PREPARED FOR: Geotechnical Consultants

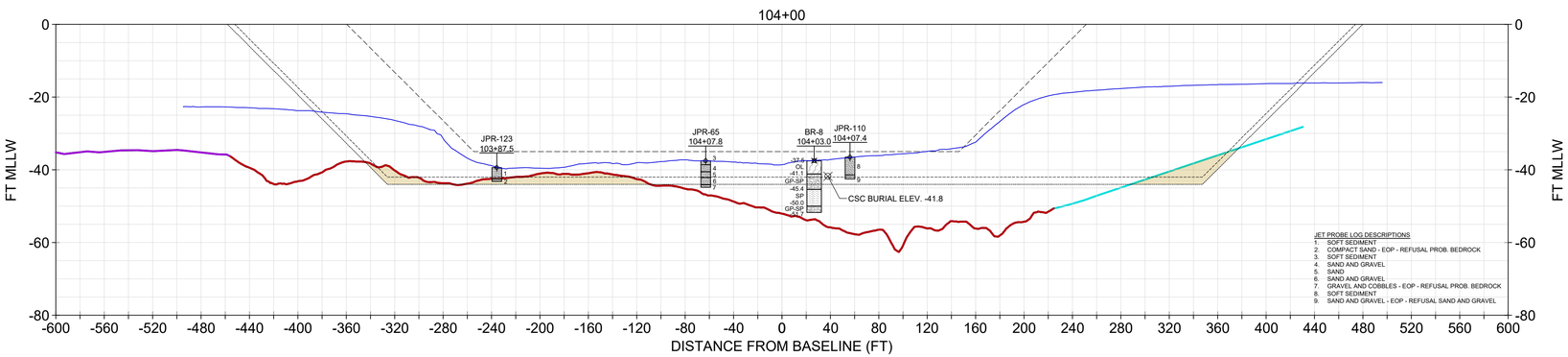
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

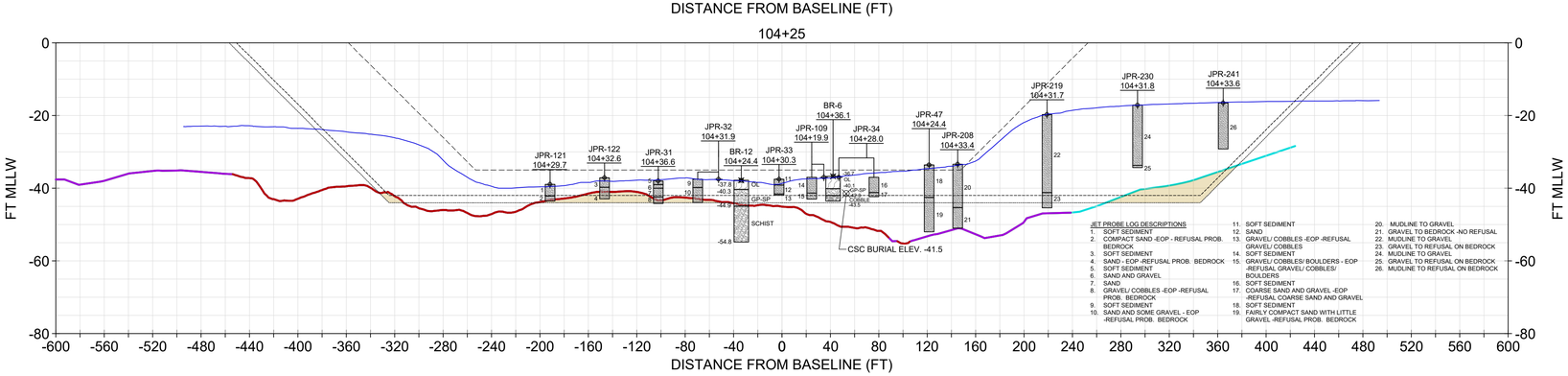
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-072









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
6. BR-## BORINGS WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
7. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
8. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
9. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
BR-8	-37.5	-51.7	ESS	2002
BR-12	-37.8	-54.8	ESS	2002
BR-6	-36.7	-43.5	ESS	2002

CORE LEGEND

- OL (ORGANIC SILT AND CLAY)
- GP-SP (POORLY GRADED GRAVEL AND SAND)
- SP (POORLY GRADED SAND)
- COBBLE
- SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 101 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

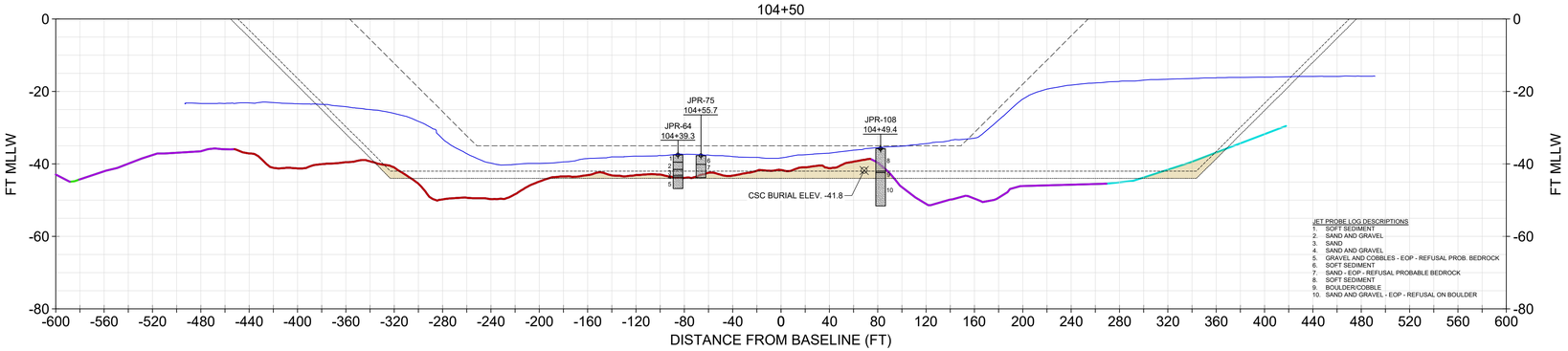
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit 1 Baltimore, MD 21237 Phone (410) 882-5595

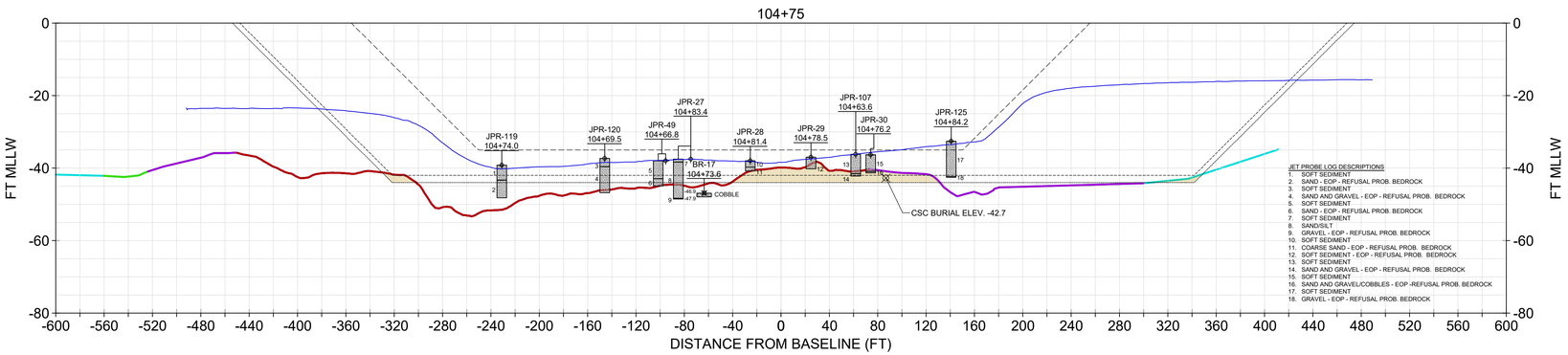
PREPARED FOR: Cross Sound Cable Company

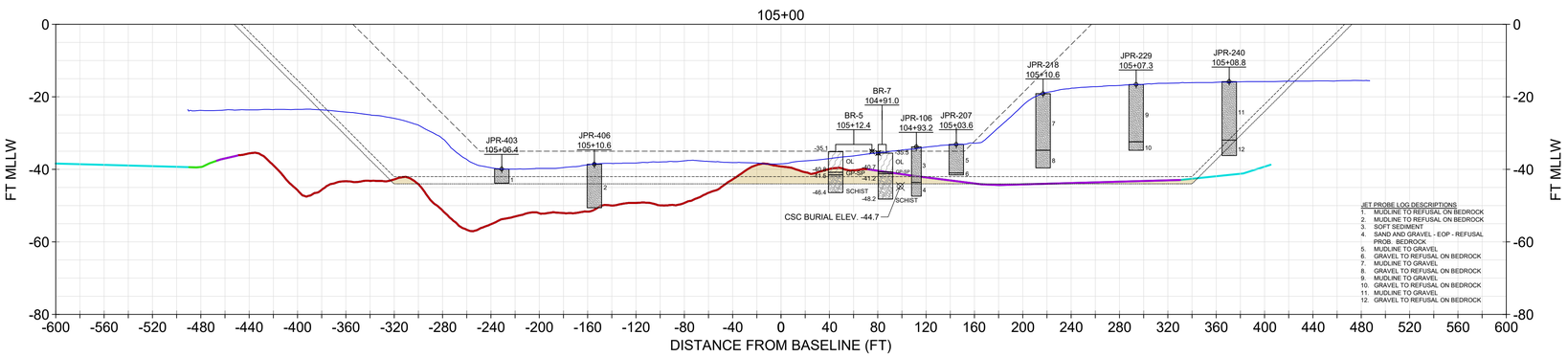
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

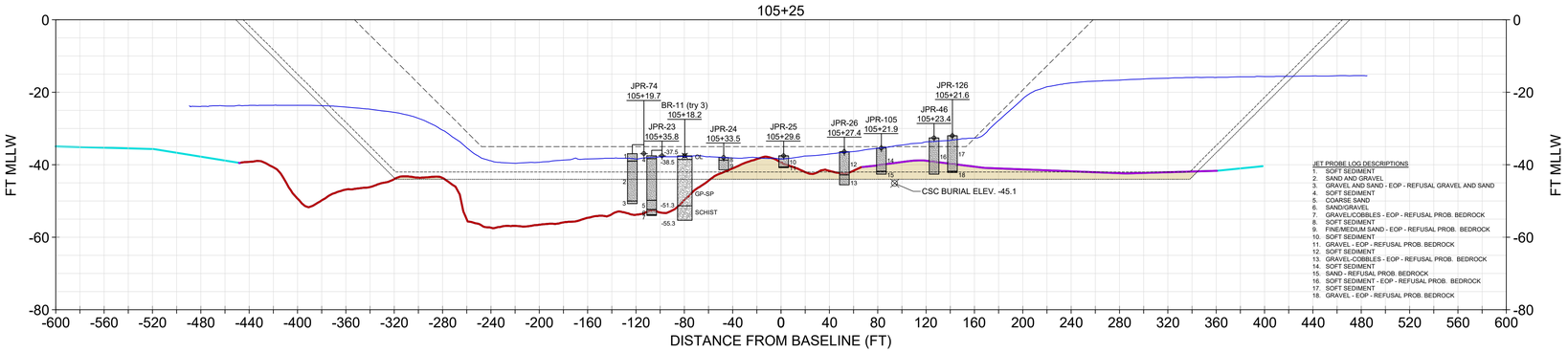
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-073









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
6. BR-## BORINGS WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
7. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
8. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
9. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
BR-17	-46.9	-47.9	ESS	2002
BR-7	-35.5	-48.2	ESS	2002
BR-11 T3	-37.5	-55.3	ESS	2002
BR-5	-35.1	-46.4	ESS	2002

CORE LEGEND

- COBBLE
- OL (ORGANIC SILT AND CLAY)
- GP-SP (POORLY GRADED GRAVEL AND SAND)
- SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 102 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

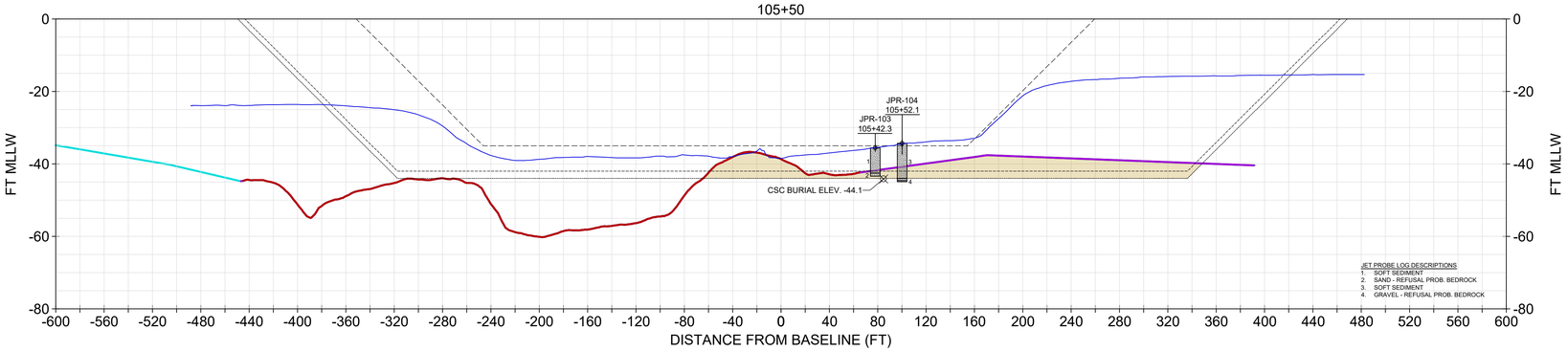
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9009 Yellow Brick Rd.
Suite A
Baltimore, MD 21237
Phone (410) 882-5565

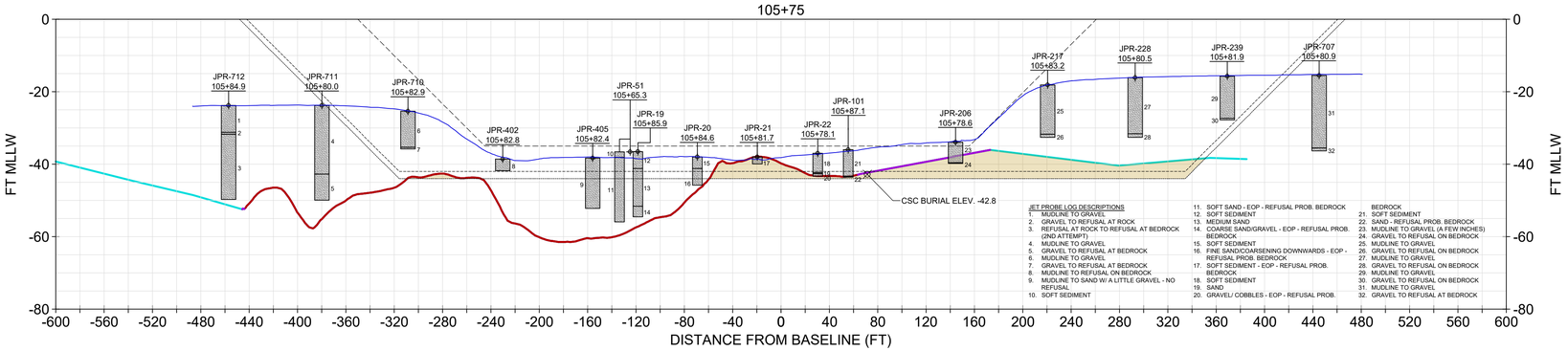
PREPARED FOR: Cross Sound Ferries

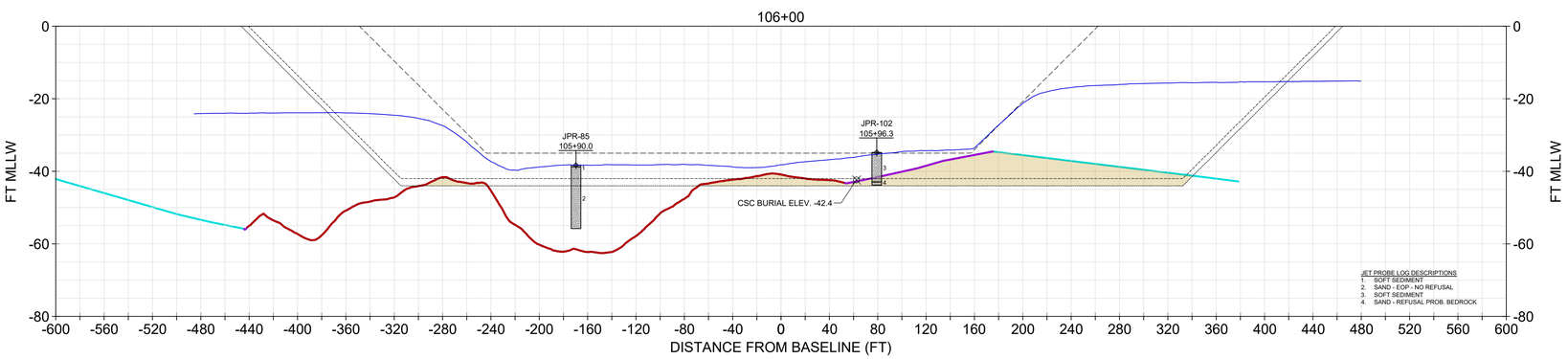
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

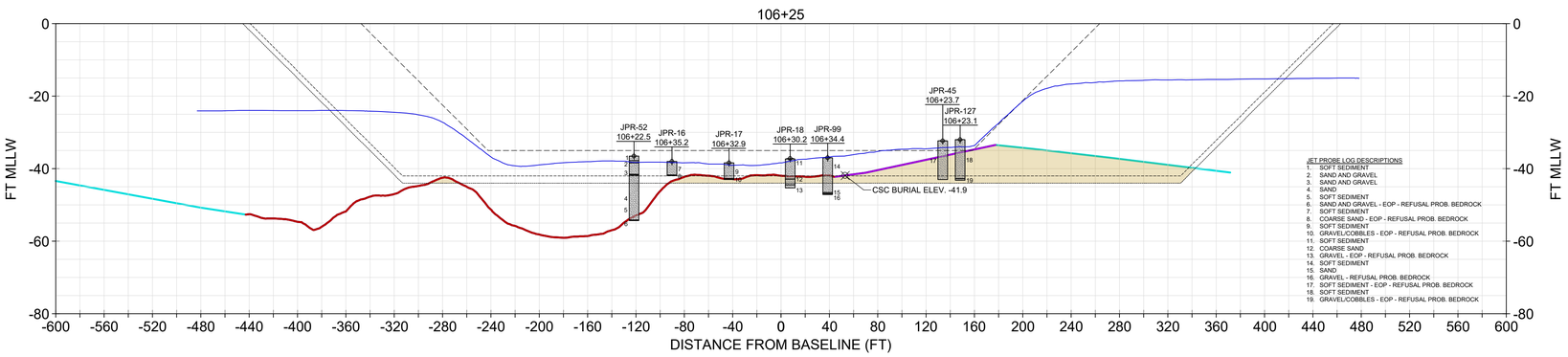
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-074









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
6. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
7. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
8. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWU24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 103 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

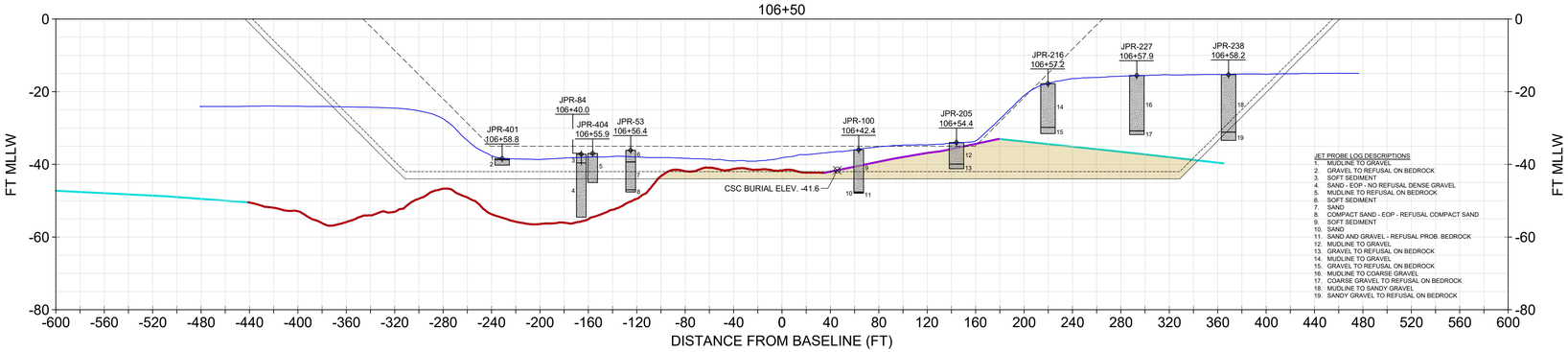
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

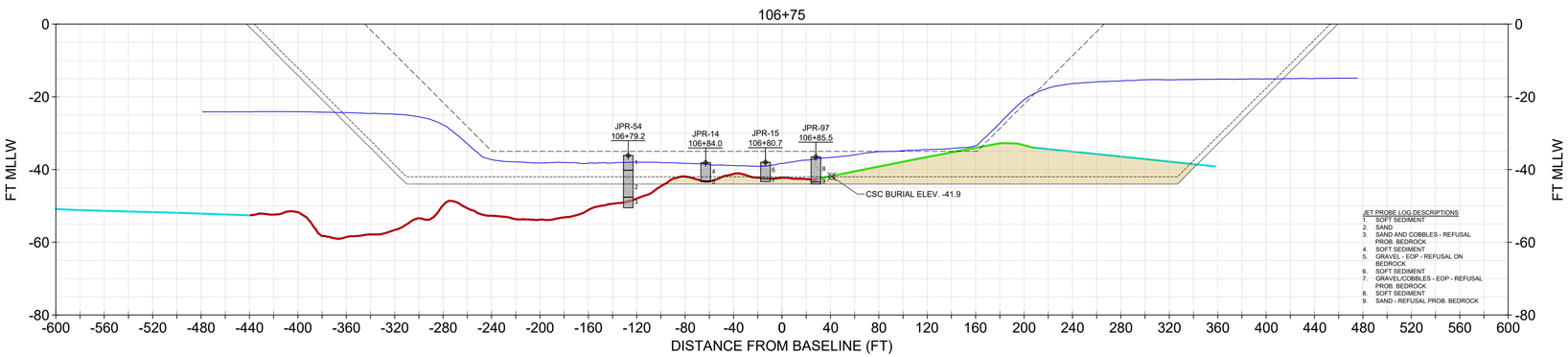
PREPARED FOR: Cross Sound Cable Company, LLC

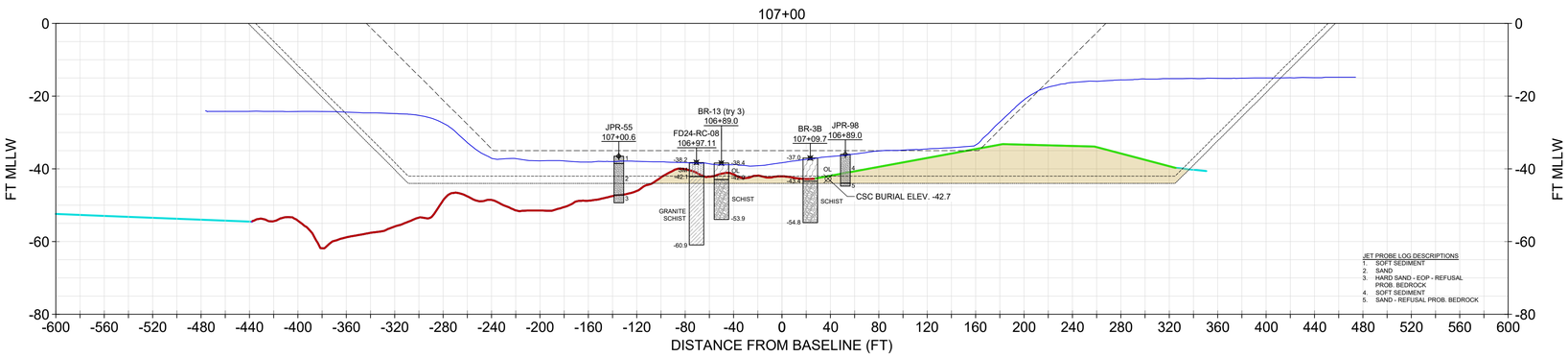
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

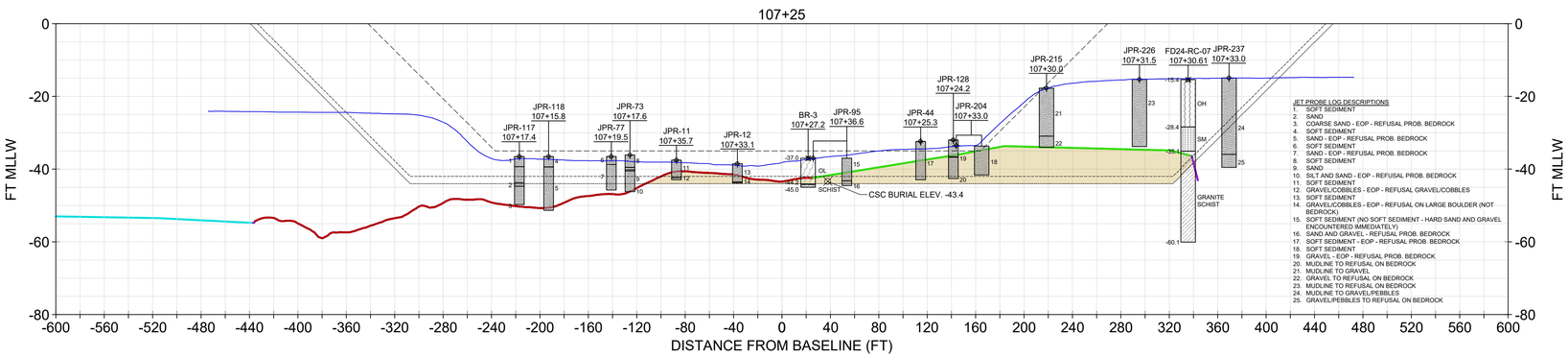
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-075









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. BR-## BORINGS WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
6. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
7. BETWEEN 95+00 AND 107+25, SECTIONS ARE NOT FULLY SHADED DUE TO A GEOLOGIC TRANSITION FROM SURFICIAL MARINE SANDS TO ORGANIC SEDIMENTS, WHERE A GEOLOGIC BOUNDARY CANNOT BE INTERPRETED WITH CONFIDENCE. THERE IS NOT A CLEAR DELINEATION BETWEEN ORGANIC AND MARINE SEDIMENTS.
8. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
9. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
BR-13 T3/4	-38.4	-53.9	ESS	2002
BR-3B	-37.0	-54.8	ESS	2002
BR-3	-37.0	-45.0	ESS	2002

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-07	-15.4	-60.1	GBA	8/22/2024
FD24-RC-08	-38.2	-60.9	GBA	8/15/2024

CORE LEGEND

- OL (ORGANIC SILT AND CLAY)
- OH (ORGANIC SILT AND CLAY
- SCHIST
- GRANITE SCHIST
- SM (SILTY SAND)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWU24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 104 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

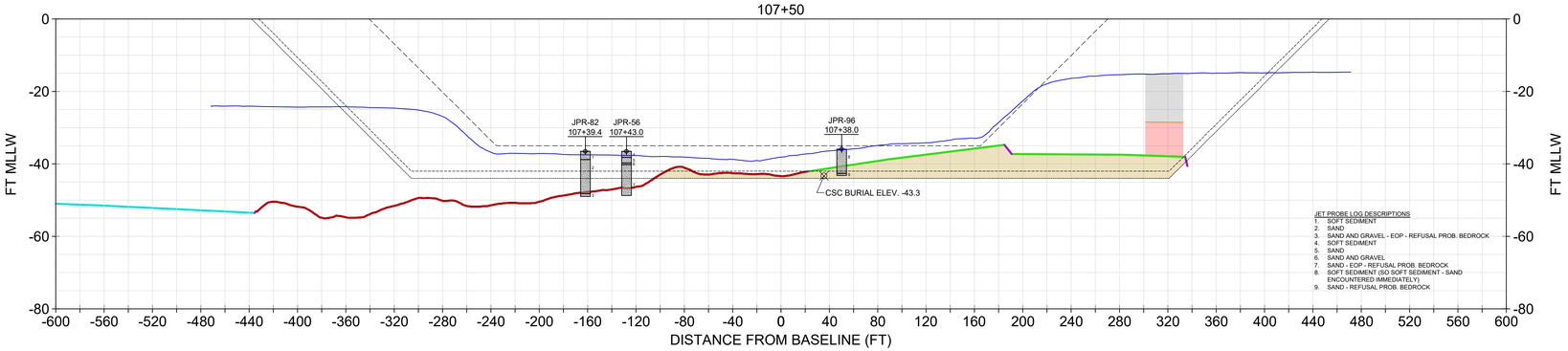
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Suite B Baltimore, MD 21237 Phone (410) 882-9565

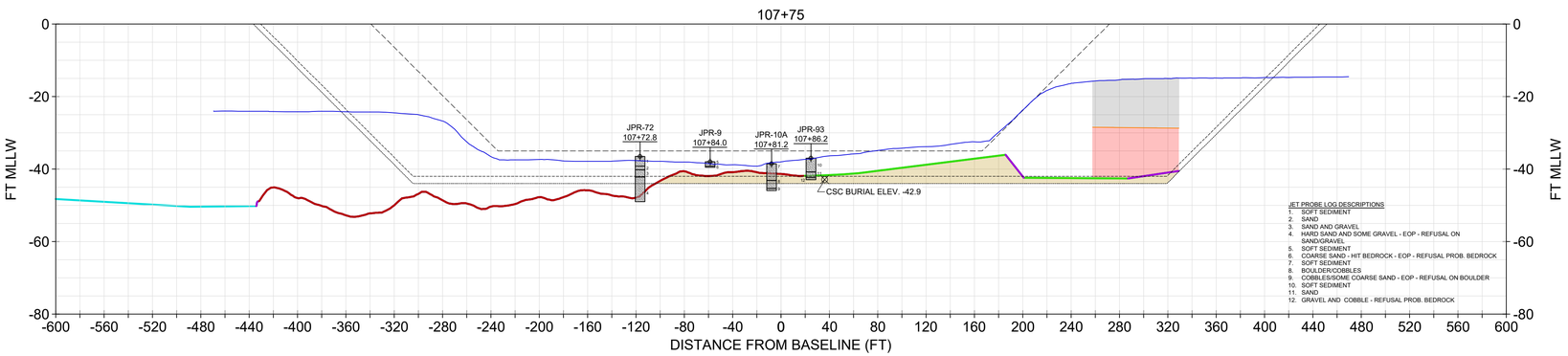
PREPARED FOR: Cross Sound Ferry Services, Inc.

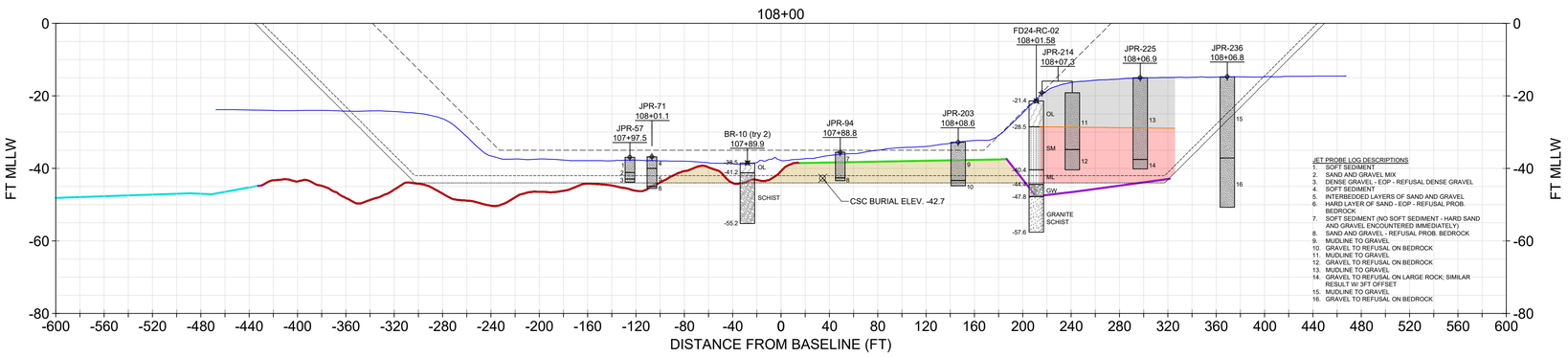
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

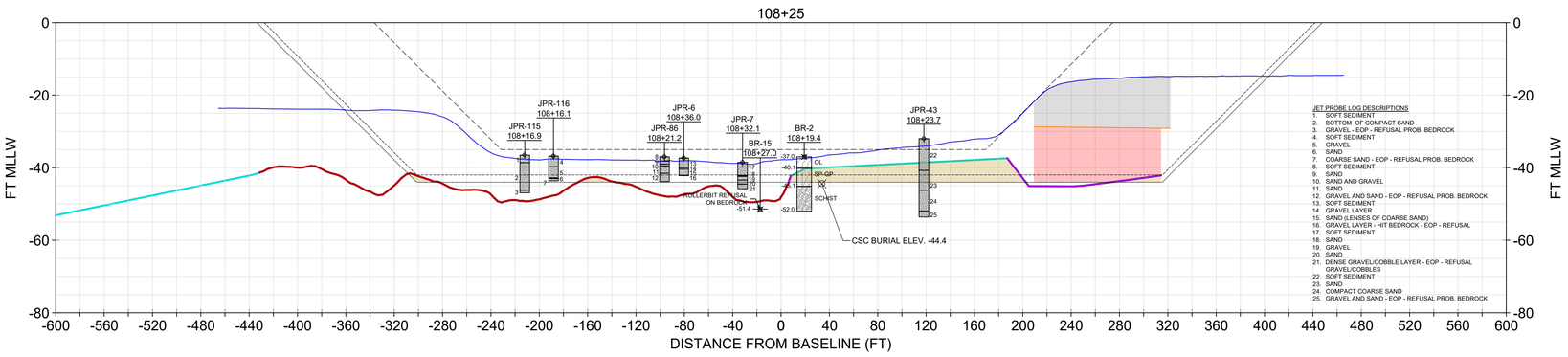
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-076









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
6. BR-## BORINGS WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
7. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
8. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
BR-10 T2	-38.5	-55.2	ESS	2002
BR-2	-37.0	-52.0	ESS	2002
BR-15	-51.4	0.0	ESS	2002

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-02	-21.4	-57.6	GBA	7/21/2024

CORE LEGEND

- OL (ORGANIC SILT AND CLAY)
- SM (SILTY SAND)
- ML (SILT)
- GW (WELL GRADED GRAVEL)
- GRANITE SCHIST
- SP-GP (POORLY GRADED SAND WITH
- SCHIST

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 105 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

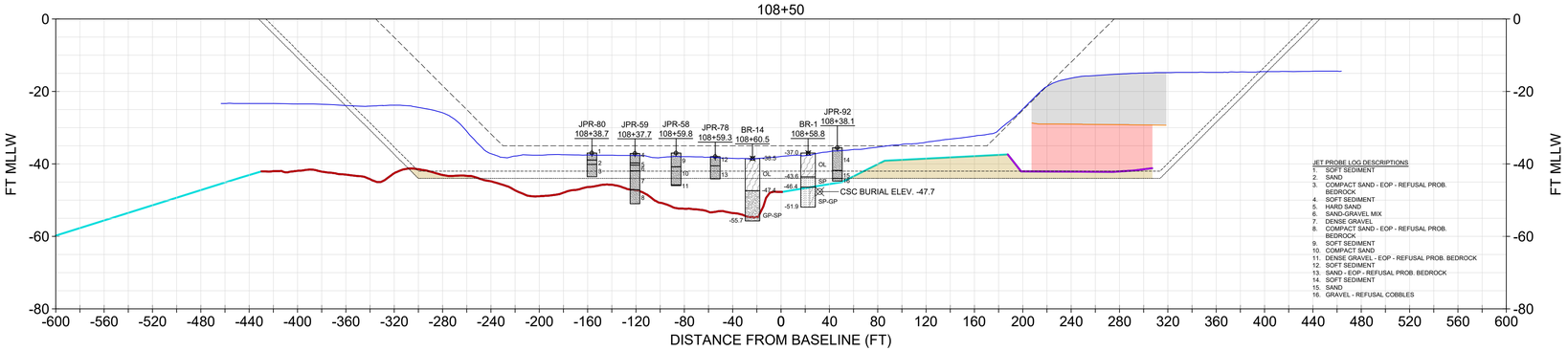
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9009 Yellow Brick Rd. Suite B Baltimore, MD 21237 Phone (410) 882-5565

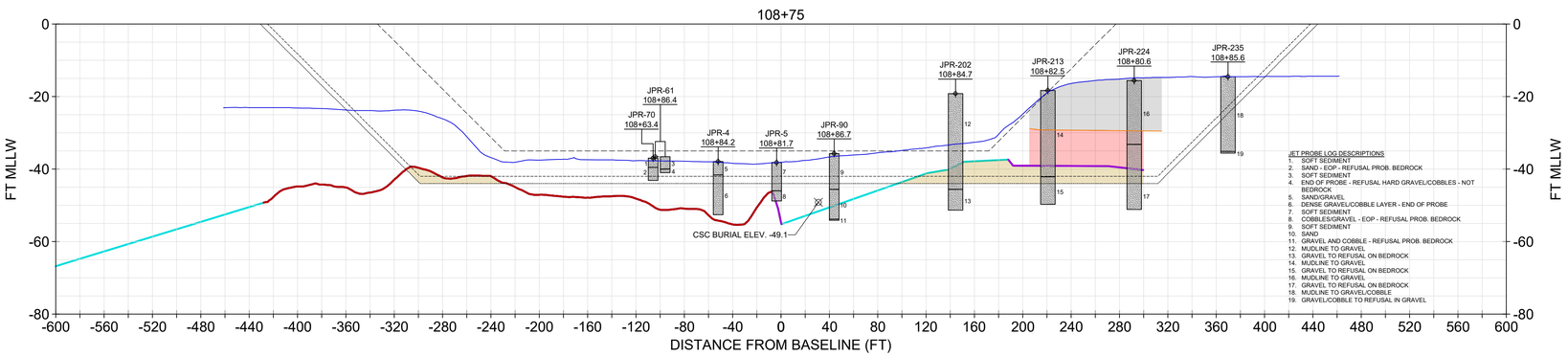
PREPARED FOR: Cross Sound Ferries Connecticut's Ferry Partner

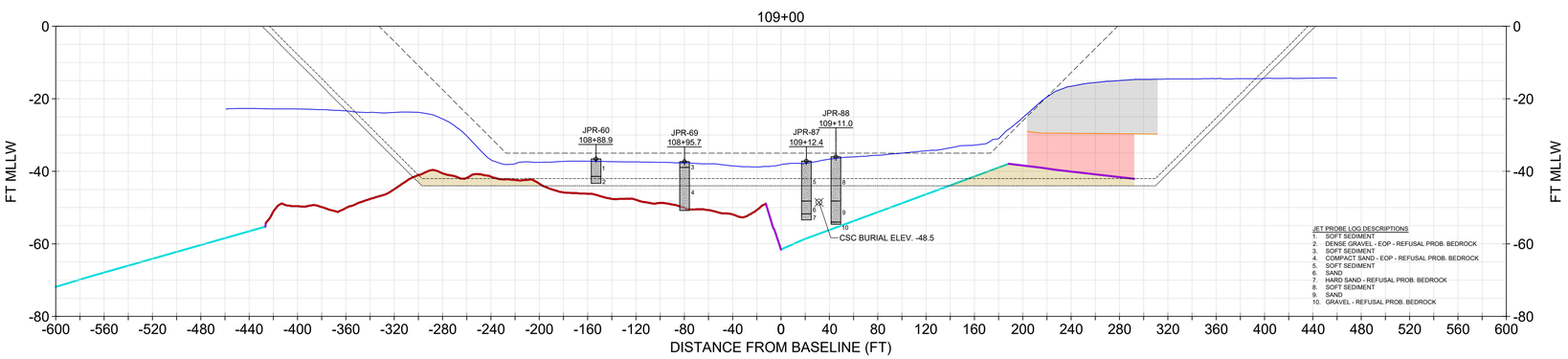
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

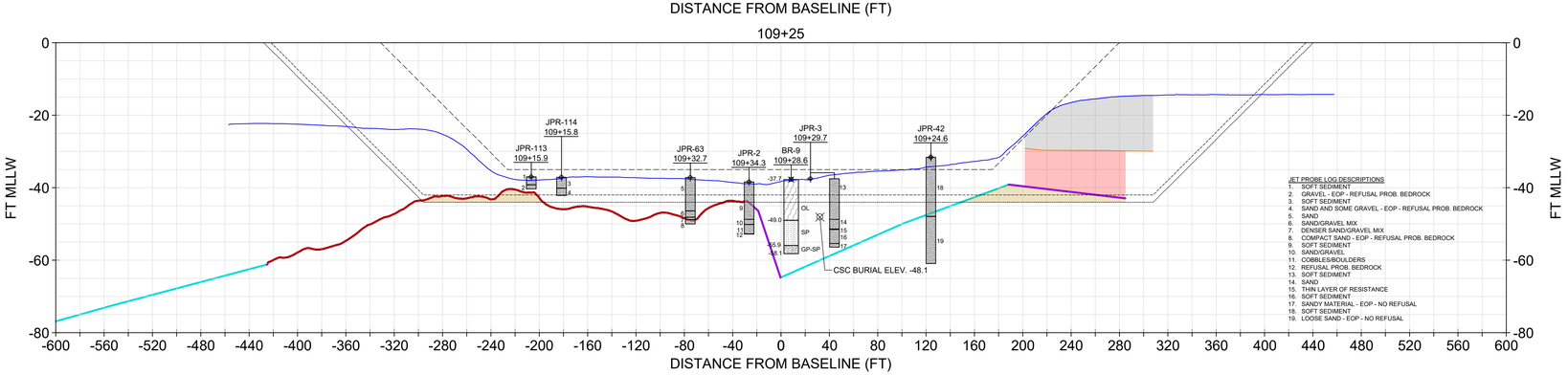
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-077









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
6. BR-## BORINGS WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
7. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
8. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
BR-1	-37.0	-51.9	ESS	2002
BR-14	-38.5	-55.7	ESS	2002
BR-9	-37.7	-58.1	ESS	2002

CORE LEGEND

- OL (ORGANIC SILT AND CLAY)
- SP (POORLY GRADED SAND)
- SP-GP (POORLY GRADED SAND WITH GRAVEL)
- GP-SP (POORLY GRADED GRAVEL AND SAND)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 106 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN

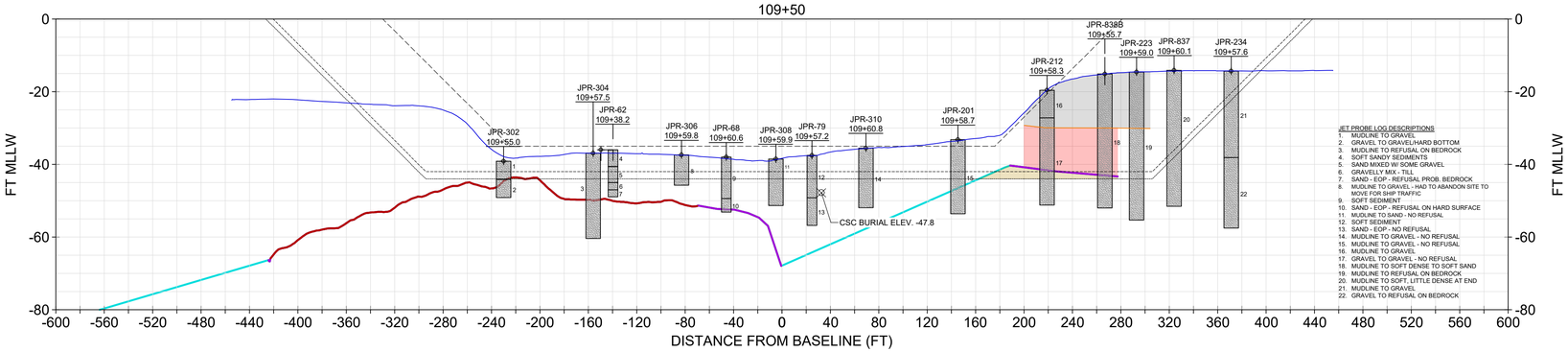
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Suite B Baltimore, MD 21237 Phone (410) 882-5565

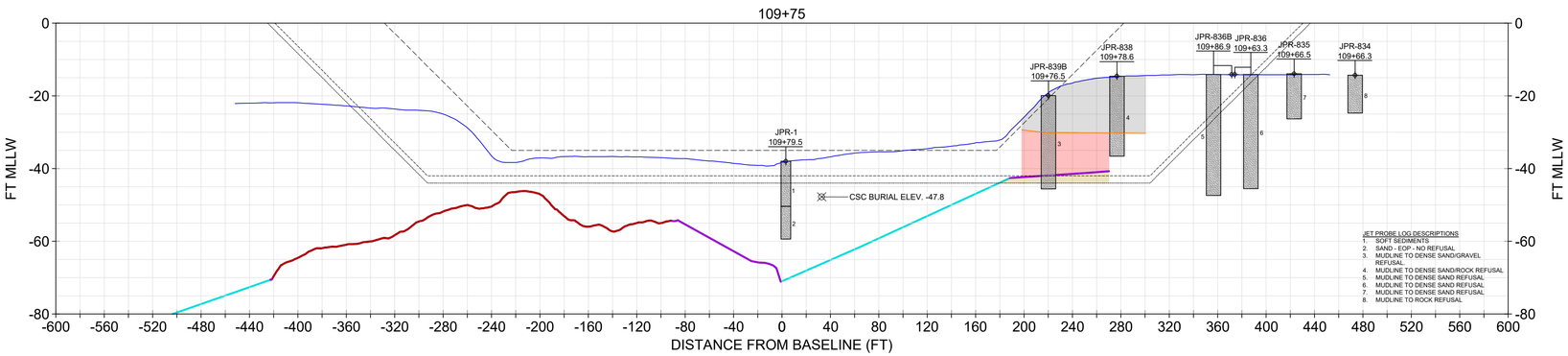
PREPARED FOR: Cross Sound Ferries

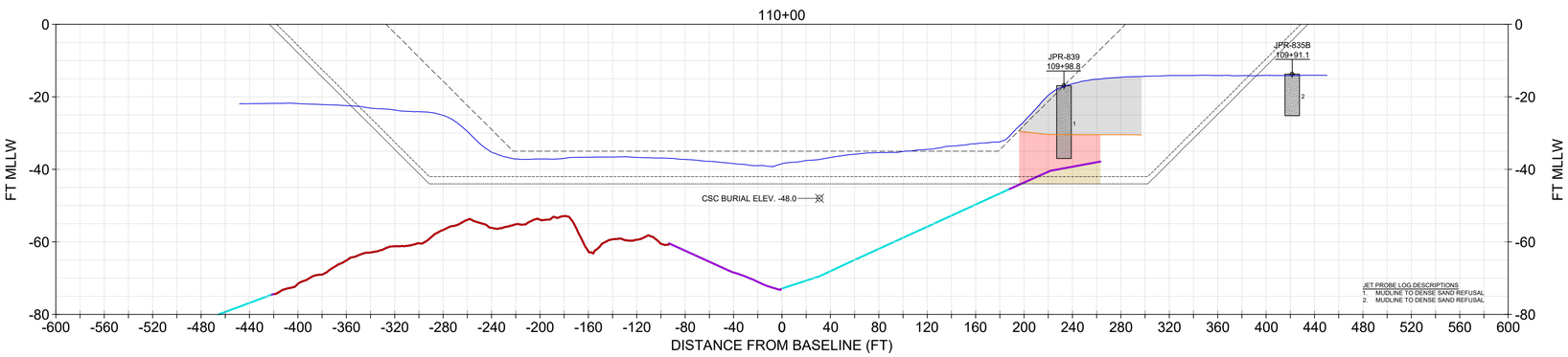
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

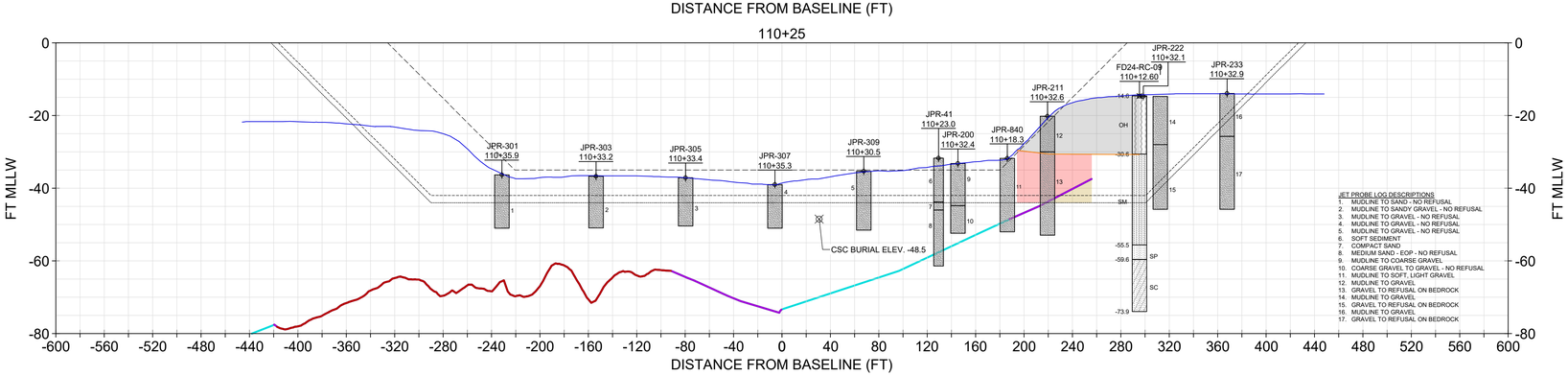
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-078









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 1 THROUGH 128 WERE COLLECTED IN 2002 BY ESS AND OSI FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE OCTOBER 2002 REPORT “AREA 6/7 GEOTECHNICAL INVESTIGATION” IN APPENDIX J.
5. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
6. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
7. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-RC-09	-14.6	-73.9	GBA	8/30/2024

CORE LEGEND

- OH (ORGANIC SILT AND CLAY)
- SM (SILTY SAND)
- SP (POORLY GRADED SAND)
- SC (CLAYEY SAND)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 107 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

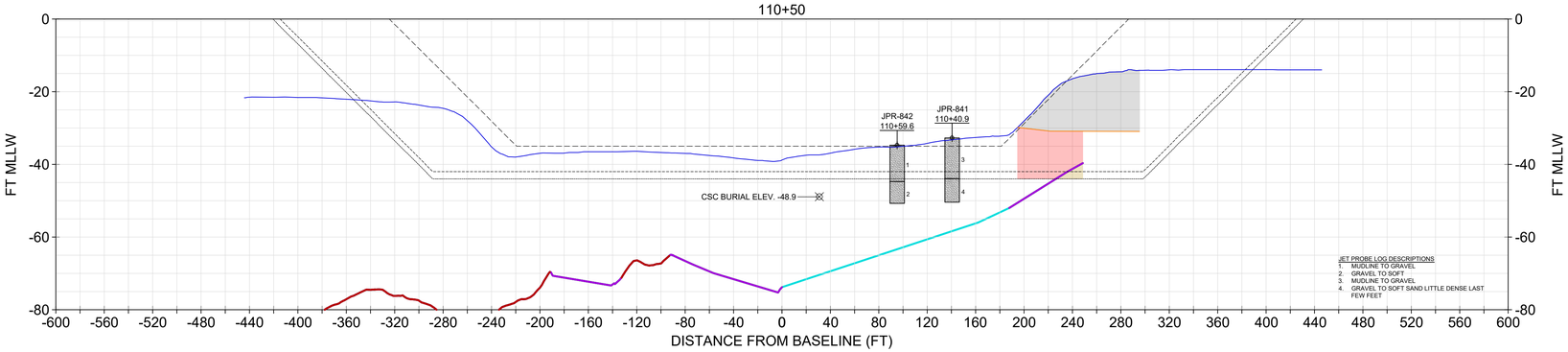
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit B Baltimore, MD 21237 Phone (410) 882-5565

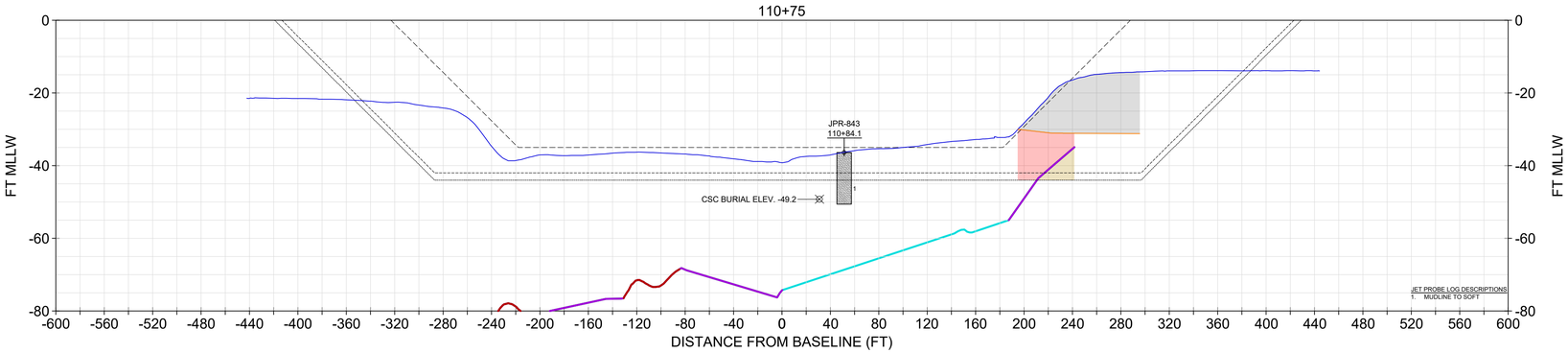
PREPARED FOR: Cross Sound Ferries

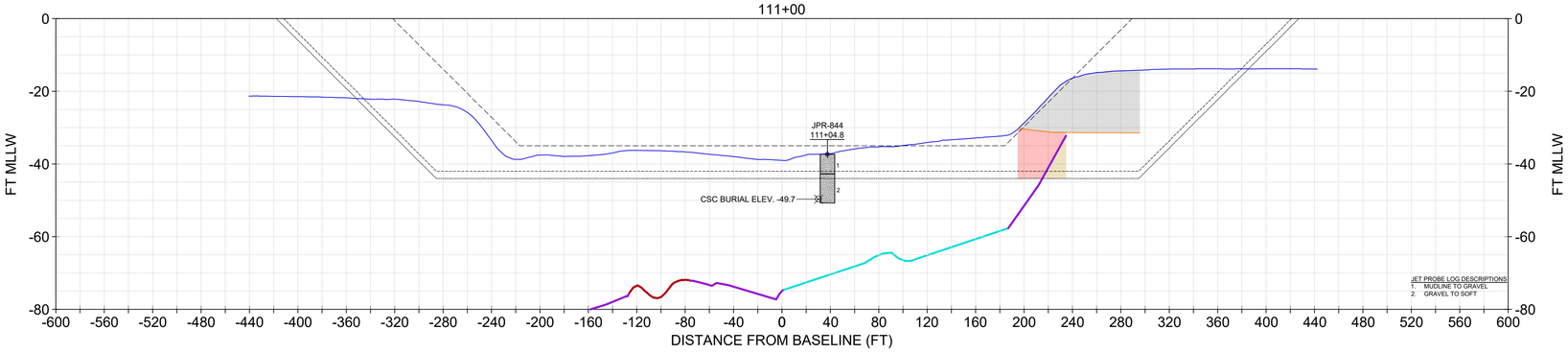
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

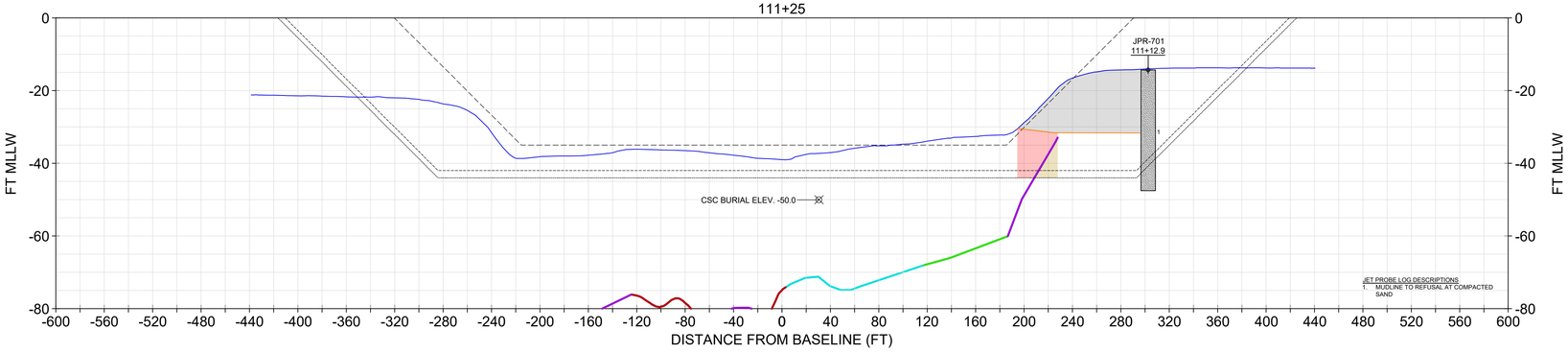
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-079









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
5. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
6. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 108 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

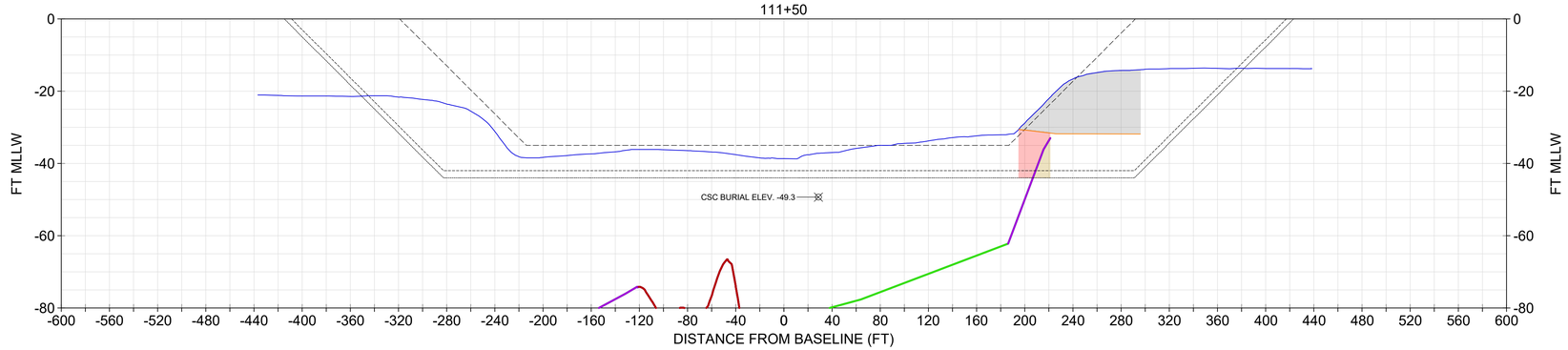
PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9008 Yellow Brick Rd. Unit B, Baltimore, MD 21237, Phone (410) 882-5565

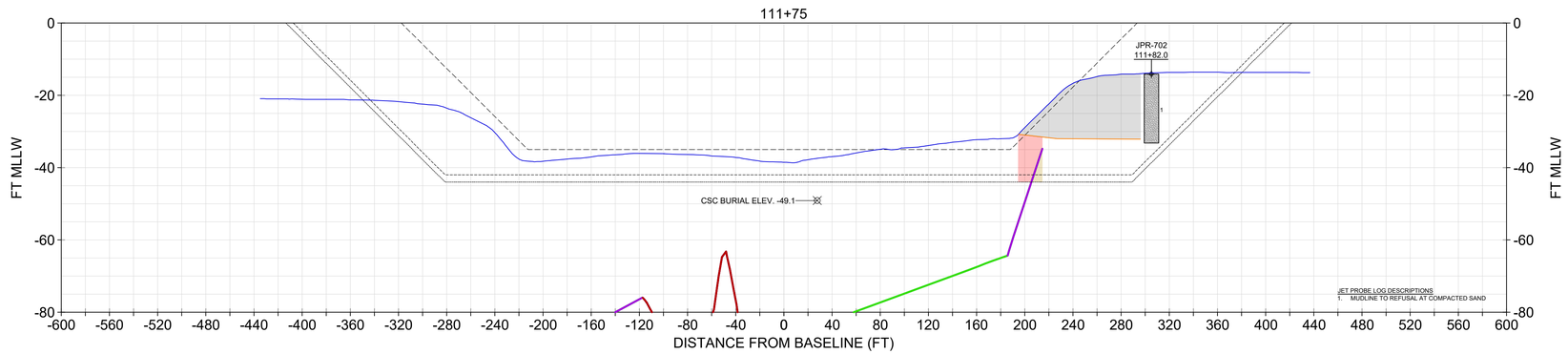
PREPARED FOR: Cross Sound Cable Company

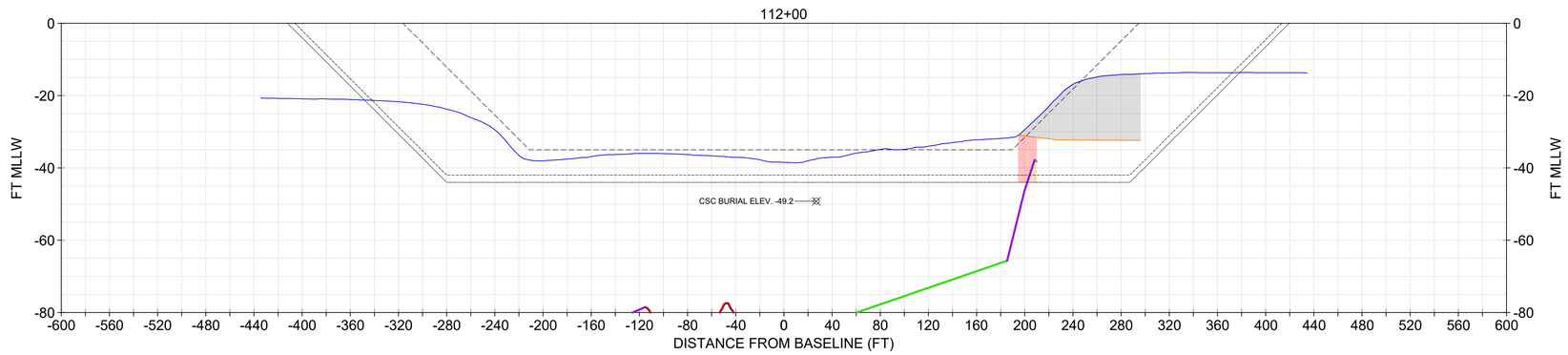
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

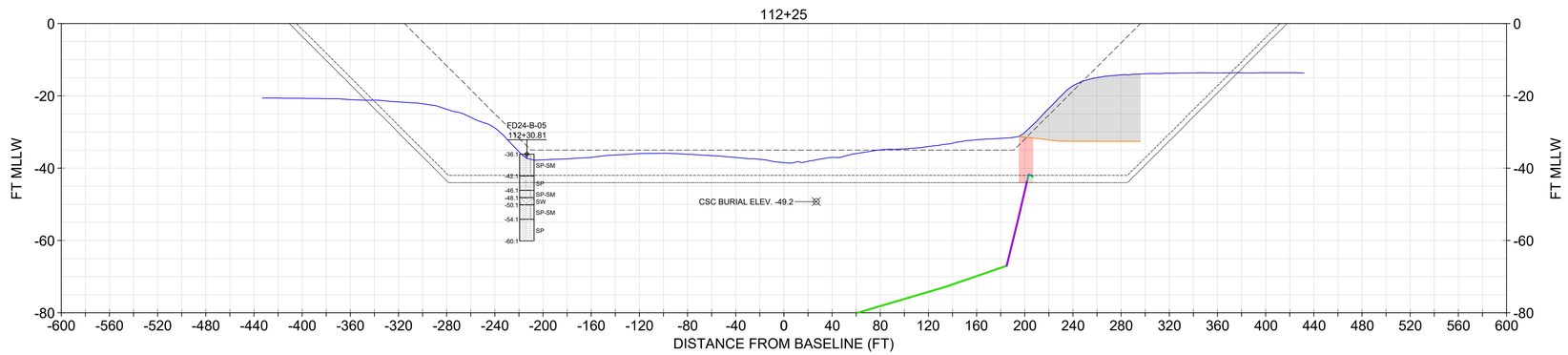
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-080









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
5. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
6. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-05	-36.1	-60.1	GBA	7/24/2024

CORE LEGEND

- SP (POORLY GRADED SAND)
- SP-SM (POORLY GRADED SAND WITH SILT)
- SW (WELL GRADED SAND)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- TOP OF ROCK (3D DATA POINTS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT
- ROCK MATERIAL

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 109 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

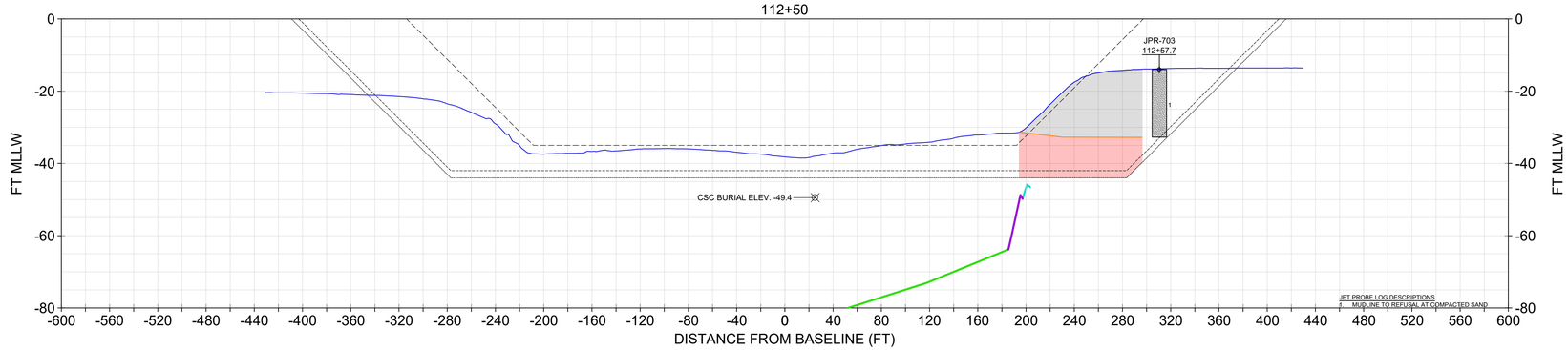
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

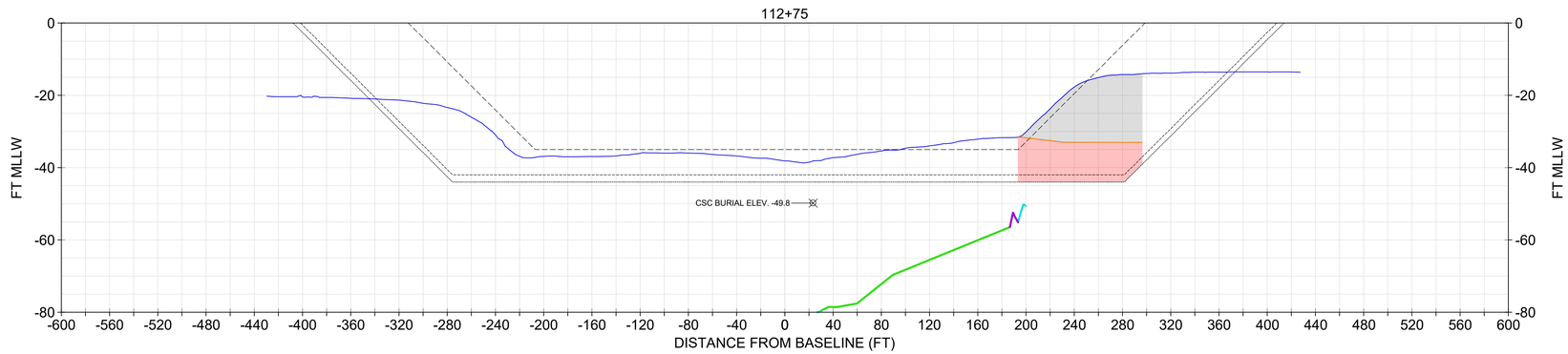
PREPARED FOR: Cross Sound Ferries Connecticut's Ferry

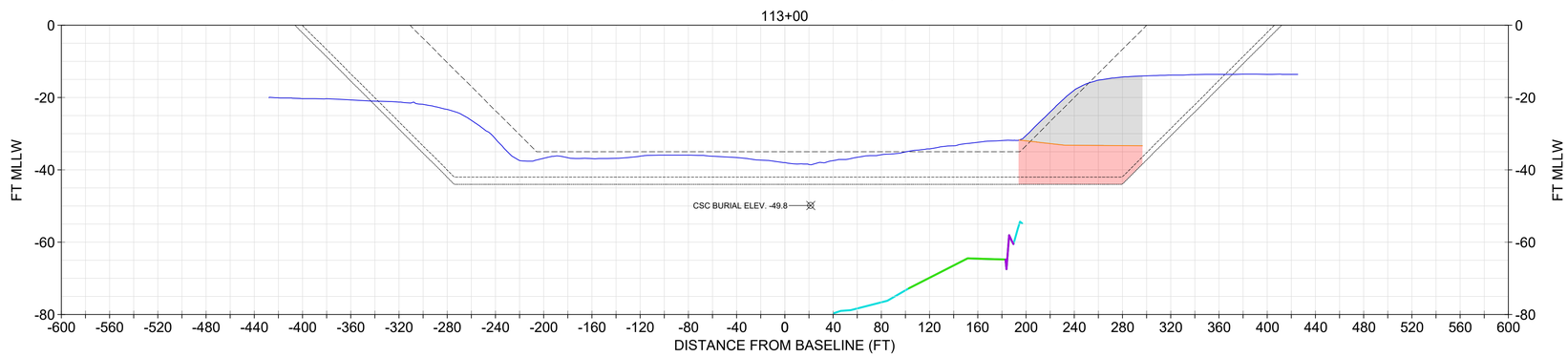
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

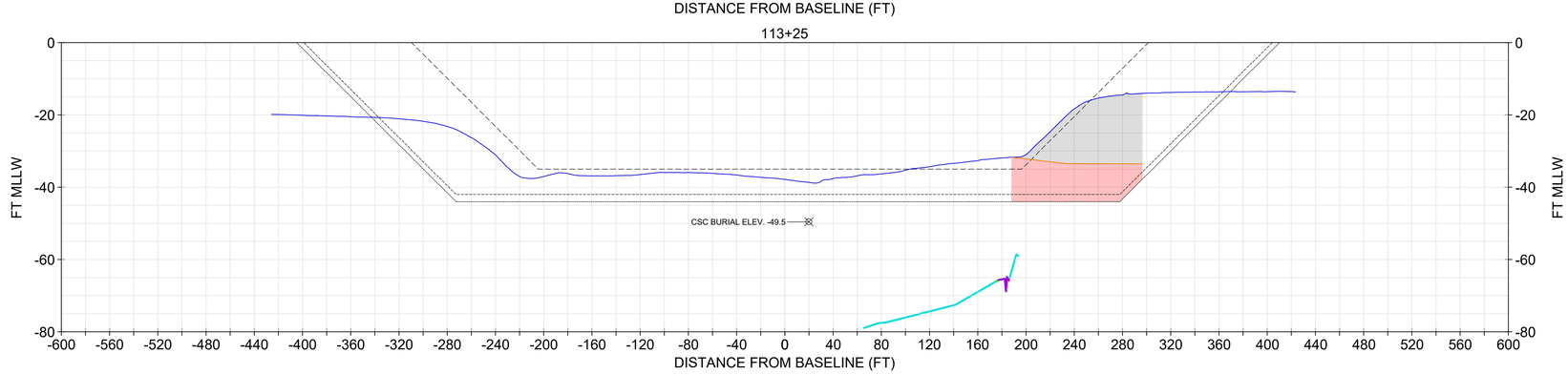
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-081









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN AREAS OF ROCK (REF. ER 1130-2-520, NOV 1996) THE DESIGN INCLUDES A REQUIRED DEPTH (40), REQUIRED OVERDEPTH (42), AND ALLOWABLE OVERDEPTH (44). IN NON-ROCK AREAS, THE DESIGN TEMPLATE INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. JET PROBES (JPR) 200 THROUGH 686 WERE COLLECTED IN 2024 BY TRC FOR CROSS SOUND CABLE COMPANY. NOT SURVEYED OR VERIFIED BY GBA. SEE LOGS PROVIDED TO GBA BY TRC AT REQUEST OF USACE IN APPENDIX I.
5. THESE SECTIONS ARE TO BE USED ONLY FOR DREDGING PLANNING/DESIGN. SEE SECTION 7.1 AND APPENDIX D OF THE GBA INTEGRATED REPORT (JAN 2025).
6. THESE SECTIONS PRESENT ONE EXAMPLE TOP OF ROCK SURFACE. THE TOP OF ROCK SURFACE IS DERIVED FROM A COMBINATION OF 3D SEISMIC REFLECTION, 2D SEISMIC REFLECTION, SEISMIC REFRACTION, AND GEOTECHNICAL CORE RESULTS. ELEVATIONS ARE MOST ACCURATE ALONG TRACK LINES OF ACQUIRED DATA, AND LEAST ACCURATE WHERE INTERPOLATED BETWEEN ACQUISITION LINES.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- -44: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 150 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 175 FT OR LESS)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: 1
SHEET 110 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN

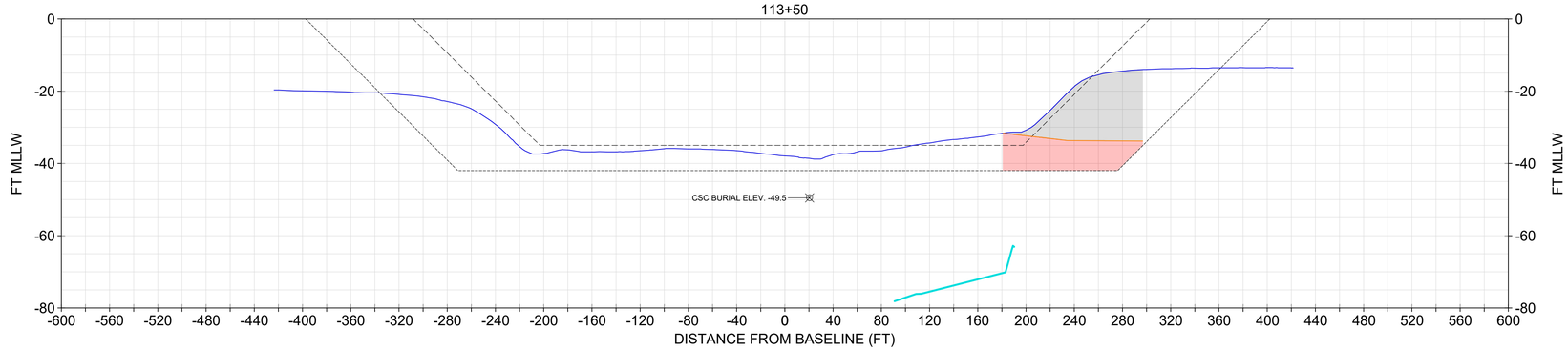
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5956

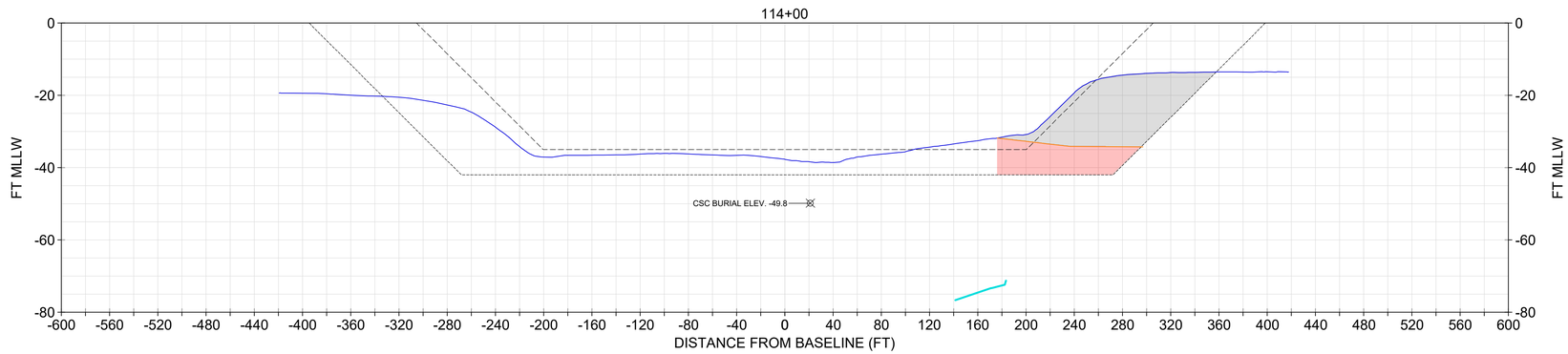
PREPARED FOR: Coastal Partners

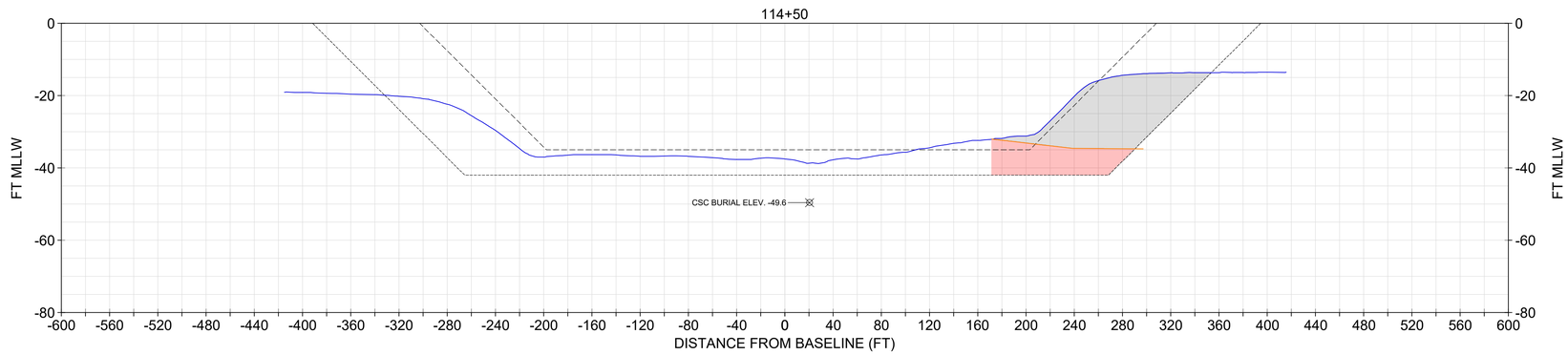
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

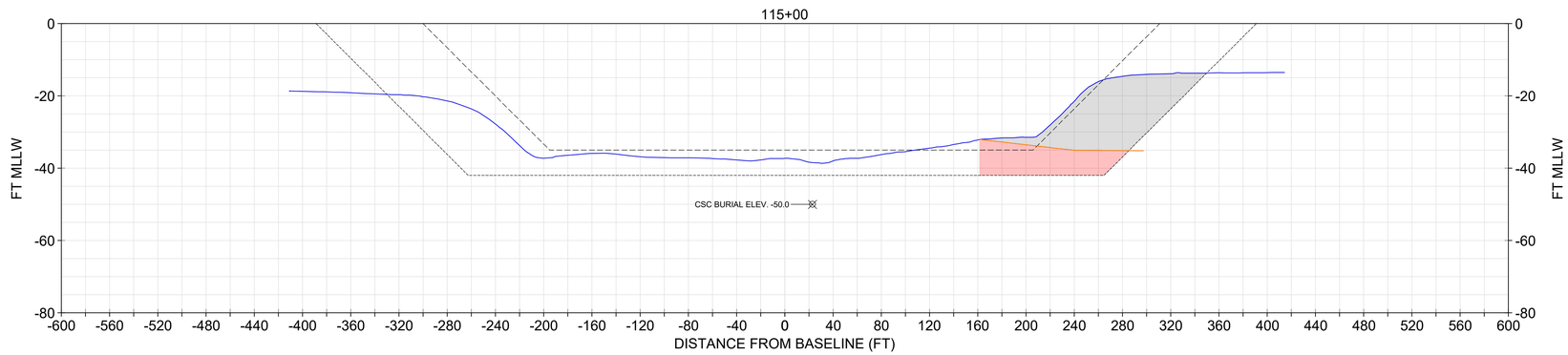
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-082









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- TOP OF ROCK (DATA POINTS SPACED 250 FT OR LESS)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 104 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

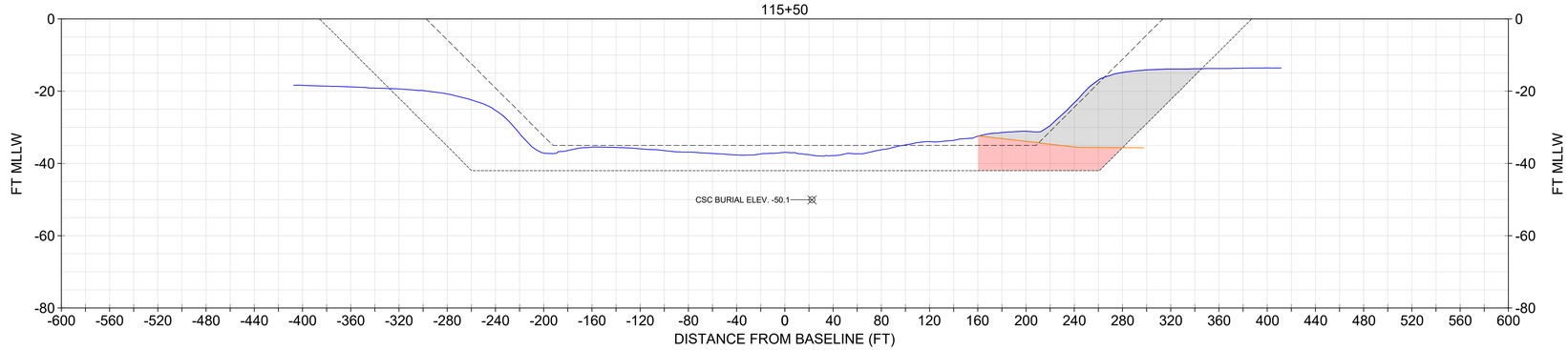
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

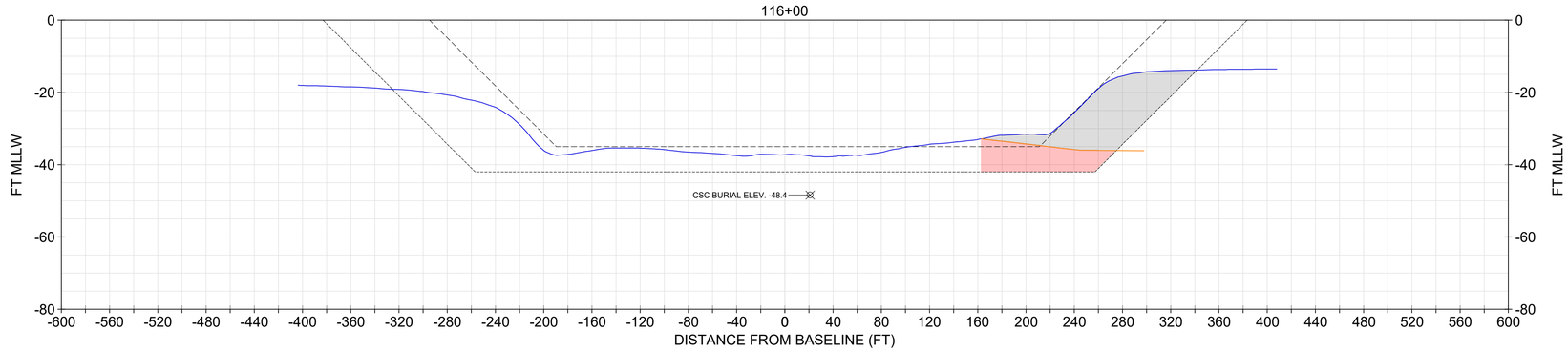
PREPARED FOR: Coastal Partners

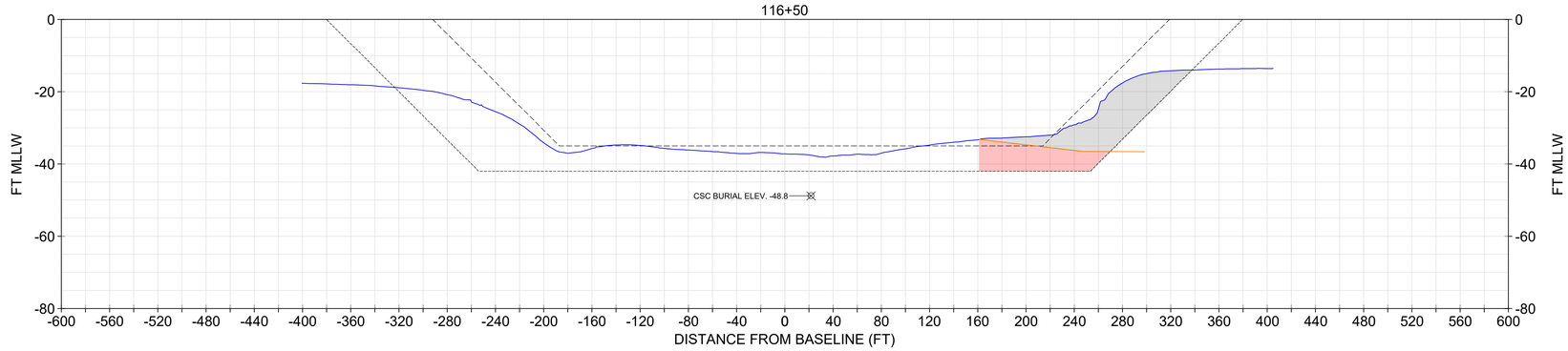
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

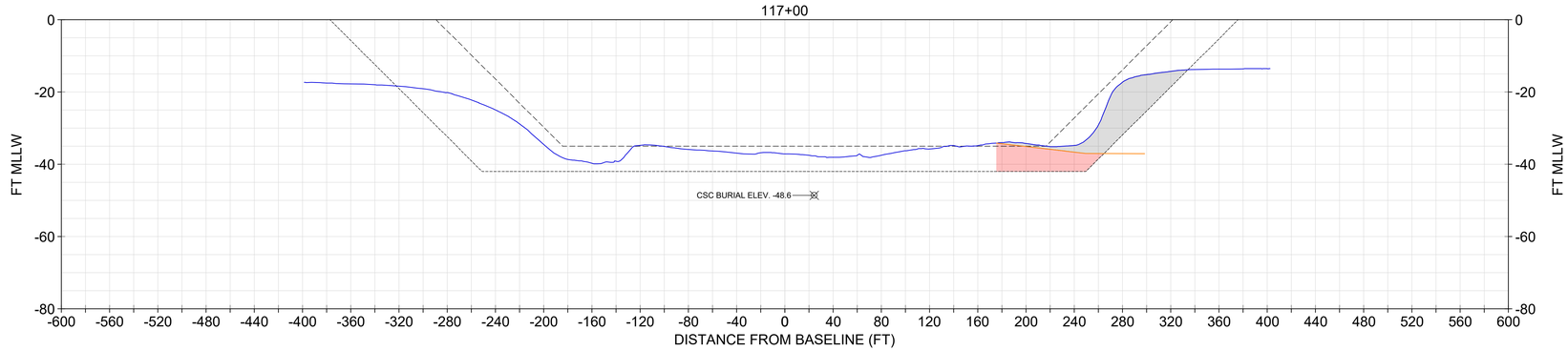
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-083









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 105 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

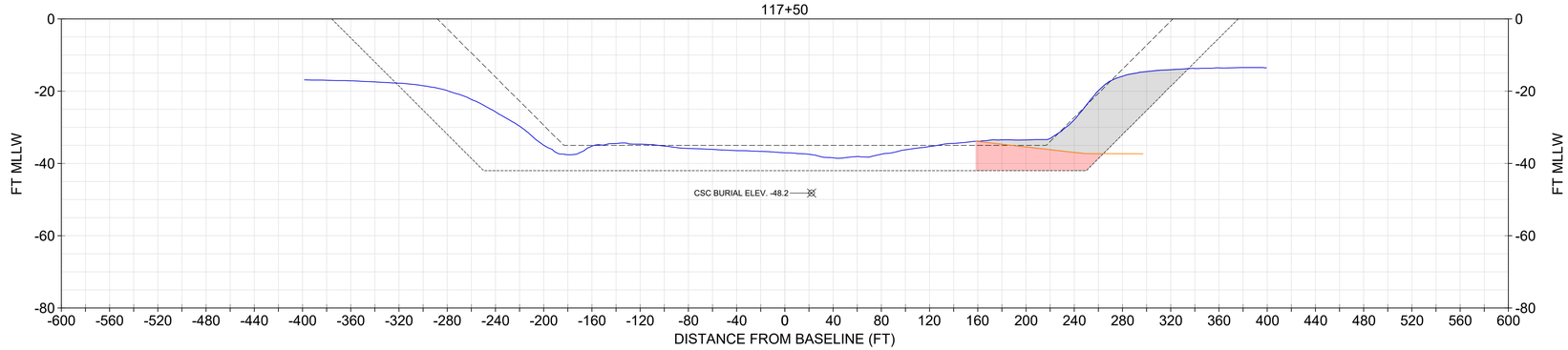
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

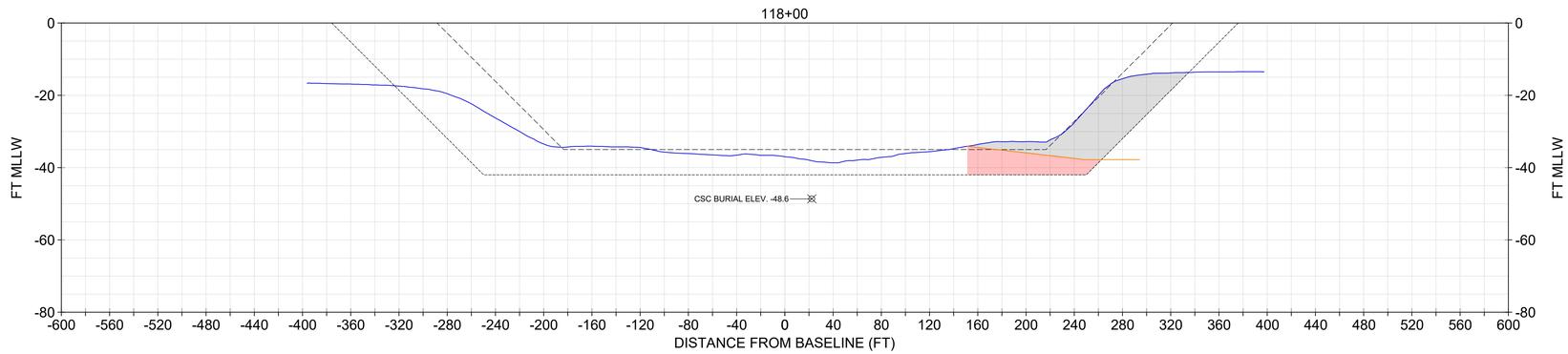
PREPARED FOR: Coastal Partners

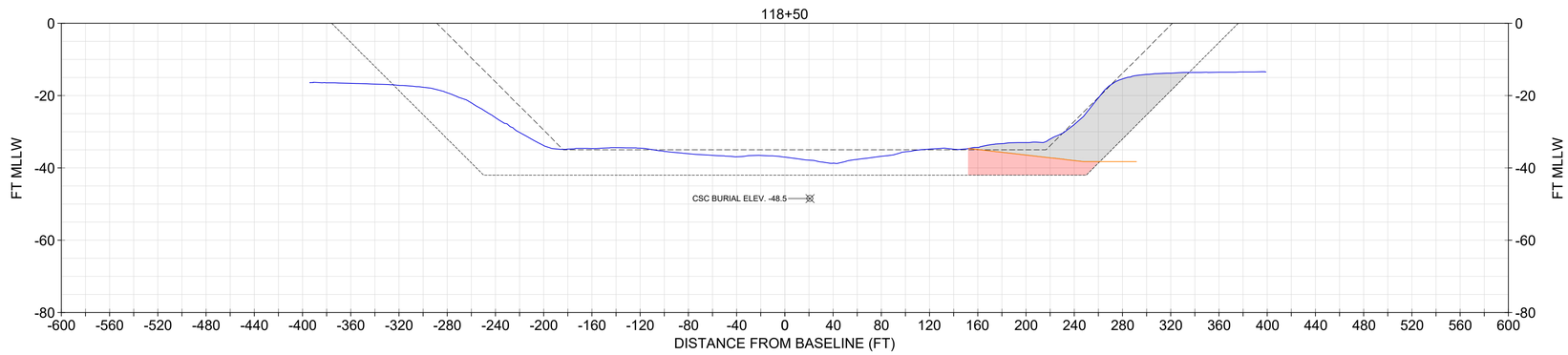
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

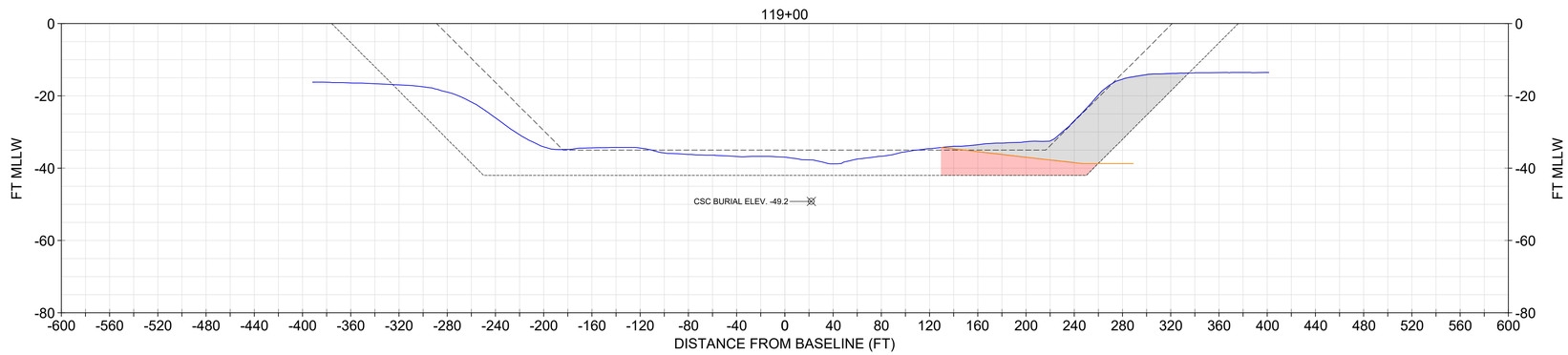
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-084









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE:
SHEET 106 OF 220
SCALE: AS SHOWN

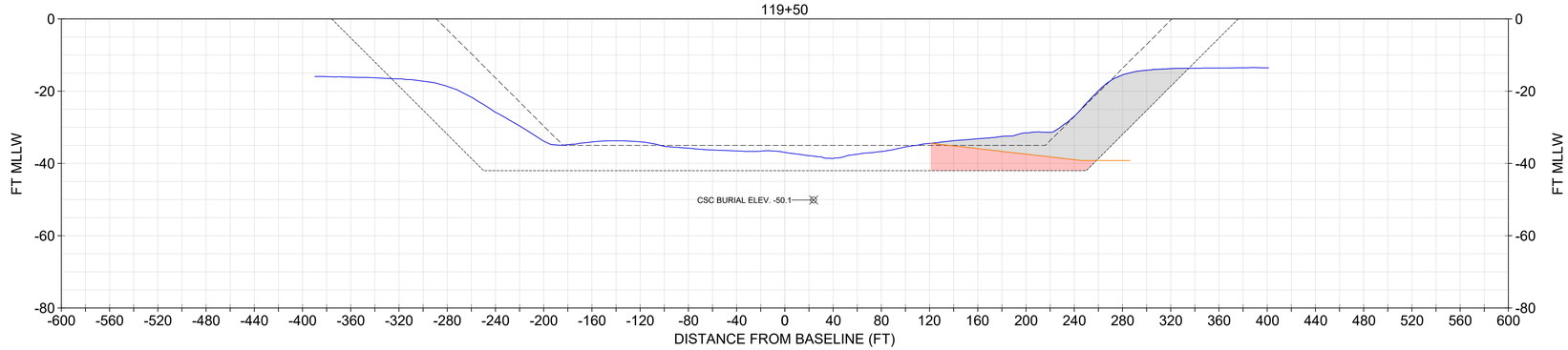
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5956

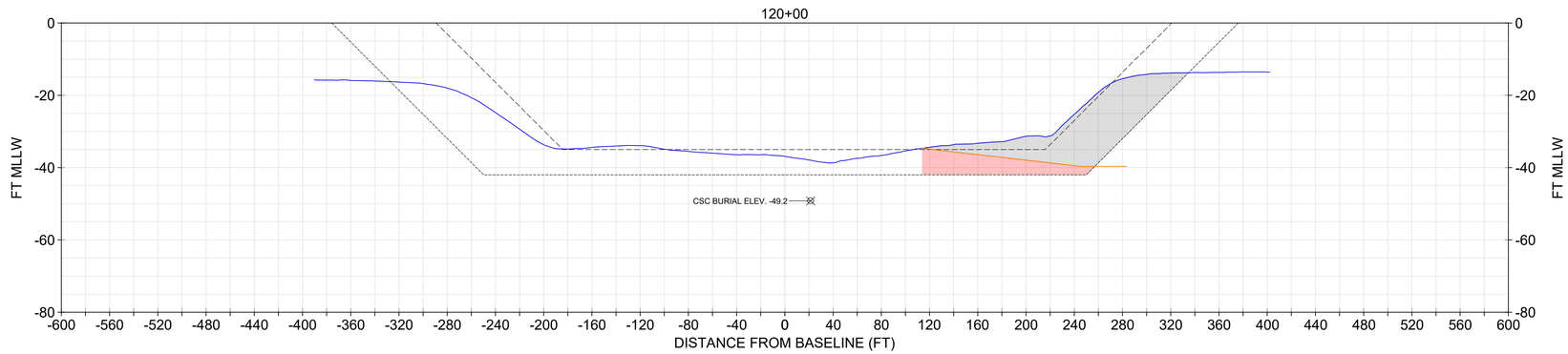
PREPARED FOR: Coastal Partners

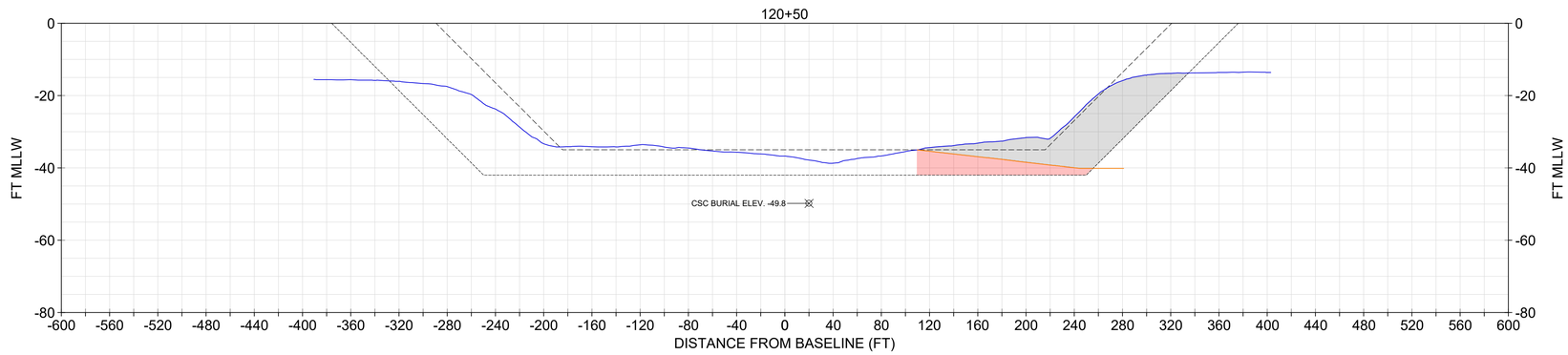
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

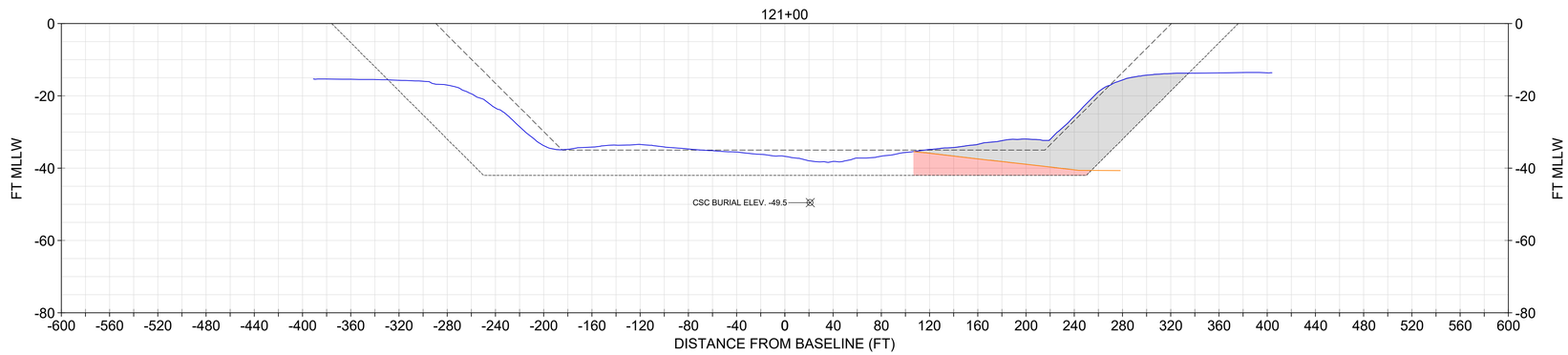
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-085









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 107 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

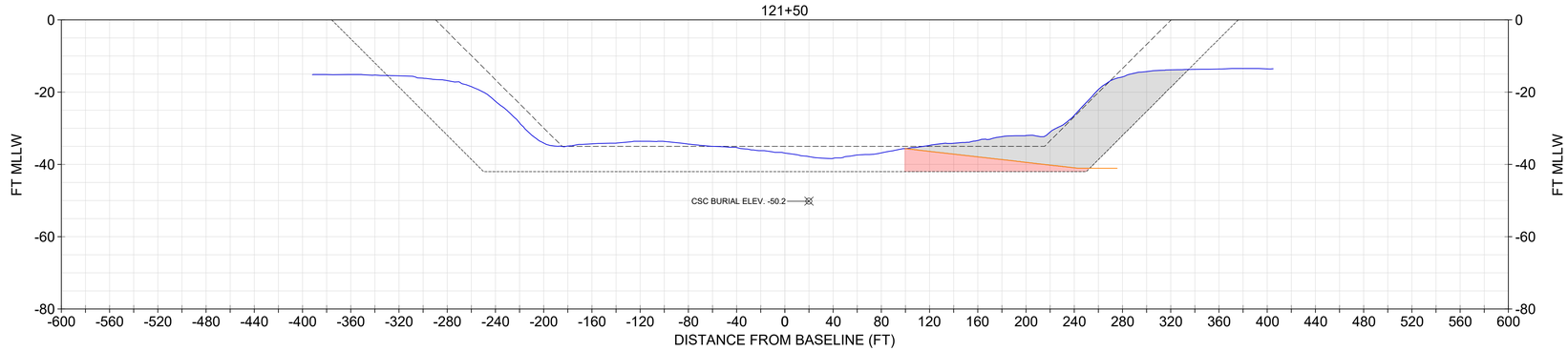
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5956

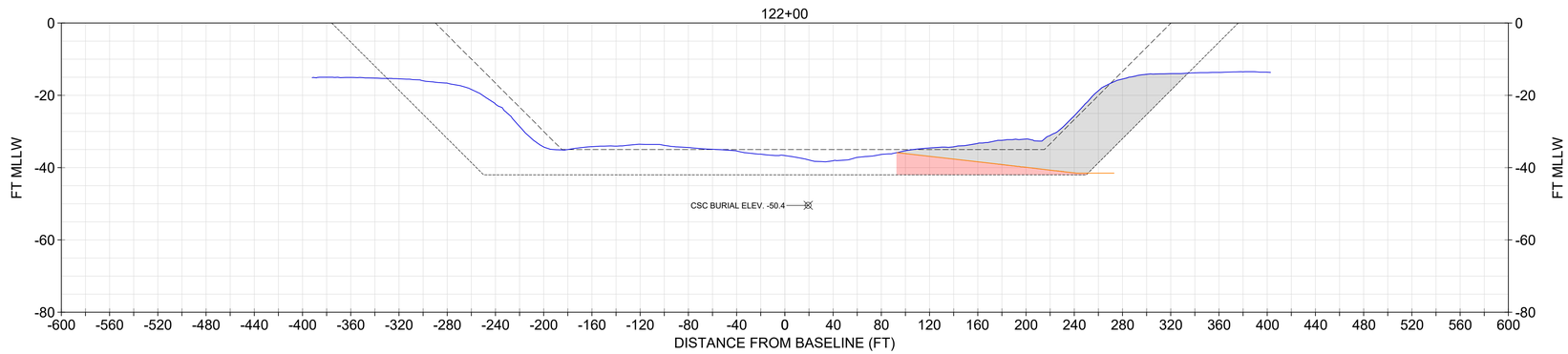
PREPARED FOR: Coastal Partners

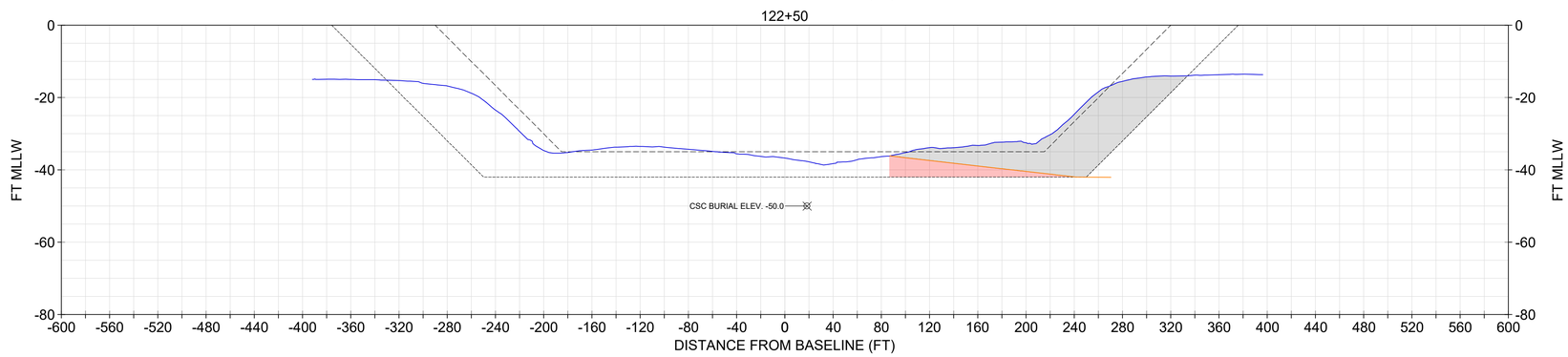
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

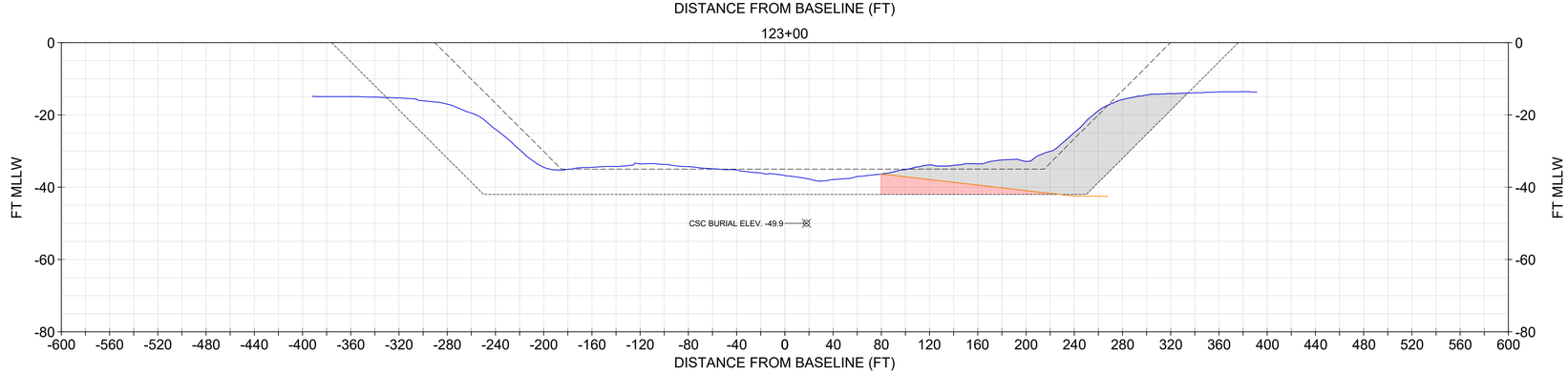
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-086









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 108 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

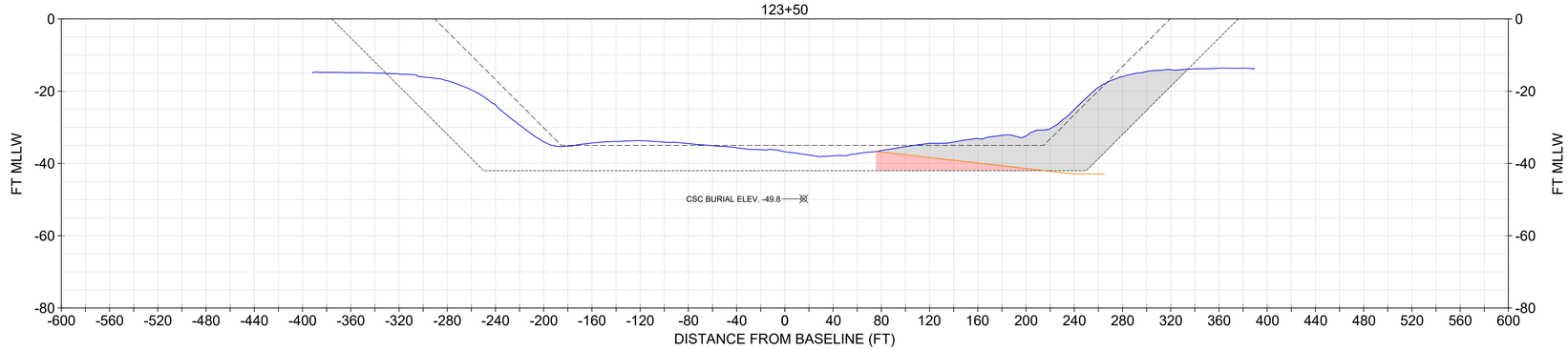
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5595

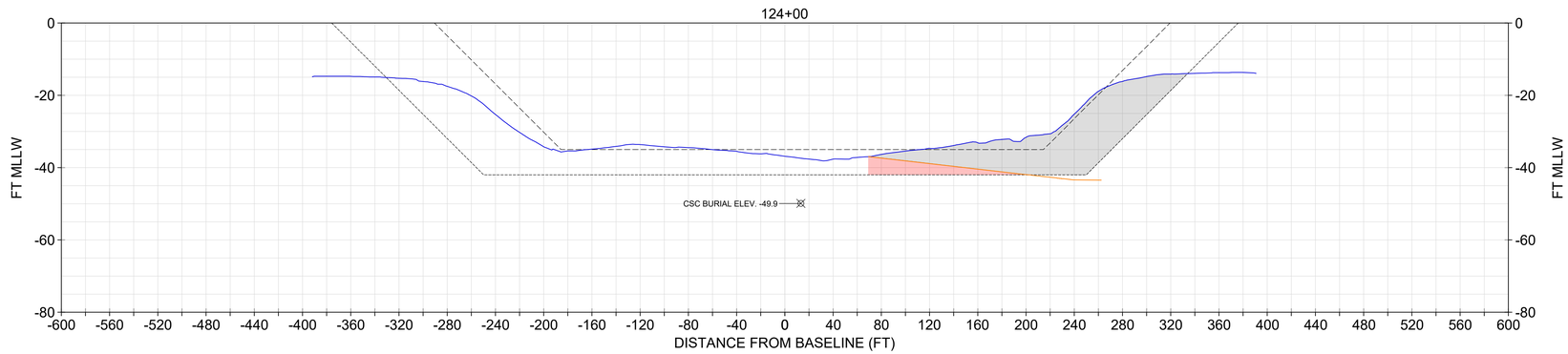
PREPARED FOR: Coastal Partners

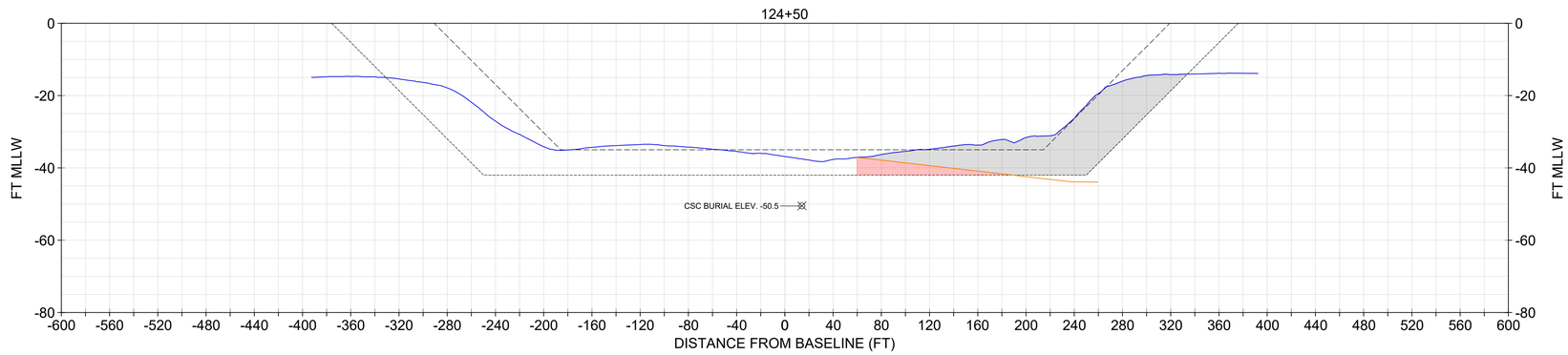
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

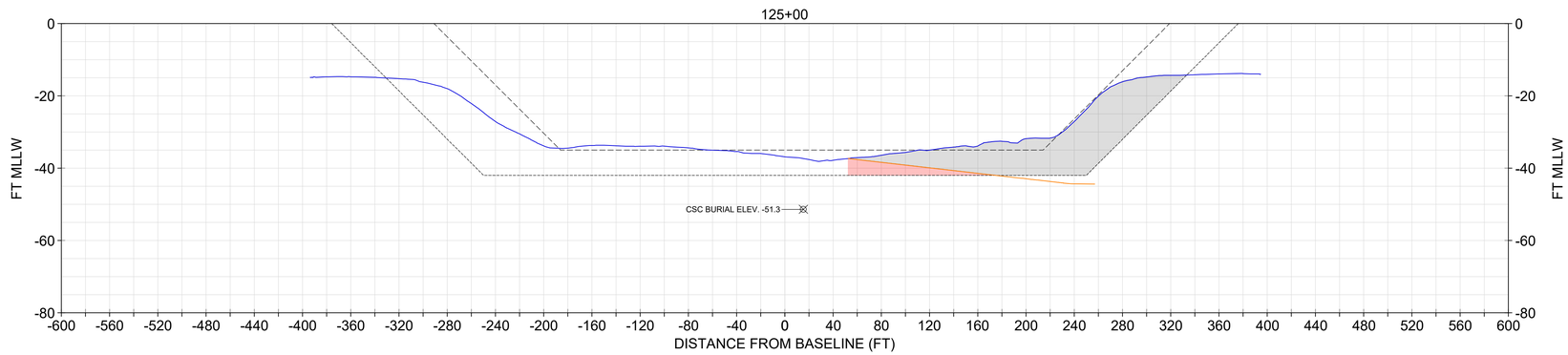
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-087









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 109 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

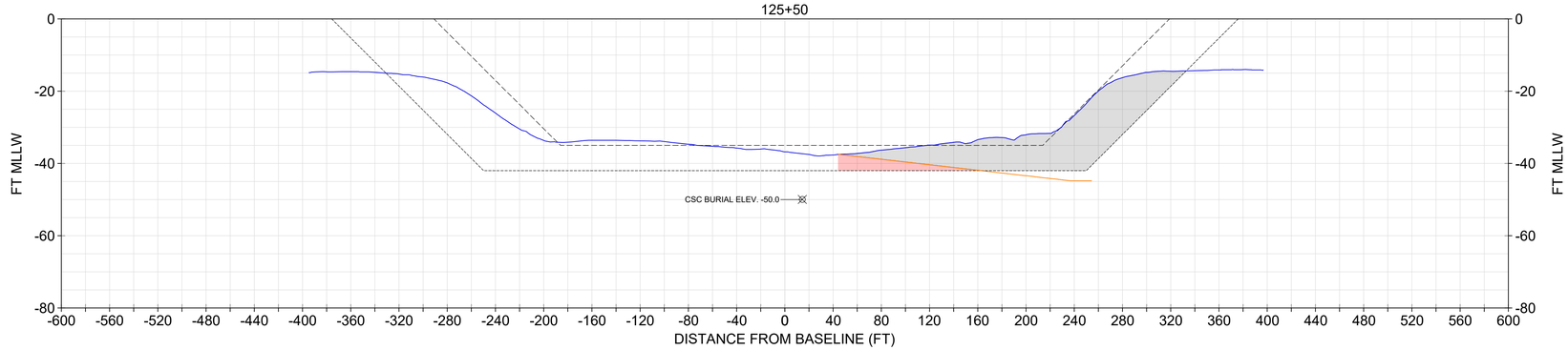
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5956

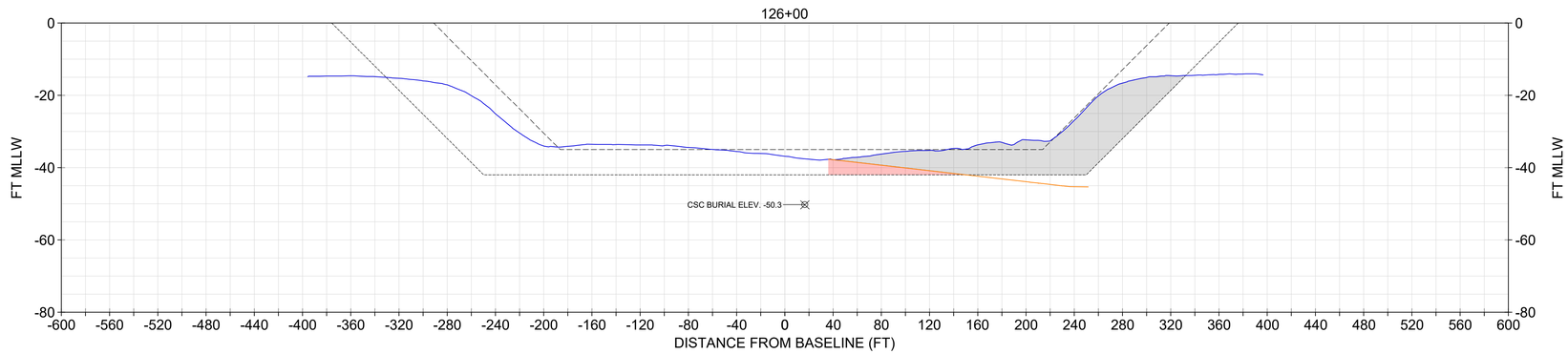
PREPARED FOR: Coastal Partners

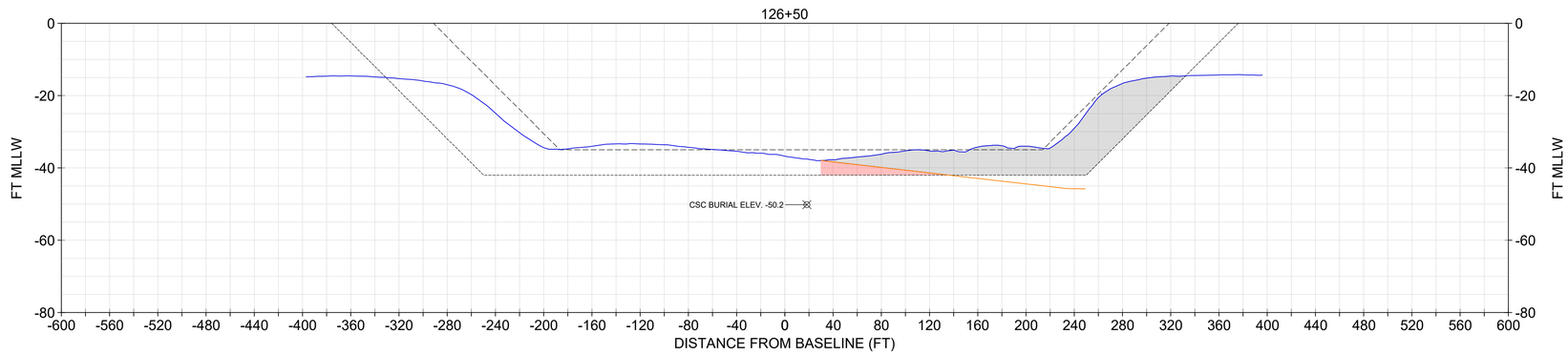
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

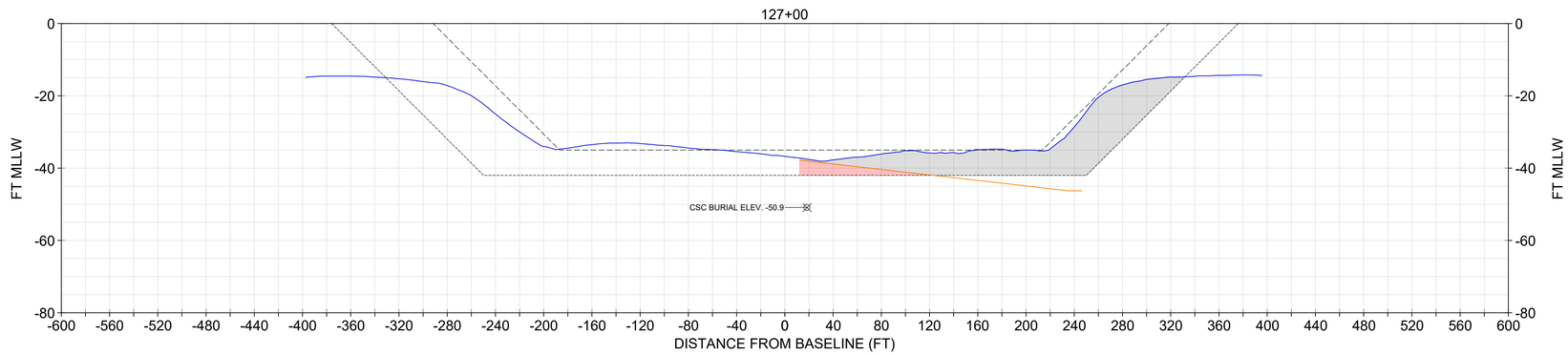
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-088









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE:
SHEET 110 OF 220
SCALE: AS SHOWN

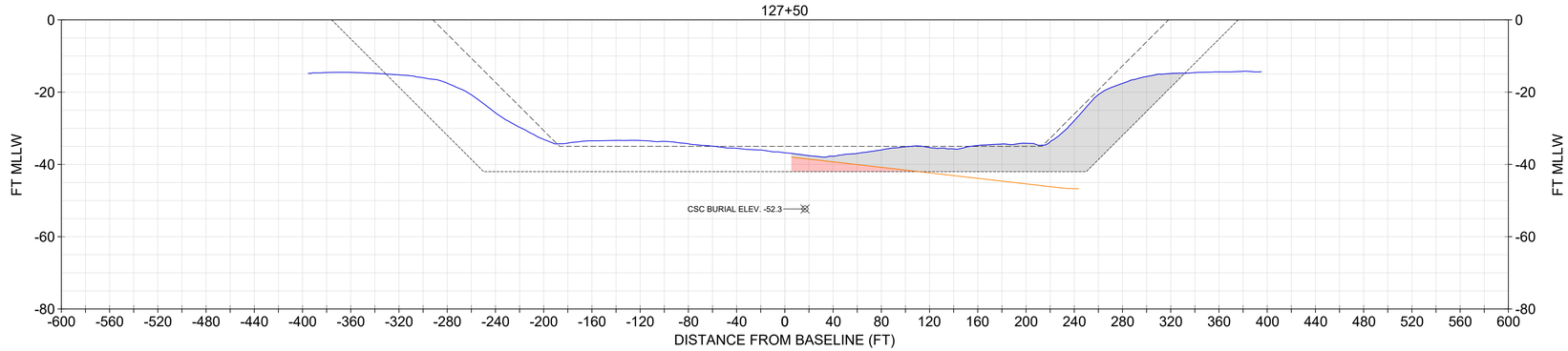
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5595

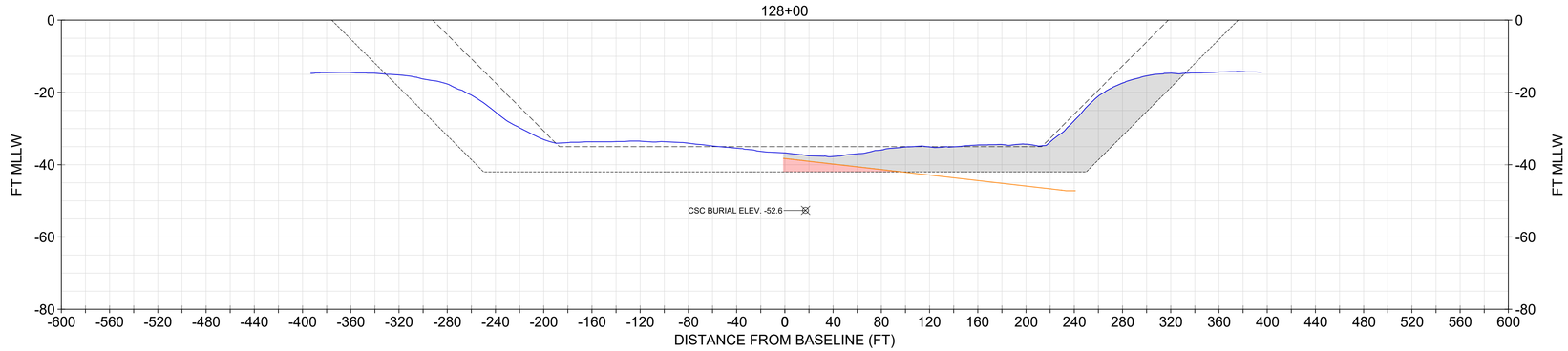
PREPARED FOR: Coastal Partners

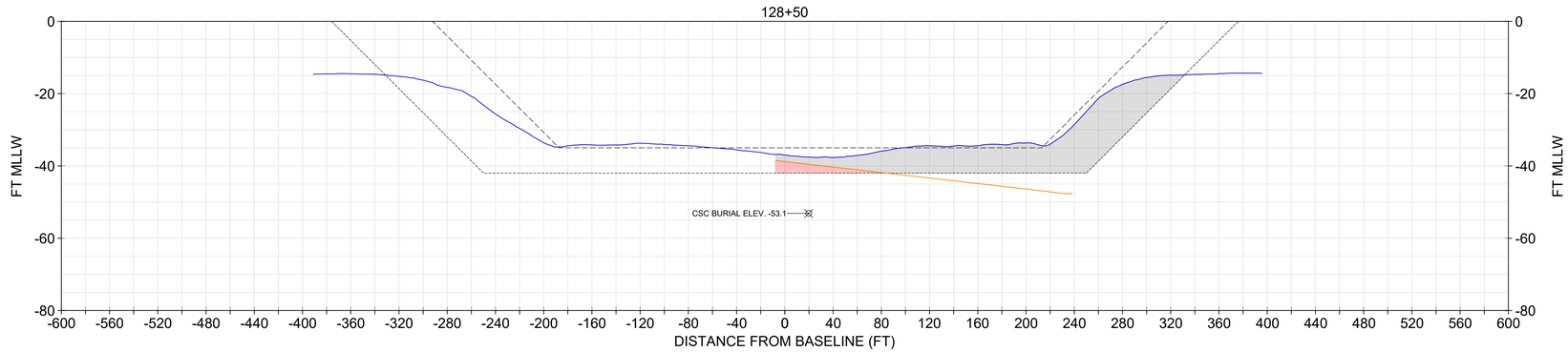
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

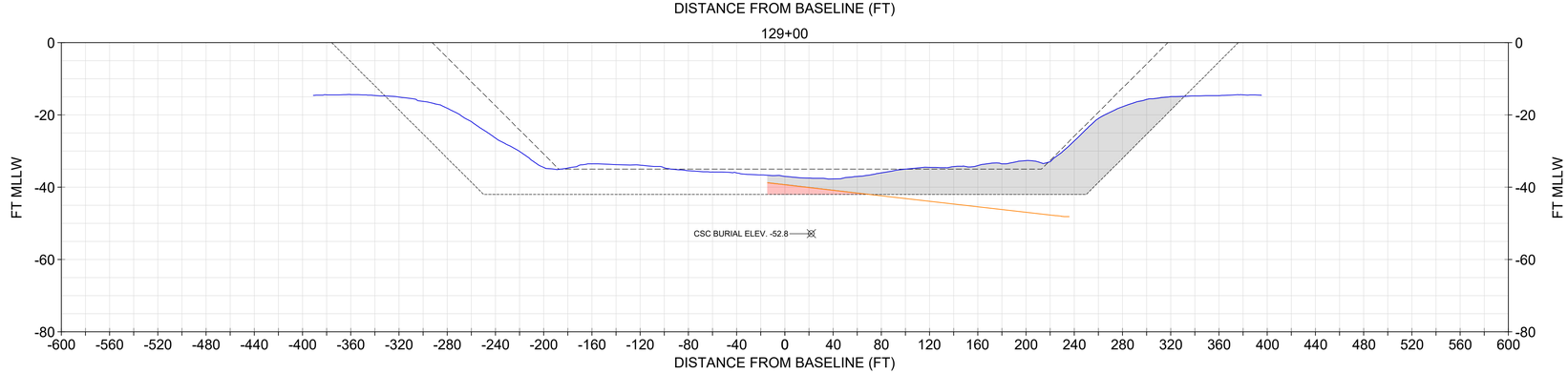
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-089









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 111 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

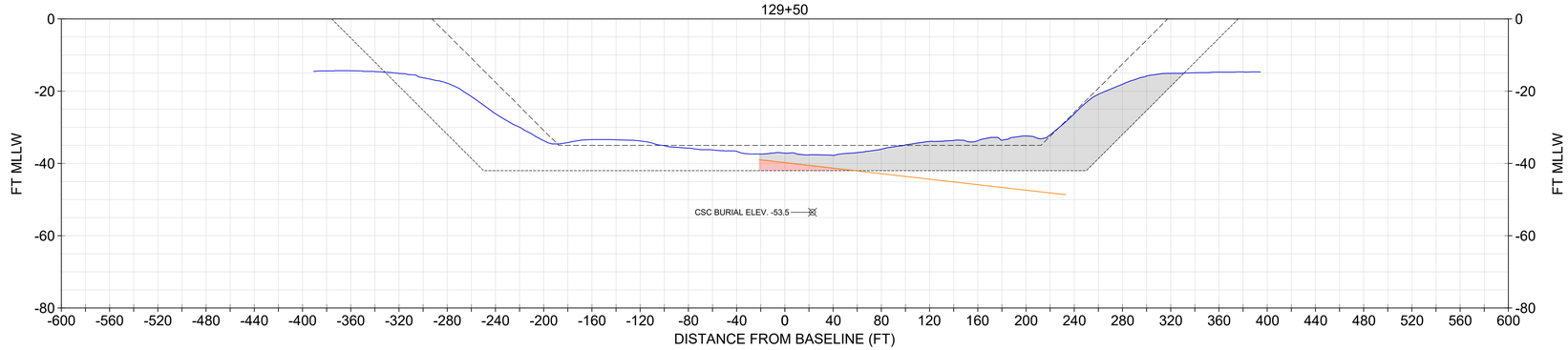
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit 1 Baltimore, MD 21237 Phone (410) 882-5595

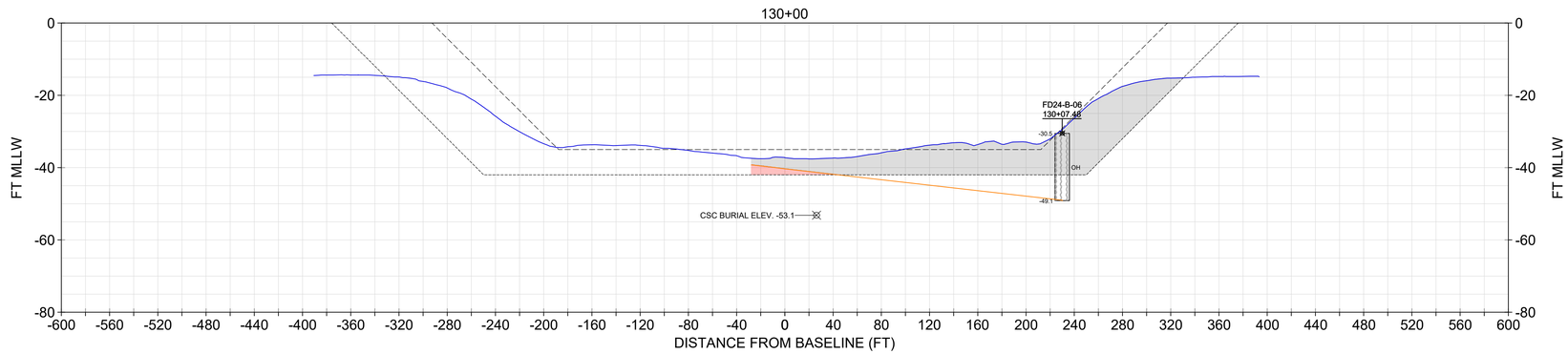
PREPARED FOR: Gardiner Geotechnical Consultants

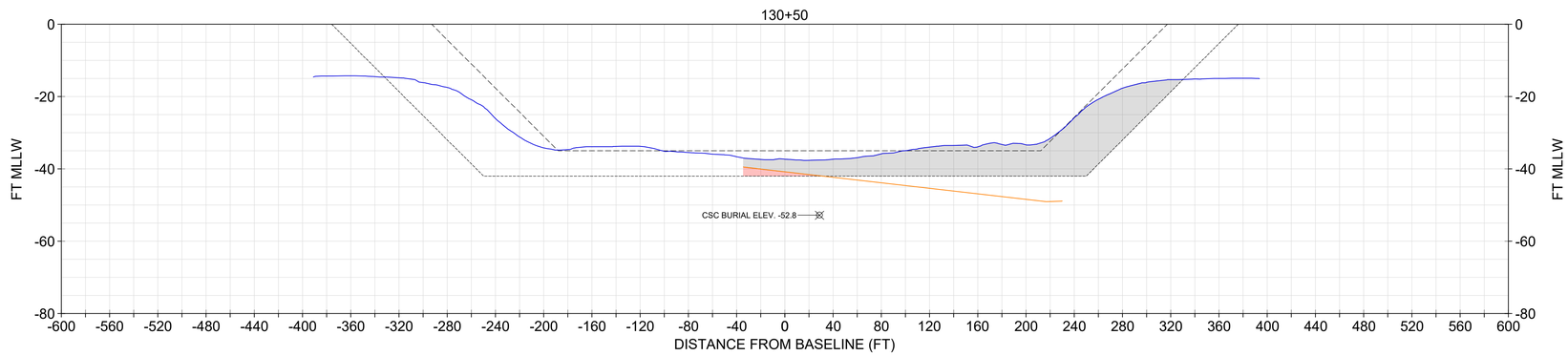
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

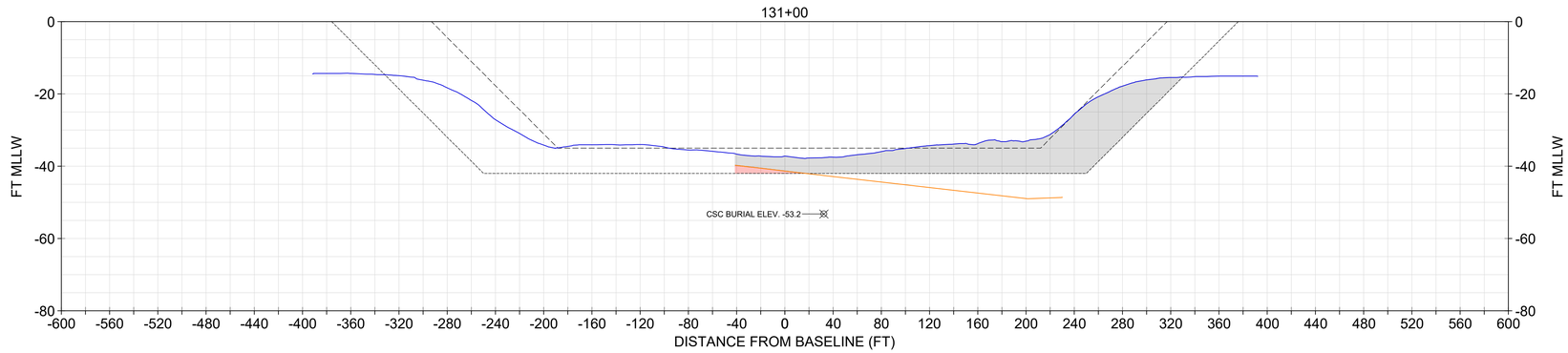
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-090









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-06	-30.5	-49.1	GBA	8/10/2024

CORE LEGEND

OH (ORGANIC SILT AND CLAY)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 112 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

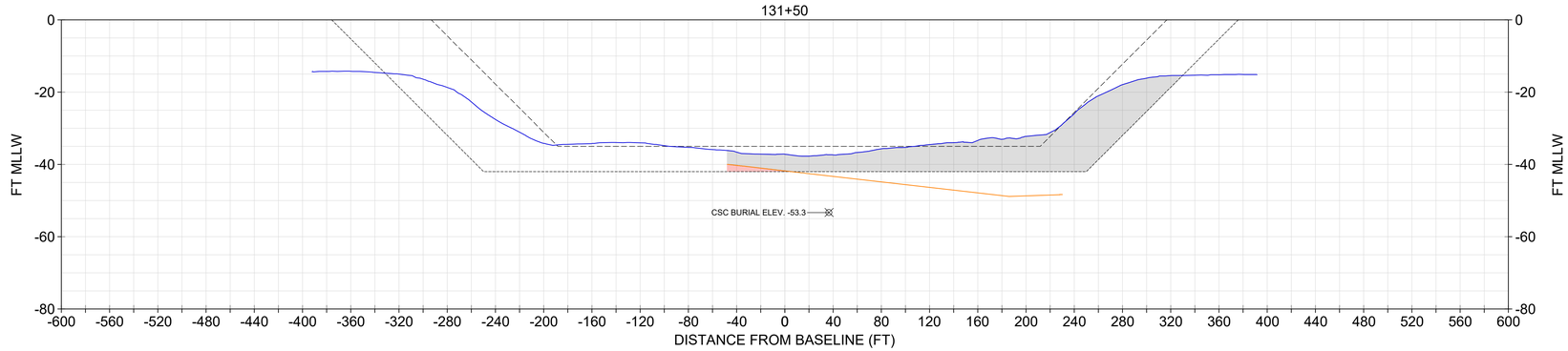
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit E
Baltimore, MD 21237
Phone (410) 882-5565

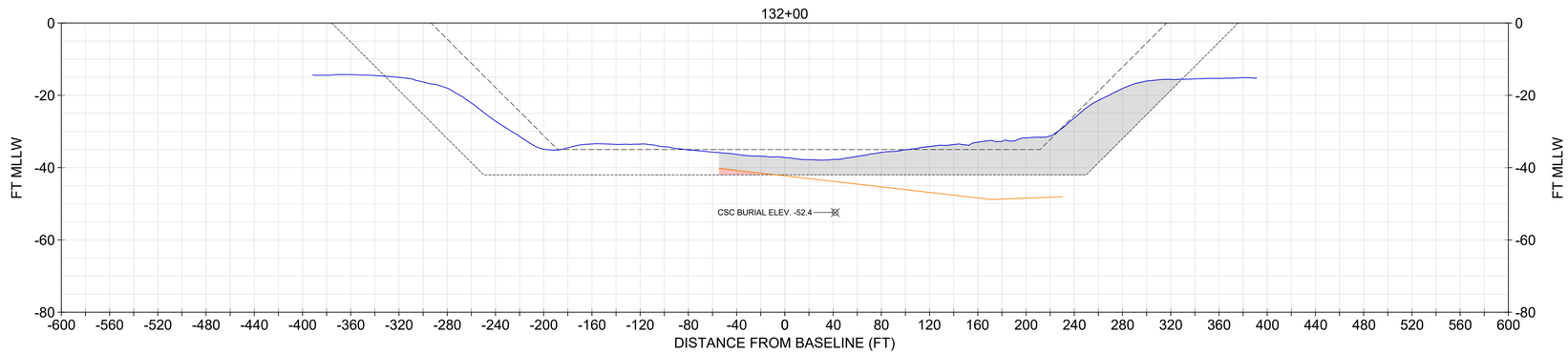
PREPARED FOR: Coastal Partners

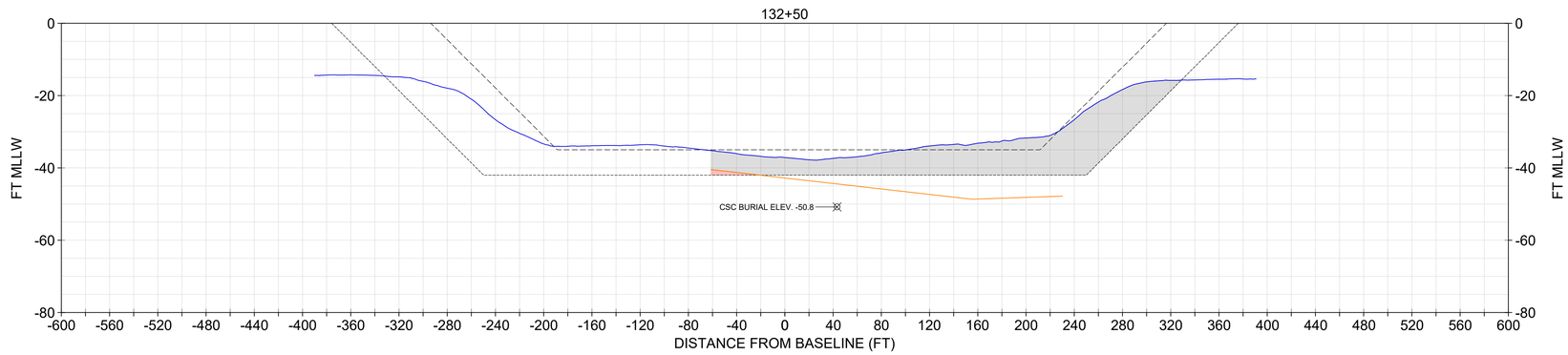
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

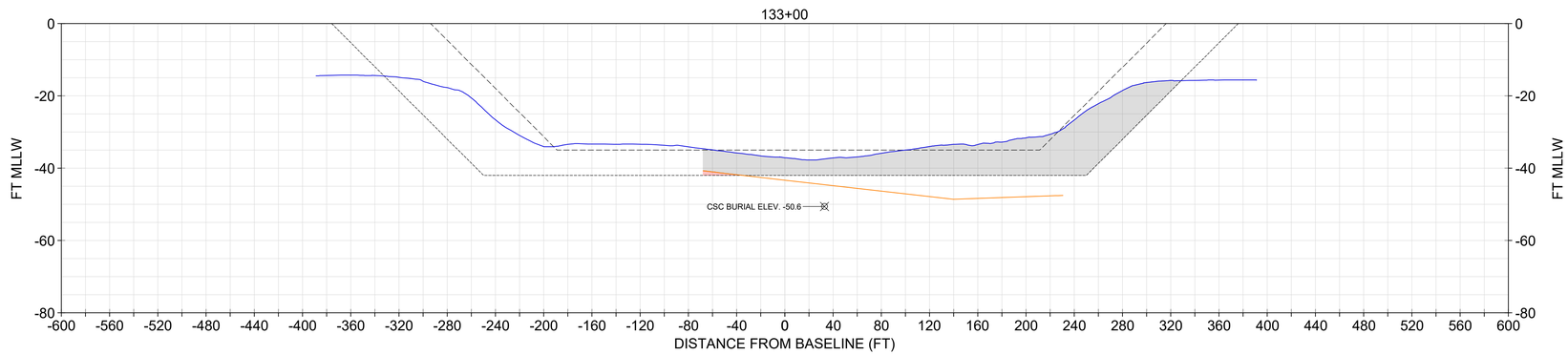
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-091









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE:
SHEET 113 OF 220

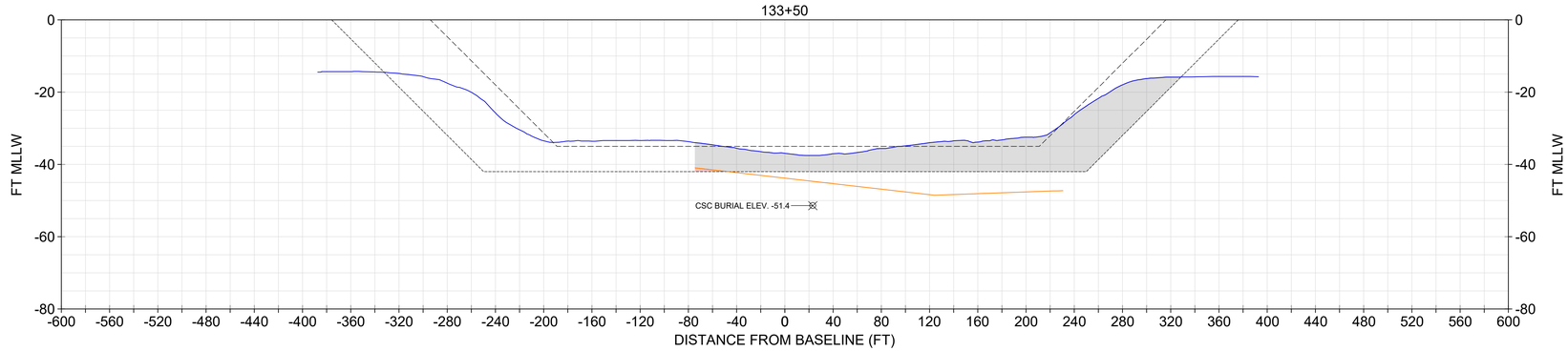
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5595

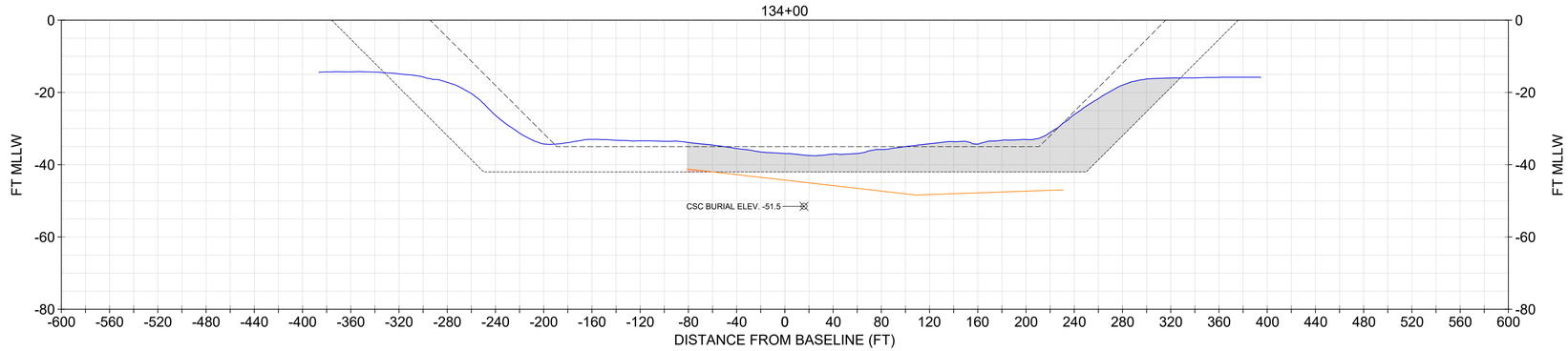
PREPARED FOR: Coastal Partners

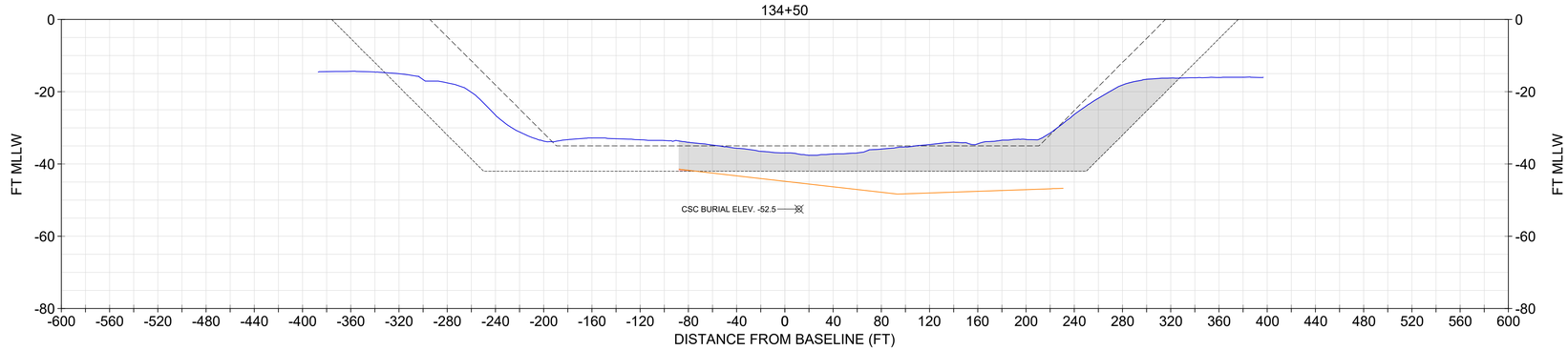
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

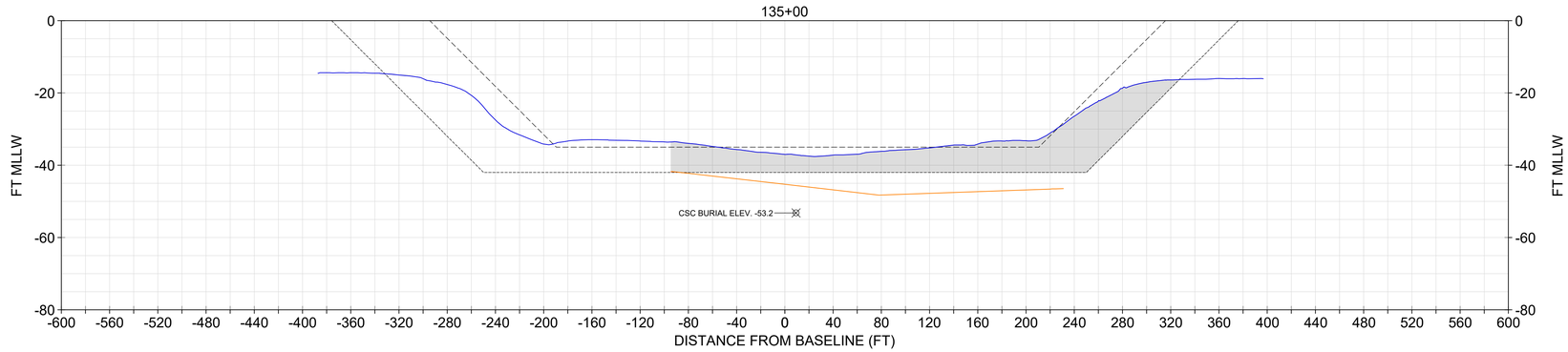
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-092









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 114 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DDU
SIZE: ANSI D
SCALE: AS SHOWN

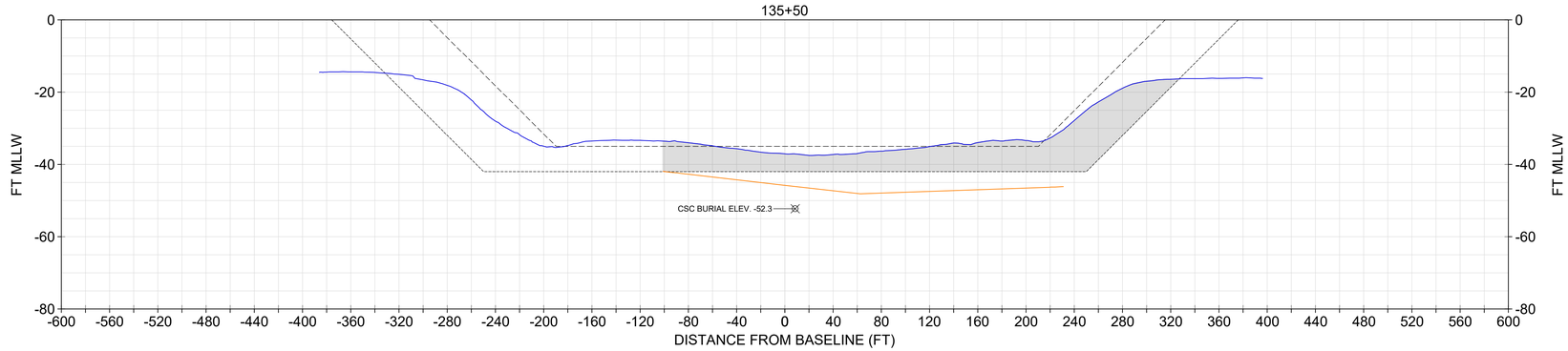
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit 1 Baltimore, MD 21237 Phone (410) 882-5595

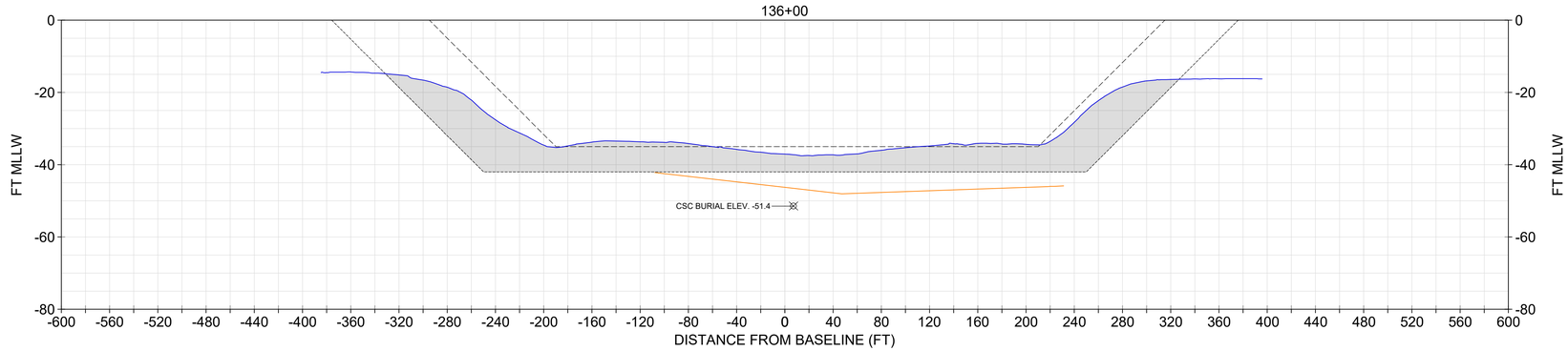
PREPARED FOR: Geotechnical Marine Environmental

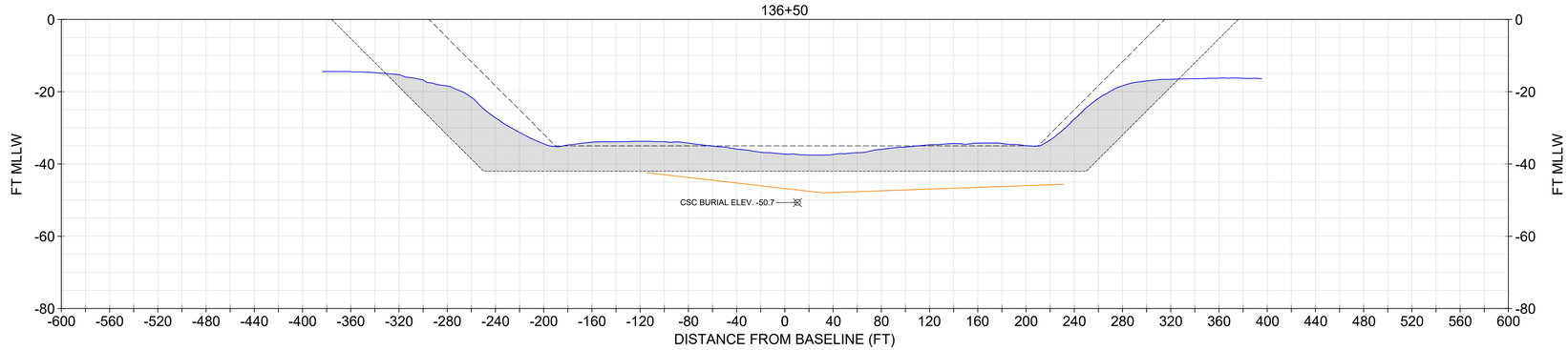
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

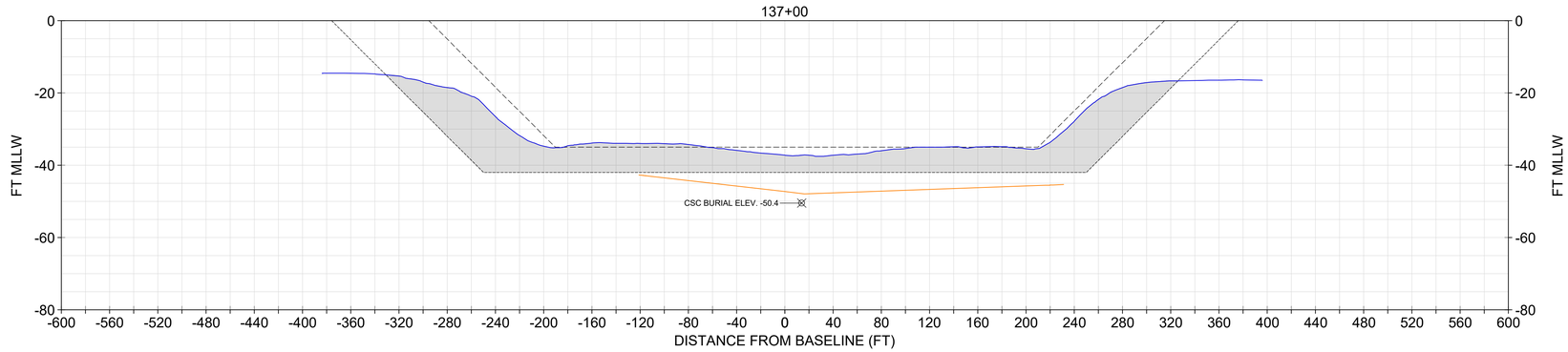
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-093









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

VERTICAL SCALE 0 20' 40'
HORIZONTAL SCALE 0 60' 120'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 115 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DDU
SIZE: ANSI D
SCALE: AS SHOWN

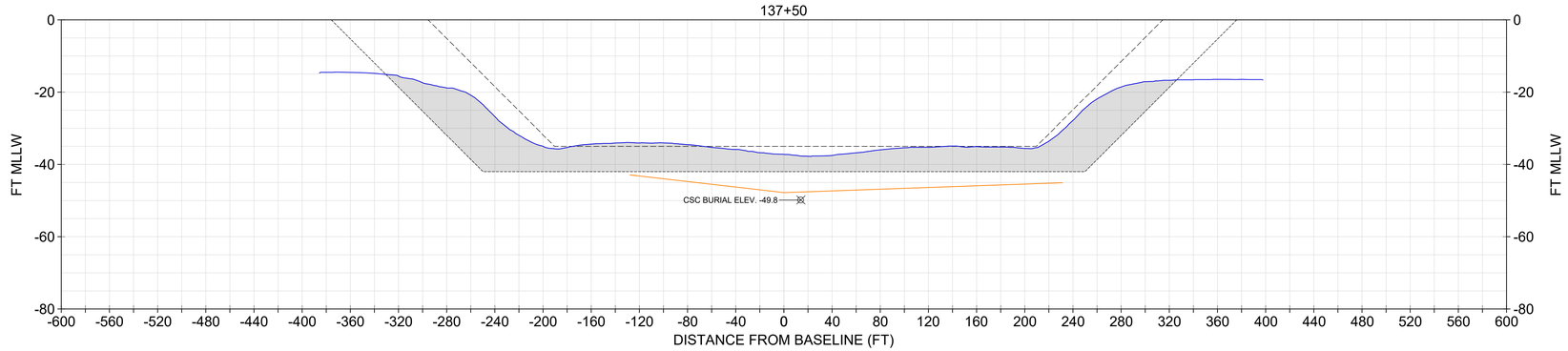
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit B Baltimore, MD 21237 Phone (410) 882-5595

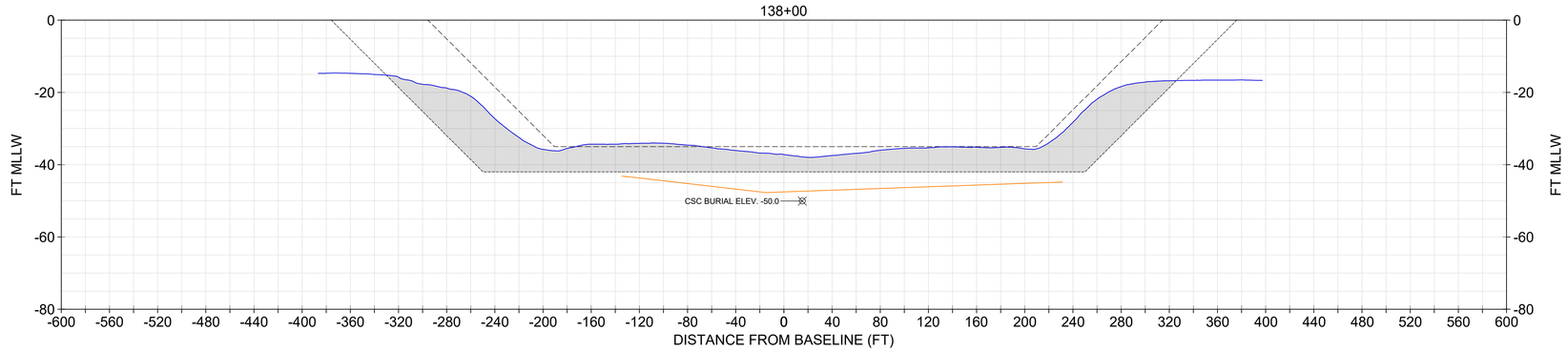
PREPARED FOR: Geotechnical Consultants

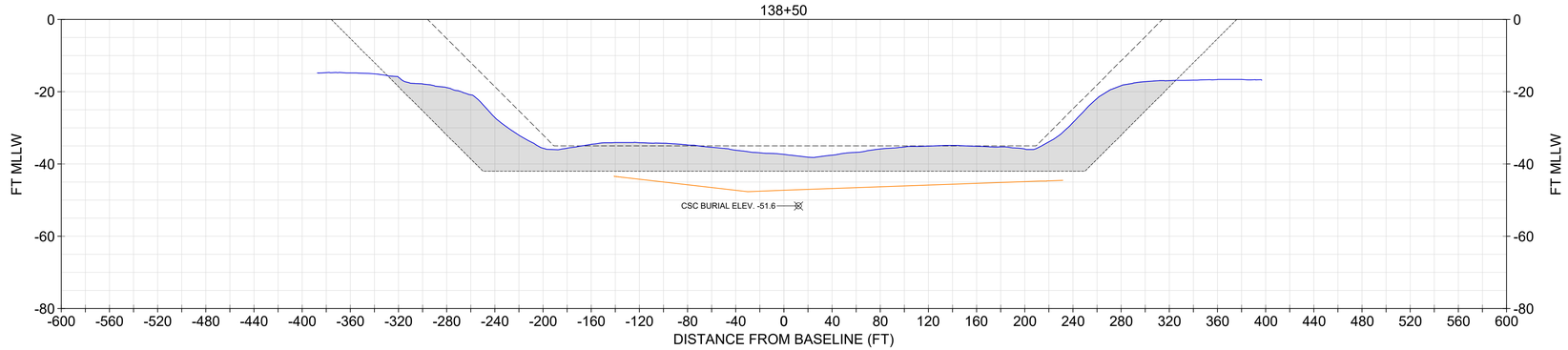
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

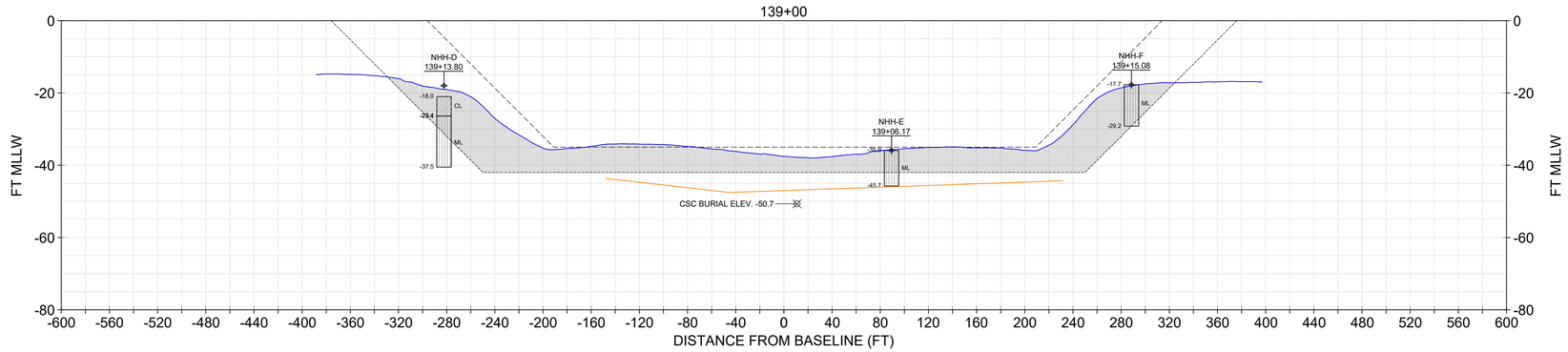
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-094









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-D	-18.0	-37.5	AECOM	2017
NHH-E	-35.9	-45.7	AECOM	2017
NHH-F	-17.7	-29.2	AECOM	2017

CORE LEGEND

- ML (SILT)
- CL (LEAN CLAY)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 116 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DDU
SIZE: ANSI D
SCALE: AS SHOWN

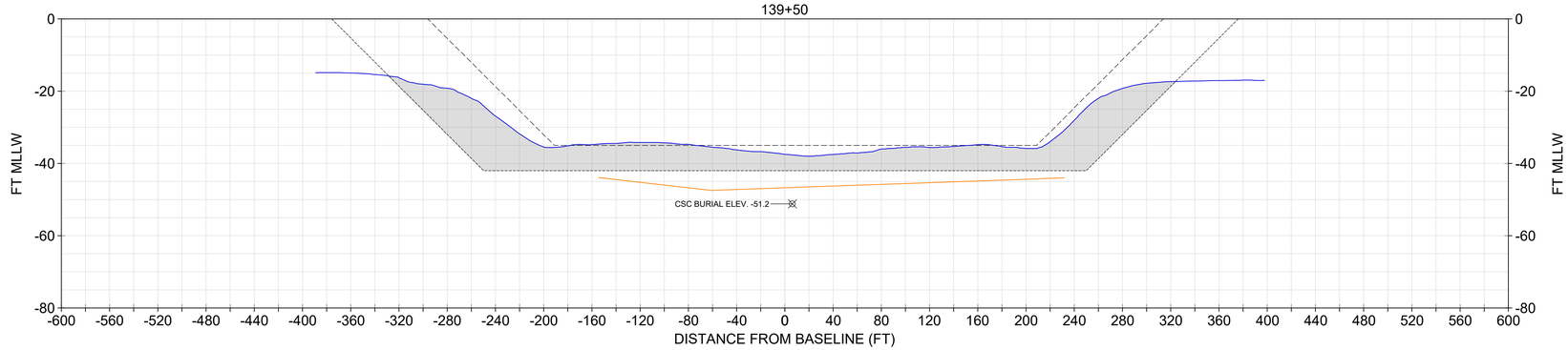
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit B Baltimore, MD 21237 Phone (410) 882-5595

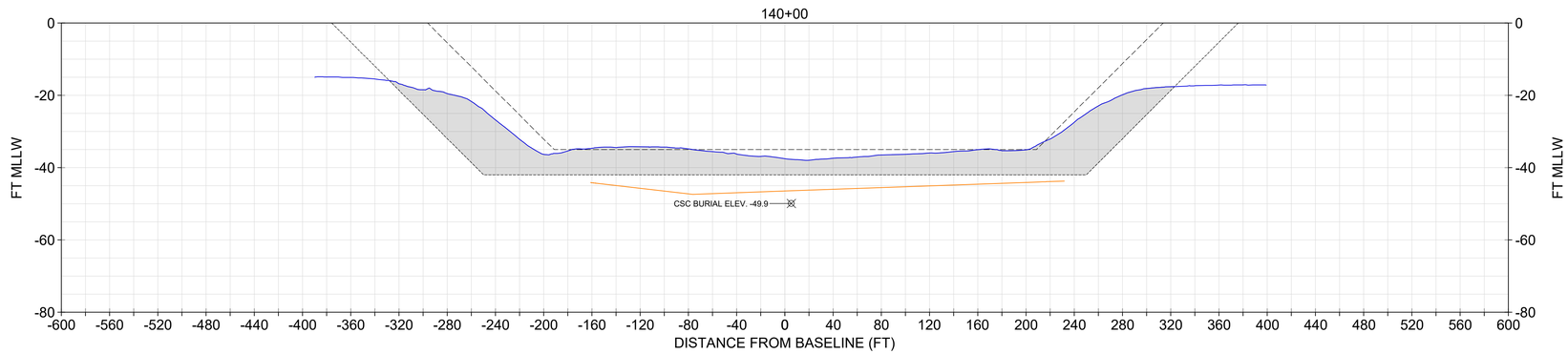
PREPARED FOR: Geosatmen Geophysical Consultant

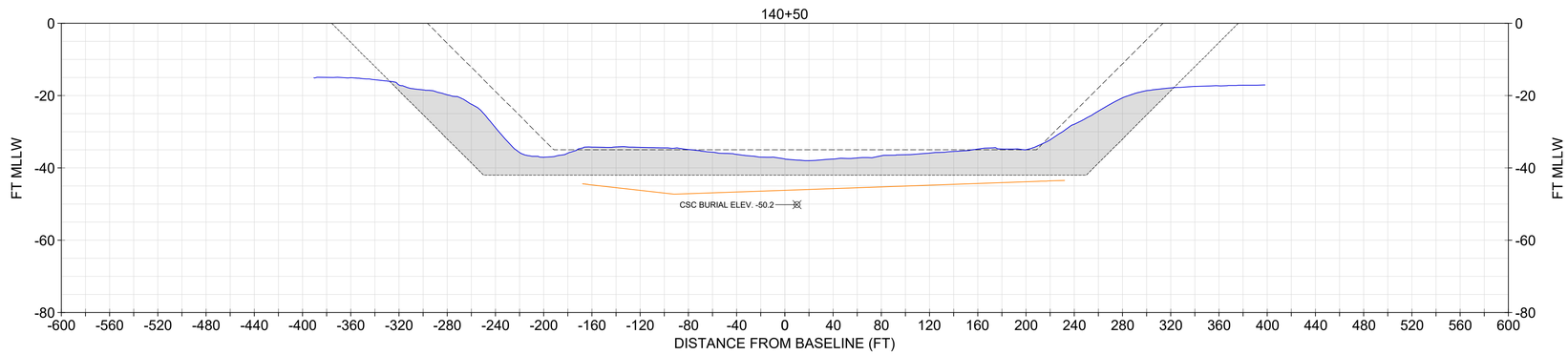
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

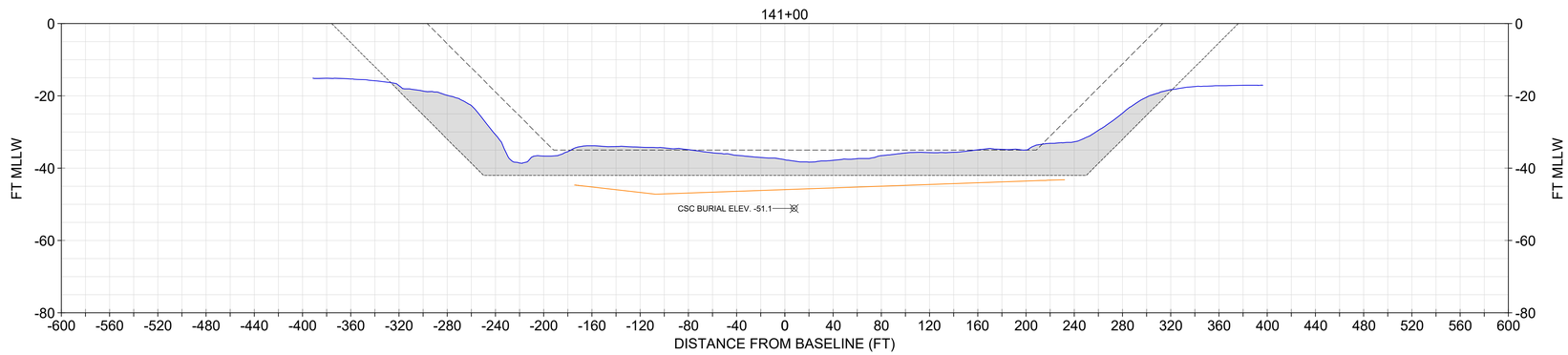
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-095









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 117 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

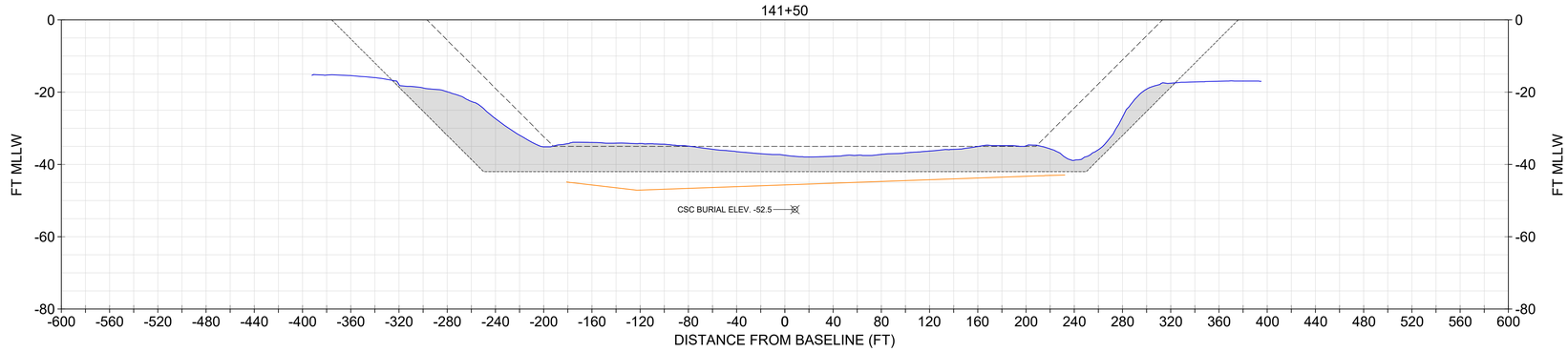
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

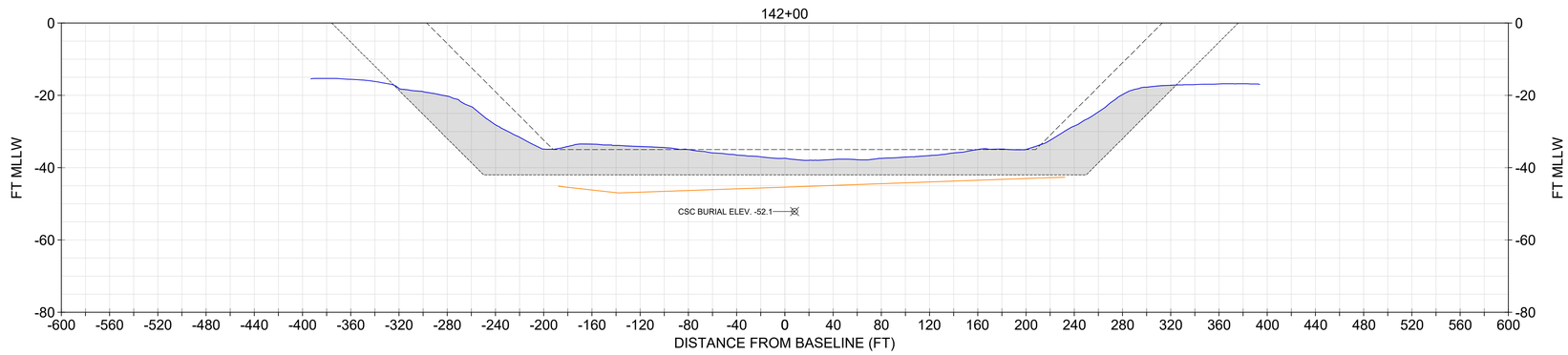
PREPARED FOR: Coastal Partners

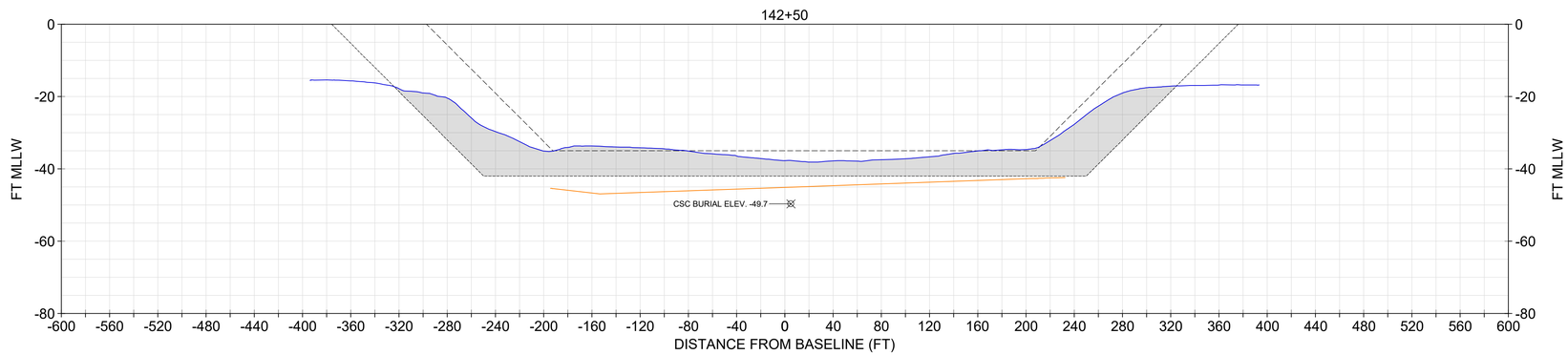
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

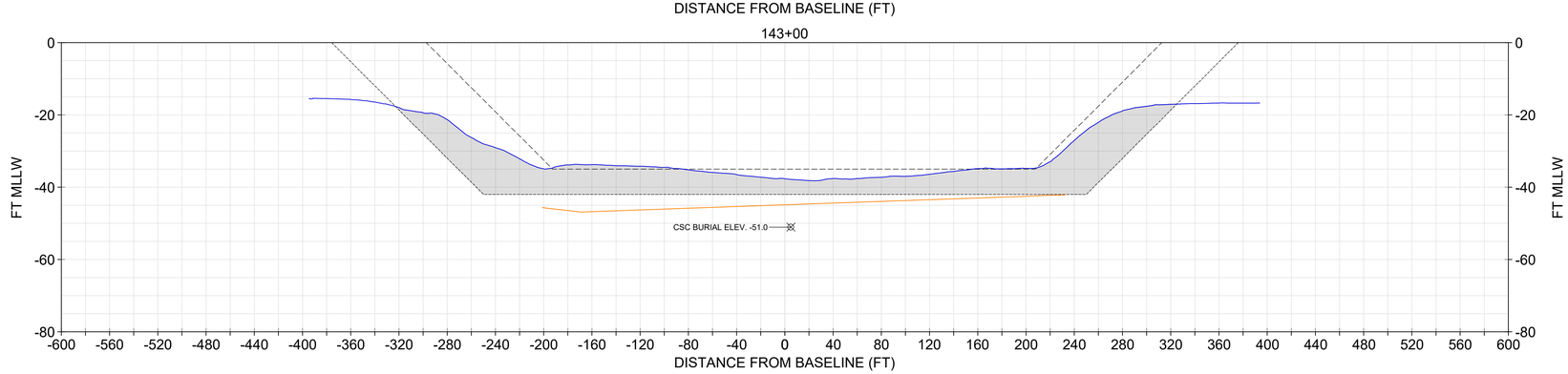
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-096









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FORDREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021.

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: 1
SHEET 118 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

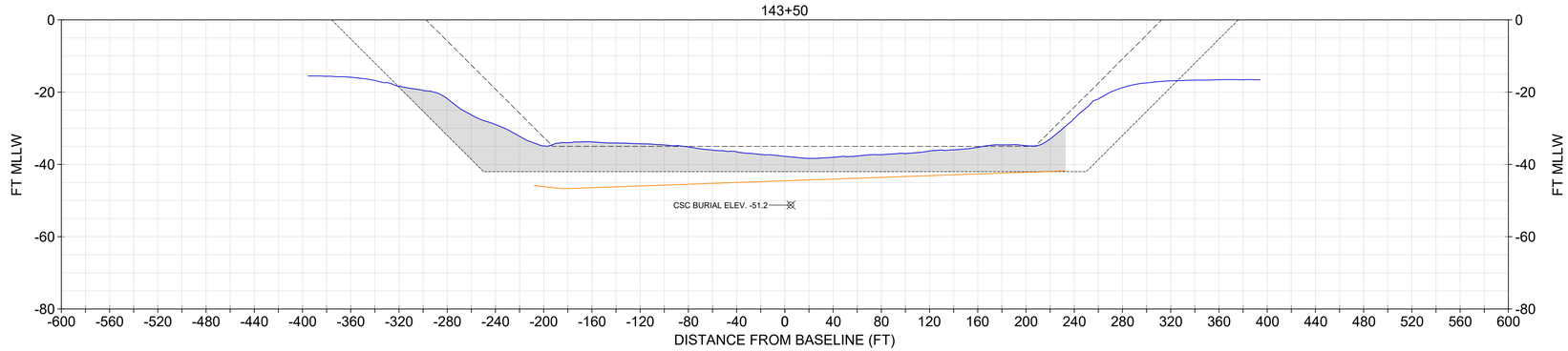
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

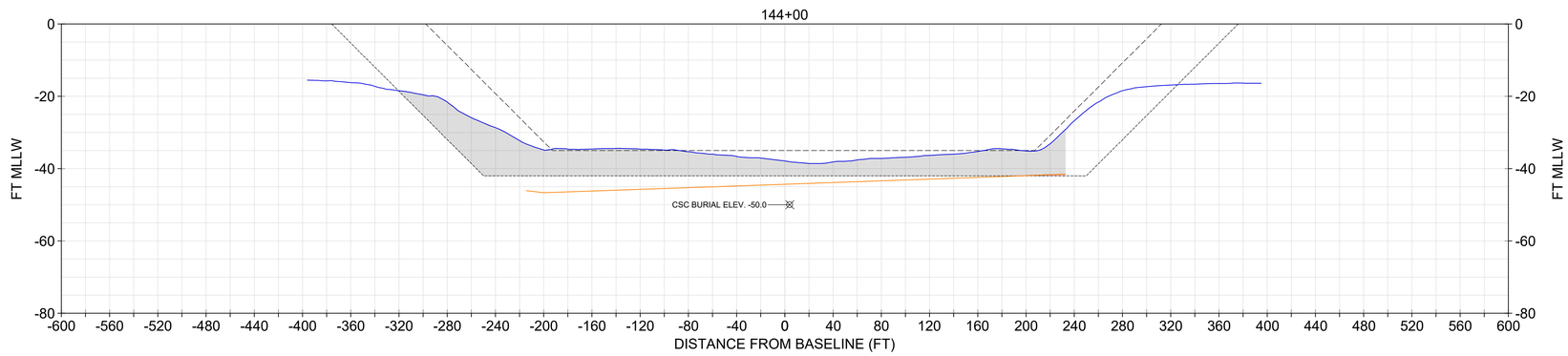
PREPARED FOR:
Coastal Partners Connecticut River Group

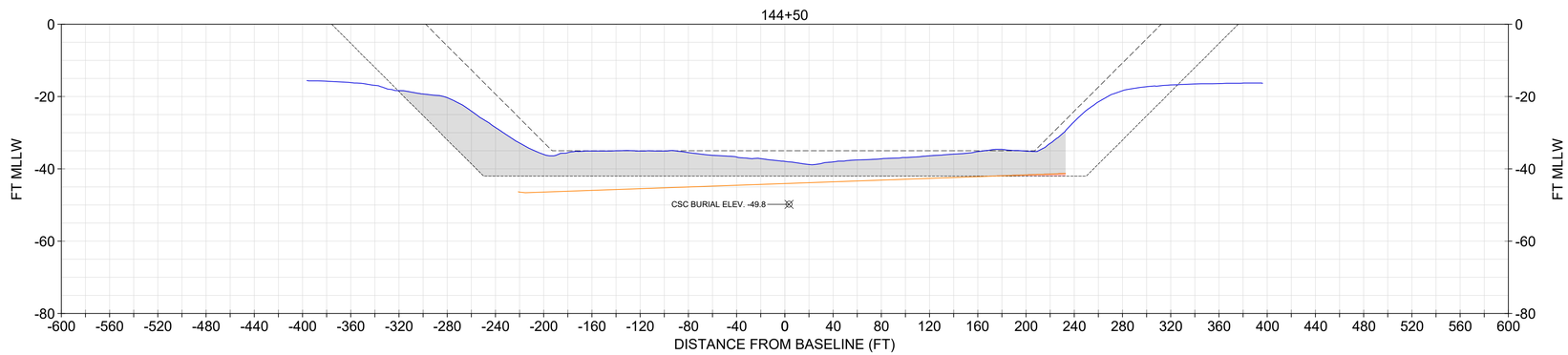
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

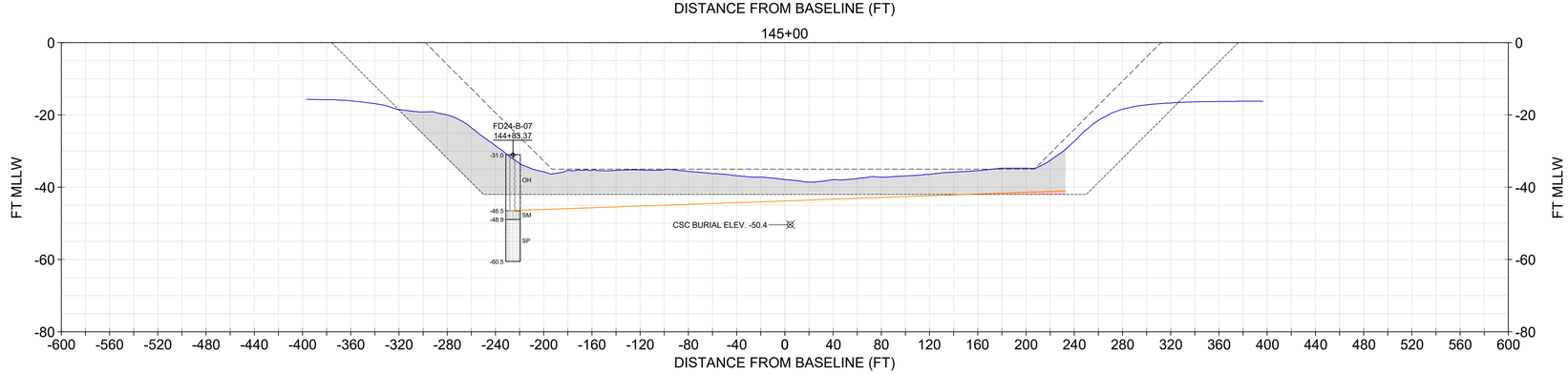
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-097









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-07	-31.0	-60.5	GBA	7/10/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- SM (SILTY SAND)
- SP (POORLY GRADED SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 119 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

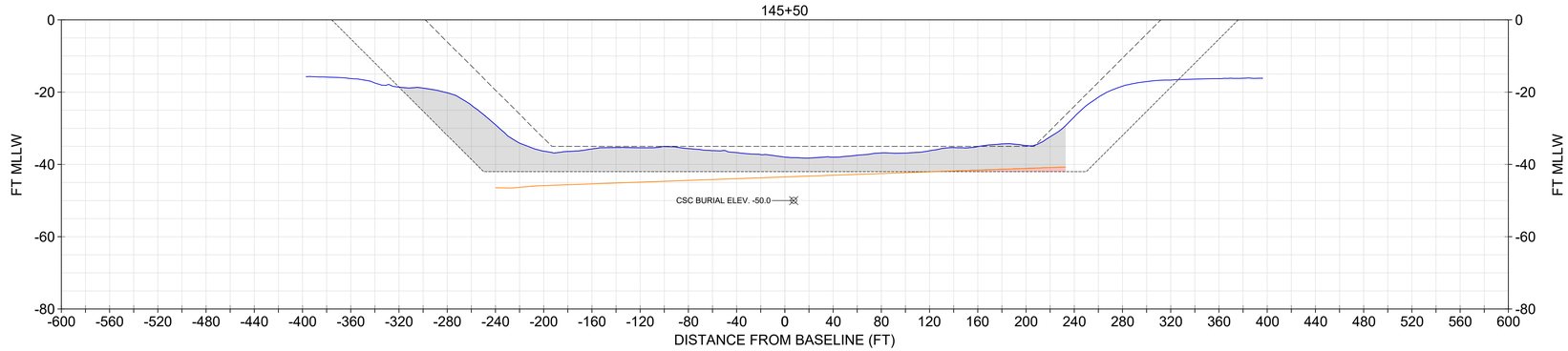
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit F
Baltimore, MD 21237
Phone (410) 682-5595

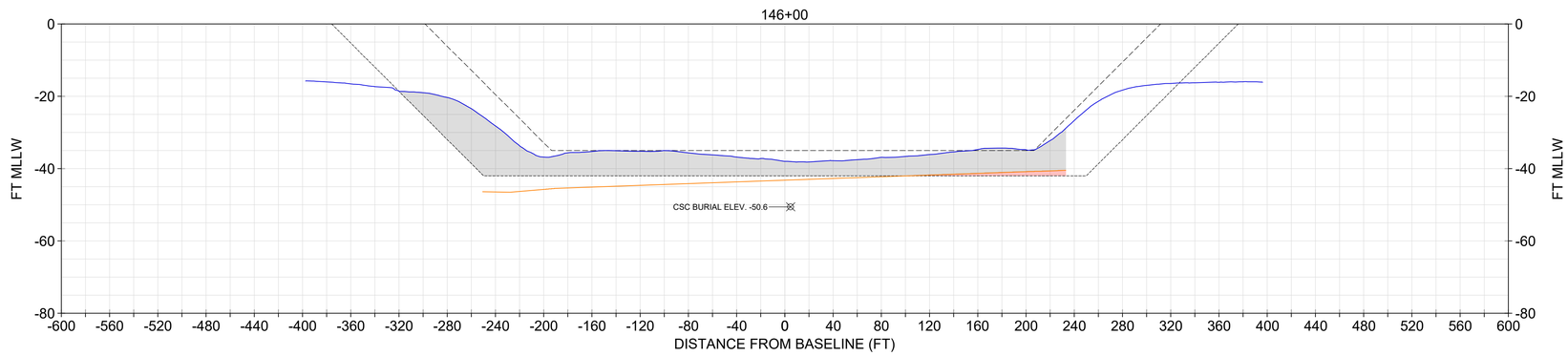
PREPARED FOR:
Coastal Partners Connecticut's Coastal Engineer

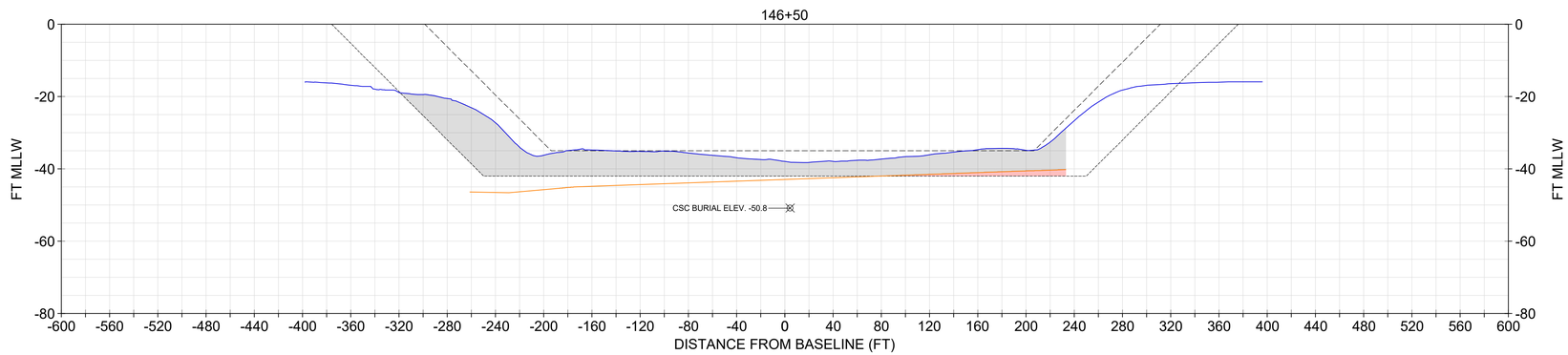
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

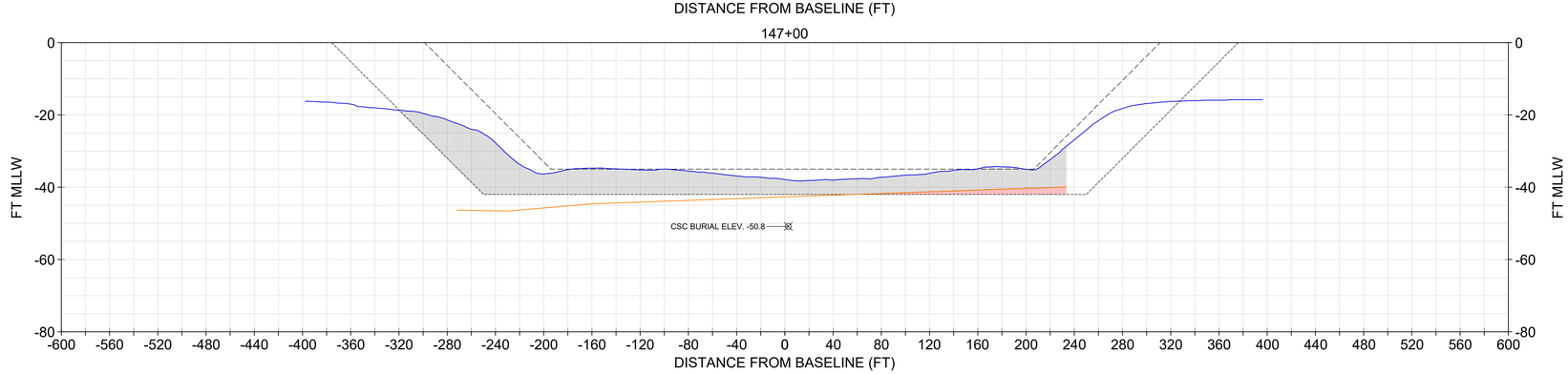
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-098









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 120 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

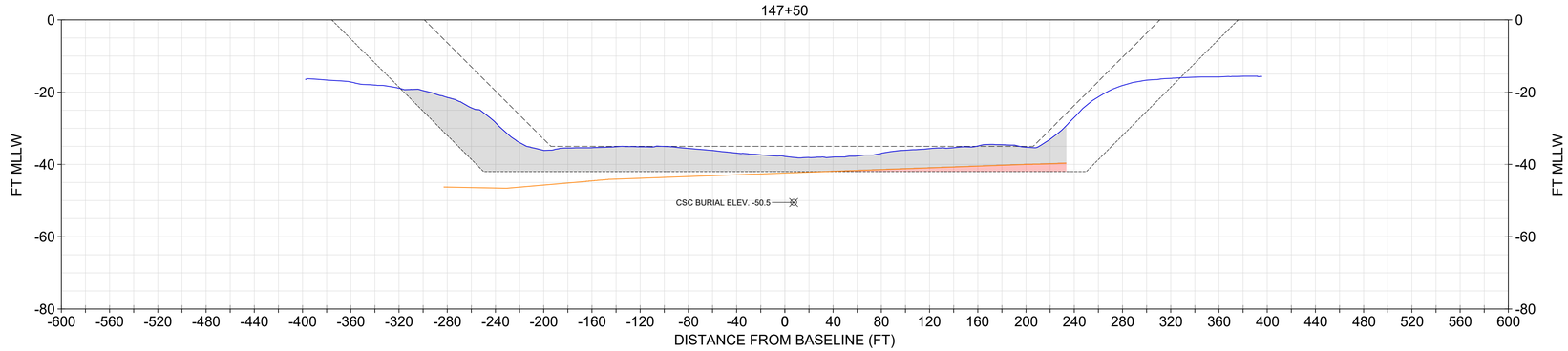
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit E
Baltimore, MD 21237
Phone (410) 682-5595

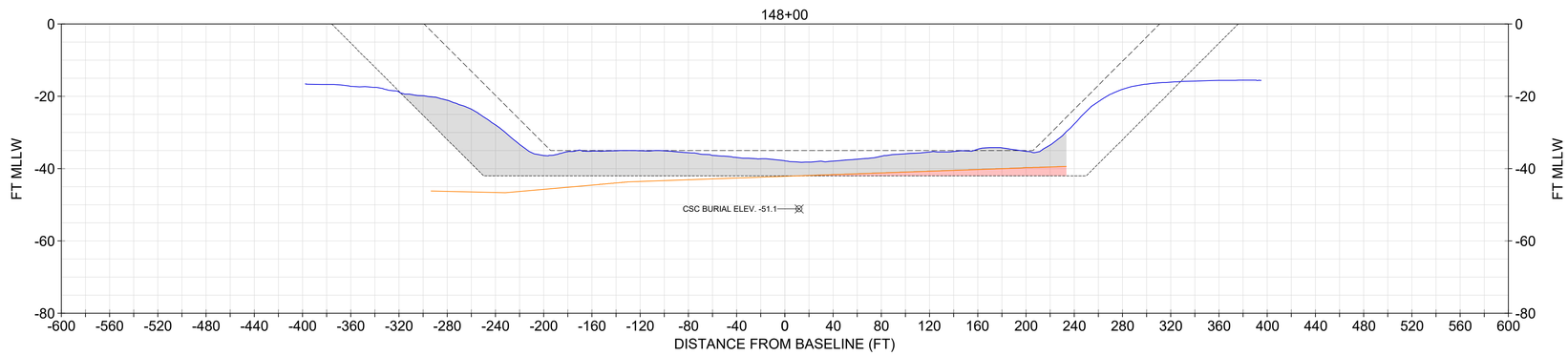
PREPARED FOR:
Coastal Partners

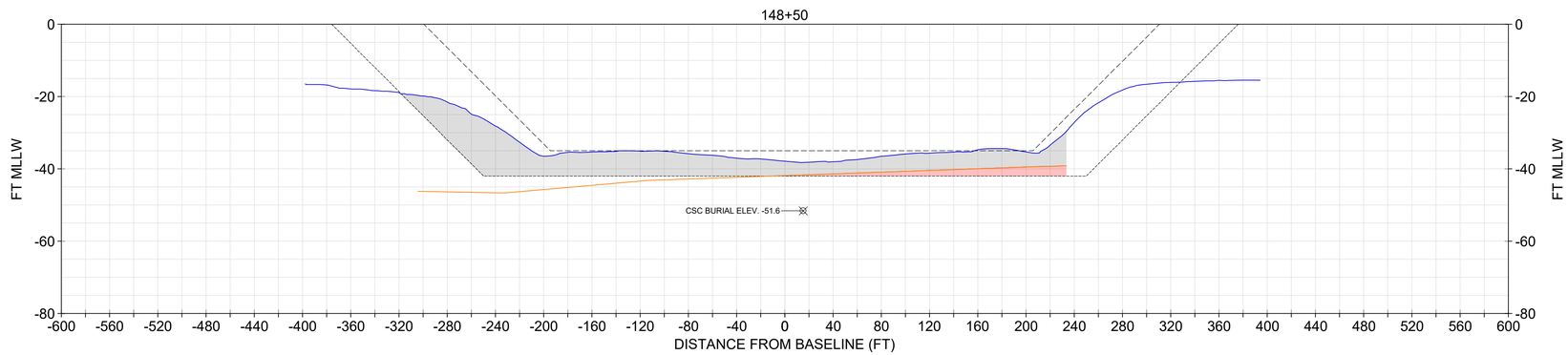
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

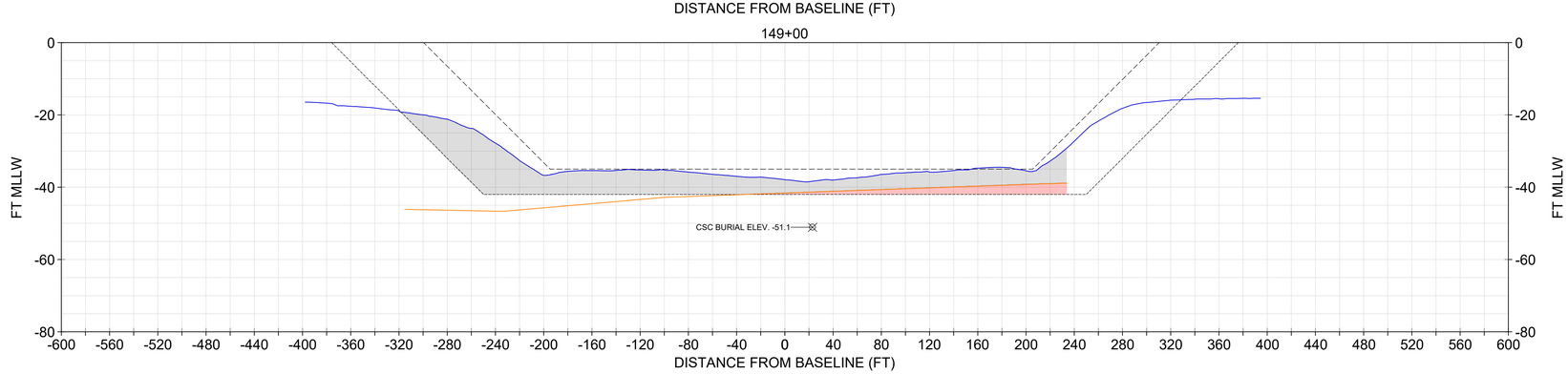
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-099









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 121 OF 220

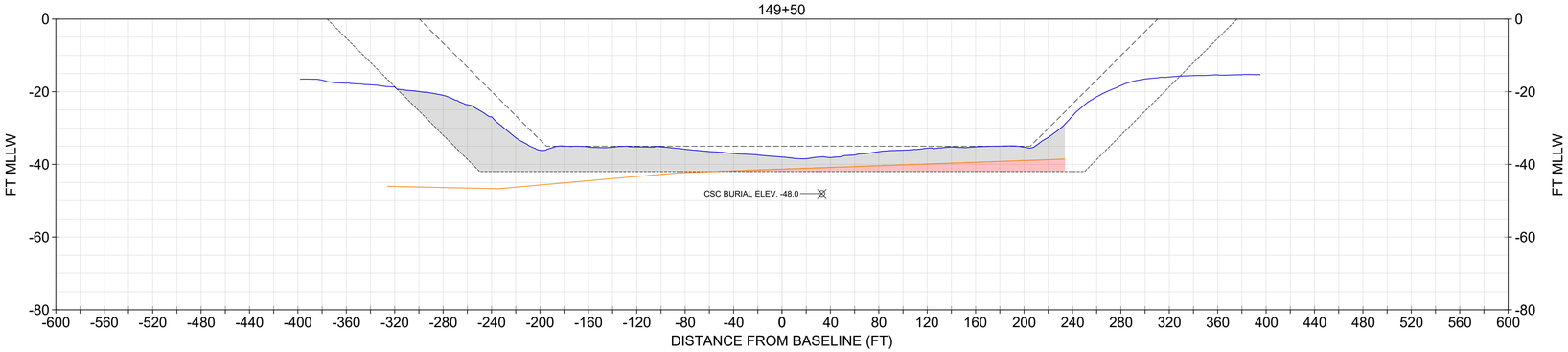
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

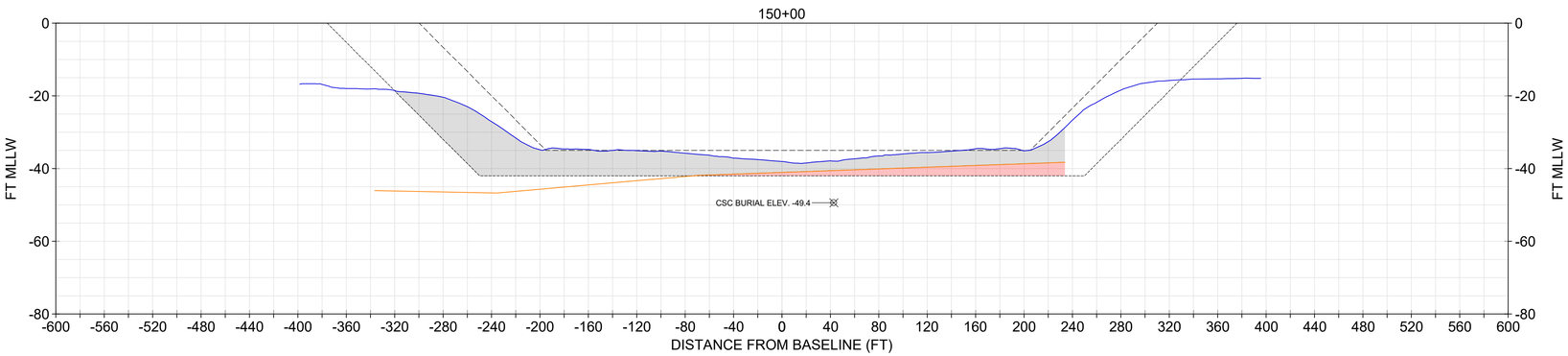
PREPARED FOR: Coastal Partners

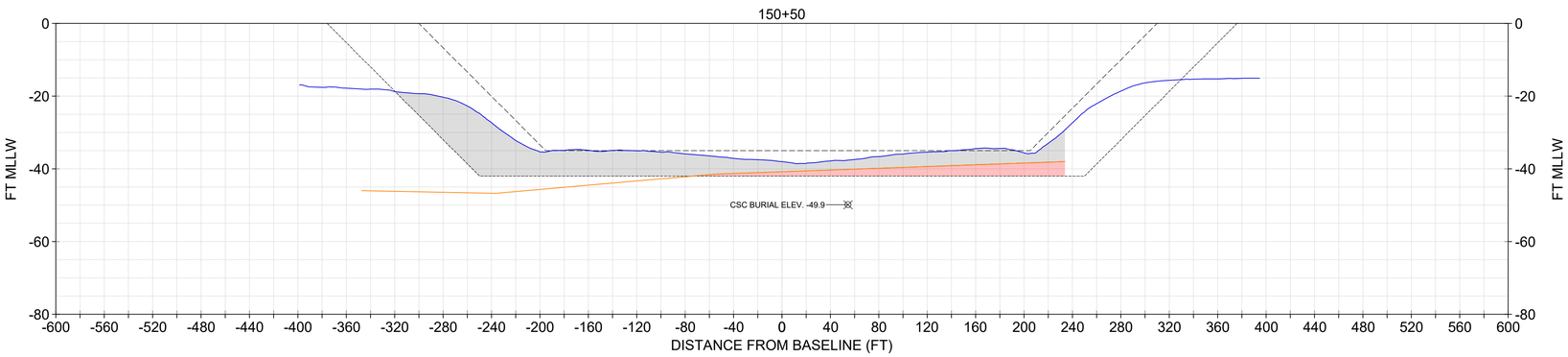
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

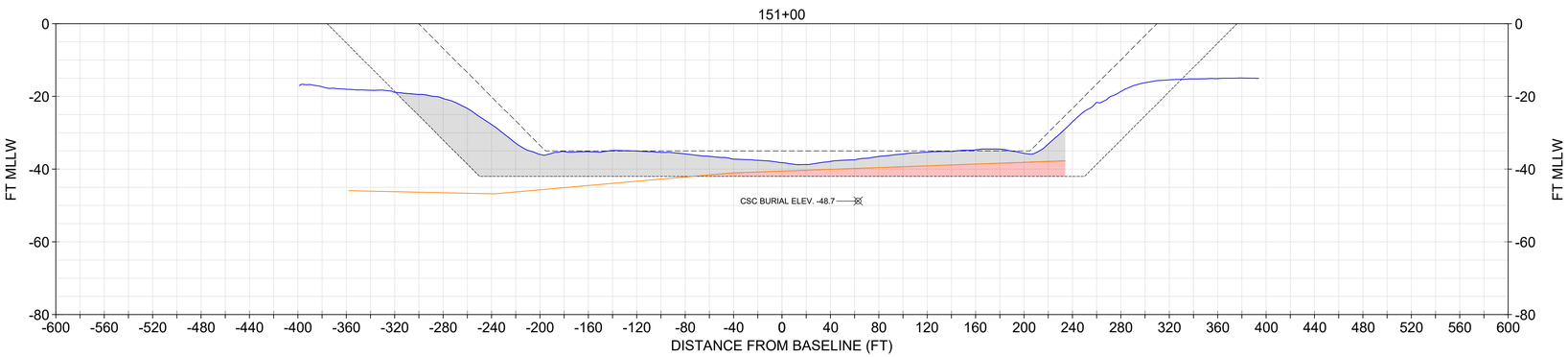
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-100









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 122 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

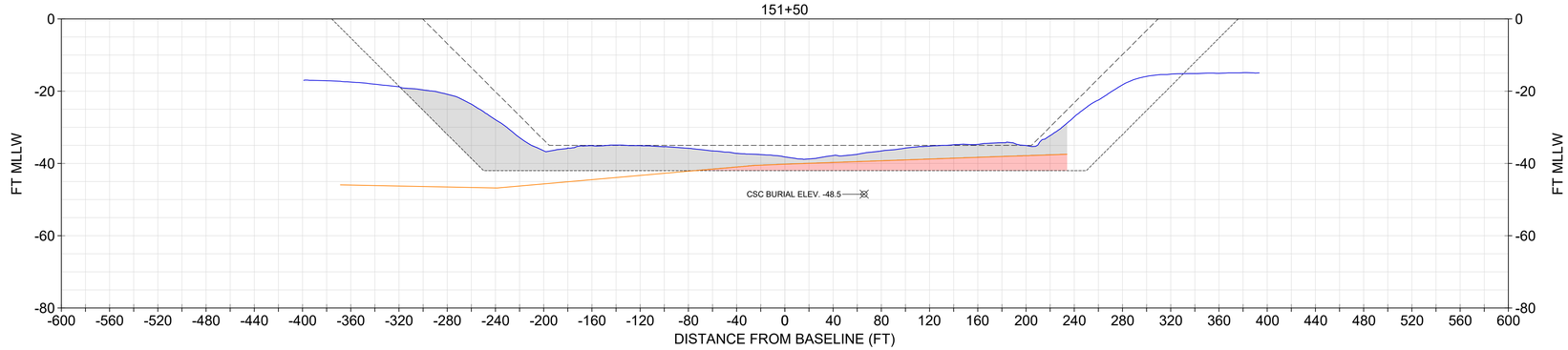
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5956

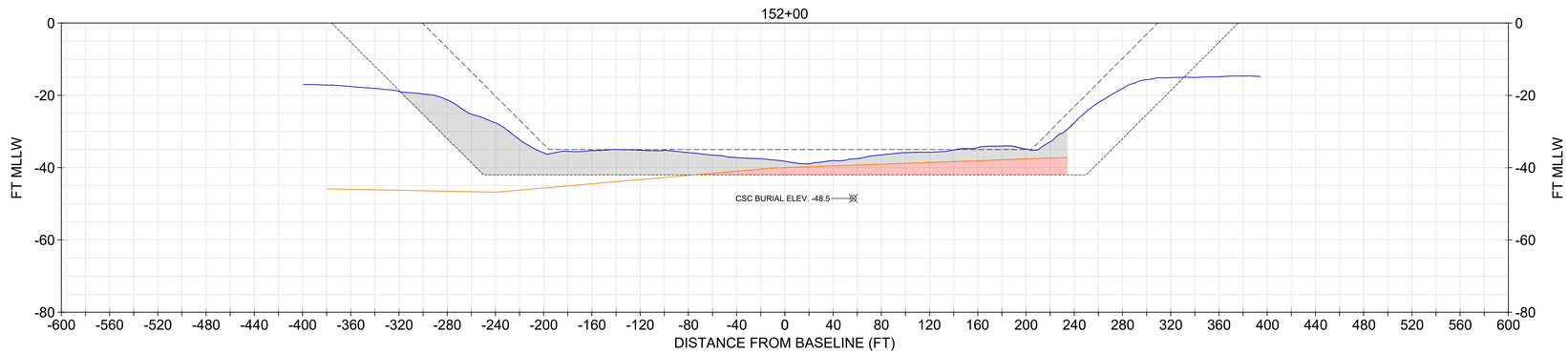
PREPARED FOR: Coastal Partners

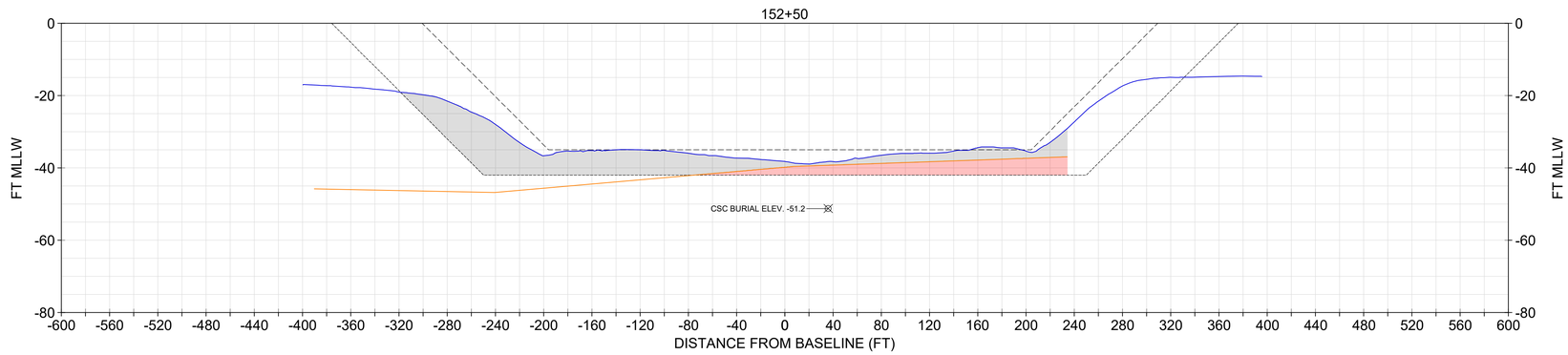
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

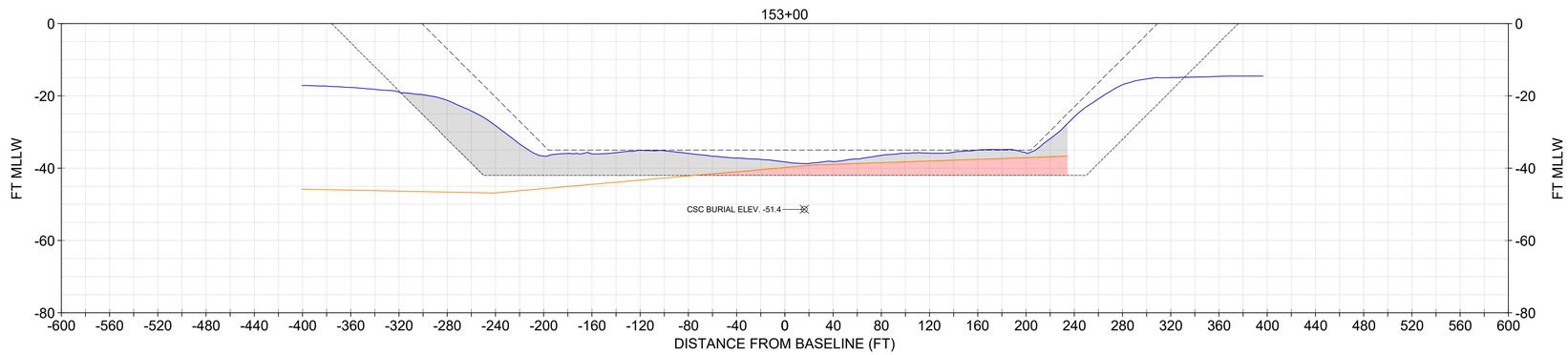
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-101









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 123 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

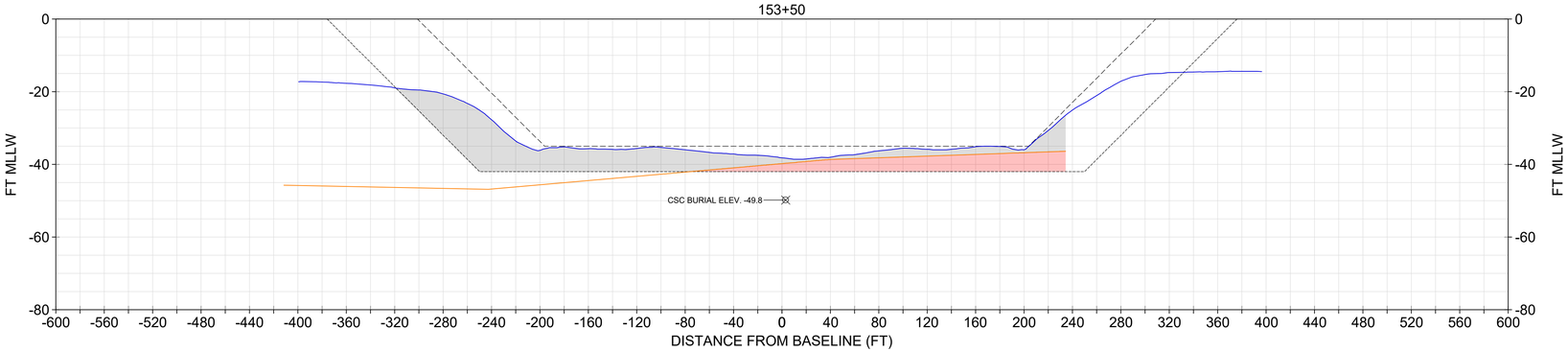
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

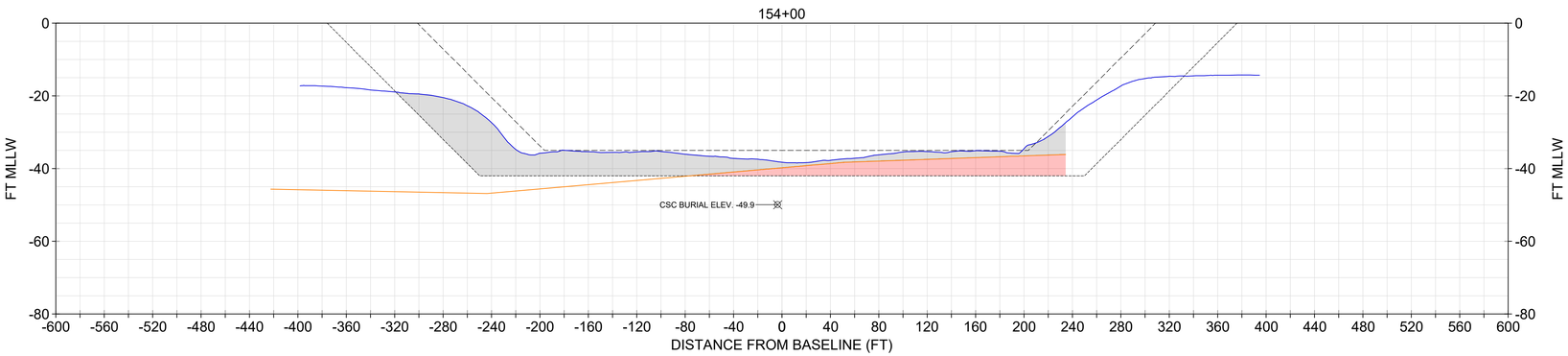
PREPARED FOR: Coastal Partners

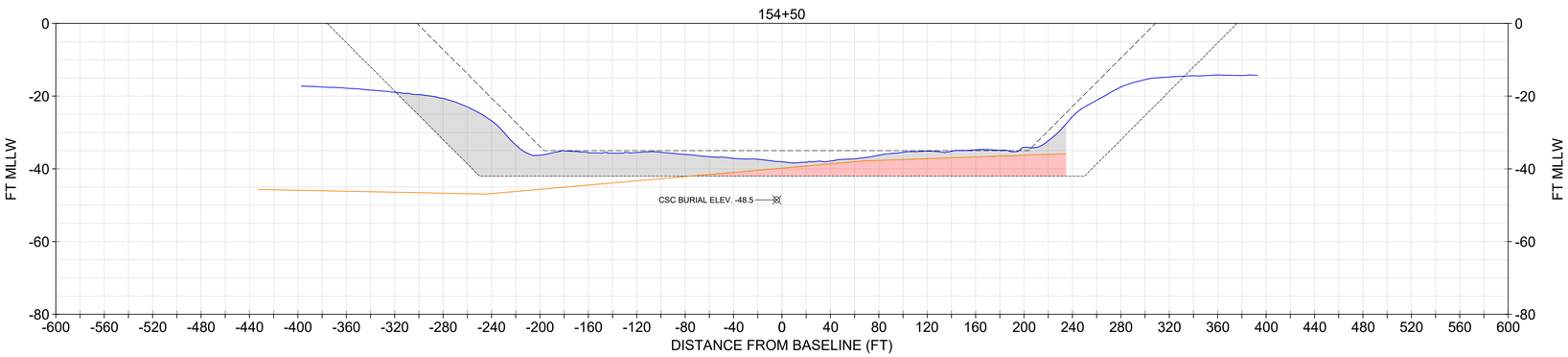
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

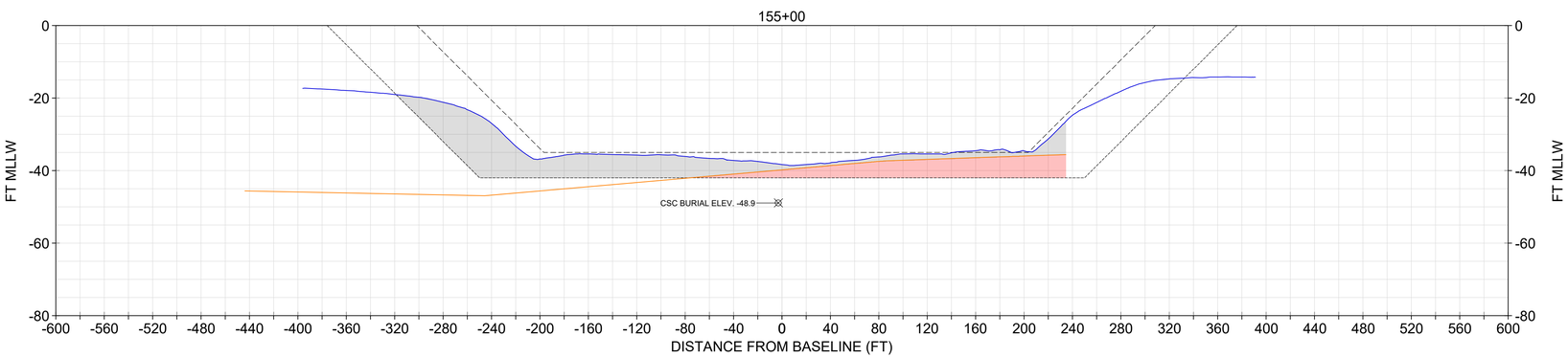
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-102









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

VERTICAL SCALE 0 20' 40'
HORIZONTAL SCALE 0 60' 120'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 124 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

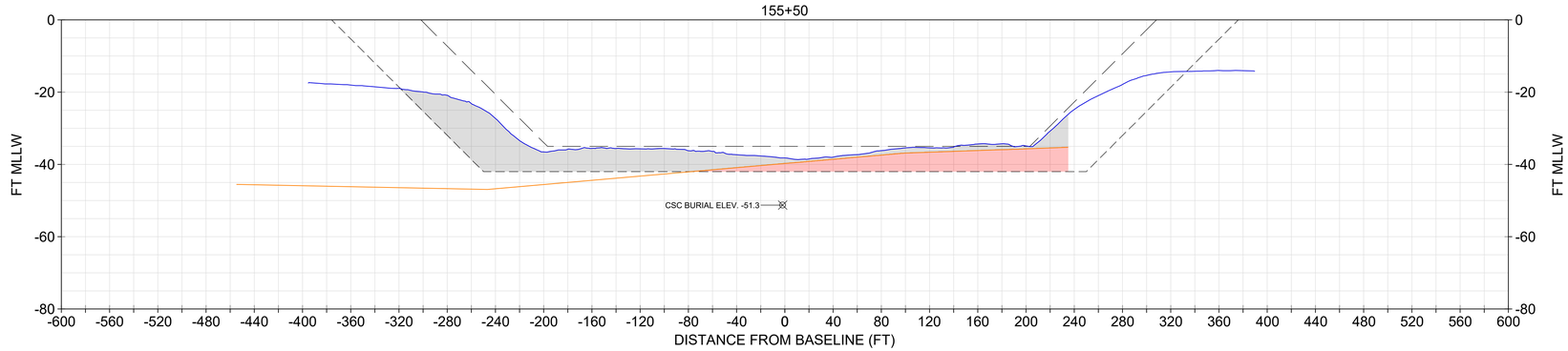
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

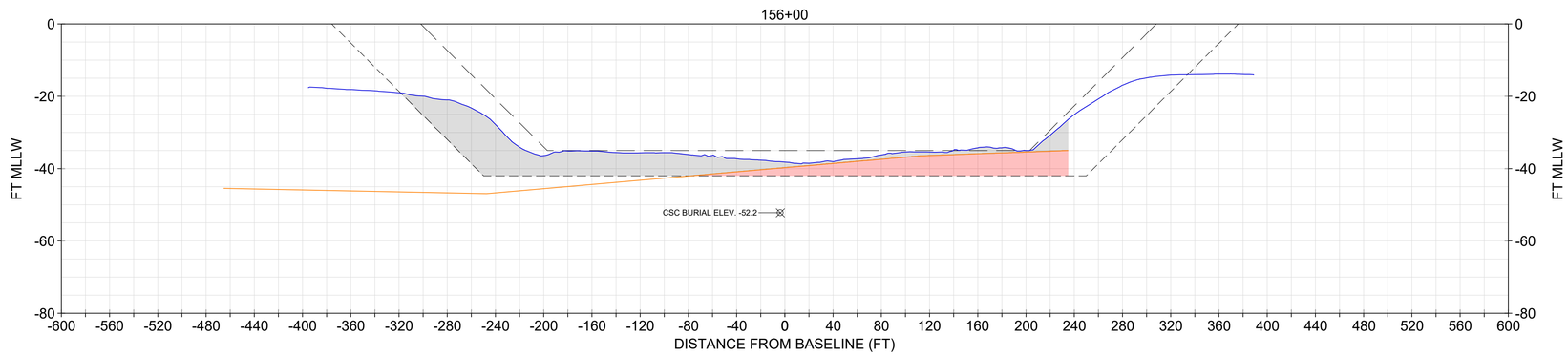
PREPARED FOR: Coastal Partners

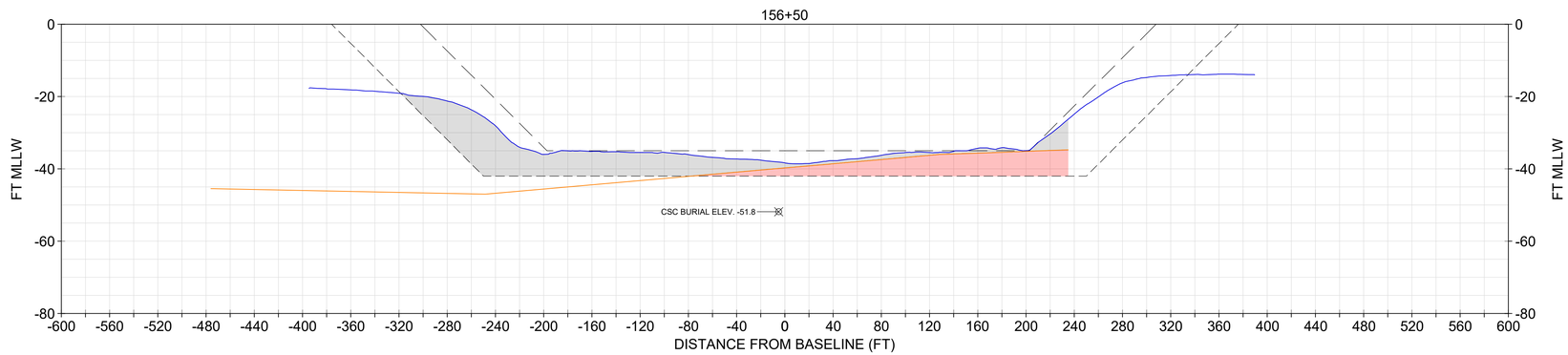
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

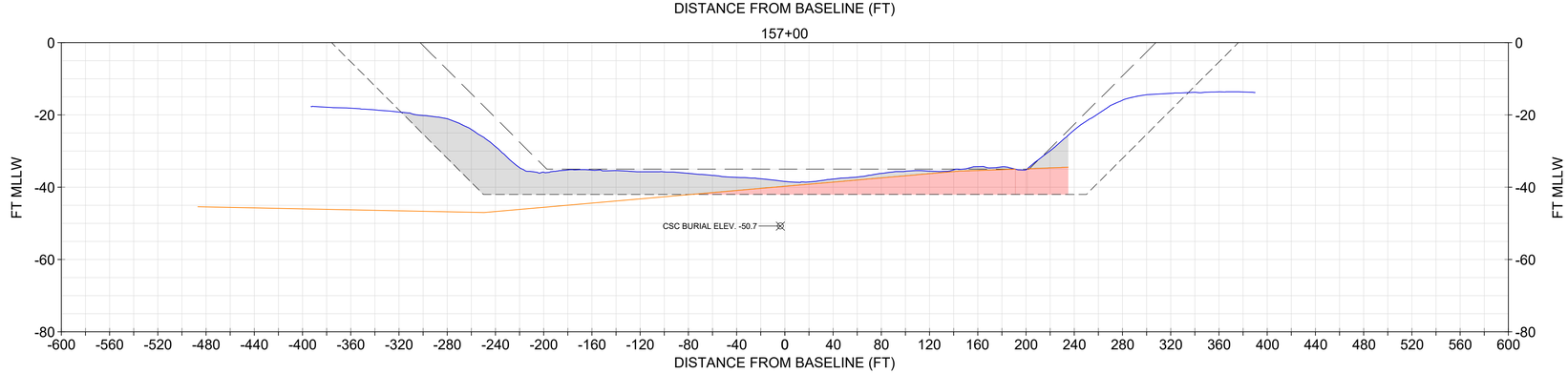
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-103









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 125 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

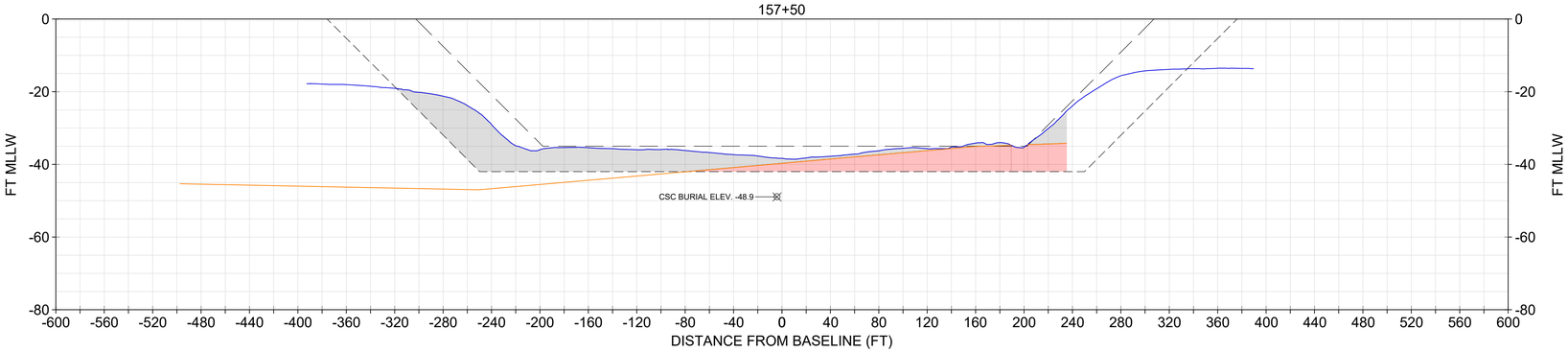
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

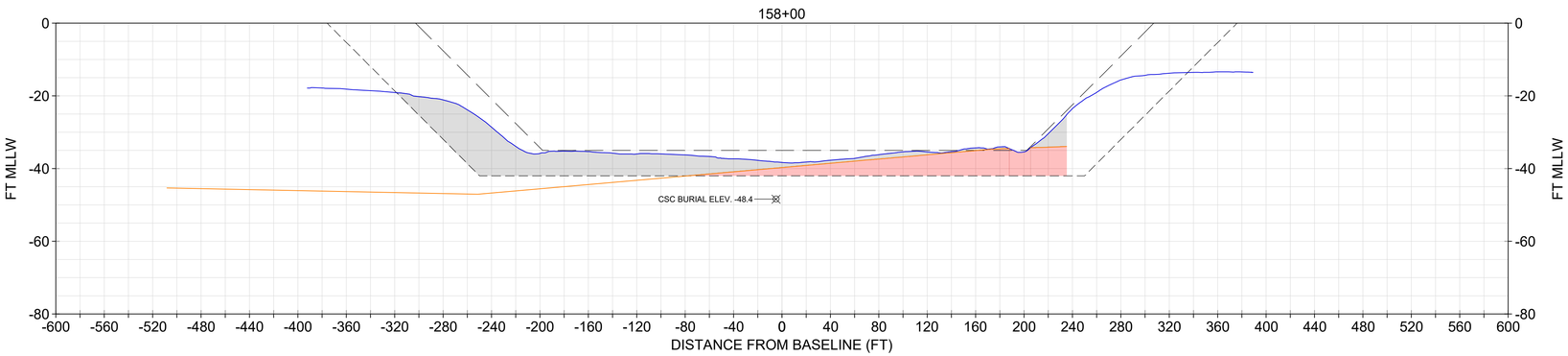
PREPARED FOR:
Coastal Partners

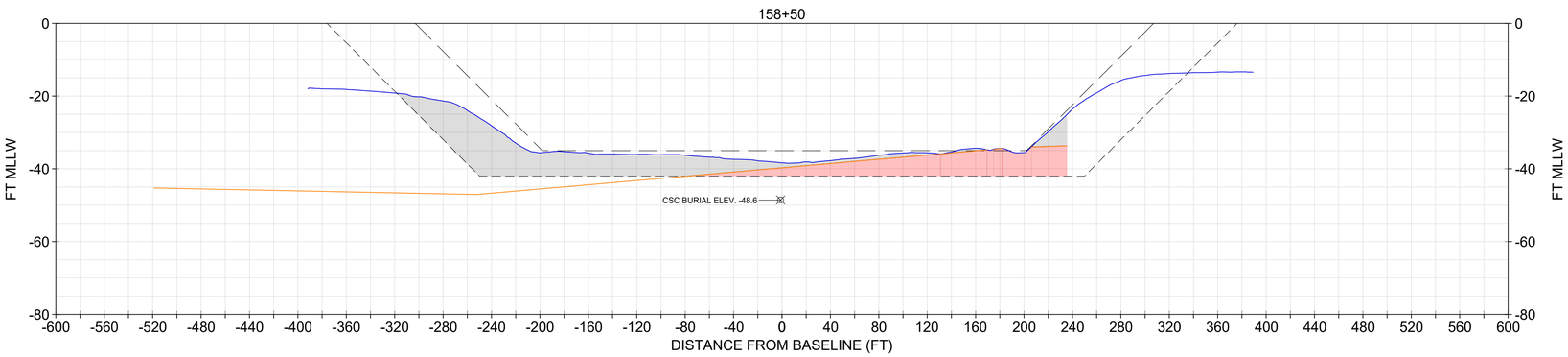
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

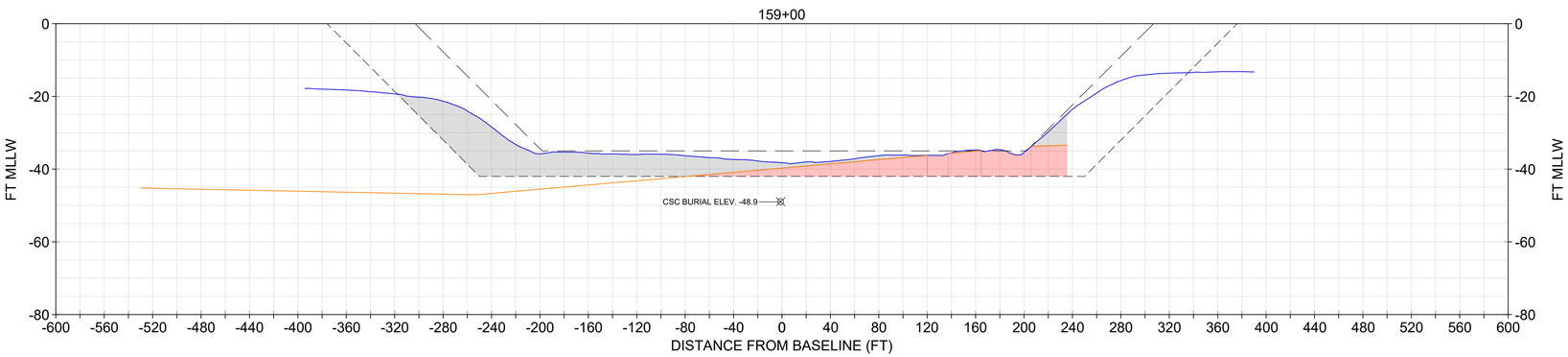
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-104









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 126 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

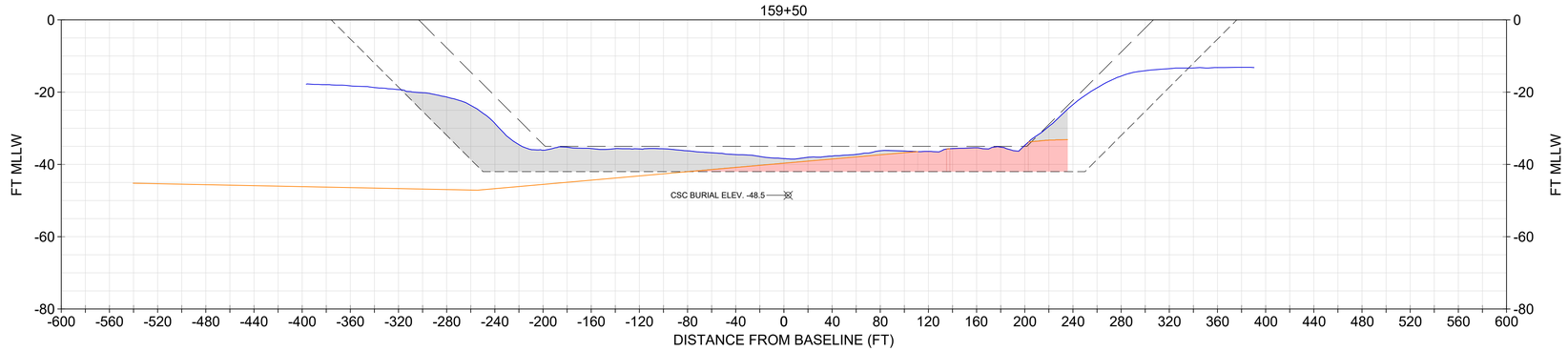
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

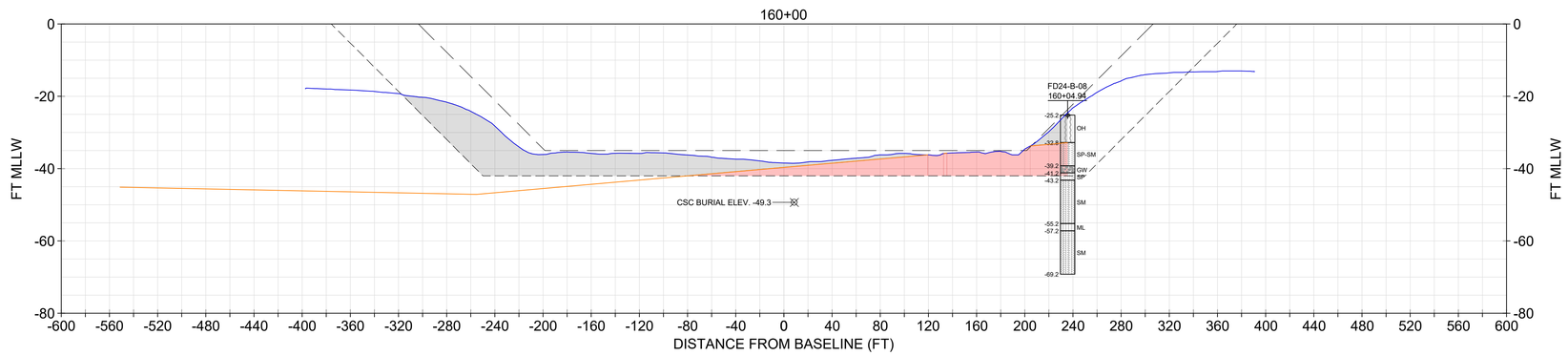
PREPARED FOR: Coastal Partners

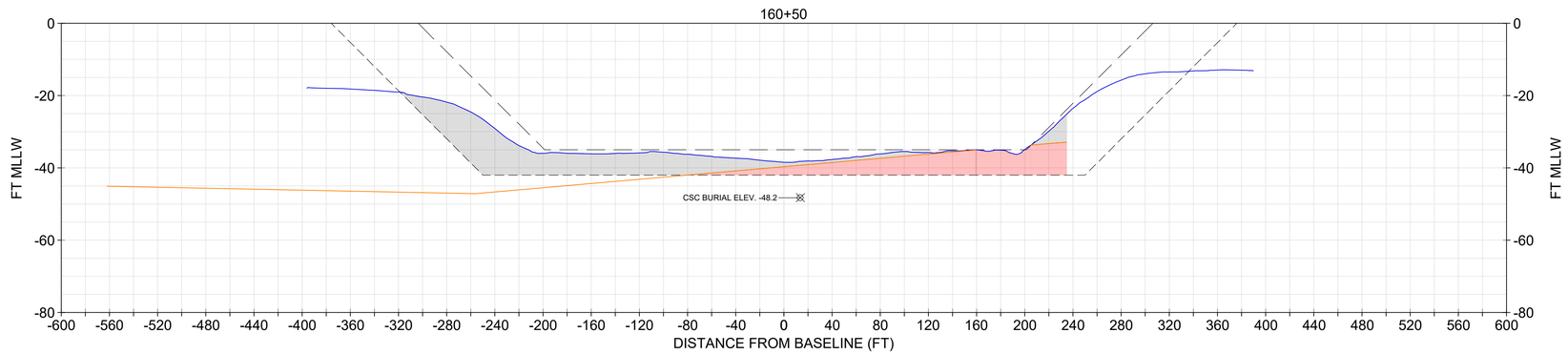
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

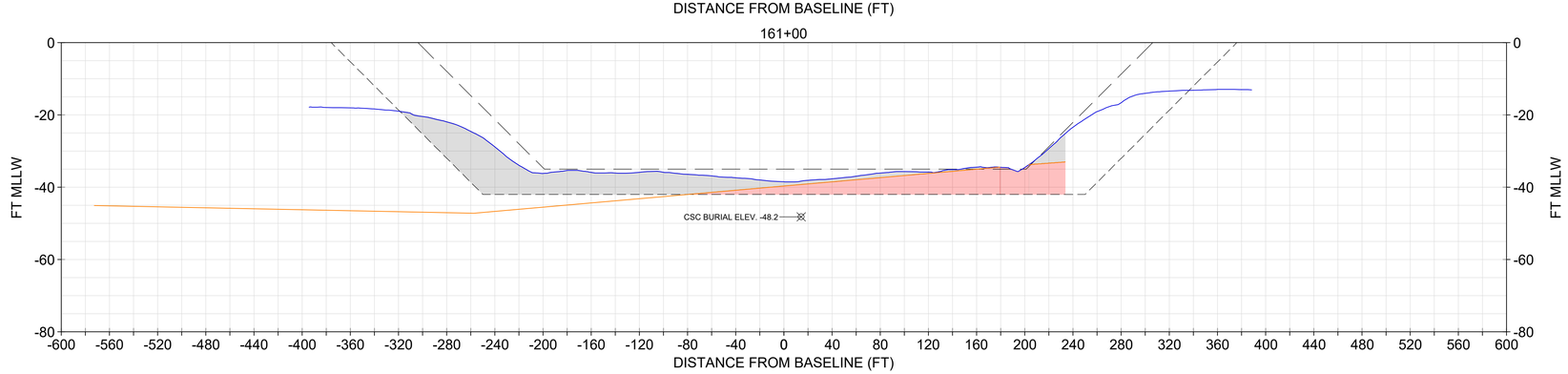
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-105









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-08	-25.2	-69.2	GBA	7/24/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- SP (POORLY GRADED SAND)
- GW (WELL GRADED GRAVEL)
- SM (SILTY SAND)
- SP-SM (POORLY GRADED SAND WITH SILT)
- ML (SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: T
SHEET 127 OF 220

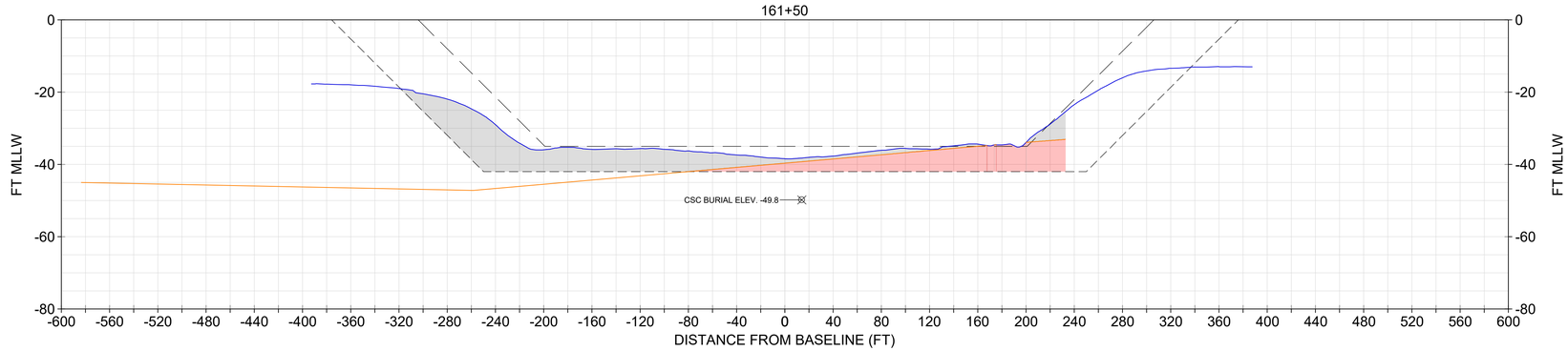
DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

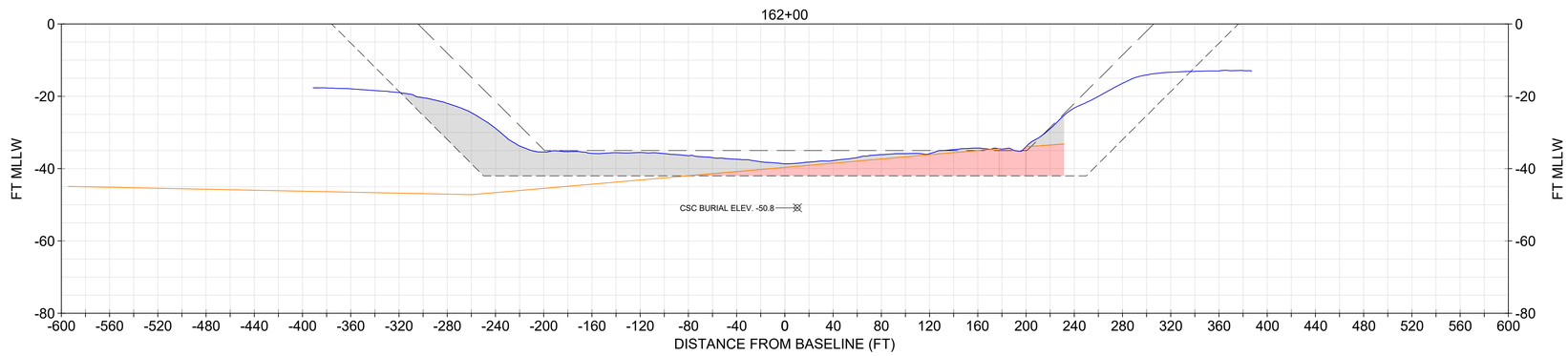
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595
PREPARED FOR: Coastal Partners

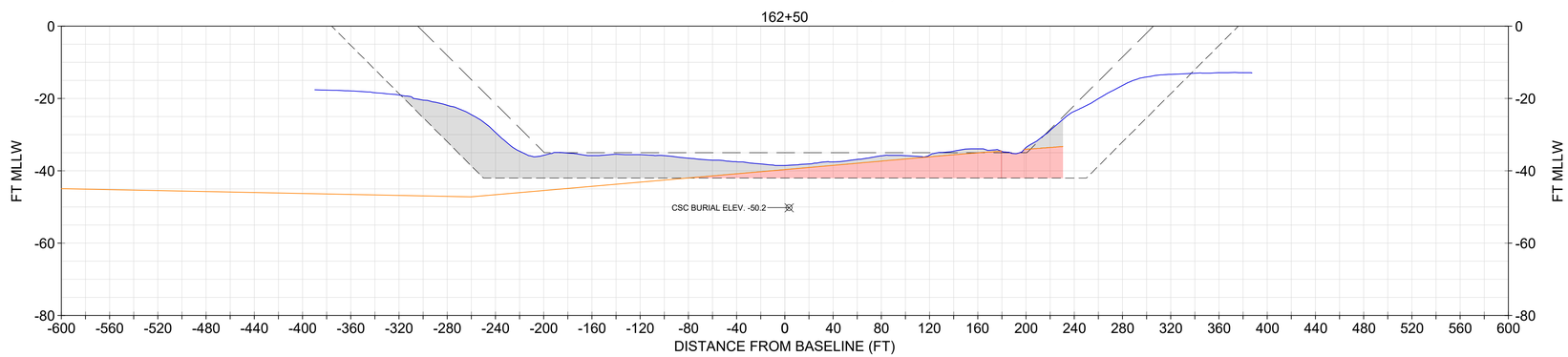
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

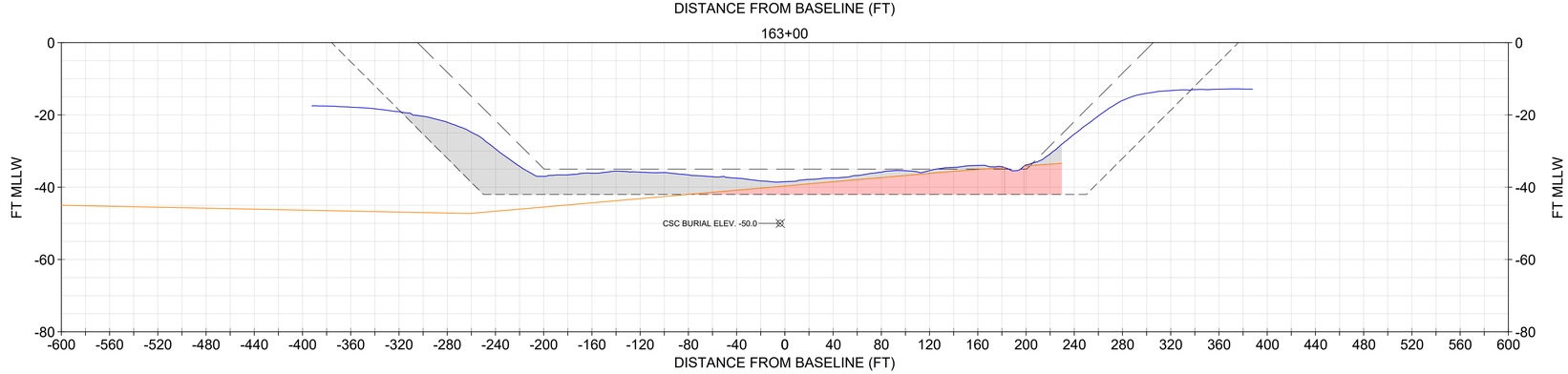
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-106









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 126 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

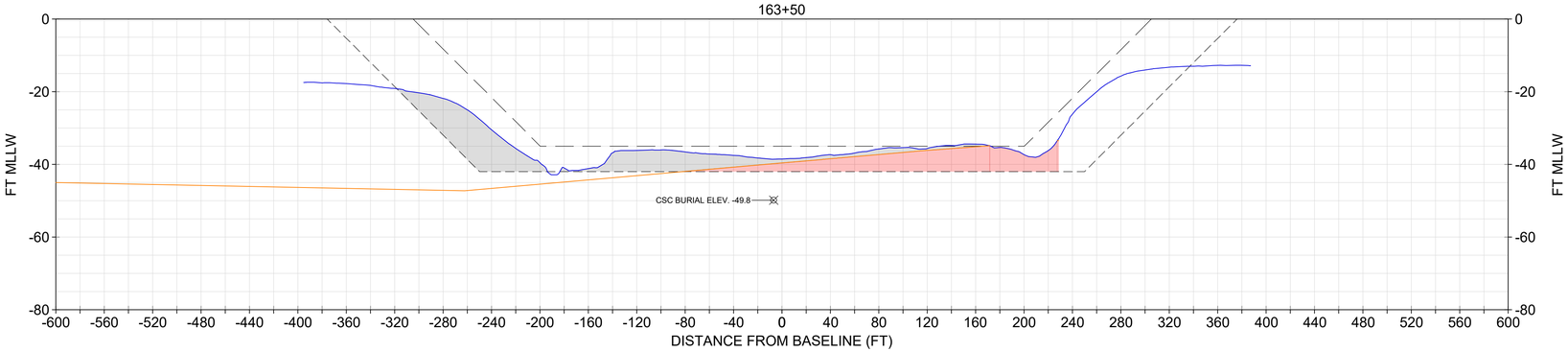
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 682-5595

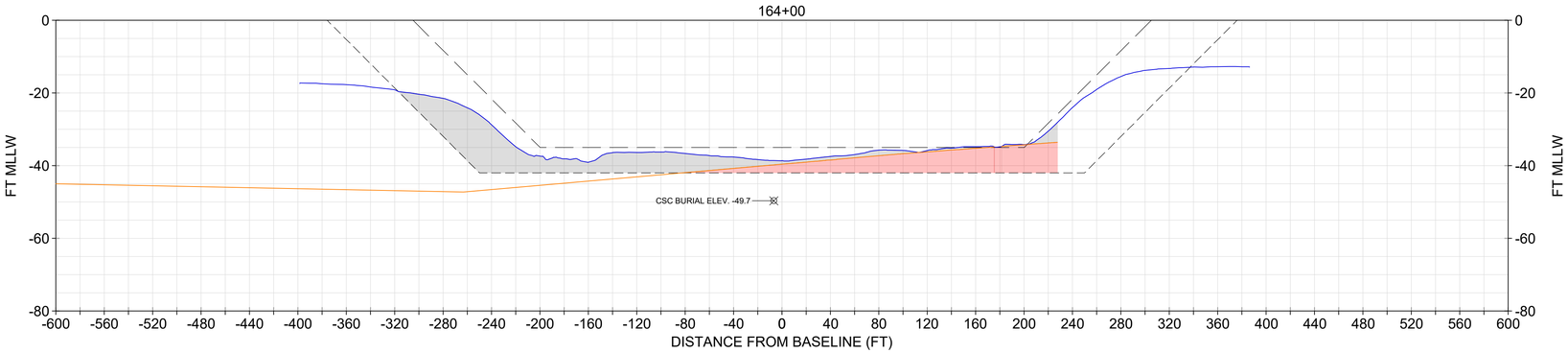
PREPARED FOR:
Coastal Partners

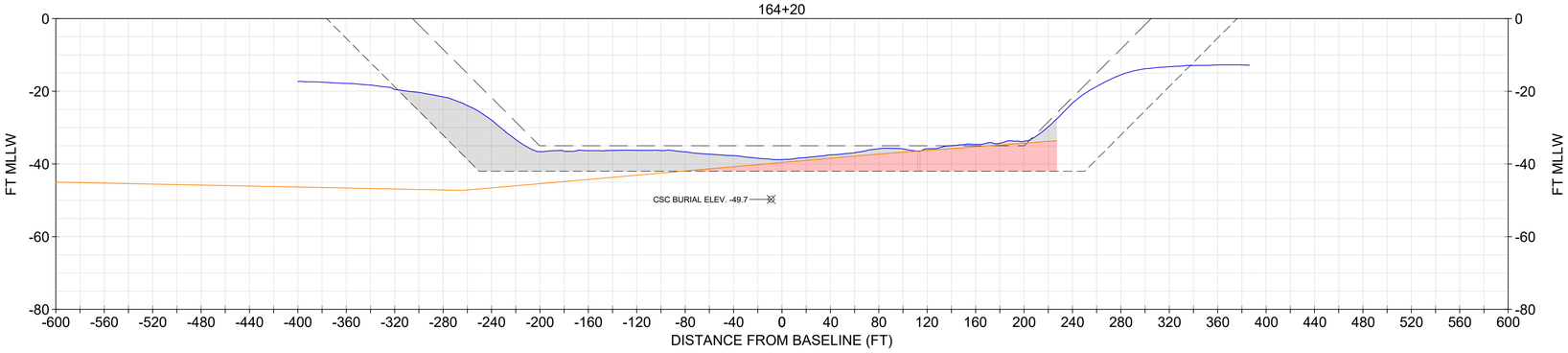
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

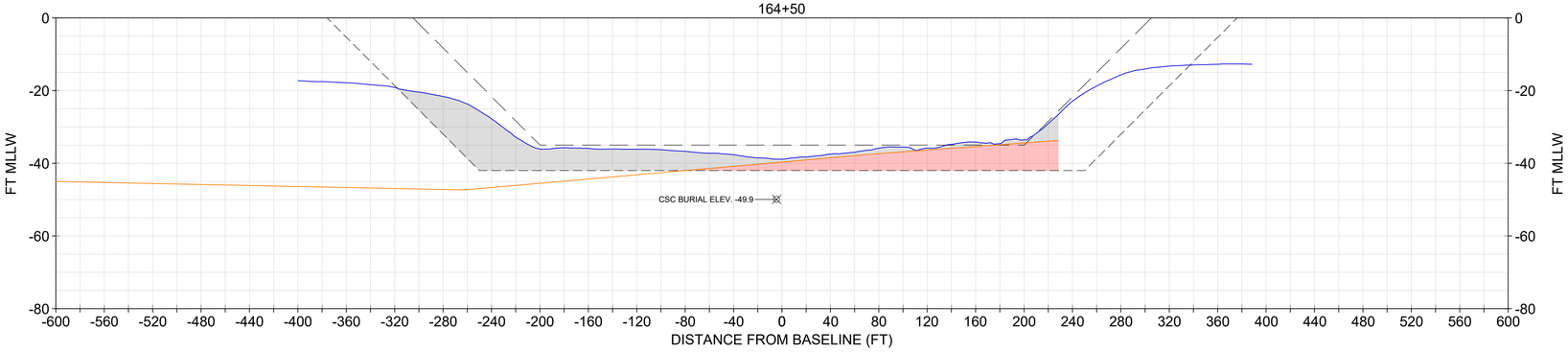
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-107









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 129 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

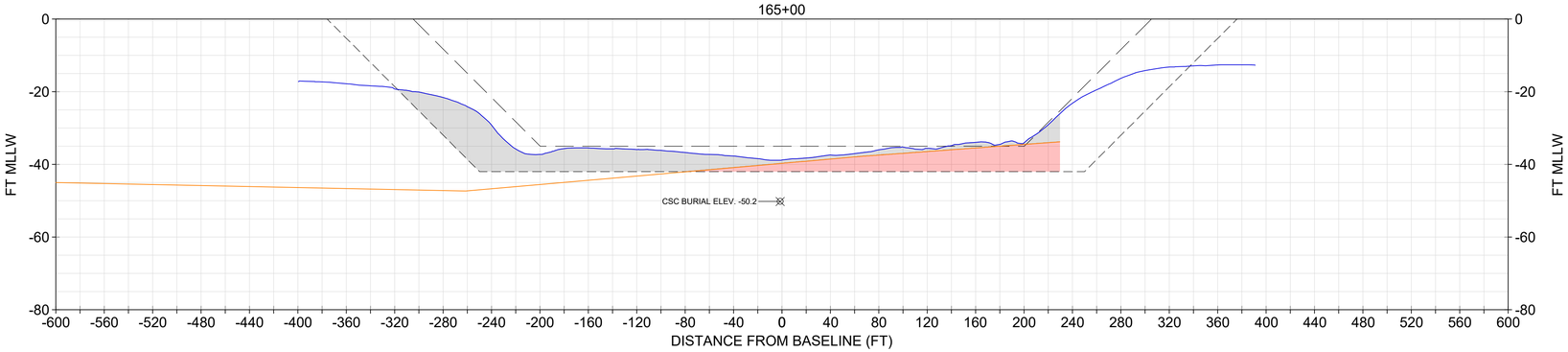
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

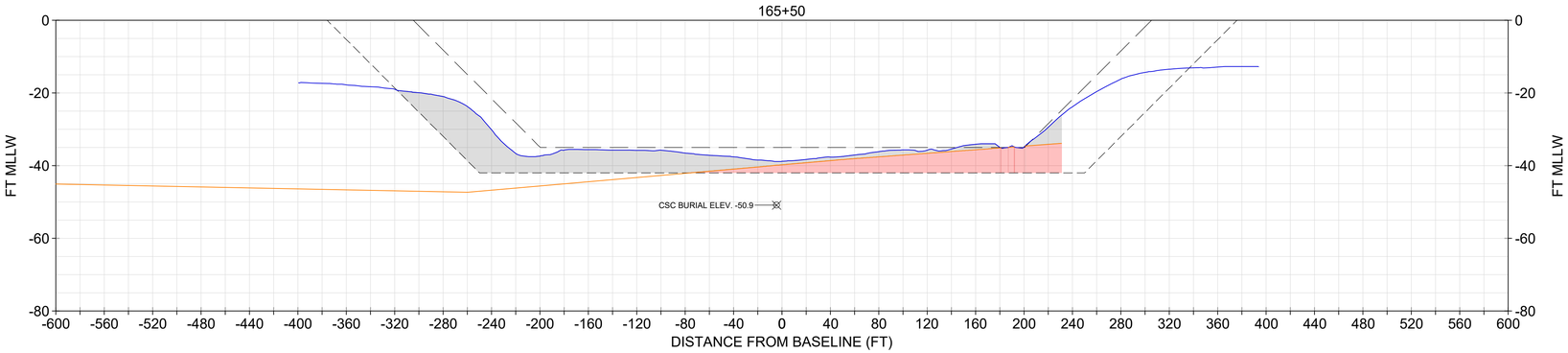
PREPARED FOR: Coastal Partners

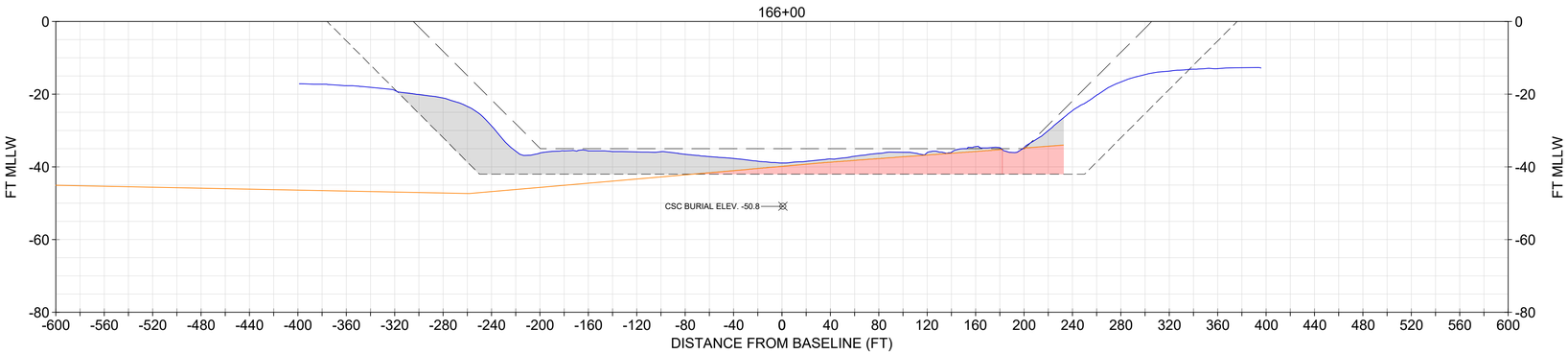
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

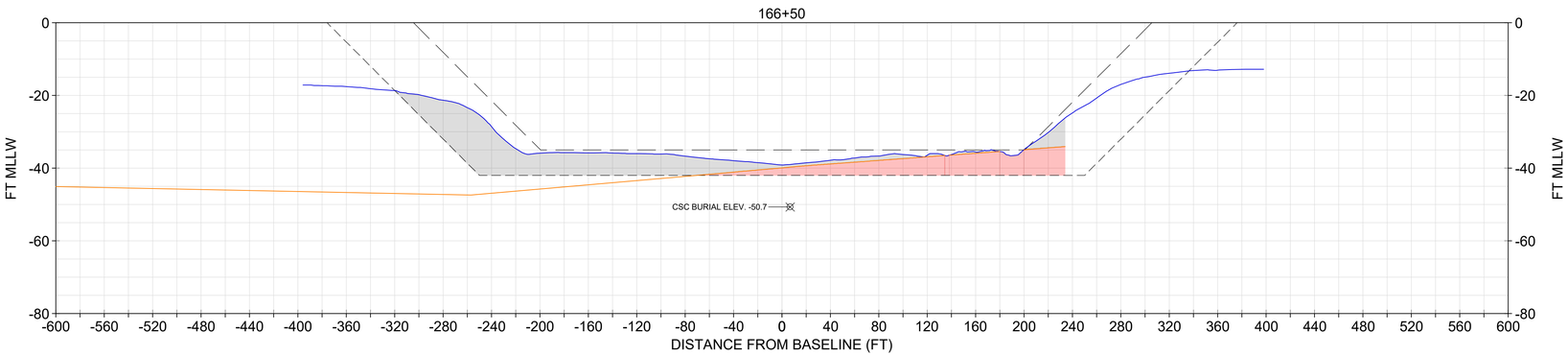
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-108









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 130 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

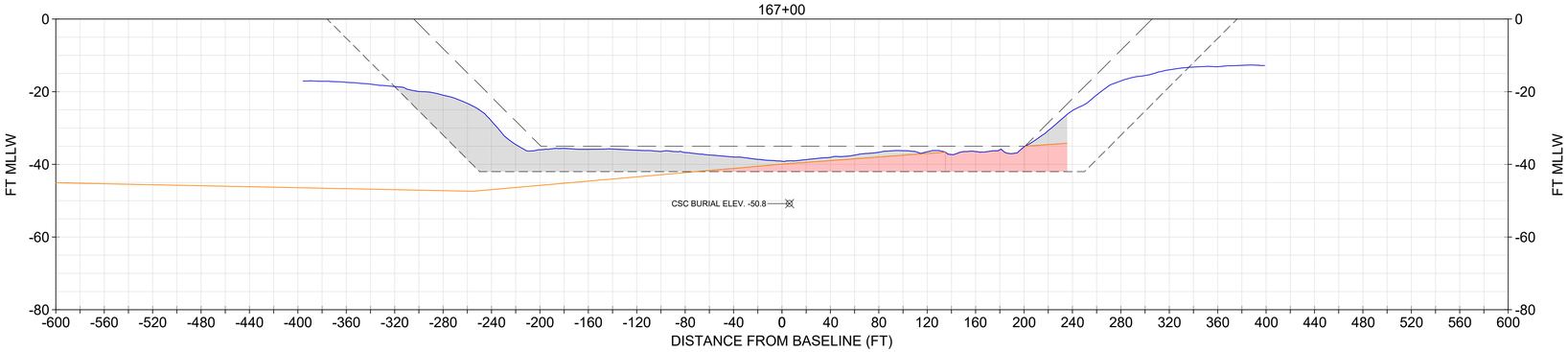
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

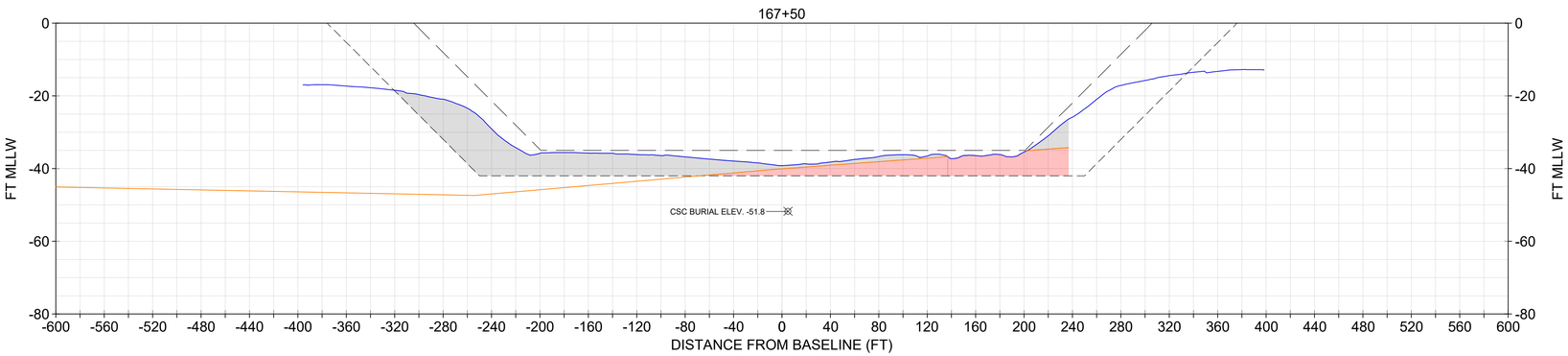
PREPARED FOR: Coastal Partners

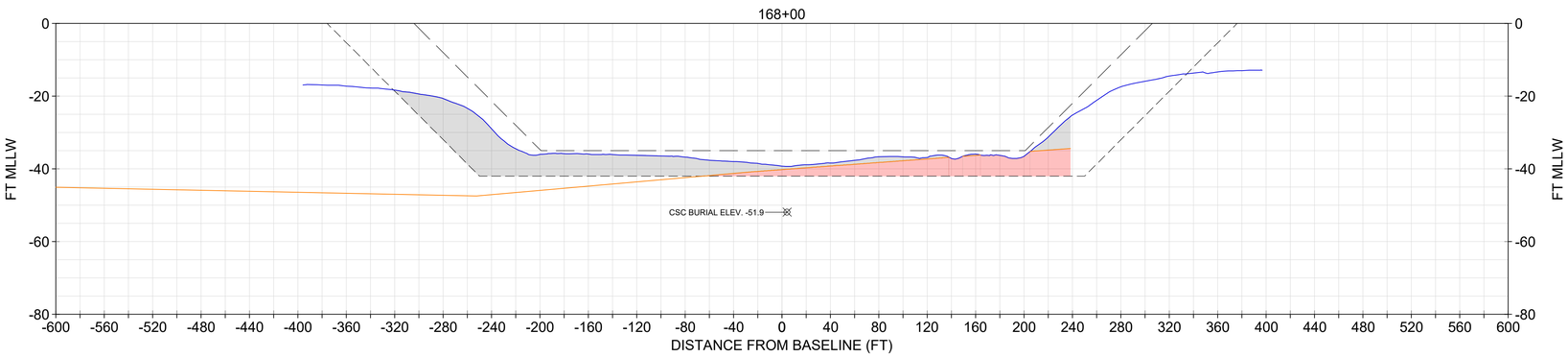
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

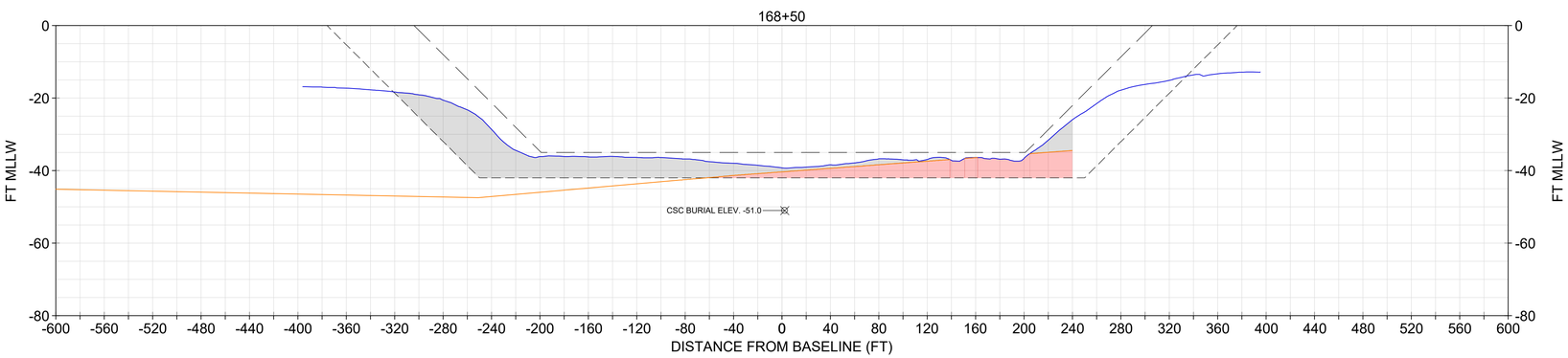
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-109









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 131 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

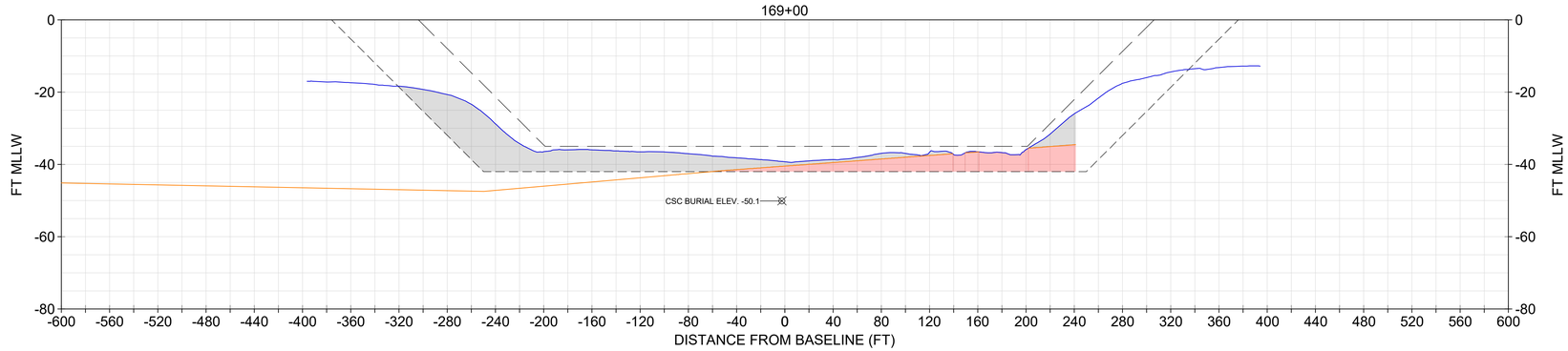
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

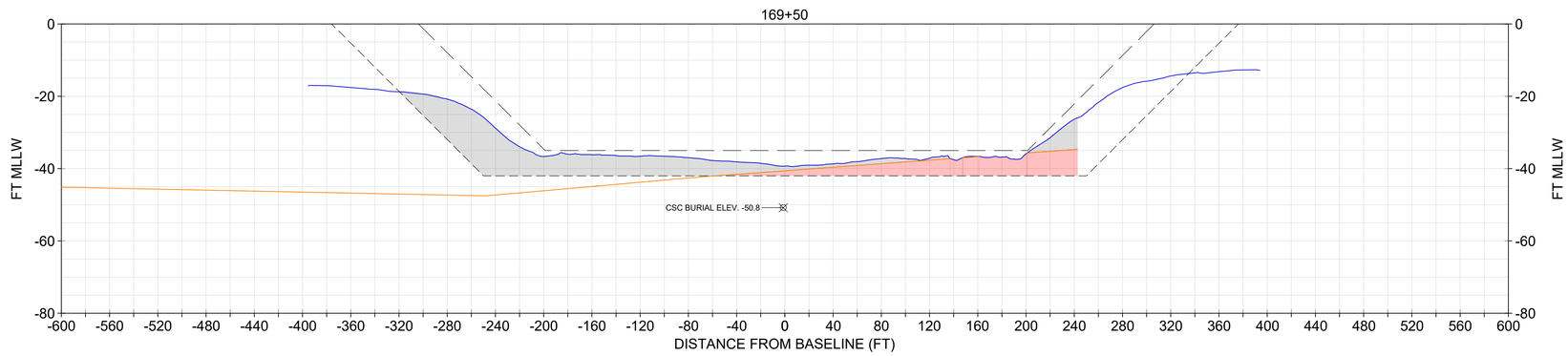
PREPARED FOR: Coastal Partners

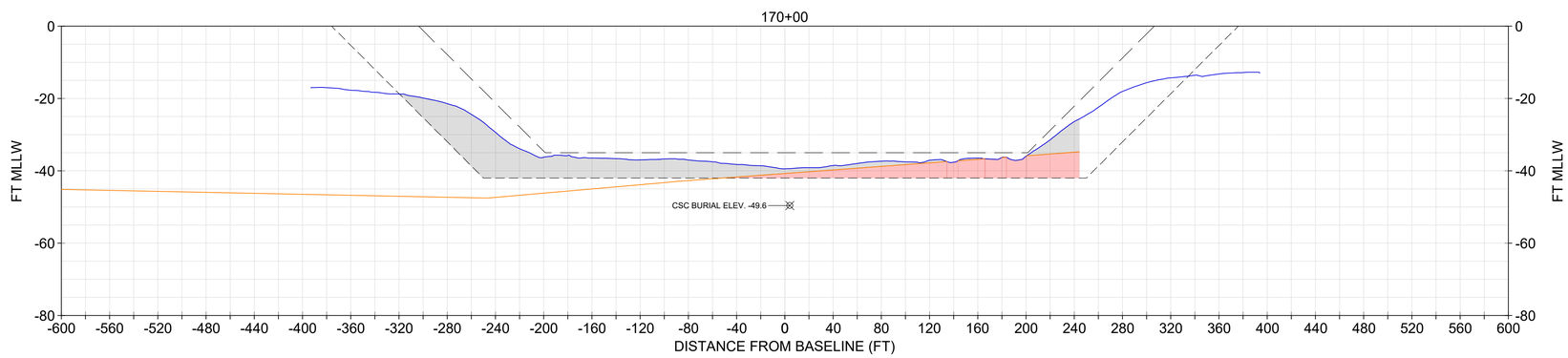
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

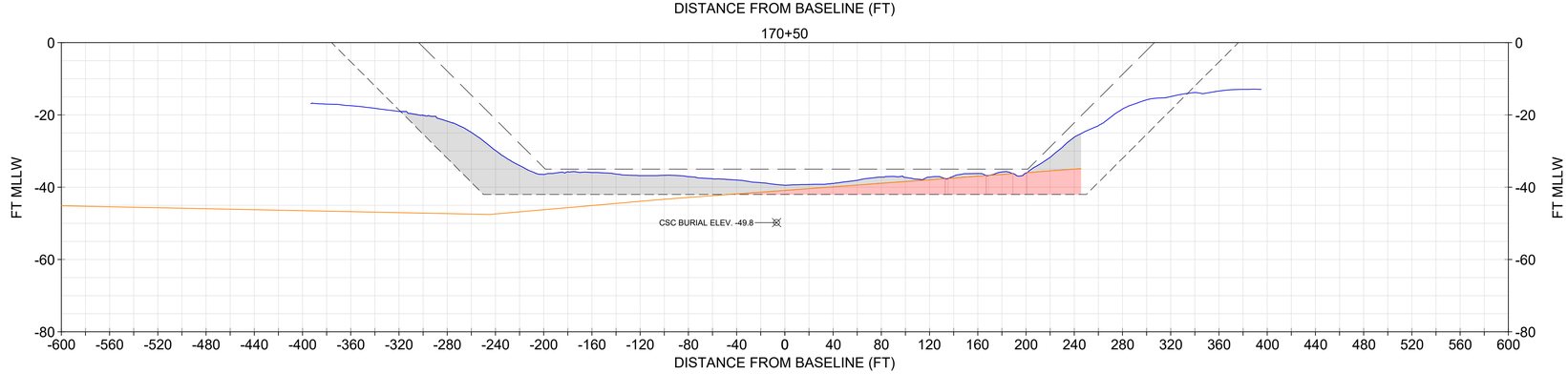
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-110









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 132 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

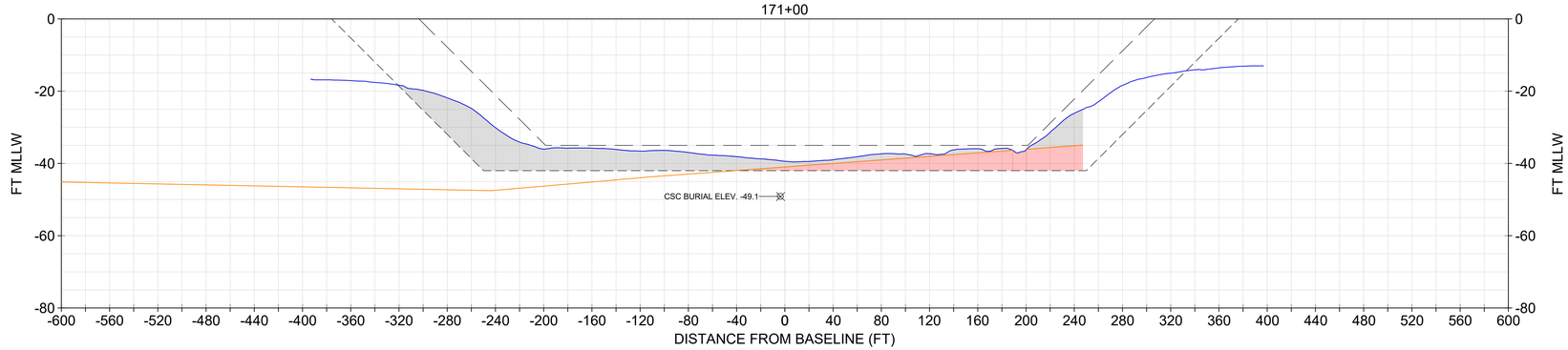
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

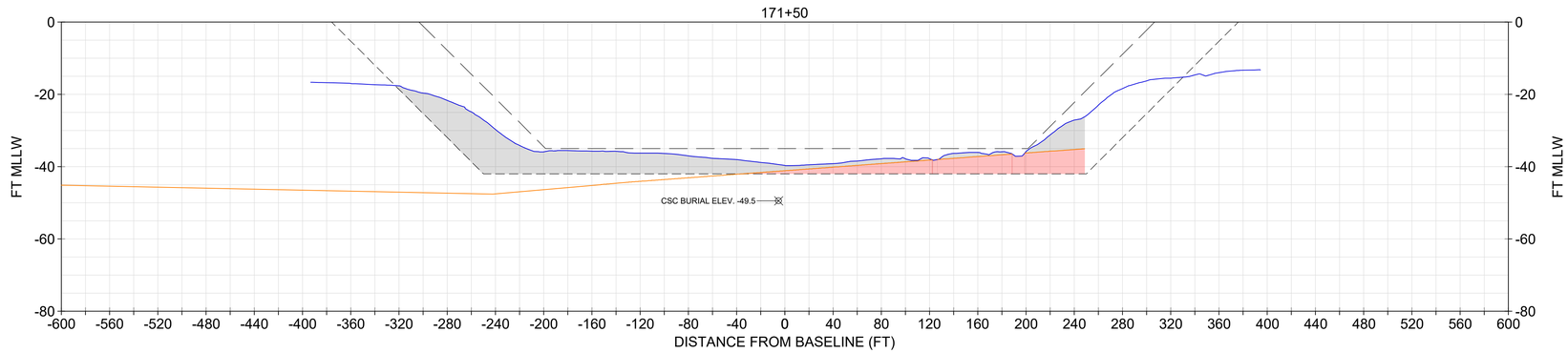
PREPARED FOR: Coastal Partners

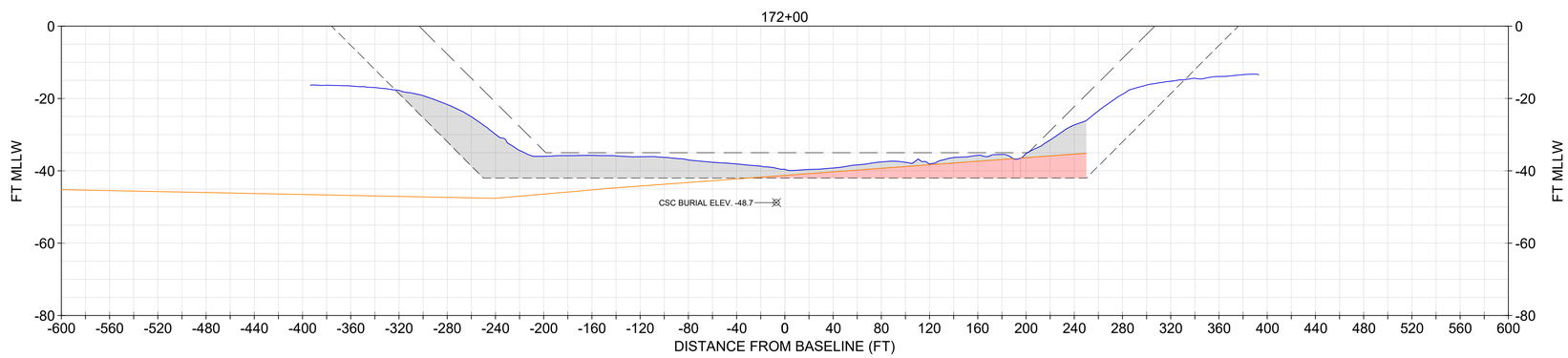
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

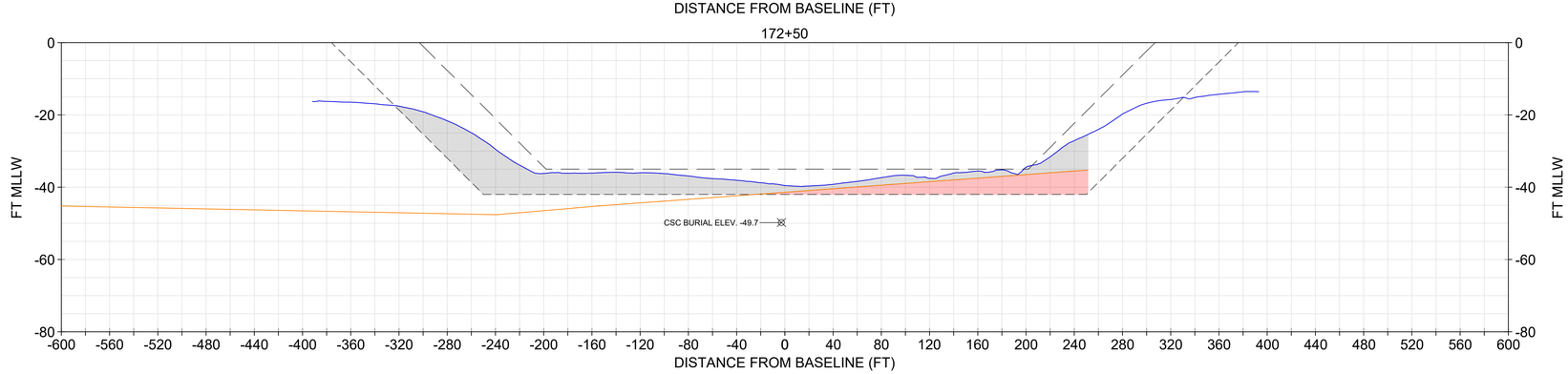
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-111









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 133 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

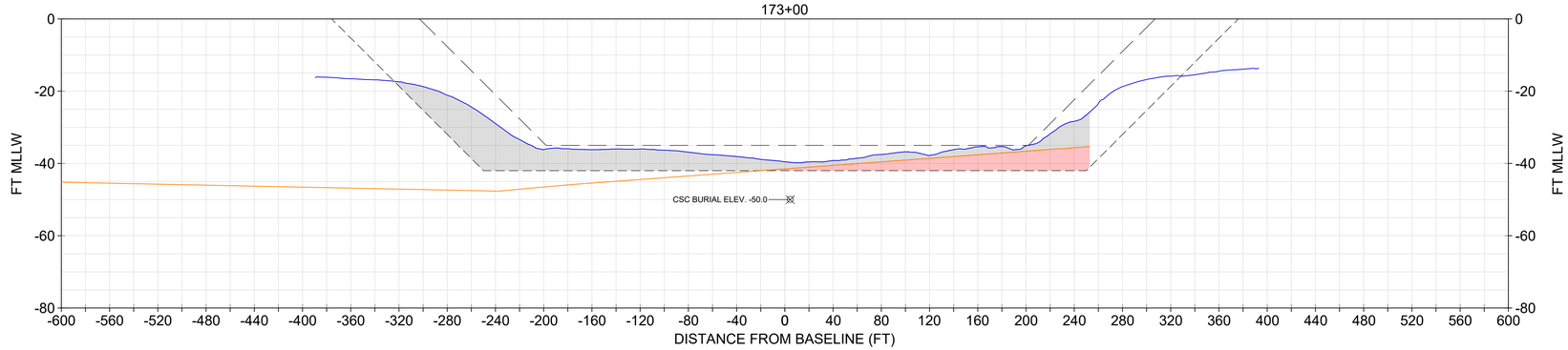
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

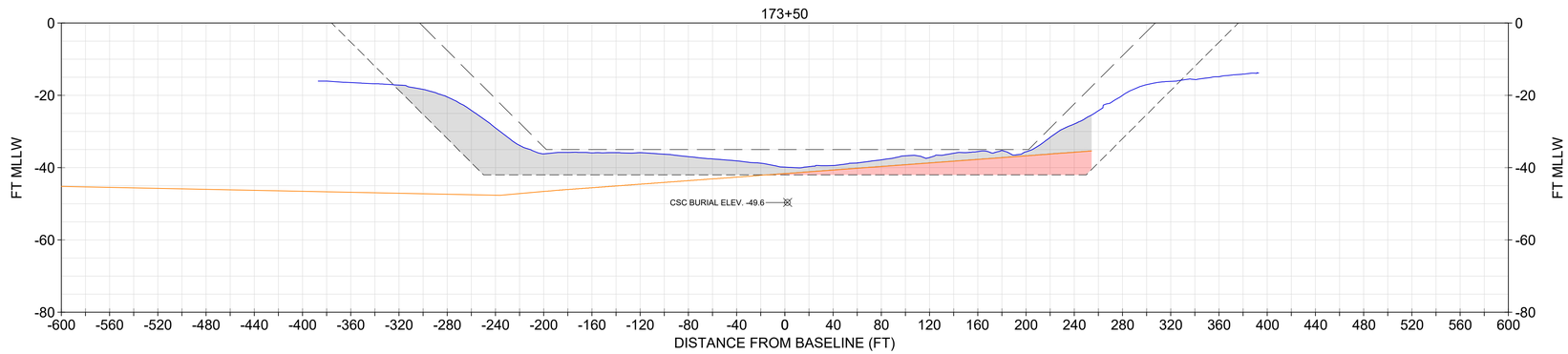
PREPARED FOR: Coastal Partners

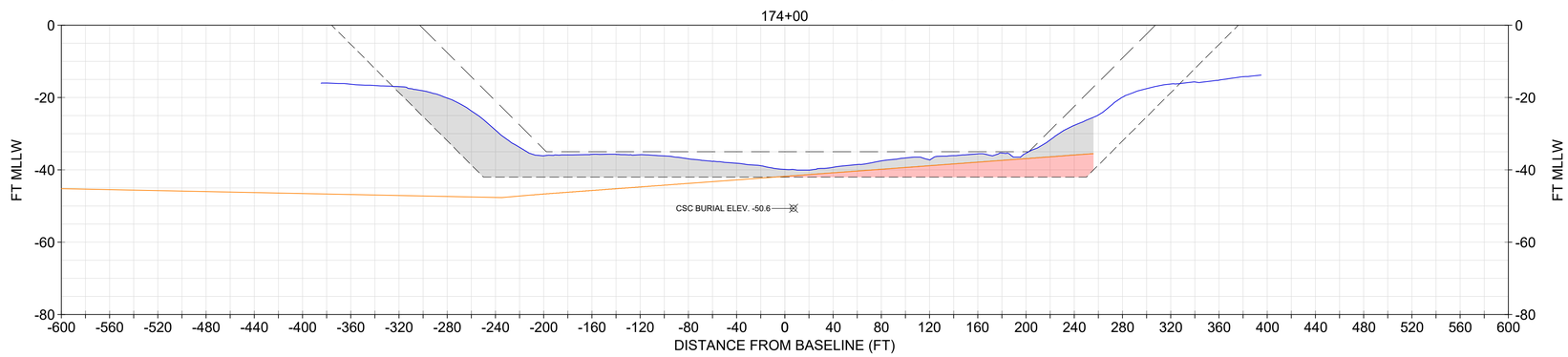
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

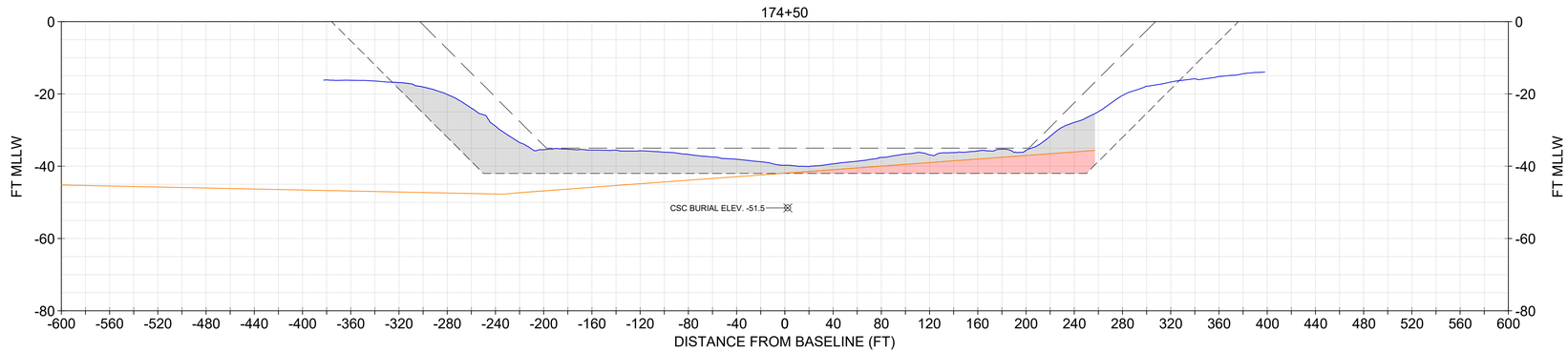
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-112









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 134 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

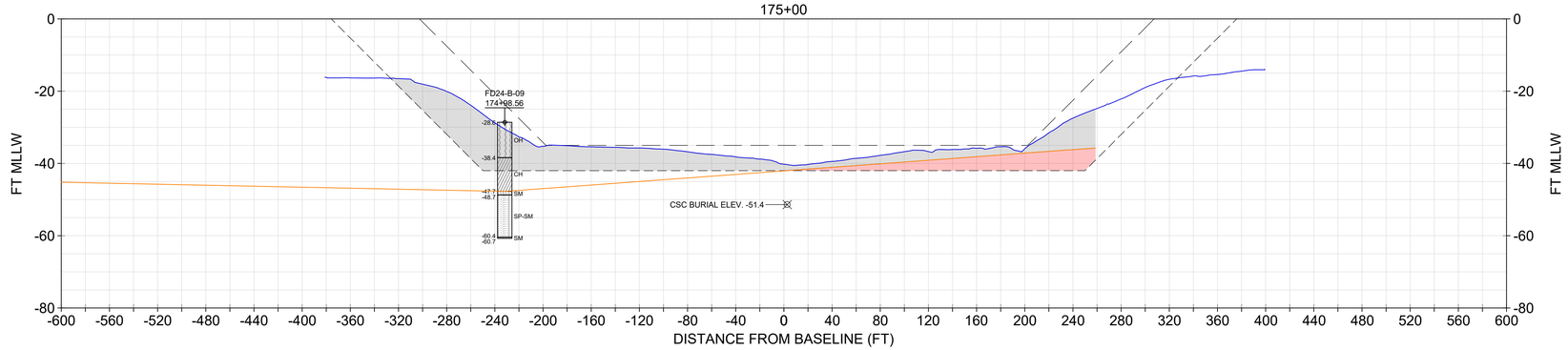
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

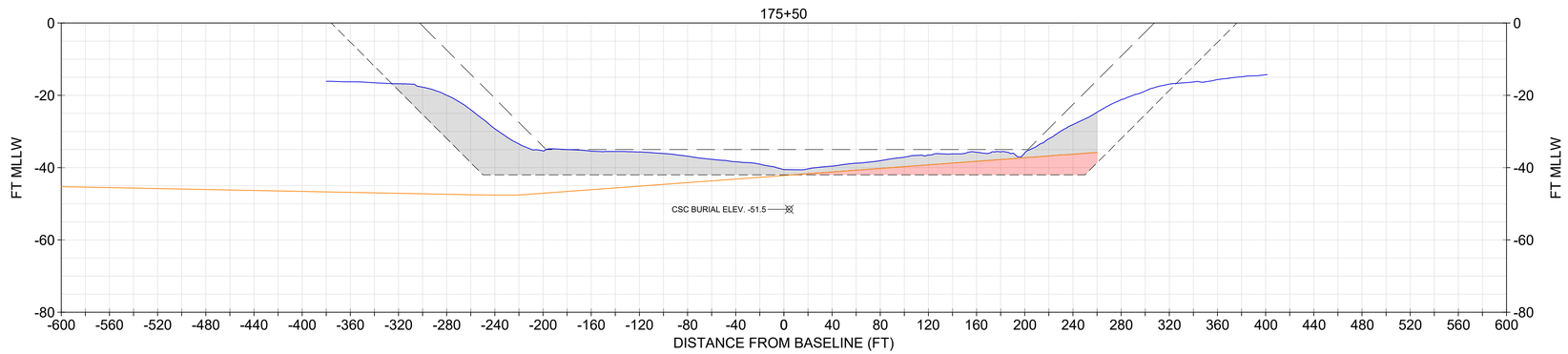
PREPARED FOR: Coastal Partners

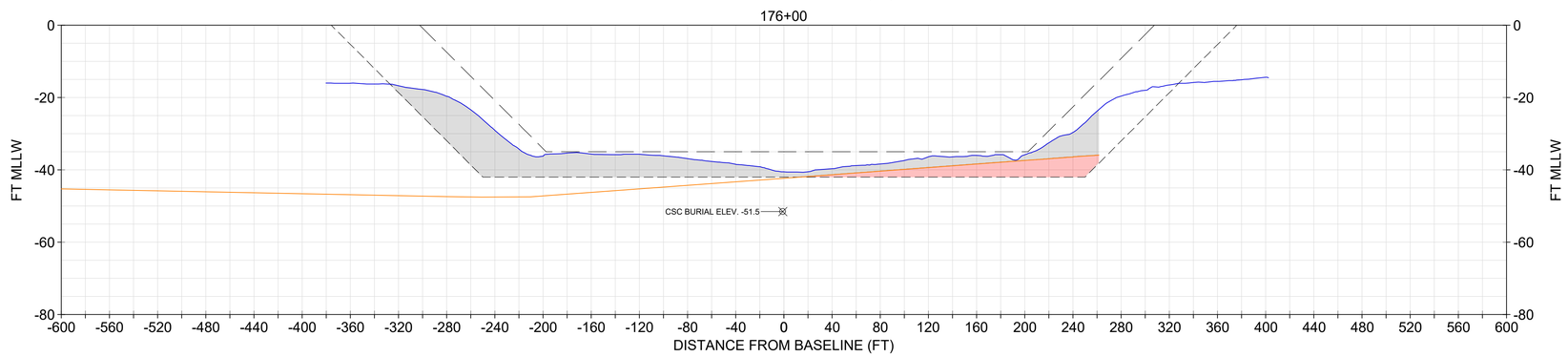
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

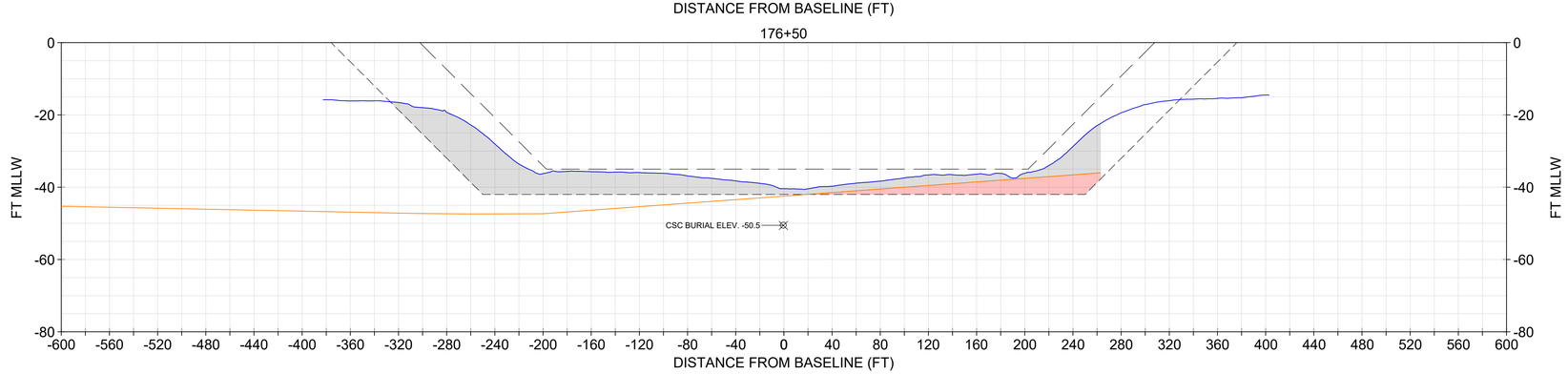
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-113









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-09	-28.6	-60.7	GBA	07/12/24

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- CH (FAT CLAY)
- SM (SILTY SAND)
- SP-SM (POORLY GRADED SAND WITH SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 135 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

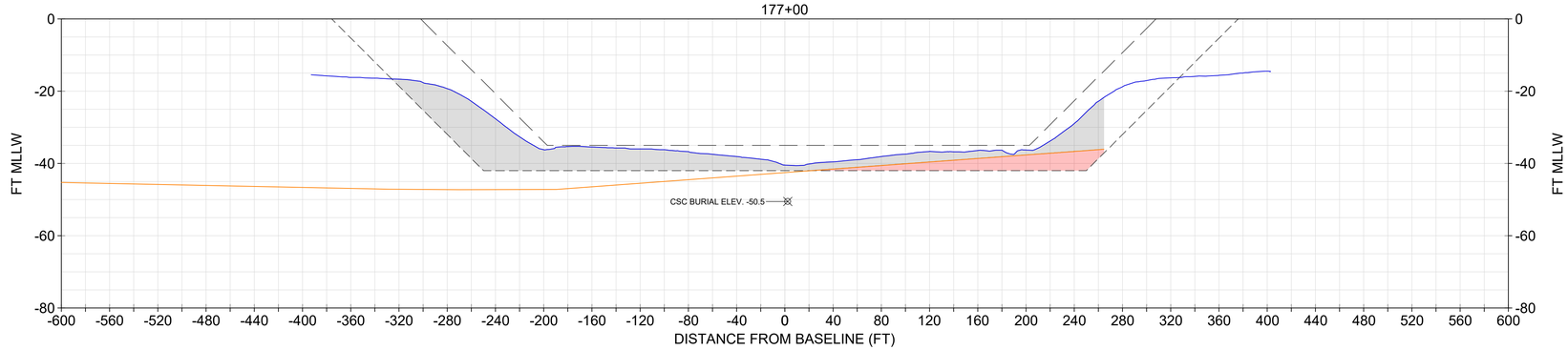
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

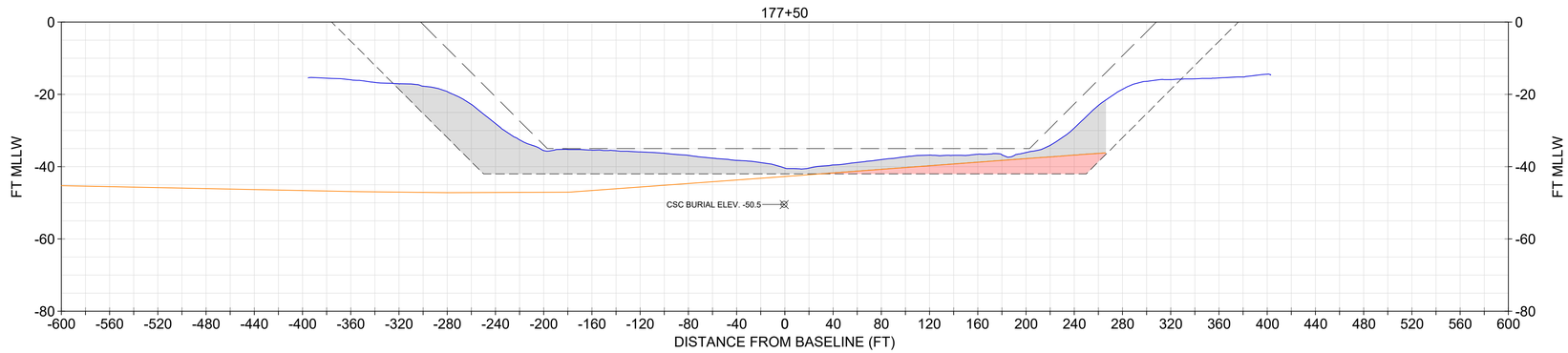
PREPARED FOR: Coastal Partners

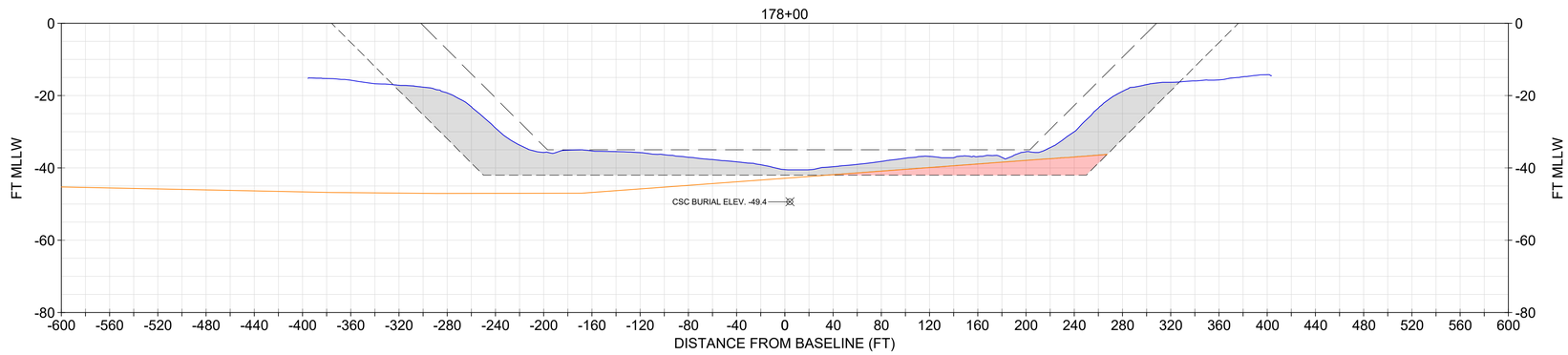
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

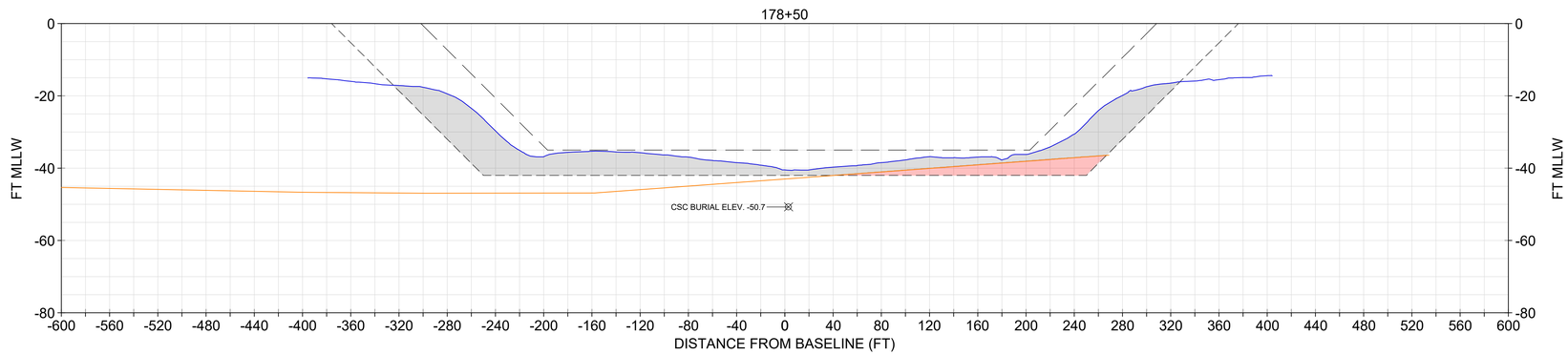
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-114









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 136 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

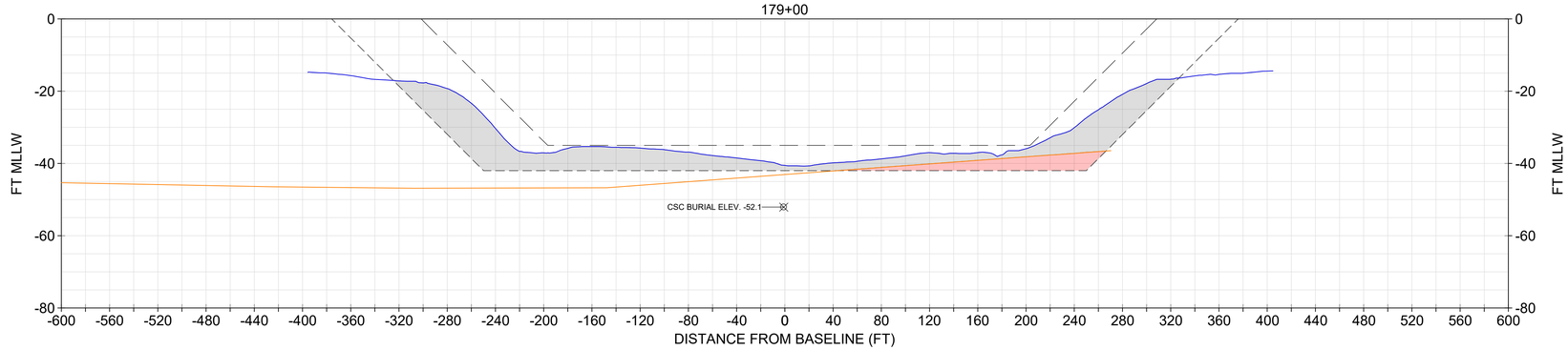
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit E
Baltimore, MD 21237
Phone (410) 882-5565

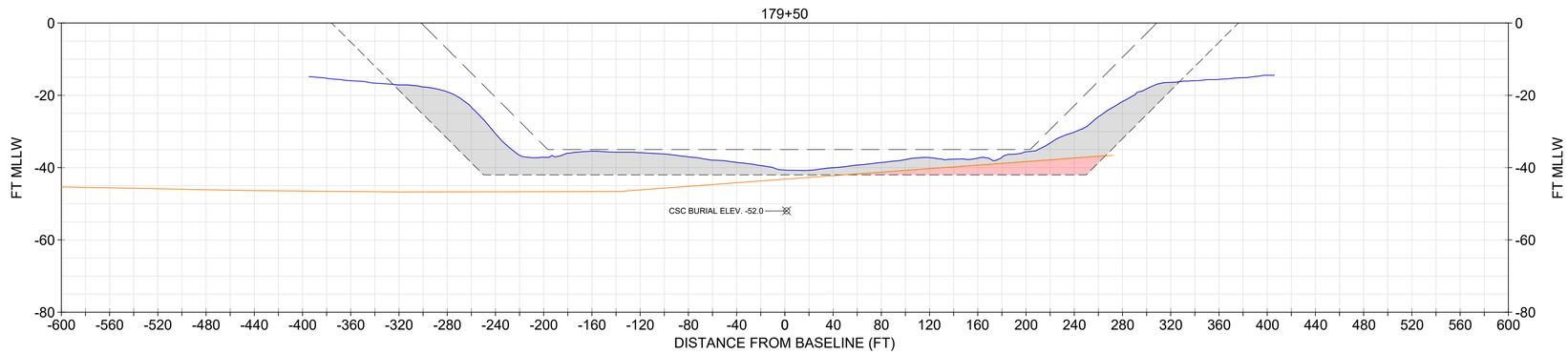
PREPARED FOR: Coastal Partners

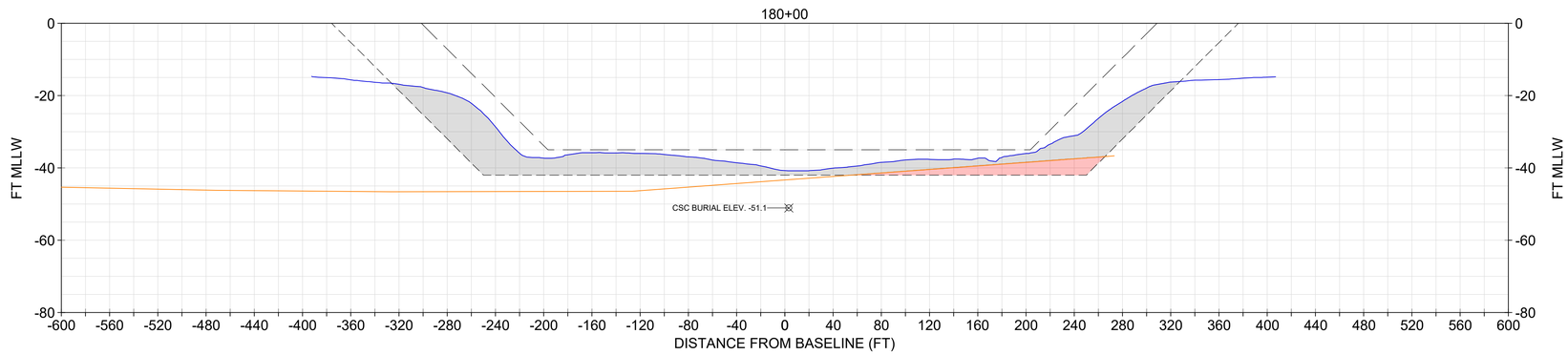
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

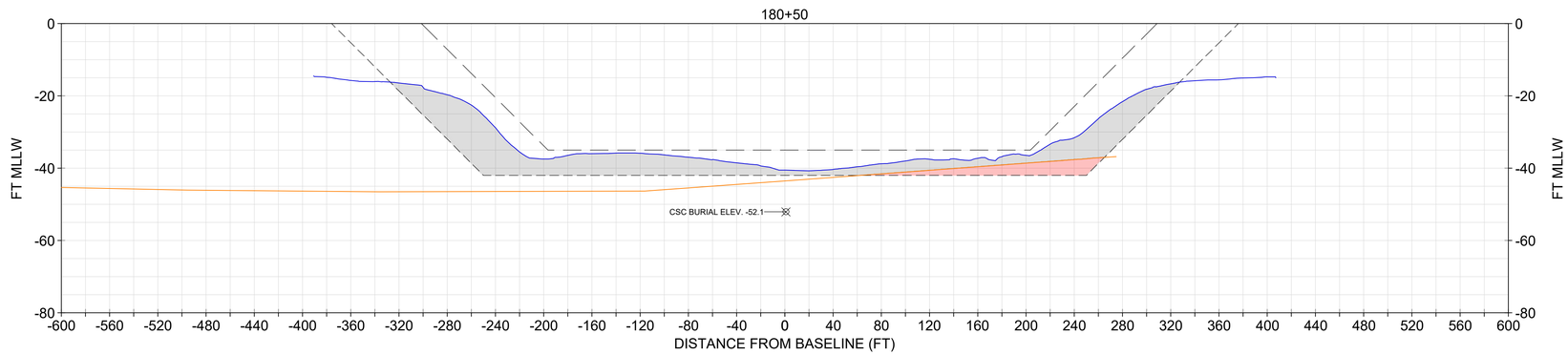
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-115









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 137 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

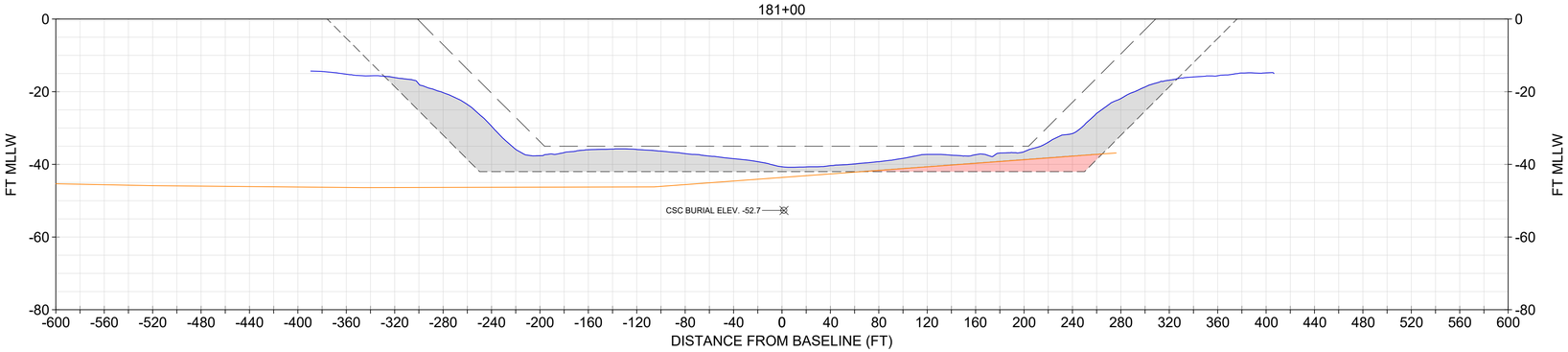
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

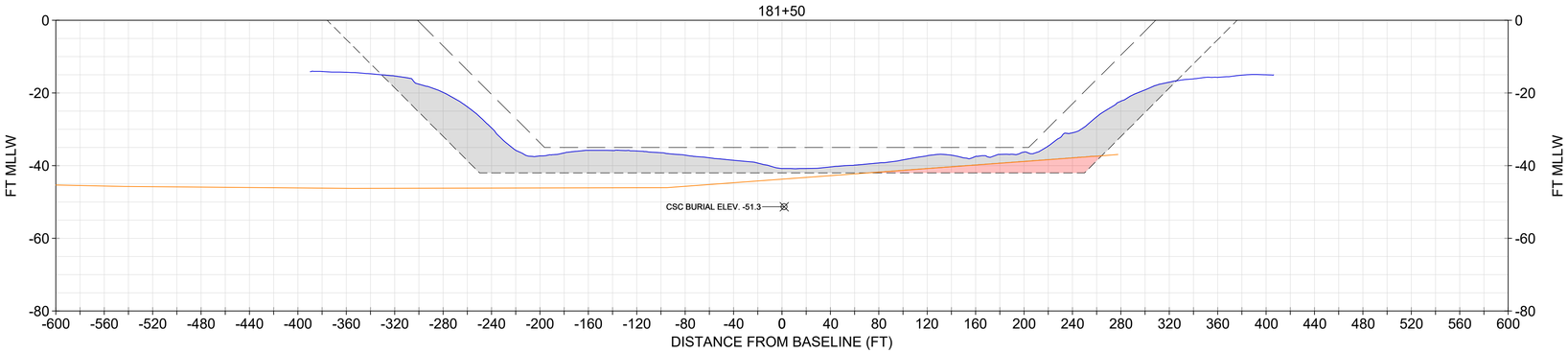
PREPARED FOR: Coastal Partners

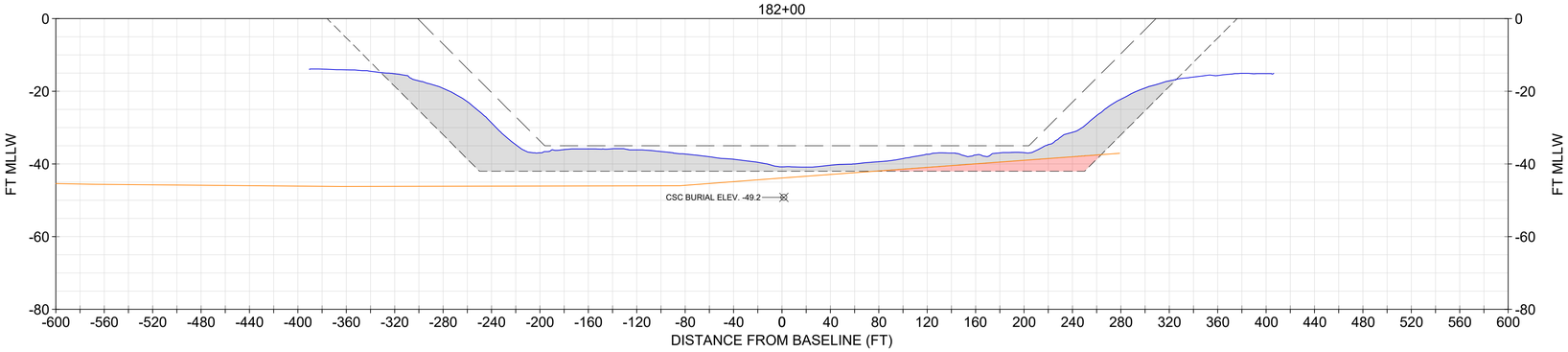
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

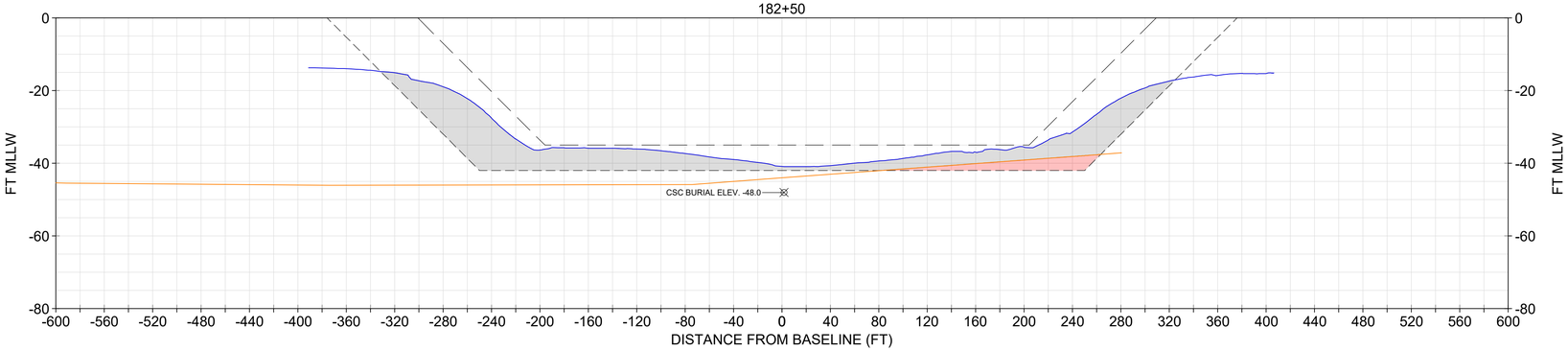
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-116









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 138 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

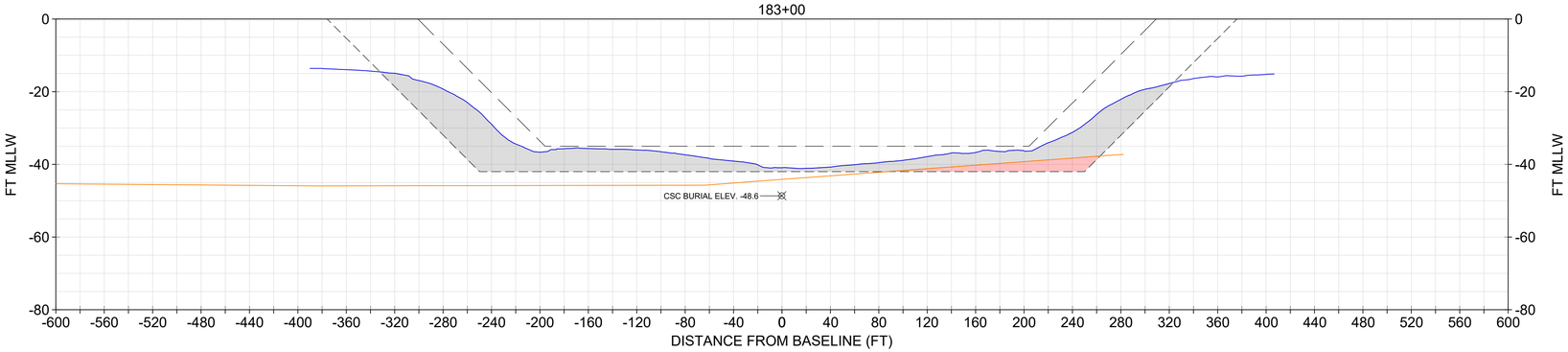
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

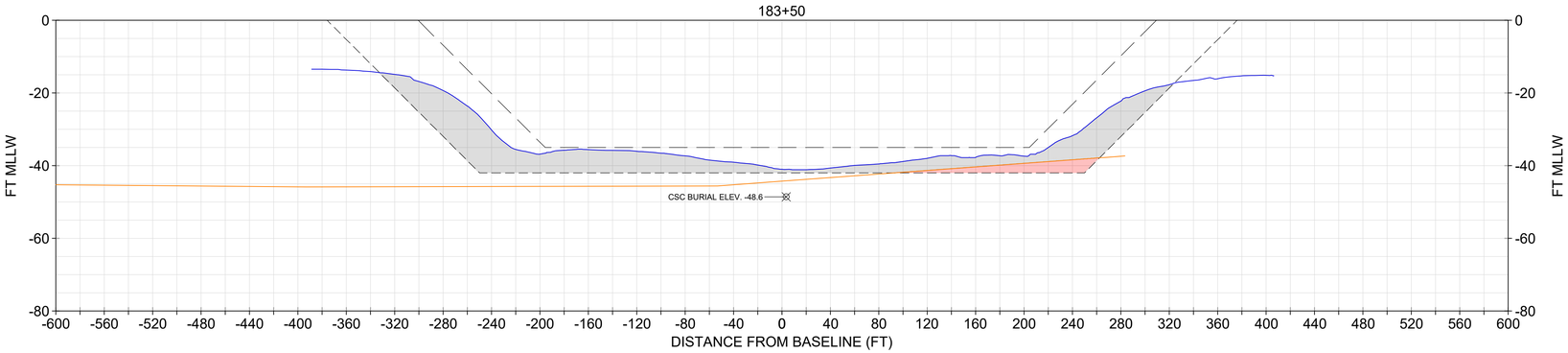
PREPARED FOR: Coastal Partners

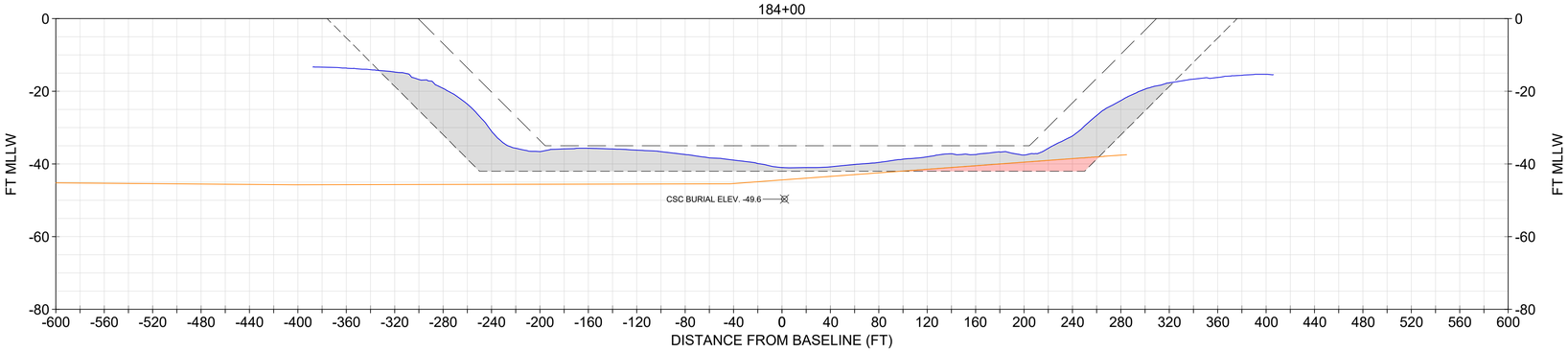
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

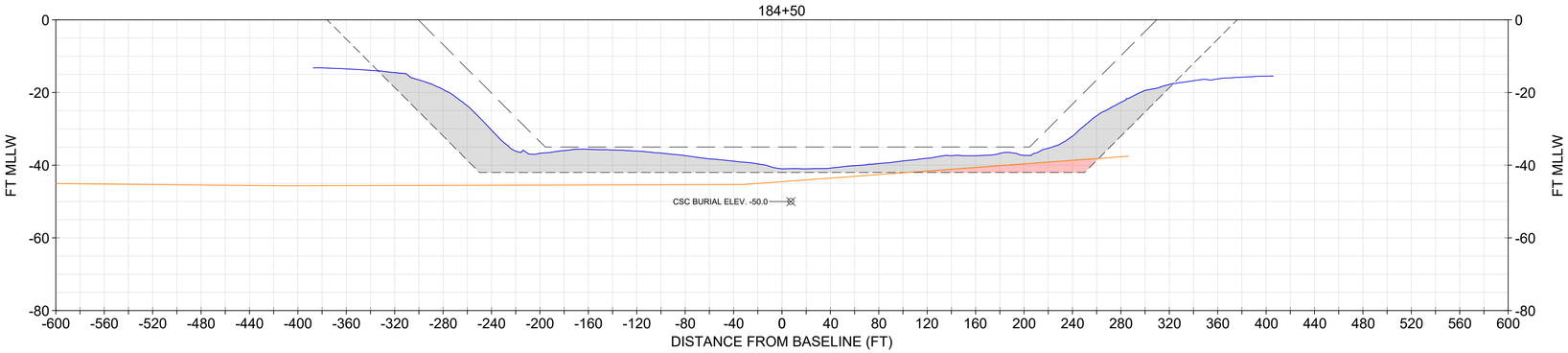
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-117









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 139 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

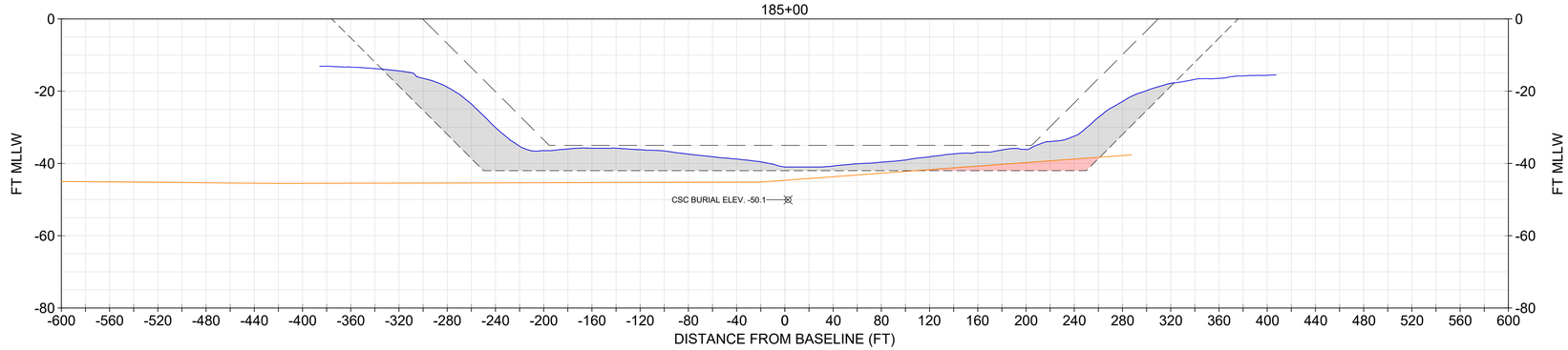
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

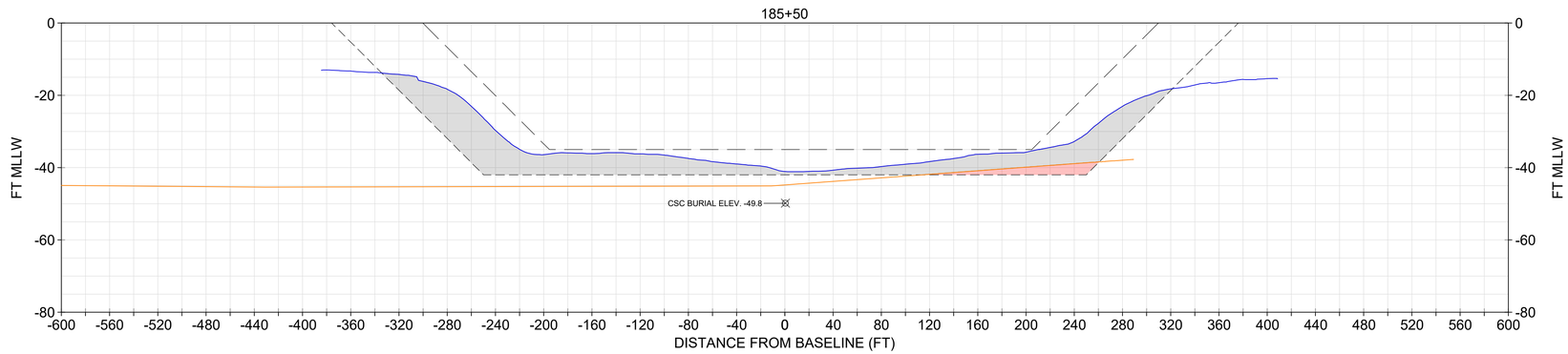
PREPARED FOR: Coastal Partners

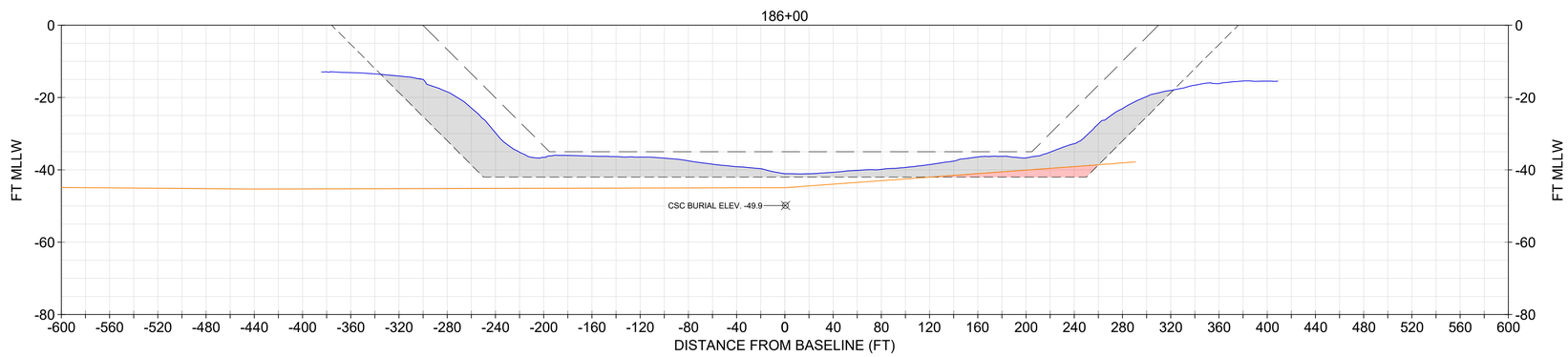
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

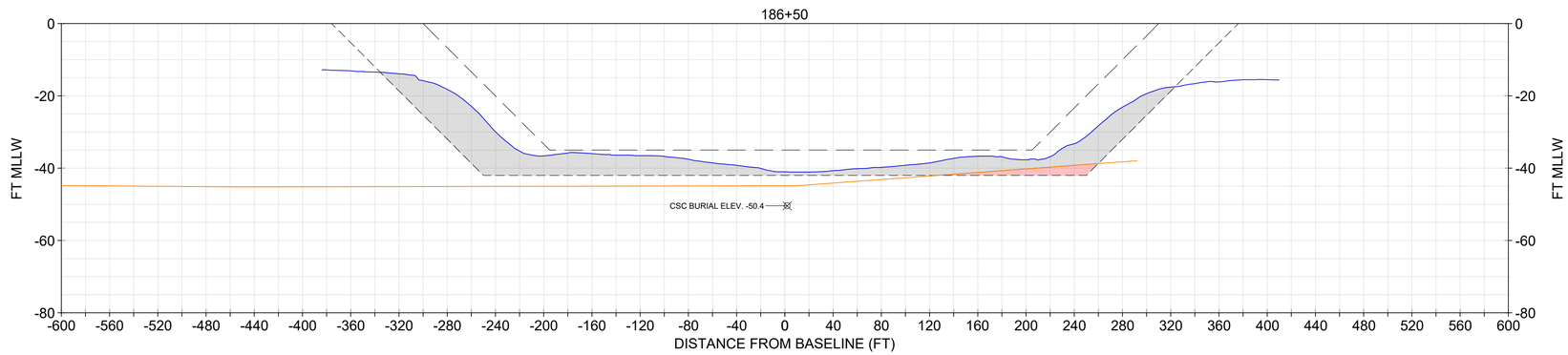
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-118









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE:
SHEET 140 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN

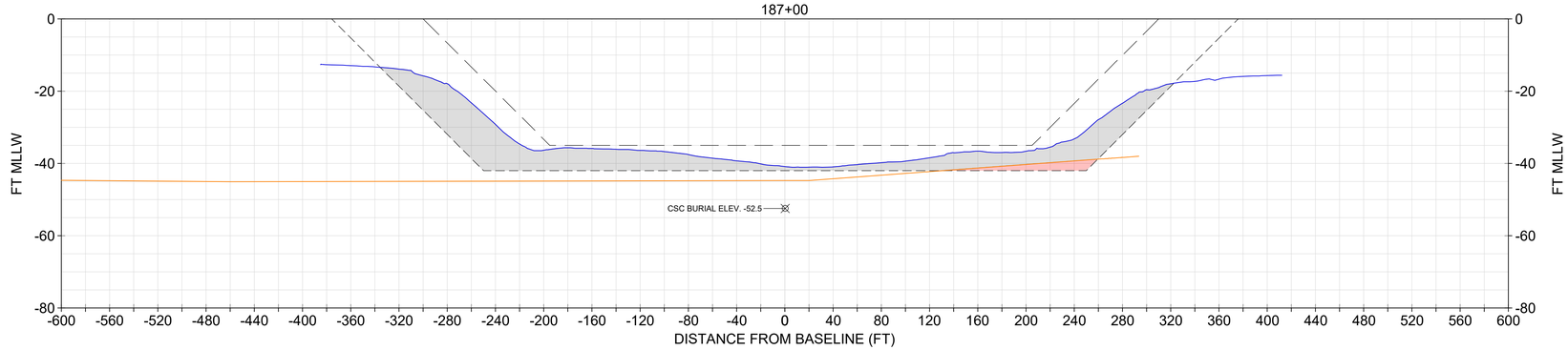
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

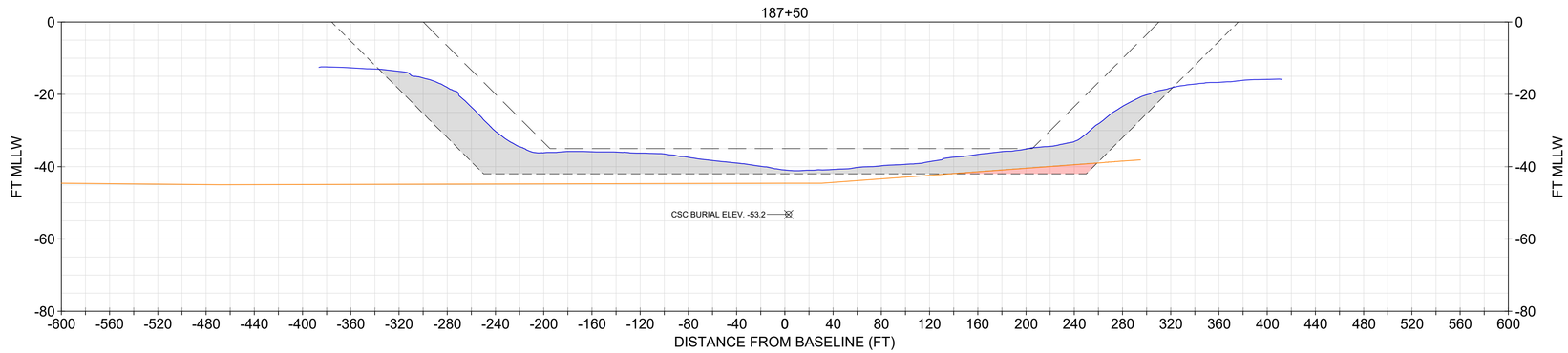
PREPARED FOR: Coastal Partners

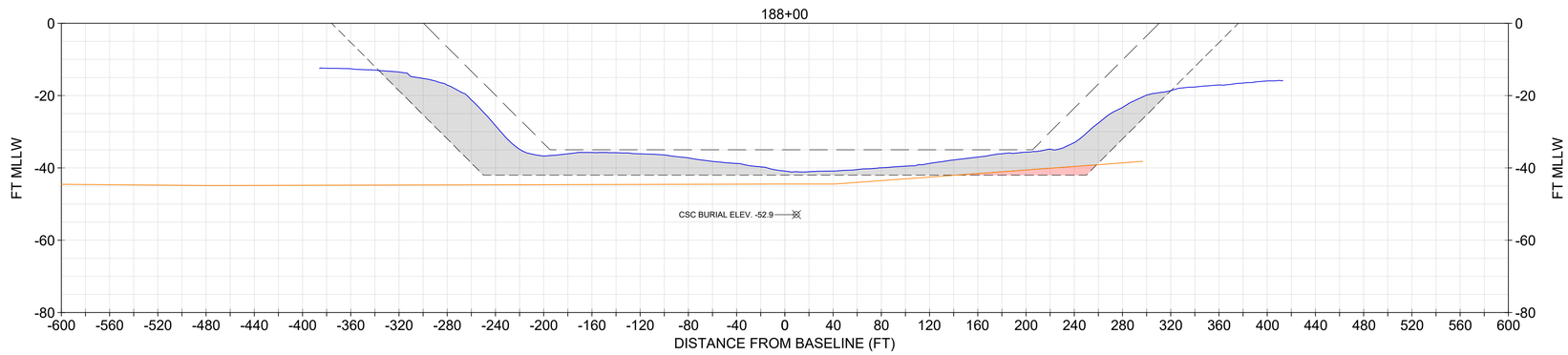
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

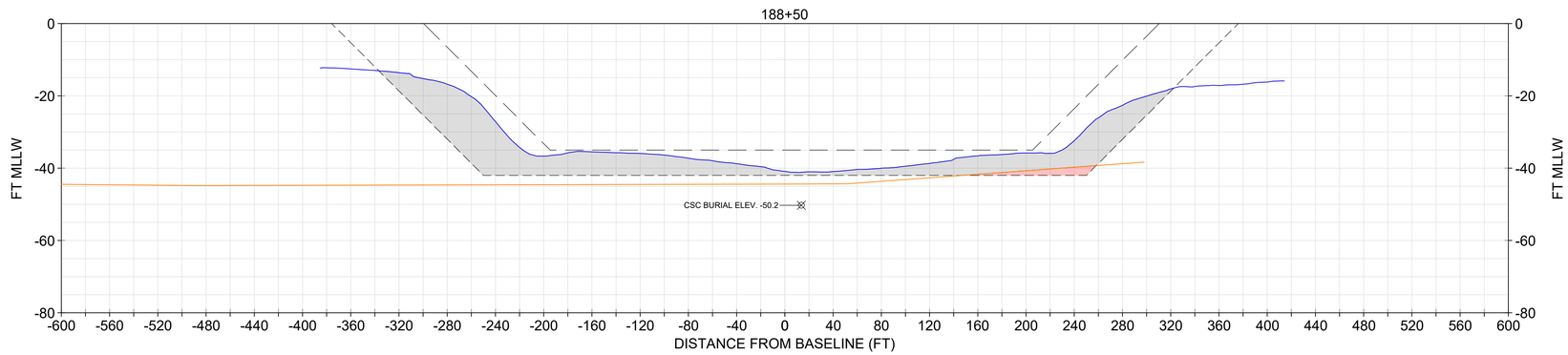
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-119









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 141 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

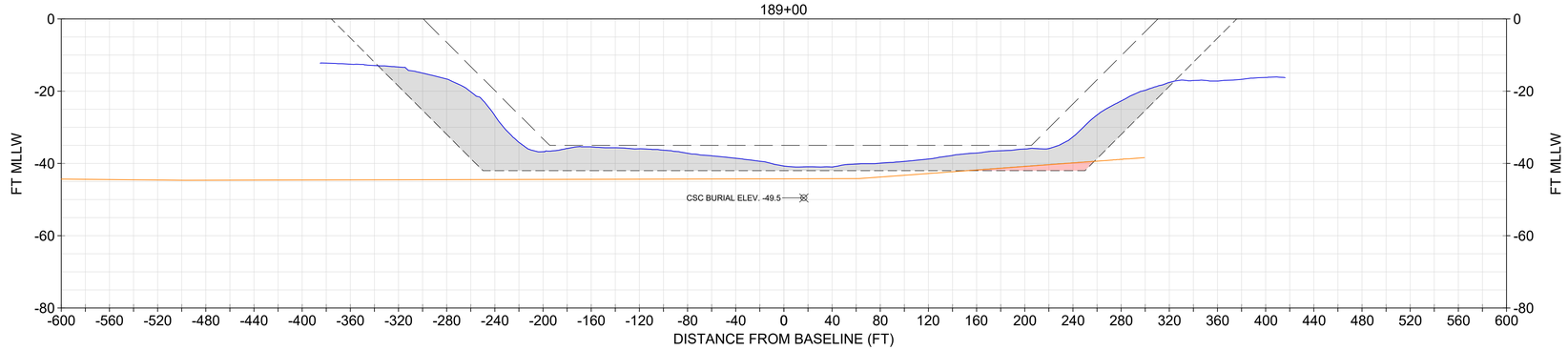
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

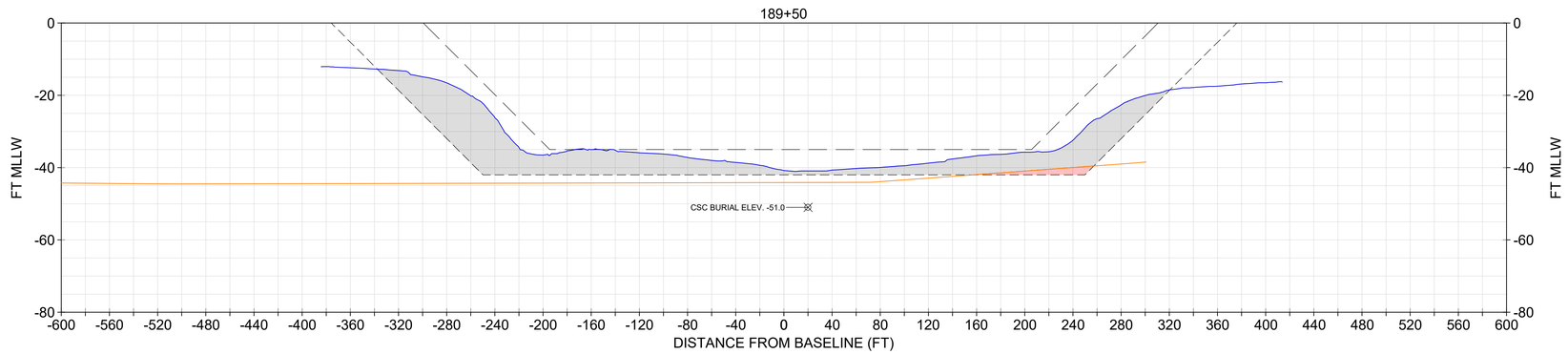
PREPARED FOR: Coastal Partners

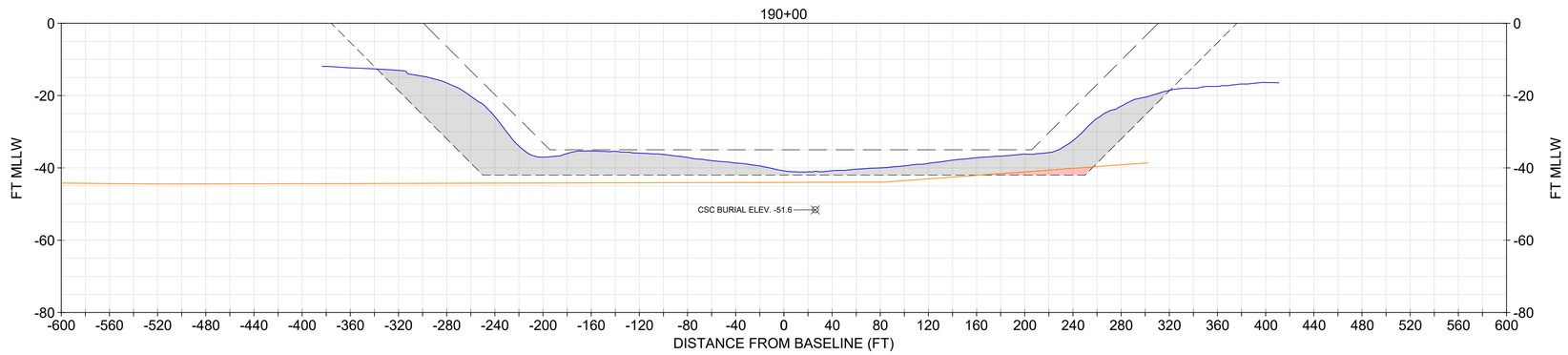
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

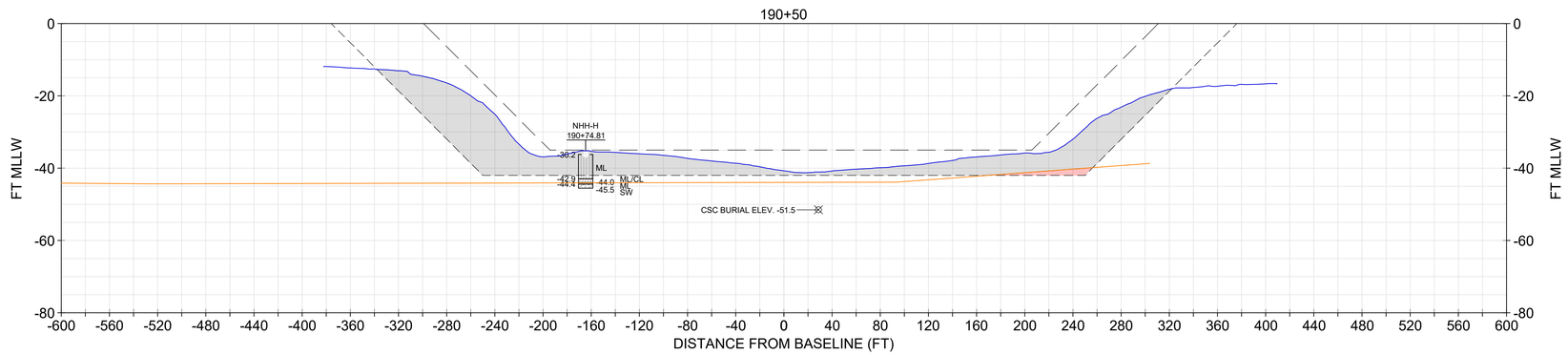
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-120









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-H	-36.2	-45.5	AECOM	2017

CORE LEGEND

- ML (SILT)
- ML/CL (CLAYEY SILT)
- SW (WELL GRADED SAND)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 142 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

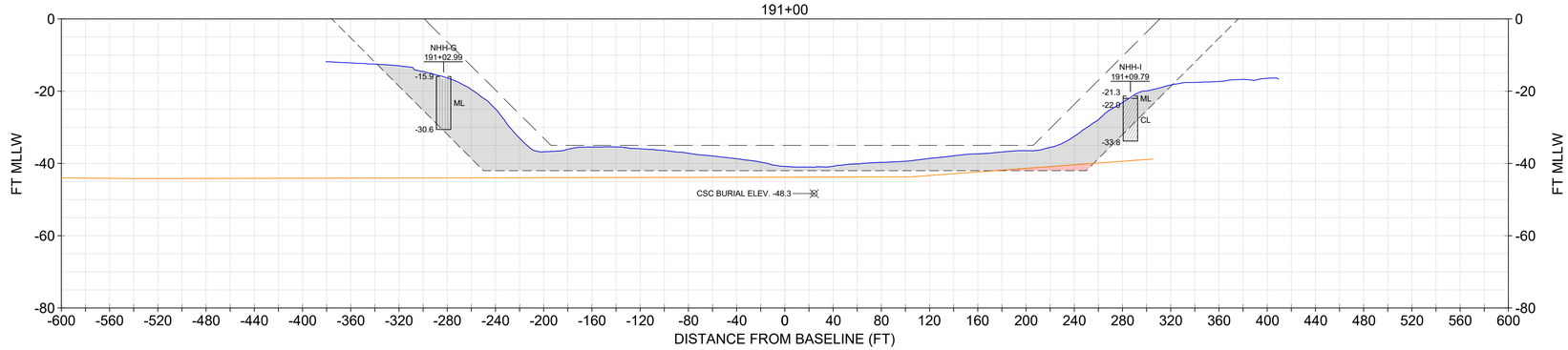
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

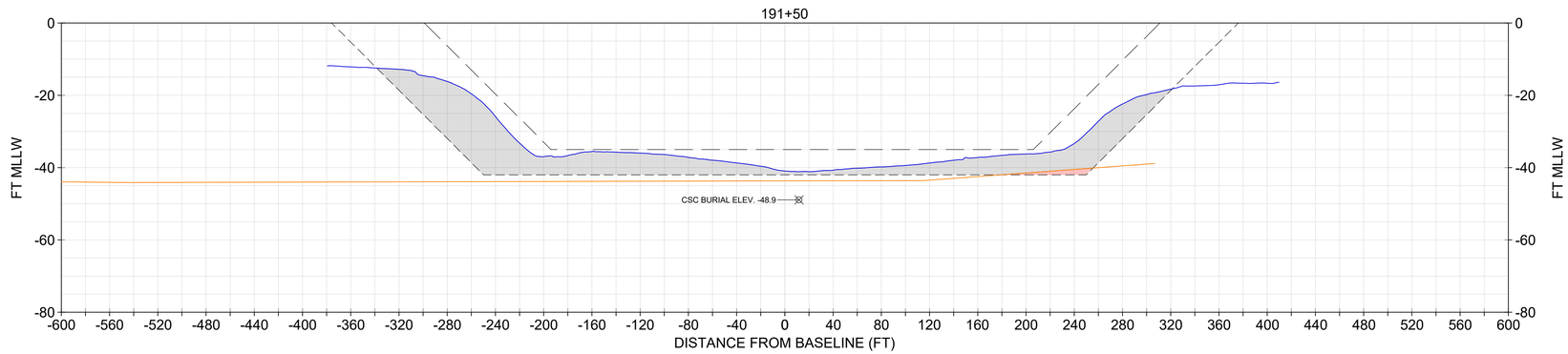
PREPARED FOR: Coastal Partners

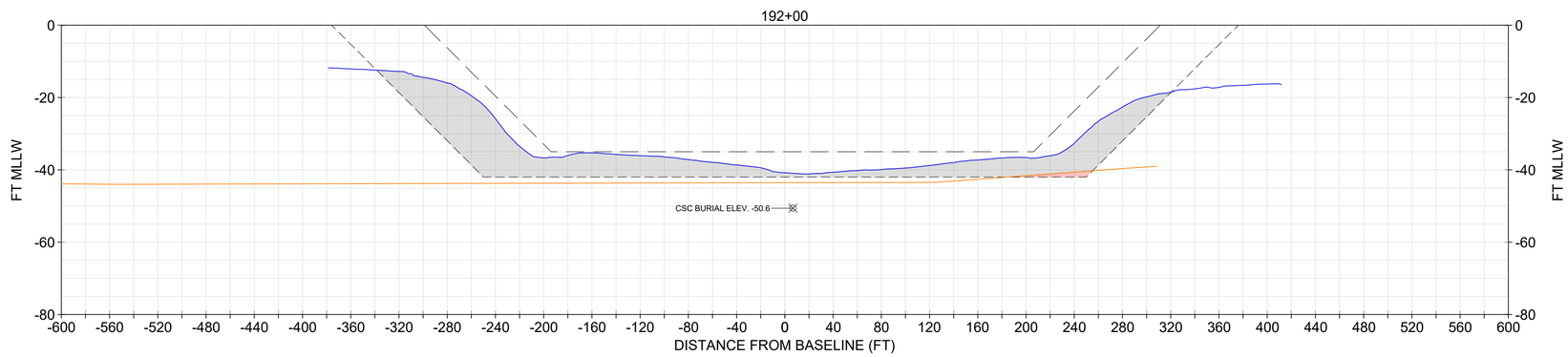
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

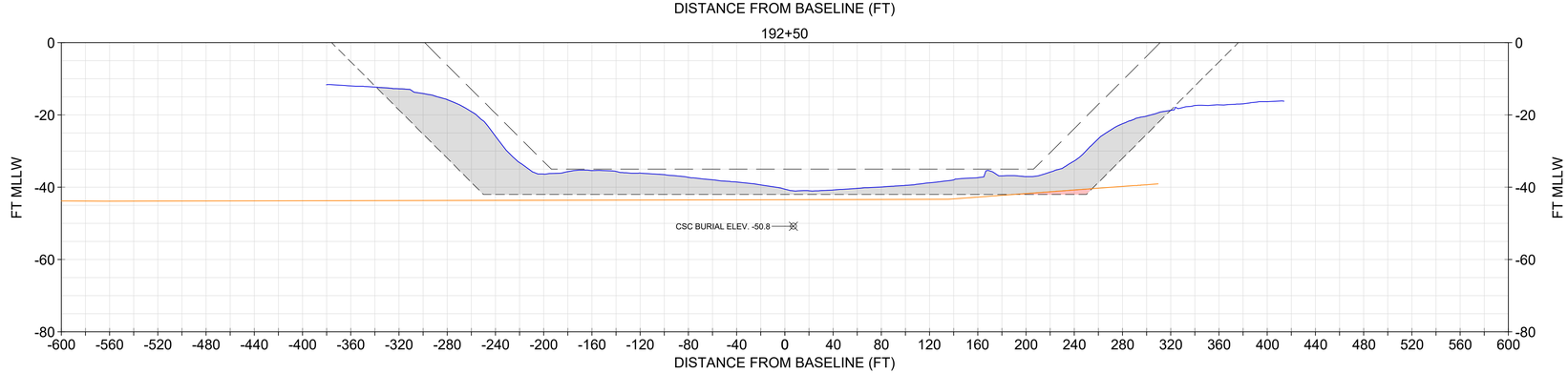
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-121









NOTE:

1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-G	-15.9	-30.6	AECOM	2017
NHH-I	-21.3	-33.8	AECOM	2017

CORE LEGEND

- ML (SILT)
- CL (LEAN CLAY)

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 143 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

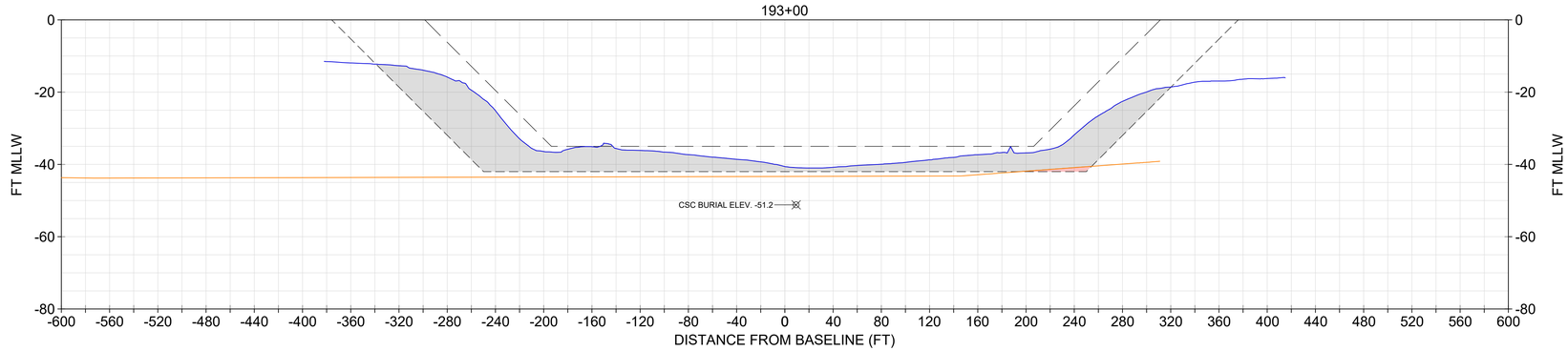
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd. Unit B
Baltimore, MD 21237
Phone (410) 882-5565

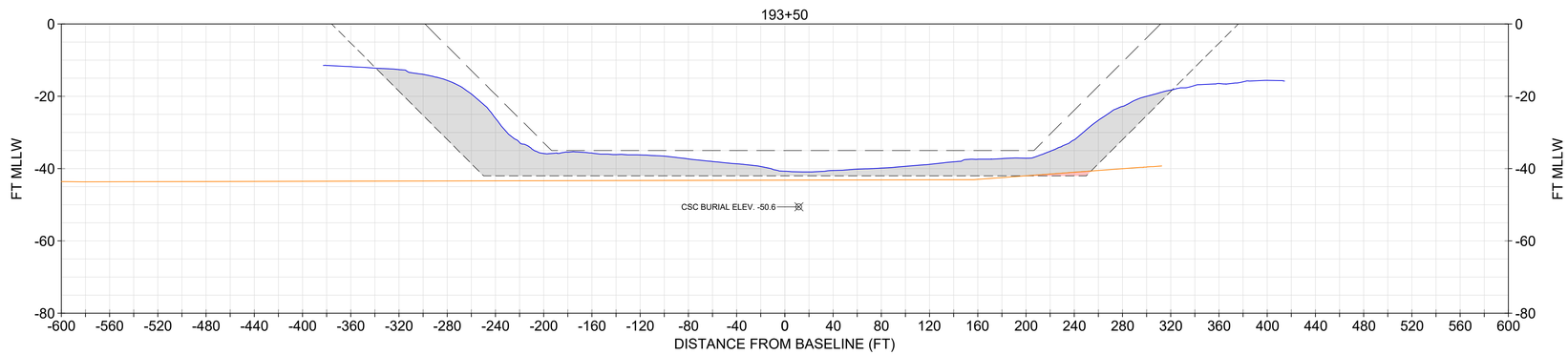
PREPARED FOR: Coastal Partners

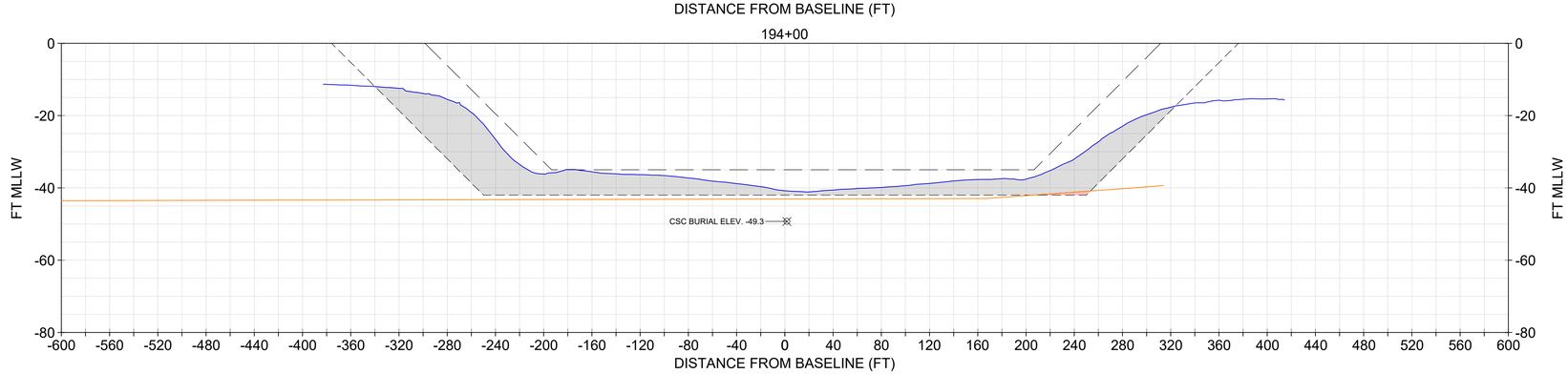
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

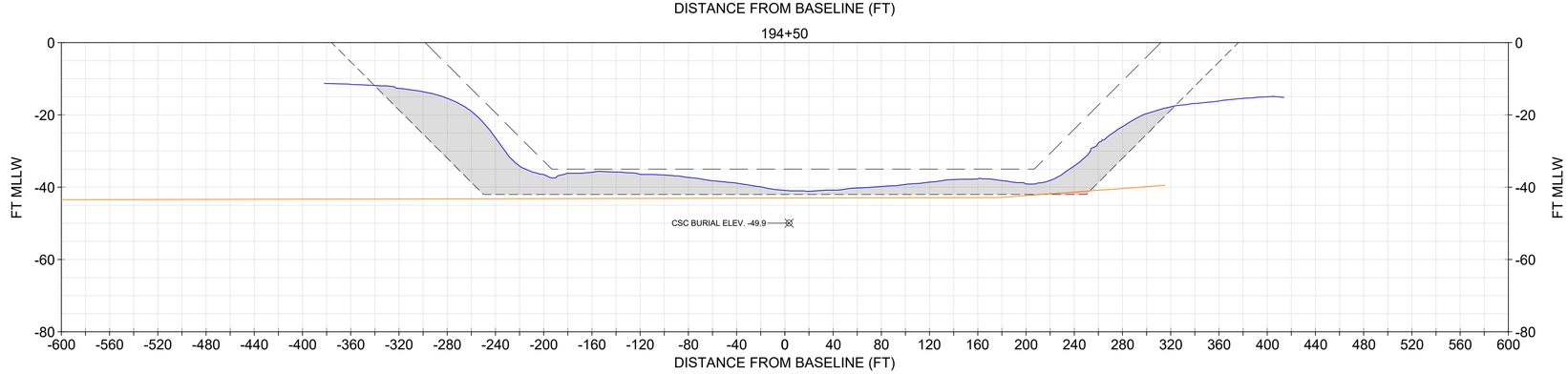
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-122









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 144 OF 220

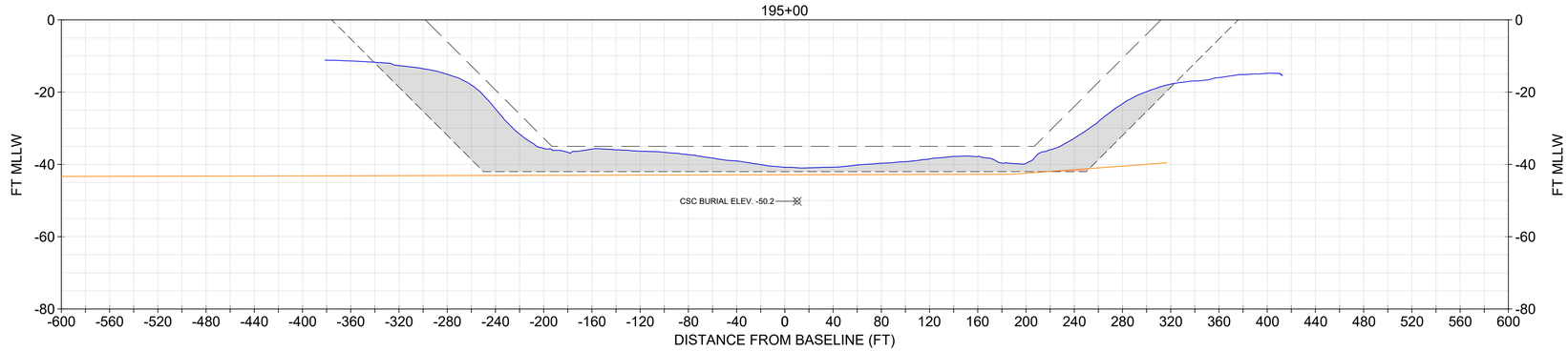
DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI 'D'
SCALE: AS SHOWN

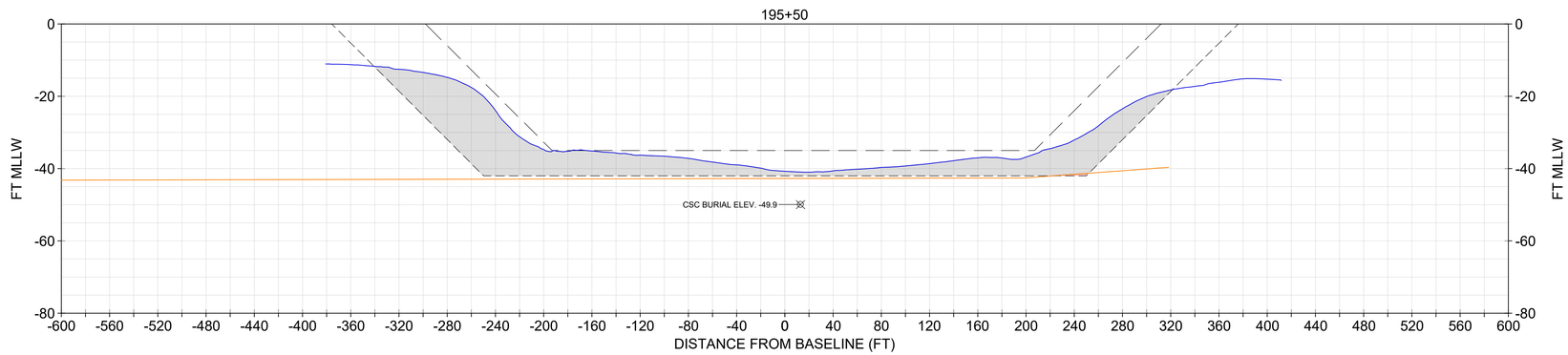
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A, Baltimore, MD 21237 Phone (410) 882-5595
PREPARED FOR: Coastal Partners

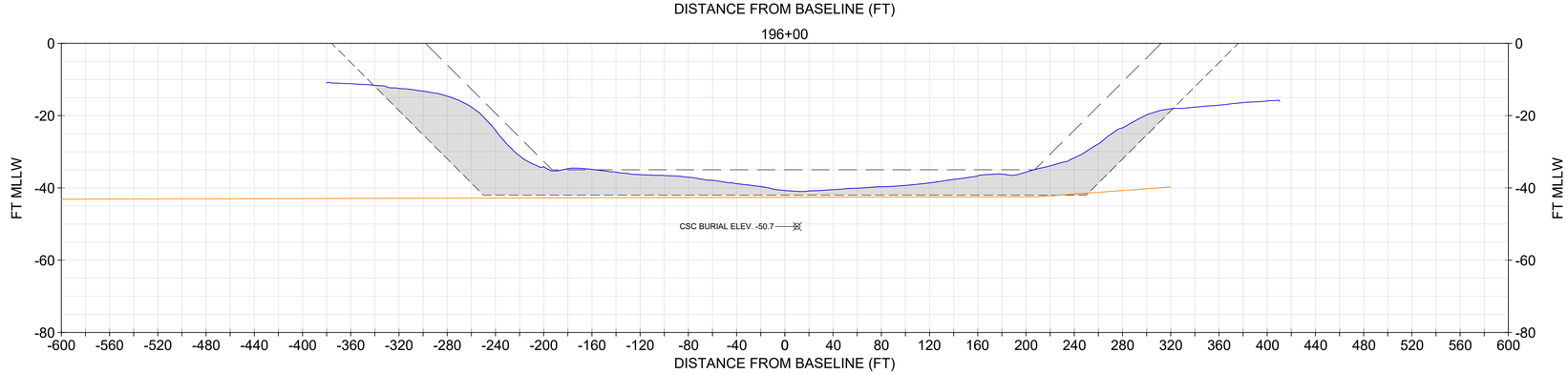
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

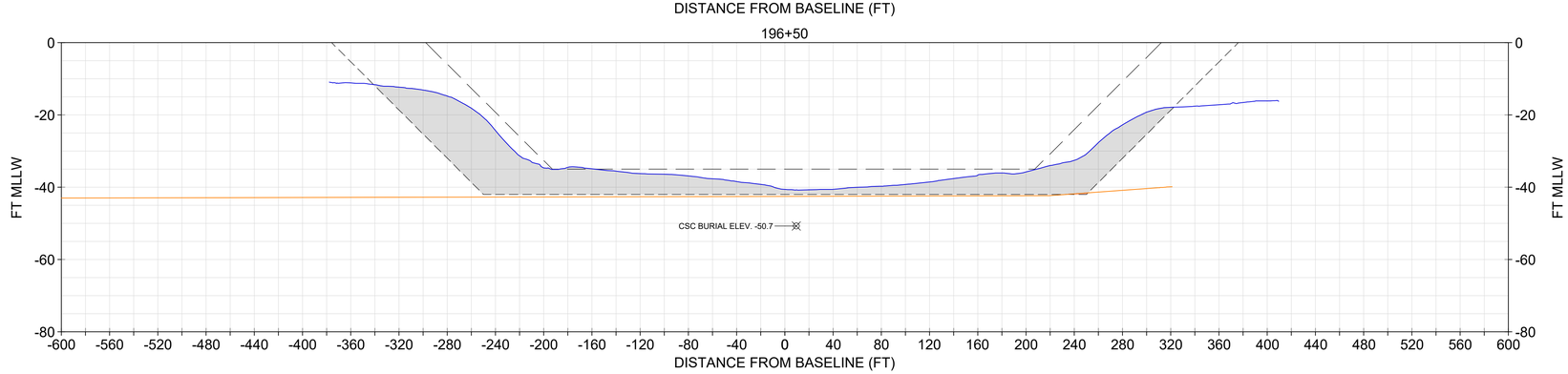
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-123









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 145 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

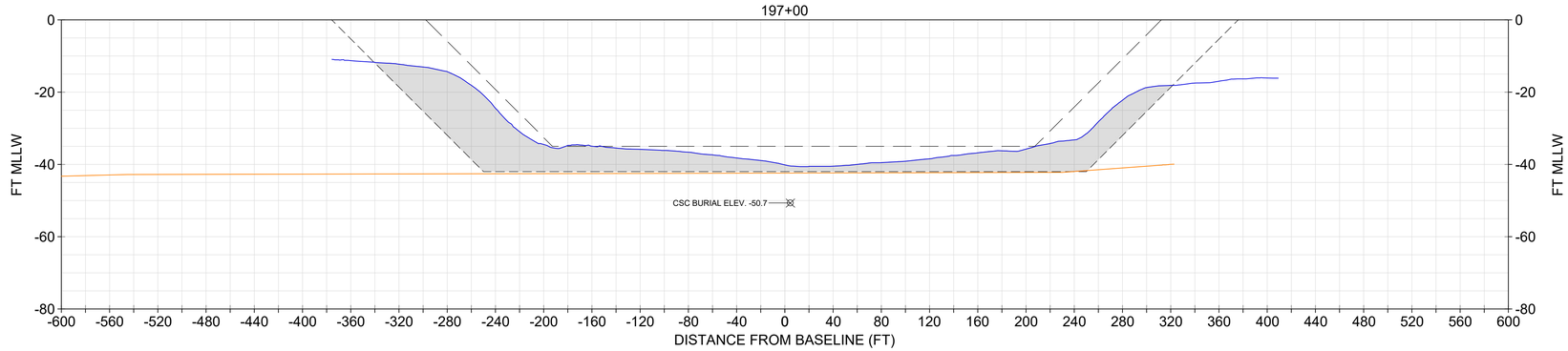
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

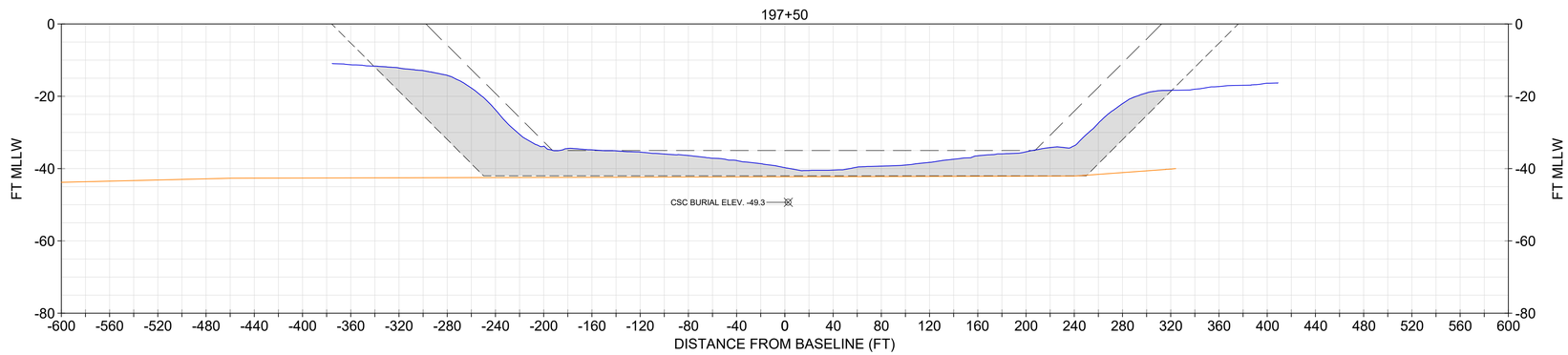
PREPARED FOR: Coastal Partners

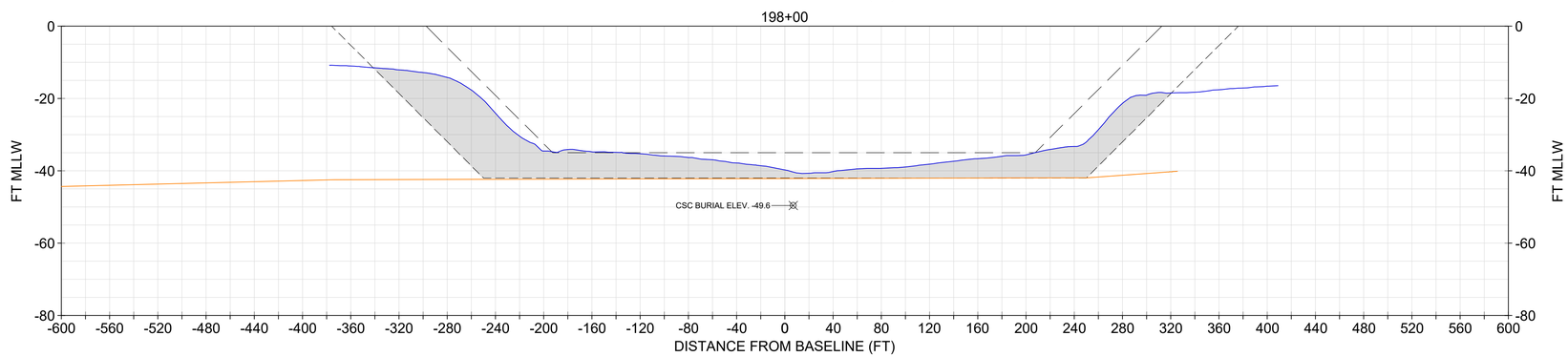
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

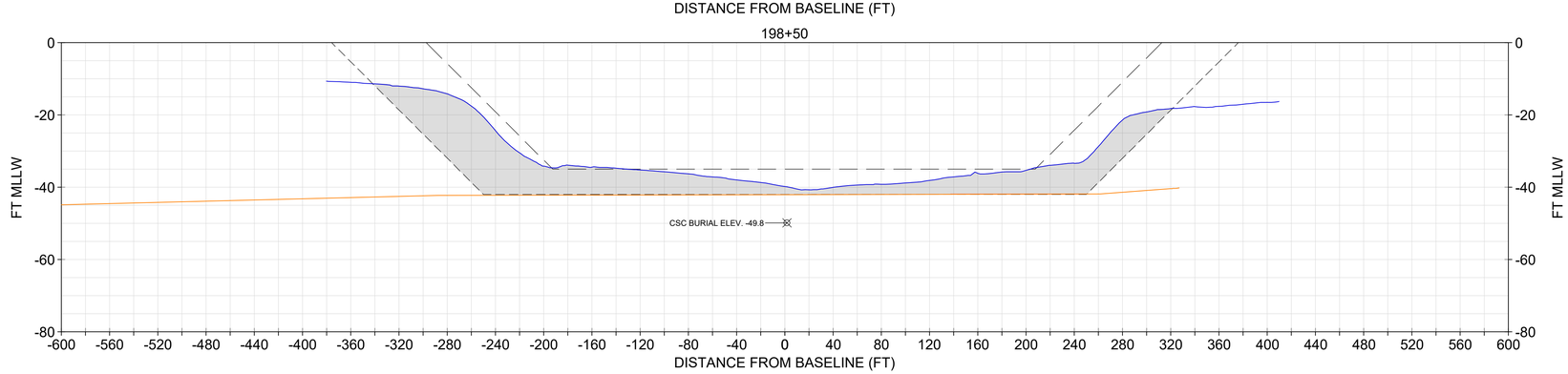
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-124









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 146 OF 220

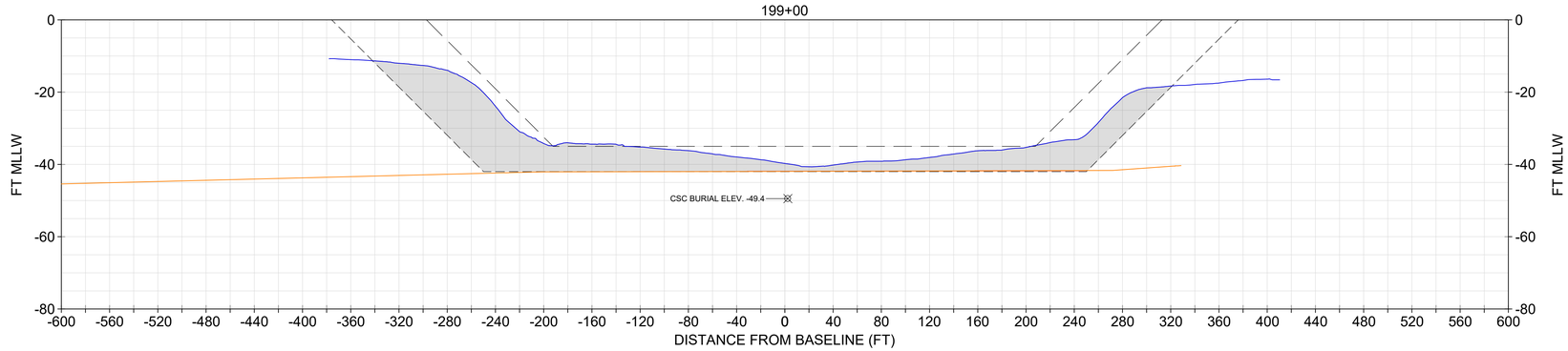
DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

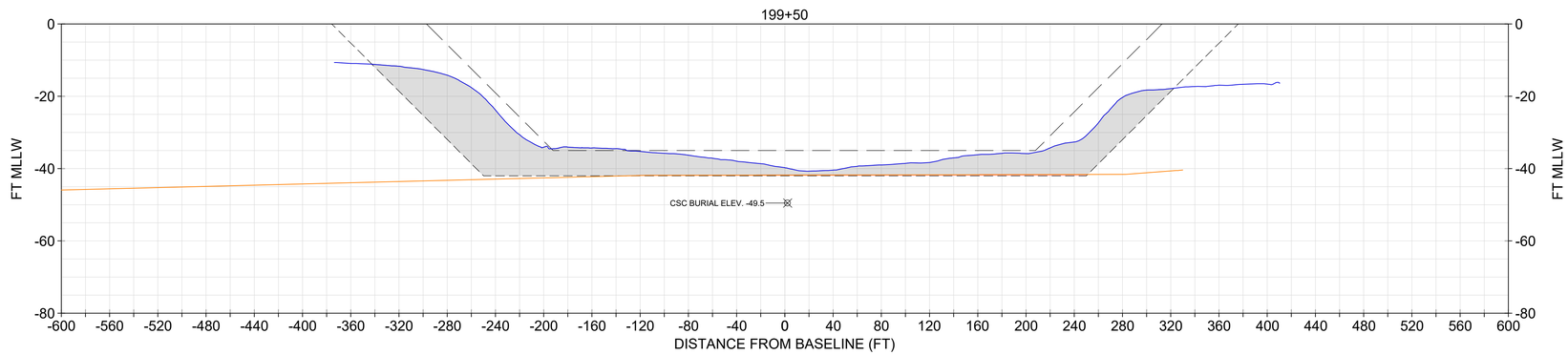
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A, Baltimore, MD 21237 Phone (410) 882-5595
PREPARED FOR: Coastal Partners

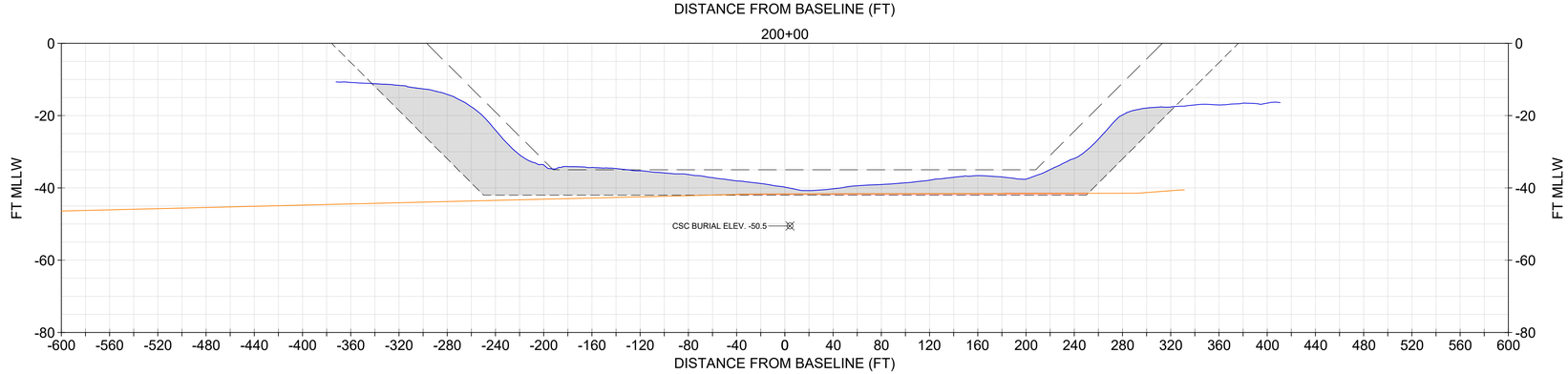
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

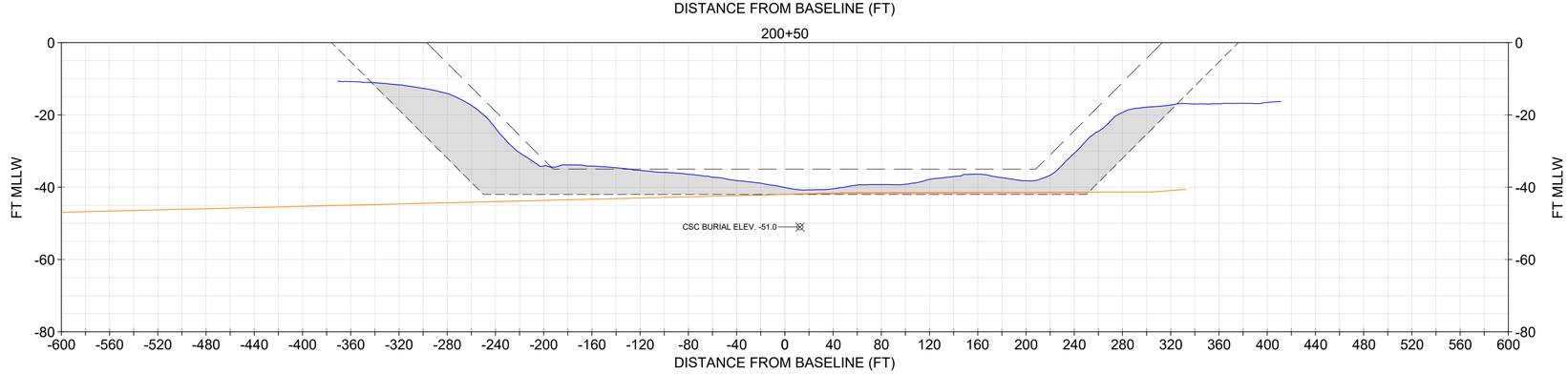
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-125









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- TOP OF ROCK (REFRACTION DATA ONLY)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 147 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

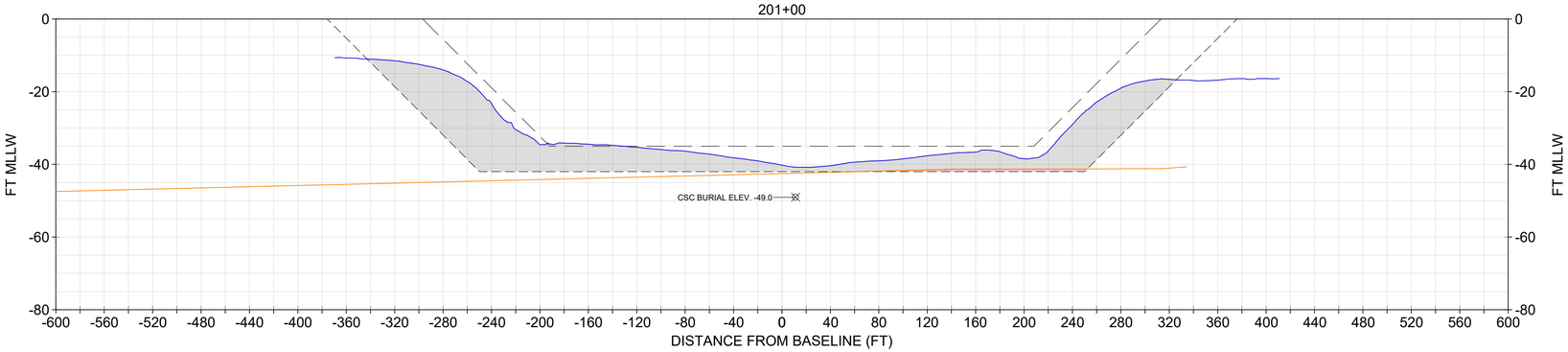
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

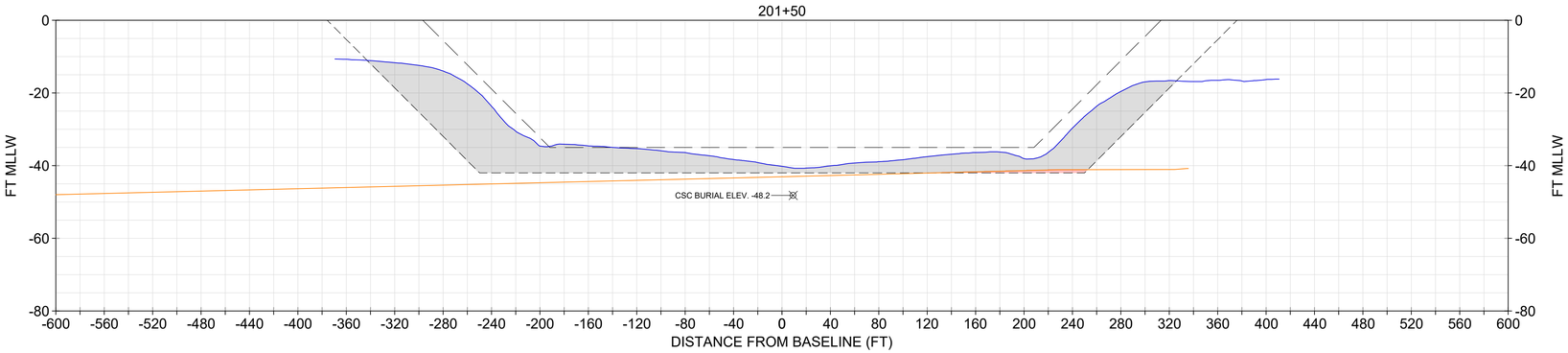
PREPARED FOR: Coastal Partners

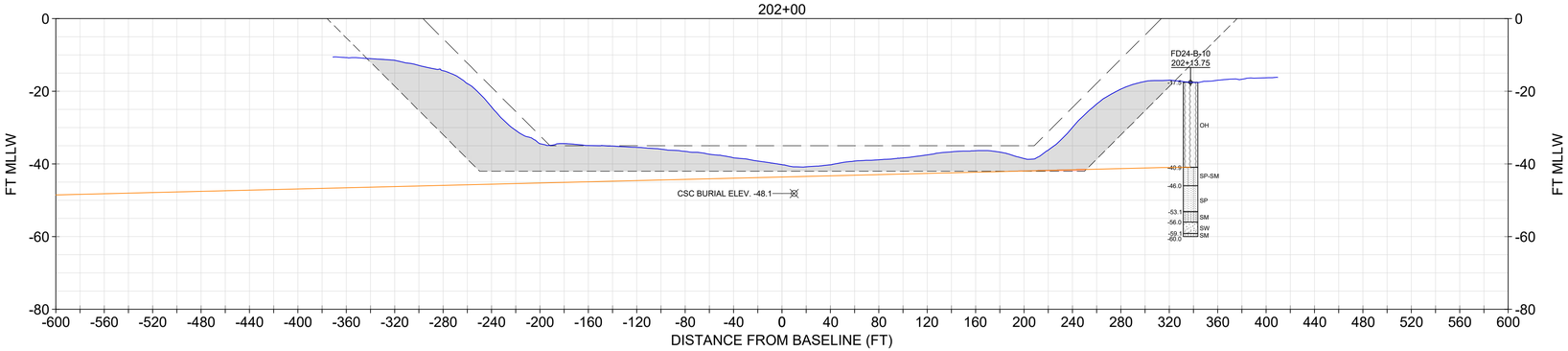
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

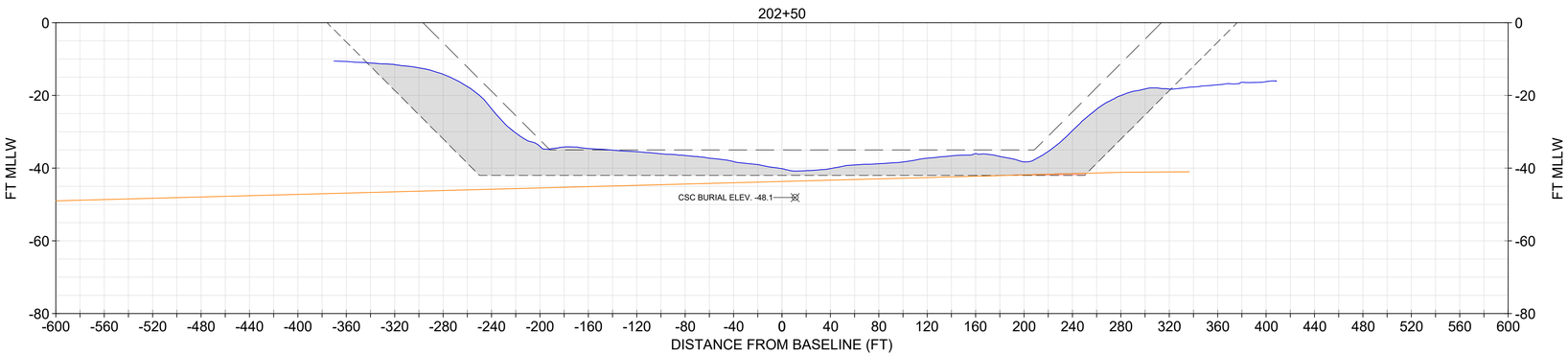
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-126









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-10	-17.5	-60.0	GBA	07/11/24

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- SP-SM (POORLY GRADED SAND WITH SILT)
- SP (POORLY GRADED SAND)
- SM (SILTY SAND)
- SW (WELL GRADED SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- TOP OF ROCK (REFRACTION DATA ONLY)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 148 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

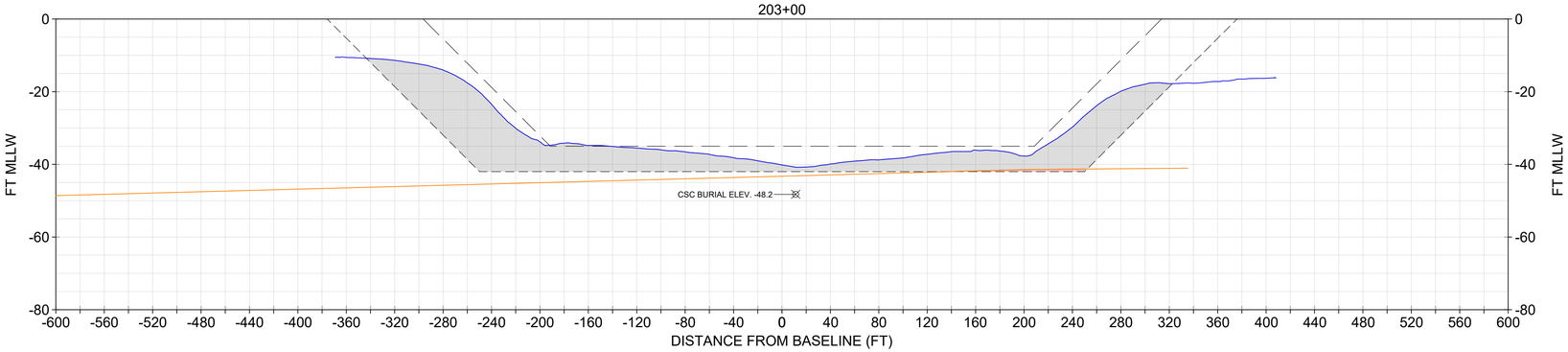
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

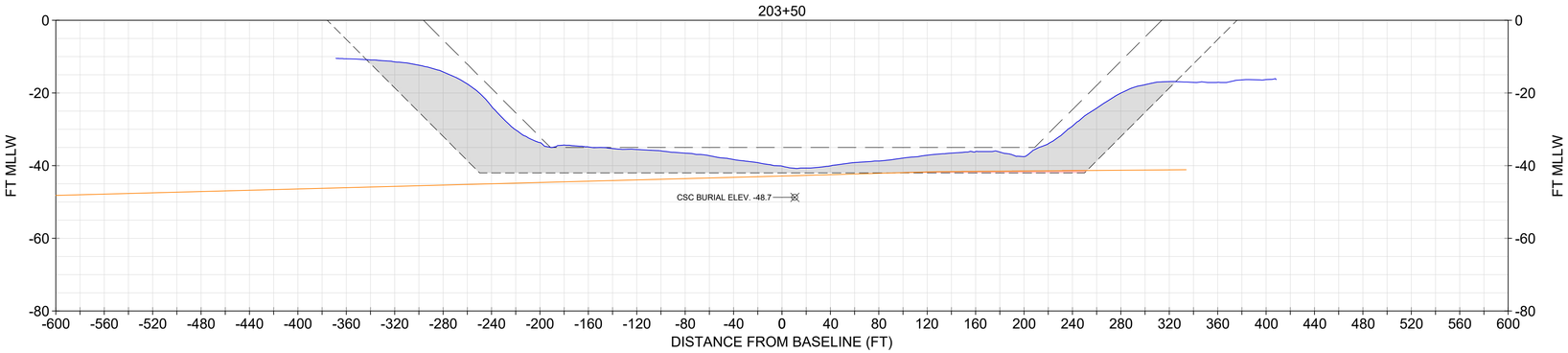
PREPARED FOR: Coastal Partners

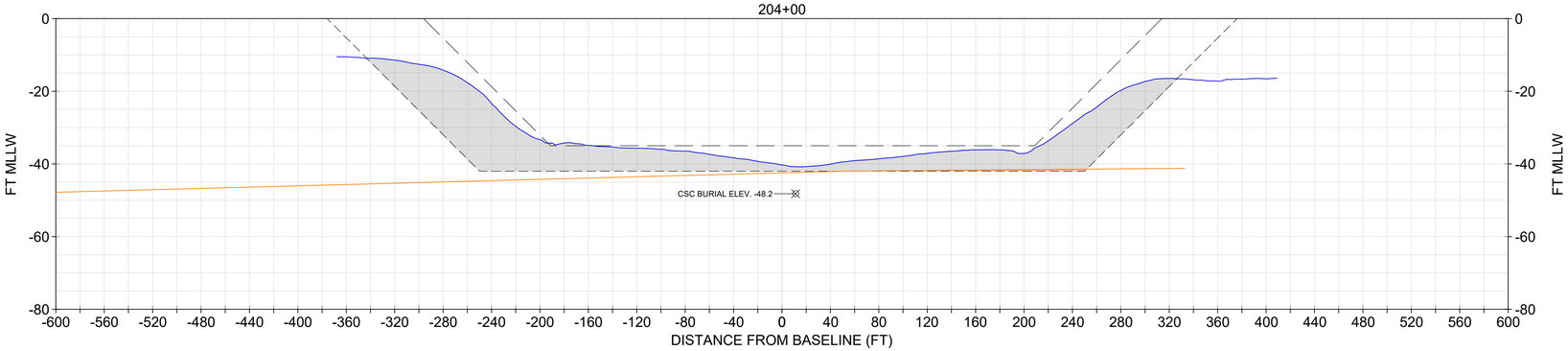
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

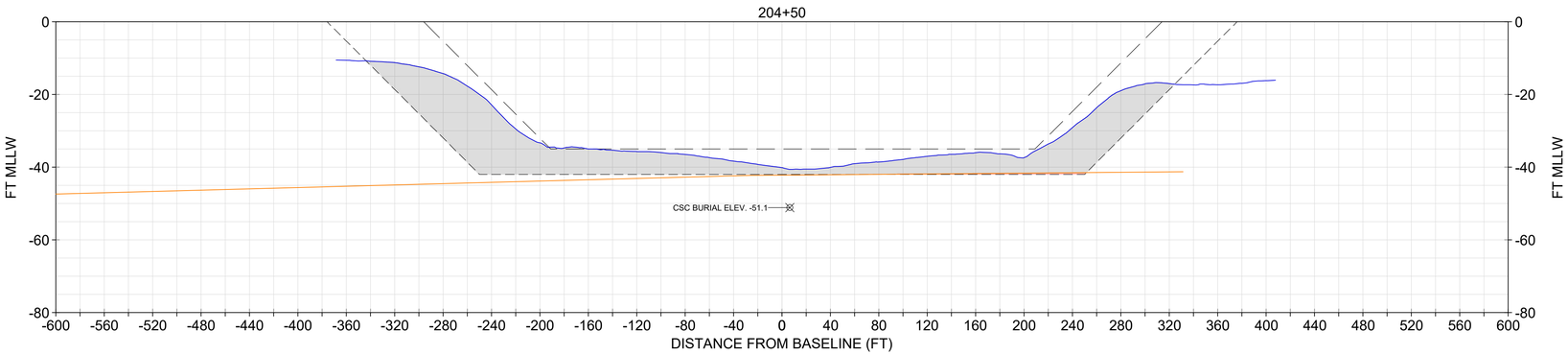
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-127









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- TOP OF ROCK (REFRACTION DATA ONLY)
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 149 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

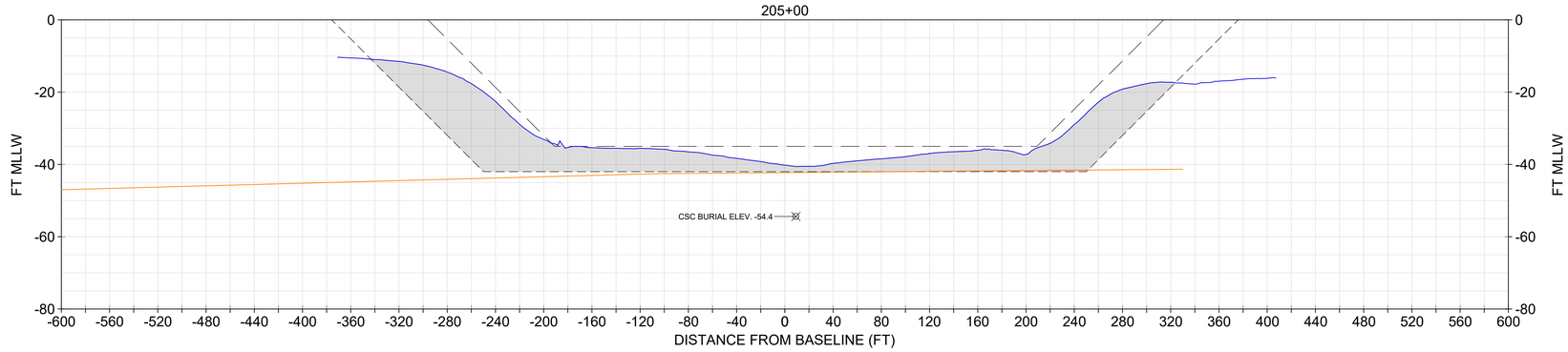
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

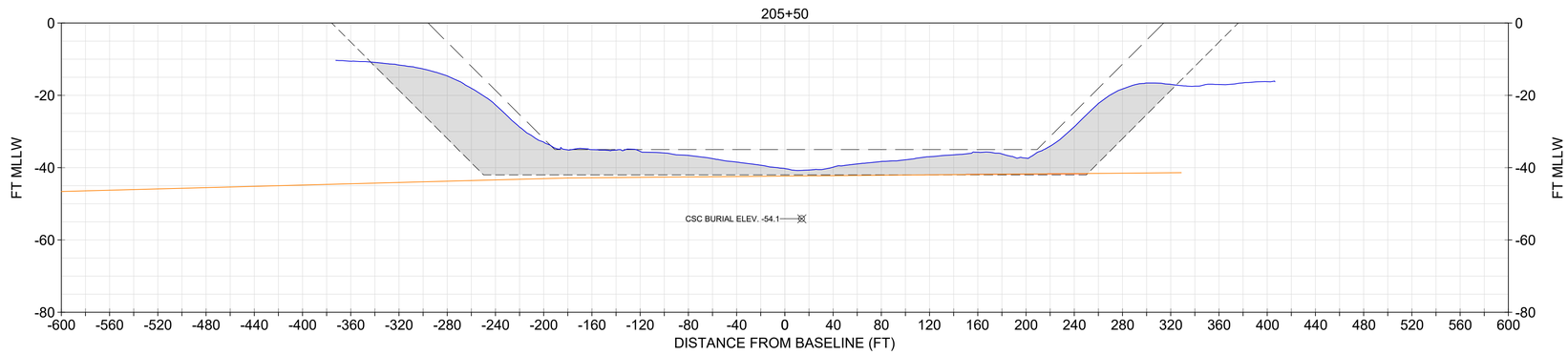
PREPARED FOR:
Coastal Partners

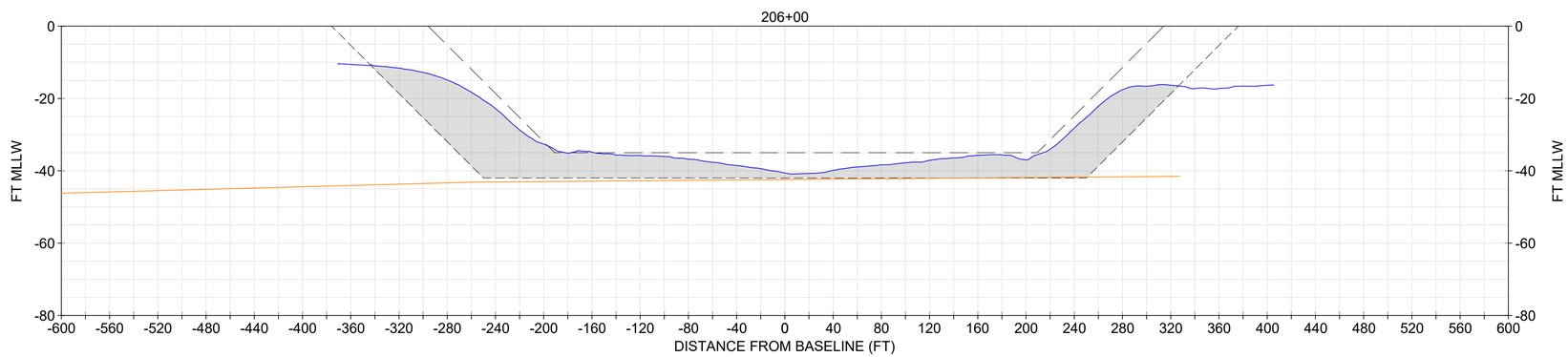
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

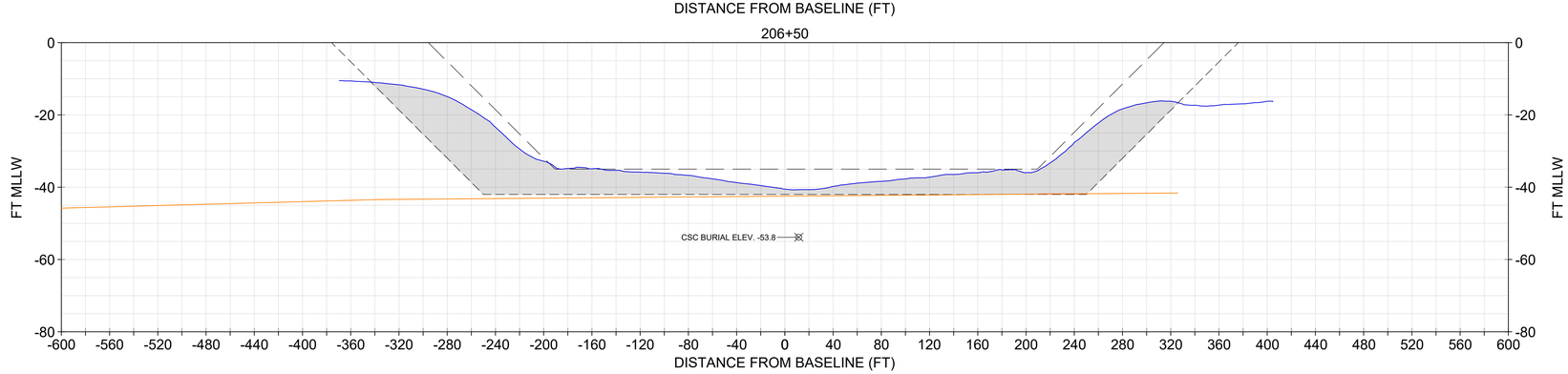
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-128









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 150 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

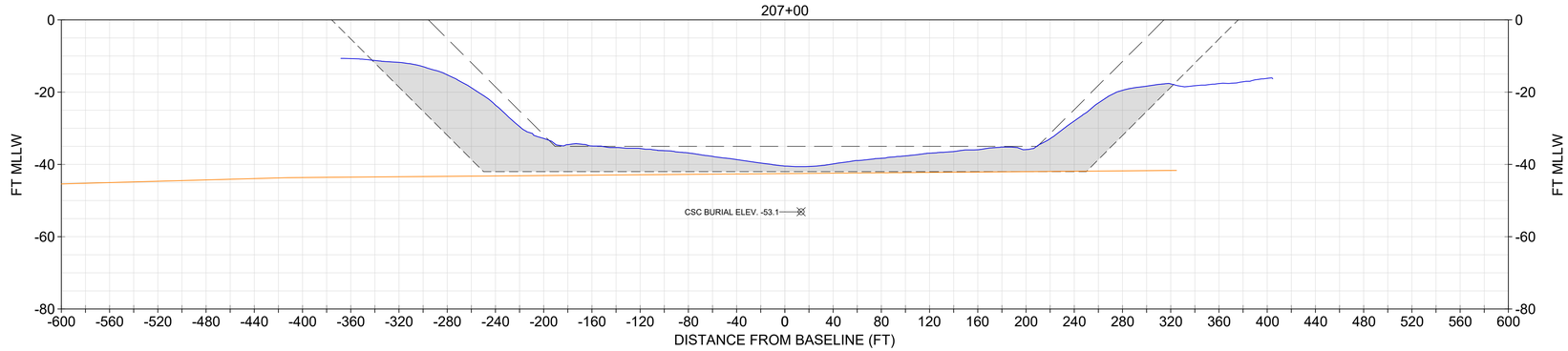
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

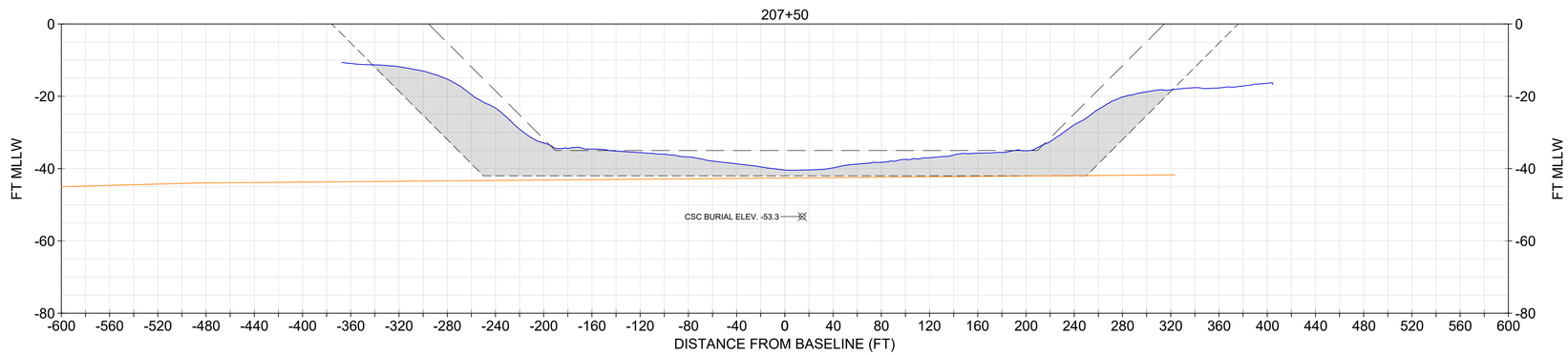
PREPARED FOR:
Coastal Partners

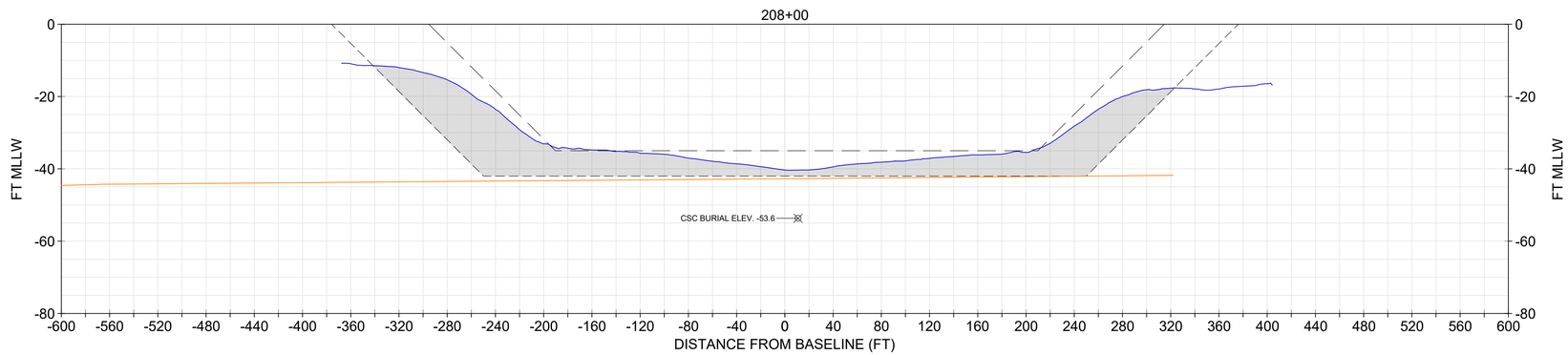
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

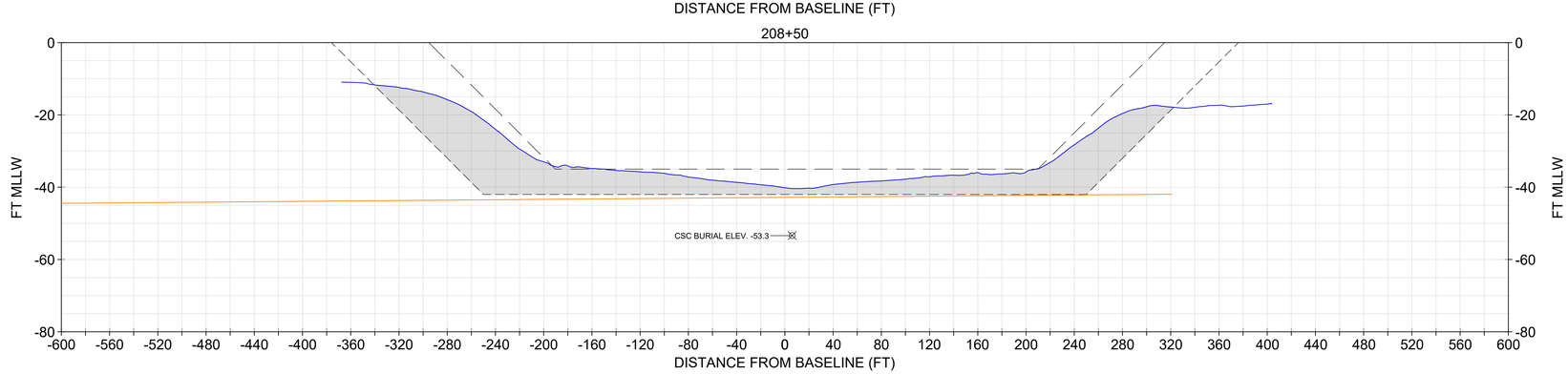
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-129









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 151 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

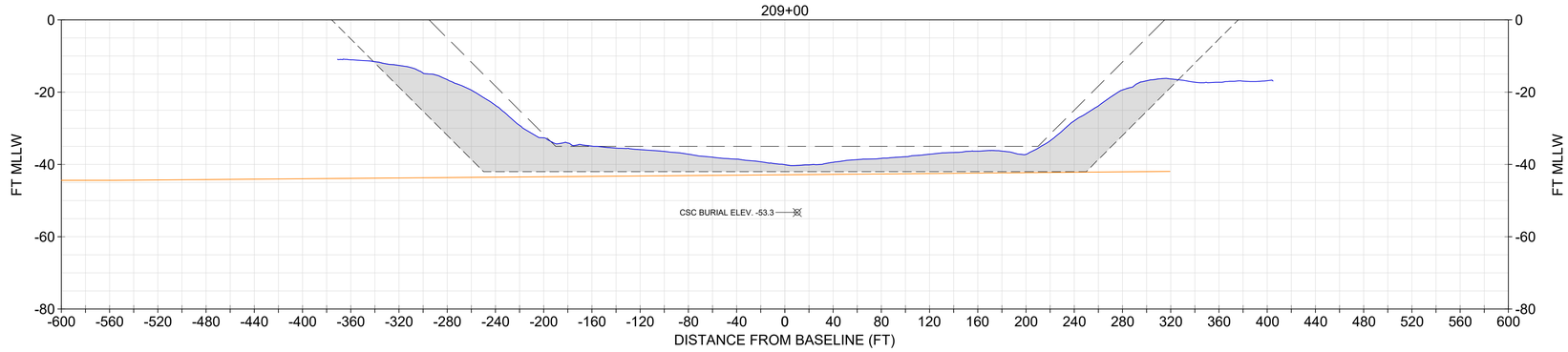
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

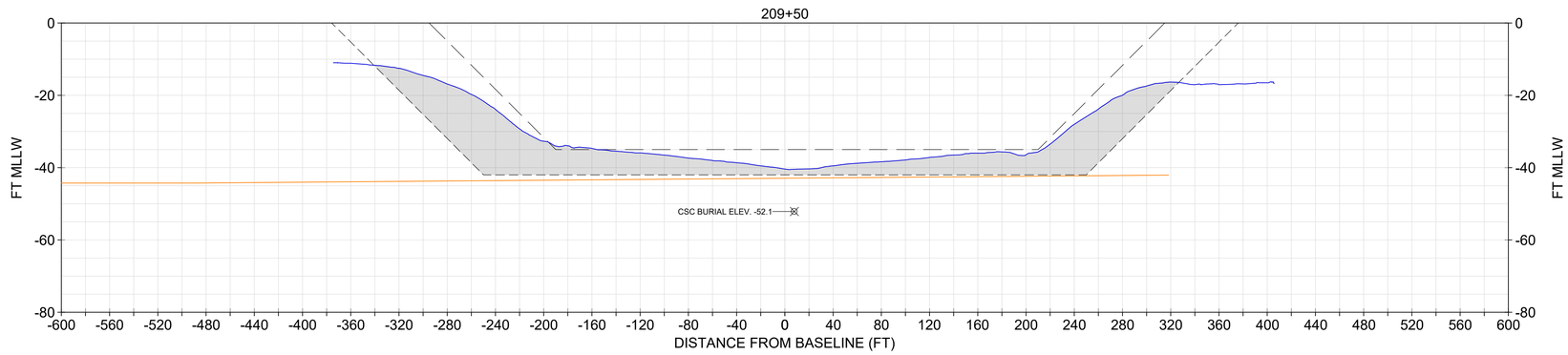
PREPARED FOR: Coastal Partners

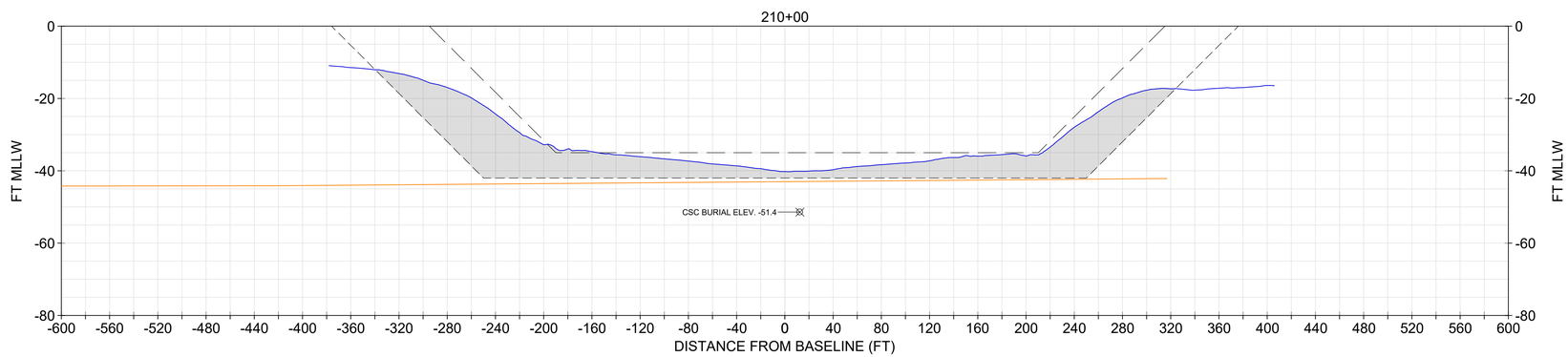
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

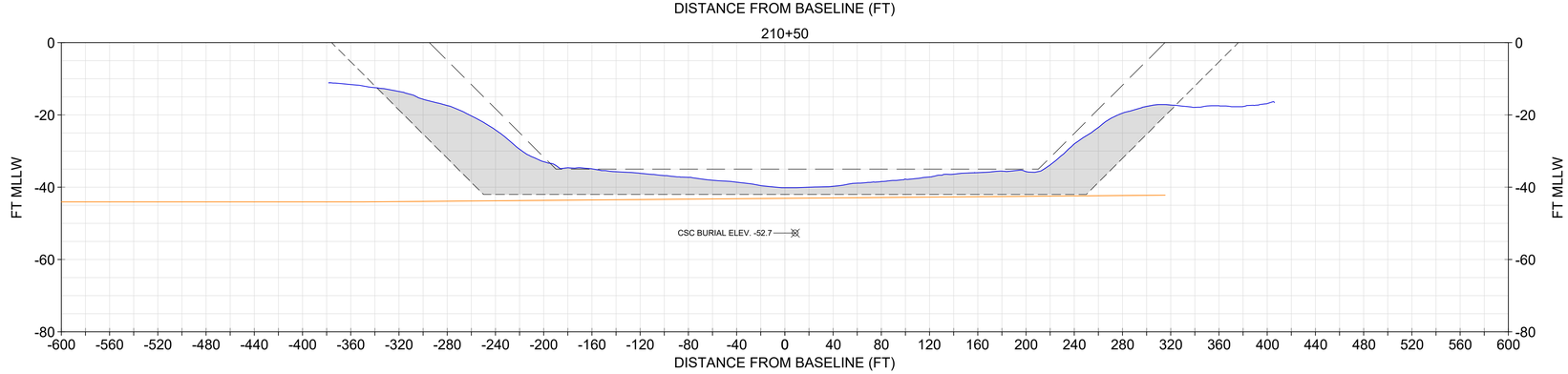
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-130









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 152 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

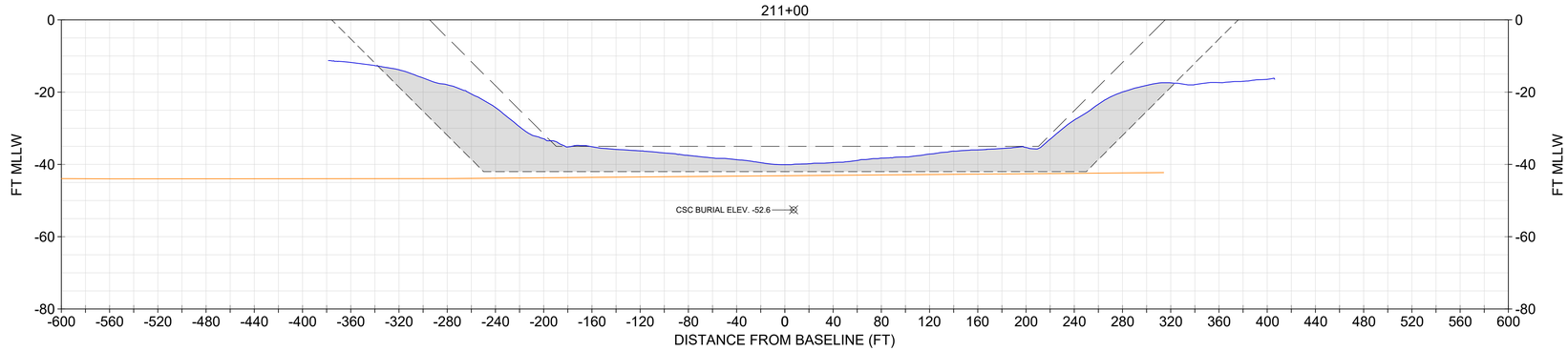
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

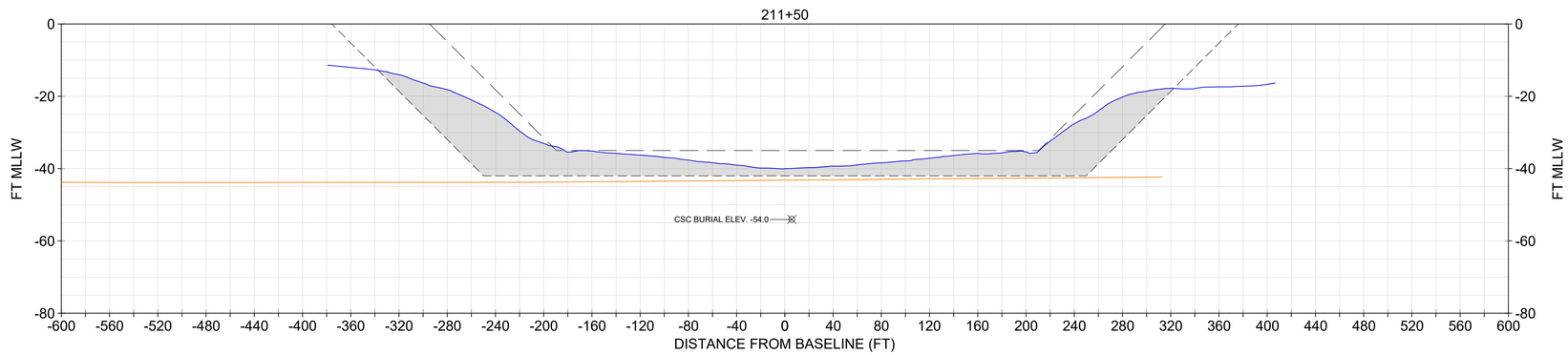
PREPARED FOR:
Coastal Partners Connecticut River Delta

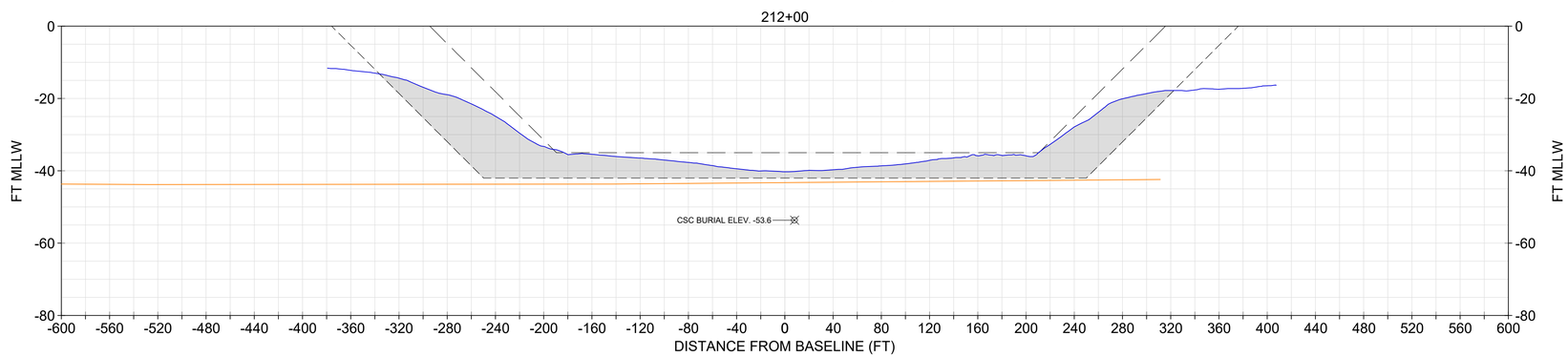
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

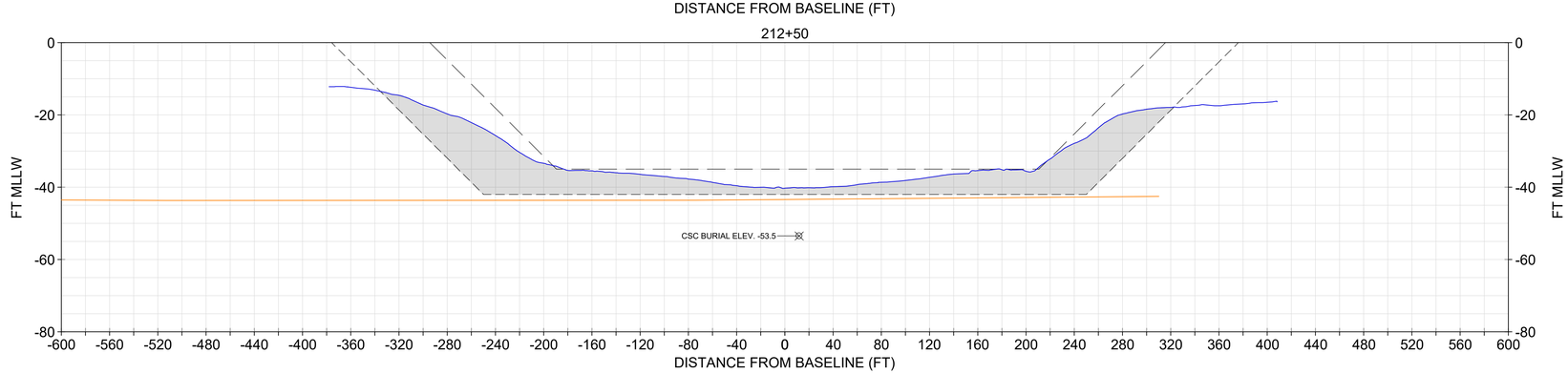
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-131









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 153 OF 220

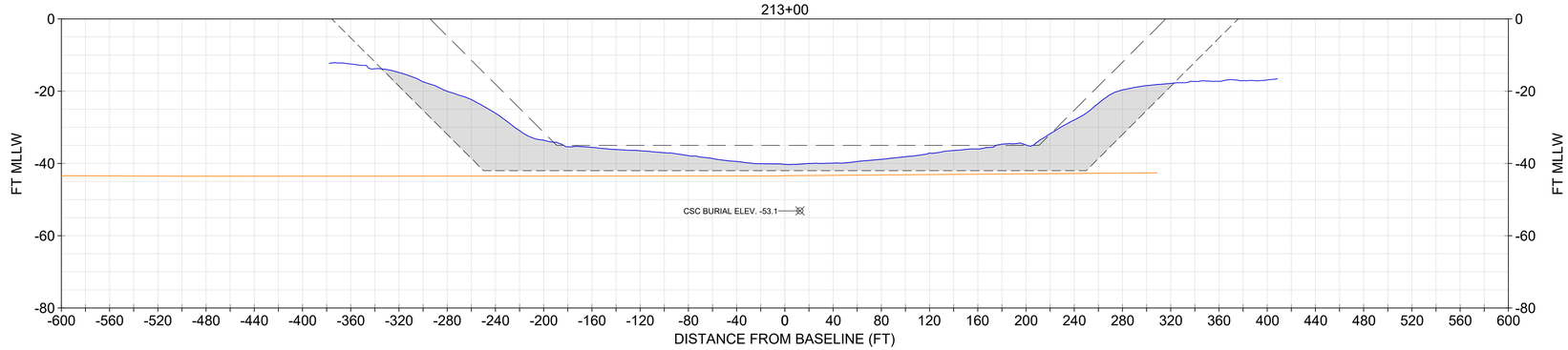
DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

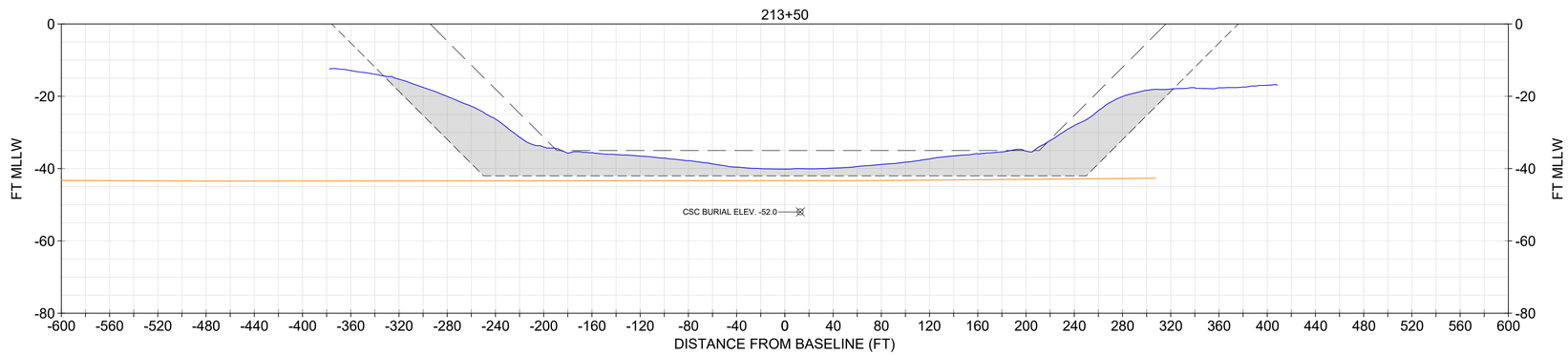
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A, Baltimore, MD 21237 Phone (410) 882-5595
PREPARED FOR: Coastal Partners

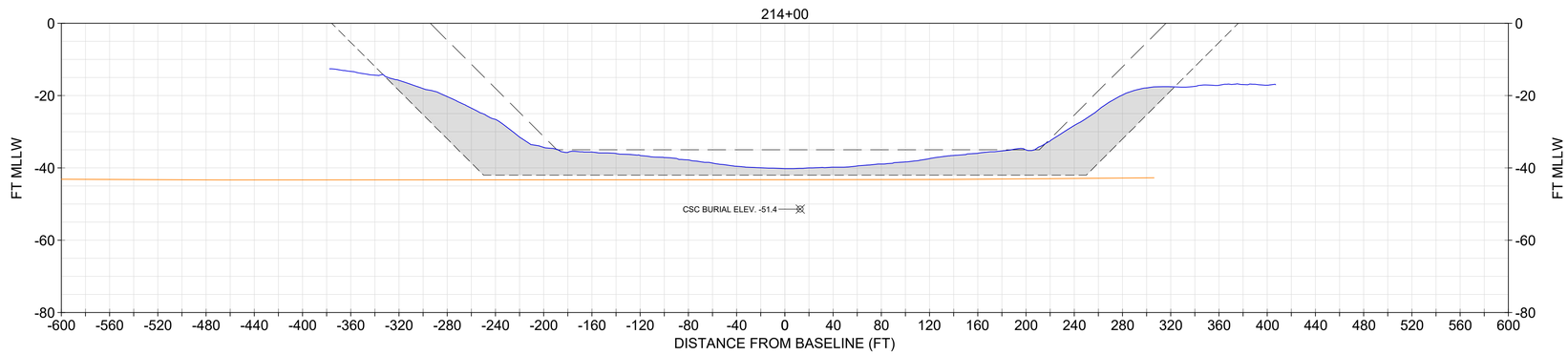
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

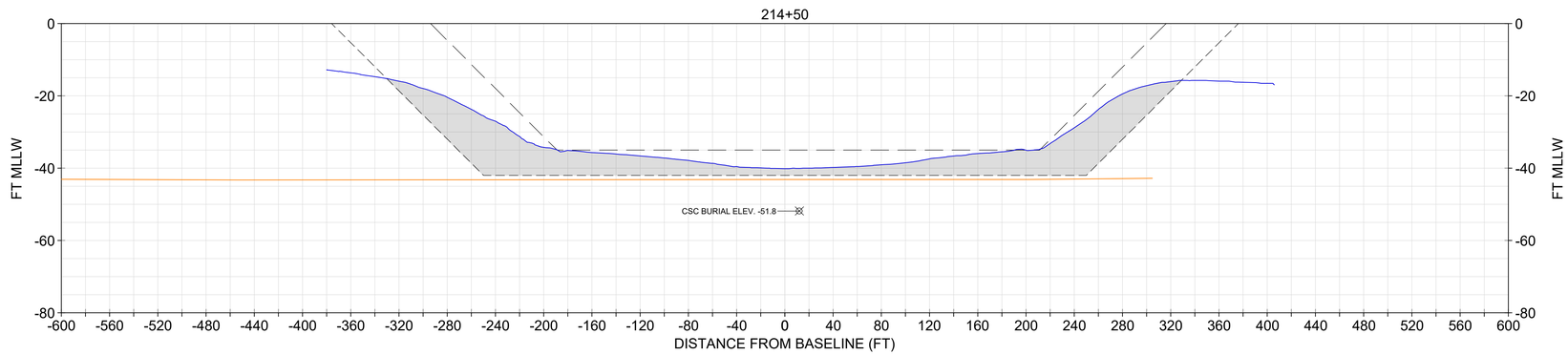
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-132









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 154 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

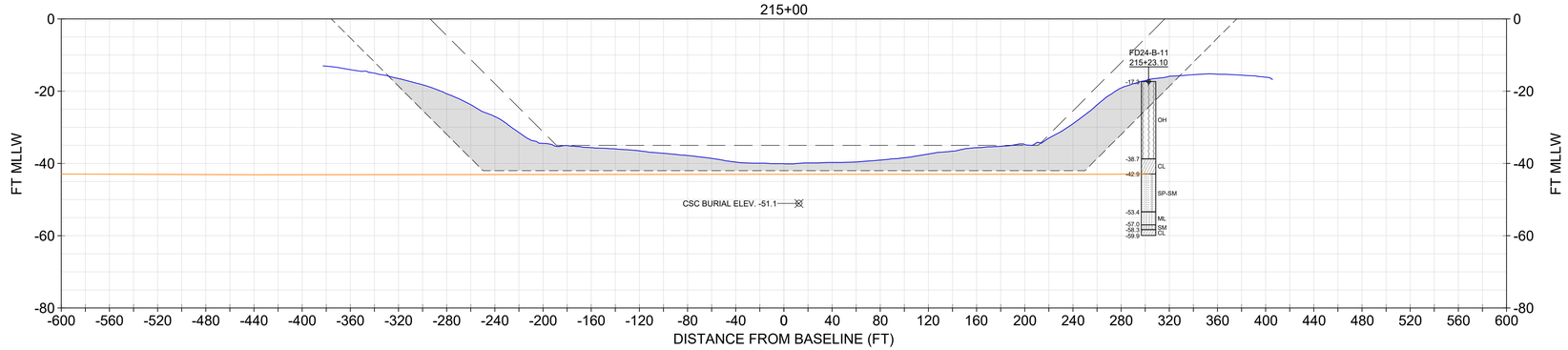
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

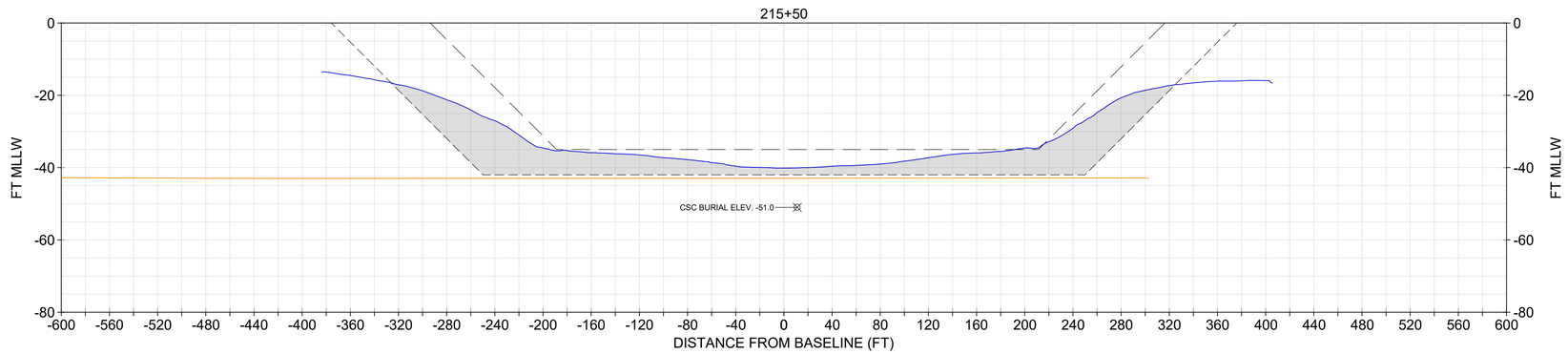
PREPARED FOR: Coastal Partners

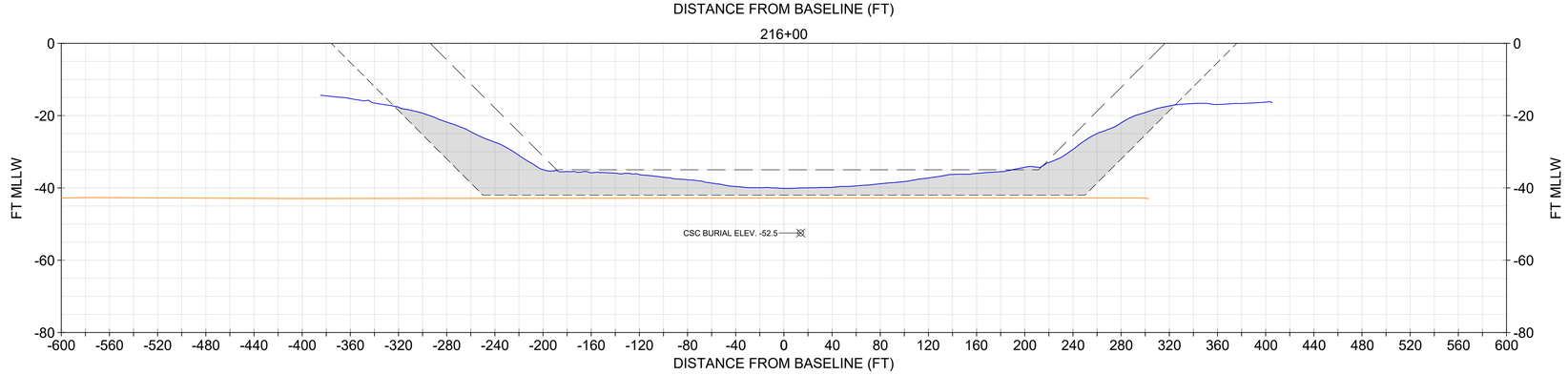
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

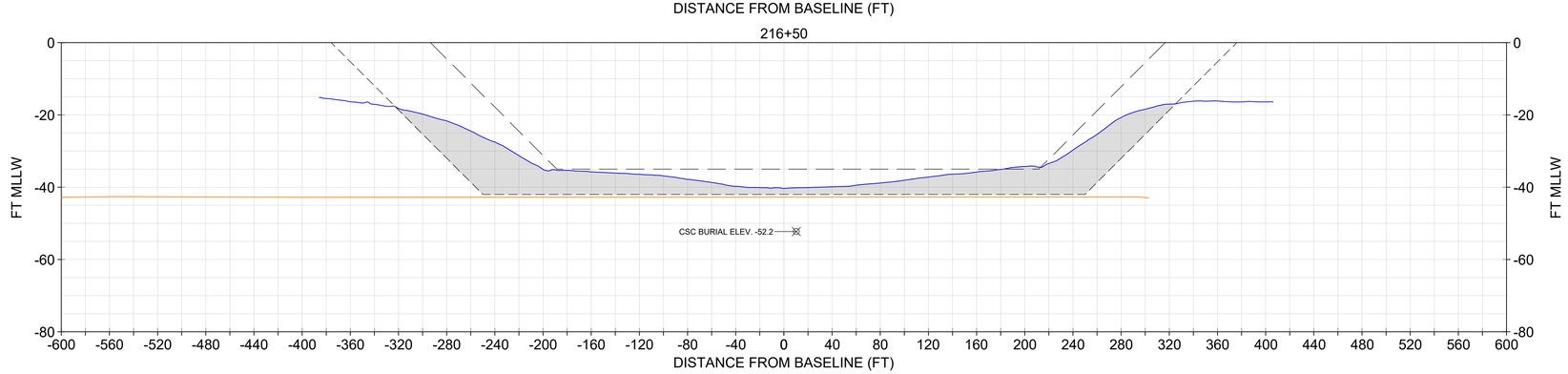
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-133









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION				
CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-11	-17.3	-59.9	GBA	7/3/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- CL (LEAN CLAY)
- SP-SM (POORLY GRADED SAND WITH SILT)
- ML (SILT)
- SM (SILTY SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 155 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

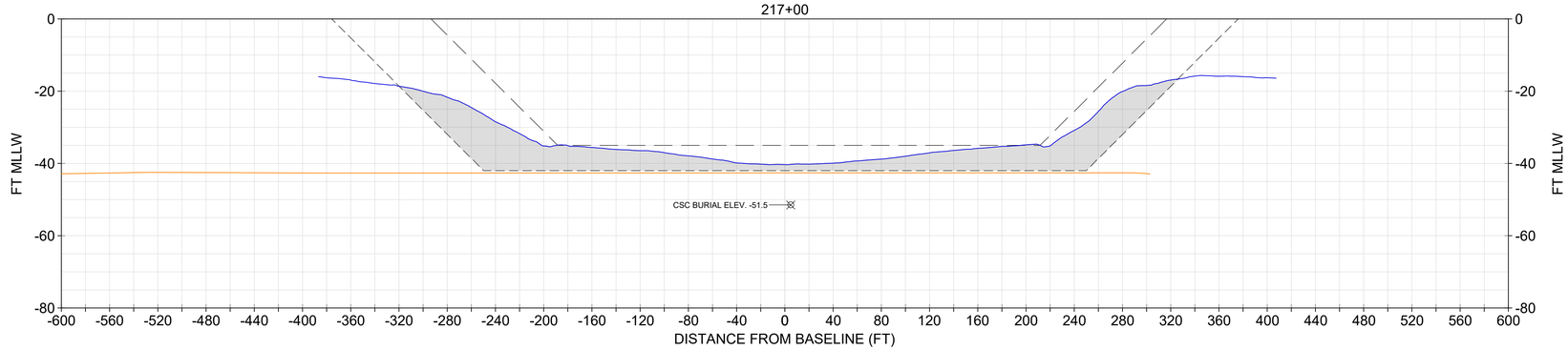
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5565

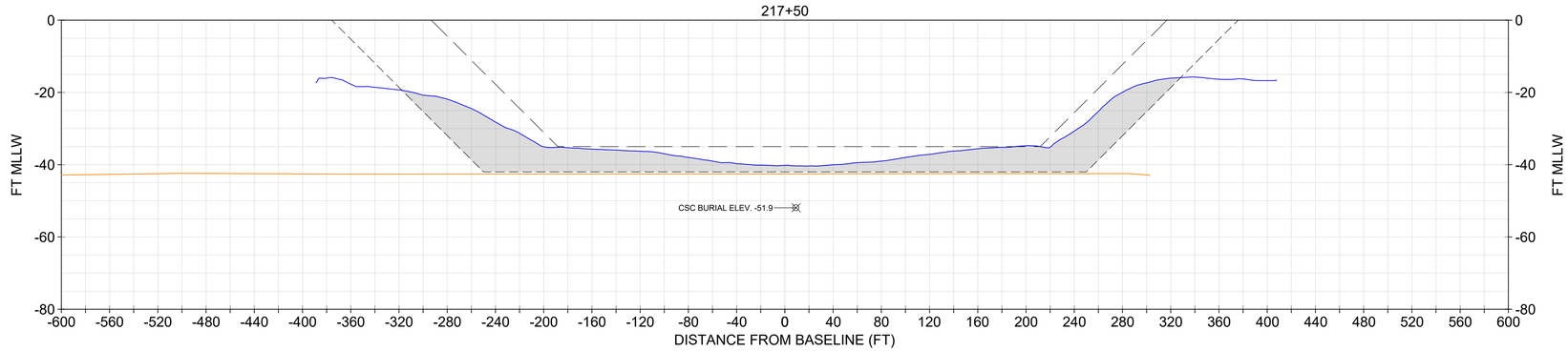
PREPARED FOR: Coastal Partners

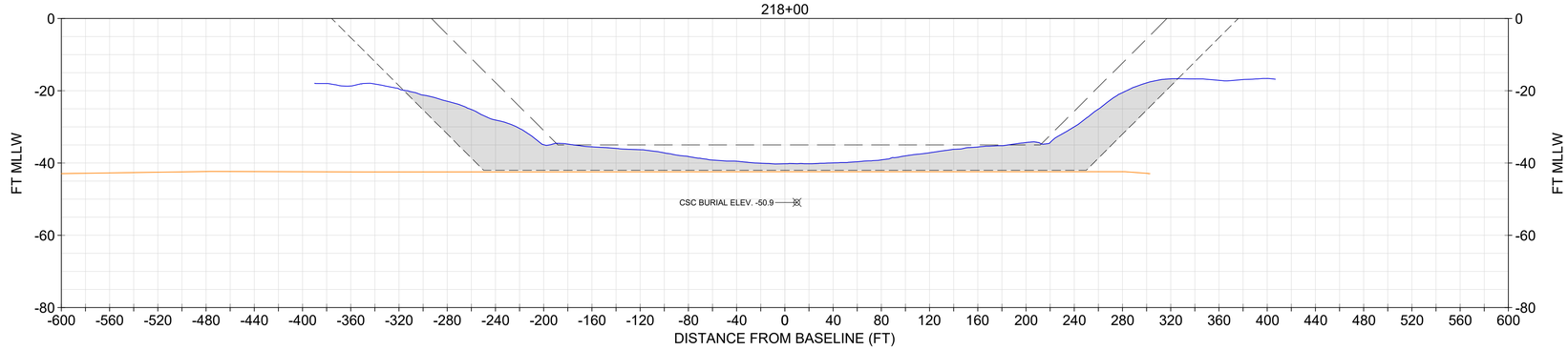
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

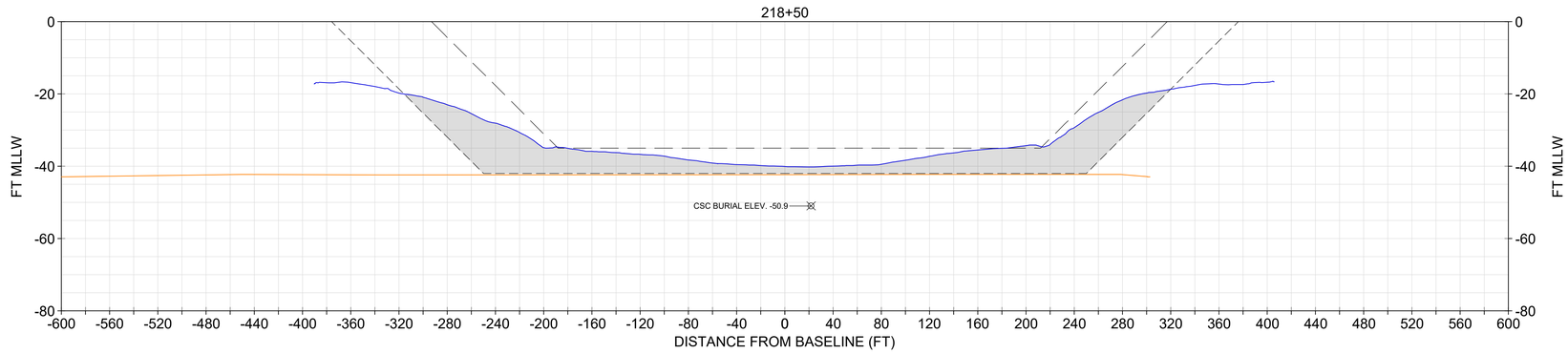
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-134









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 156 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI 'D'
SCALE: AS SHOWN

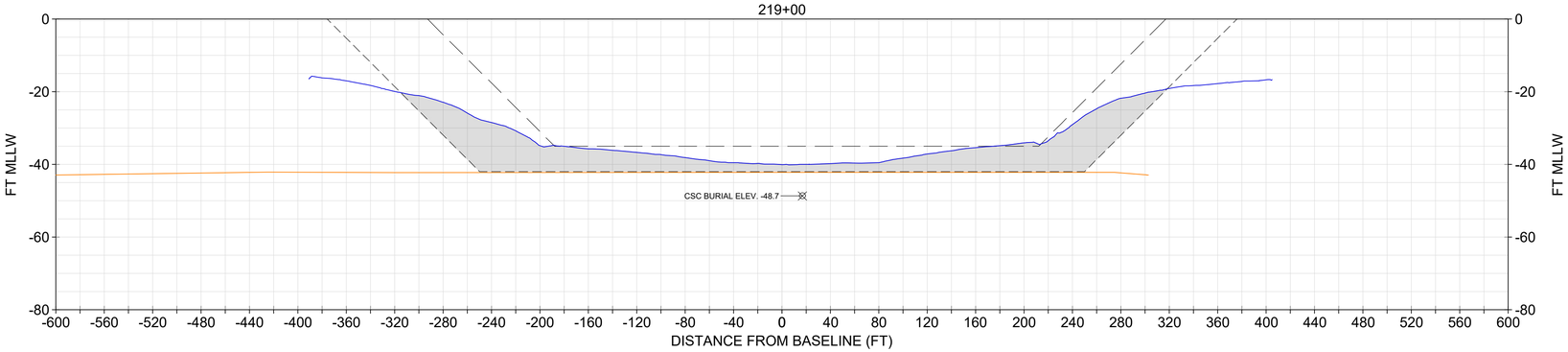
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

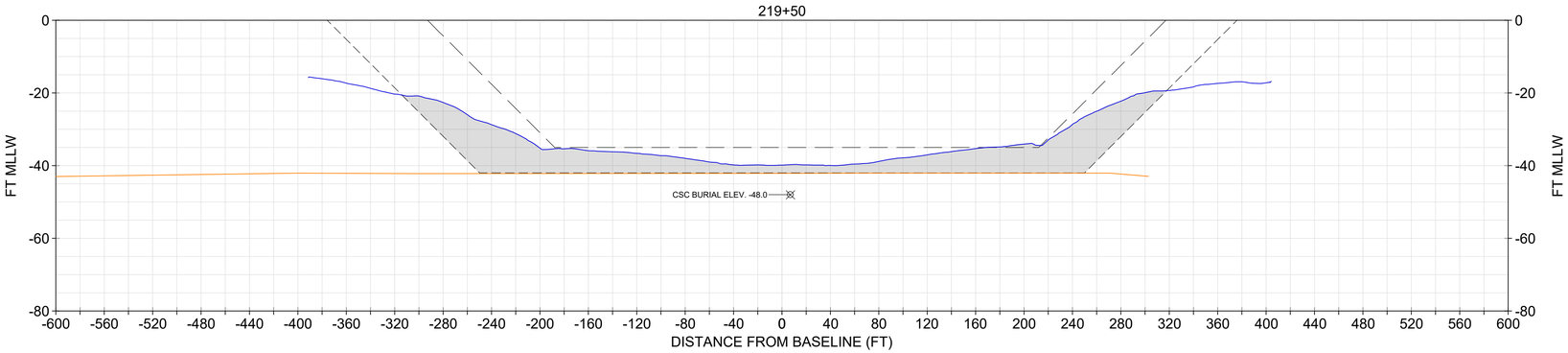
PREPARED FOR: Coastal Partners Connecticut's Coastal Program

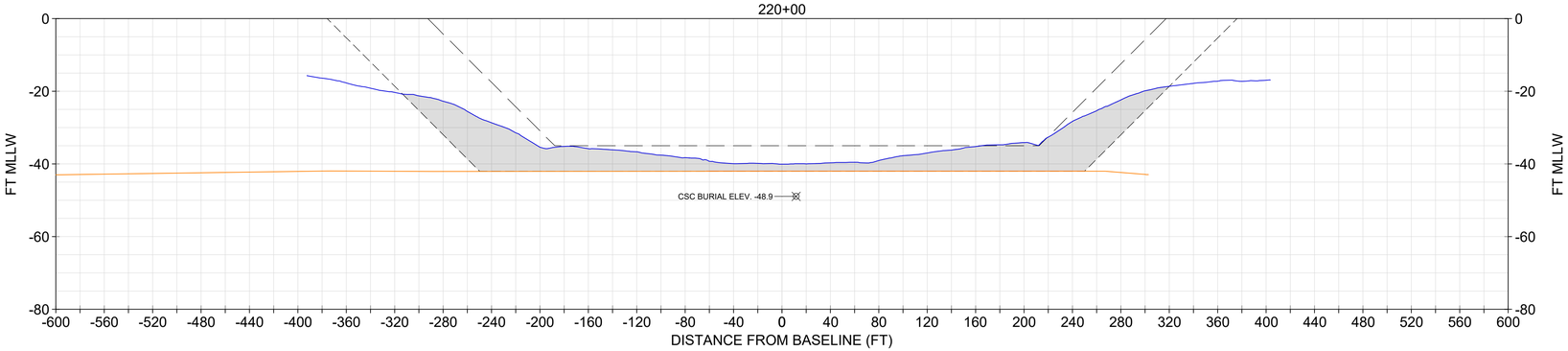
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

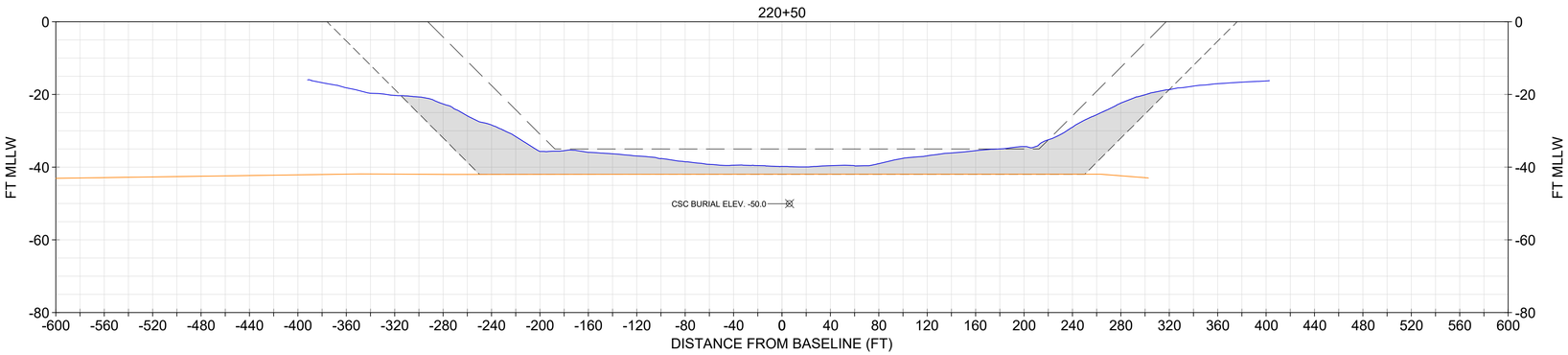
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-135









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 157 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

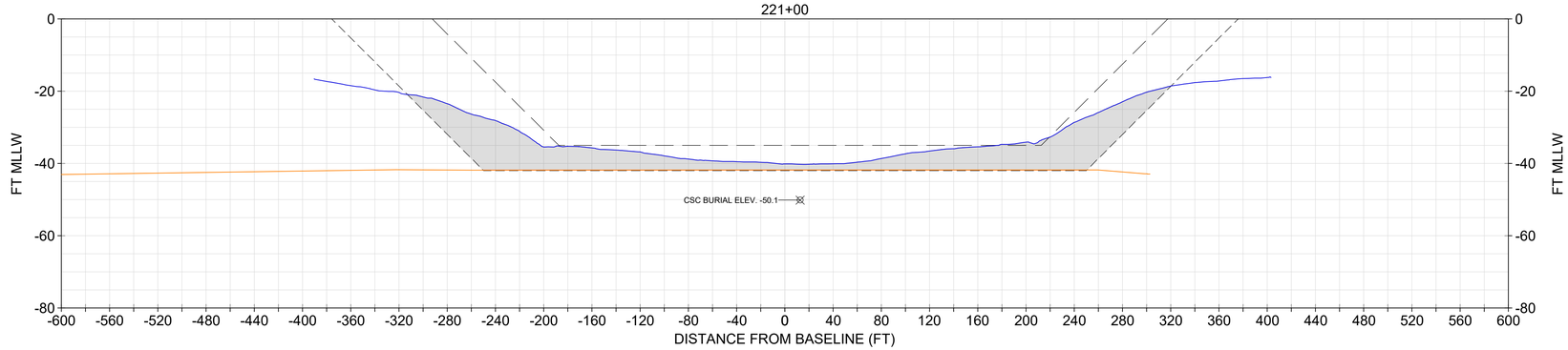
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

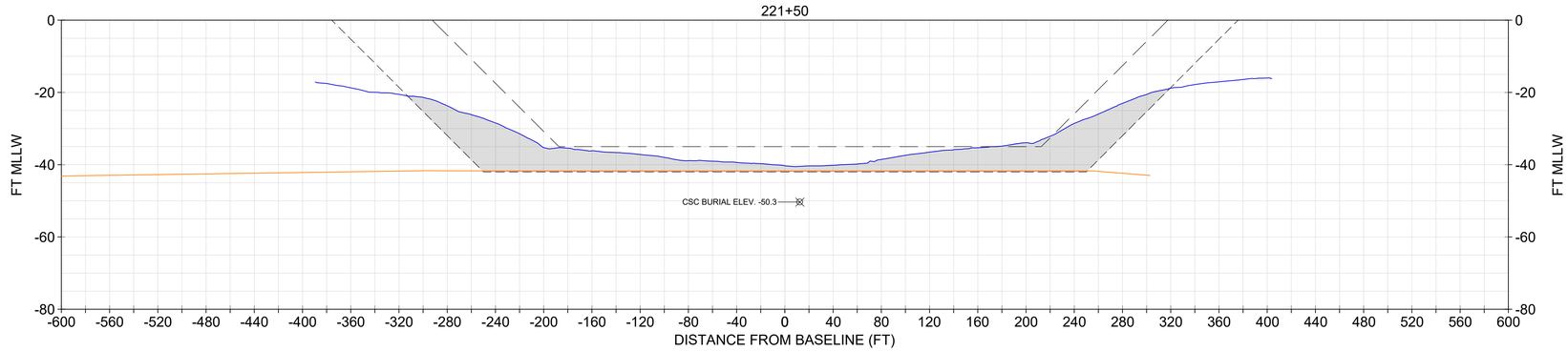
PREPARED FOR: Coastal Partners

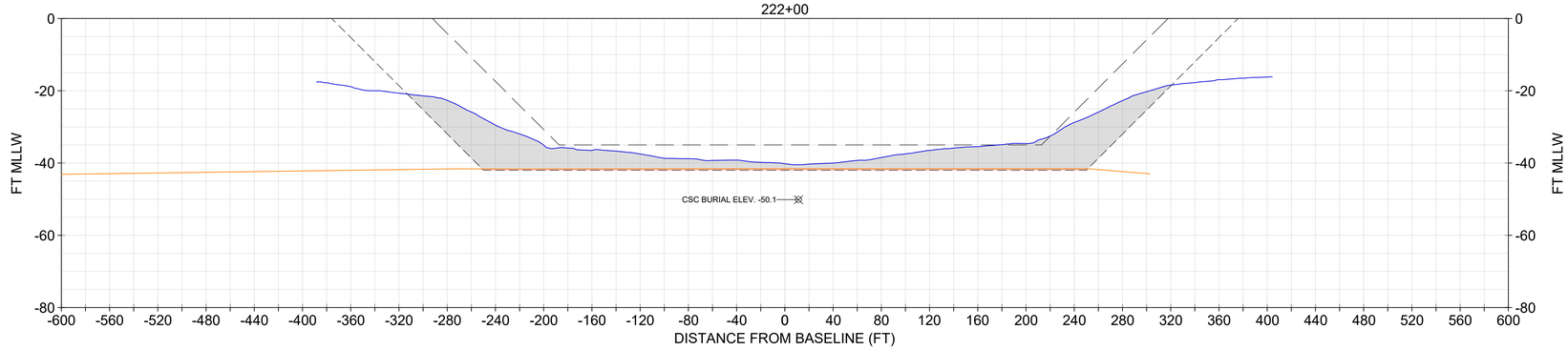
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

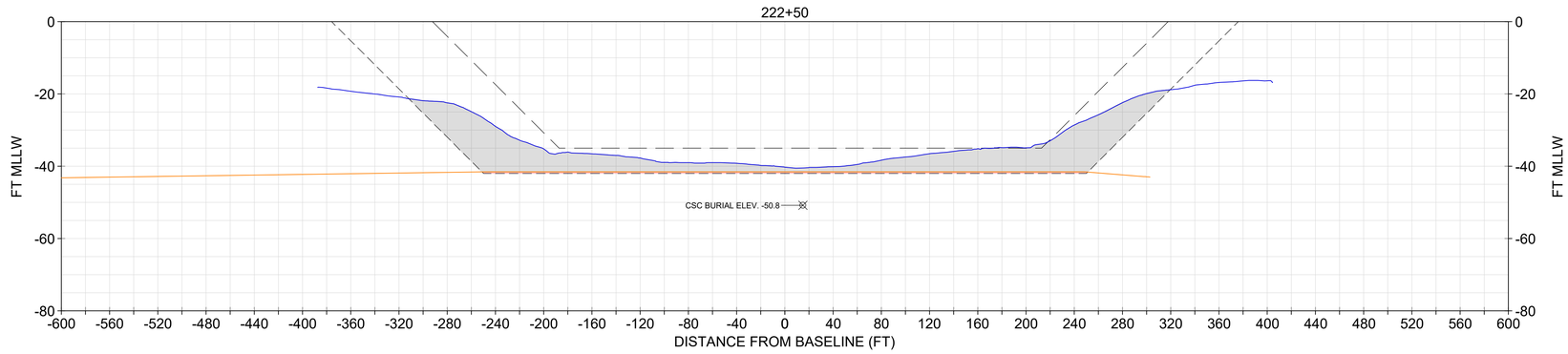
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-136









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 158 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

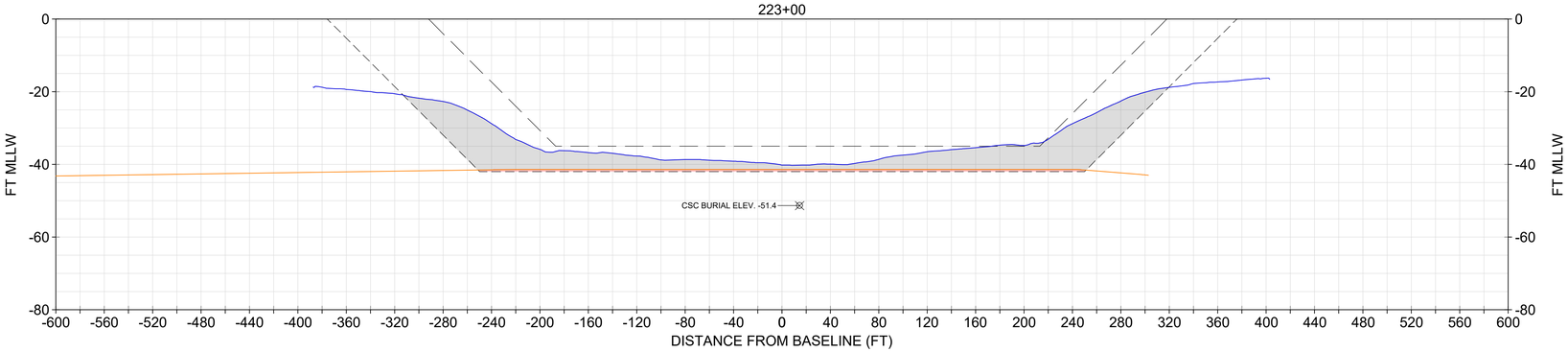
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

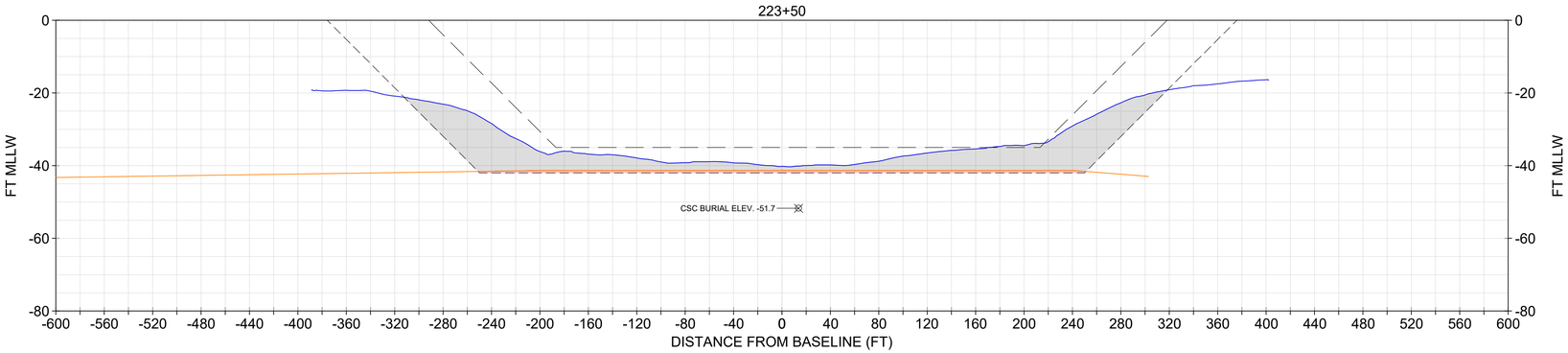
PREPARED FOR: Coastal Partners

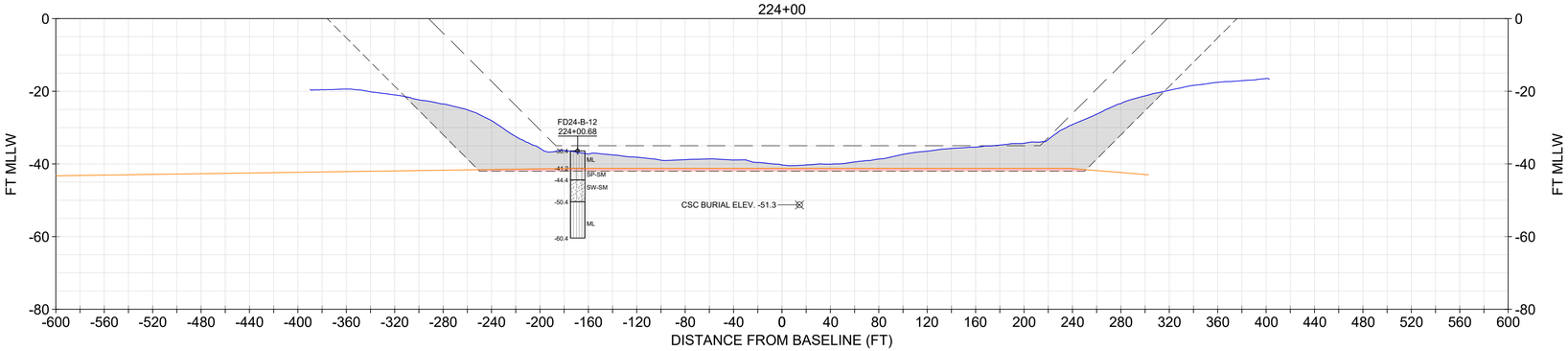
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

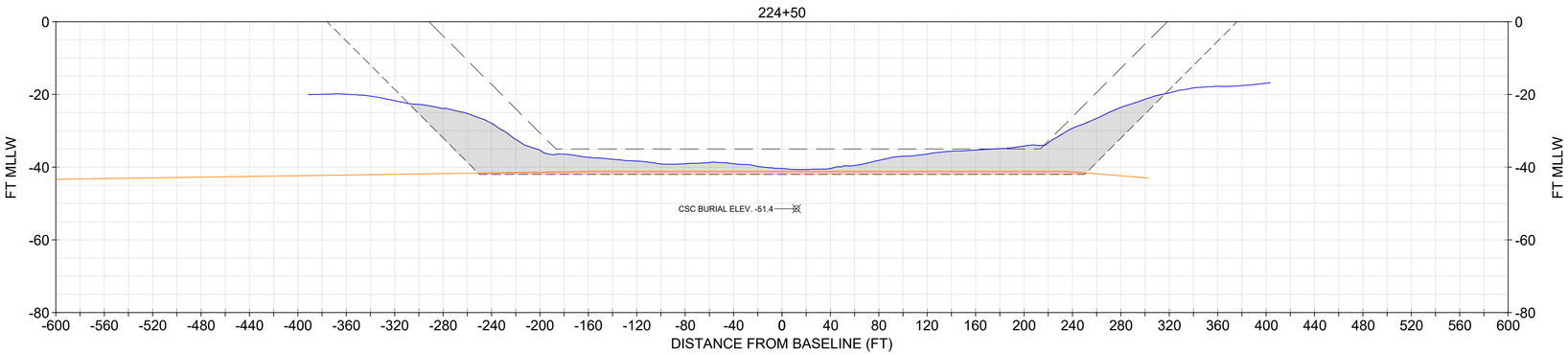
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-137









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL CORE (MLLW)	SOURCE	DATE COLLECTED
FD24-B-12	-36.4	-60.4	GBA	7/25/2024

CORE LEGEND
- ML (SILT)
- SP-SM (POORLY GRADED SAND WITH SILT)
- SW-SM (WELL GRADED SAND WITH SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 159 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

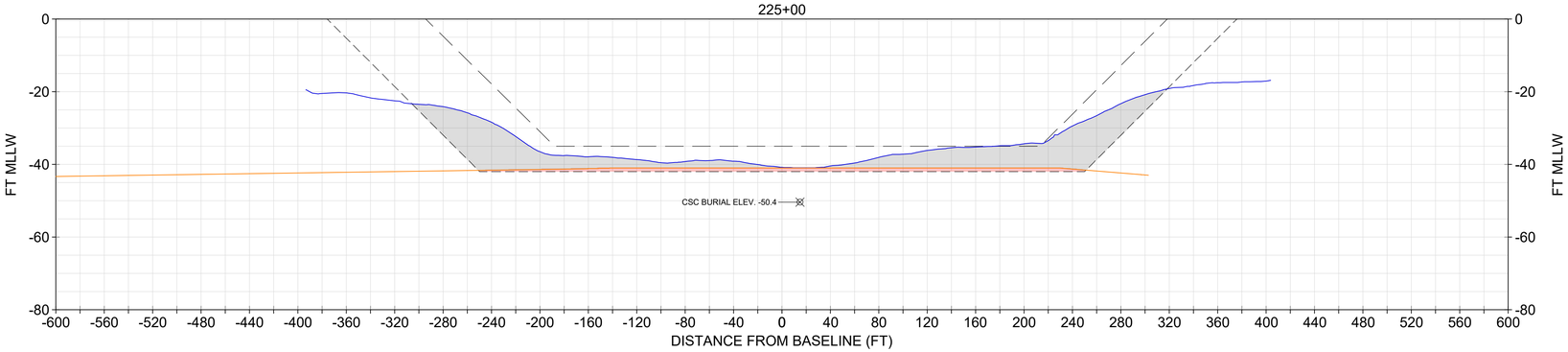
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

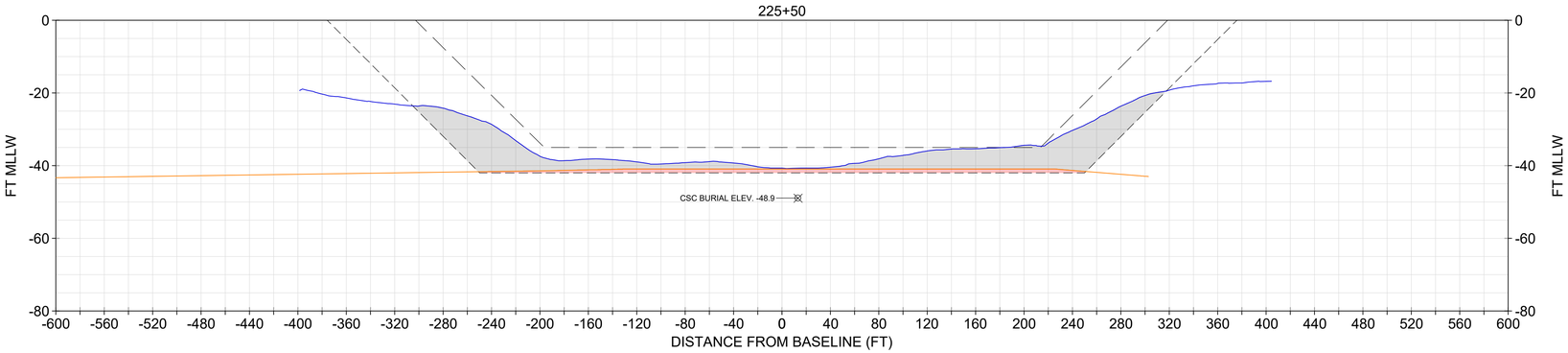
PREPARED FOR: Coastal Partners Connecticut's Coastal Program

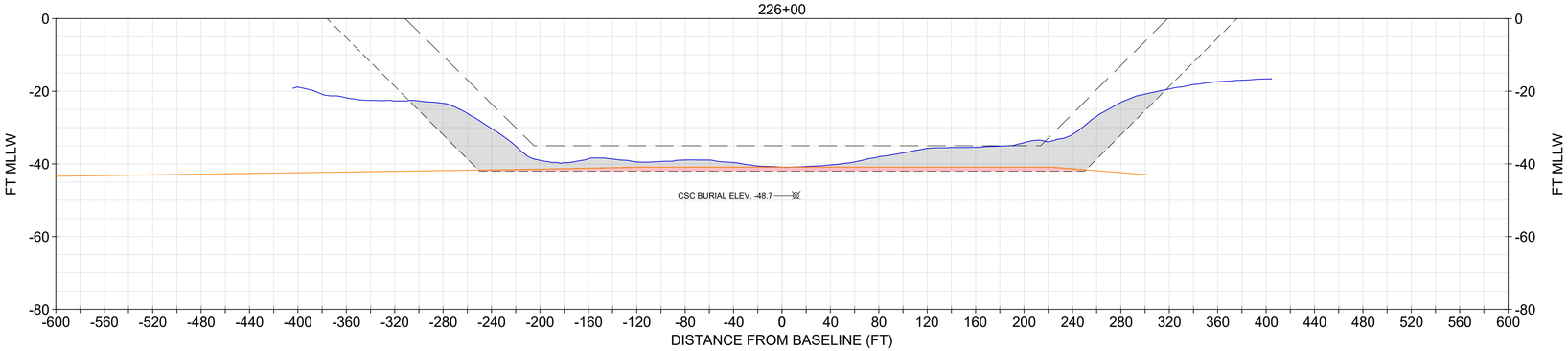
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

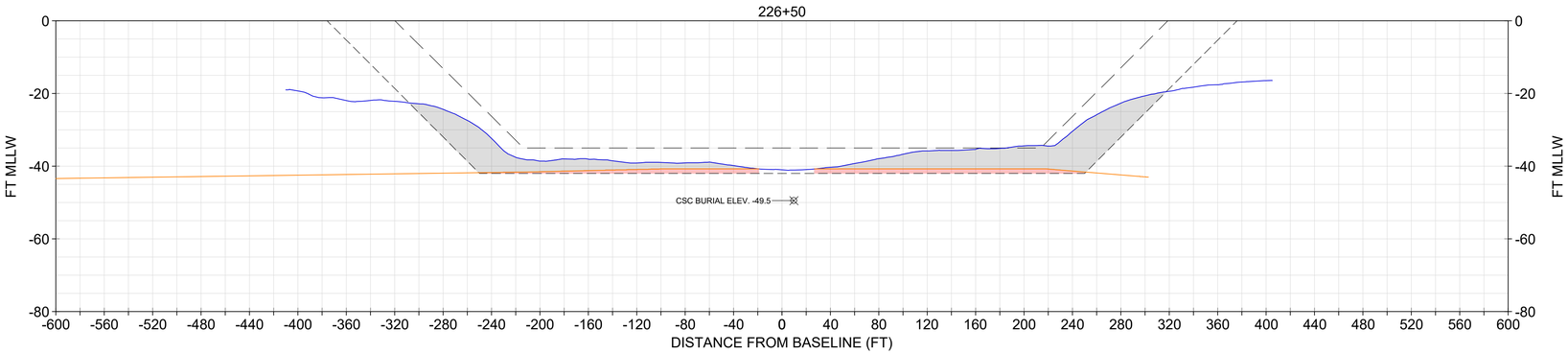
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-138









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: -
SUBMITTED BY: DCU
SHEET 16\0 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

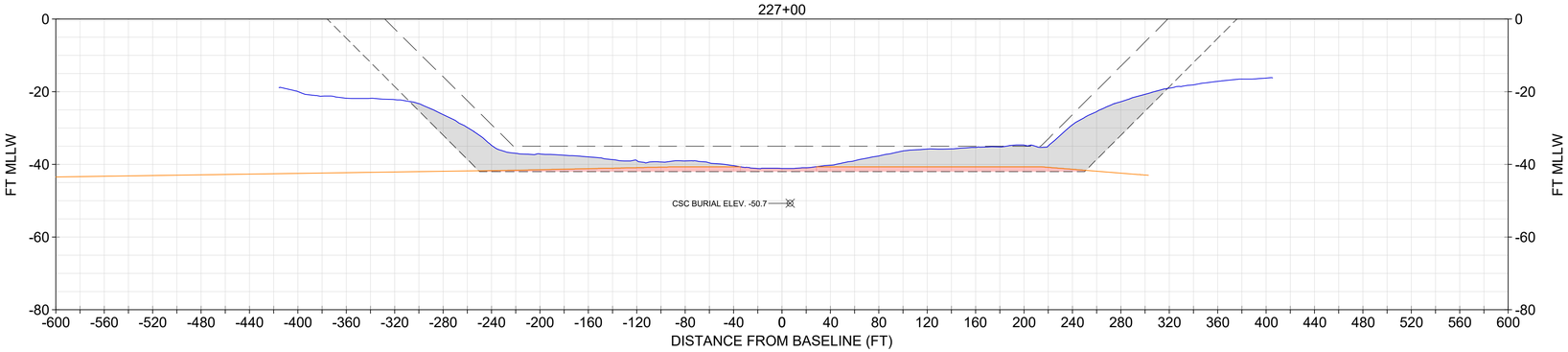
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

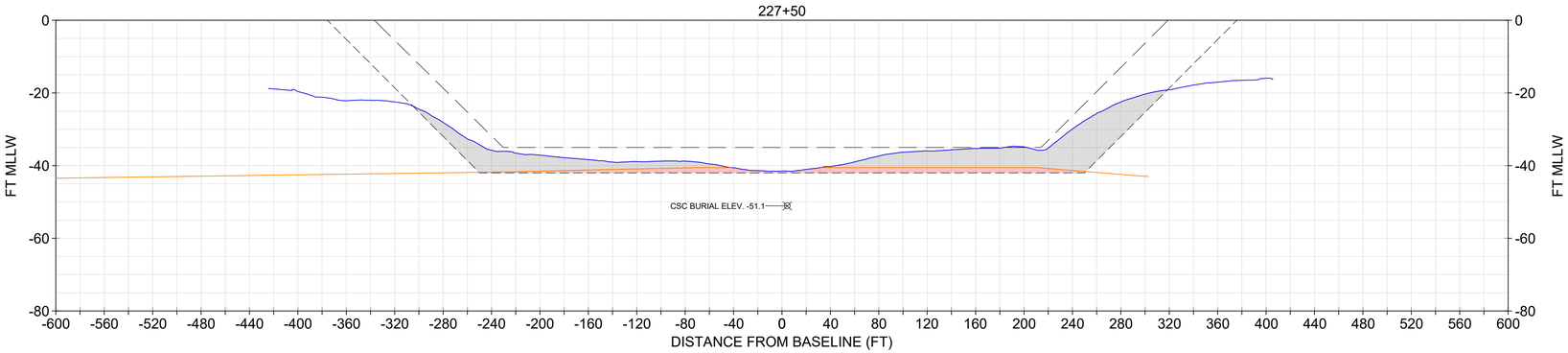
PREPARED FOR: Coastal Partners

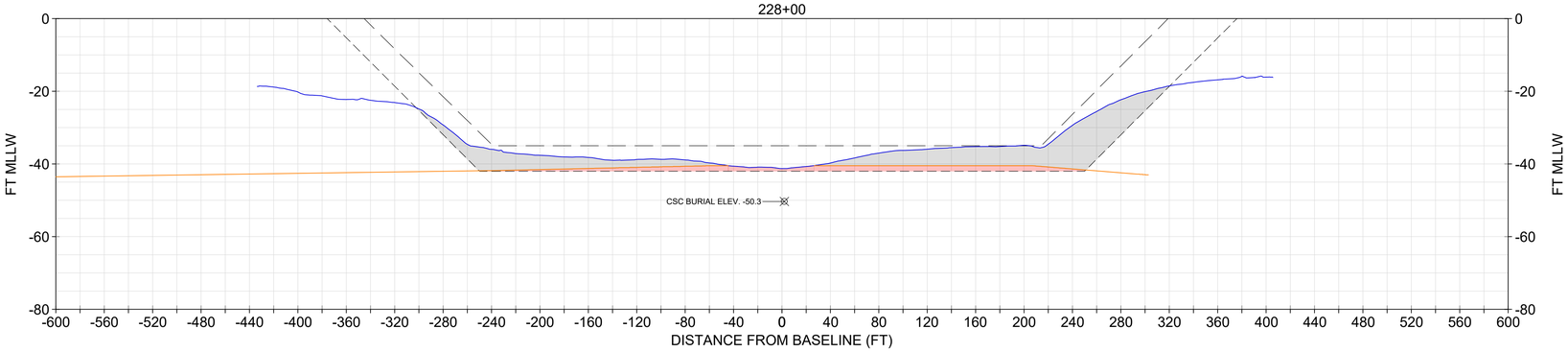
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

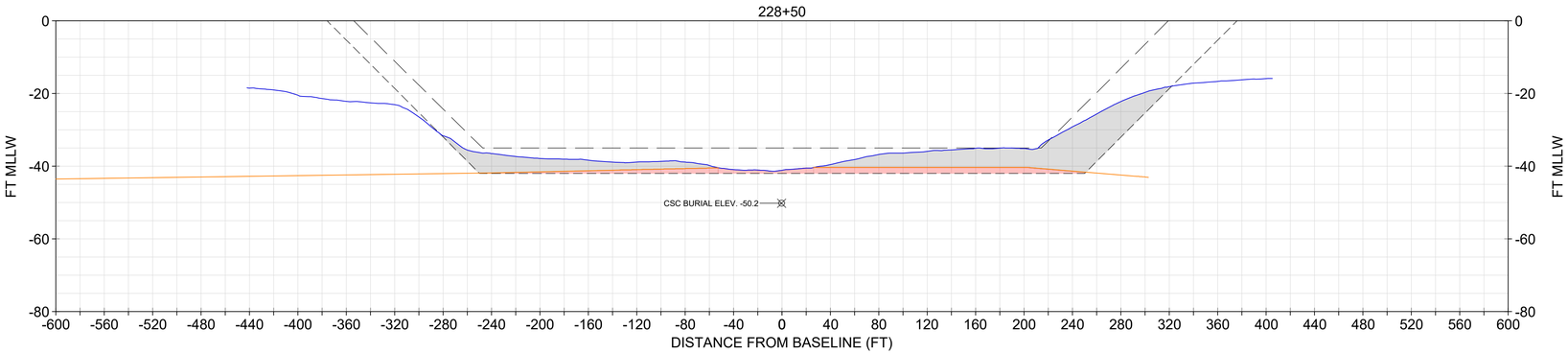
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-139









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 161 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

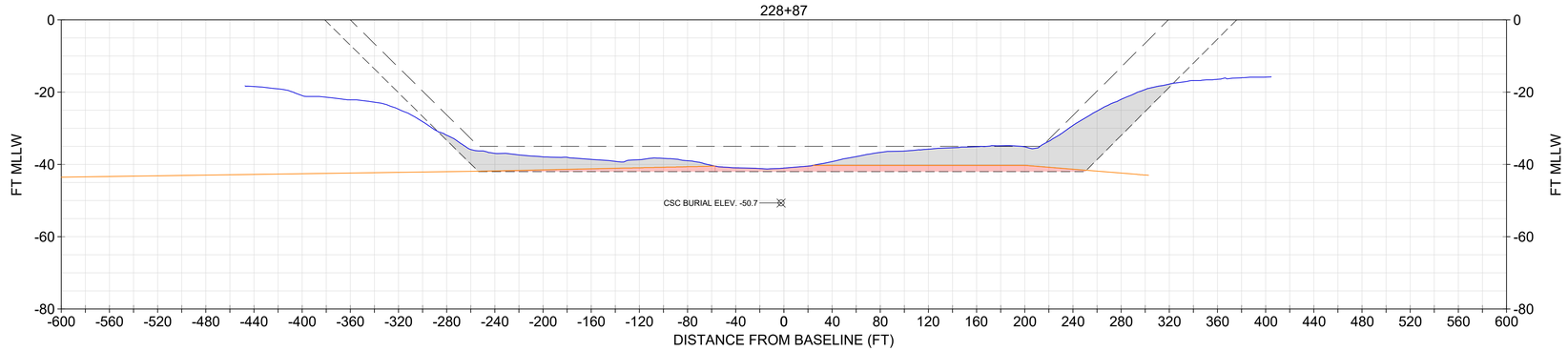
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

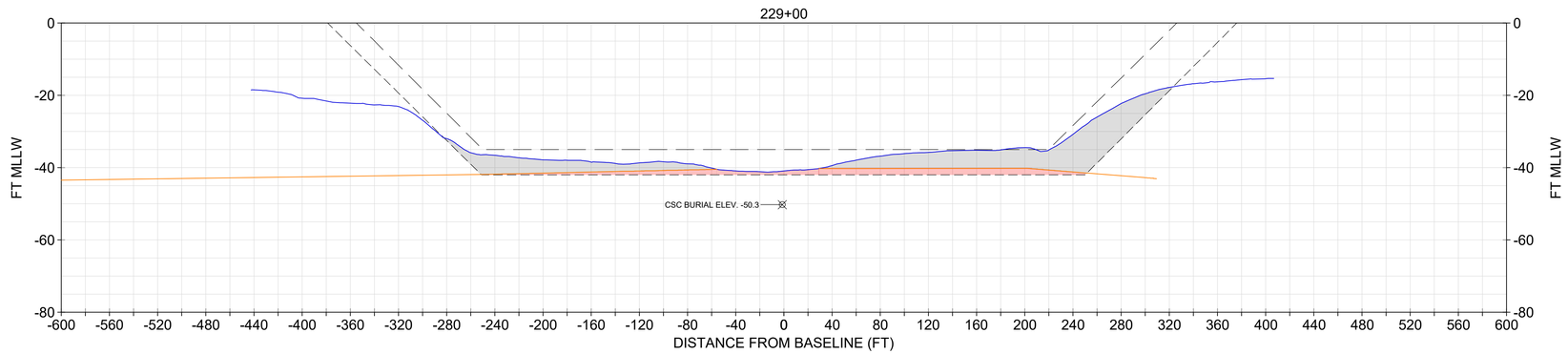
PREPARED FOR: Coastal Partners

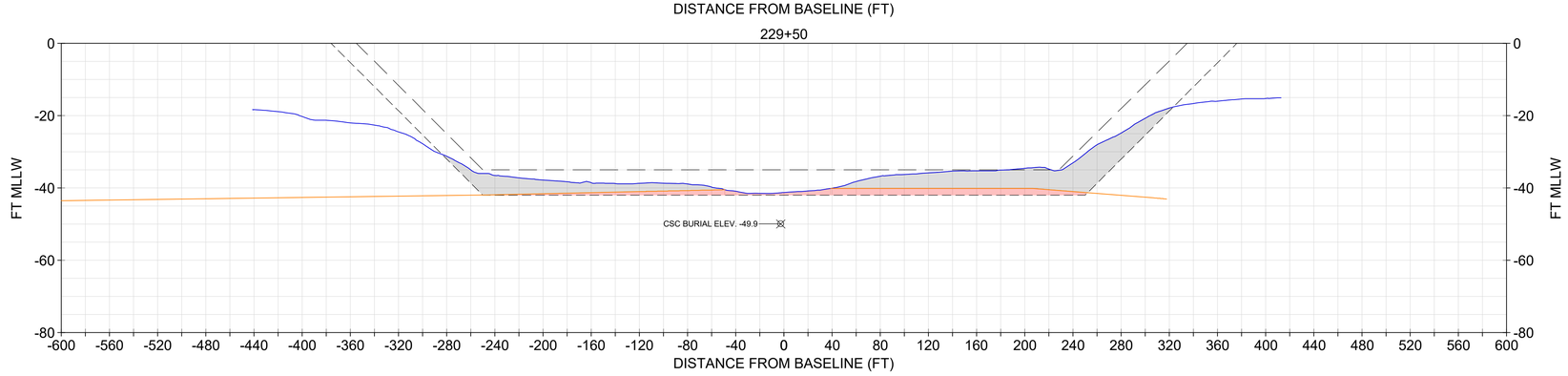
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

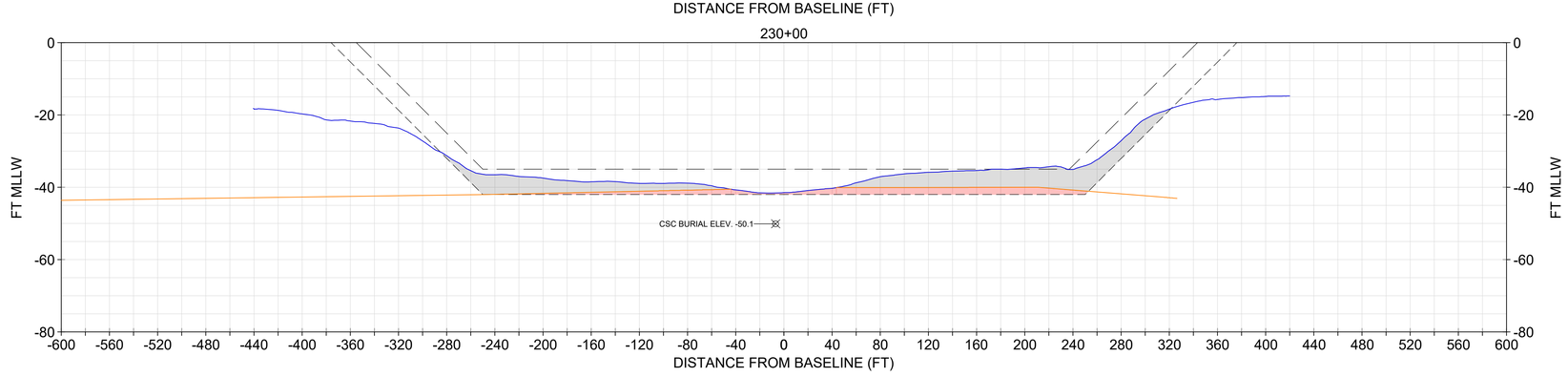
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-140









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 162 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

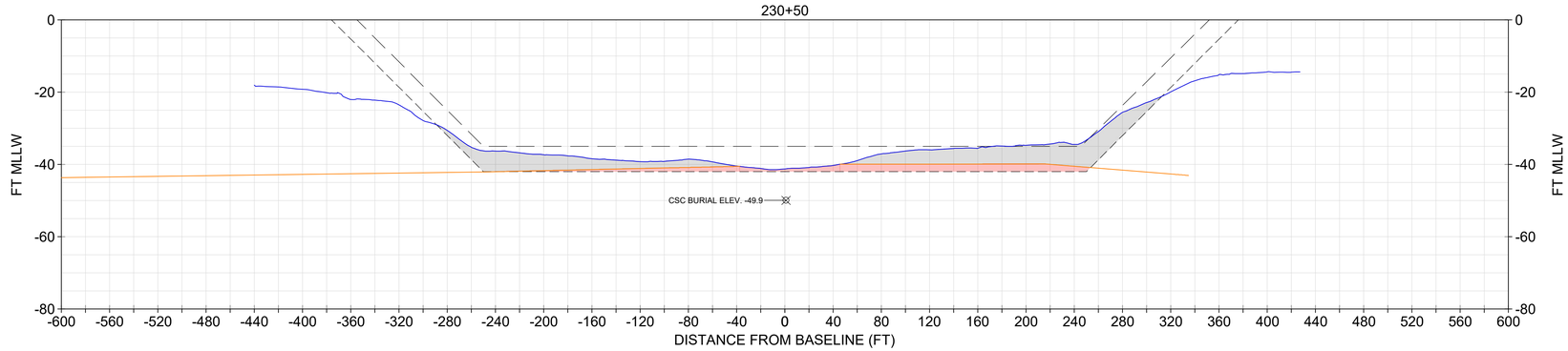
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 882-5595

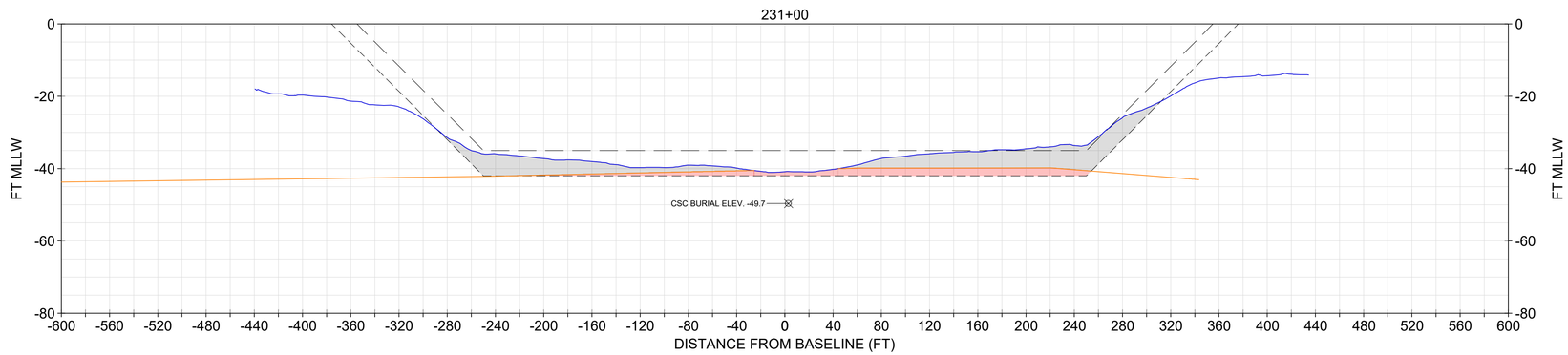
PREPARED FOR: Capital Partners

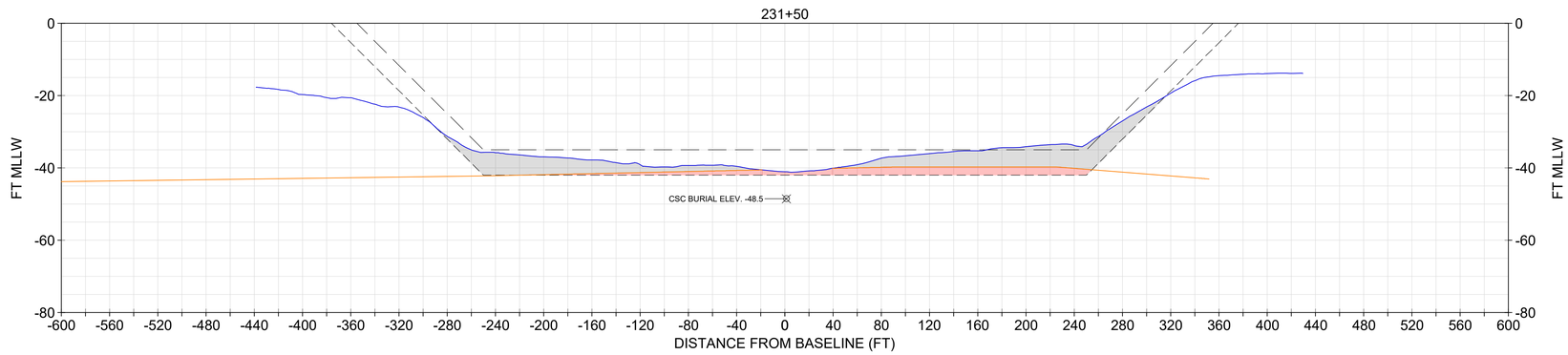
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

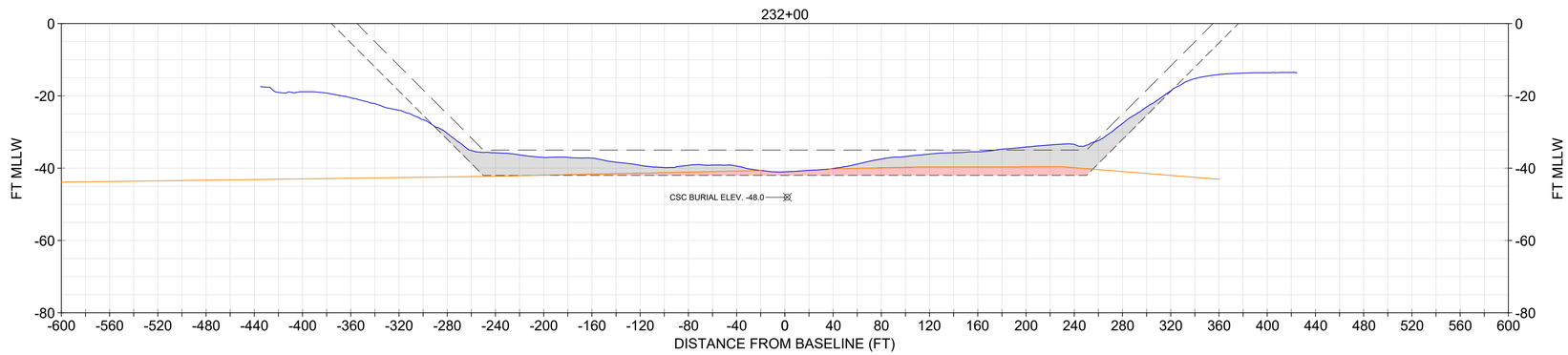
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-141









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 163 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

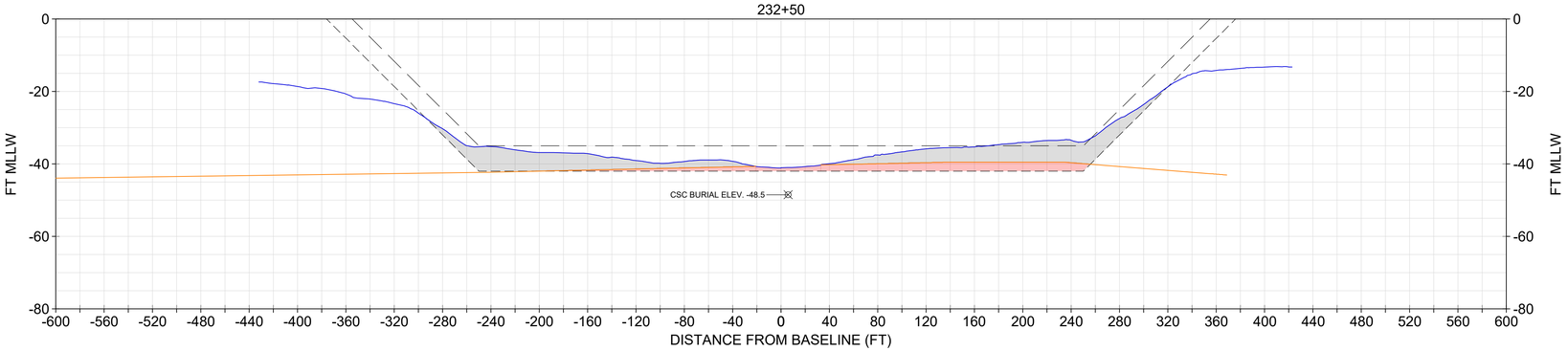
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

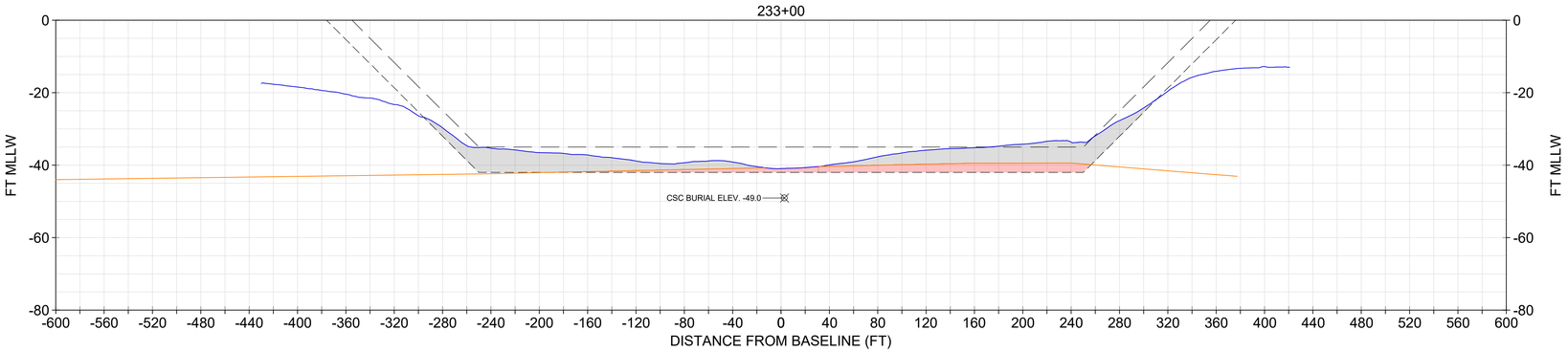
PREPARED FOR: Coastal Partners

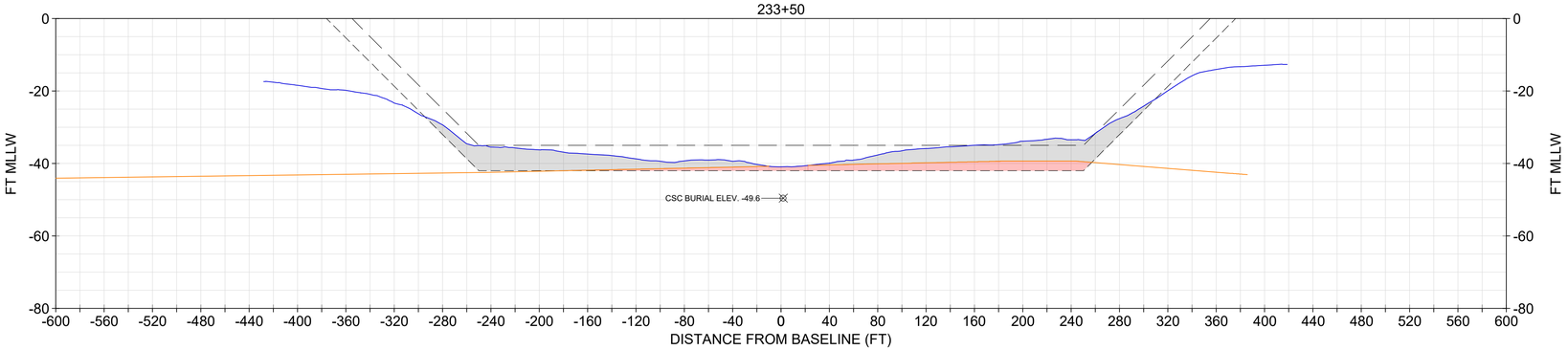
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

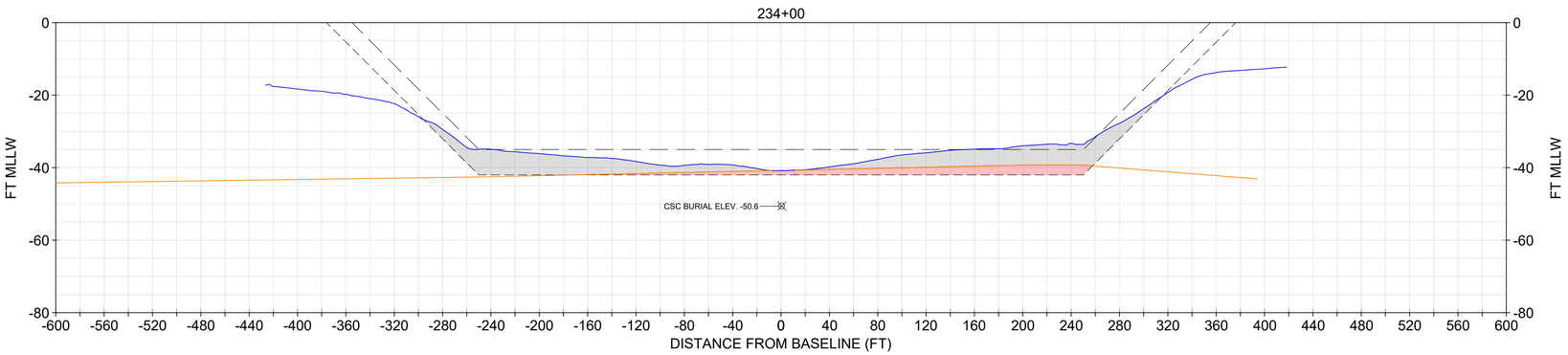
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-142









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: -
SUBMITTED BY: DCU
SHEET 164 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

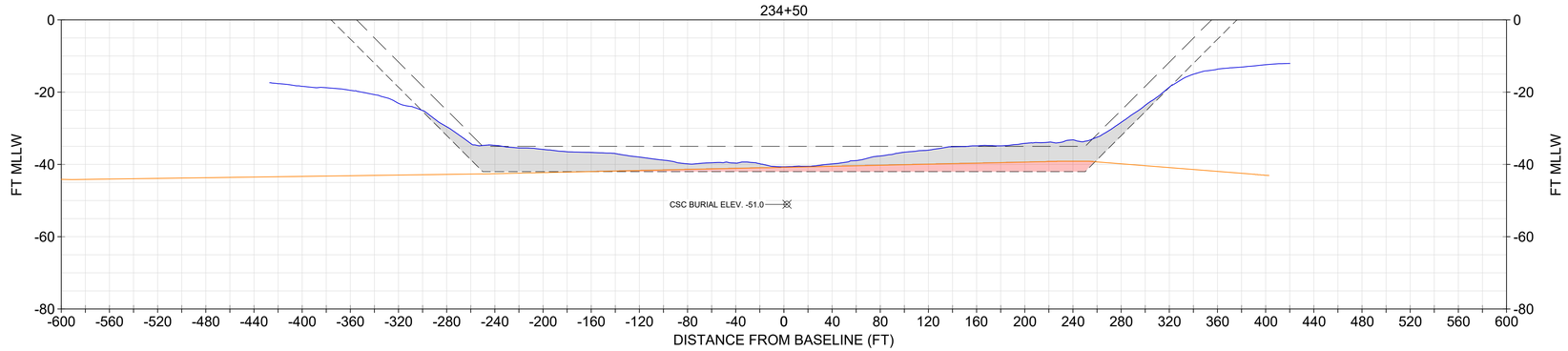
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

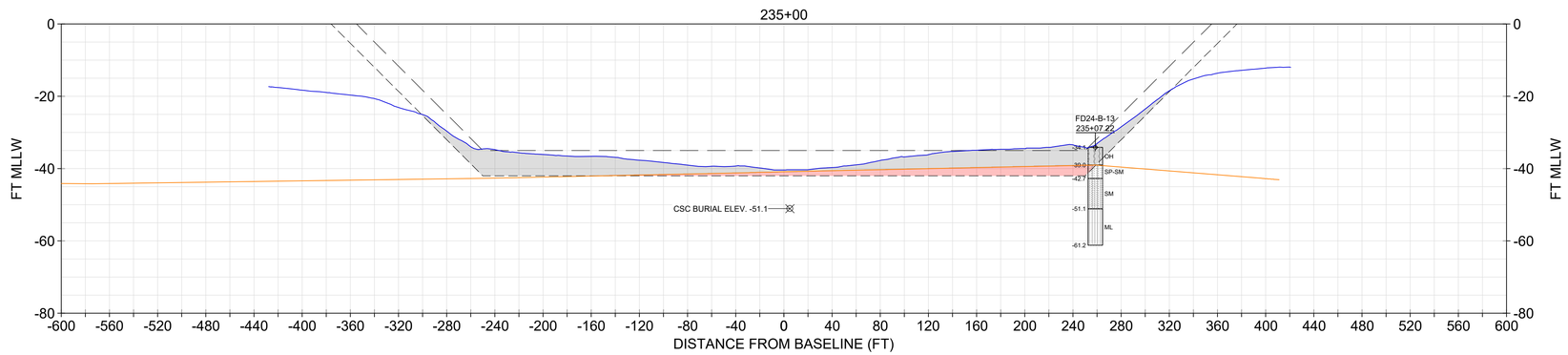
PREPARED FOR: Coastal Partners

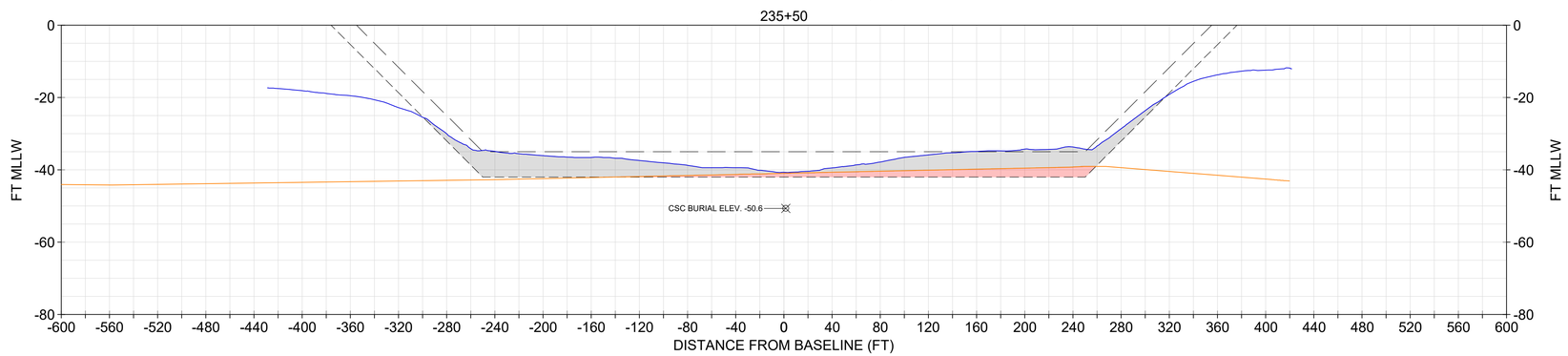
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

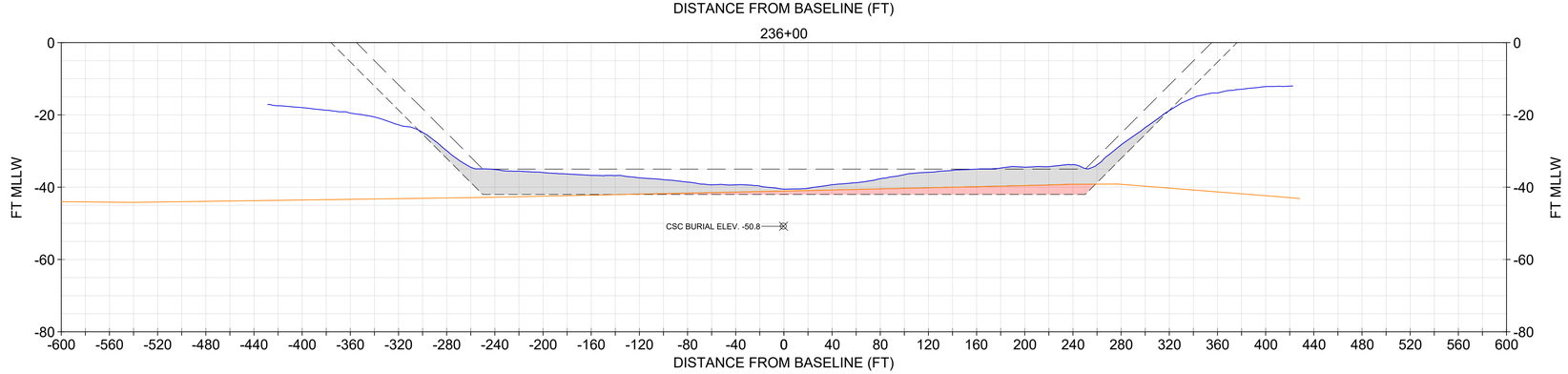
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-143









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-13	-34.1	-61.2	GBA	7/2/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- SP-SM (POORLY GRADED SAND WITH SILT)
- SM (SILTY SAND)
- ML (SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 165 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

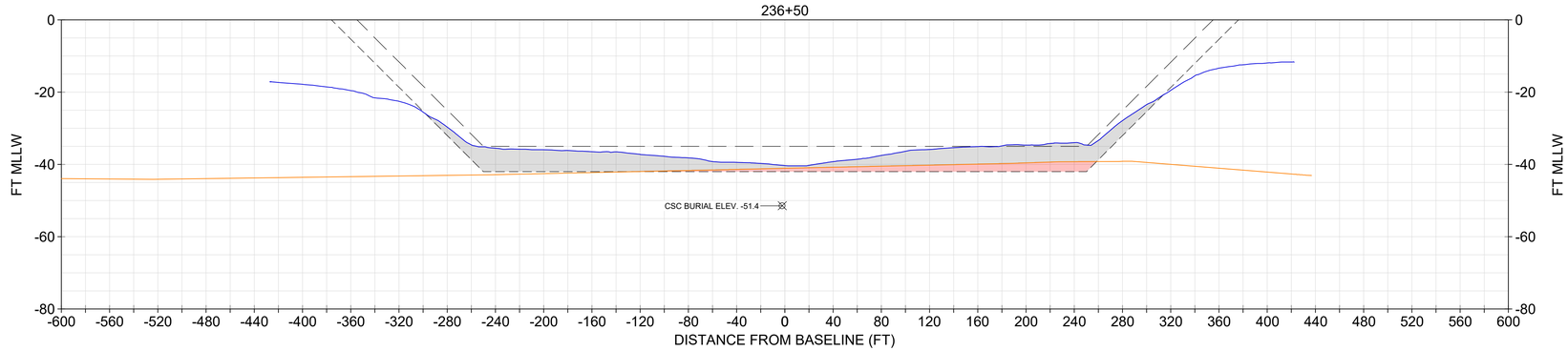
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

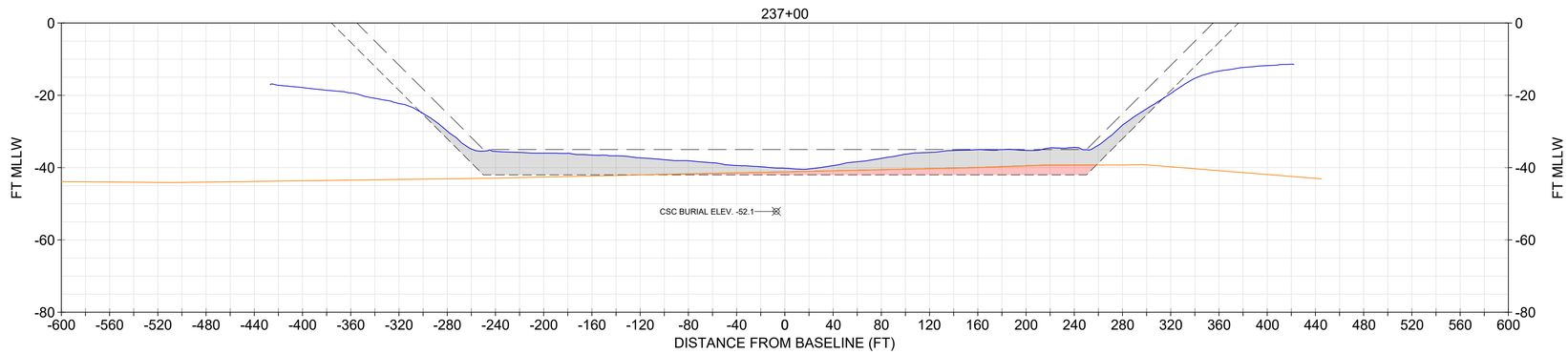
PREPARED FOR: Coastal Partners Connecticut's Coastal Program

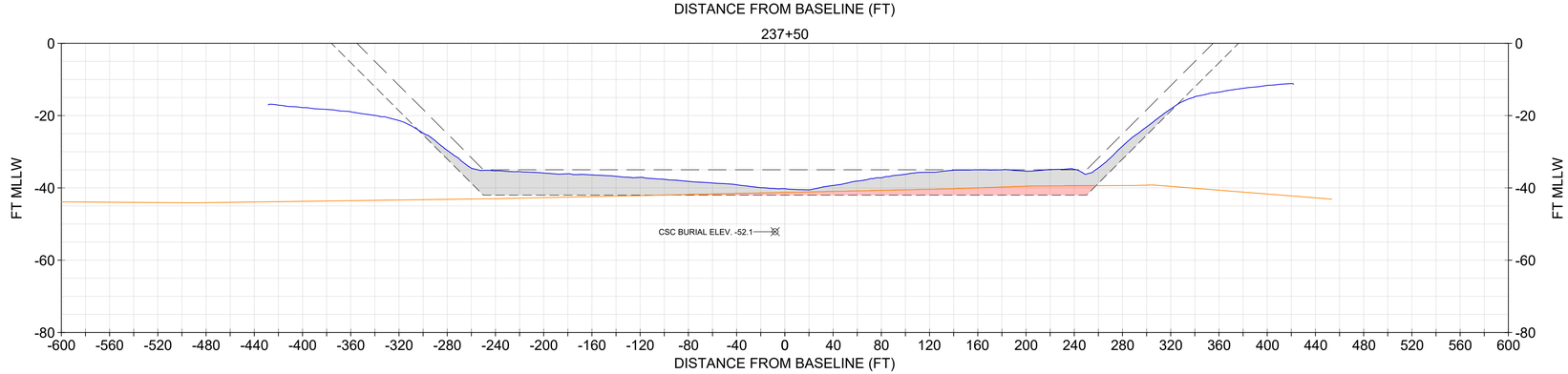
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

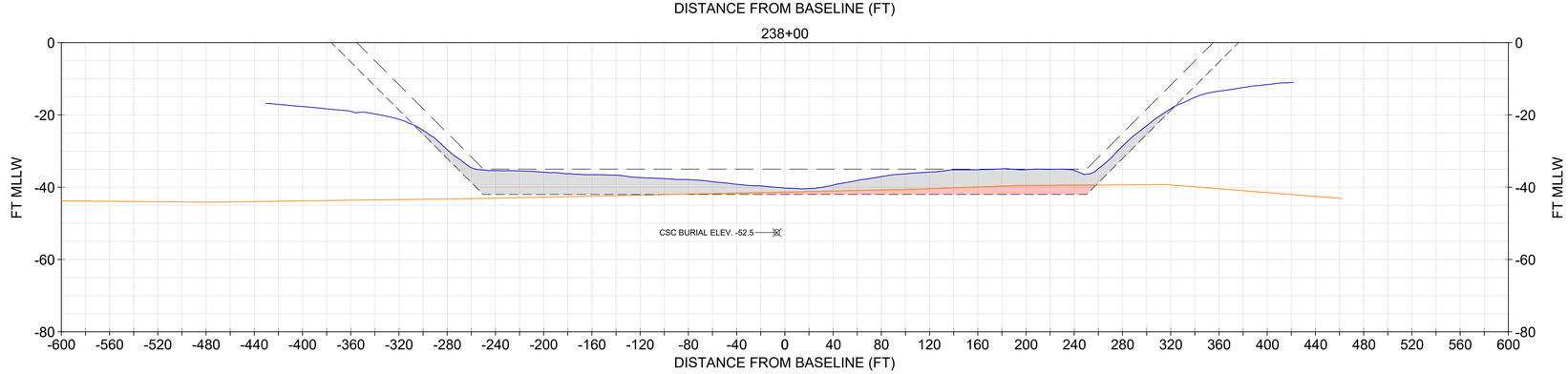
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-144









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 166 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

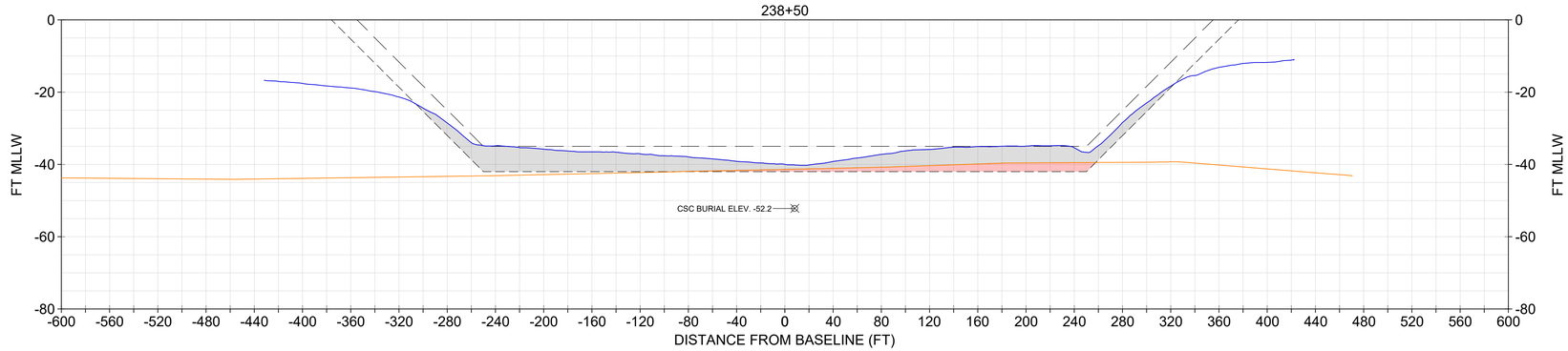
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 6008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

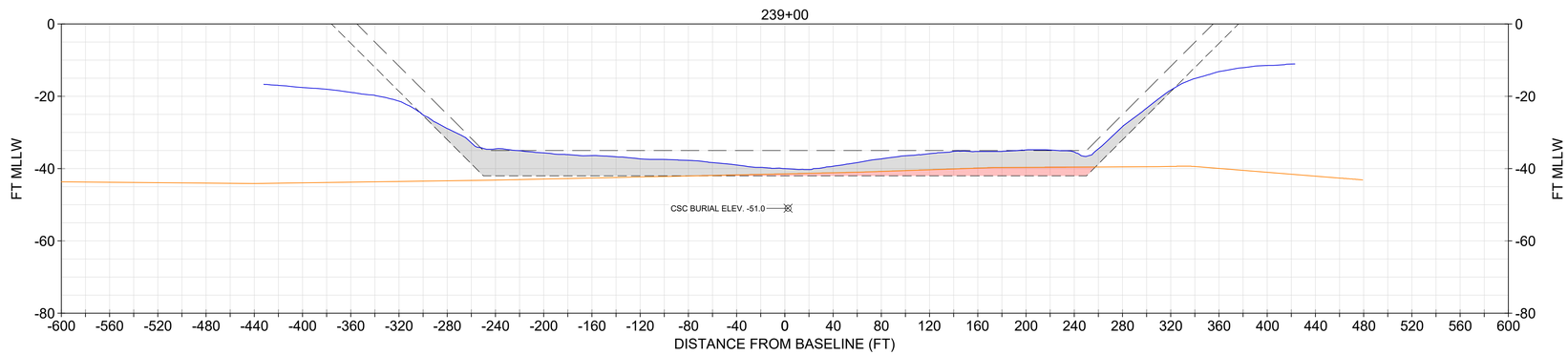
PREPARED FOR: Capital Partners

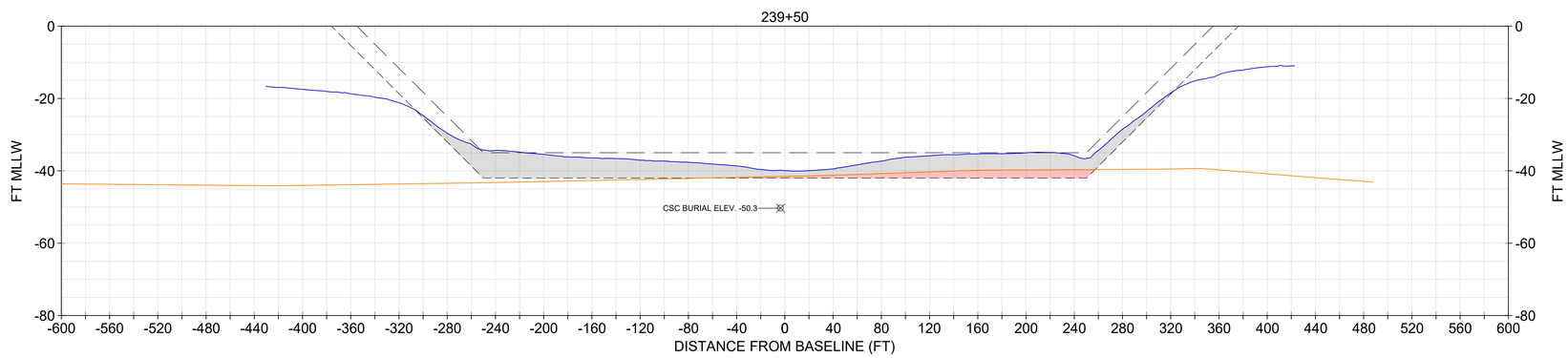
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

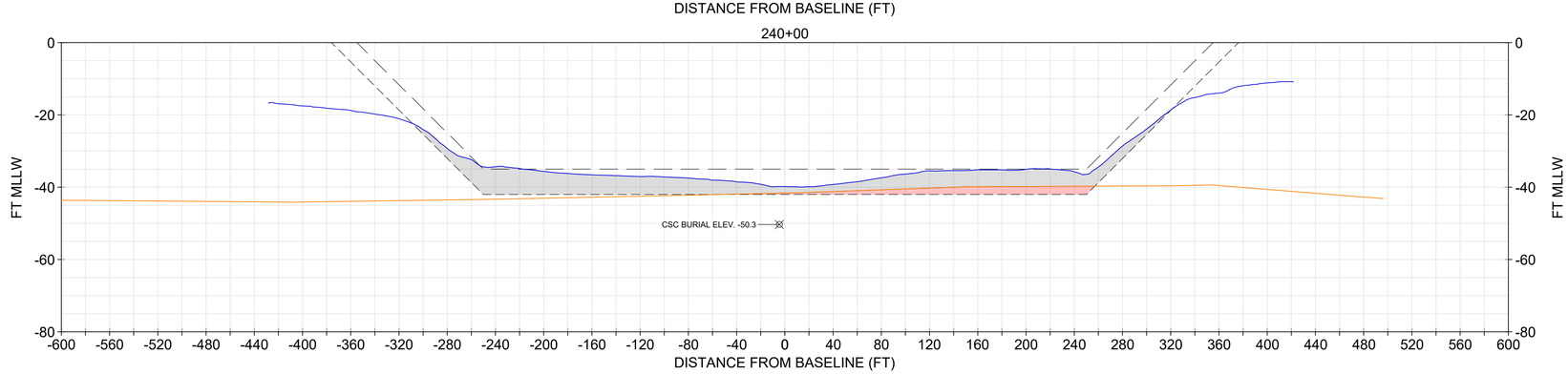
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-145









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 167 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

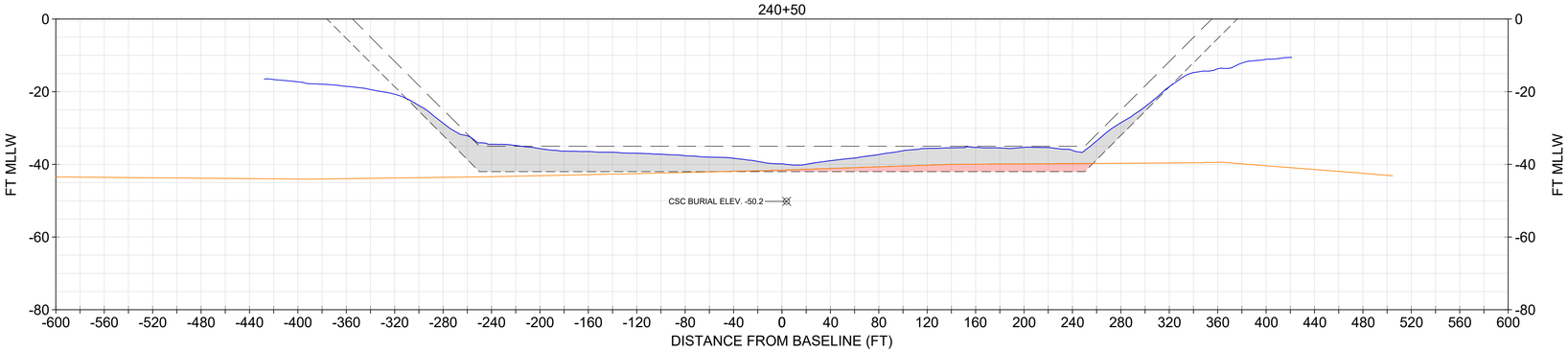
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A, Baltimore, MD 21237 Phone (410) 682-5595

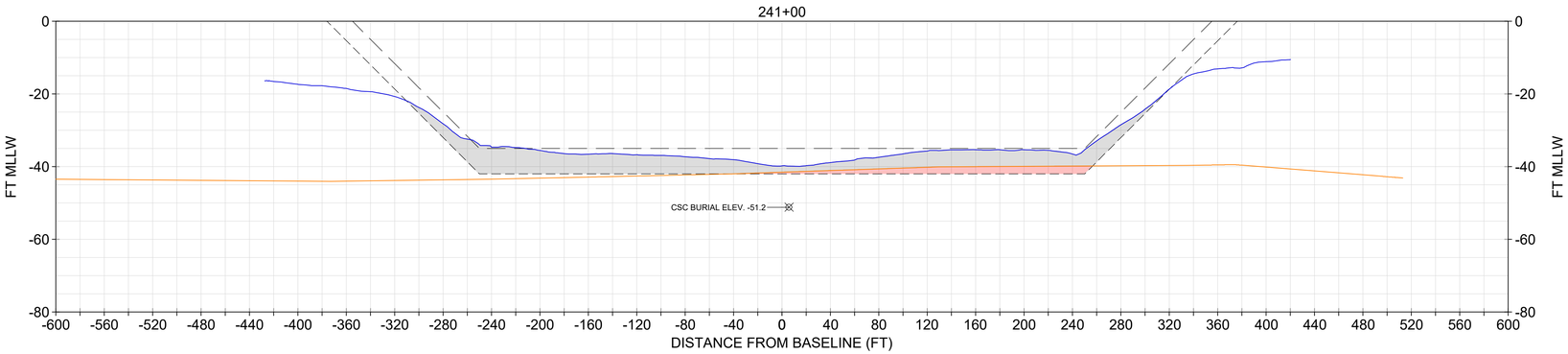
PREPARED FOR: Coastal Partners

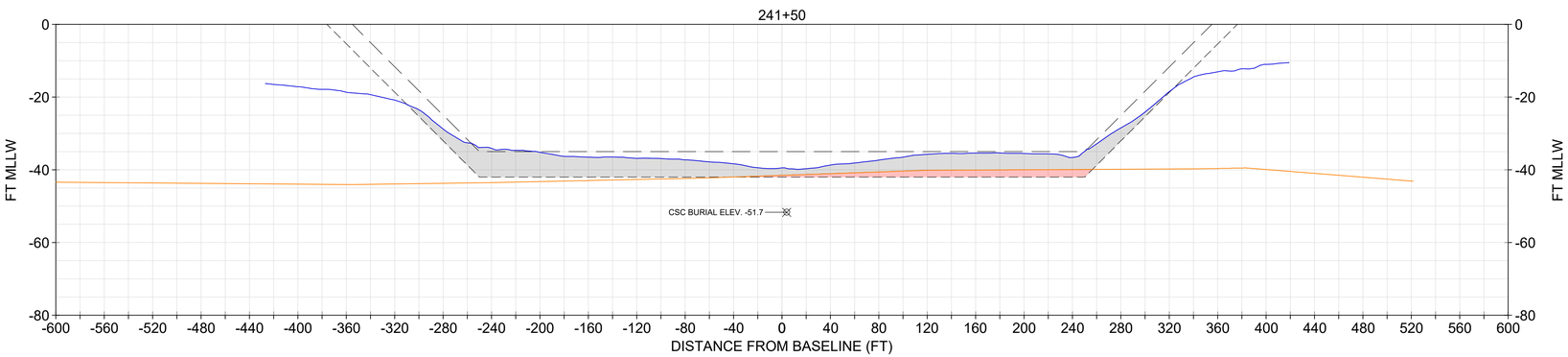
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

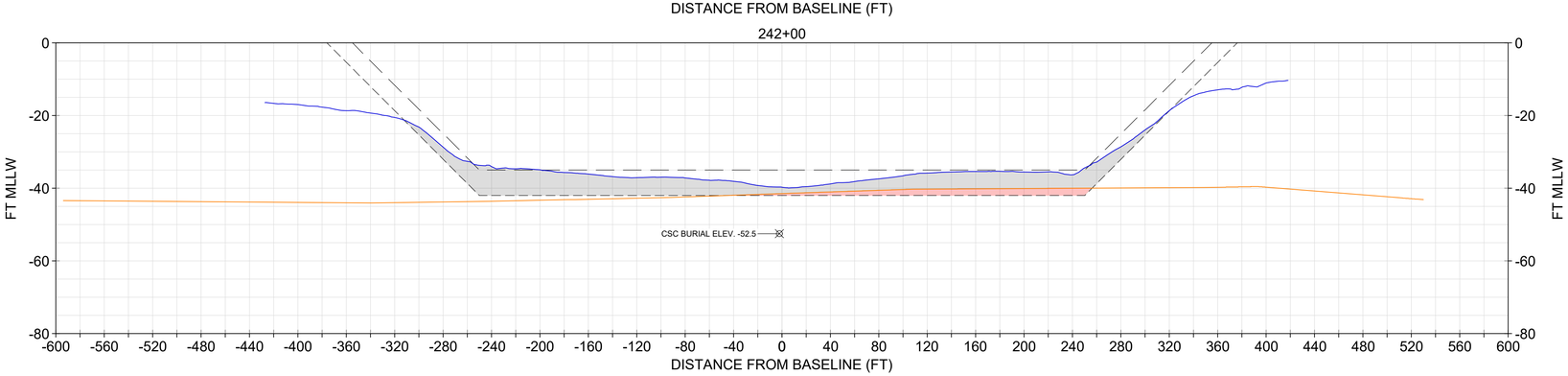
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-146









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 168 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

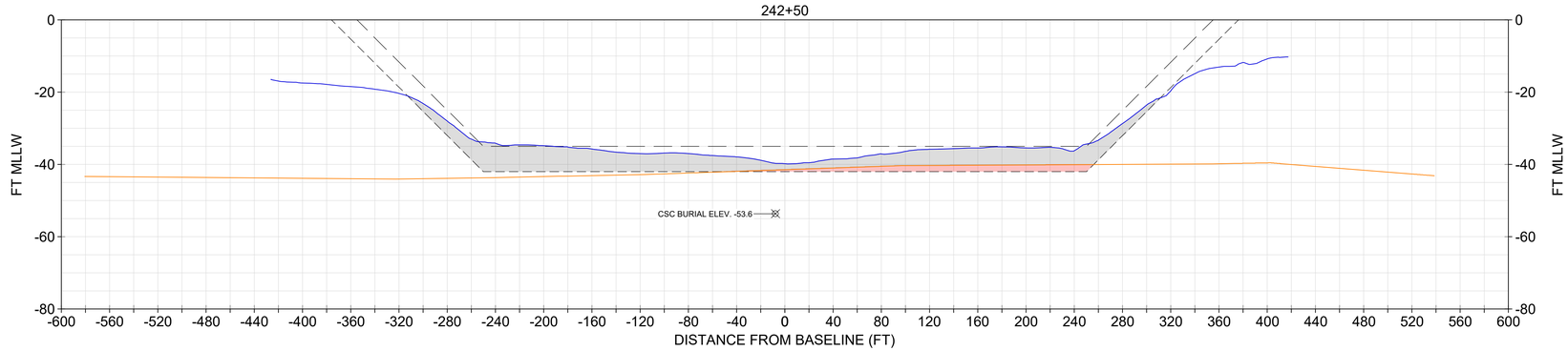
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

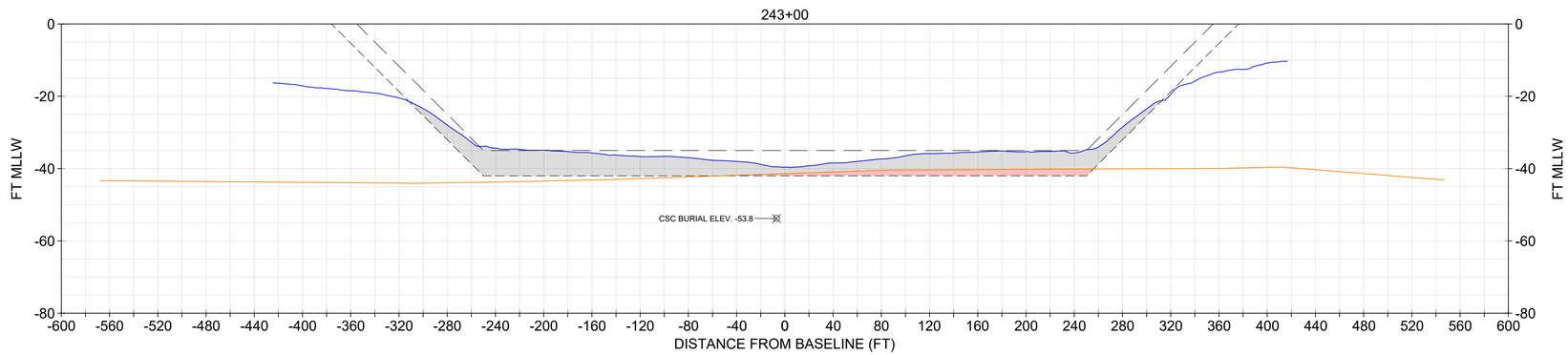
PREPARED FOR: Capital Partners

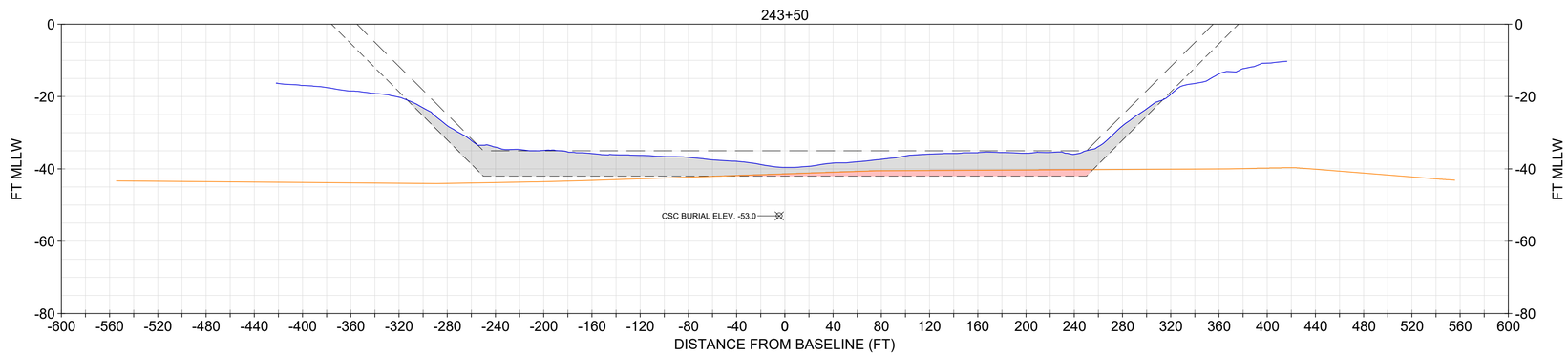
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

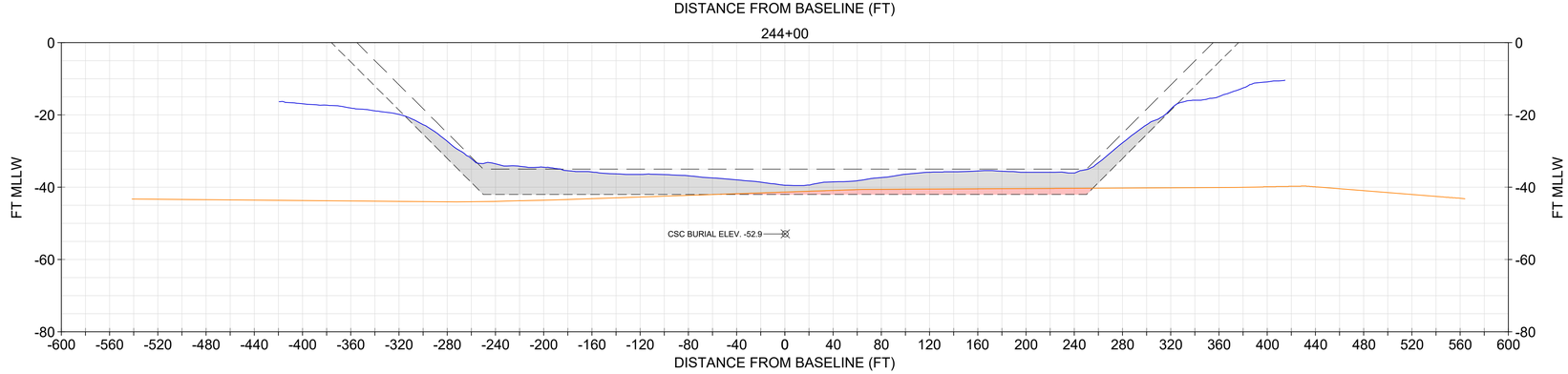
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-147









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 169 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

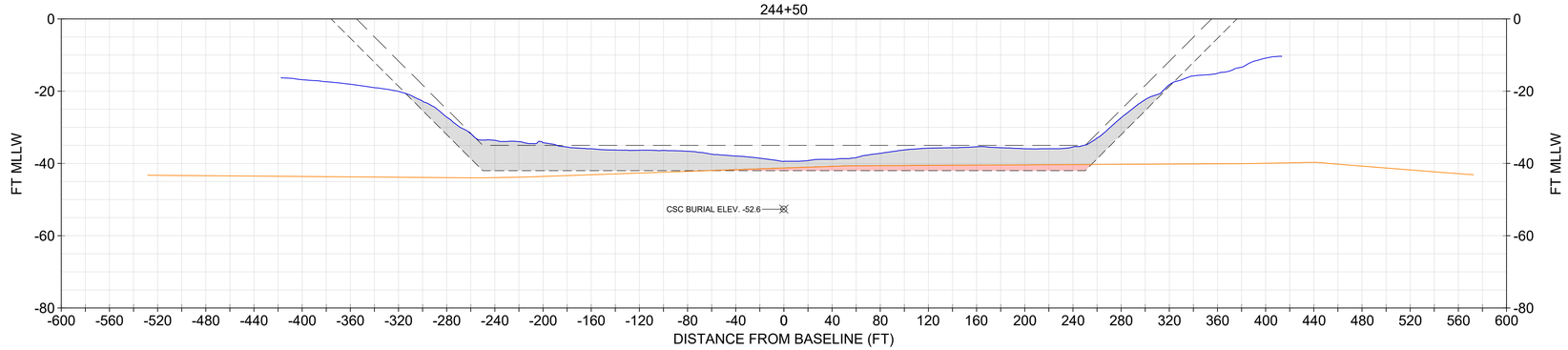
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

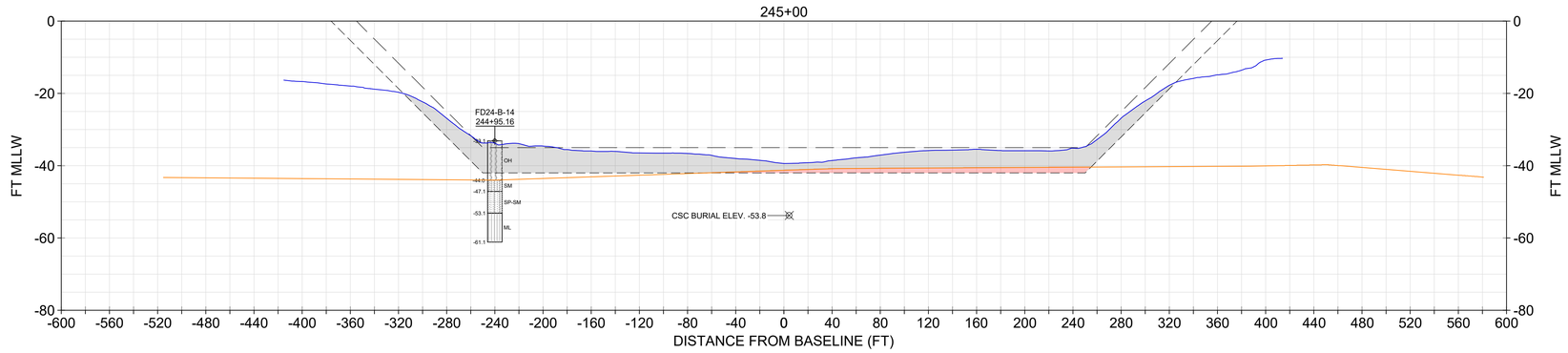
PREPARED FOR: Coastal Partners

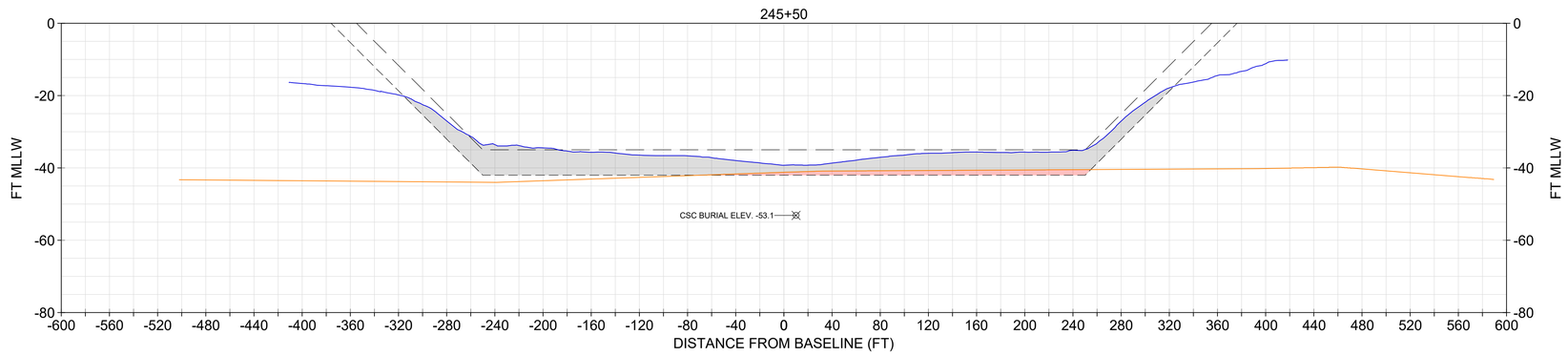
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

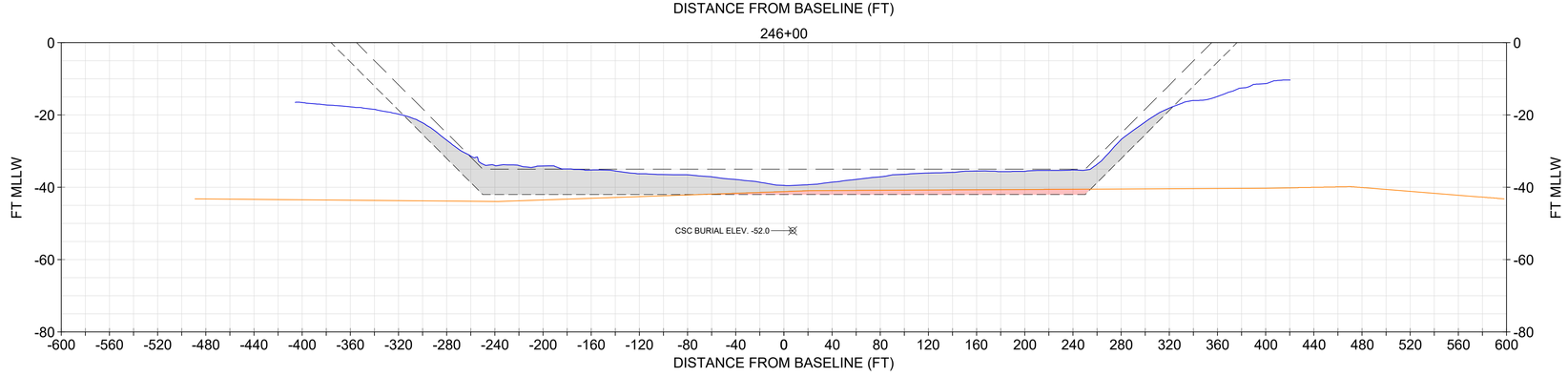
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-148









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-14	-33.1	-61.1	GBA	7/26/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- SM (SILTY SAND)
- SP-SM (POORLY GRADED SAND WITH SILT)
- ML (SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 170 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

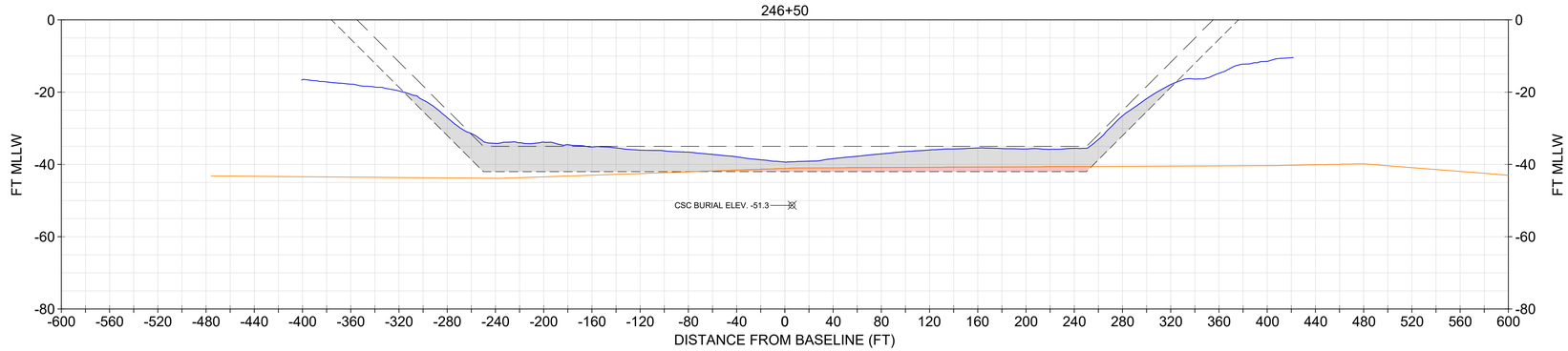
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

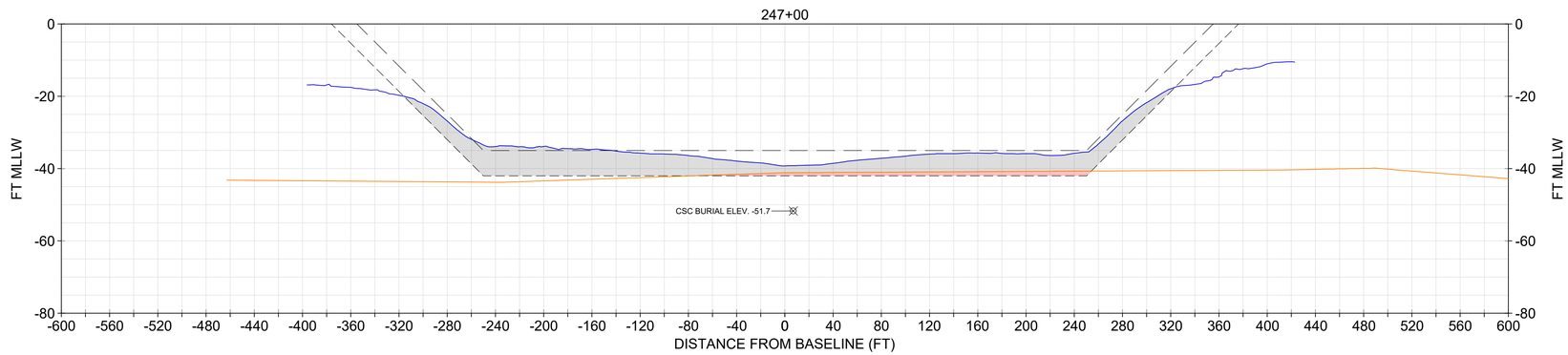
PREPARED FOR: Capital Partners

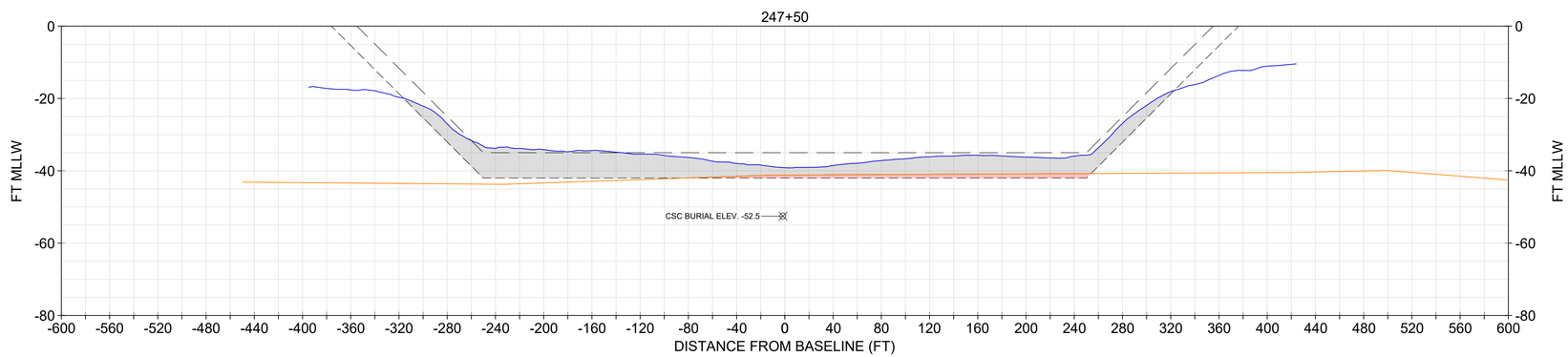
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

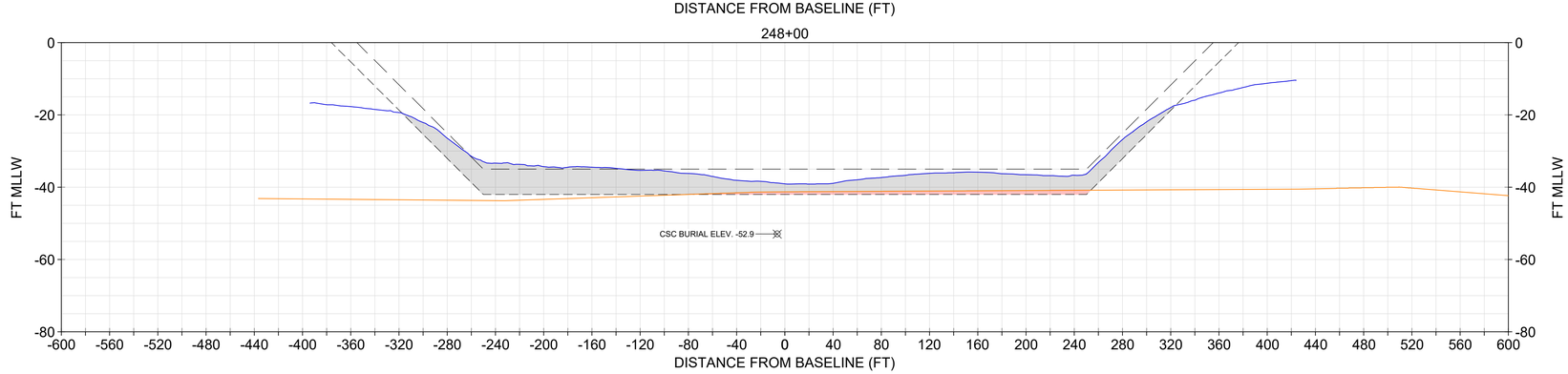
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-149









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 171 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI 'D'
SCALE: AS SHOWN

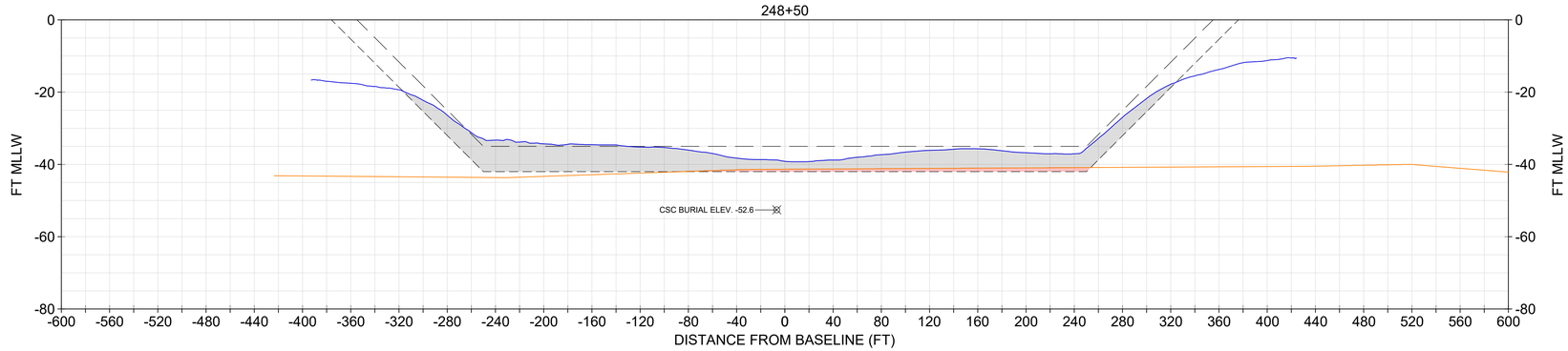
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 882-5595

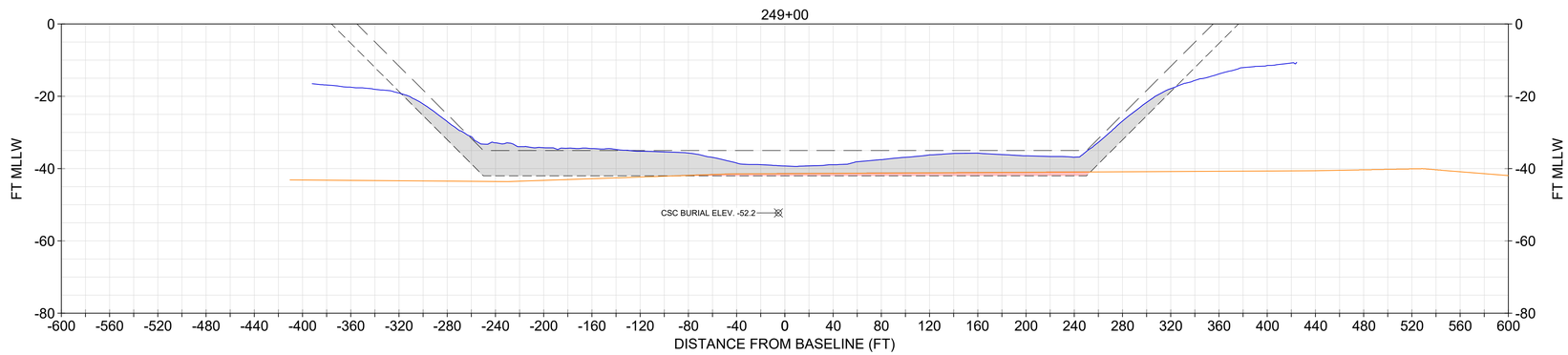
PREPARED FOR:
Coastal Partners

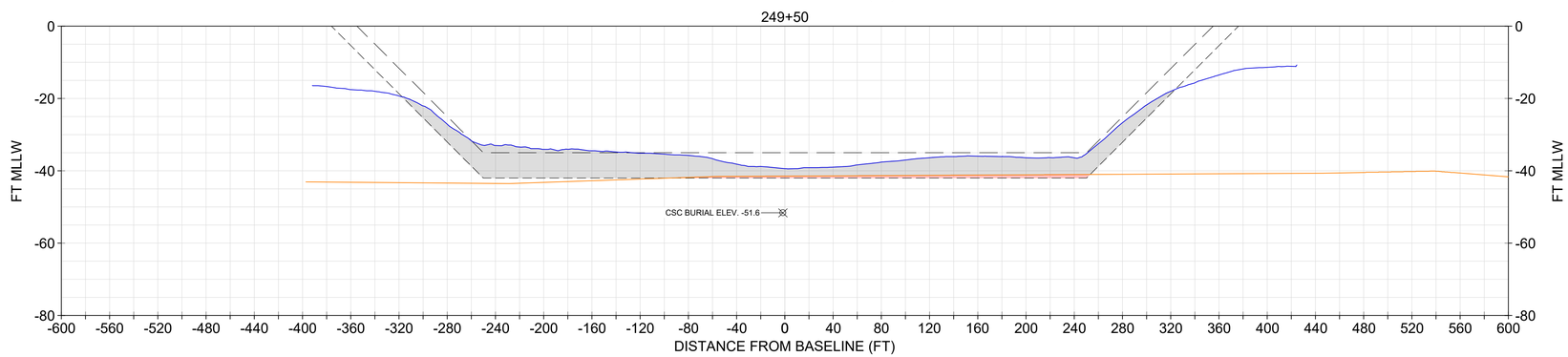
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

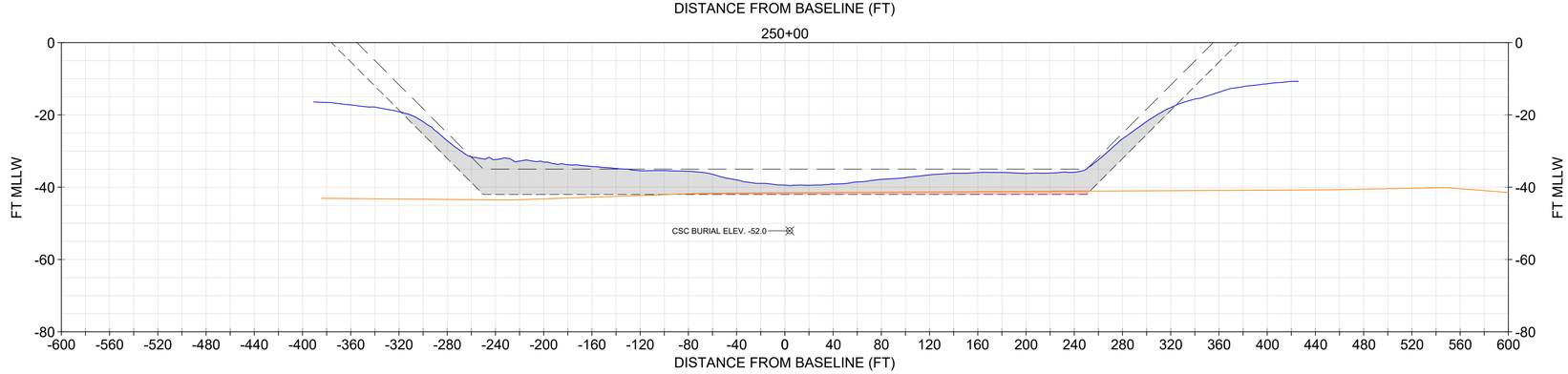
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-150









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 172 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

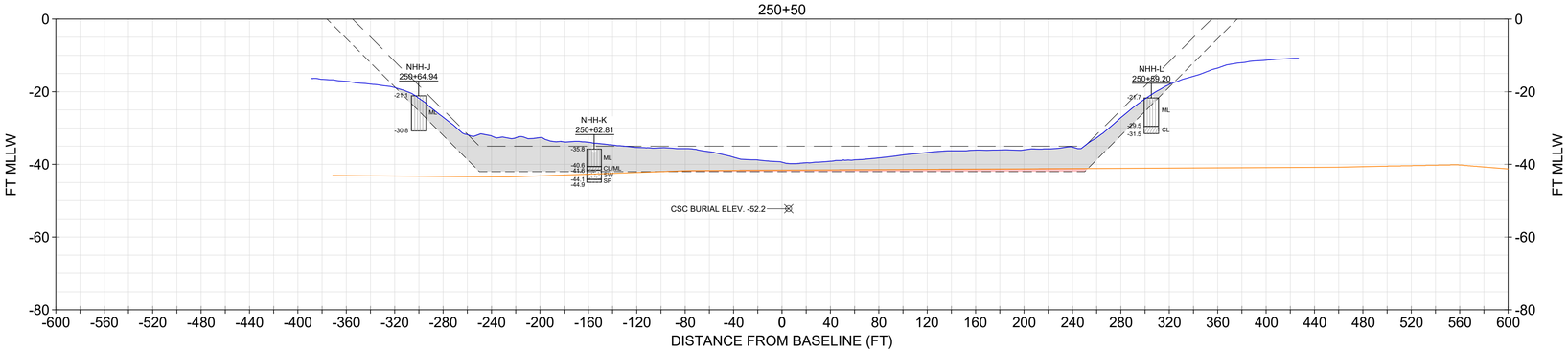
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

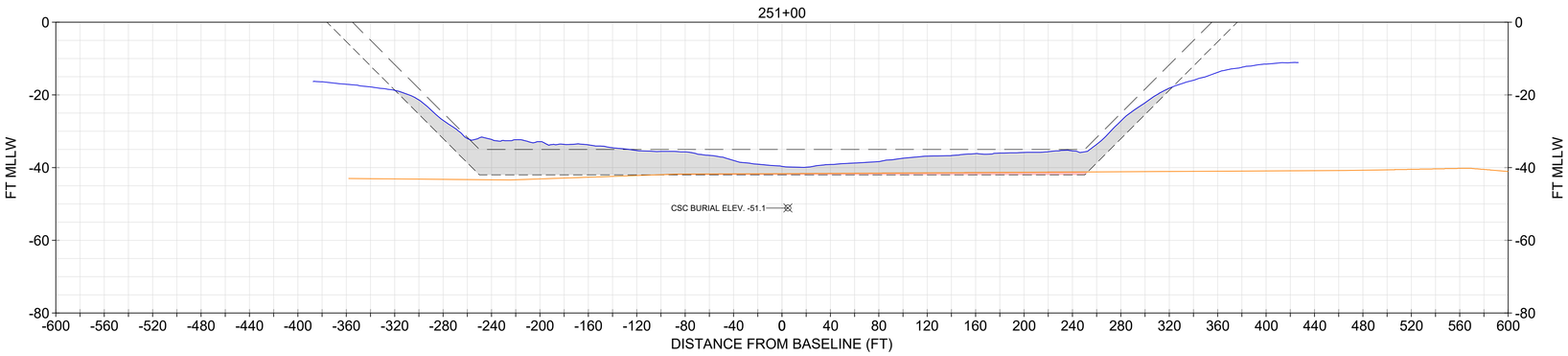
PREPARED FOR: Coastal Partners

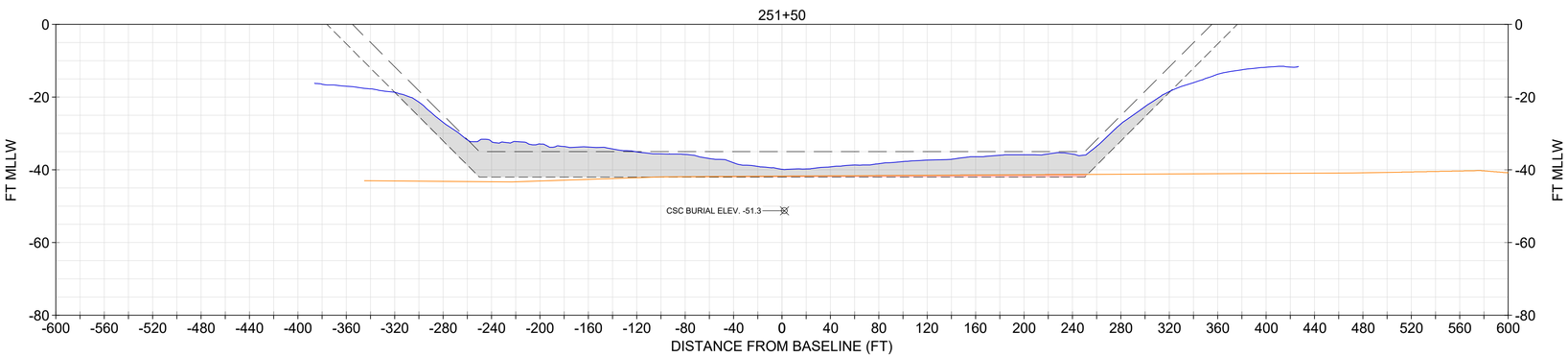
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

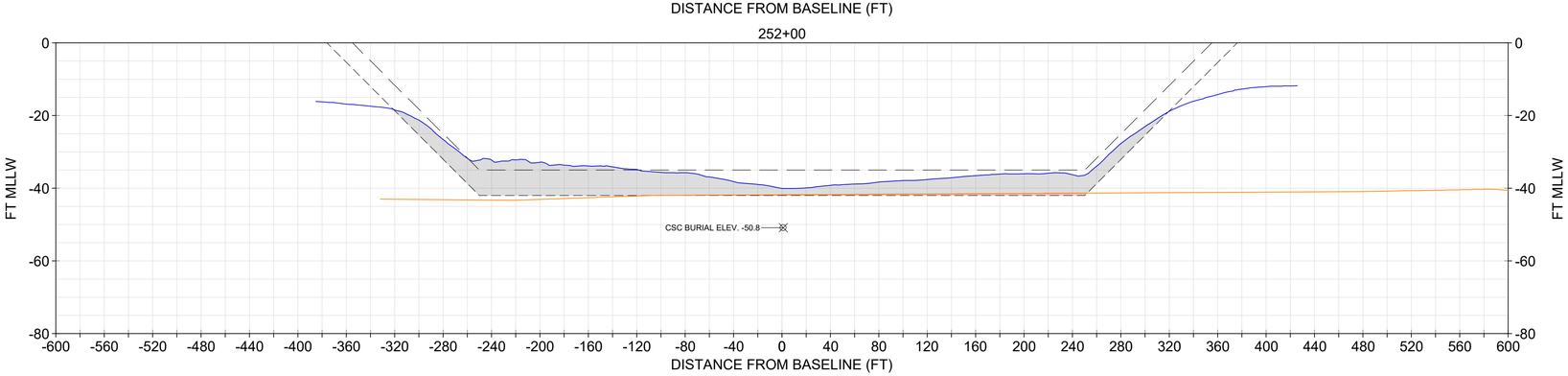
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-151









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.
4. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-J	-21.1	-30.8	AECOM	2017
NHH-K	-35.8	-44.9	AECOM	2017
NHH-L	-21.7	-31.5	AECOM	2017

CORE LEGEND
- ML (SILT)
- CL/ML (SILTY CLAY)
- SW (WELL GRADED SAND)
- SP (POORLY GRADED SAND)
- CL (LEAN CLAY)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 173 OF 220

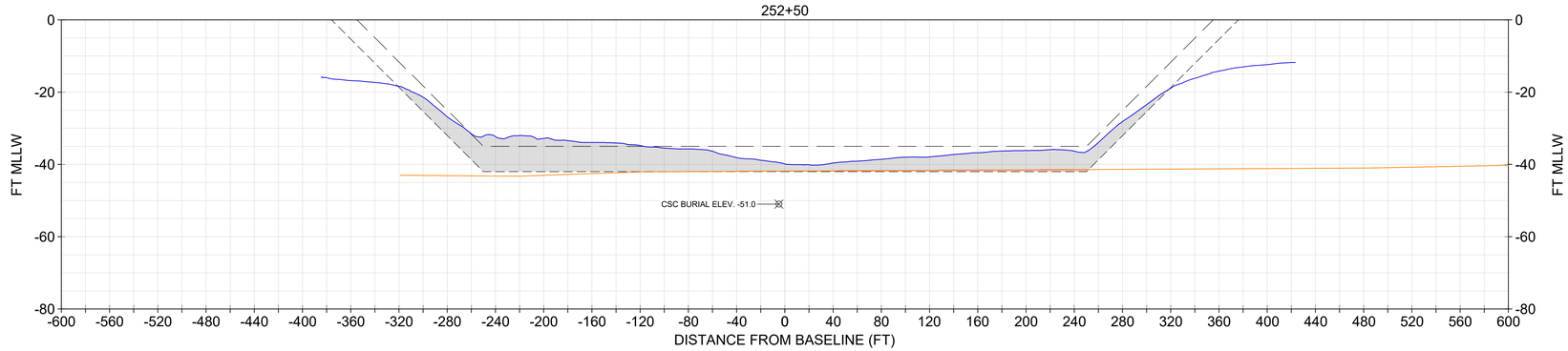
DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

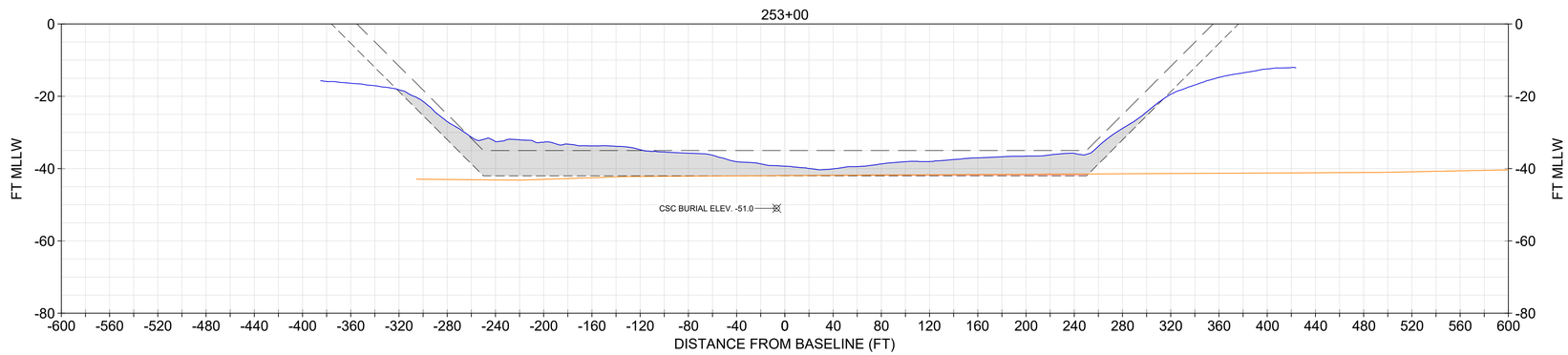
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595
PREPARED FOR: Coastal Partners

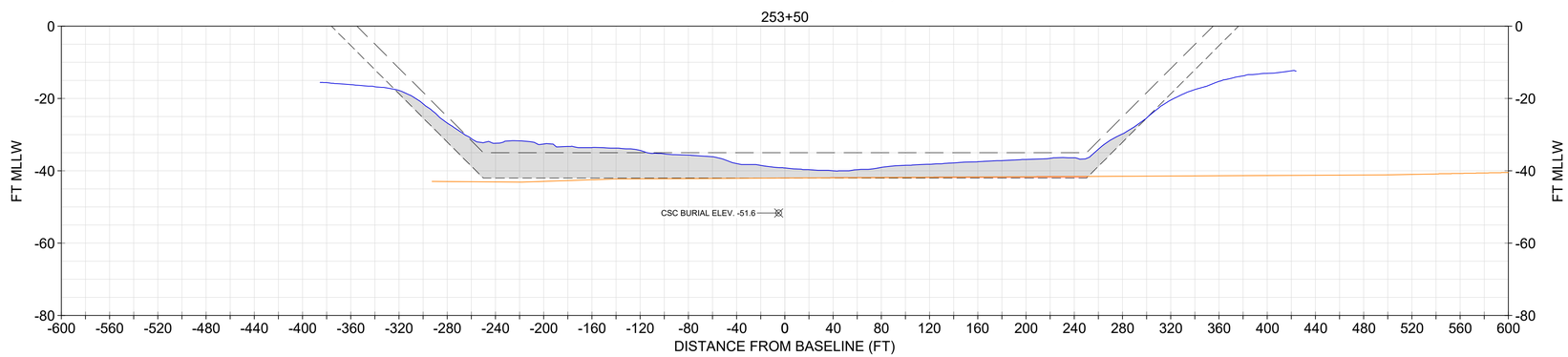
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

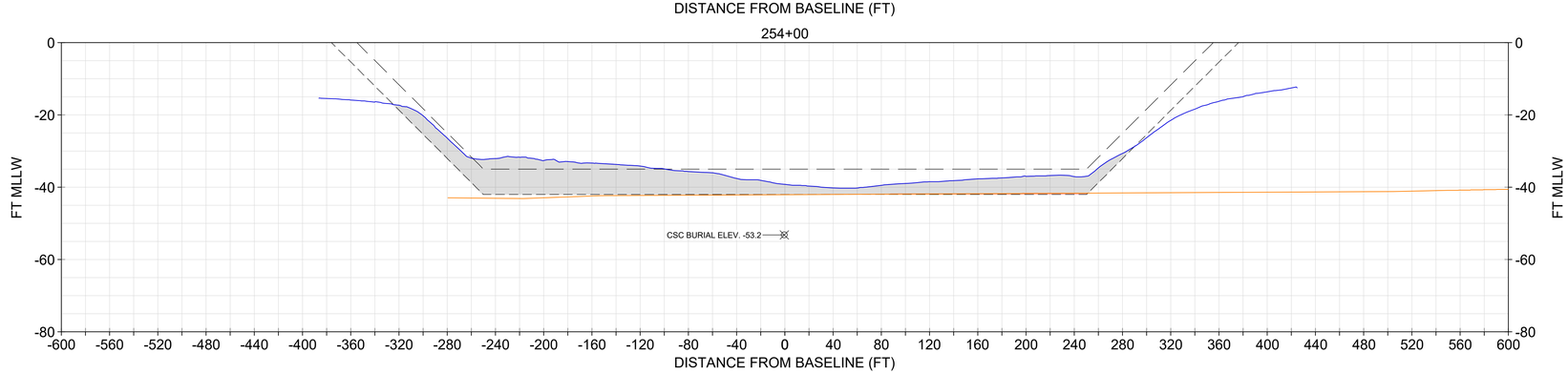
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-152









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 174 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

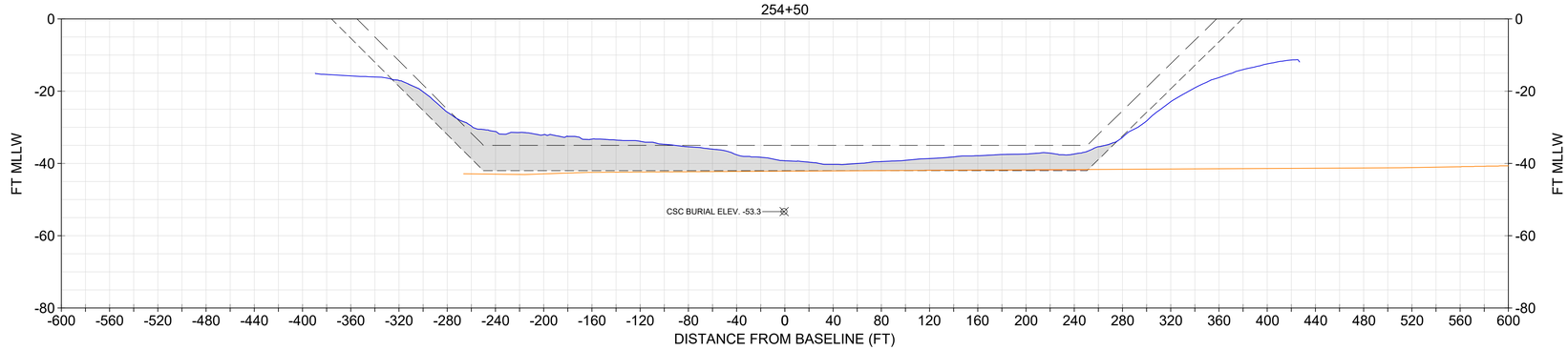
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit A
Baltimore, MD 21237
Phone (410) 682-5595

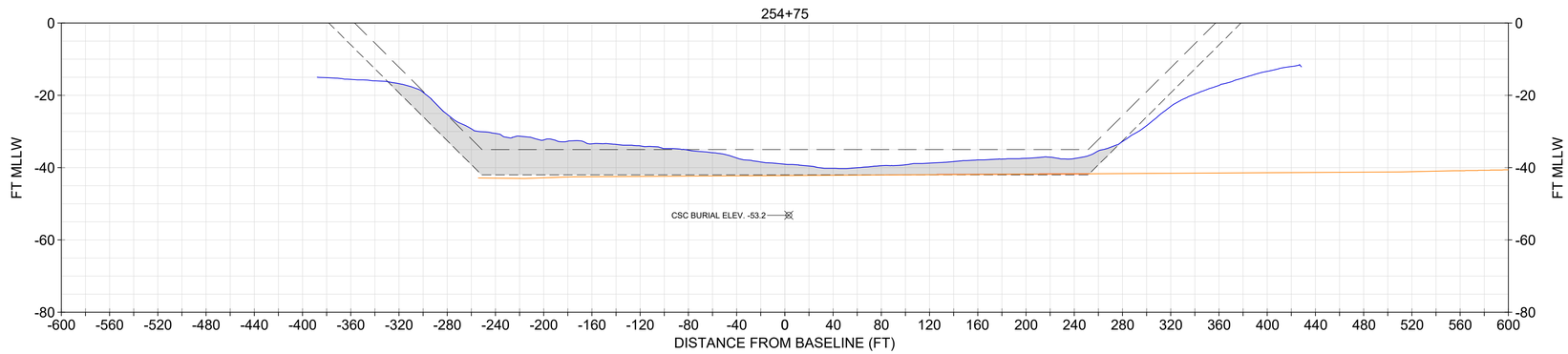
PREPARED FOR:
Coastal Partners
Connecticut River Coalition

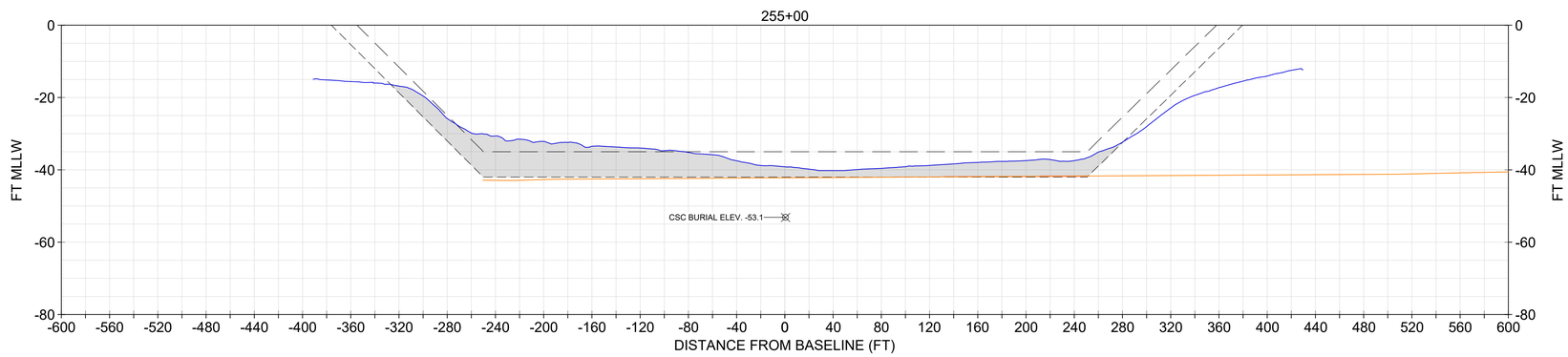
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

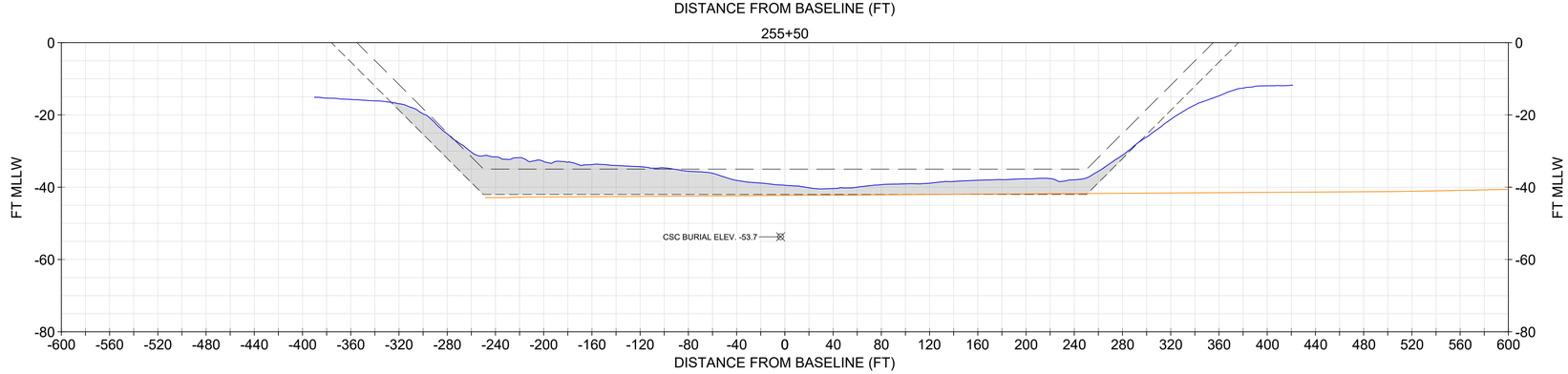
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-153









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: T
SHEET 175 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN

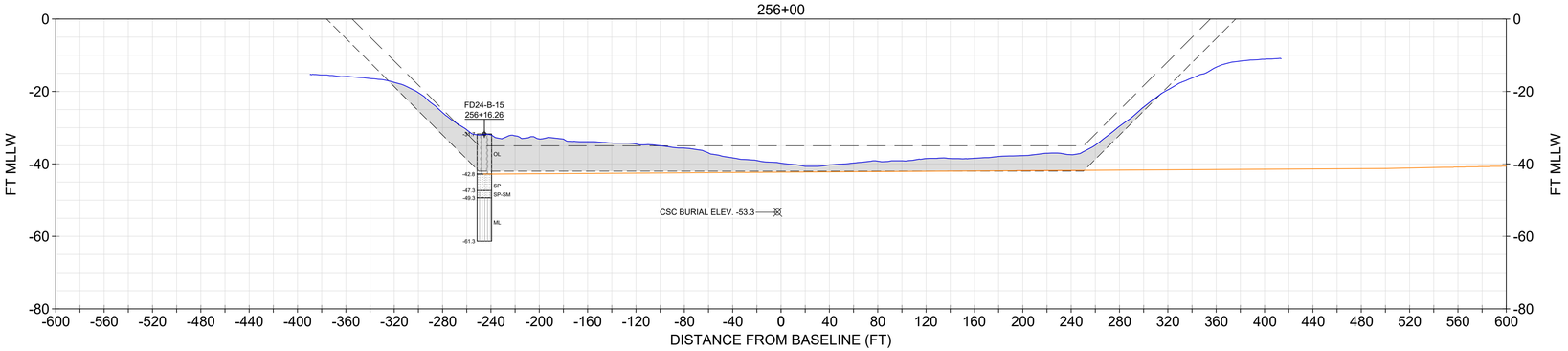
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

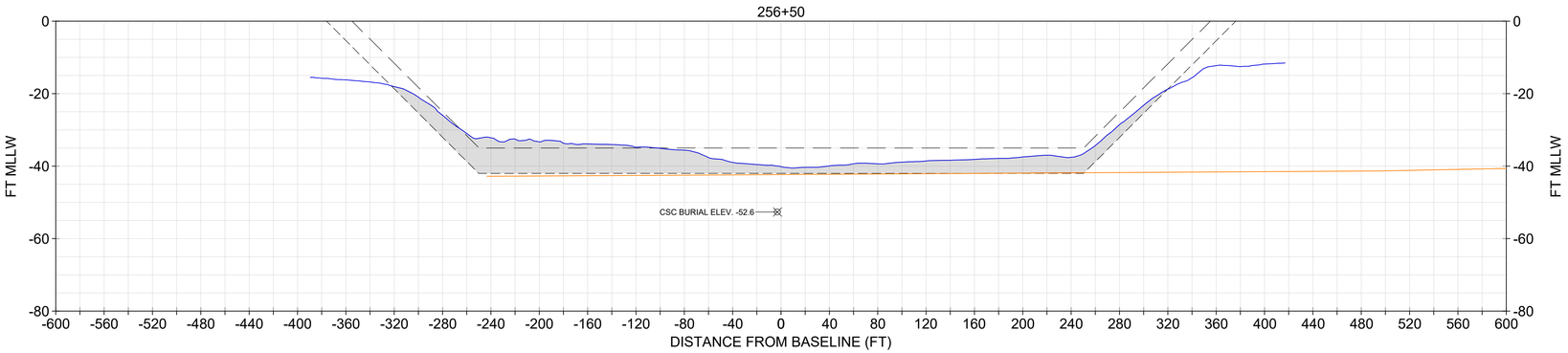
PREPARED FOR: Coastal Partners

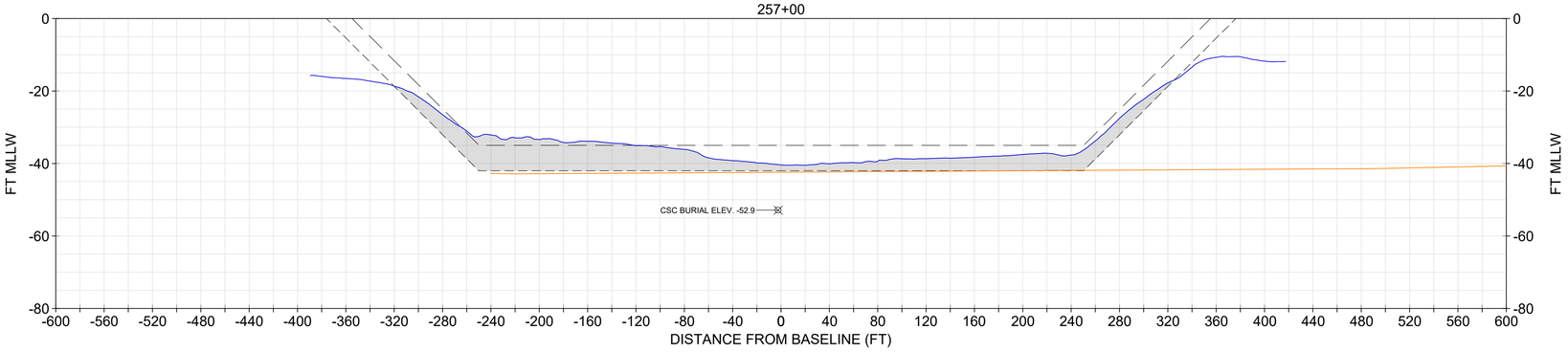
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

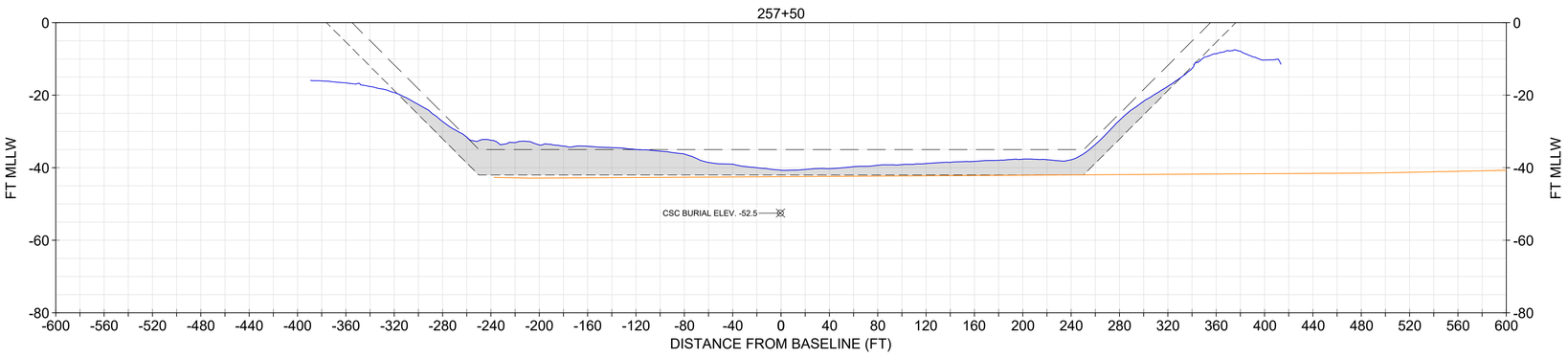
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-154









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-15	-31.7	-61.3	GBA	8/7/2024

CORE LEGEND
- OL (ORGANIC SILT AND CLAY)
- SP (POORLY GRADED SAND)
- SP-SM (POORLY GRADED SAND WITH SILT)
- ML (SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 176 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

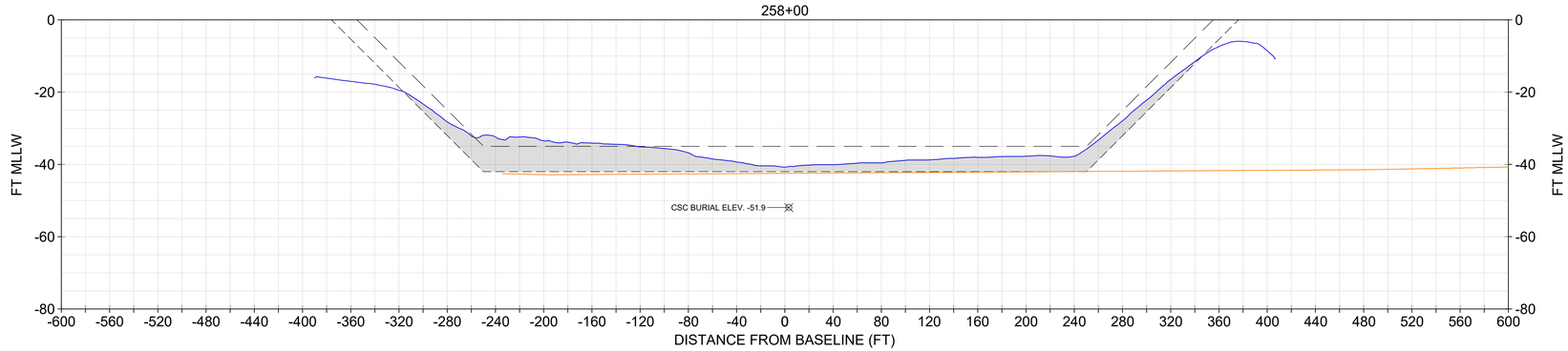
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

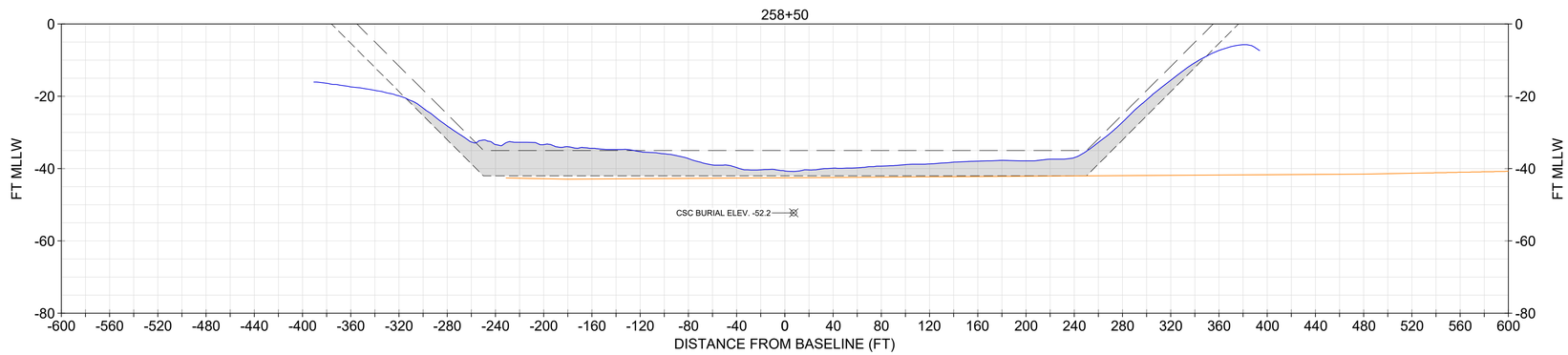
PREPARED FOR: Capital Partners

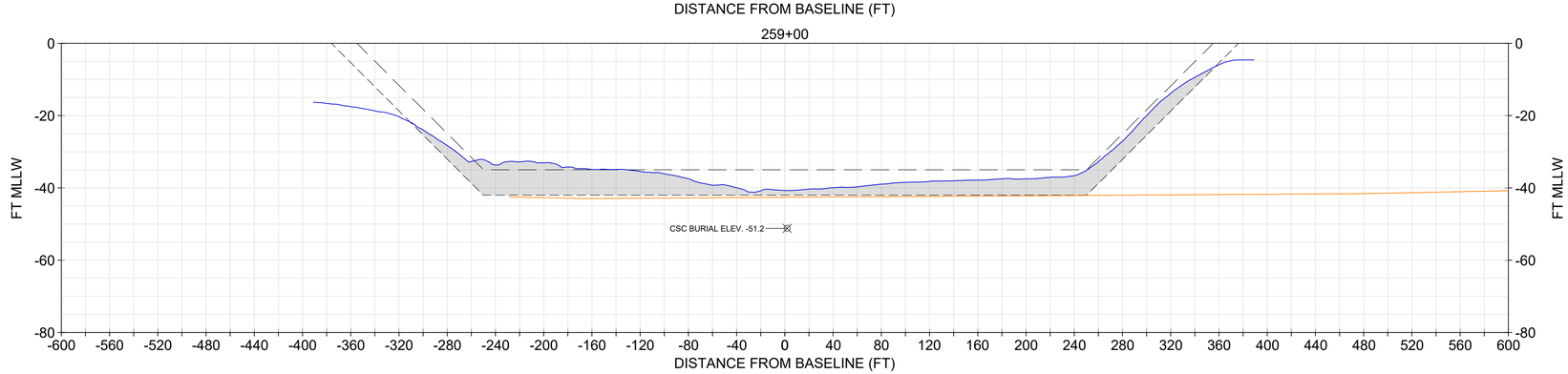
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

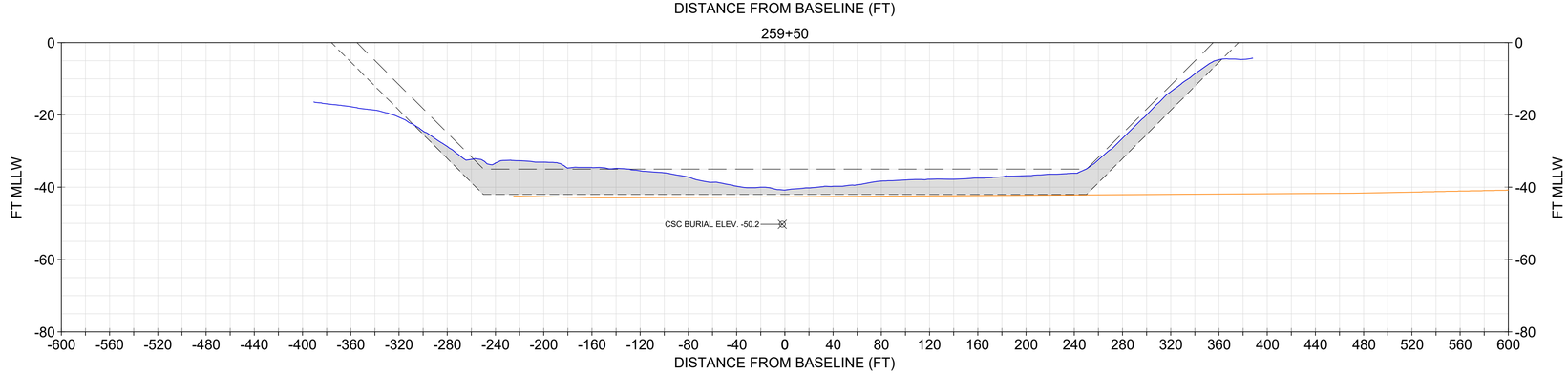
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-155









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 177 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

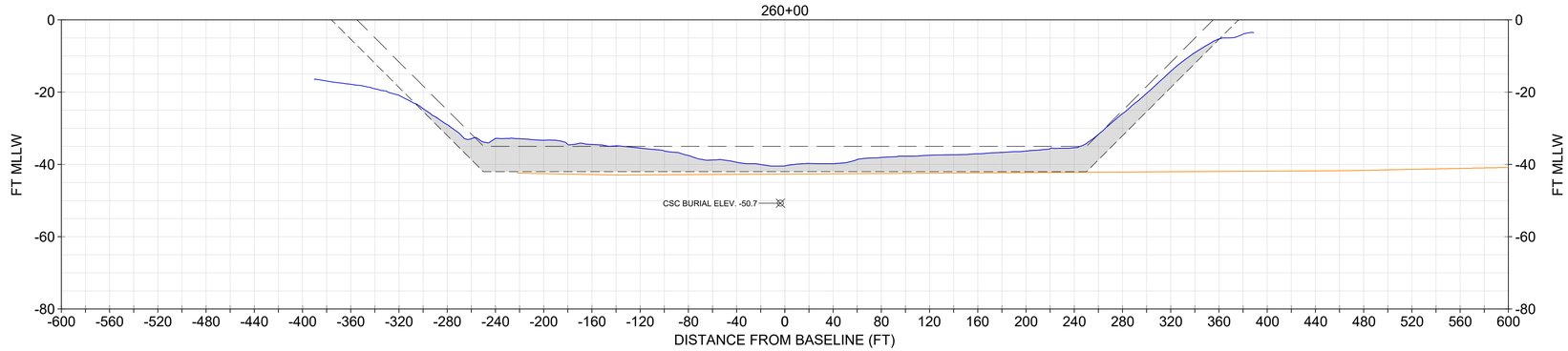
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A
Baltimore, MD 21237
Phone (410) 682-5595

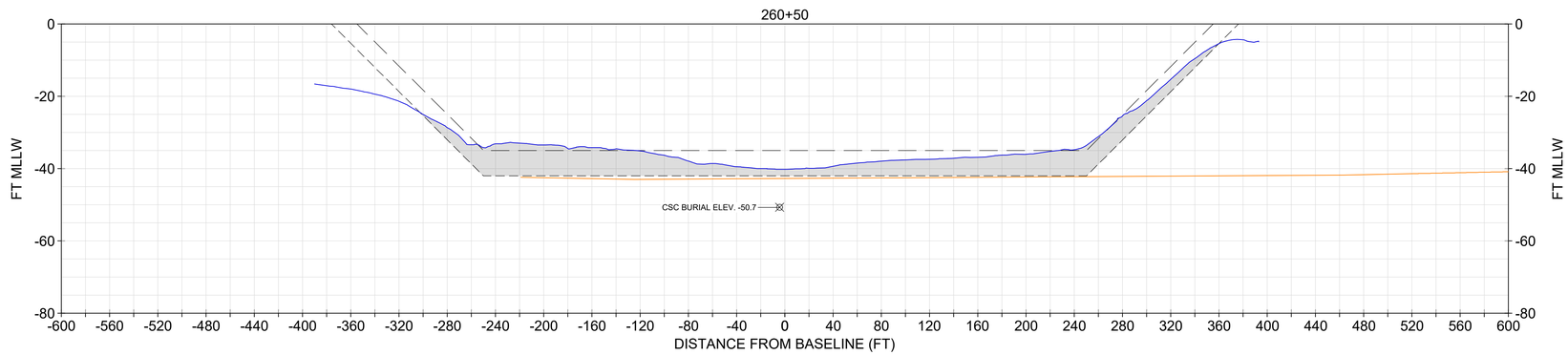
PREPARED FOR: Coastal Partners

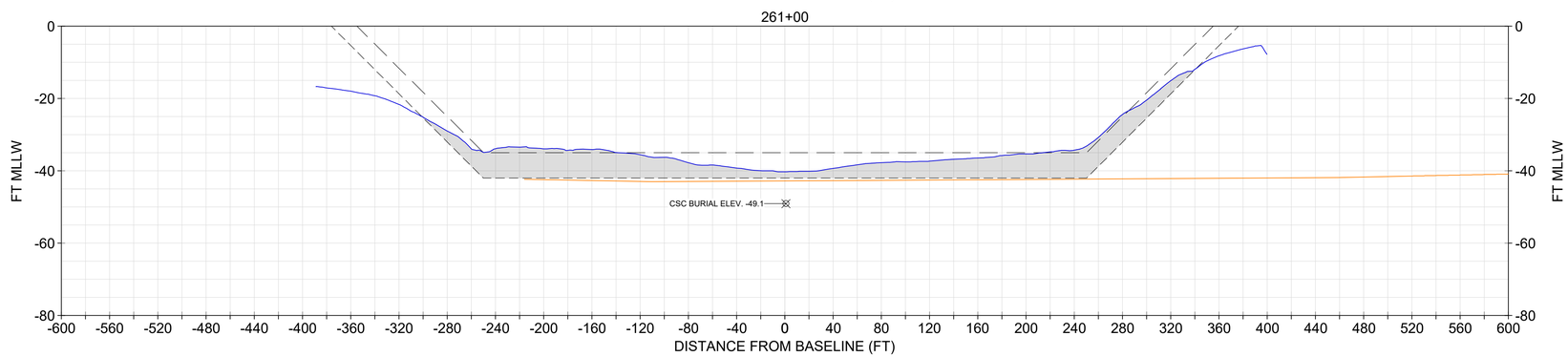
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

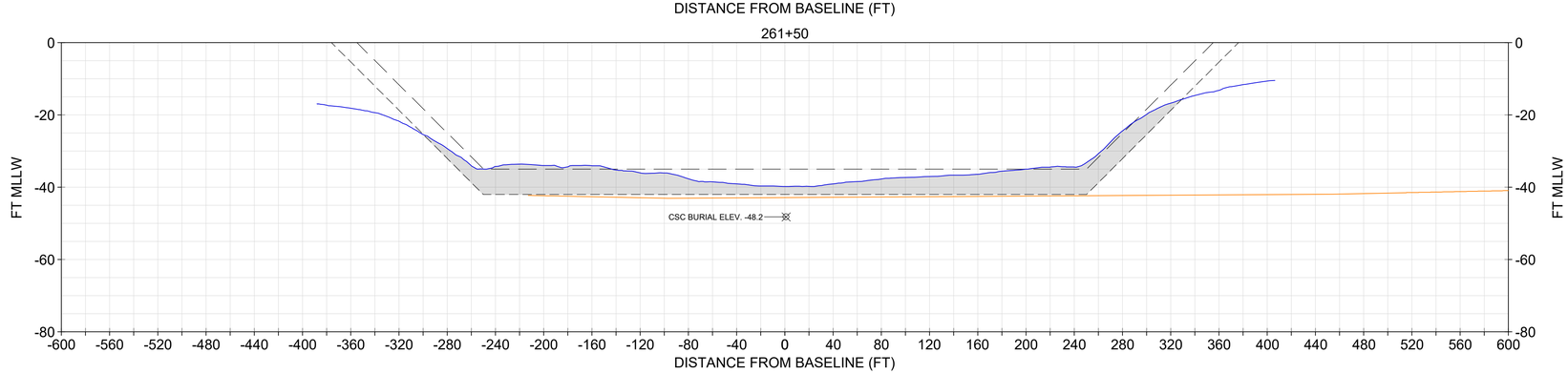
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-156









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 178 OF 220

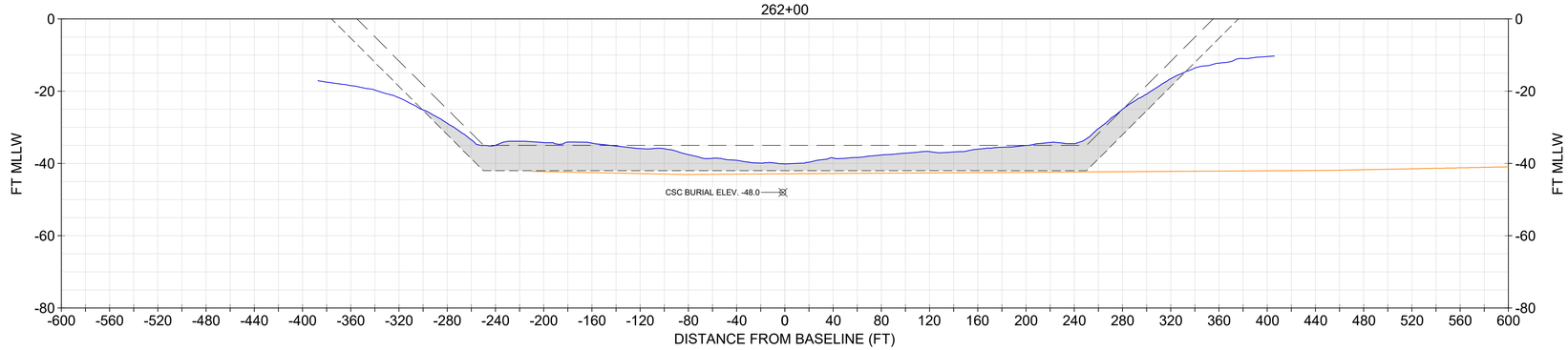
DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

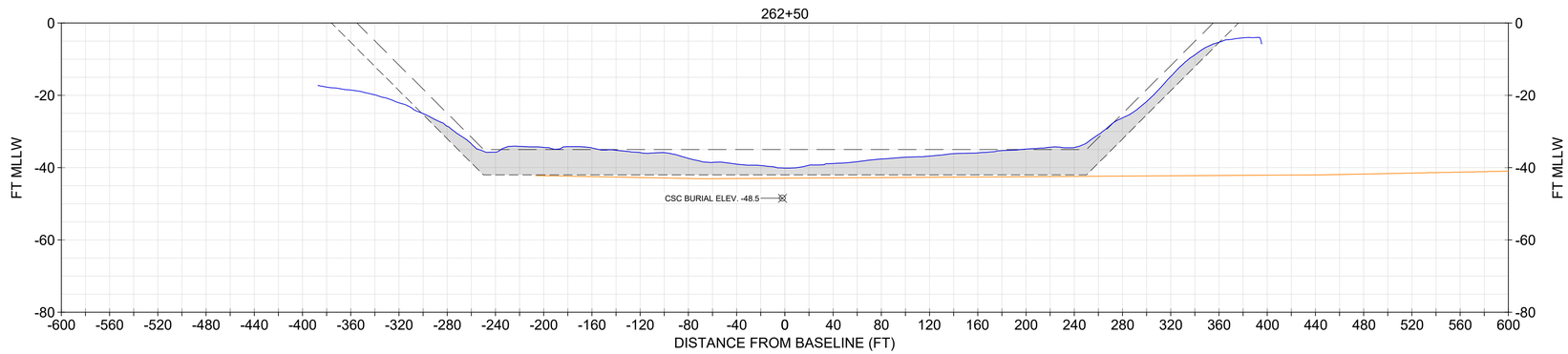
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595
PREPARED FOR: Coastal Partners

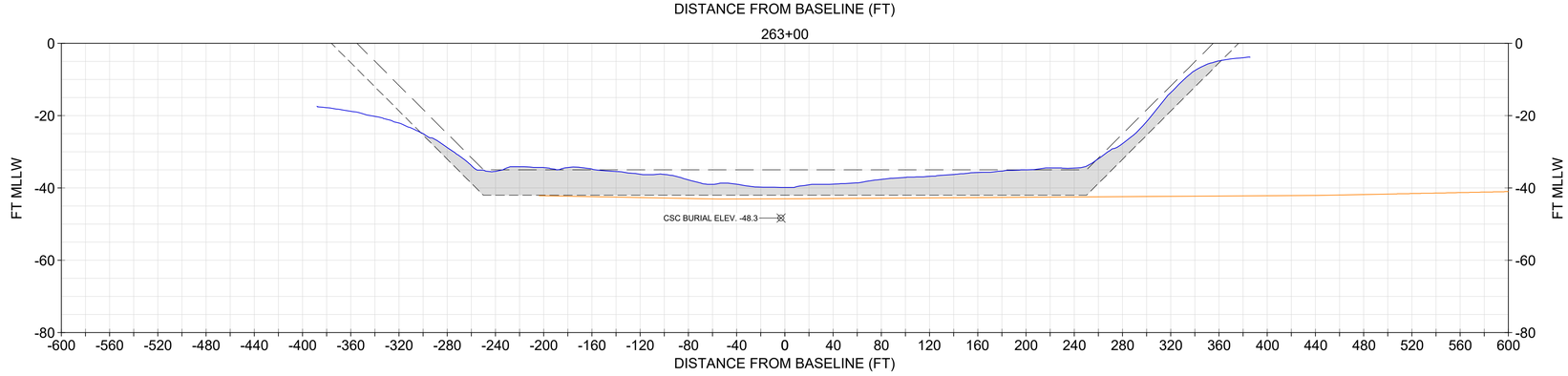
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

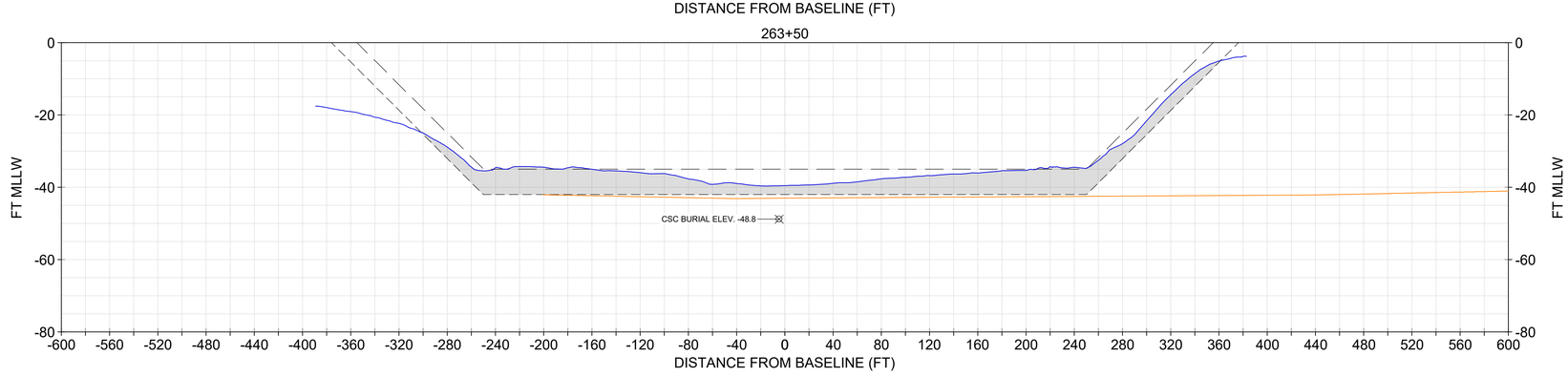
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-157









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 179 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

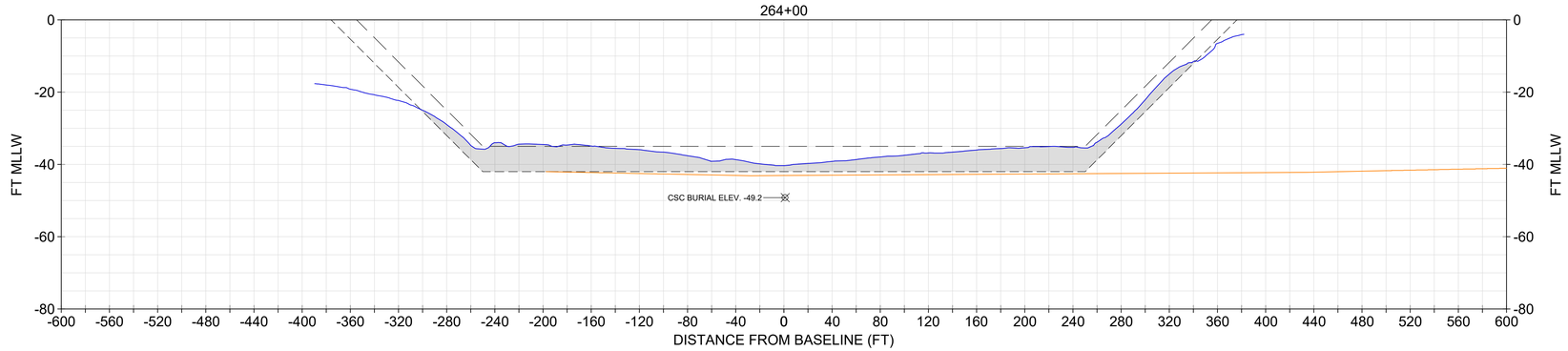
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

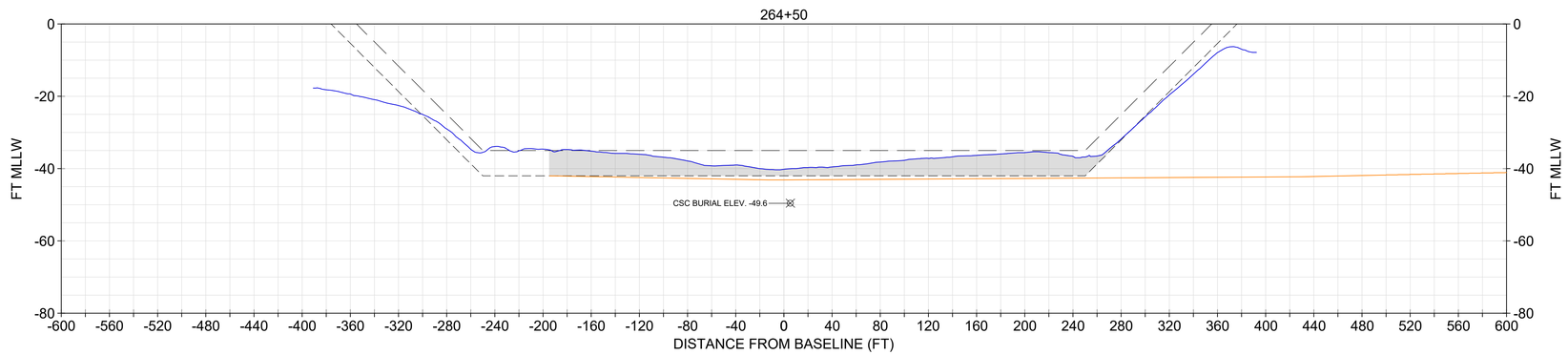
PREPARED FOR: Coastal Partners

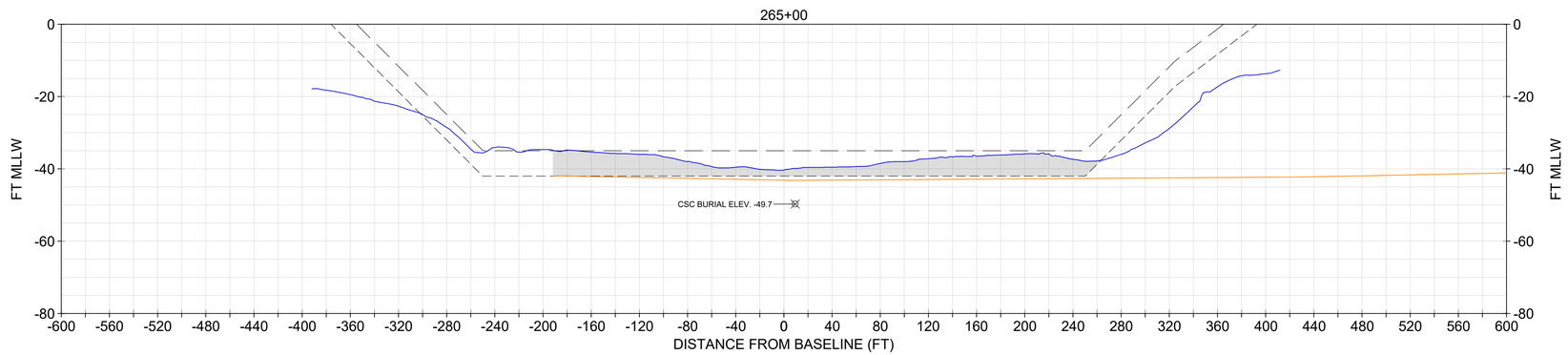
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

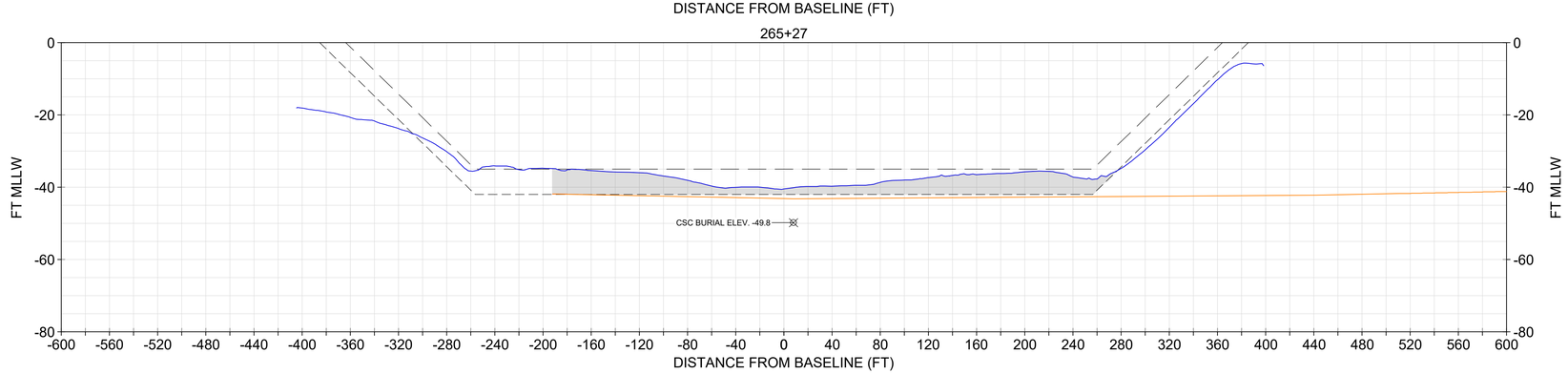
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-158









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 180 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI 'D'
SCALE: AS SHOWN

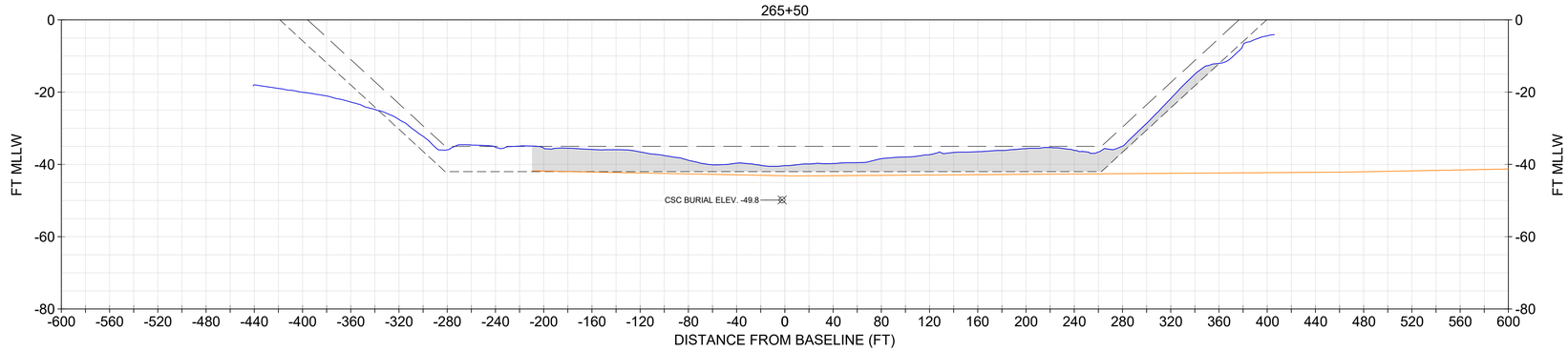
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 682-5595

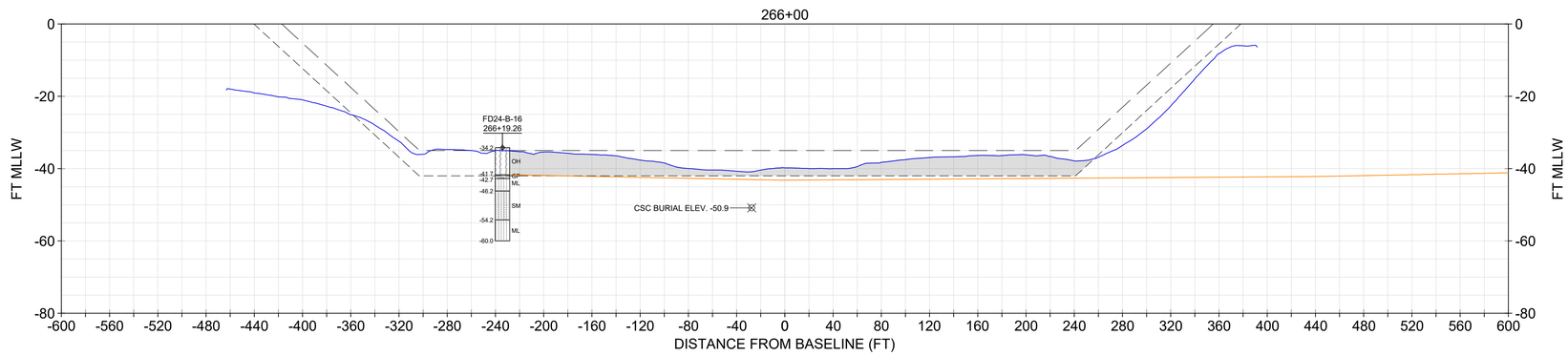
PREPARED FOR: Coastal Partners Connecticut's Coastal Program

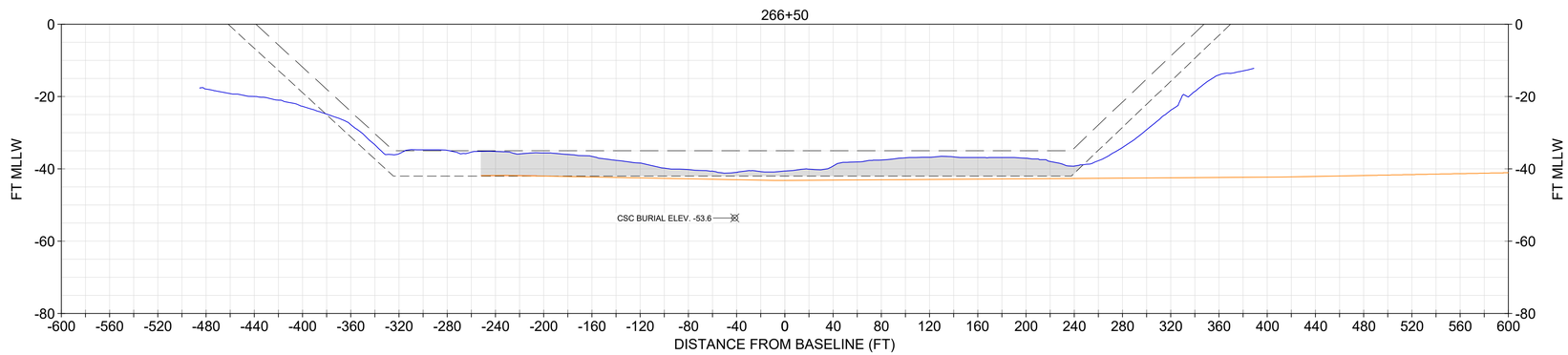
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

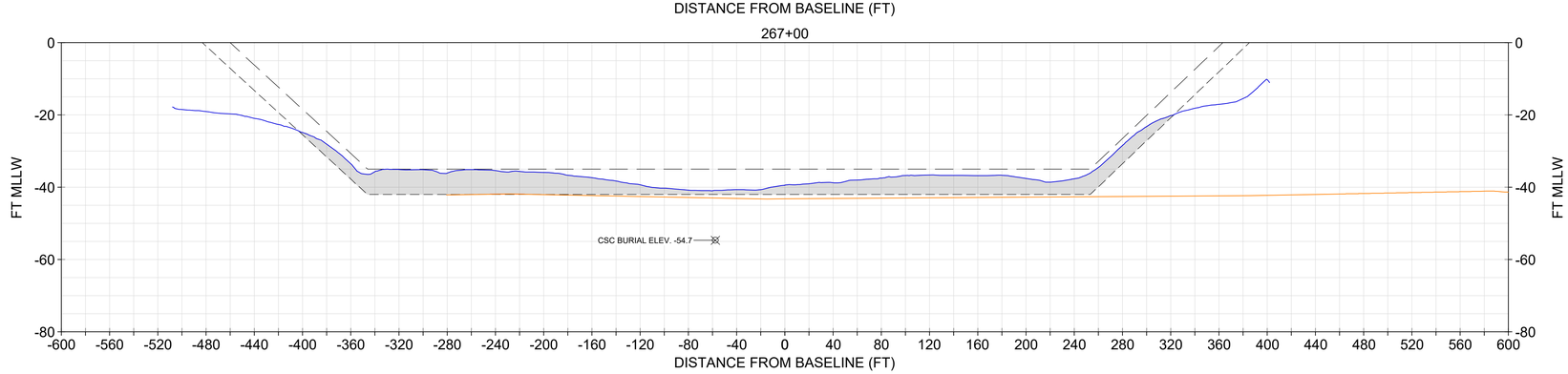
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-159









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-16	-34.2	-60.0	GBA	8/5/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- GP (POORLY GRADED GRAVEL)
- ML (SILT)
- SM (SILTY SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 181 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCU
SIZE: ANSI D
SCALE: AS SHOWN

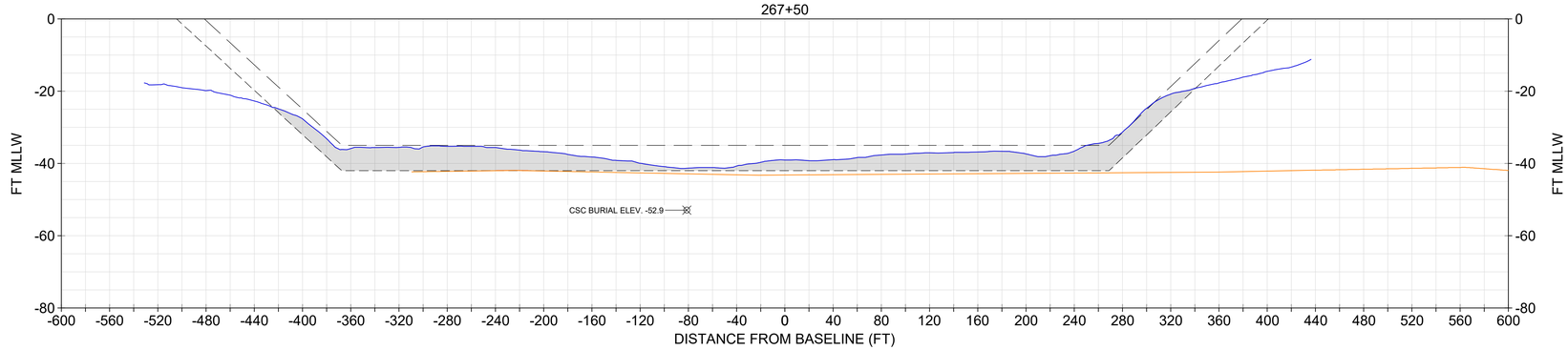
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

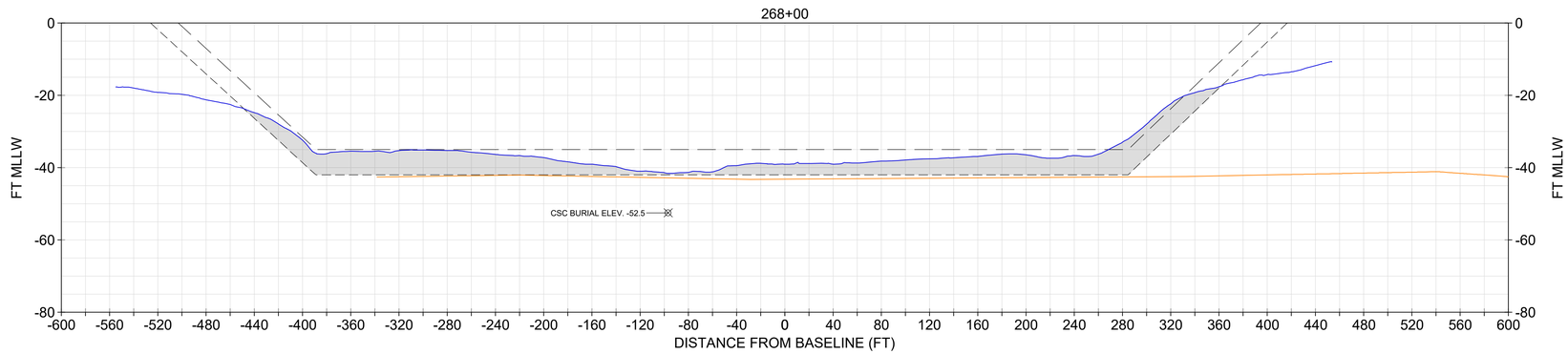
PREPARED FOR: Coastal Partners Connecticut's Coastal Program

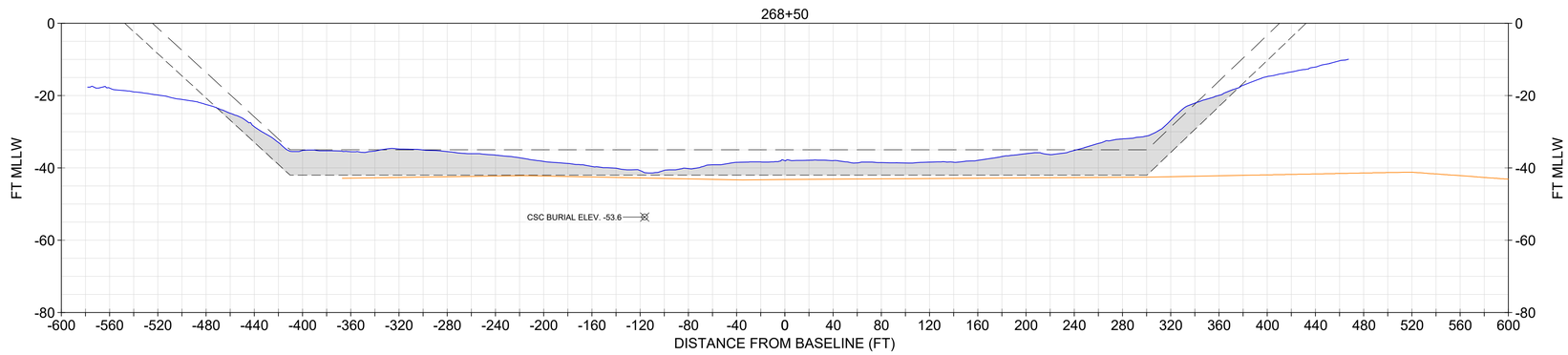
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

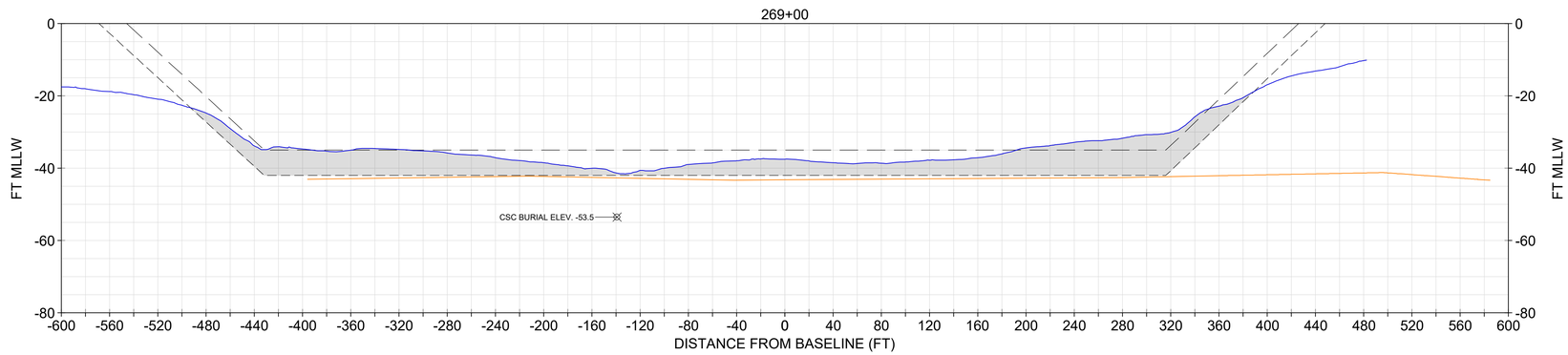
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-160









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 182 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: -
SIZE: ANSI 'D'
SCALE: AS SHOWN

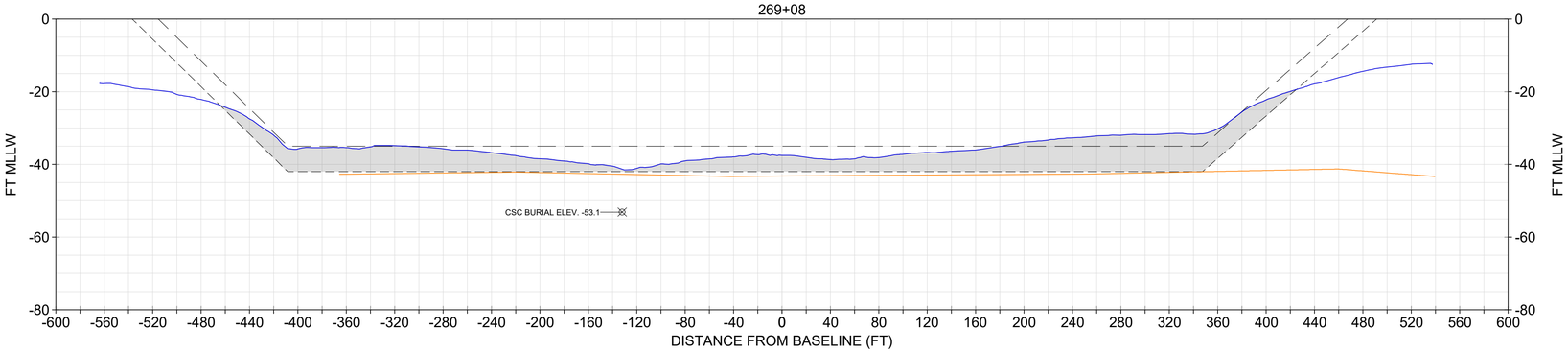
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit E Baltimore, MD 21237 Phone (410) 882-5565

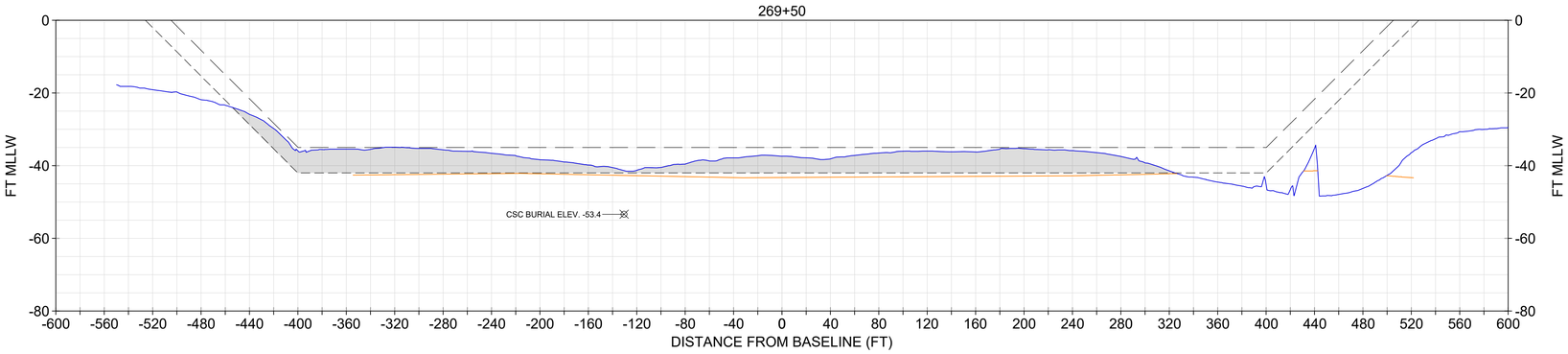
PREPARED FOR: Coastal Partners

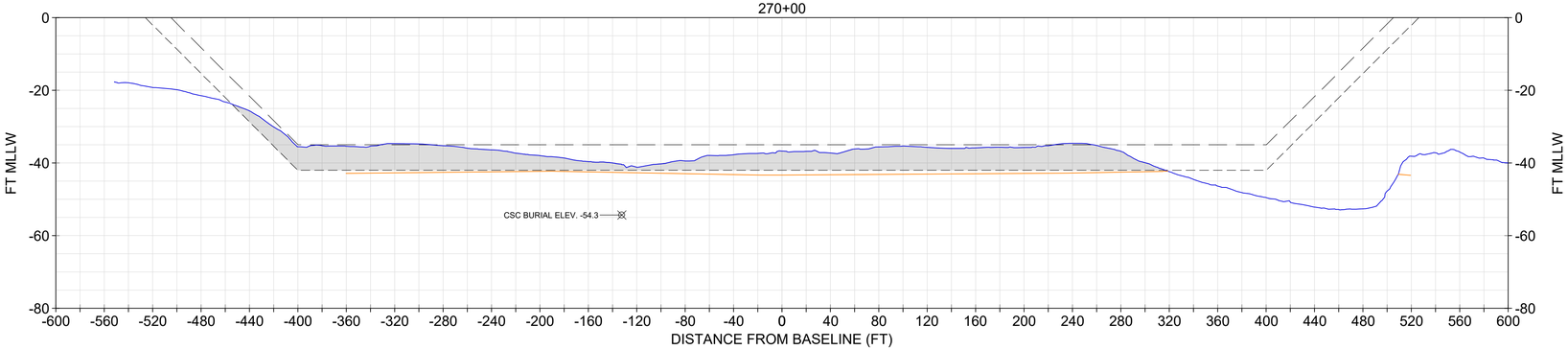
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

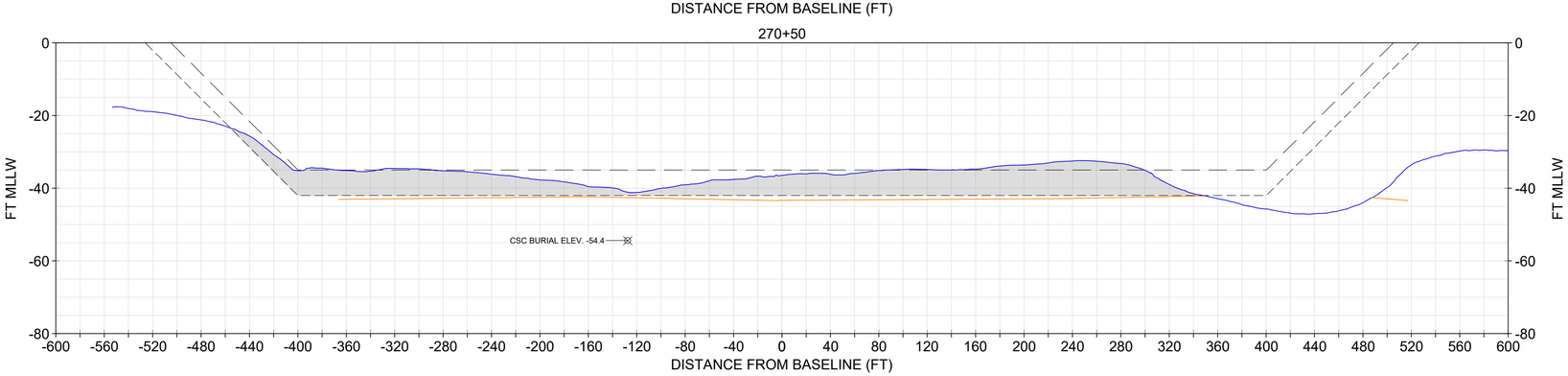
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-161









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 183 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

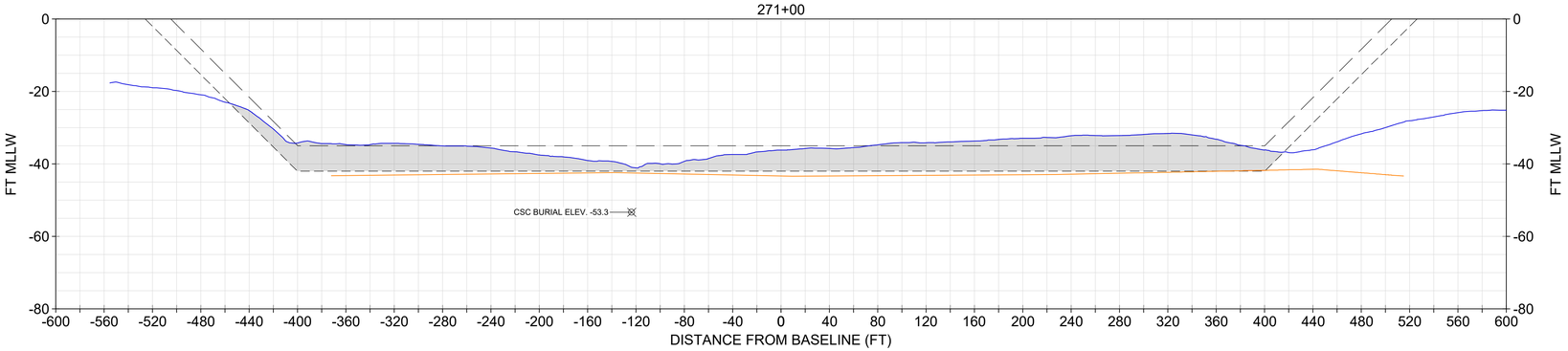
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit F
Baltimore, MD 21237
Phone (410) 882-5595

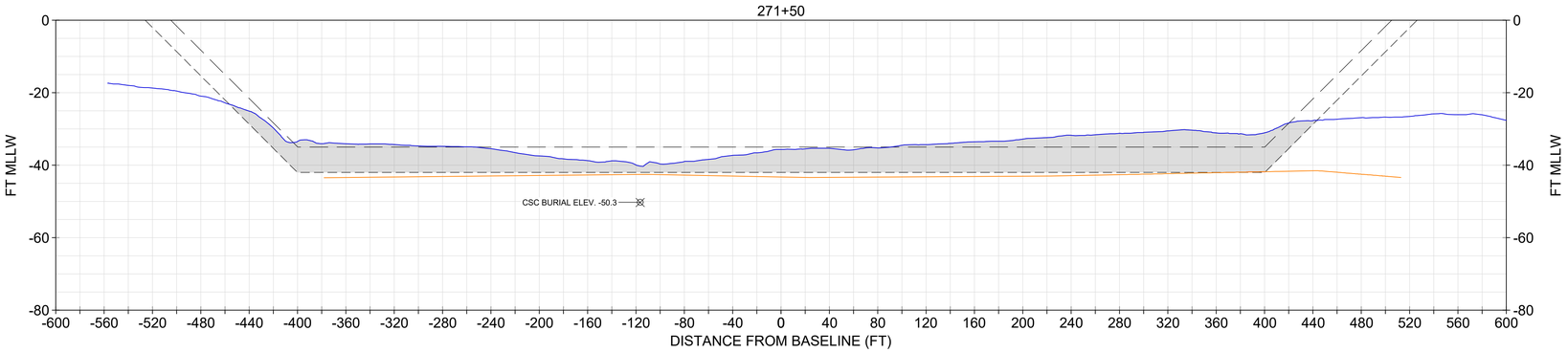
PREPARED FOR: Coastal Science & Engineering

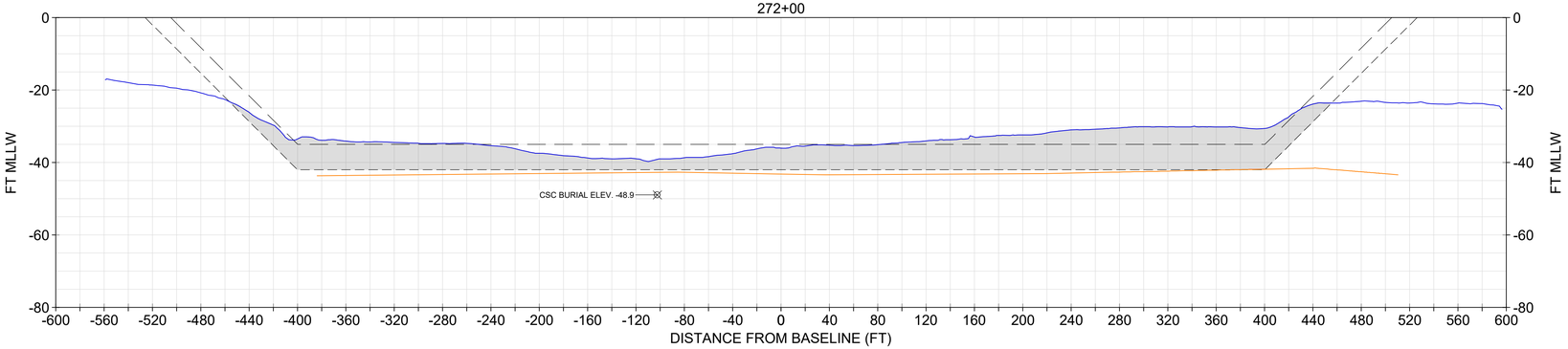
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

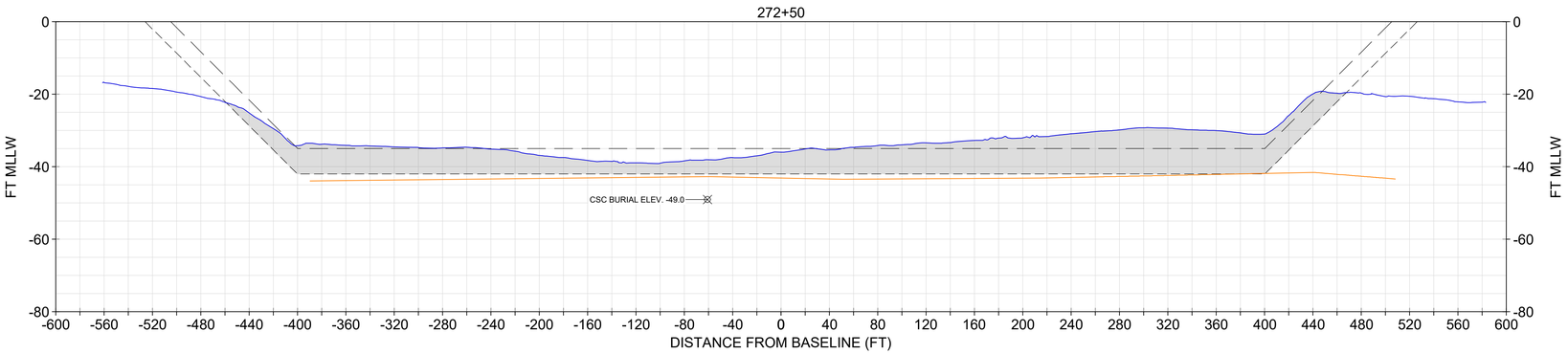
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-162









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: I
SHEET 184 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

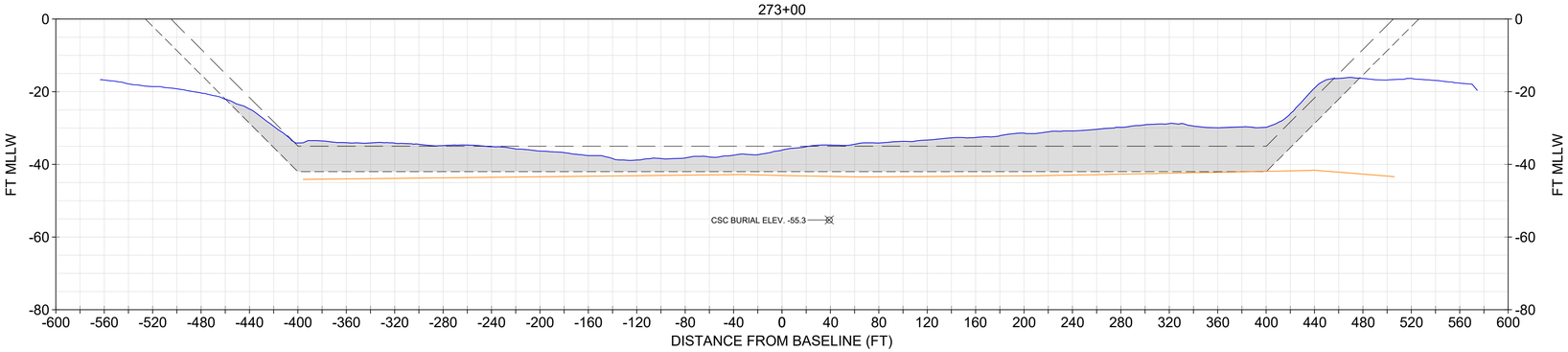
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit F
Baltimore, MD 21237
Phone (410) 882-5595

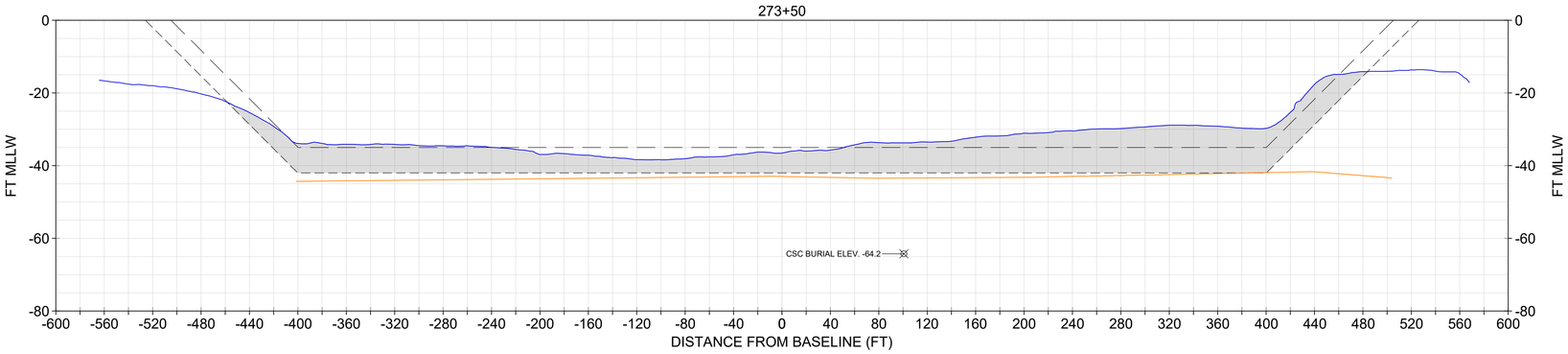
PREPARED FOR: Coastal Science & Engineering

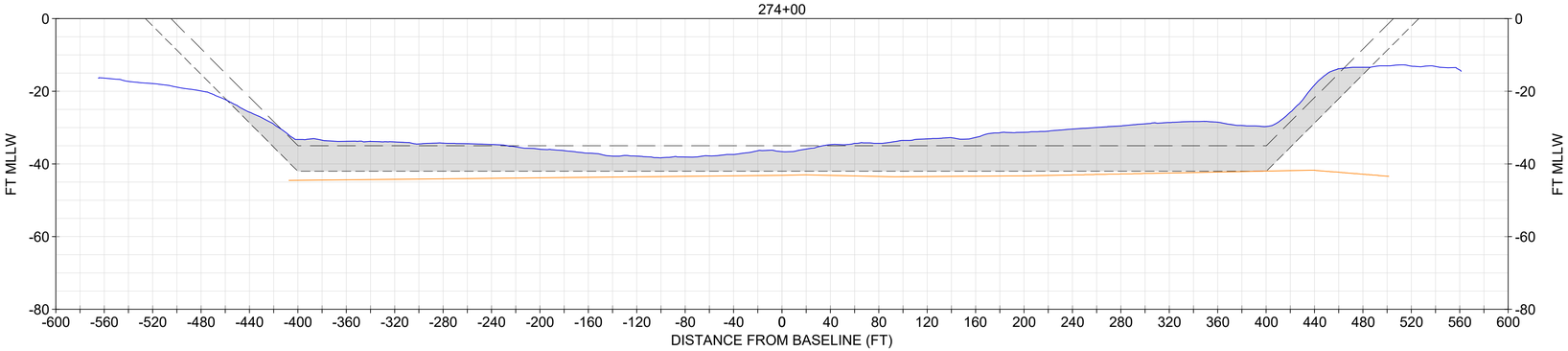
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

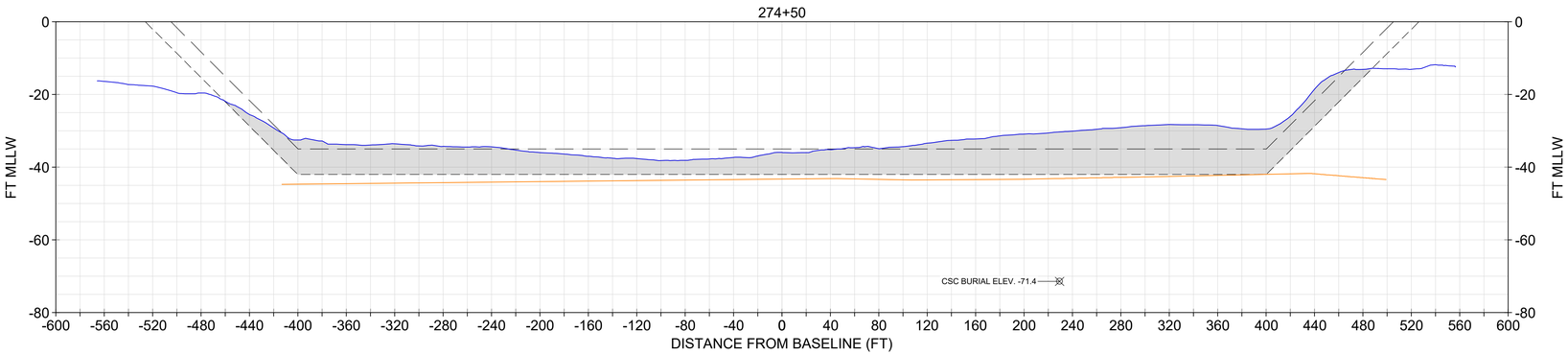
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-163









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 185 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

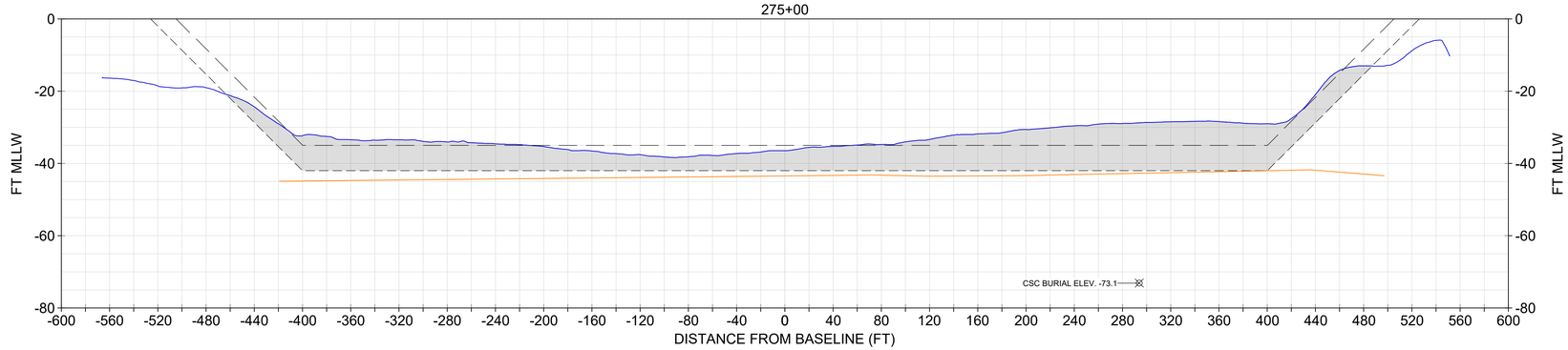
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit F
Baltimore, MD 21237
Phone (410) 882-5595

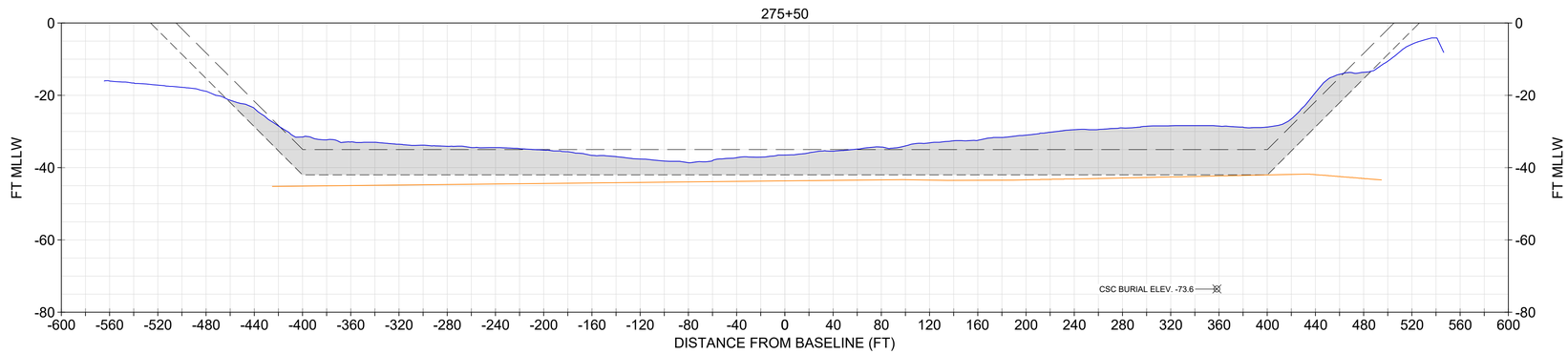
PREPARED FOR:
Coastal Science & Engineering

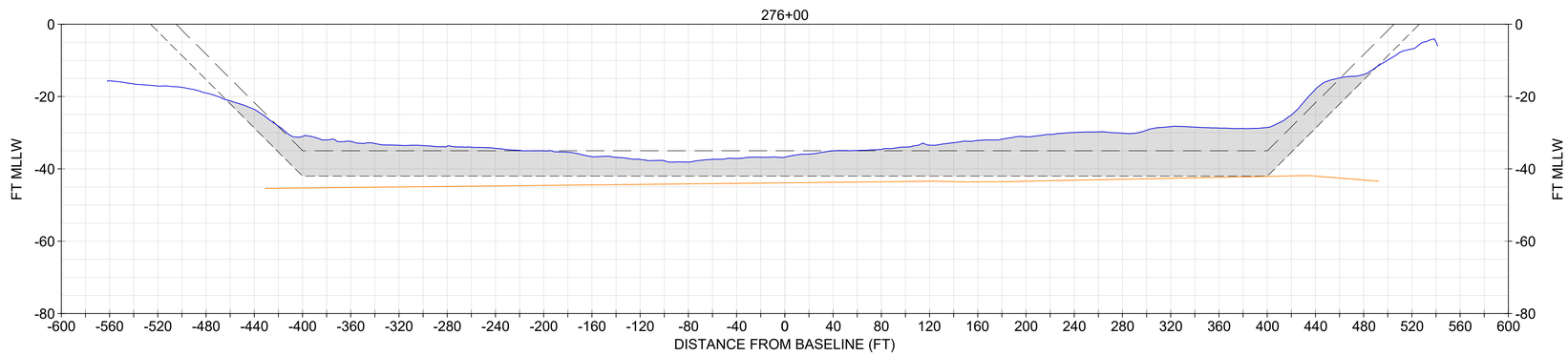
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

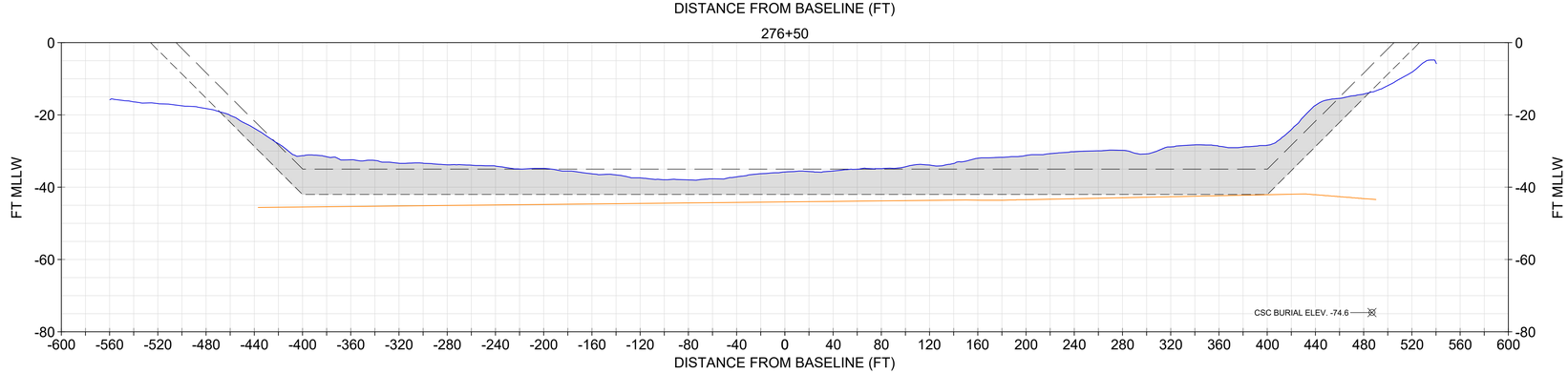
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-164









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

VERTICAL SCALE 0 20' 40'
HORIZONTAL SCALE 0 60' 120'

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: 1
SHEET 186 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY:
SIZE: ANSI 'D'
SCALE: AS SHOWN

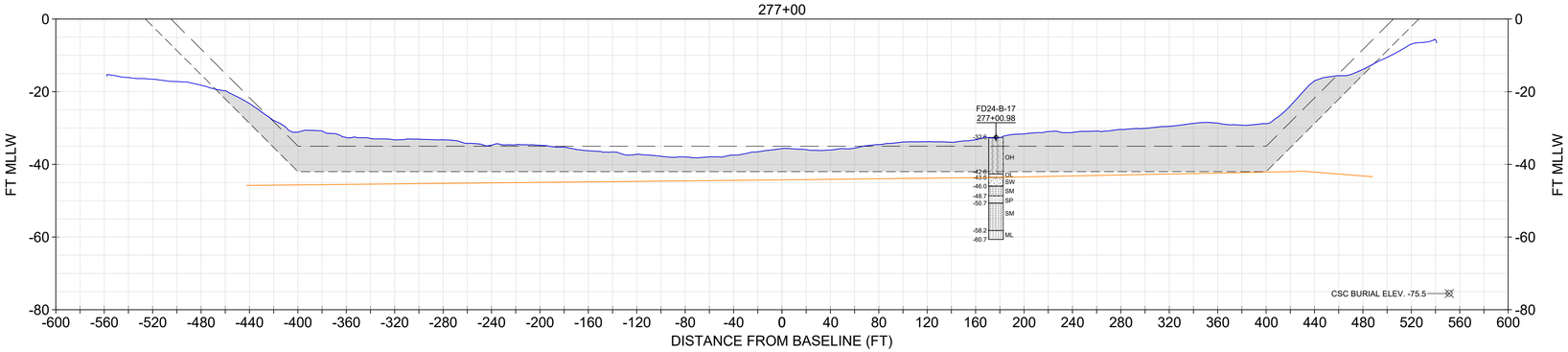
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd.
Unit E
Baltimore, MD 21237
Phone (410) 882-5565

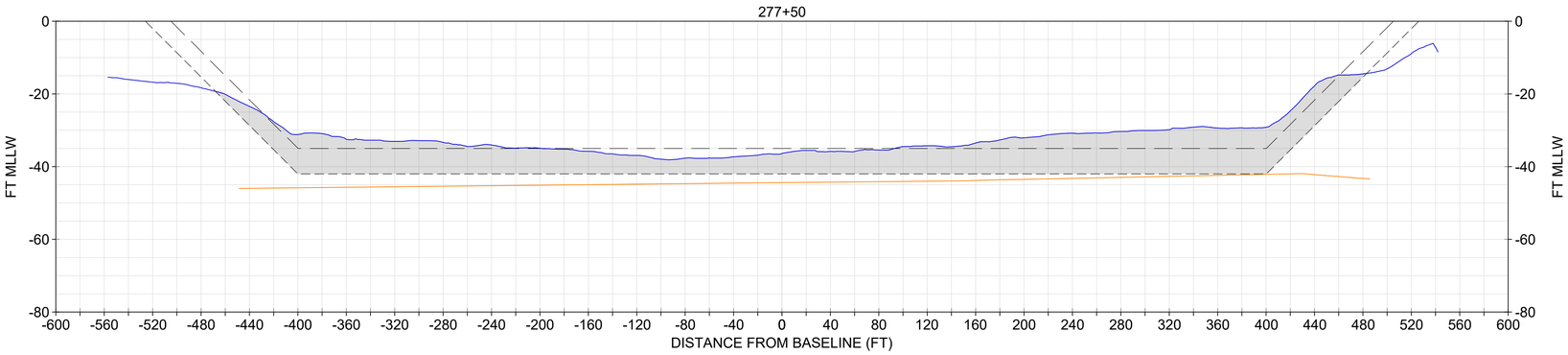
PREPARED FOR: Coastal Partners

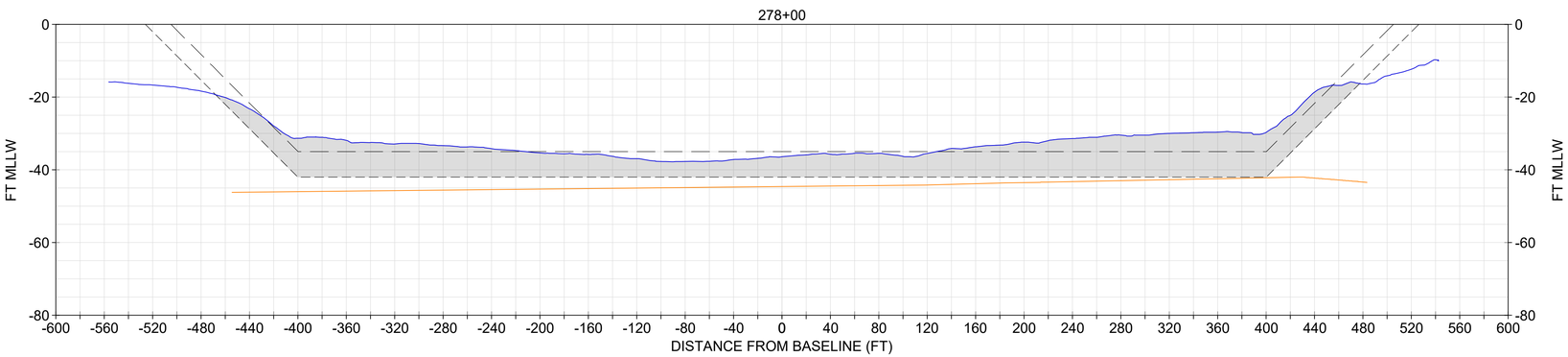
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

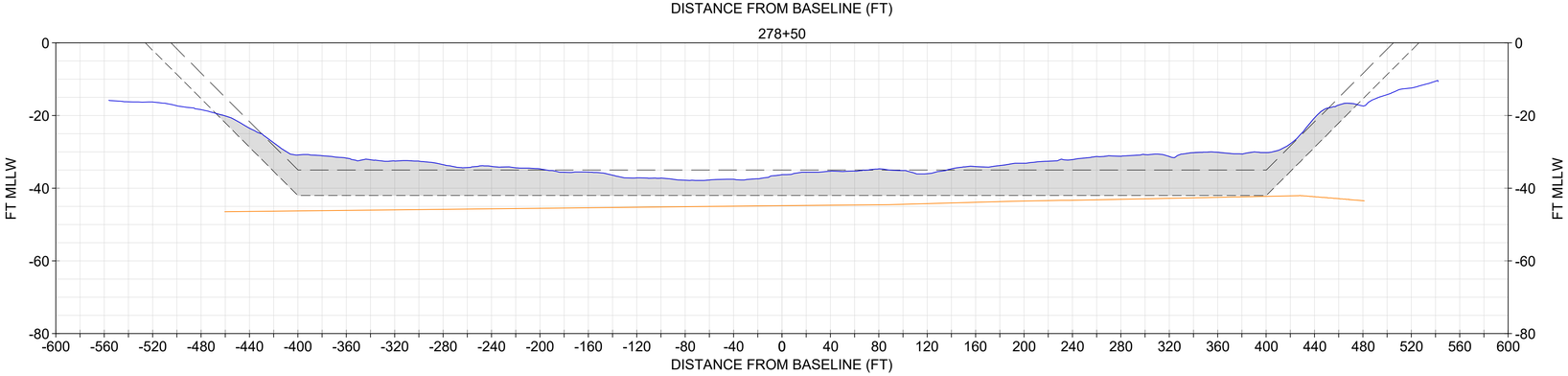
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-165









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. CROSS SOUND CABLE BURIAL LOCATION INFORMATION PROVIDED BT TRC COMPANIES, INC. ON FEBRUARY 2, 2021. NOT SURVEYED OR VERIFIED BY GBA.

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-17	-32.6	-60.7	GBA	8/5/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- OL (ORGANIC SILT AND CLAY)
- SW (WELL GRADED SAND)
- SM (SILTY SAND)
- SP (POORLY GRADED SAND)
- ML (SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- CROSS SOUND CABLE BURIAL ELEV. AND POSITION
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE:
SHEET 187 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

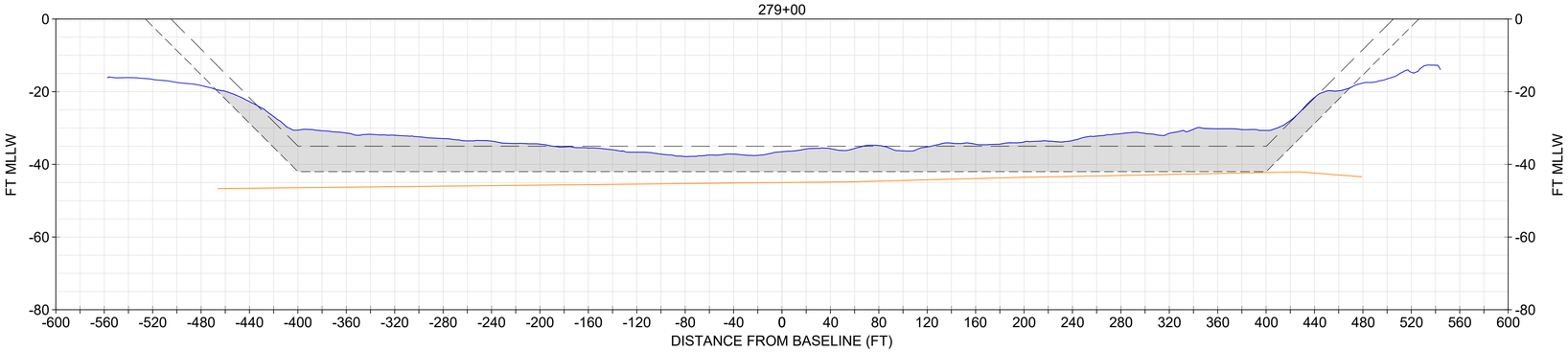
PREPARED BY:
GBA
9003 Yellow Brick Rd.
Unit F
Baltimore, MD 21237
Phone (410) 682-5595
ENGINEERS ★ SURVEYORS

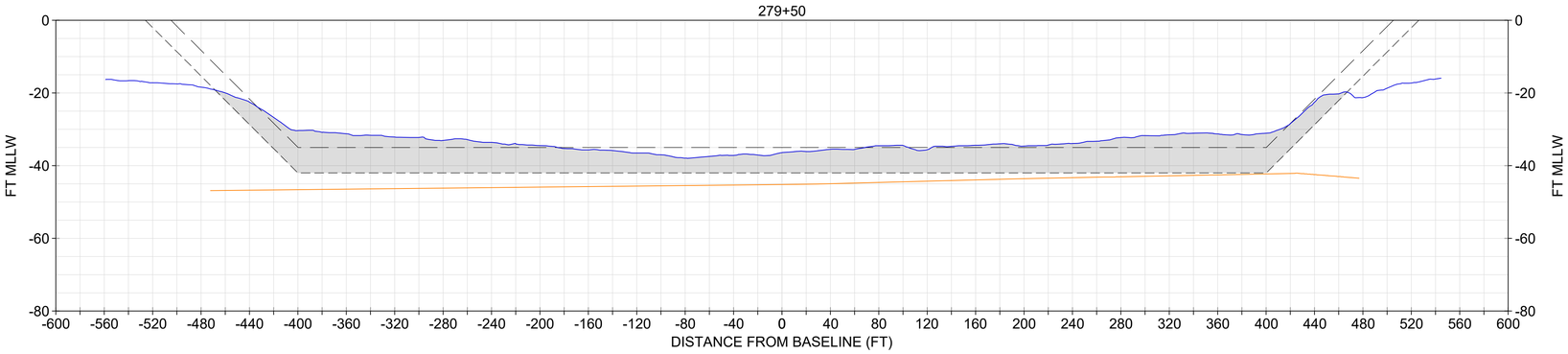
PREPARED FOR:
Coastal Science & Engineering

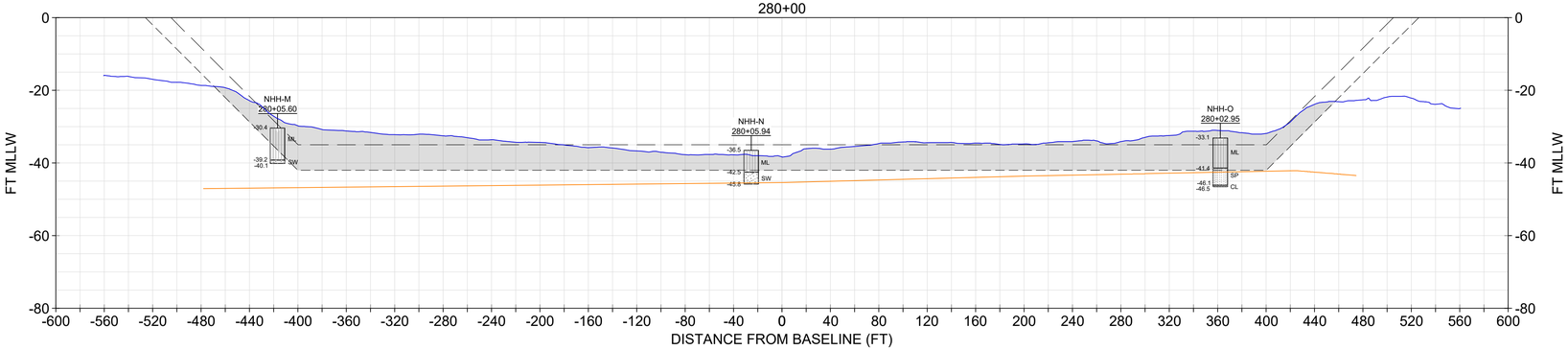
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

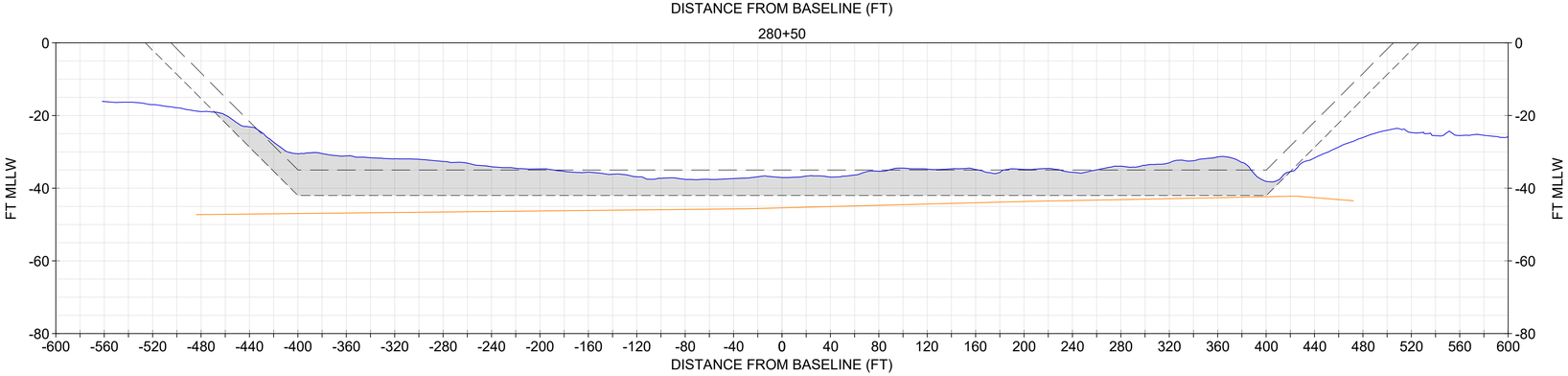
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-166









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-M	-30.4	-40.1	AECOM	2017
NHH-N	-36.5	-45.8	AECOM	2017
NHH-O	-33.1	-46.5	AECOM	2017

CORE LEGEND
- ML (SILT)
- SW (WELL GRADED SAND)
- SP (POORLY GRADED SAND)
- CL (LEAN CLAY)

STICK LOG LEGEND
- SM
- ML

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
DESIGNED BY: USACE
TASK ORDER NO.: W912WJ24F0024
DRAWN BY: ECC
CONTRACT NO.: W912DS22D0017
CHECKED BY: BJC
DRAWING CODE: -
SUBMITTED BY: DOU
SHEET 186 OF 220
SIZE: ANSI D
SCALE: AS SHOWN

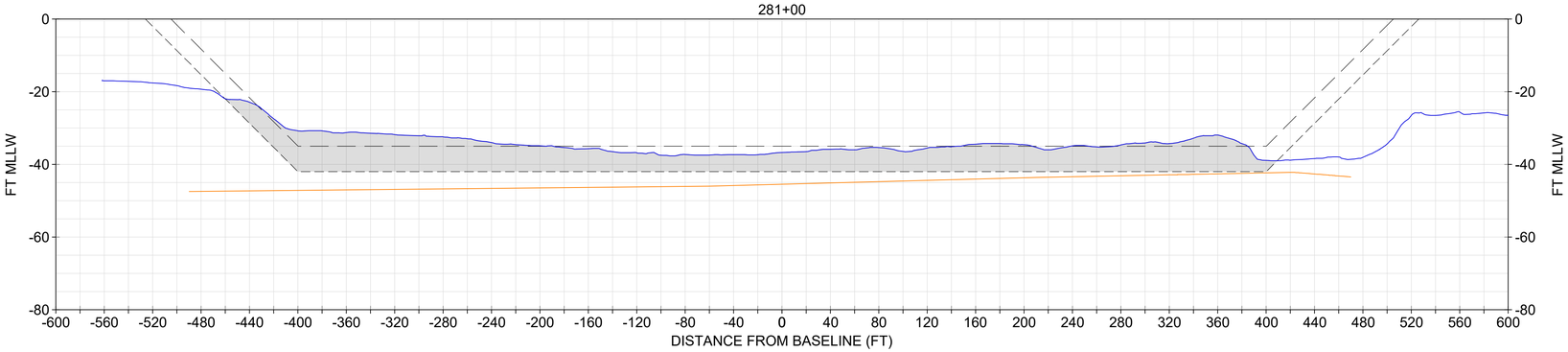
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit A Baltimore, MD 21237 Phone (410) 882-5595

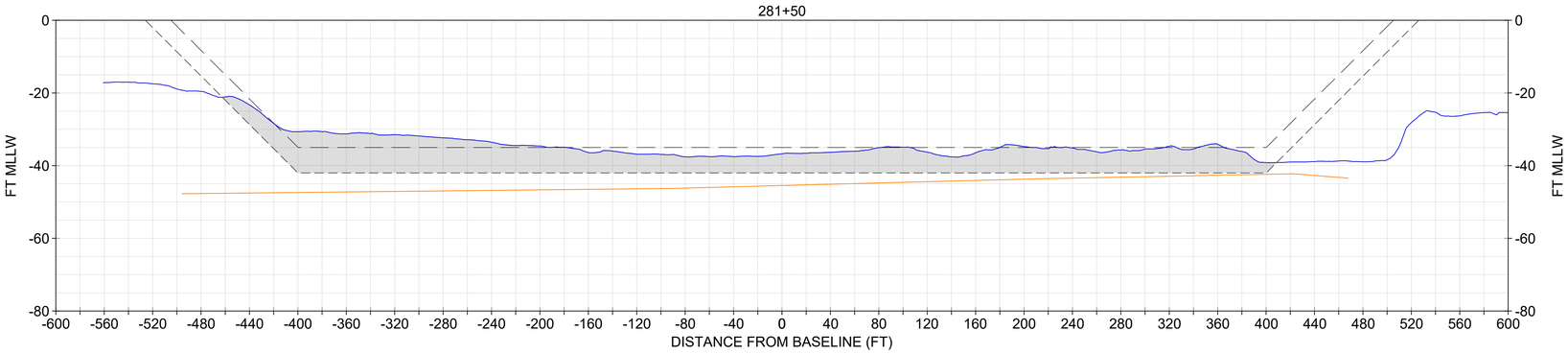
PREPARED FOR: Coastal Science & Engineering

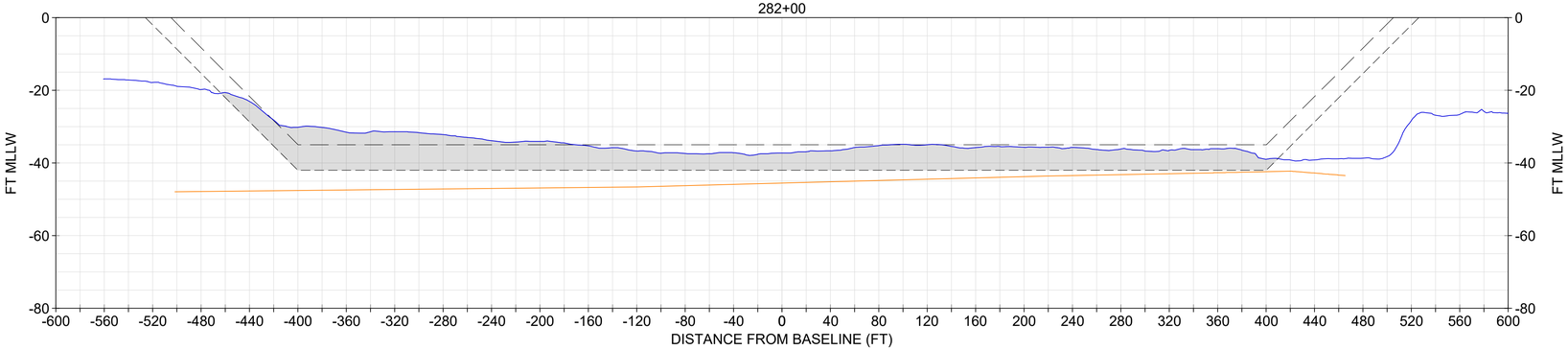
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

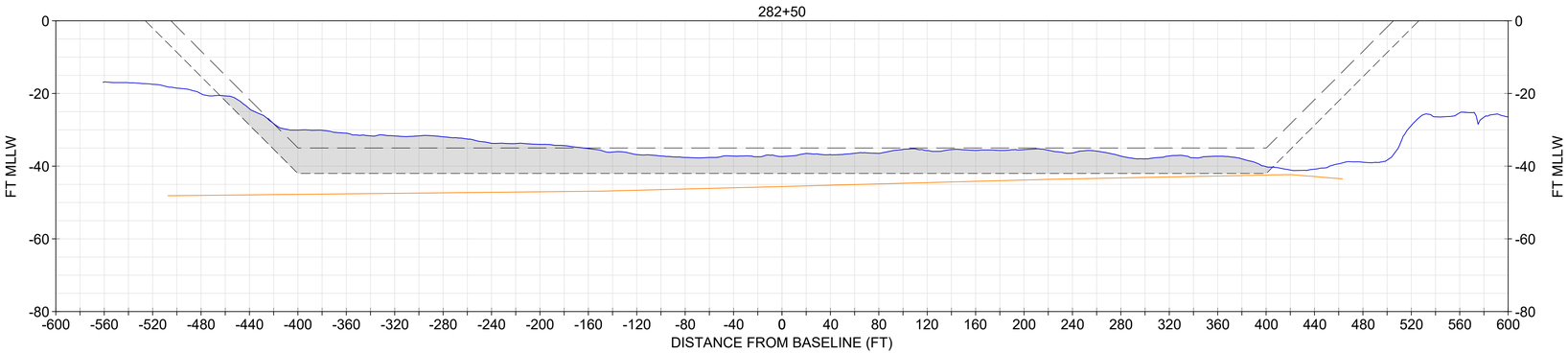
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-167









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 189 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

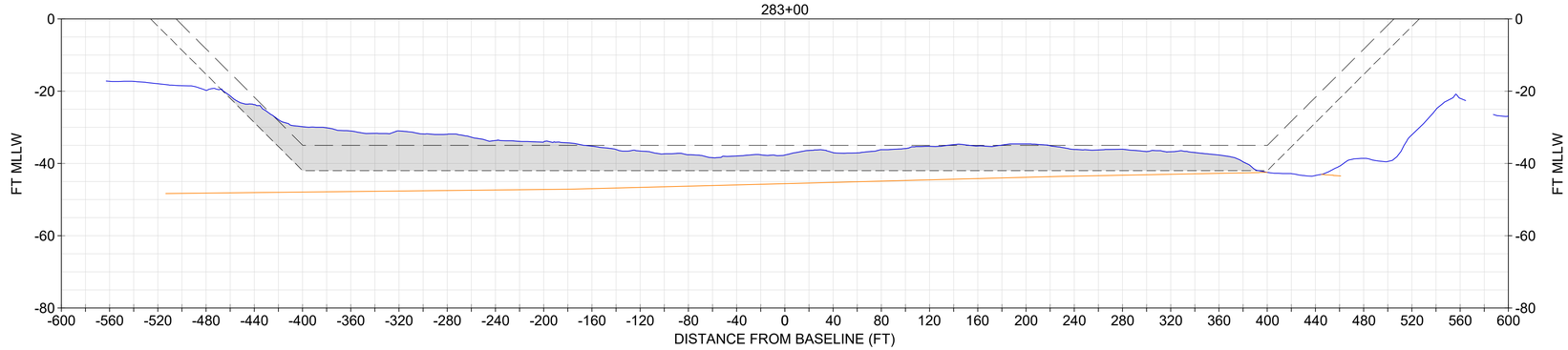
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit F Baltimore, MD 21237 Phone (410) 882-5595

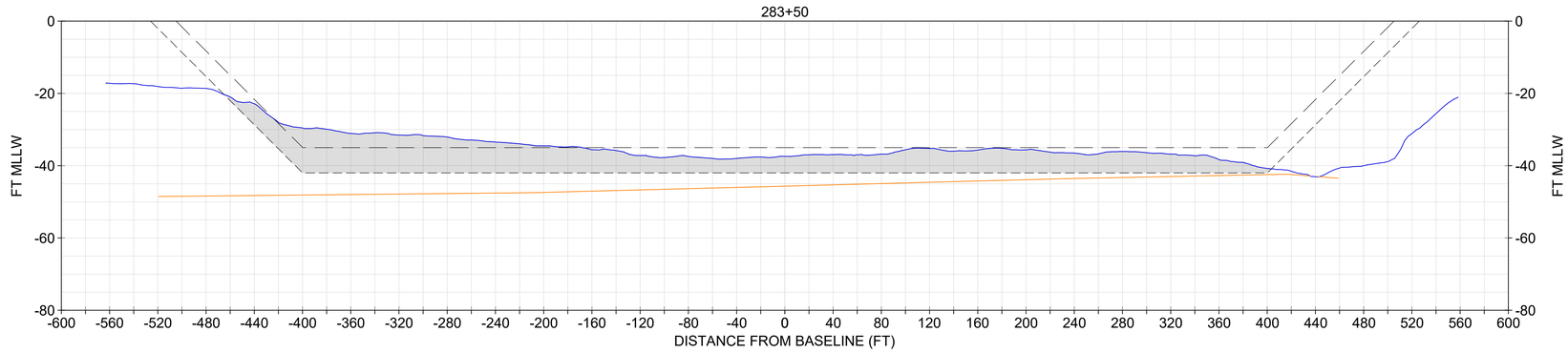
PREPARED FOR: Coastal Science & Assessment Branch

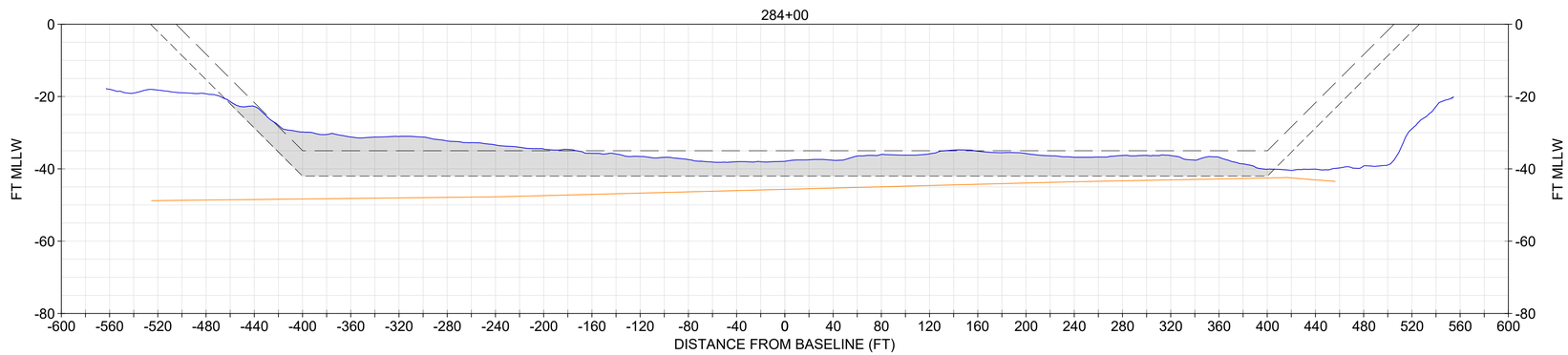
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

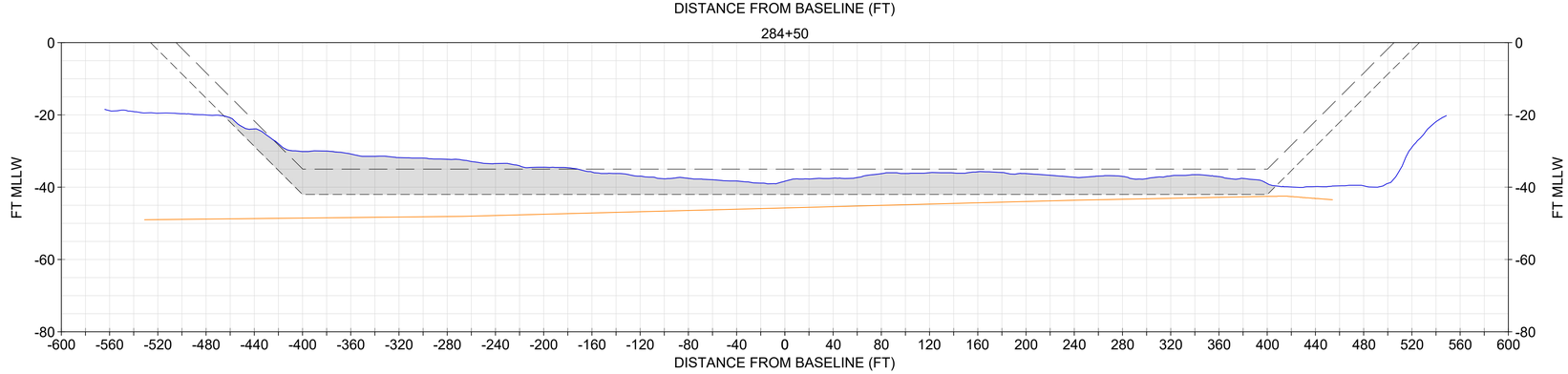
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-168









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 190 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SCALE: AS SHOWN
SIZE: ANSI D

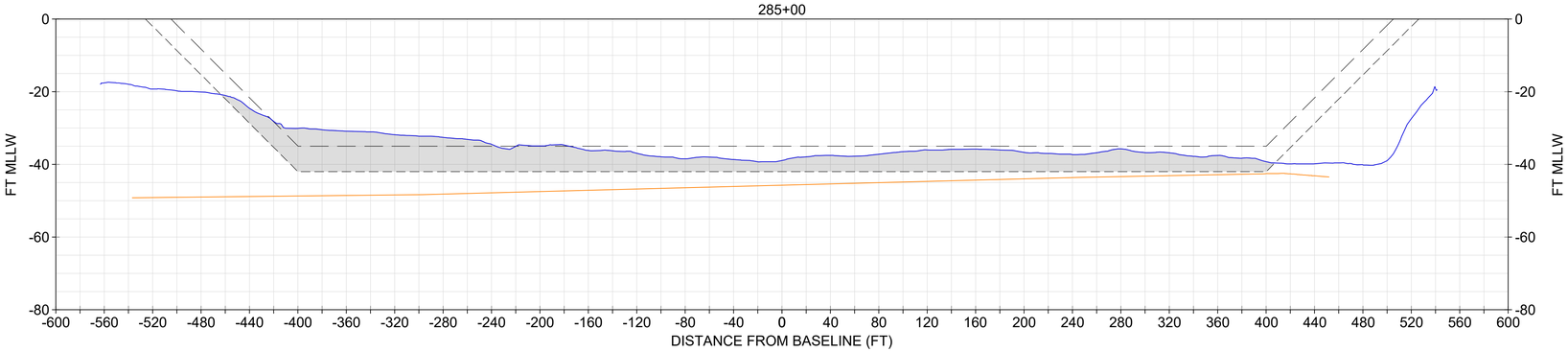
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit F Baltimore, MD 21237 Phone (410) 882-5595

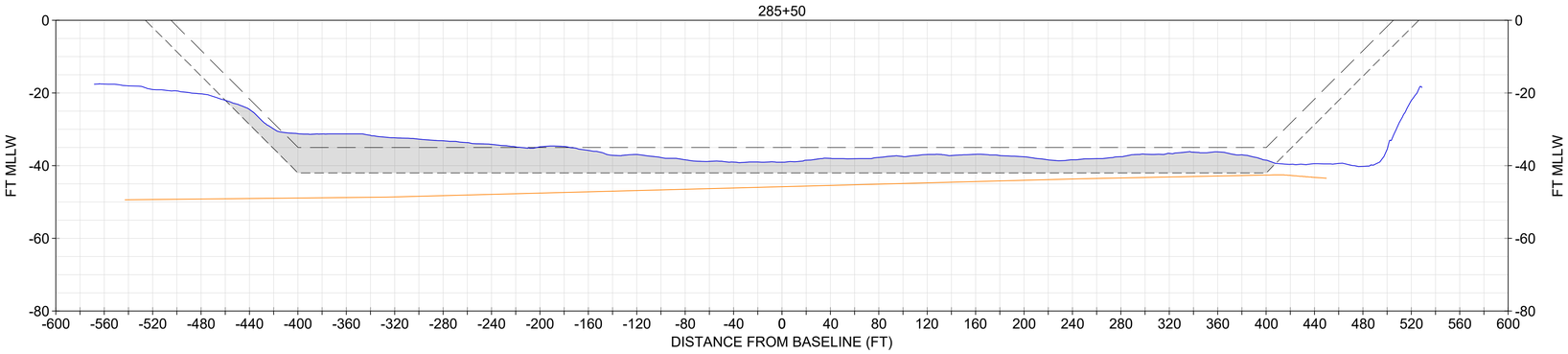
PREPARED FOR: Coastal Science & Engineering

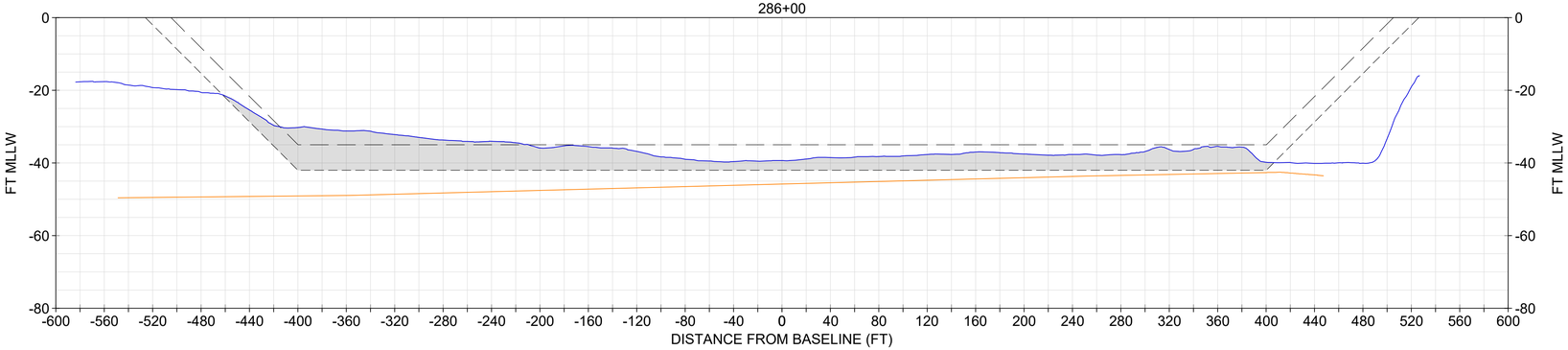
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

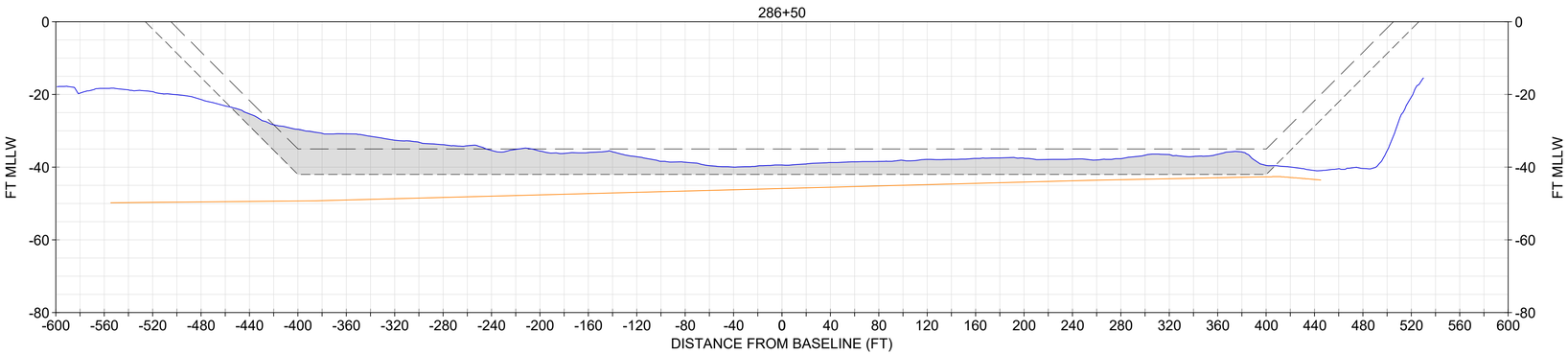
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-169









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 191 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN

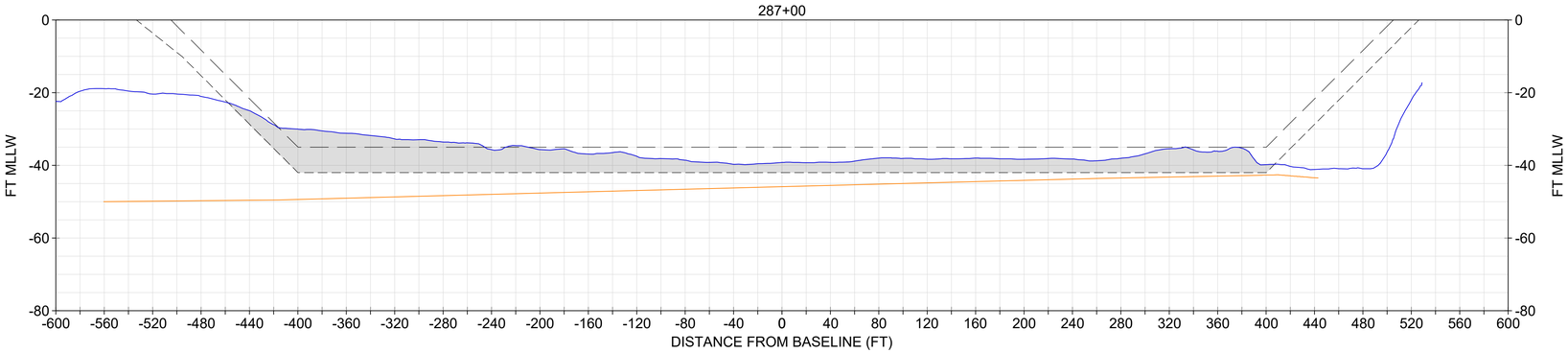
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit F Baltimore, MD 21237 Phone (410) 882-5595

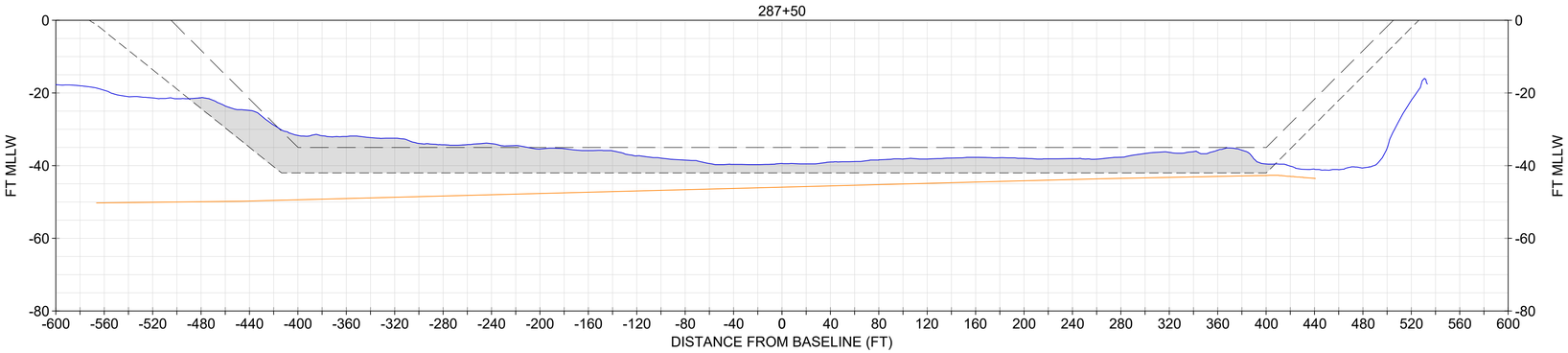
PREPARED FOR: Coastal Science & Engineering

SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-170





NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND

- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit F Baltimore, MD 21237 Phone (410) 882-5595

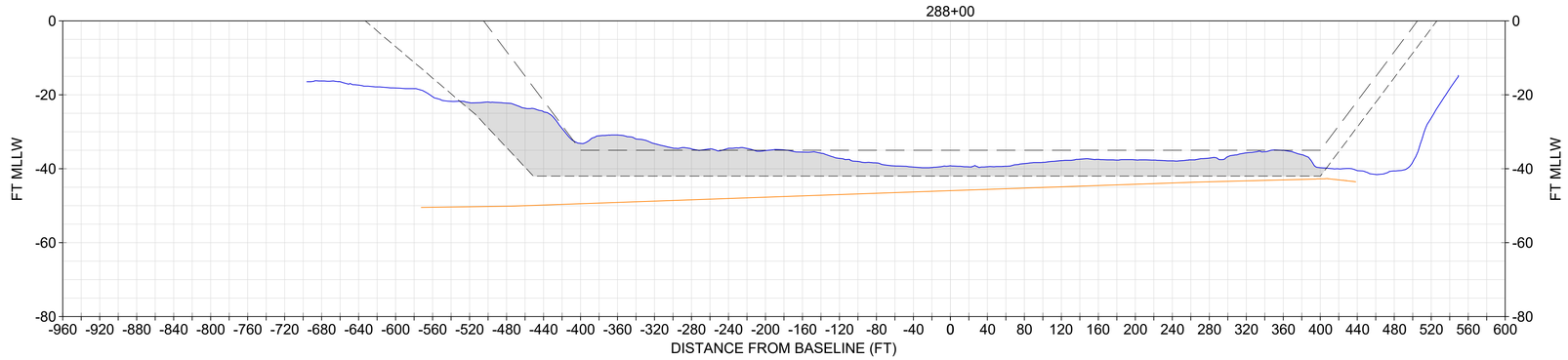
PREPARED FOR: Gardiner Geotechnical Consultants

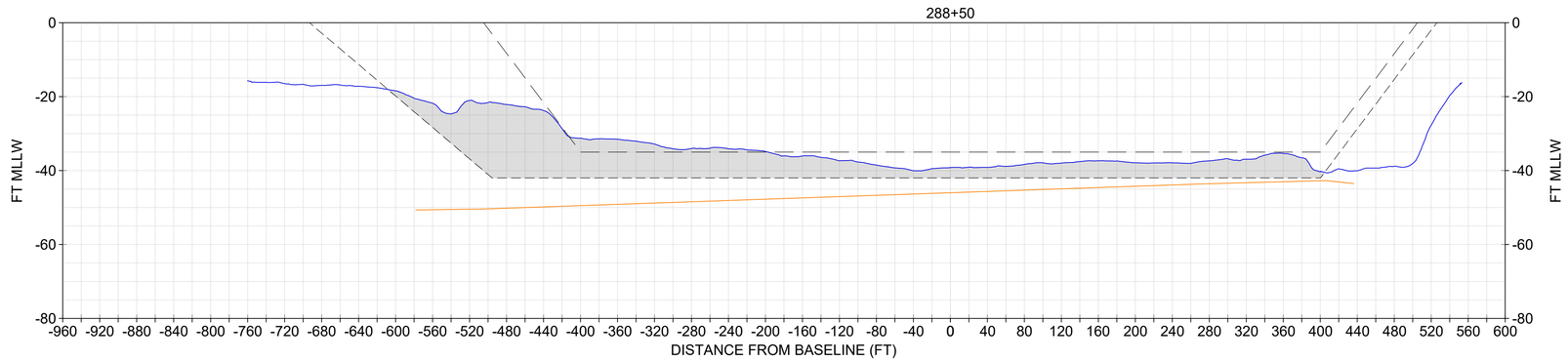
DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOU
SIZE: ANSI D
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: -
SHEET 192 OF 220

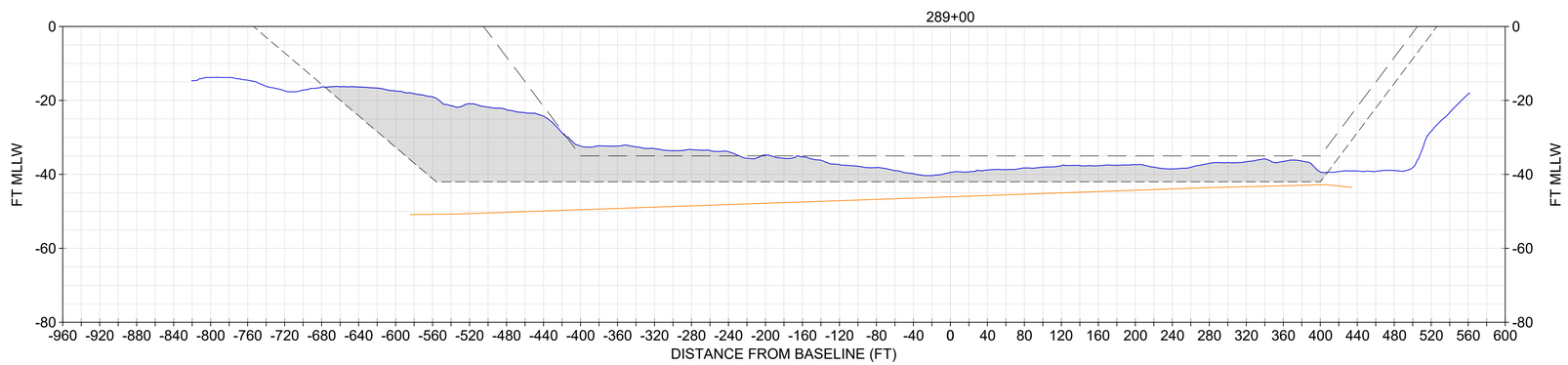
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

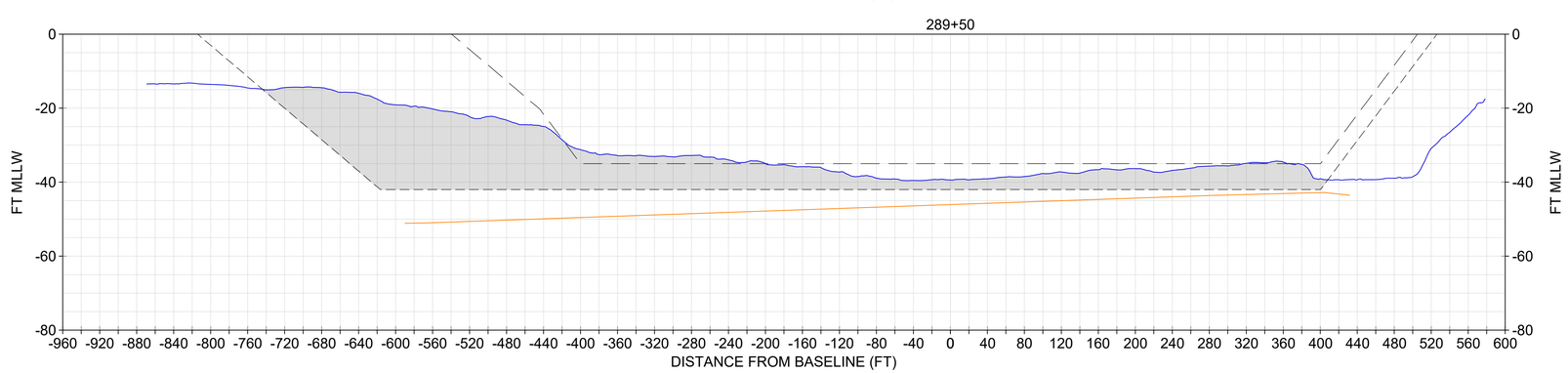
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-171









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 80' 160' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 193 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

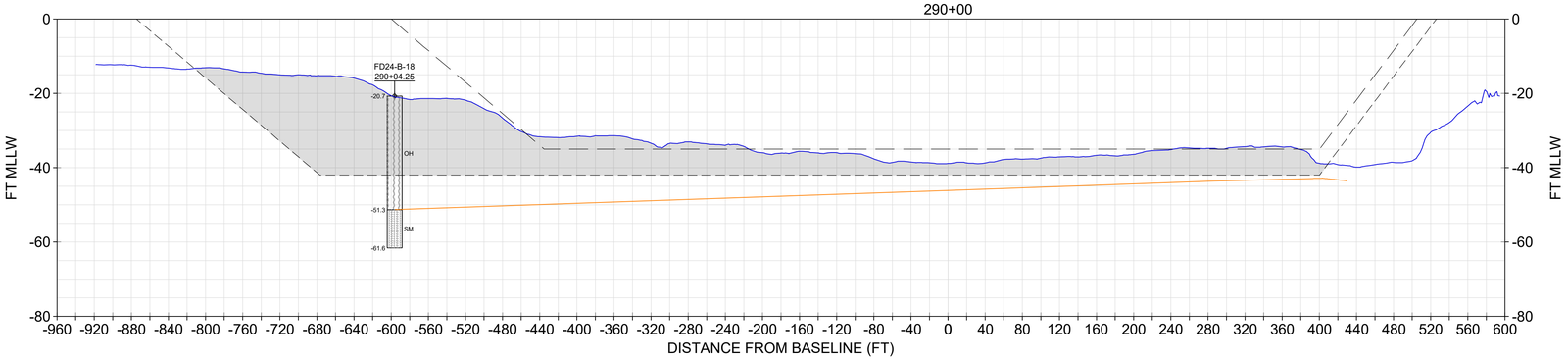
PREPARED BY:
GBA
9009 Yellow Brick Rd.
Suite 100
Baltimore, MD 21237
Phone (410) 682-5595
ENGINEERS ★ SURVEYORS

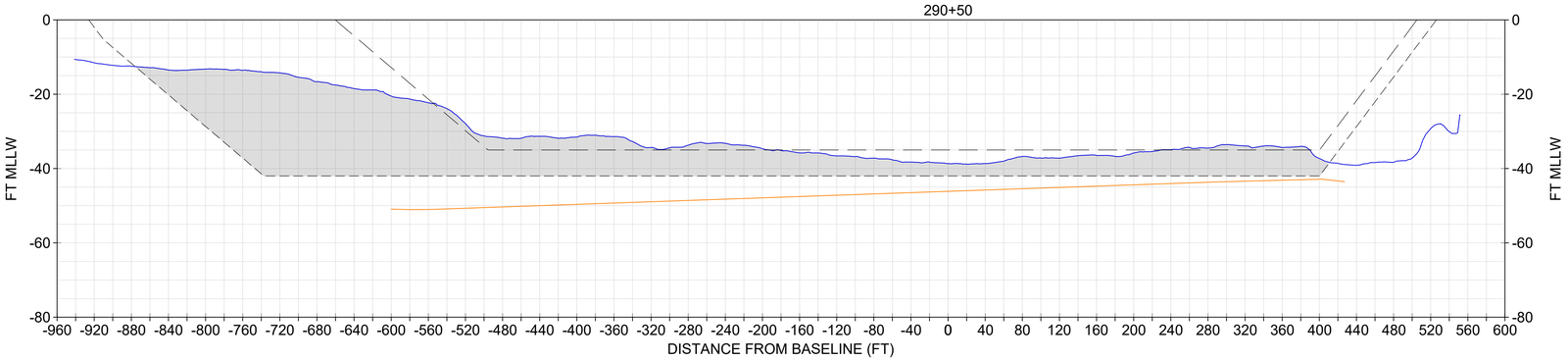
PREPARED FOR:

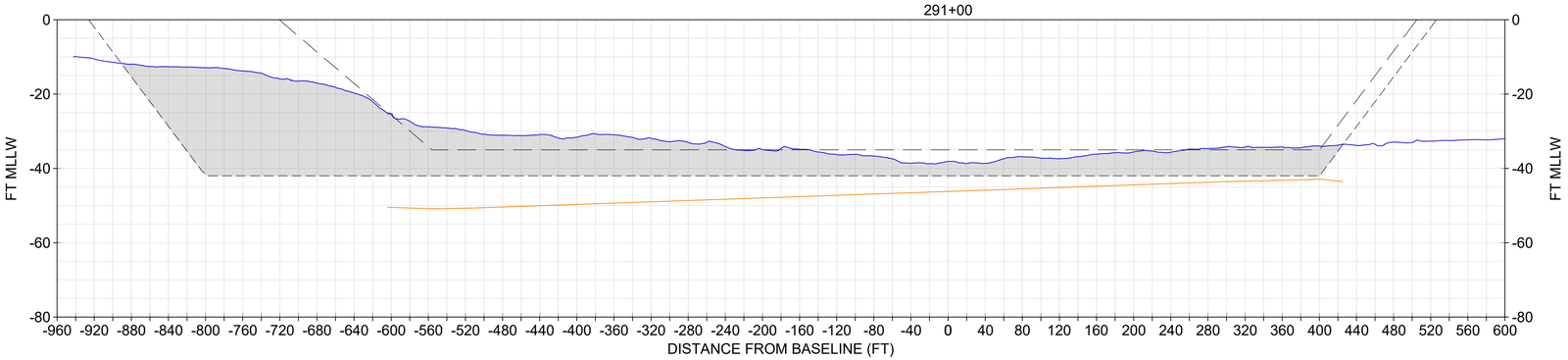
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

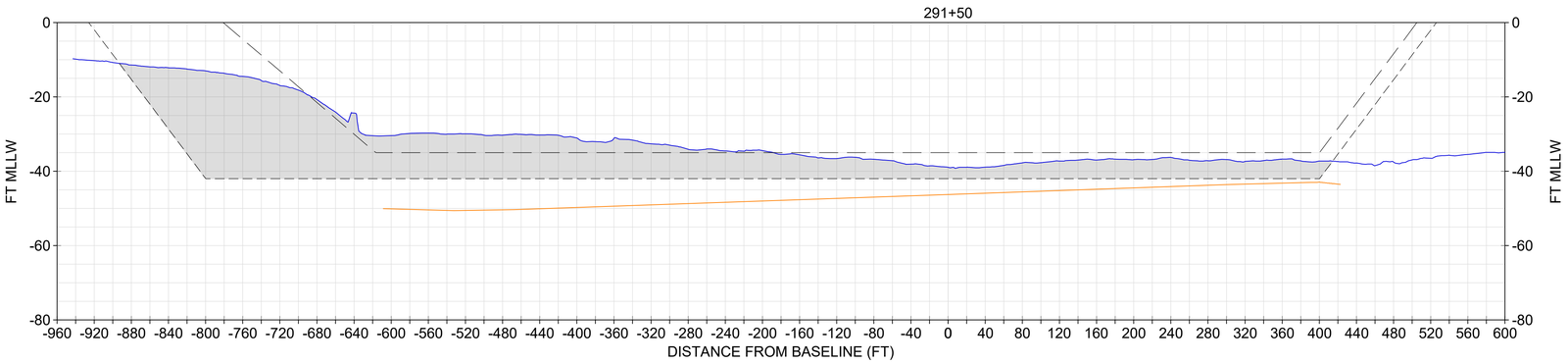
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-172









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-18	-20.7	-61.6	GBA	7/1/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- SM (SILTY SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 80' 160' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 194 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

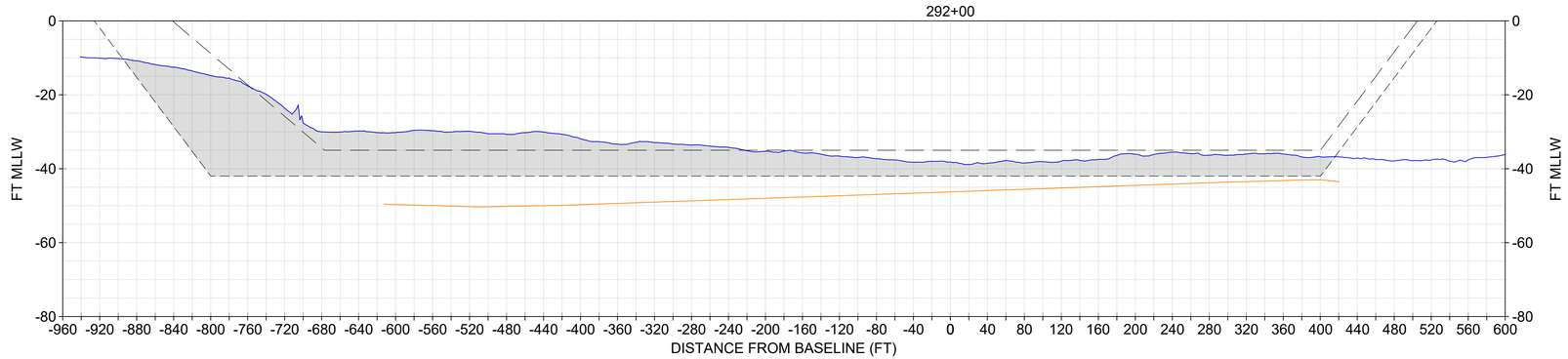
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit D Baltimore, MD 21237 Phone (410) 882-5595

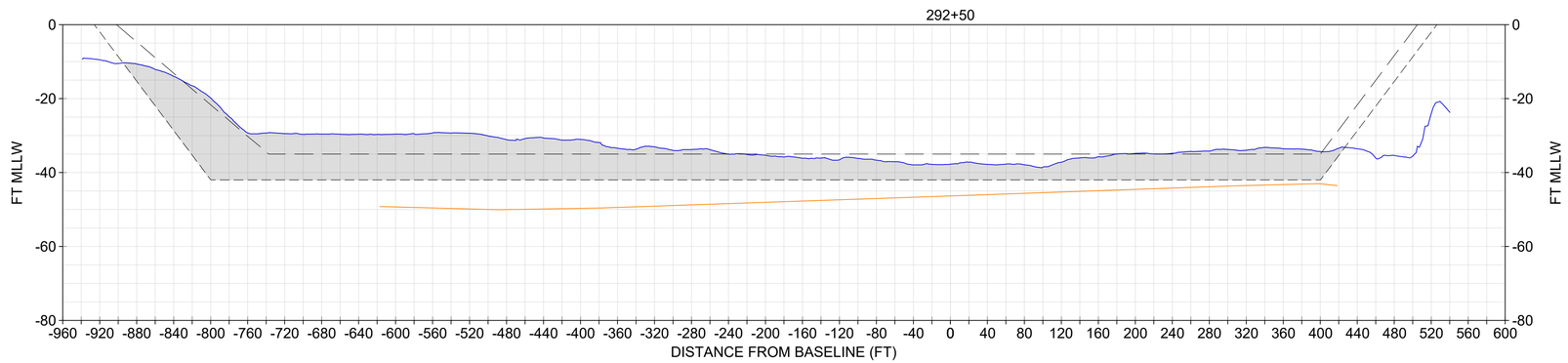
PREPARED FOR:

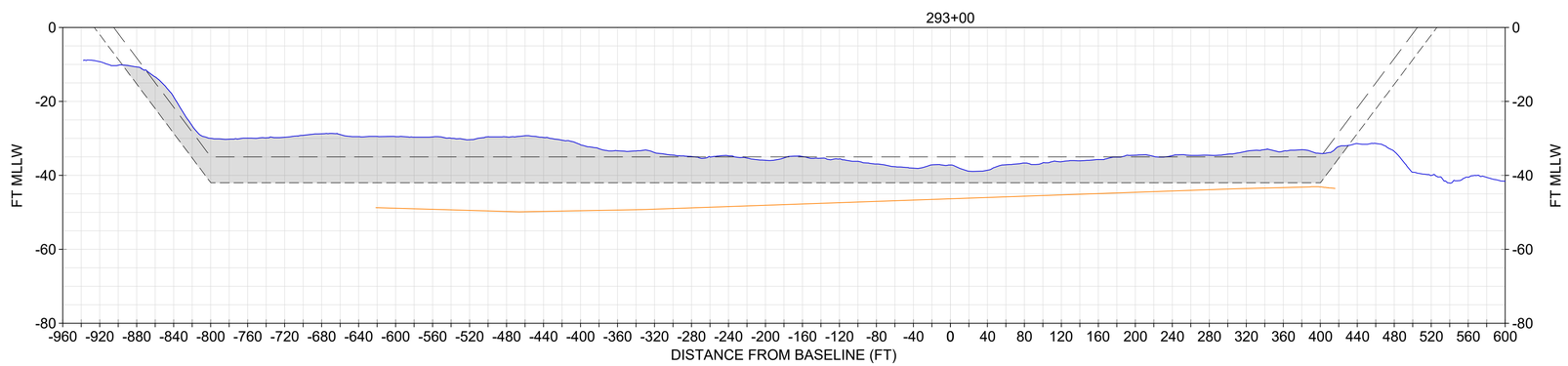
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

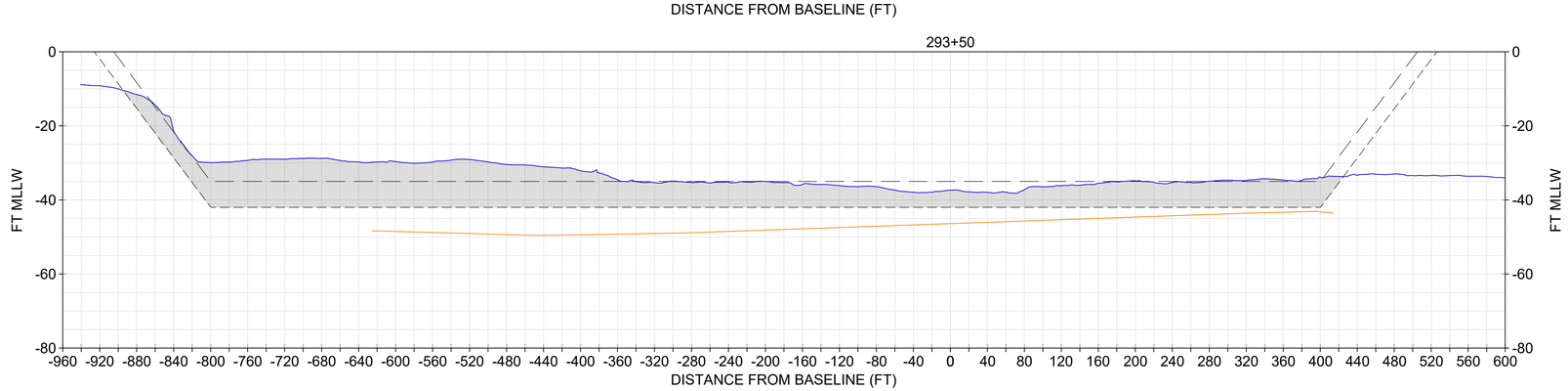
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-173









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 80' 160' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 195 OF 220

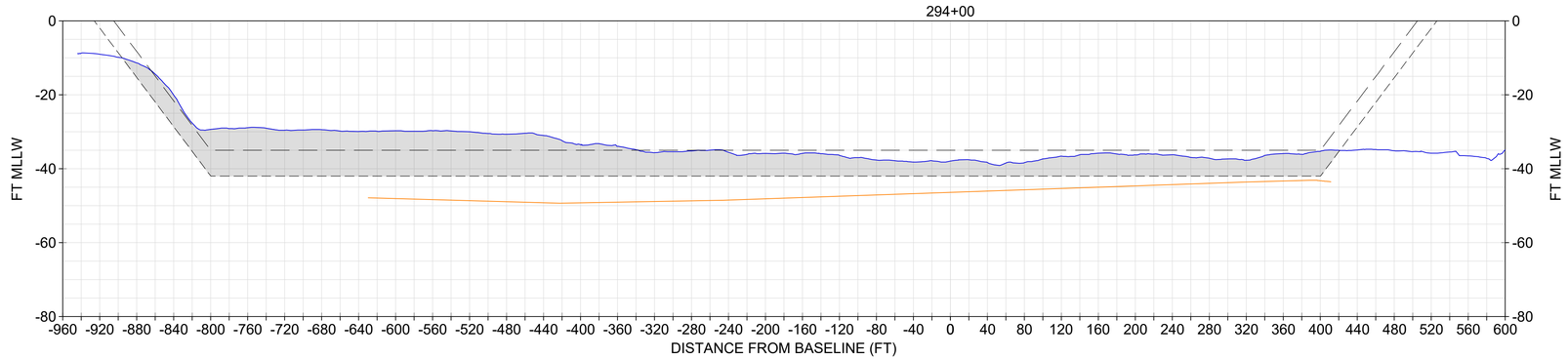
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit G
Baltimore, MD 21237
Phone (410) 882-5595

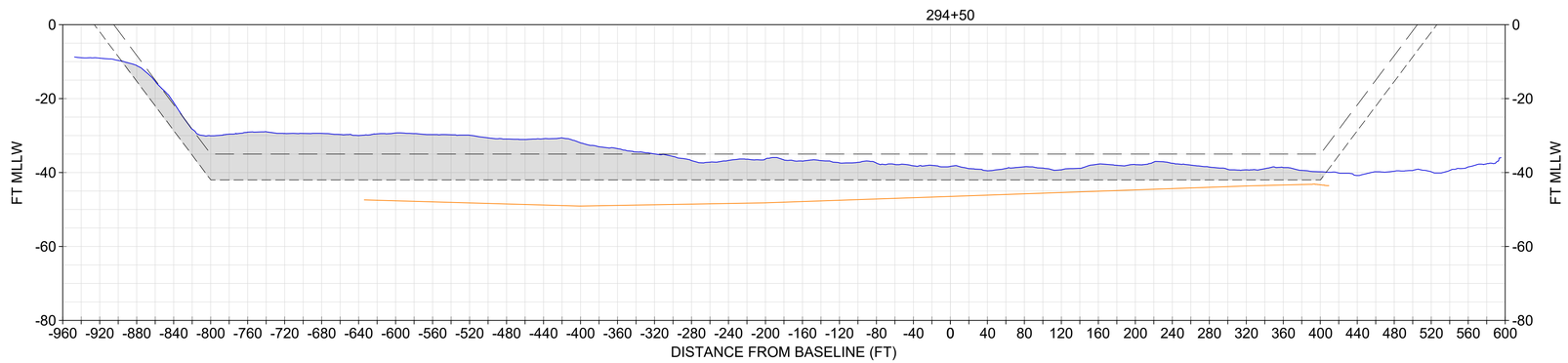
PREPARED FOR:

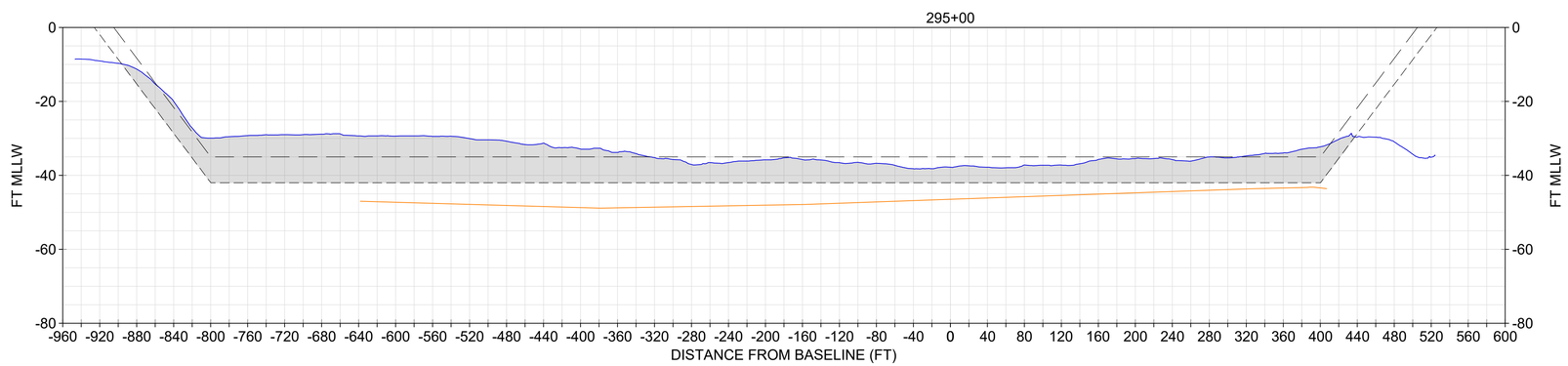
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

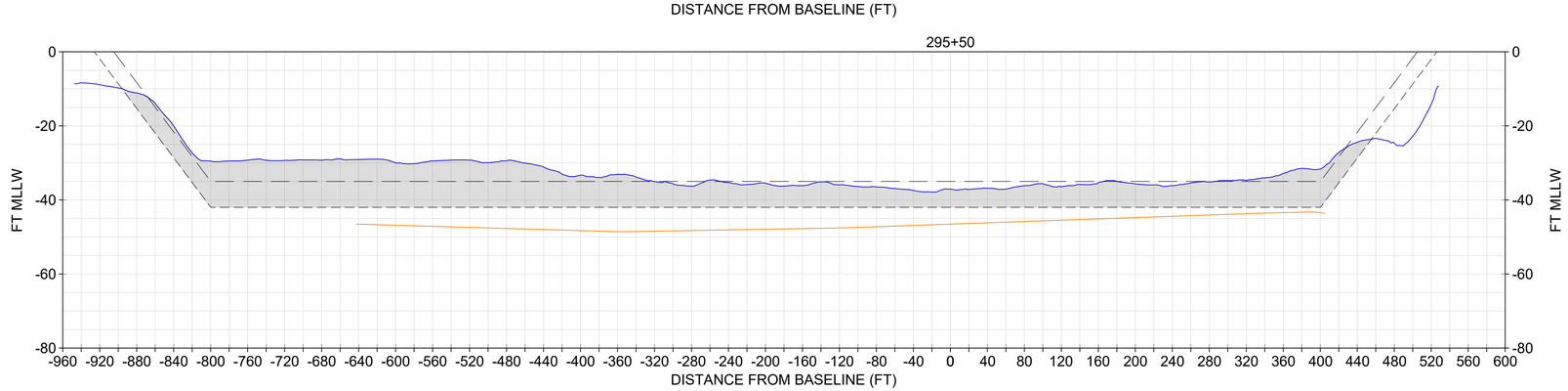
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-174









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 80' 160' HORIZONTAL SCALE

SECTIONS SHOULD BE PRINTED IN COLOR

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 196 OF 220

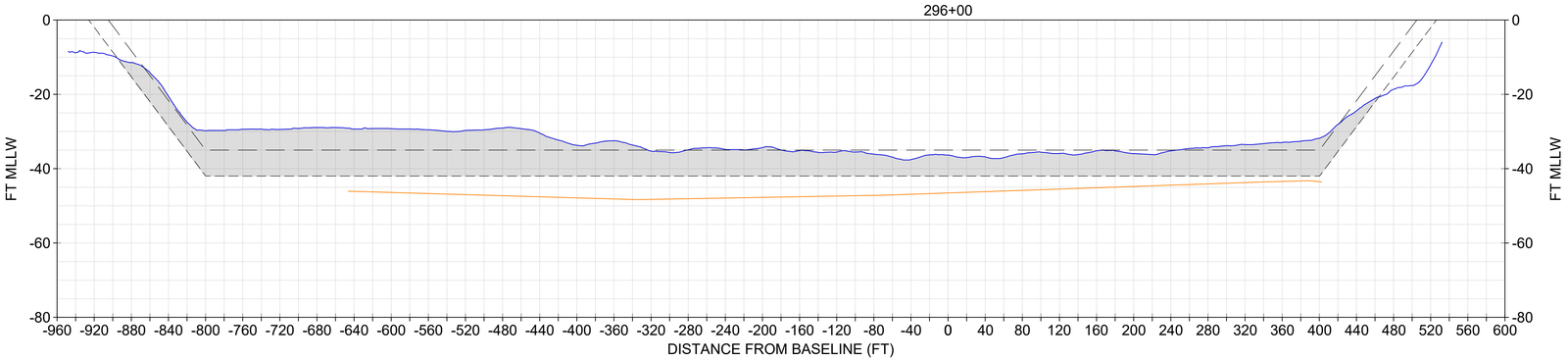
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit G
Baltimore, MD 21237
Phone (410) 882-5595

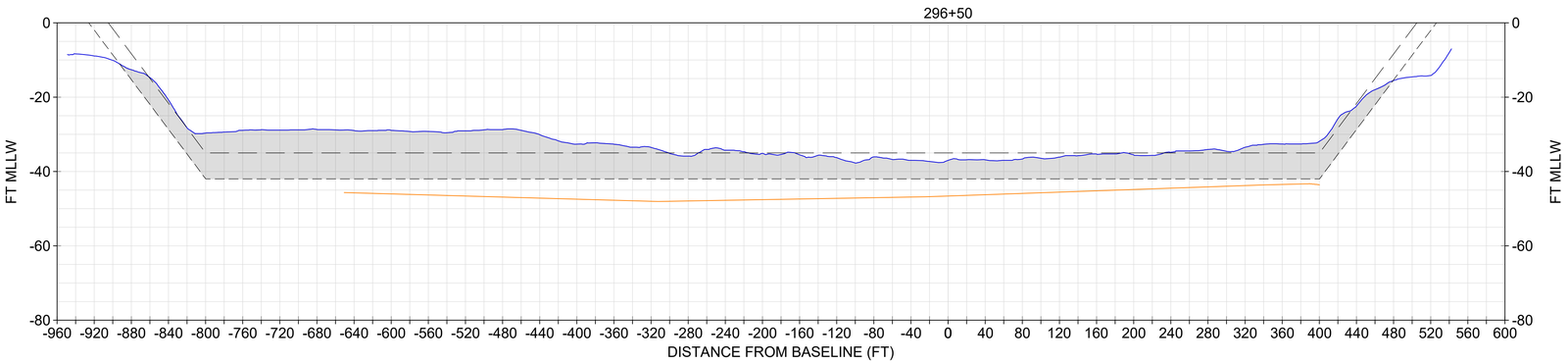
PREPARED FOR:

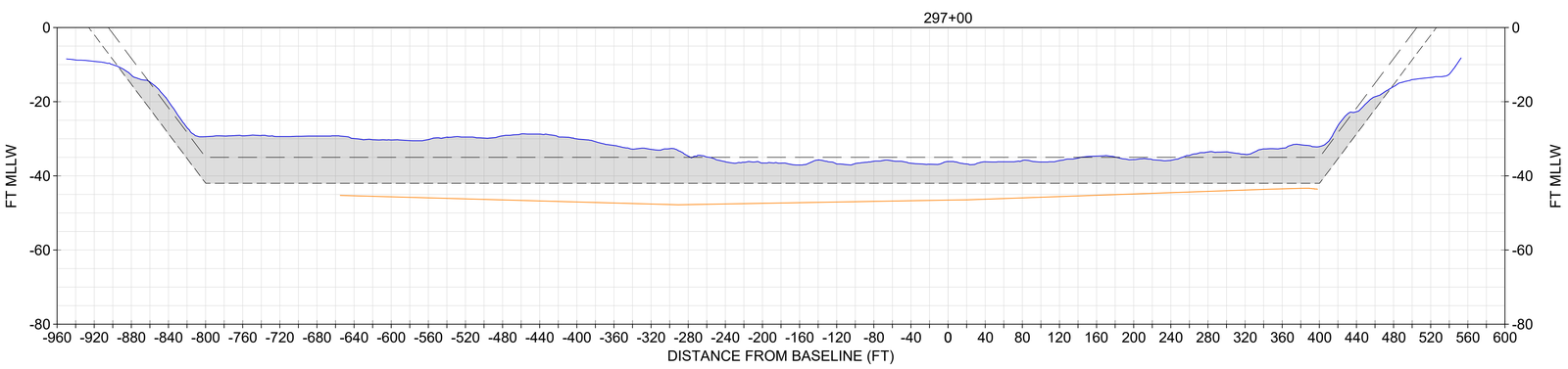
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

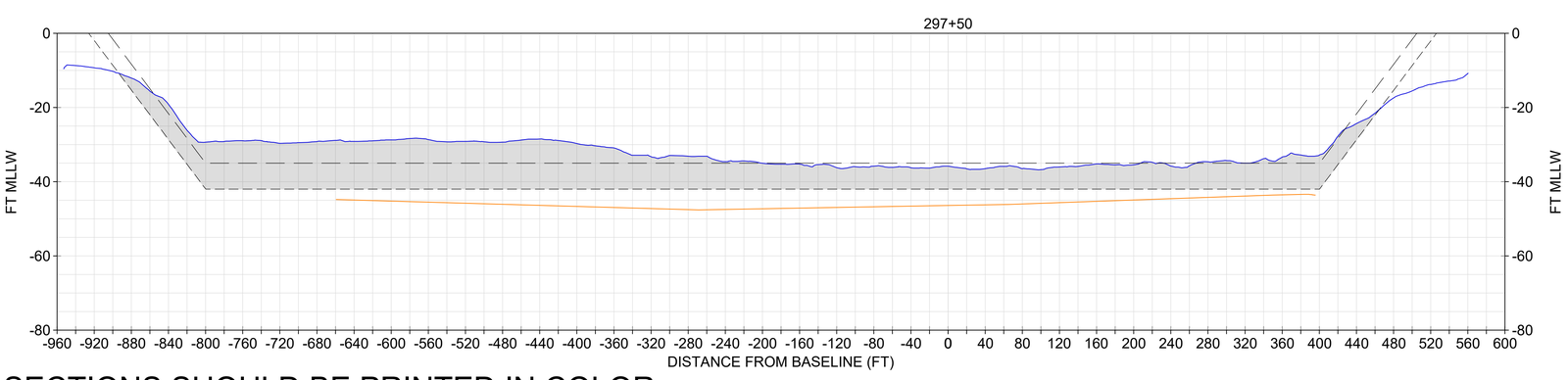
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-175









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 80' 160' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: ####
SHEET 197 OF 220

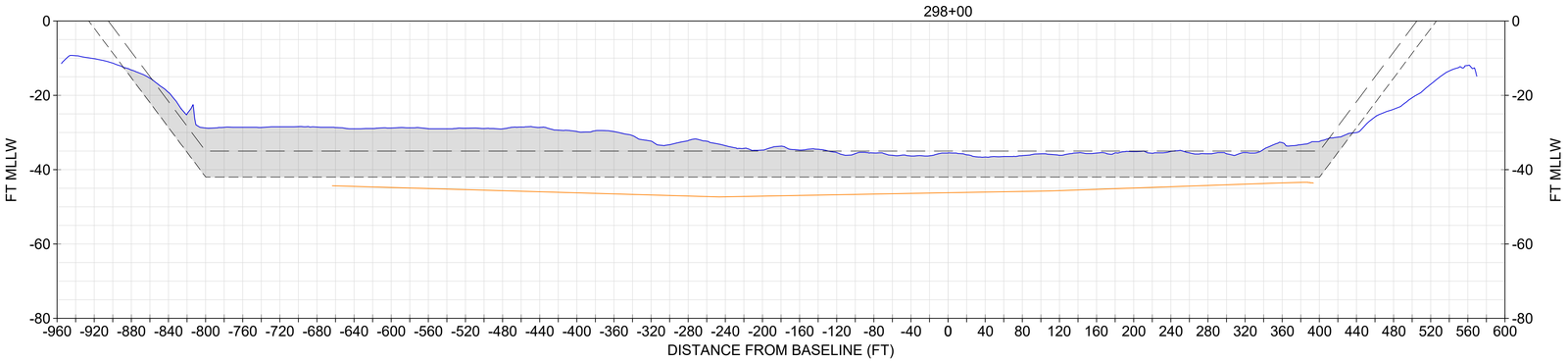
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit 10
Baltimore, MD 21237
Phone (410) 882-5595

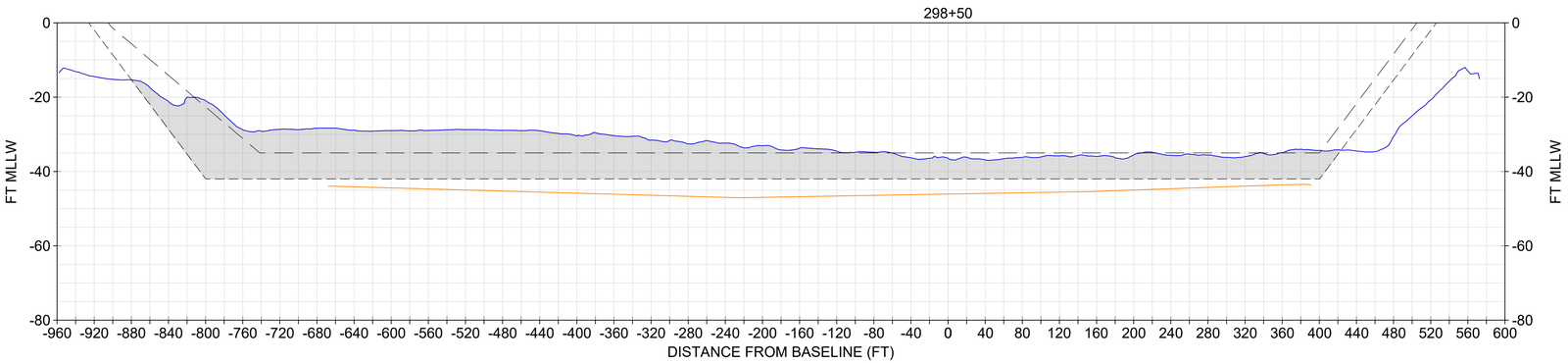
PREPARED FOR:

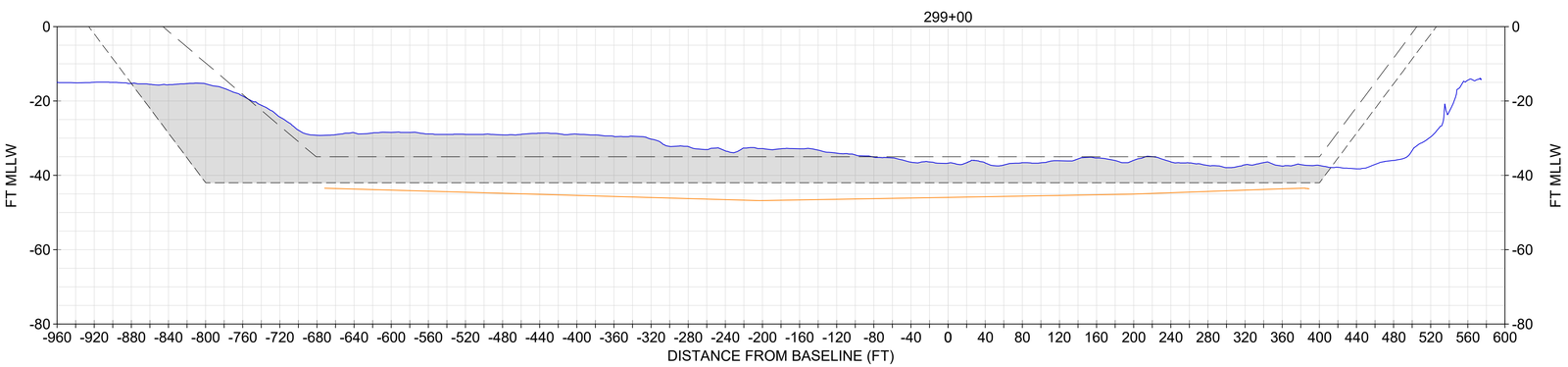
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

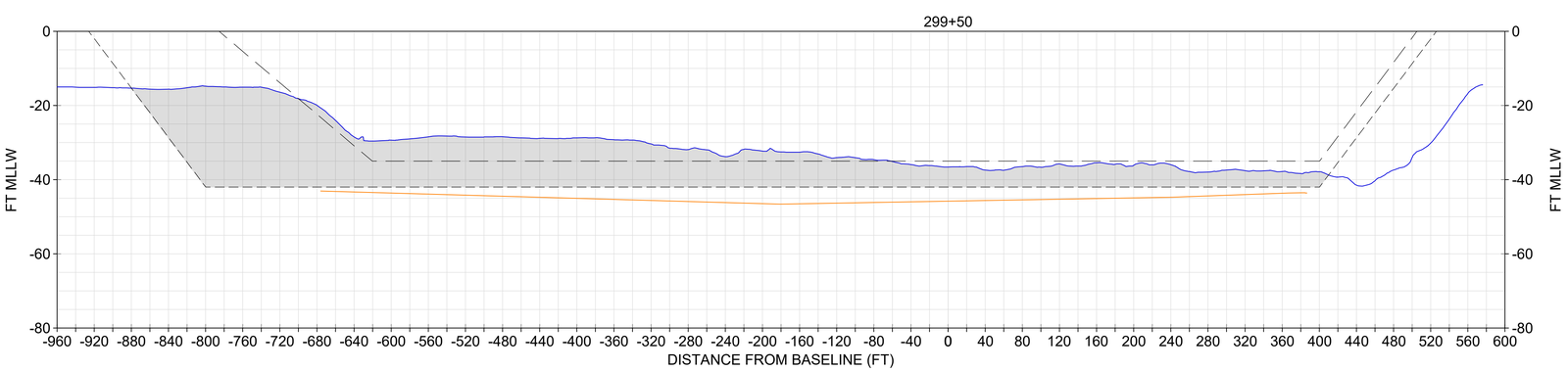
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-176









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 80' 160' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 198 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

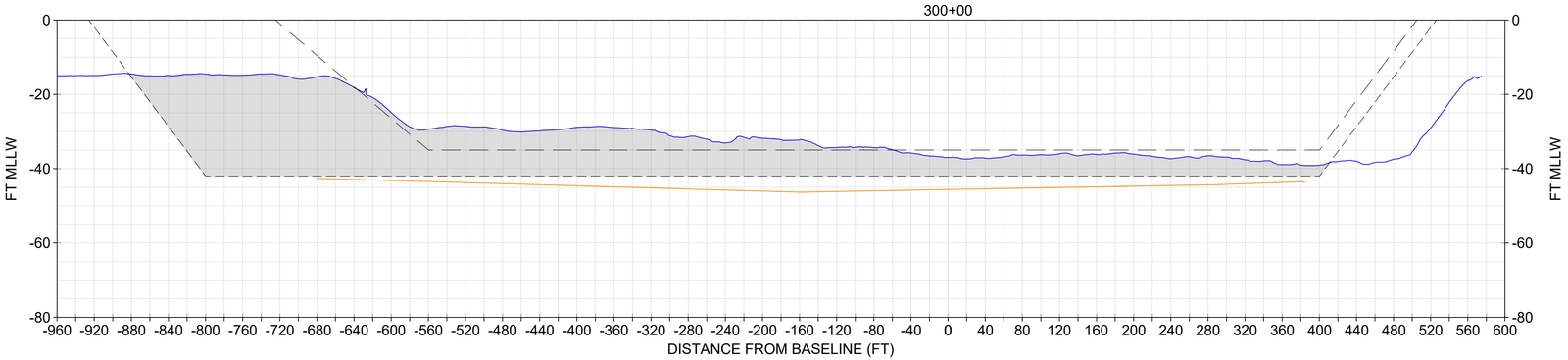
PREPARED BY:
GBA
ENGINEERS ★ SURVEYORS
9009 Yellow Brick Rd.
Suite D
Baltimore, MD 21237
Phone (410) 682-5595

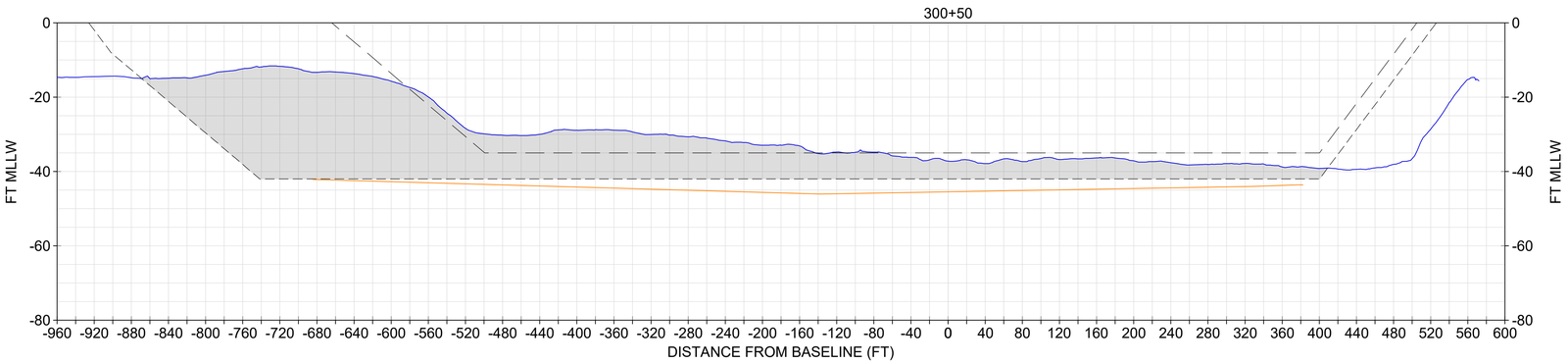
PREPARED FOR:

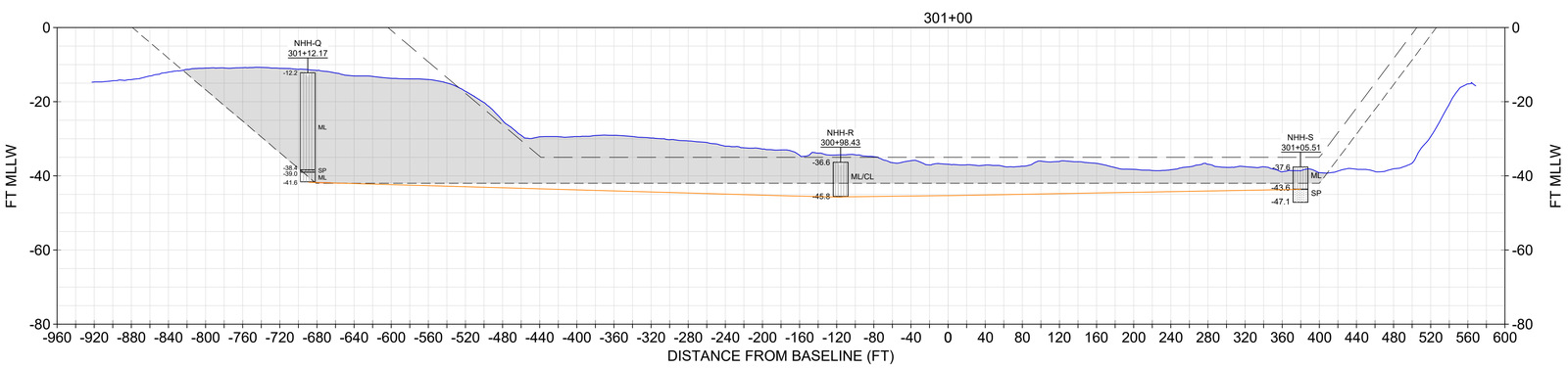
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

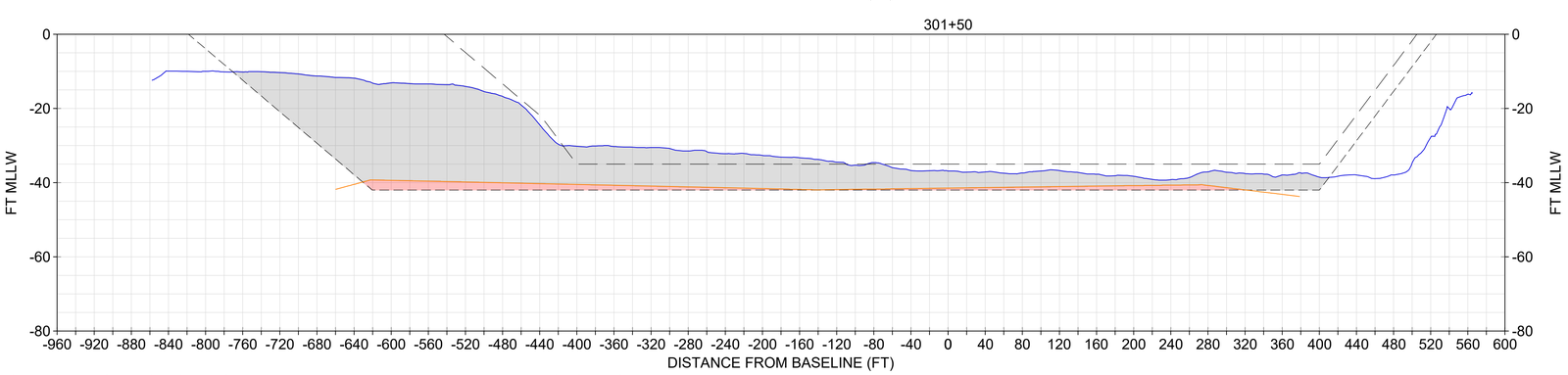
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-177









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-Q	-12.2	-41.6	AECOM	2017
NHH-R	-36.3	-45.8	AECOM	2017
NHH-S	-37.6	-47.1	AECOM	2017

CORE LEGEND
- ML (SILT)
- SP (POORLY GRADED SAND)
- ML/CL (CLAYEY SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE
0 80' 160' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI 'D'
SCALE: AS SHOWN
ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: ####
SHEET 199 OF 220

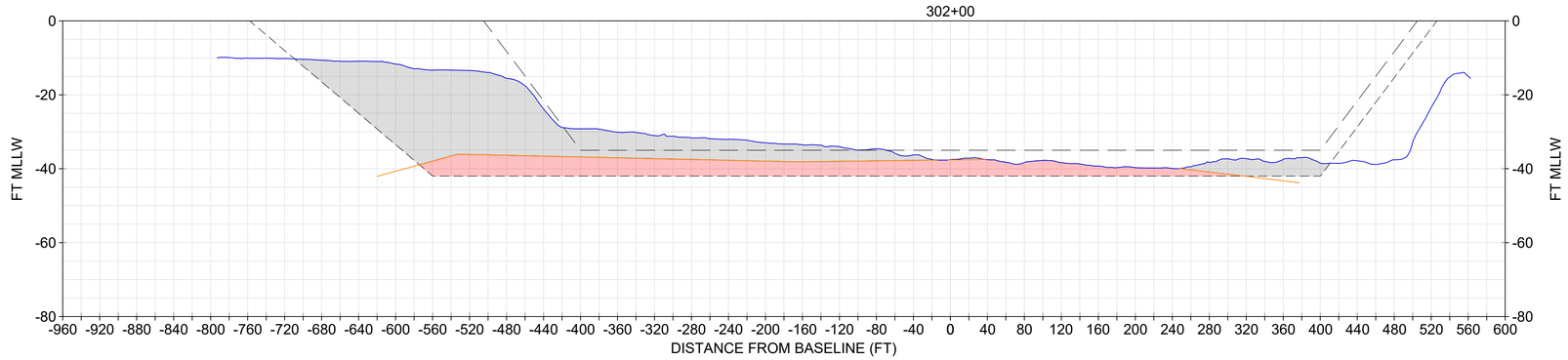
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Suite 10
Baltimore, MD 21237
Phone (410) 882-5595

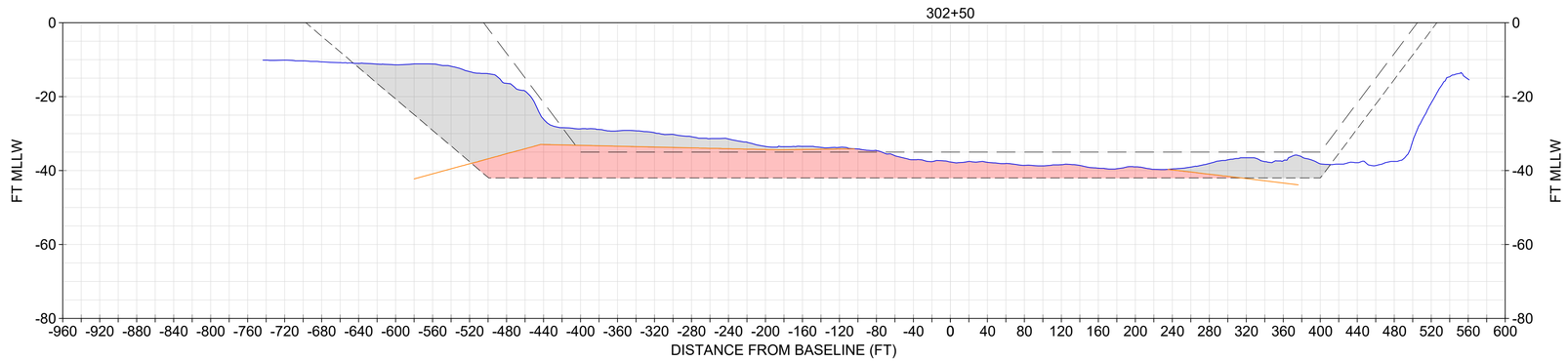
PREPARED FOR:

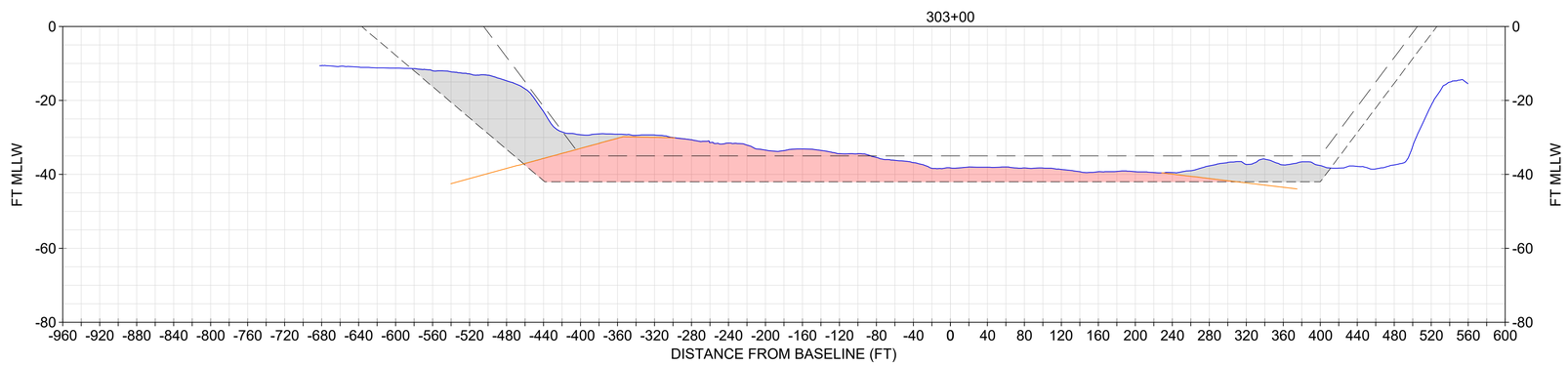
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

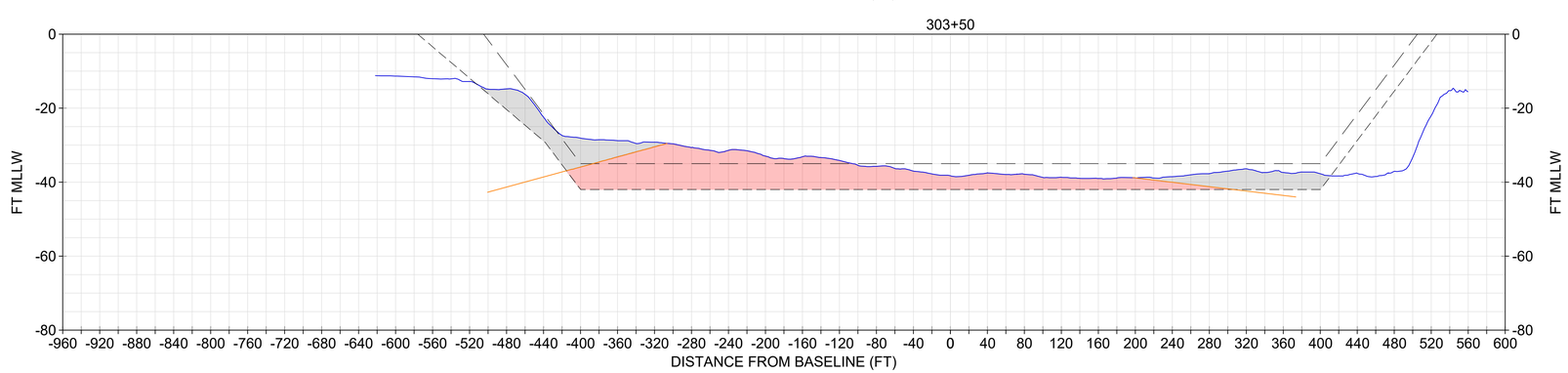
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-178









SECTIONS SHOULD BE PRINTED IN COLOR

NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

0 20' 40' VERTICAL SCALE

0 80' 160' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 200 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

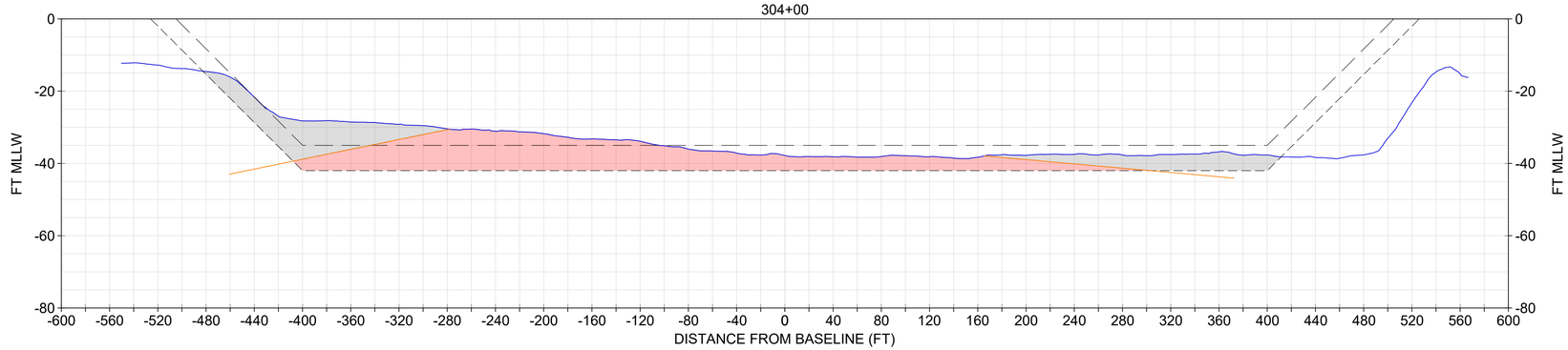
PREPARED BY:
GBA
ENGINEERS ★ SURVEYORS
9009 Yellow Brick Rd.
Suite 100
Baltimore, MD 21237
Phone (410) 682-5595

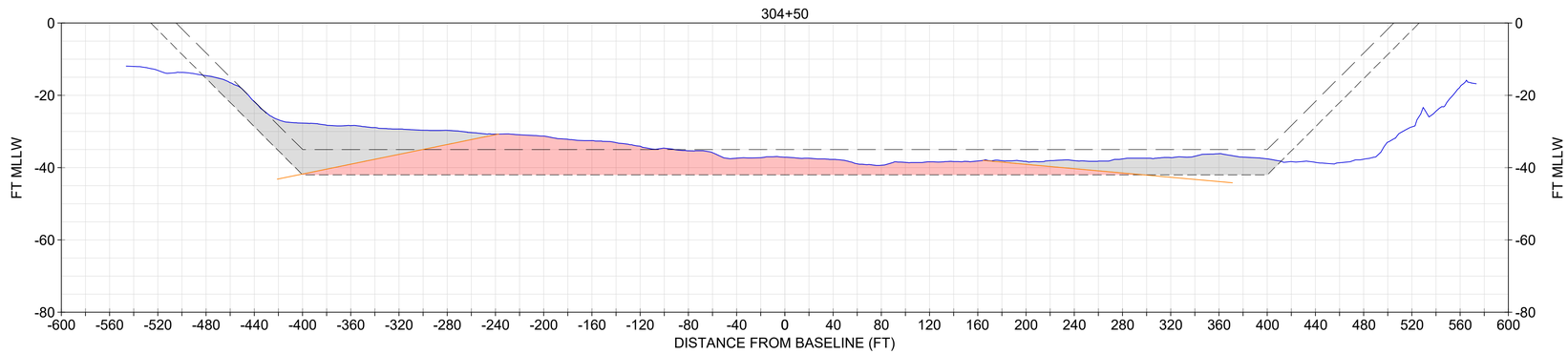
PREPARED FOR:

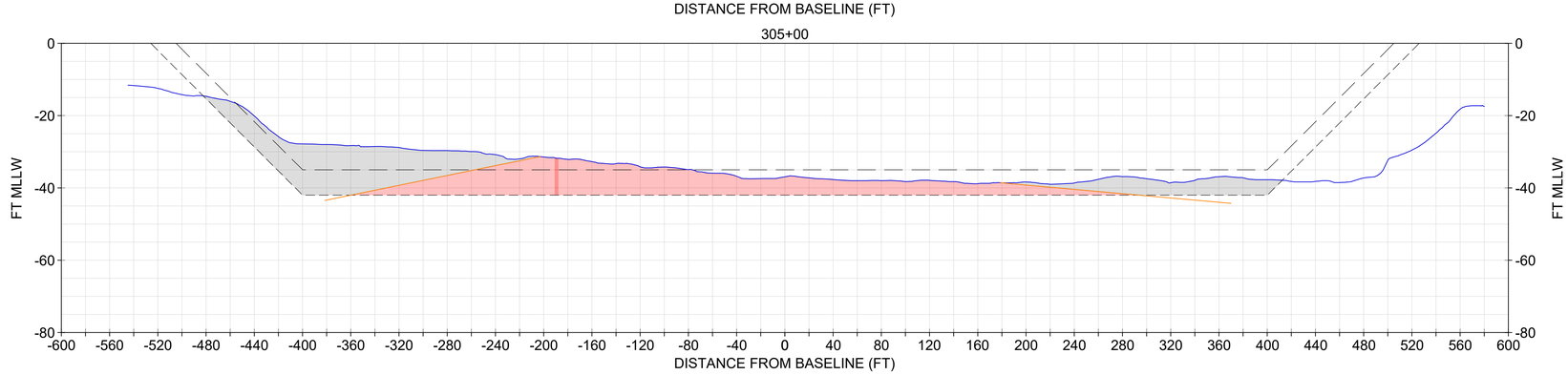
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

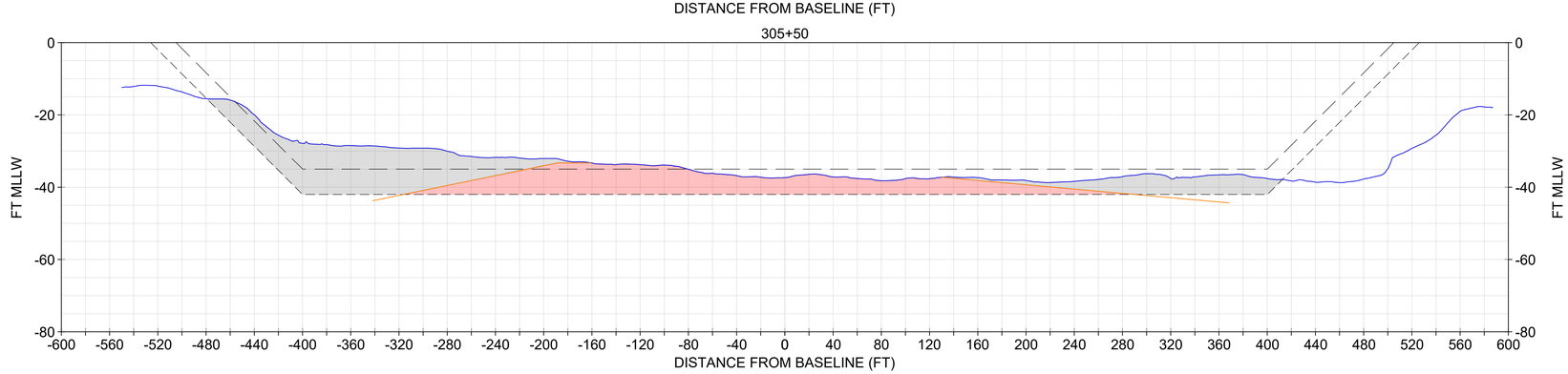
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-179









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 201 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. ZEMMITER
SIZE: ANSI 'D'
SCALE: AS SHOWN

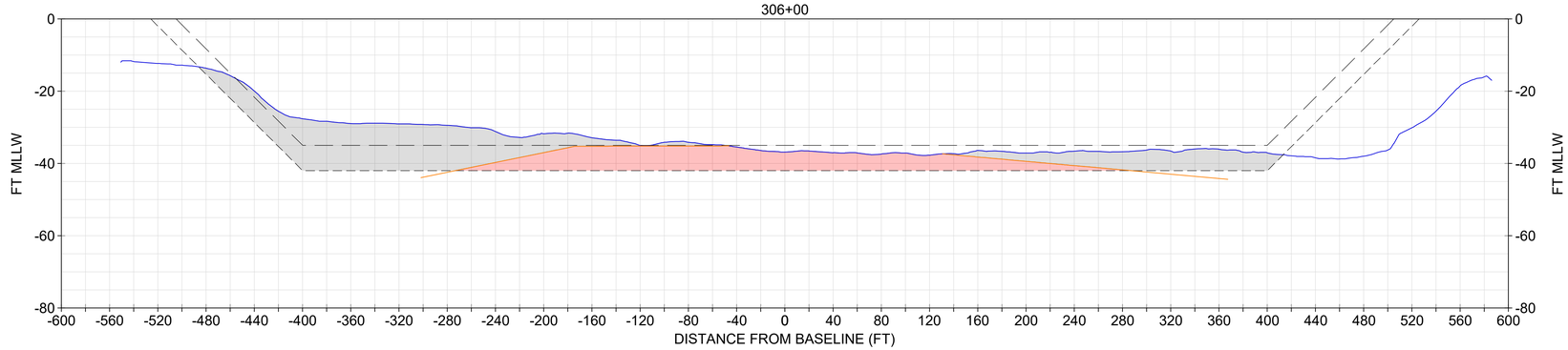
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9003 Yellow Brick Rd. Unit C Baltimore, MD 21237 Phone (410) 882-5565

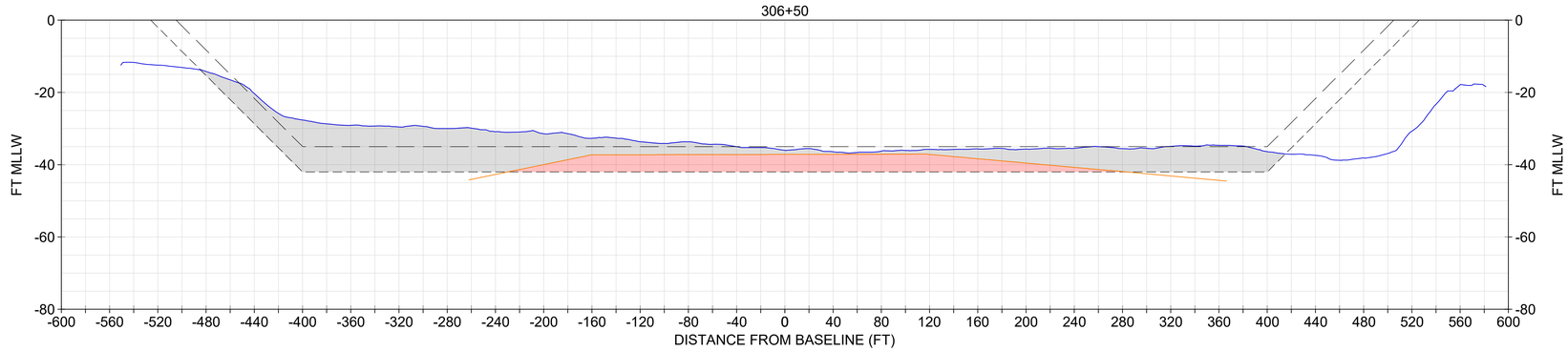
PREPARED FOR:

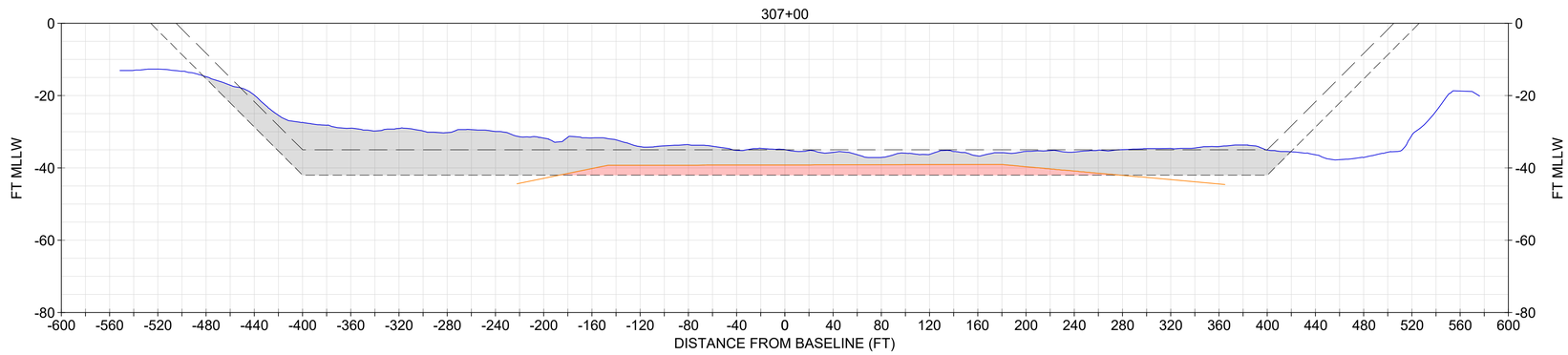
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

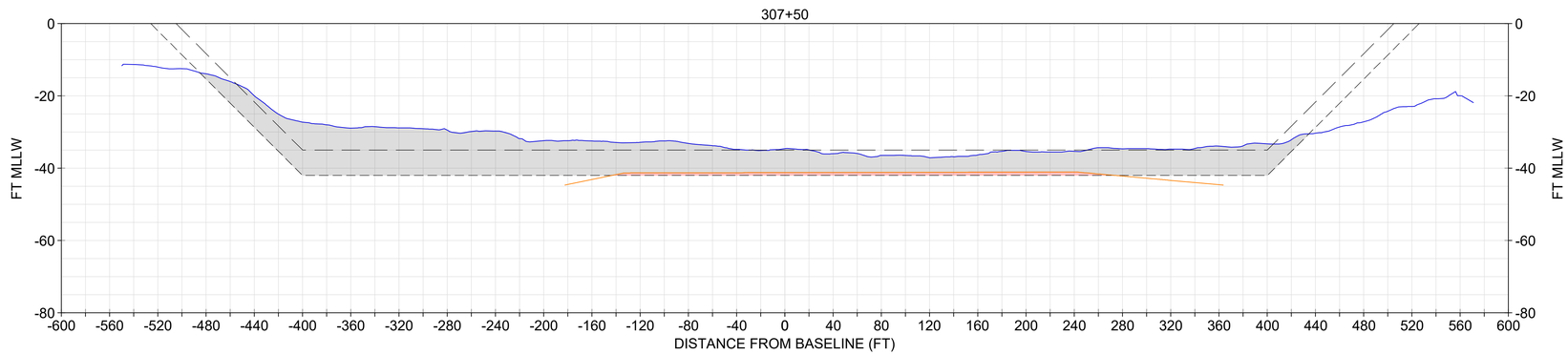
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-180









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 202 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. ZEMMITER
SIZE: ANSI 'D'
SCALE: AS SHOWN

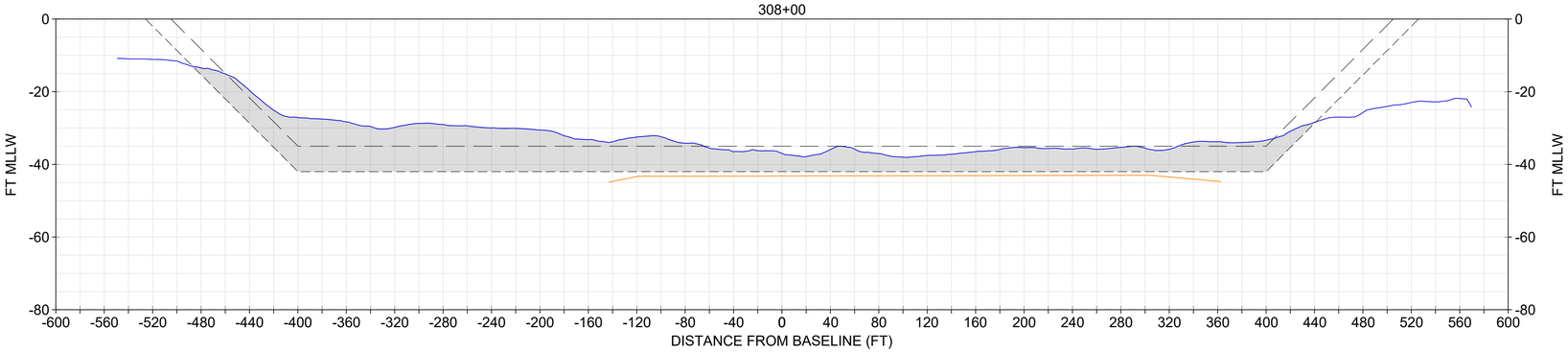
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit C
Baltimore, MD 21237
Phone (410) 882-5565

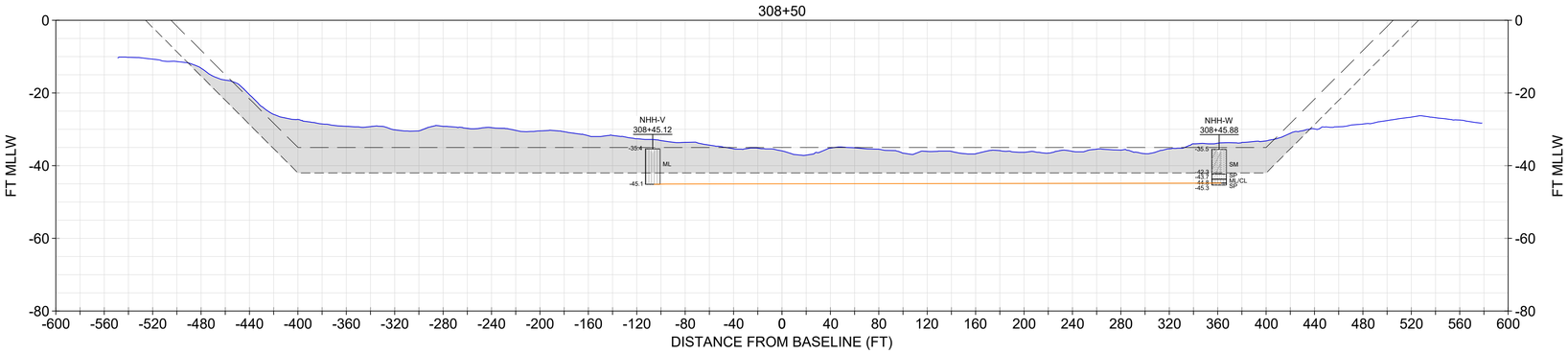
PREPARED FOR:

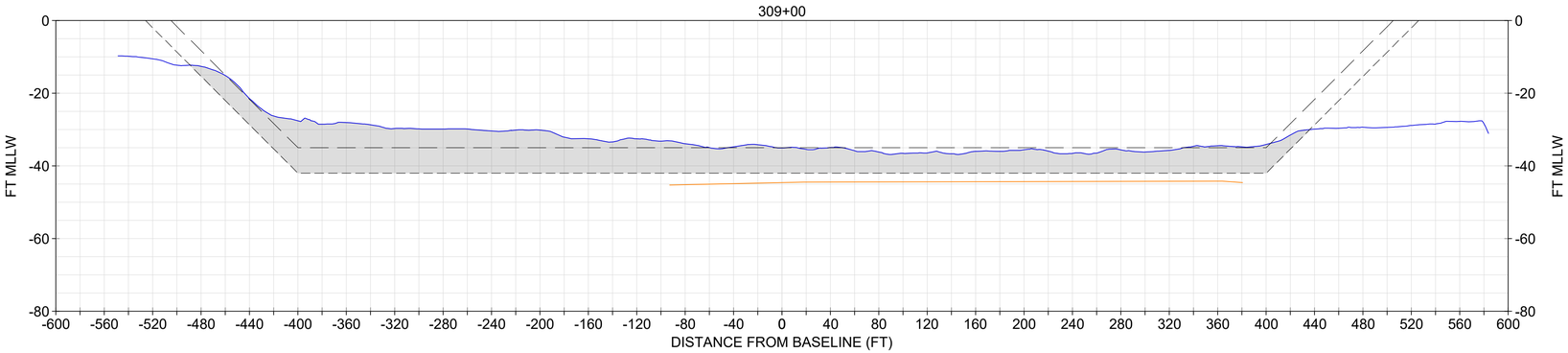
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

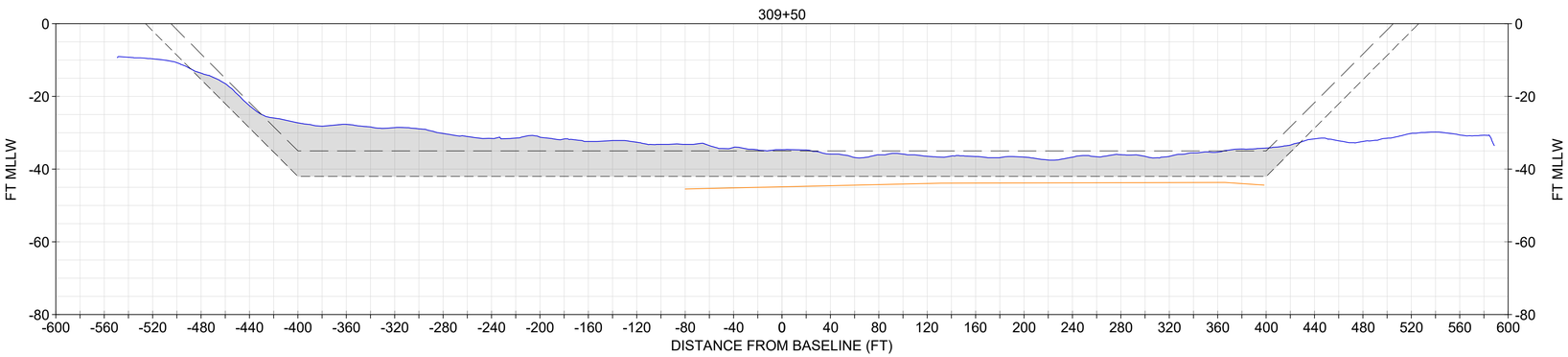
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-181









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-V	-35.4	-45.1	AECOM	2017
NHH-W	-35.5	-45.3	AECOM	2017

CORE LEGEND
- ML
- SM
- SP
- ML/CL

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE
0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 203 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

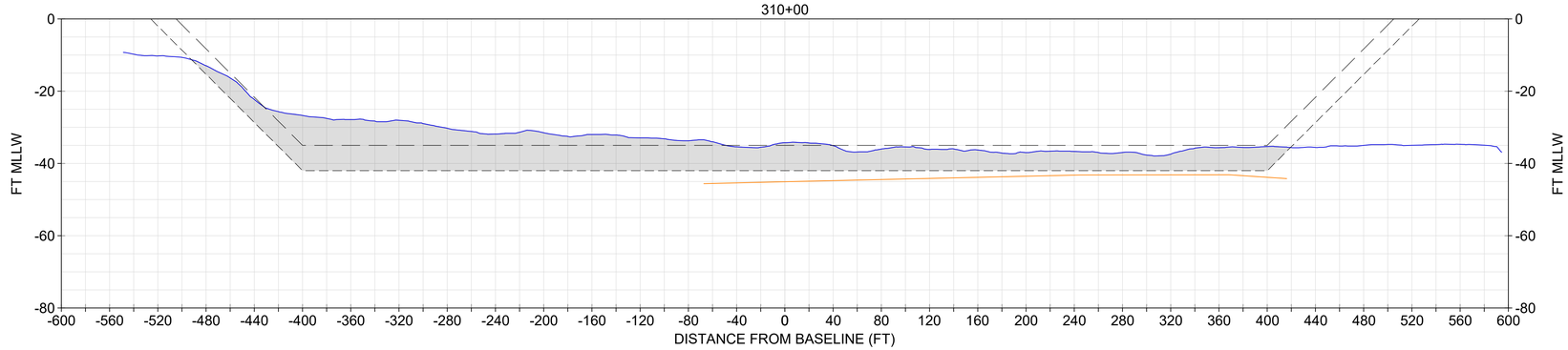
PREPARED BY:
GBA
9009 Yellow Brick Rd.
Suite 100
Baltimore, MD 21237
Phone (410) 682-5595
ENGINEERS ★ SURVEYORS

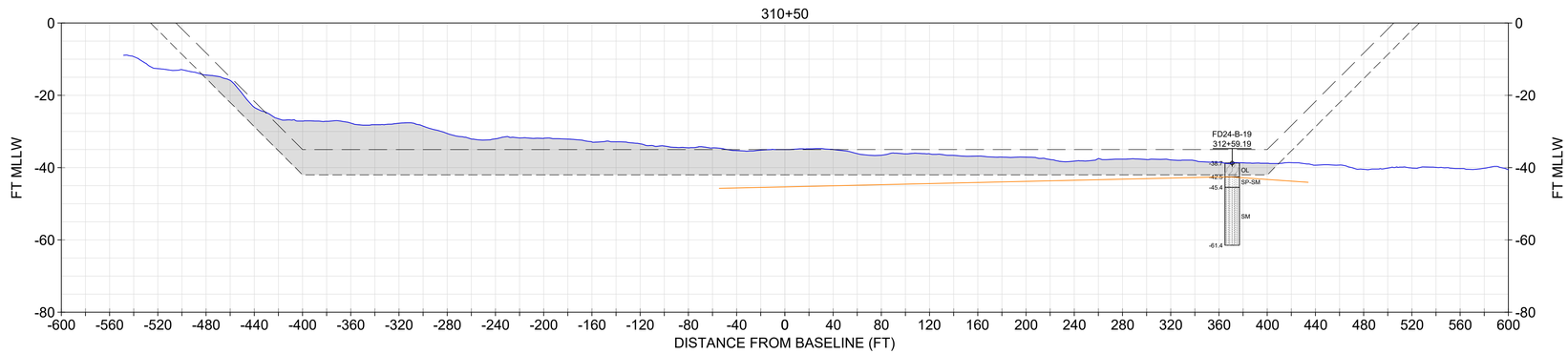
PREPARED FOR:

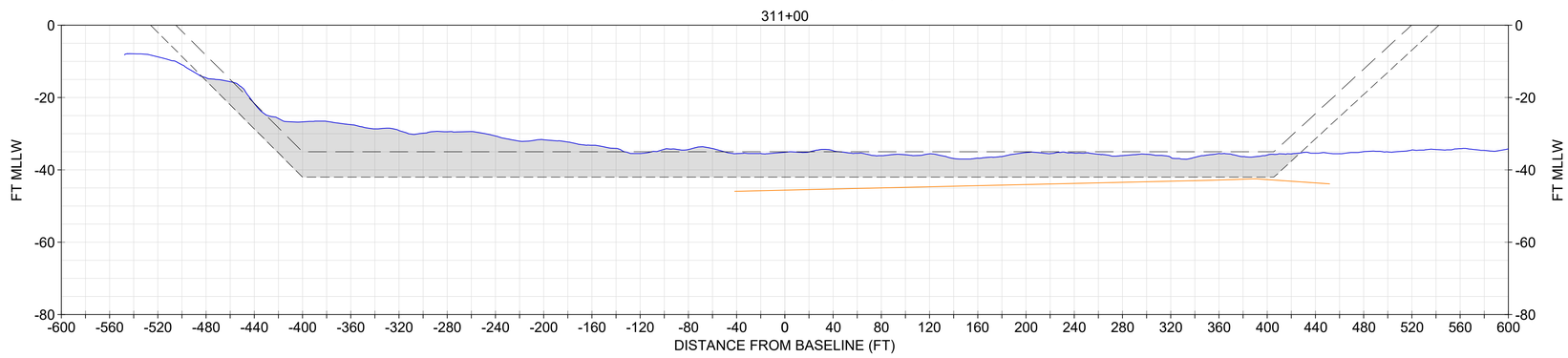
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

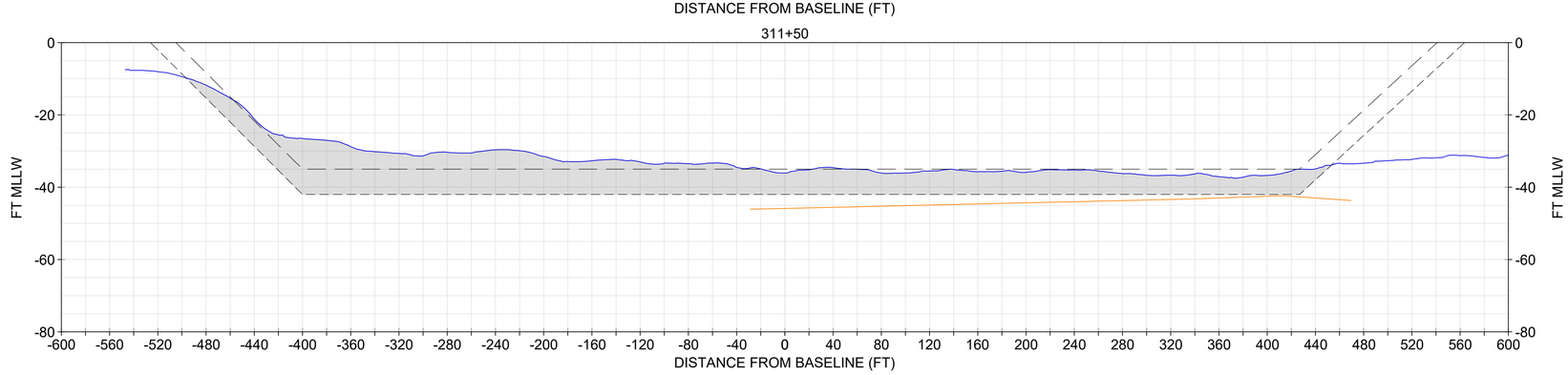
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-182









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-19	-38.7	-61.4	GBA	8/8/2024

CORE LEGEND
- OL (ORGANIC SILT AND CLAY)
- SP-SM (POORLY GRADED SAND WITH SILT)
- SM (SILTY SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 204 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. ZEMITIS
SIZE: ANSI 'D'
SCALE: AS SHOWN

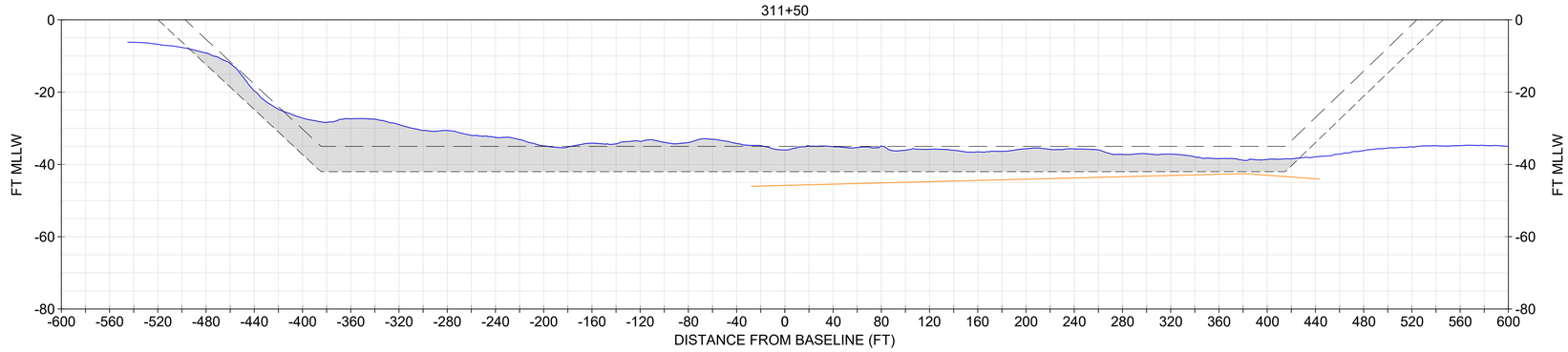
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit 0
Baltimore, MD 21237
Phone (410) 882-5565

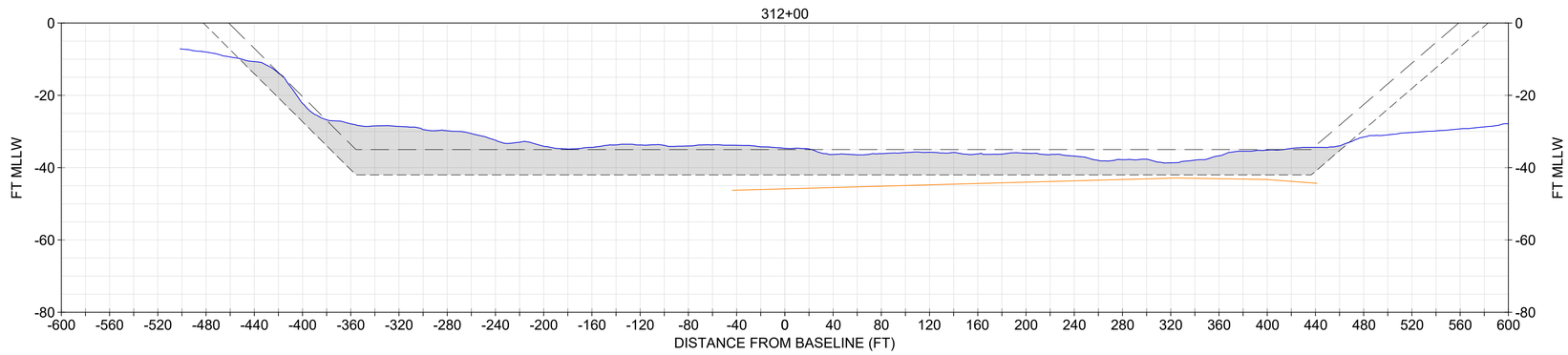
PREPARED FOR:

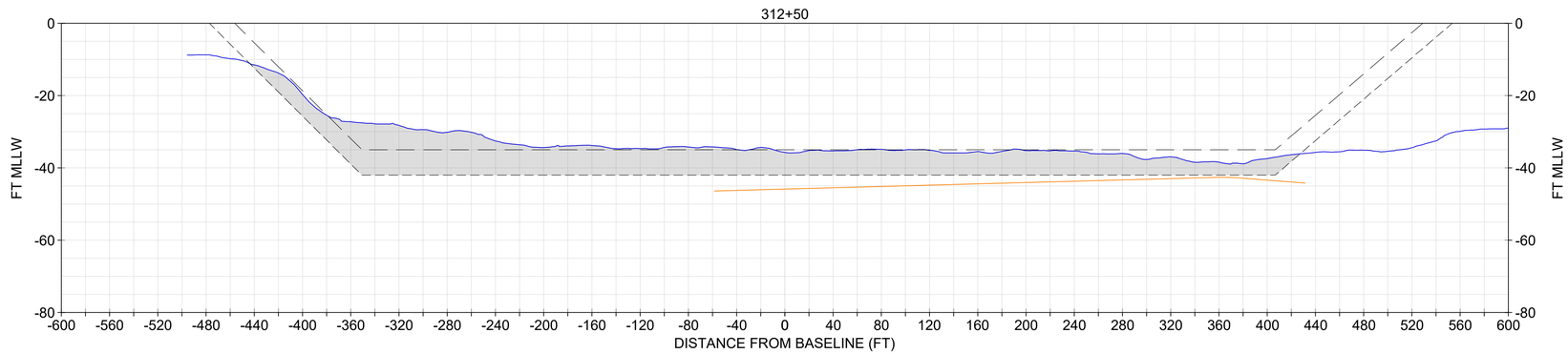
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

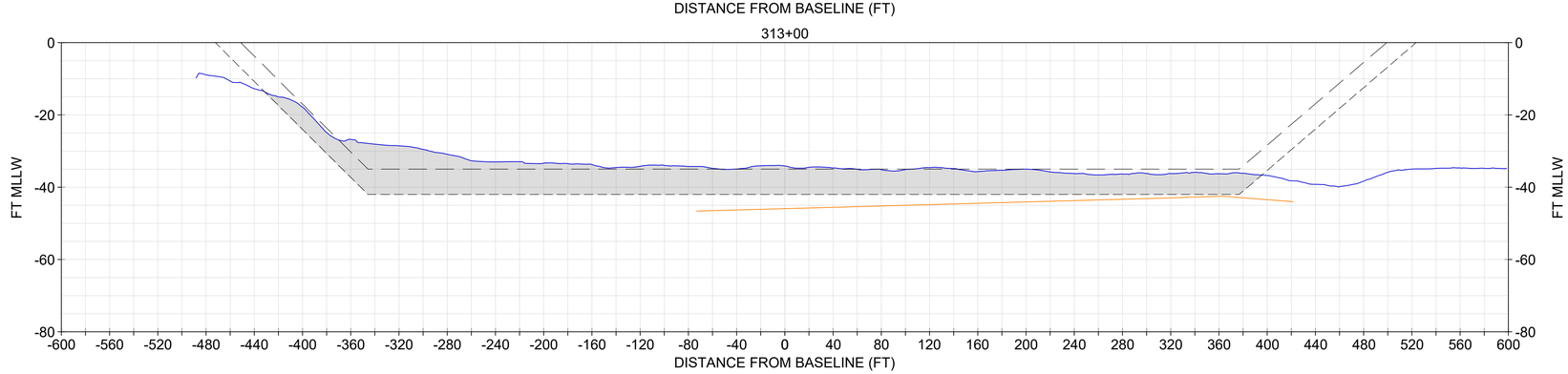
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-183









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 205 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

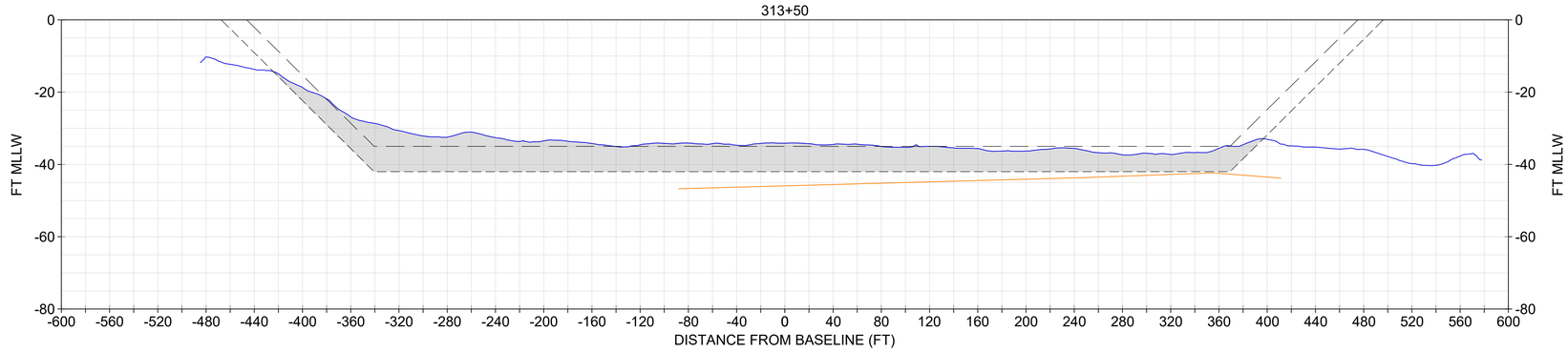
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit O Baltimore, MD 21237 Phone (410) 882-5595

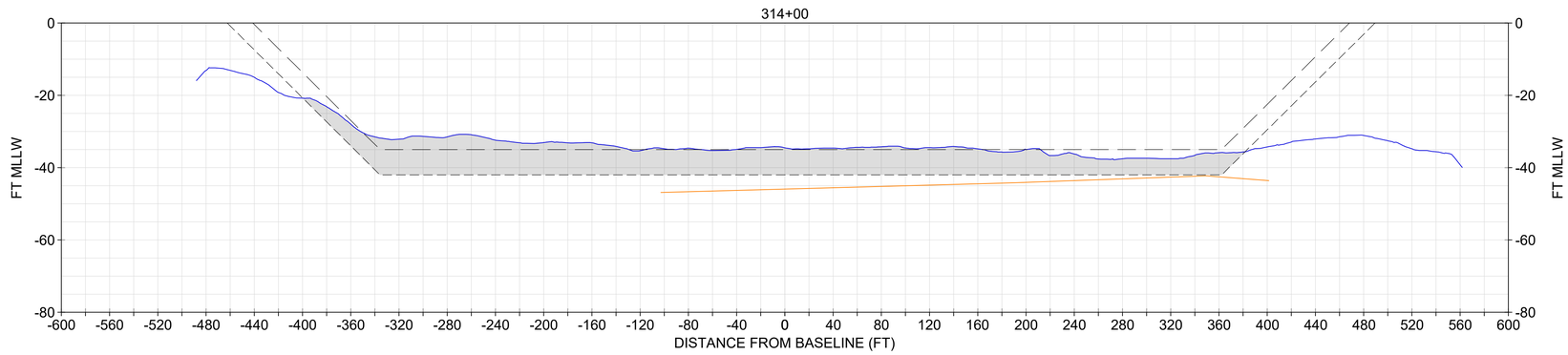
PREPARED FOR:

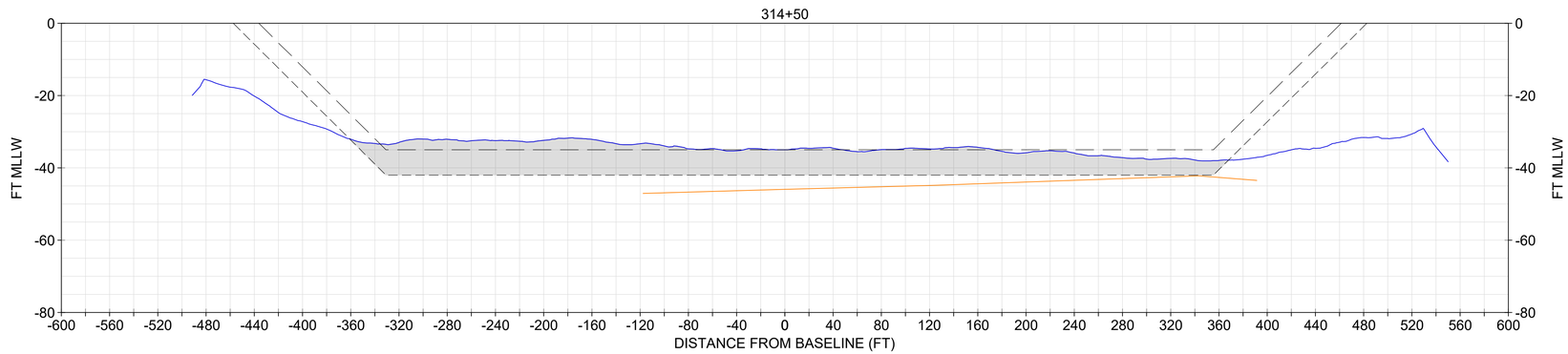
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

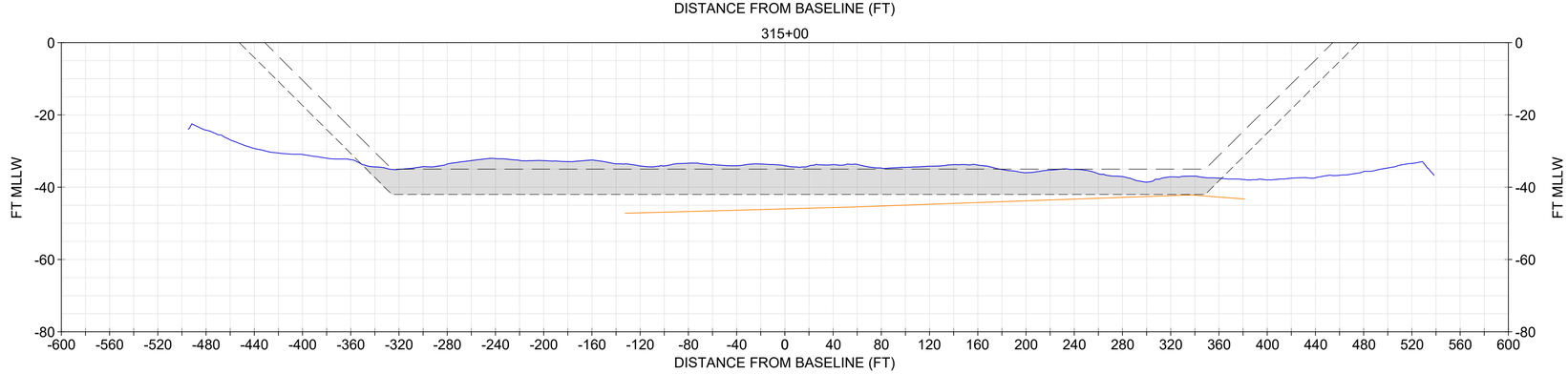
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-184









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 206 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

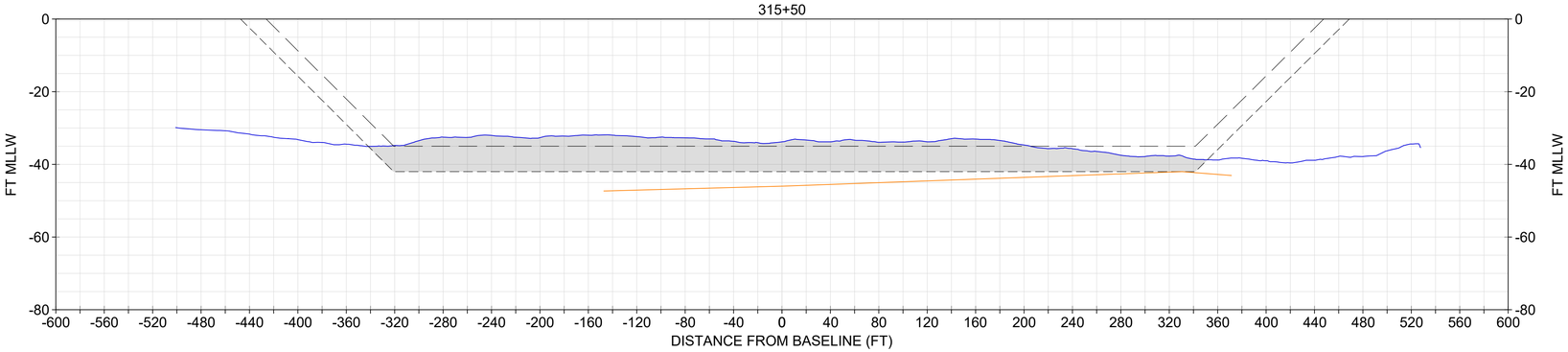
PREPARED BY:
GBA ENGINEERS ★ SURVEYORS
9008 Yellow Brick Rd. Unit O
Baltimore, MD 21237
Phone (410) 882-5595

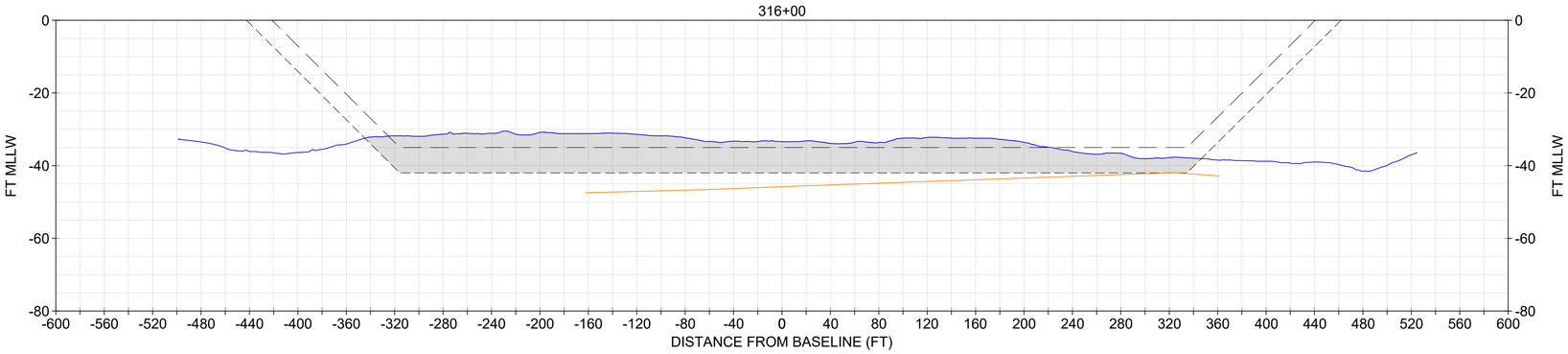
PREPARED FOR:

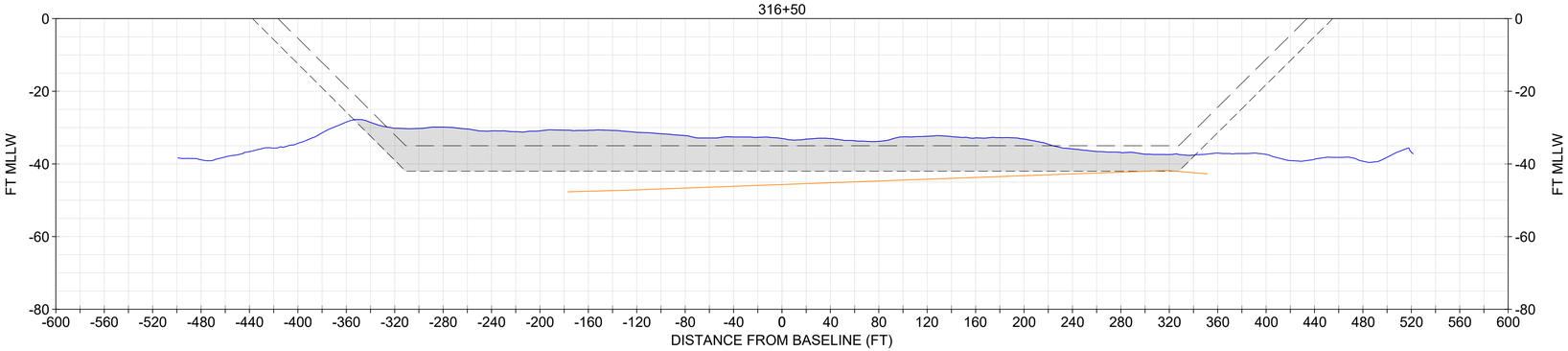
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

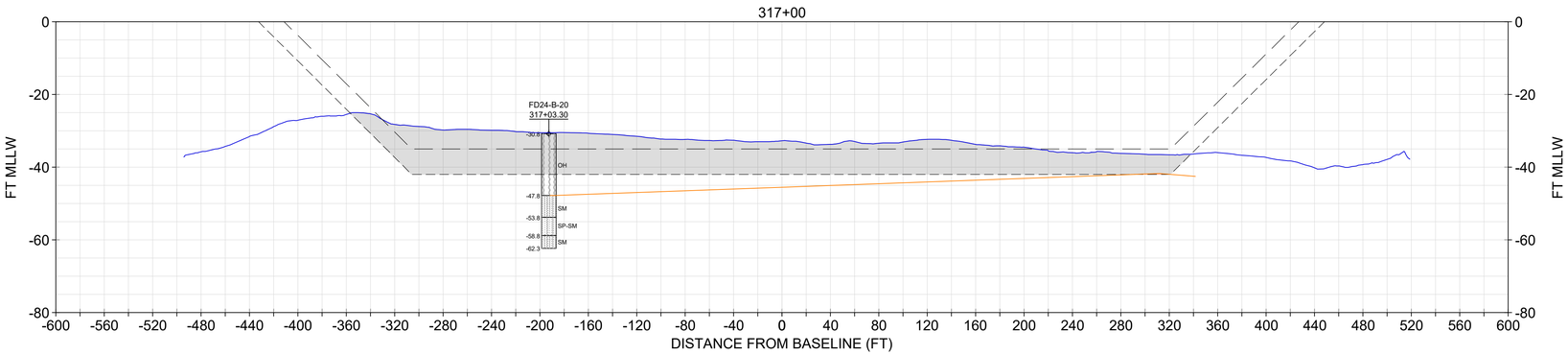
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-185









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
FD24-B-20	-30.8	-62.3	GBA	6/30/2024

CORE LEGEND
- OH (ORGANIC SILT AND CLAY)
- SM (SILTY SAND)
- SP-SM (POORLY GRADED SAND WITH SILT)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- ORGANIC/MARINE SEDIMENT INTERFACE
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 207 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

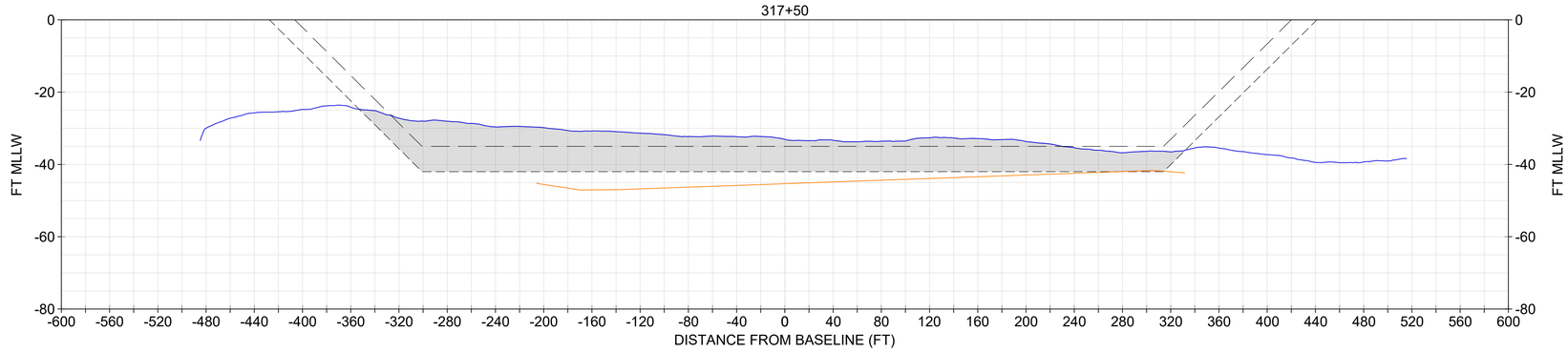
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit O Baltimore, MD 21237 Phone (410) 882-5595

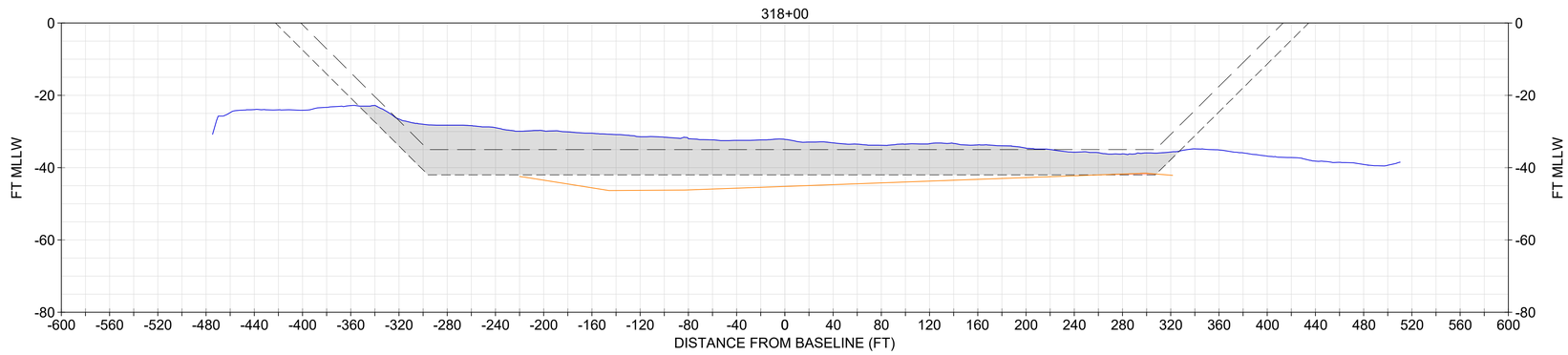
PREPARED FOR:

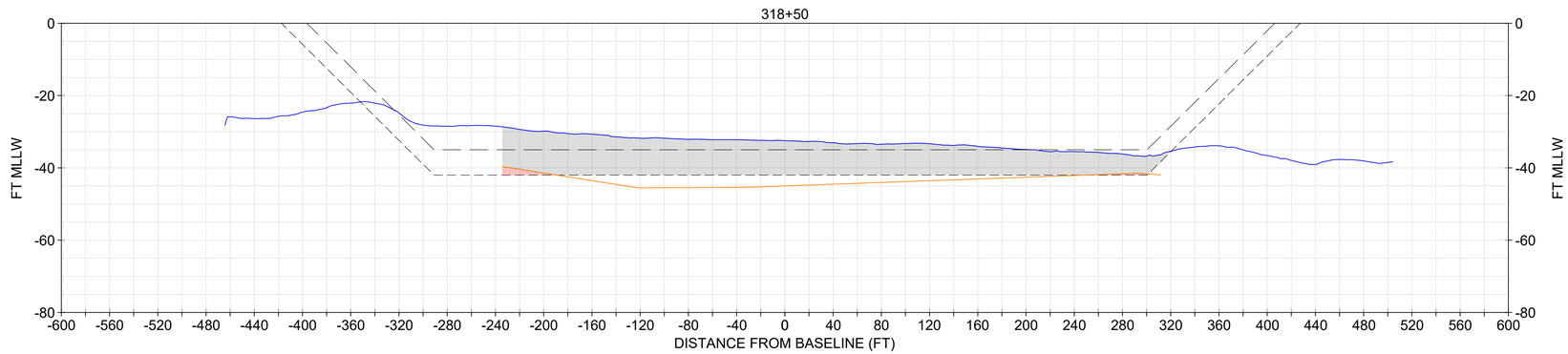
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

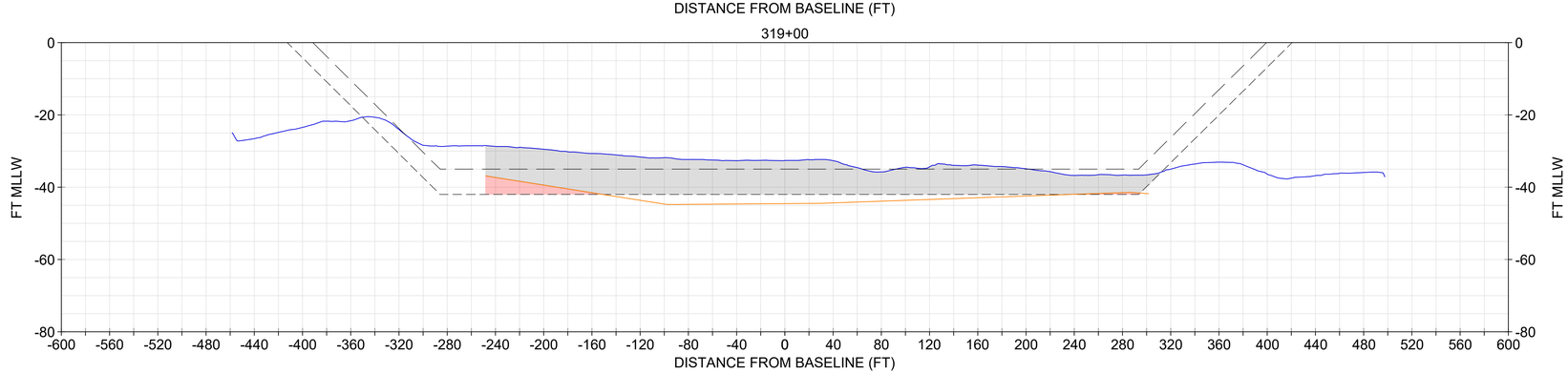
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-186









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 208 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

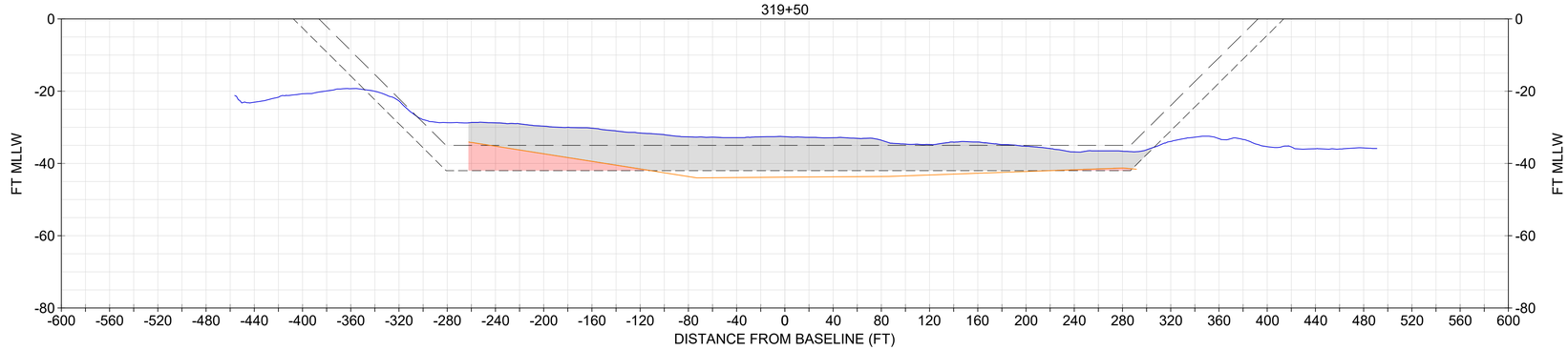
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 9008 Yellow Brick Rd. Unit O Baltimore, MD 21237 Phone (410) 882-5595

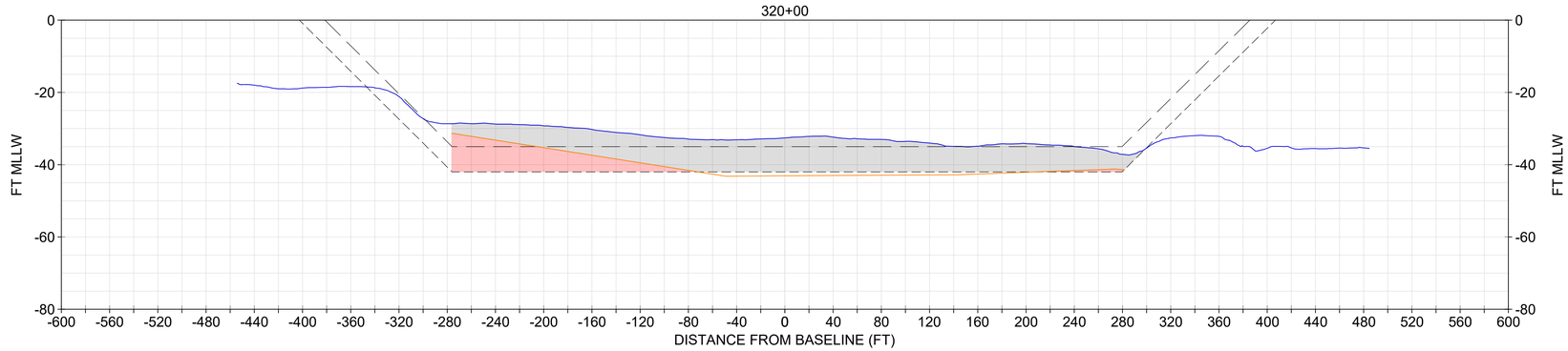
PREPARED FOR:

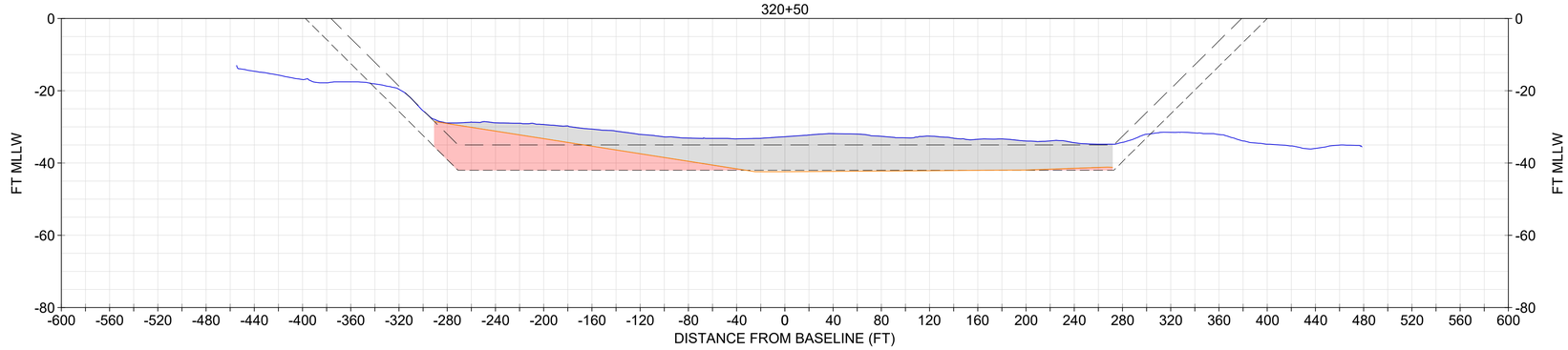
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

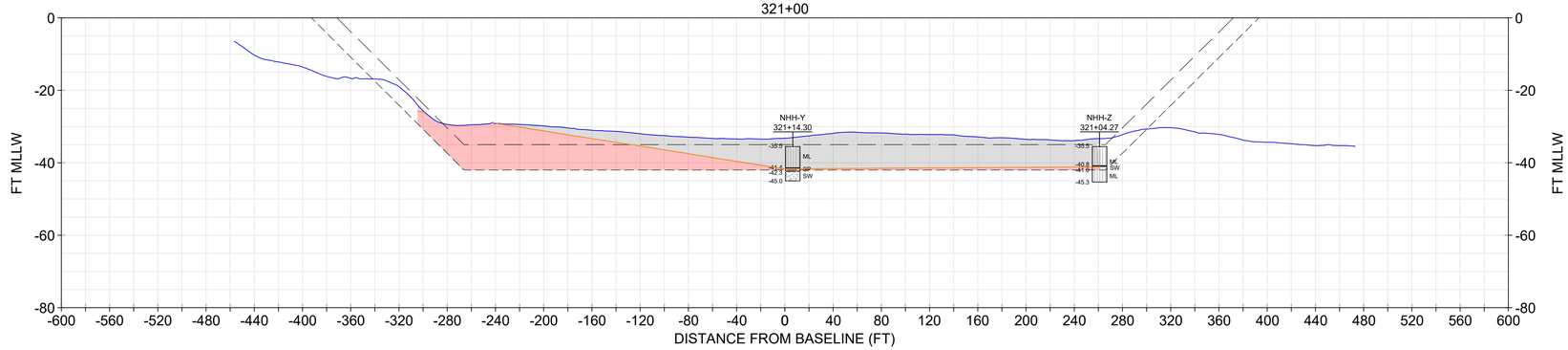
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-187









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-Y	-35.5	-45.0	AECOM	2017
NHH-Z	-35.5	-45.3	AECOM	2017

CORE LEGEND
- ML (SILT)
- SP (POORLY GRADED SAND)
- SW (WELL GRADED SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)
- MARINE SANDS UNIT
- ORGANIC SEDIMENTS UNIT

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 209 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. ZEMITIS
SIZE: ANSI 'D'
SCALE: AS SHOWN

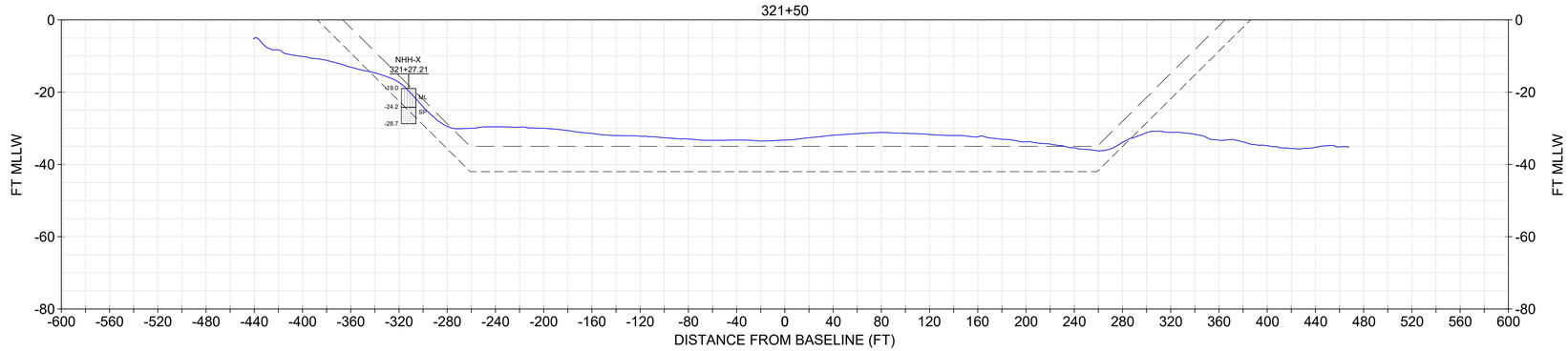
PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Suite C
Baltimore, MD 21237
Phone (410) 882-5565

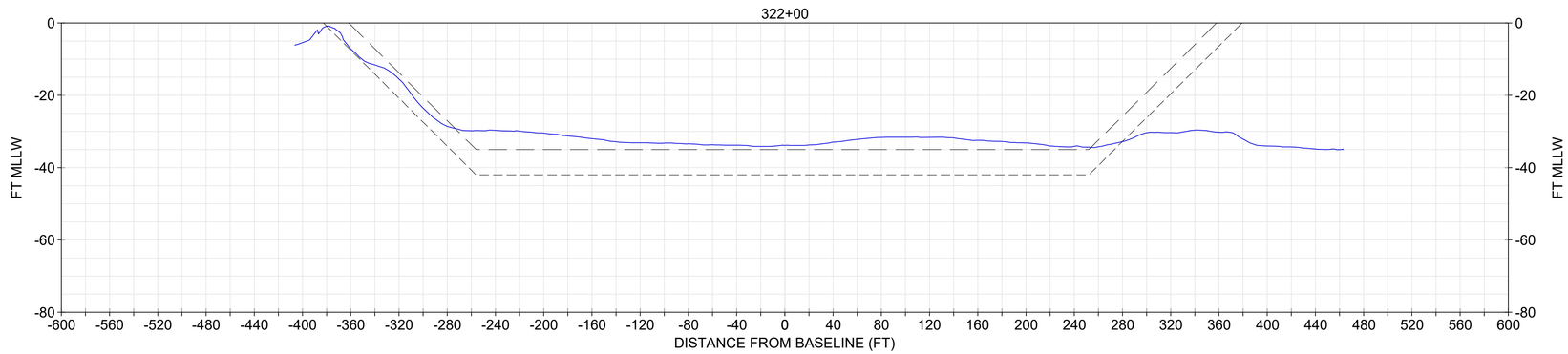
PREPARED FOR:

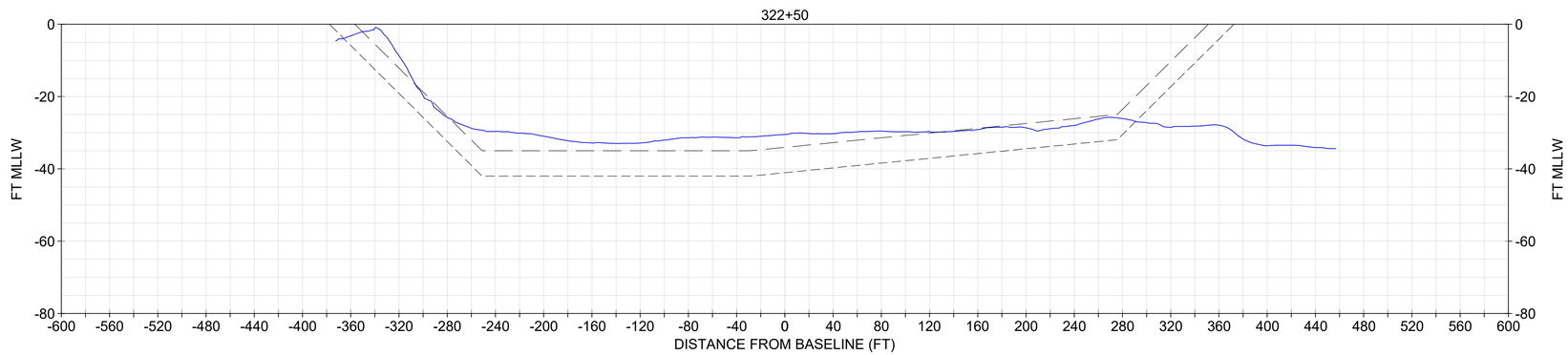
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

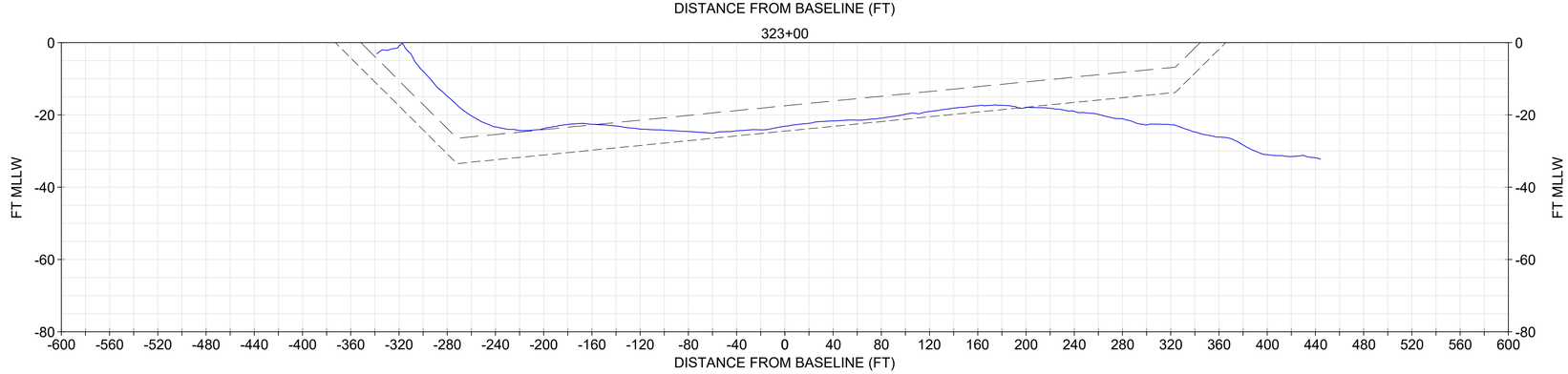
CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-188









NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).
3. TO REVIEW SPECIFIC 2017 AECOM VIBRACORE DATA INFORMATION, REFER TO FINAL REPORT FOR DREDGE MATERIAL SUITABILITY TESTING, AECOM REPORT NO. 60543021 IN APPENDIX !!!!.

HISTORIC CORE INFORMATION

CORE	EL. TOP OF BORING (MLLW)	TERMINAL EL. (MLLW)	SOURCE	DATE COLLECTED
NHH-X	-19.0	-28.7	AECOM	2017

CORE LEGEND
- ML (SILT)
- SP (POORLY GRADED SAND)

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 210 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. SUBMITTER
SIZE: ANSI D
SCALE: AS SHOWN

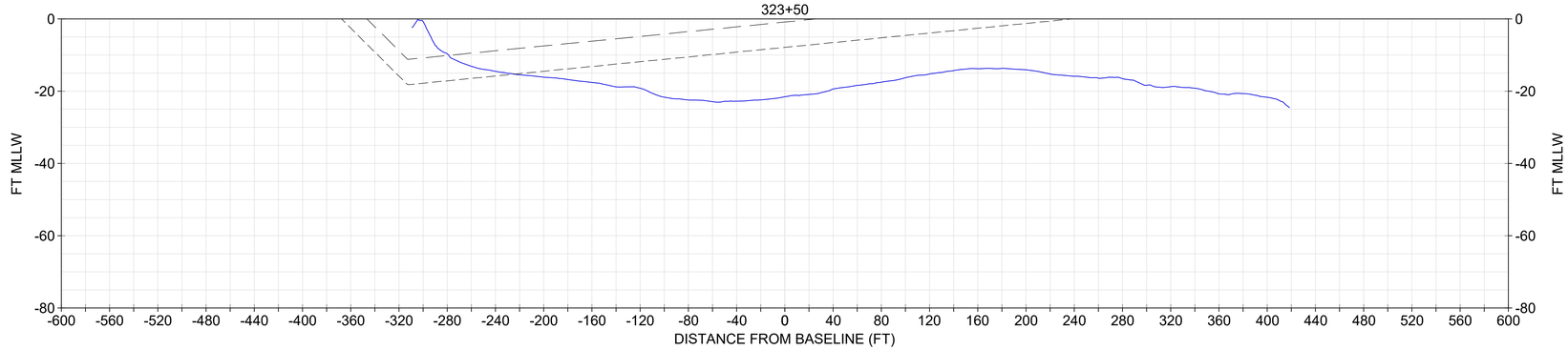
PREPARED BY: GBA ENGINEERS ★ SURVEYORS 6008 Yellow Brick Rd. Unit D Baltimore, MD 21237 Phone (410) 882-5595

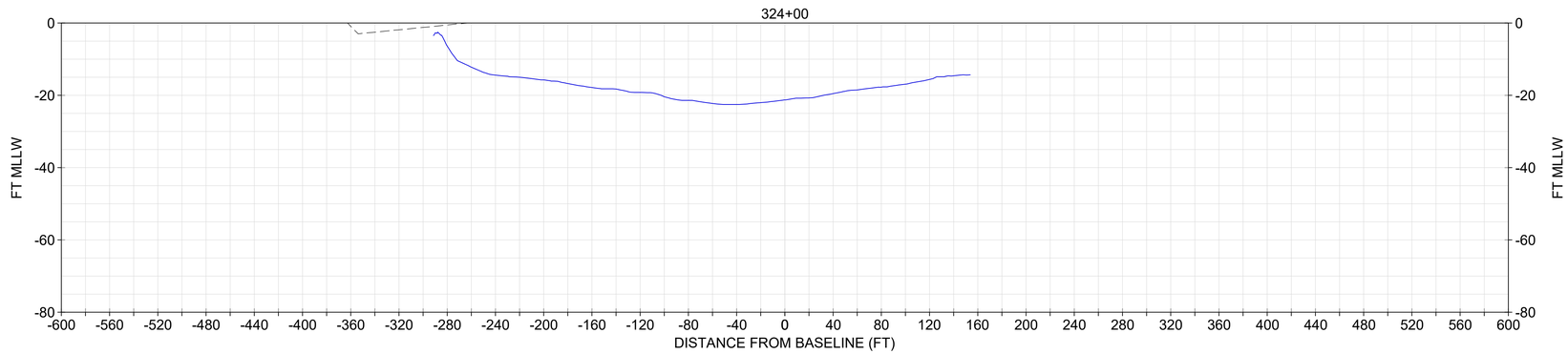
PREPARED FOR:

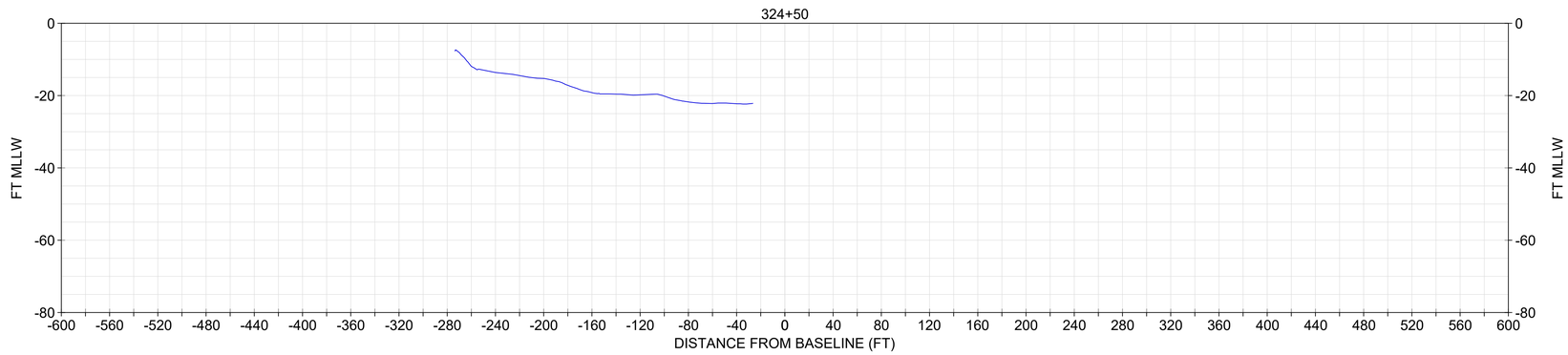
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-189







NOTE:
1. USACE BATHYMETRY USES XYZ FILE "CT_19_NHH_20231206_CS_073_FULL.XYZ" FROM THE USACE EHYDRO WEBSITE.
2. IN NON-ROCK AREAS, THE DESIGN INCLUDES A REQUIRED DEPTH (40), AND ALLOWABLE OVERDEPTH (42).

LEGEND
- NOV-DEC 2023 USACE BATHYMETRY
- CURRENT AUTHORIZED FED NAVIGATION CHANNEL
- -42: IMPROVEMENT FED NAVIGATION CHANNEL MAX OVERDEPTH DREDGING (NON-ROCK AREA)

SECTIONS SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2024
SOLICITATION NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: #####
SHEET 211 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: A. ZEMITIS
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS
9003 Yellow Brick Rd.
Unit 0
Baltimore, MD 21237
Phone (410) 882-5595

PREPARED FOR:

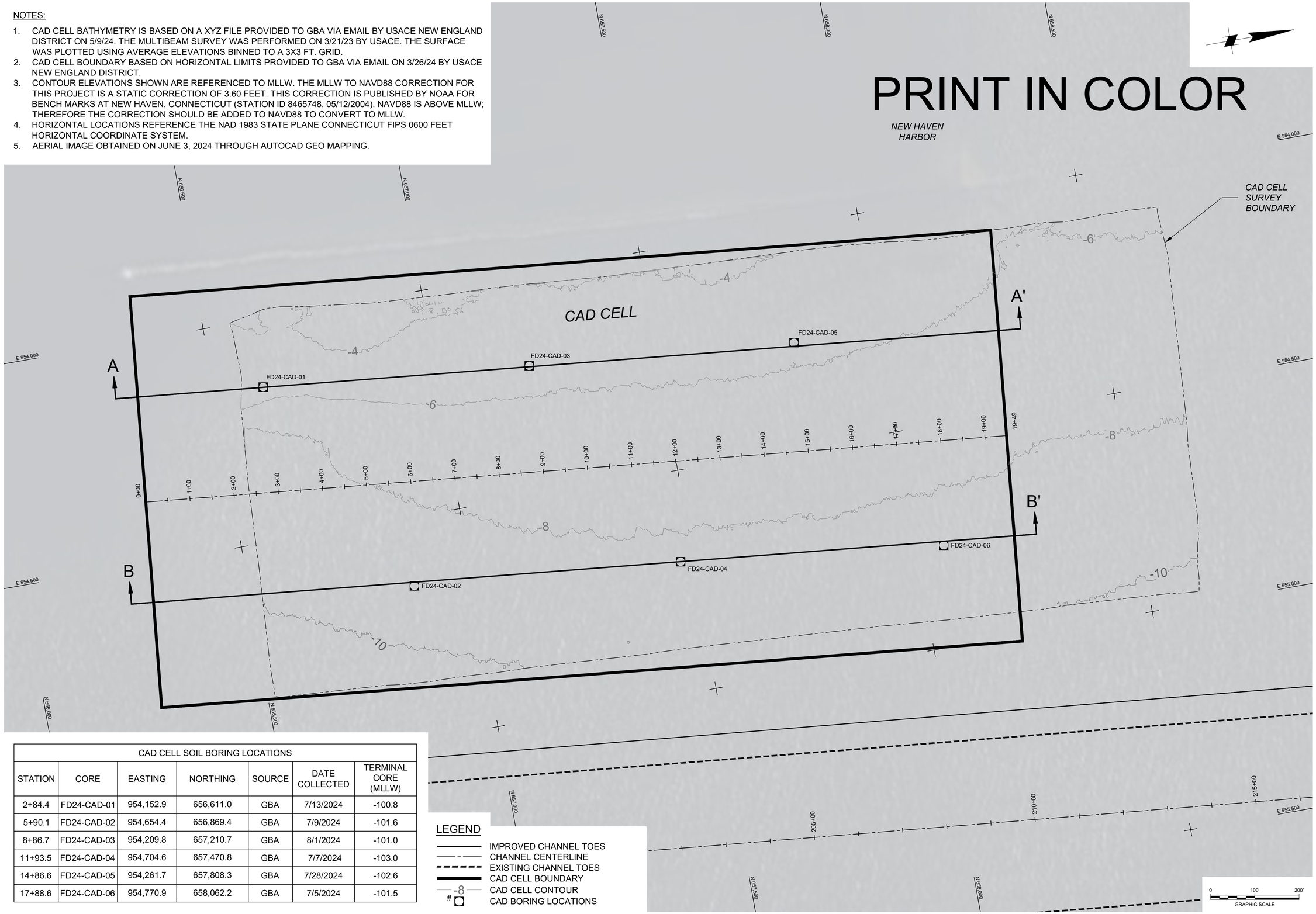
SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

CHANNEL GEOLOGIC CROSS SECTIONS

SHEET ID
S-190

NOTES:

1. CAD CELL BATHYMETRY IS BASED ON A XYZ FILE PROVIDED TO GBA VIA EMAIL BY USACE NEW ENGLAND DISTRICT ON 5/9/24. THE MULTIBEAM SURVEY WAS PERFORMED ON 3/21/23 BY USACE. THE SURFACE WAS PLOTTED USING AVERAGE ELEVATIONS BINNED TO A 3X3 FT. GRID.
2. CAD CELL BOUNDARY BASED ON HORIZONTAL LIMITS PROVIDED TO GBA VIA EMAIL ON 3/26/24 BY USACE NEW ENGLAND DISTRICT.
3. CONTOUR ELEVATIONS SHOWN ARE REFERENCED TO MLLW. THE MLLW TO NAVD88 CORRECTION FOR THIS PROJECT IS A STATIC CORRECTION OF 3.60 FEET. THIS CORRECTION IS PUBLISHED BY NOAA FOR BENCH MARKS AT NEW HAVEN, CONNECTICUT (STATION ID 8465748, 05/12/2004). NAVD88 IS ABOVE MLLW; THEREFORE THE CORRECTION SHOULD BE ADDED TO NAVD88 TO CONVERT TO MLLW.
4. HORIZONTAL LOCATIONS REFERENCE THE NAD 1983 STATE PLANE CONNECTICUT FIPS 0600 FEET HORIZONTAL COORDINATE SYSTEM.
5. AERIAL IMAGE OBTAINED ON JUNE 3, 2024 THROUGH AUTOCAD GEO MAPPING.



CAD CELL SOIL BORING LOCATIONS

STATION	CORE	EASTING	NORTHING	SOURCE	DATE COLLECTED	TERMINAL CORE (MLLW)
2+84.4	FD24-CAD-01	954,152.9	656,611.0	GBA	7/13/2024	-100.8
5+90.1	FD24-CAD-02	954,654.4	656,869.4	GBA	7/9/2024	-101.6
8+86.7	FD24-CAD-03	954,209.8	657,210.7	GBA	8/1/2024	-101.0
11+93.5	FD24-CAD-04	954,704.6	657,470.8	GBA	7/7/2024	-103.0
14+86.6	FD24-CAD-05	954,261.7	657,808.3	GBA	7/28/2024	-102.6
17+88.6	FD24-CAD-06	954,770.9	658,062.2	GBA	7/5/2024	-101.5

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912IWU24F0024
CONTRACT NO.: W912DS22D0016
DRAWING CODE: W912DS22D0017
SHEET 219 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DCZ
DATE: ANSI 'D'
SCALE: AS SHOWN

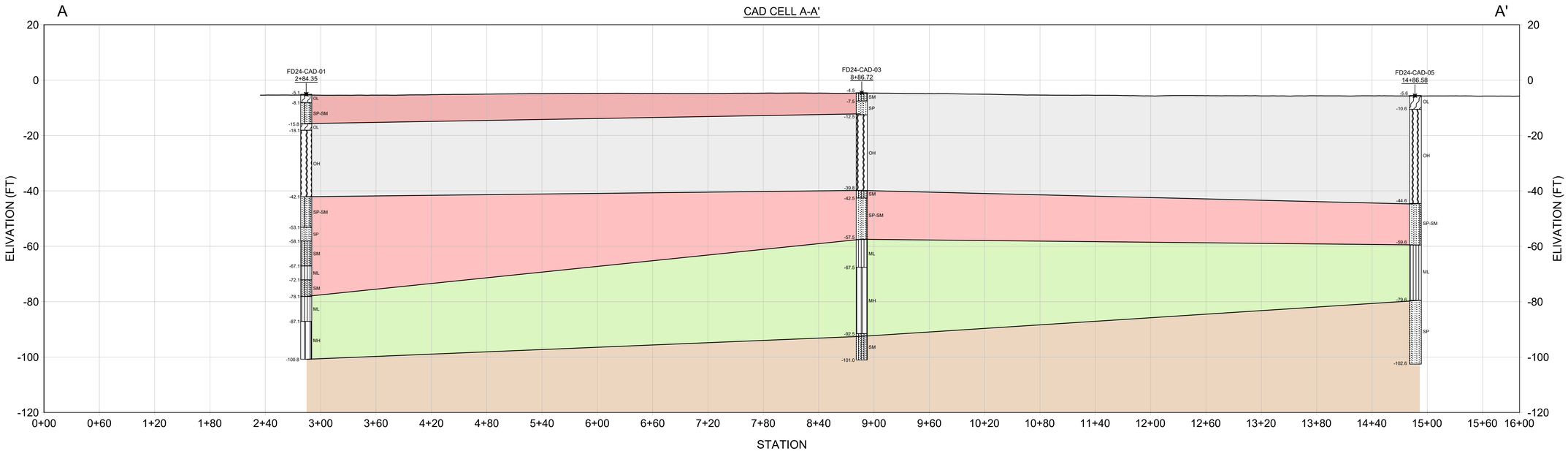
PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9003 Yellow Brick Rd. Unit D, Baltimore, MD 21237, Phone (410) 882-5595

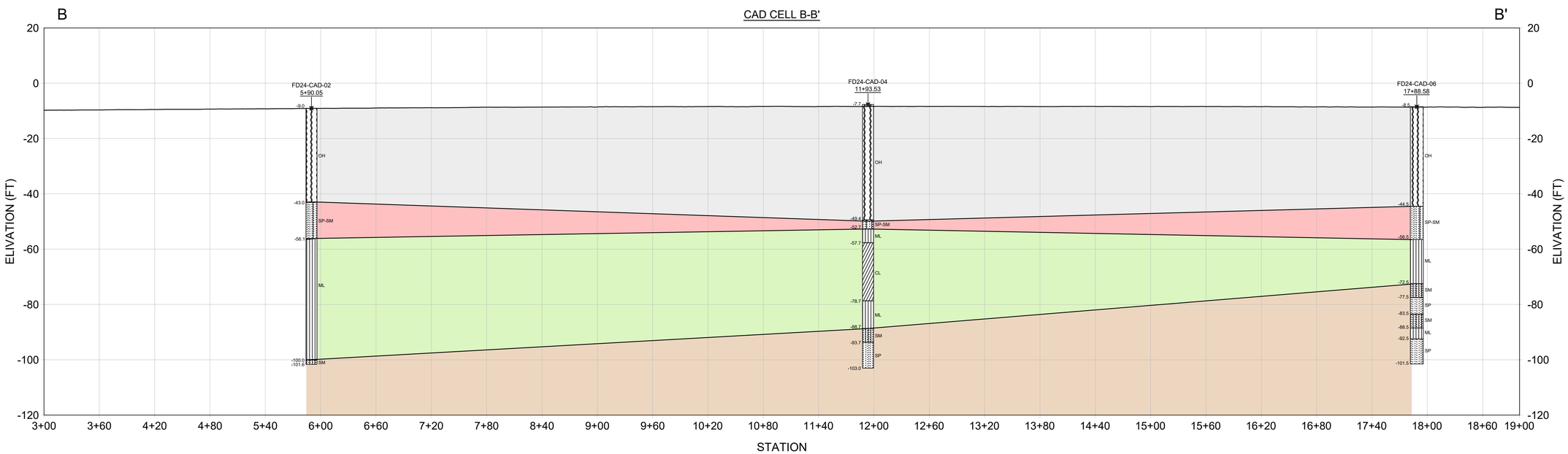
PREPARED FOR: Geotechnical Branch

SUBSURFACE EPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

CAD CELL GEOTECHNICAL BORING LOCATIONS

SHEET ID
P-027





CORE LEGEND

- OL (ORGANIC SILT AND CLAY)
- SP-SM (POORLY GRADED SAND WITH SILT)
- OH (ORGANIC SILT AND CLAY)
- SP (POORLY GRADED SAND)
- SM (SILTY SAND)
- ML (SILT)
- MH (ELASTIC SILT)
- CL (LEAN CLAY)

LEGEND

- MARCH 2023 USACE BATHYMETRY
- ORGANIC SEDIMENTS UNIT
- MARINE SANDS UNIT
- GLACIO MARINE SILT UNIT
- GLACIO MARINE SAND UNIT

PROFILES SHOULD BE PRINTED IN COLOR

0 20' 40' VERTICAL SCALE

0 60' 120' HORIZONTAL SCALE

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

ISSUE DATE: JANUARY 2025
TASK ORDER NO.: W912WJ24F0024
CONTRACT NO.: W912DS22D0017
DRAWING CODE: ####
SHEET 220 OF 220

DESIGNED BY: USACE
DRAWN BY: ECC
CHECKED BY: BJC
SUBMITTED BY: DOW
SIZE: ANSI 'D'
SCALE: AS SHOWN

PREPARED BY: GBA ENGINEERS ★ SURVEYORS, 9009 Yellow Brick Rd. Unit A, Baltimore, MD 21237, Phone (410) 882-9595

PREPARED FOR: Coastal Partners

SUBSURFACE EXPLORATION
NEW HAVEN HARBOR
NEW HAVEN, CONNECTICUT

CAD CELL GEOLOGIC PROFILES

SHEET ID
PR-001