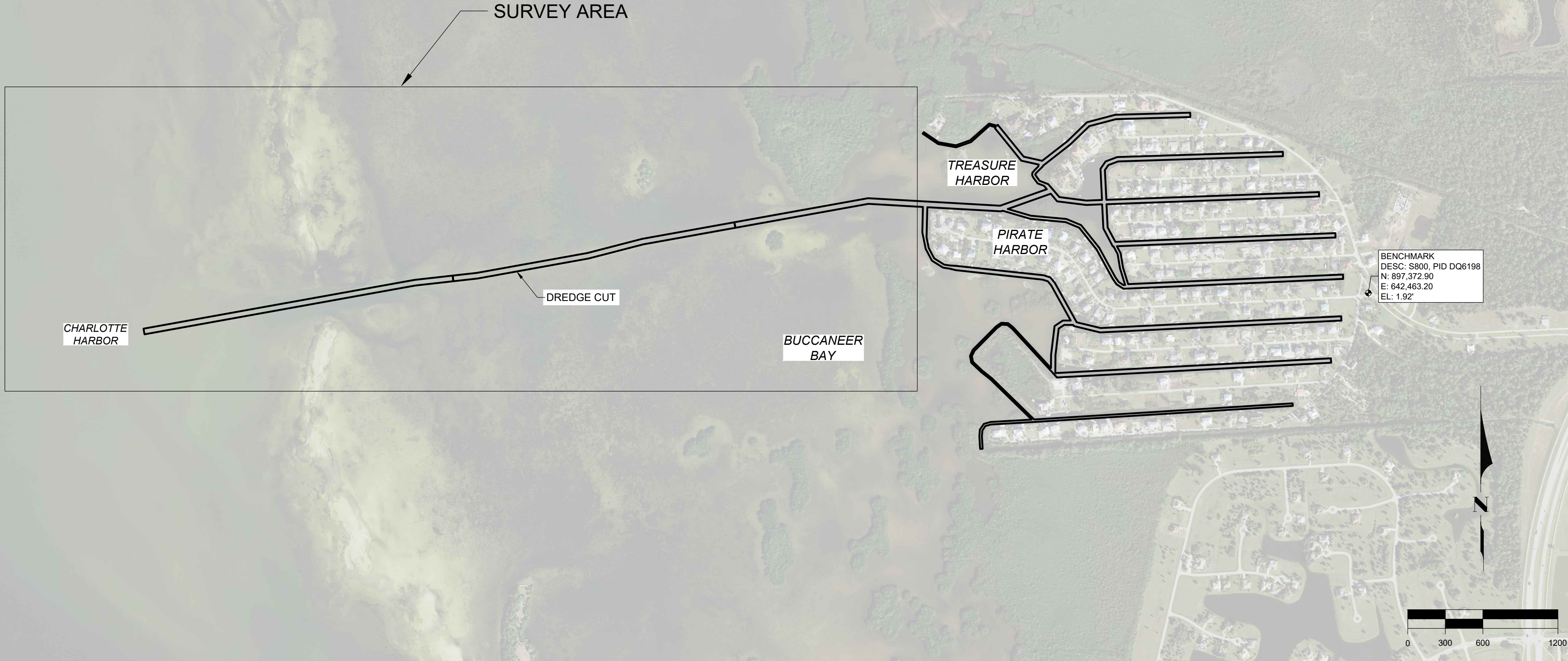


PUBLISHED TIDAL INFORMATION

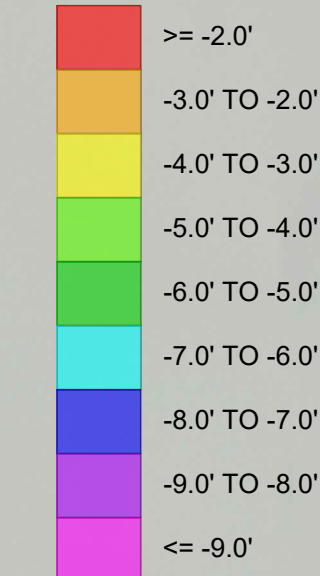
TIDAL DATUMS AT PUNTA GORDA, CHARLOTTE COUNTY ARE BASED ON FLORIDA 872 5744 TIDE STATION, PUBLISHED 10-18-2010.
LENGTH OF SERIES = 8 MONTHS
TIME PERIOD = 7/1977 - 2/1978
TIDAL EPOCH = 1963 - 2001
CONTROL TIDE STATION = 872 5110 NAPLES, GULF OF MEXICO
ELEVATIONS OF TIDAL DATUMS ARE REFERENCED IN NAVD 1988.
MEAN HIGH WATER (MHW) = +0.06 FT NAVD
MEAN TIDE LEVEL (MTL) = -0.57 FT NAVD
MEAN LOW WATER (MLW) = -1.20 FT NAVD
MEAN LOWER LOW WATER (MLLW) = -1.65 FT NAVD

NOTES

- BATHYMETRIC SURVEY COMPLETED BY COASTAL ENGINEERING CONSULTANTS, INC., ON 7/1/2022.
- CHANNEL MARKERS WERE LOCATED ON 7/1/2022.
- PLANE COORDINATES ARE BASED ON THE TRANSVERSE MERCATOR PROJECTION FOR THE WEST ZONE OF FLORIDA AND REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD 83).
- ELEVATIONS SHOWN HEREON ARE IN FEET AND TENTHS AND REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD). REFERENCE BENCHMARKS: S800, PID DQ6198, N: 897,372.9, E: 642,463.2, ELEV: 1.92 FT NAVD AND R800, PID DQ6197, N: 897,422.1, E: 644,818.9, ELEV: 11.16 FT NAVD.
- TIDAL REDUCTIONS WERE OBTAINED UTILIZING REAL-TIME KINEMATIC GPS AND REFERENCED TO NAVD.
- SURVEY ACCURACY STANDARDS, QUALITY CONTROL, AND QUALITY ASSURANCE REQUIREMENTS WERE FOLLOWED DURING THIS SURVEY IN ACCORDANCE WITH USACE EM 1110-2-1003, HYDROGRAPHIC SURVEYING MANUAL, 11/30/2013.
- INFORMATION SHOWN HEREON REFLECTS CONDITIONS AS THEY EXISTED ON THE SURVEY DATE SHOWN AND CAN ONLY BE CONSIDERED INDICATIVE OF CONDITIONS AT THAT TIME.
- AERIAL PHOTOGRAPHY OBTAINED FROM FLORIDA DEPARTMENT OF TRANSPORTATION, DATED 2020.

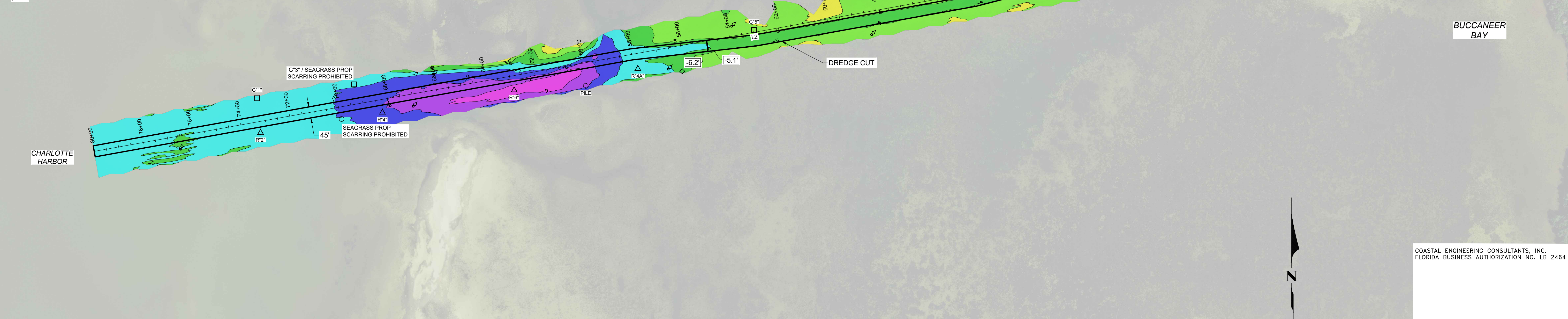


ELEVATION (FT NAVD)



LEGEND

- 0+00 = CHANNEL STATION
- ▲ = EXISTING CHANNEL MARKERS
- = EXISTING INFORMATIONAL SIGN
- ⊕ = EXISTING SEAGRASS BUOY
- ◇ = EXISTING CAUTION SIGN
- 6.2' = DREDGE CUT ELEVATION (FT NAVD)



SURVEY BASELINE LINE TABLE				
LINE #	LENGTH	DIRECTION	START POINT (X, Y)	END POINT (X, Y)
L1	480.98'	S79° 47' 00.53"W	(638466.61', 898108.04')	(637993.26', 898022.73')
L2	5400.00'	S79° 47' 09.20"W	(637993.26', 898022.73')	(632678.84', 897065.16')

COASTAL ENGINEERING CONSULTANTS, INC.
FLORIDA BUSINESS AUTHORIZATION NO. LB 2464

RICHARD J. EWING, V.P.
PROFESSIONAL SURVEYOR AND MAPPER
FLORIDA CERTIFICATE NO. 5295
NOT VALID WITHOUT THE SIGNATURE AND
THE ORIGINAL RAISED SEAL OF A FLORIDA
LICENSED SURVEYOR AND MAPPER
CEC FILE NO. 22247
DATE OF FIELD SURVEY: 7/1/2022
DATE OF SIGNATURE:

CHARLOTTE COUNTY

PIRATE HARBOR
BATHYMETRIC SURVEY
OVERALL PLAN VIEW

CLIENT:

COASTAL & MARINE ENGINEERING
ENVIRONMENTAL & GEOLOGICAL SERVICES
SURVEY AND MAPPING
ENGINEERING: CA 2464
SURVEYING: LB 2464

COASTAL
ENGINEERING
CONSULTANTS
INC.

Serving Florida Since 1977
28421 BONITA CROSSINGS BLVD
BONITA SPRINGS, FLORIDA 34135

SHEET 1

FILE NO.: 22247-PH-1

DATE: 8/22/2022

DRAWN: RHG

CHECKED: RJE

SEC. TWP. RNG.

ACAD NO. 22247-Pirate Harbor.dwg

REF. NO. 22,247

NO. 22,247

DATE

BY

REVISION DESCRIPTION

SCALE: 8/22/2022

F.B.

RHG

PG.

RJE

TWP.

RNG.

ACAD NO.

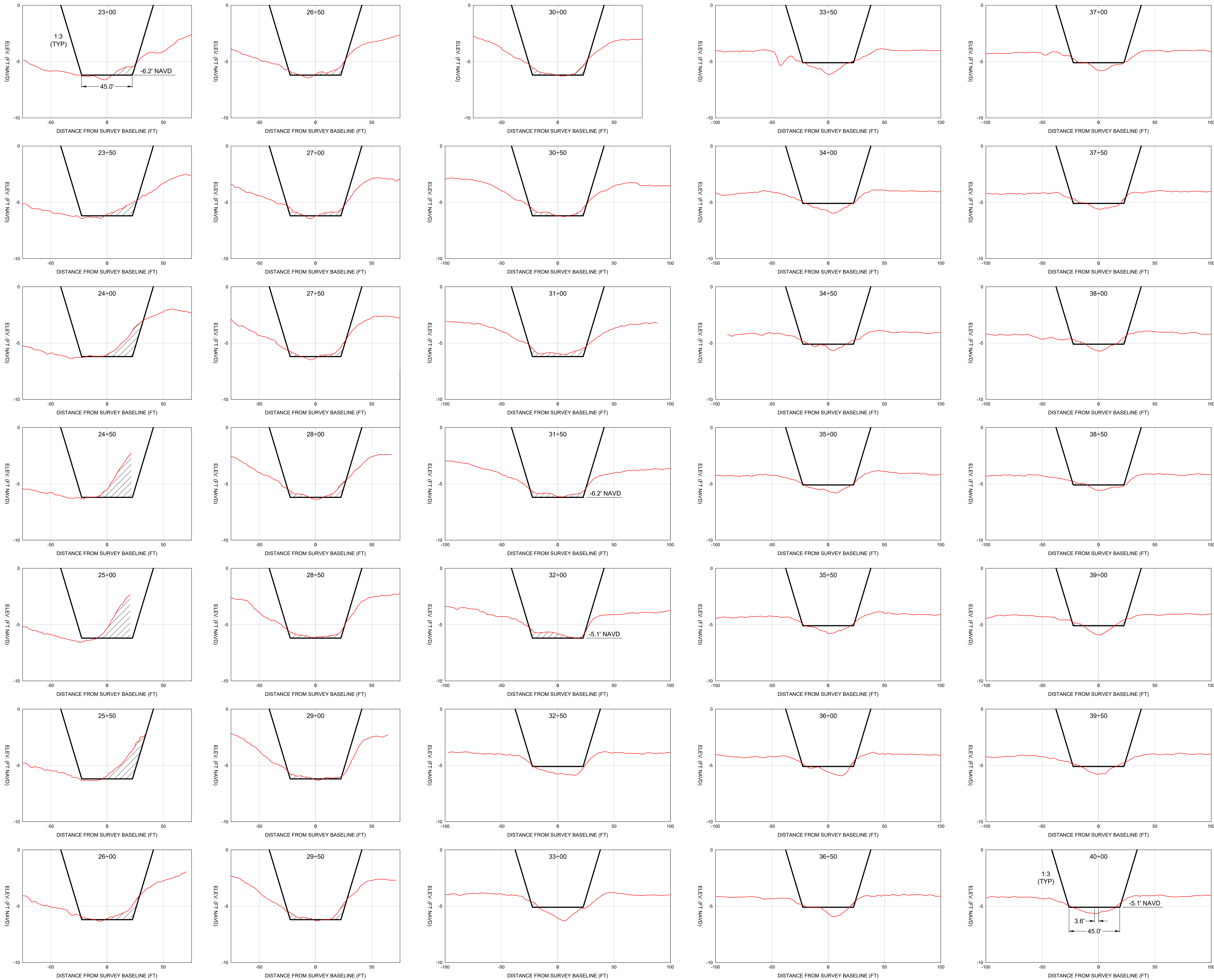
REF. NO.

NO.

DATE

BY

REVISION DESCRIPTION



COASTAL & MARINE ENGINEERING
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ENGINEERING: CA 2464
SURVEYING: LB 2464

PHONE: (239)643-2324
FAX: (239)643-1143
www.coastal-engineering.com
E-Mail: info@cecill.com

CHARLOTTE COUNTY

PIRATE HARBOR
BATHYMETRIC SURVEY
CROSS SECTIONS: 23+00 TO 40+00

CLIENT:
TITLE:

DATE: 8/22/2022
DRAWN: RHG
CHECKED: RJE
SEC. TYP. RING.
ACAD NO. 22247-Pirate Harbor.dwg
REF. NO. 22.247

AS NOTED
F.B.
PG.
RNG.

NO. 22.247
DATE
BY

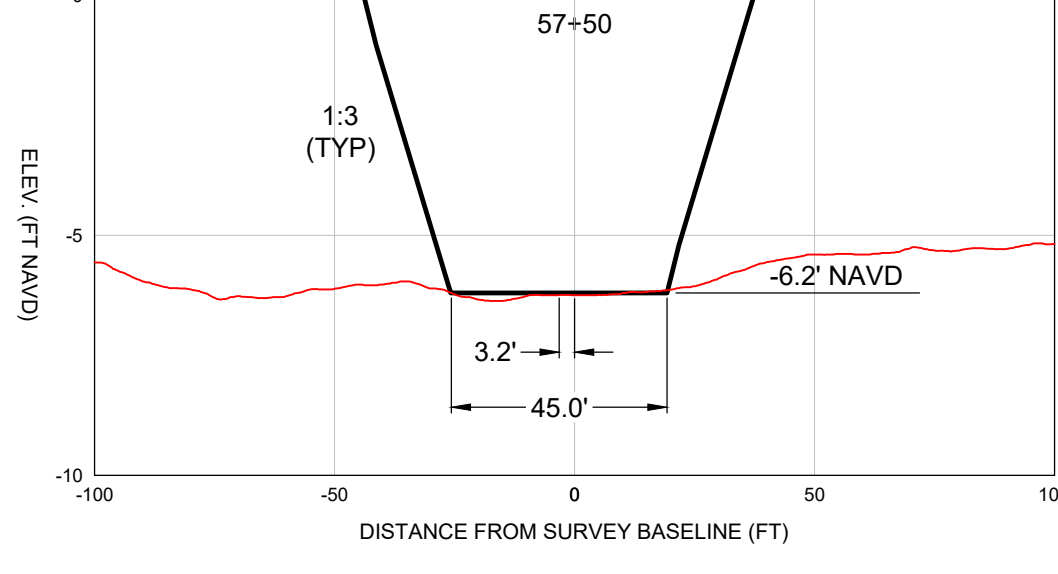
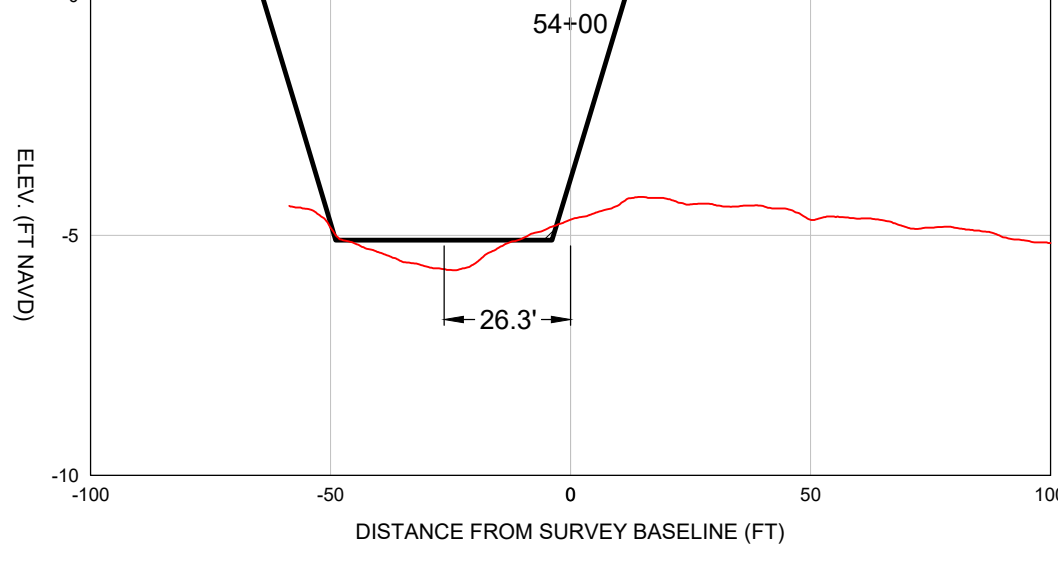
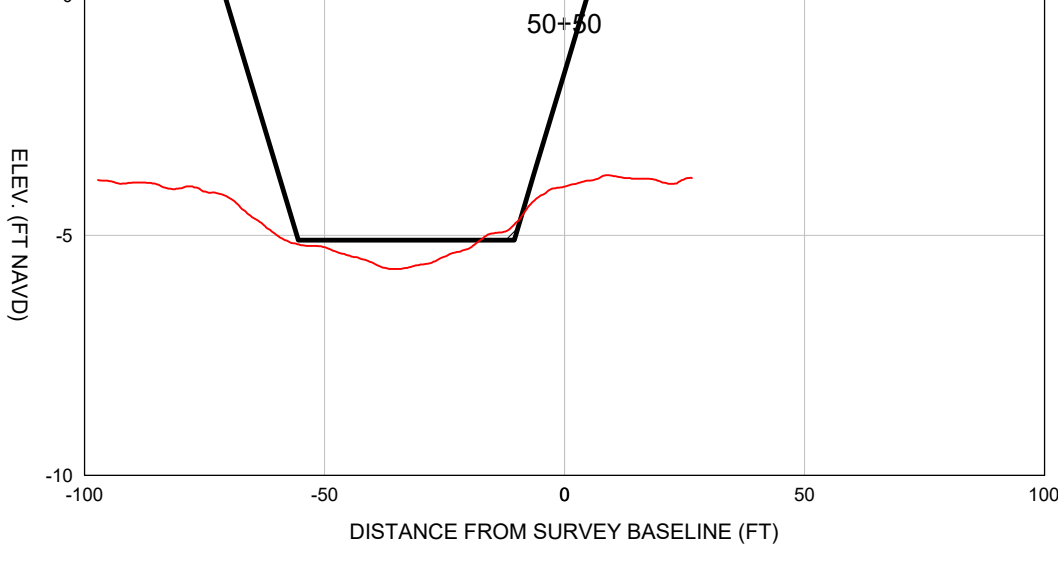
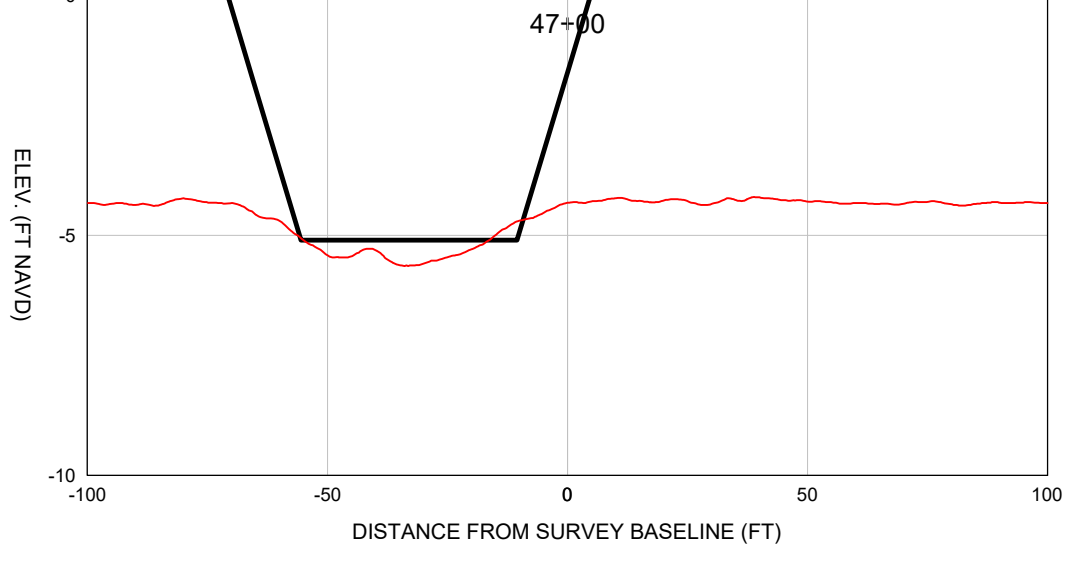
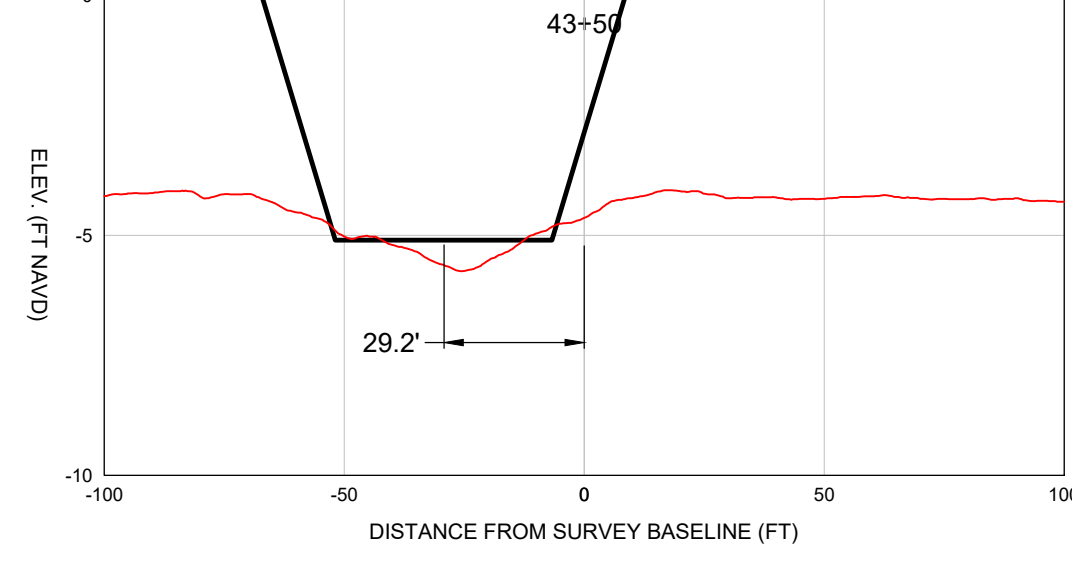
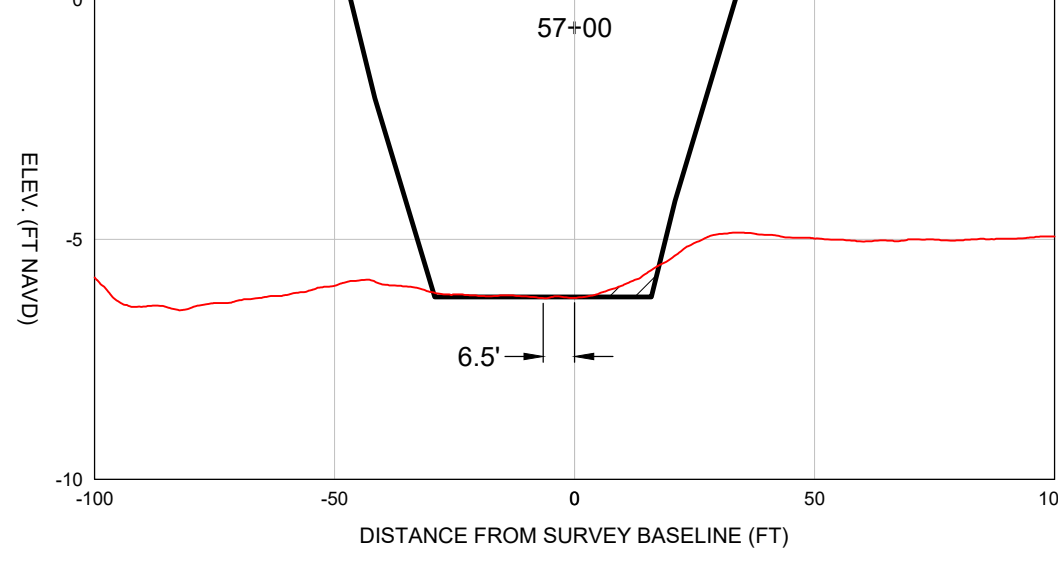
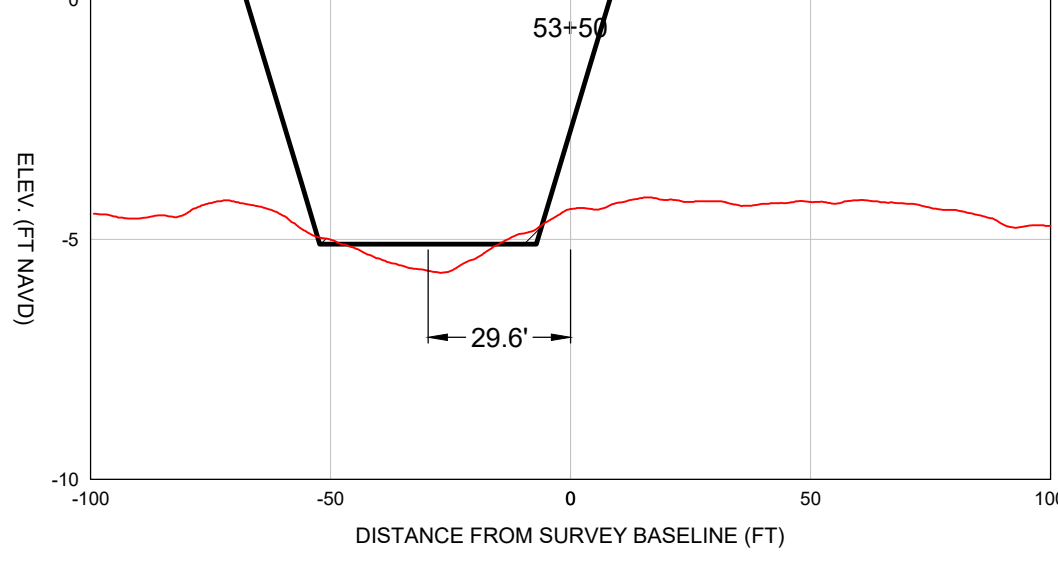
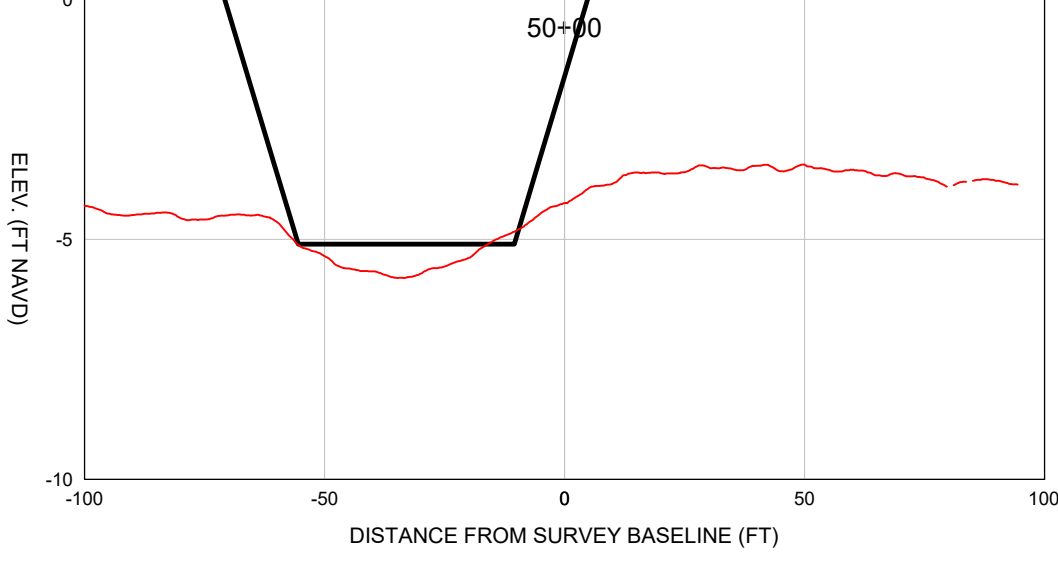
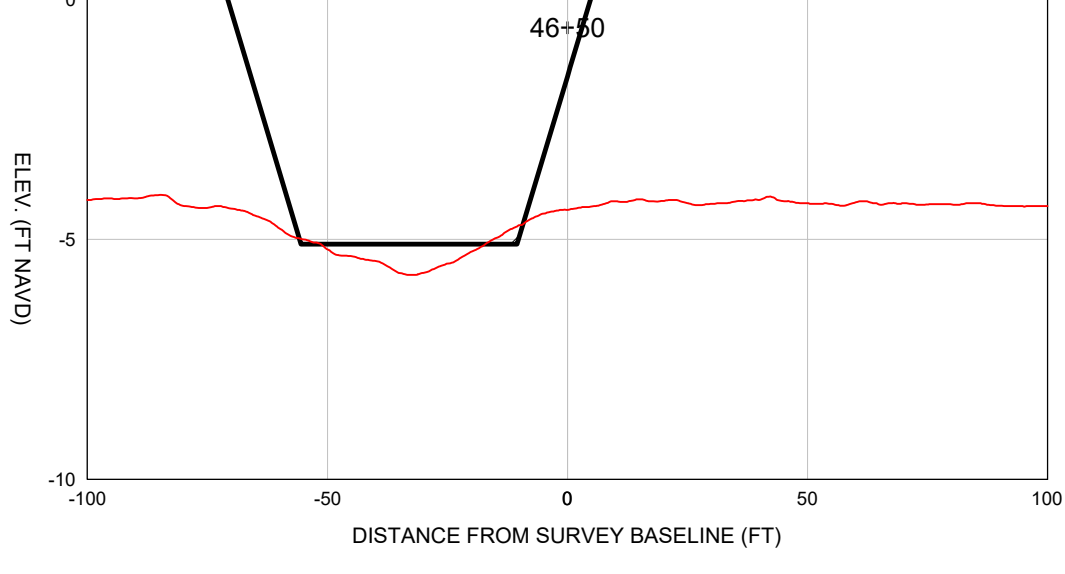
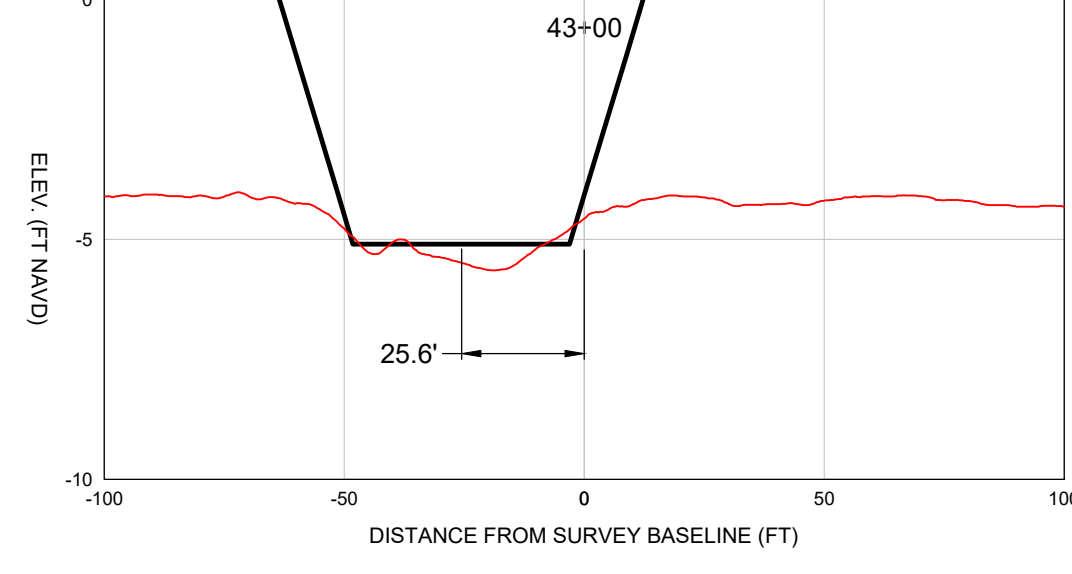
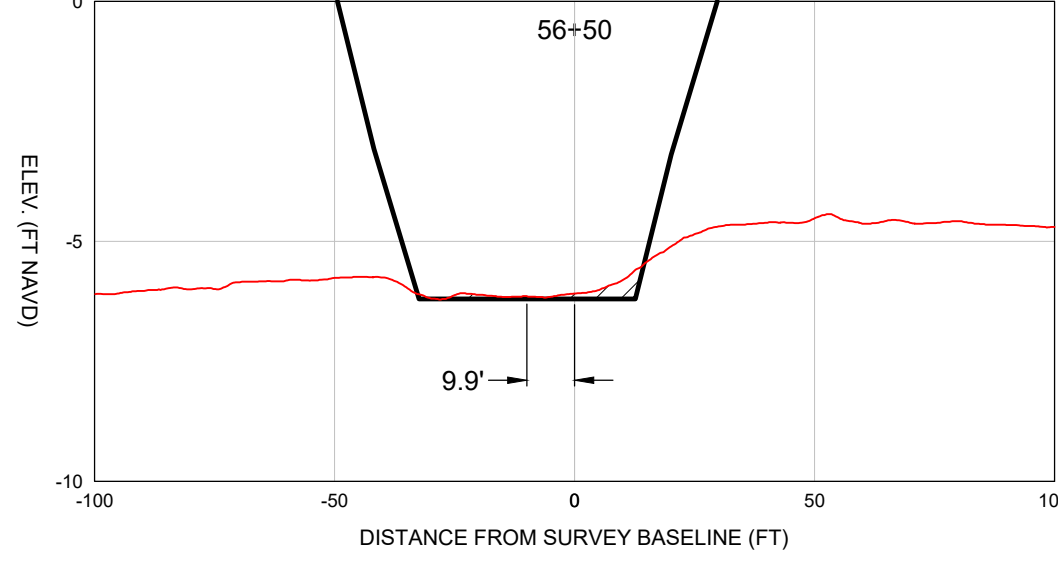
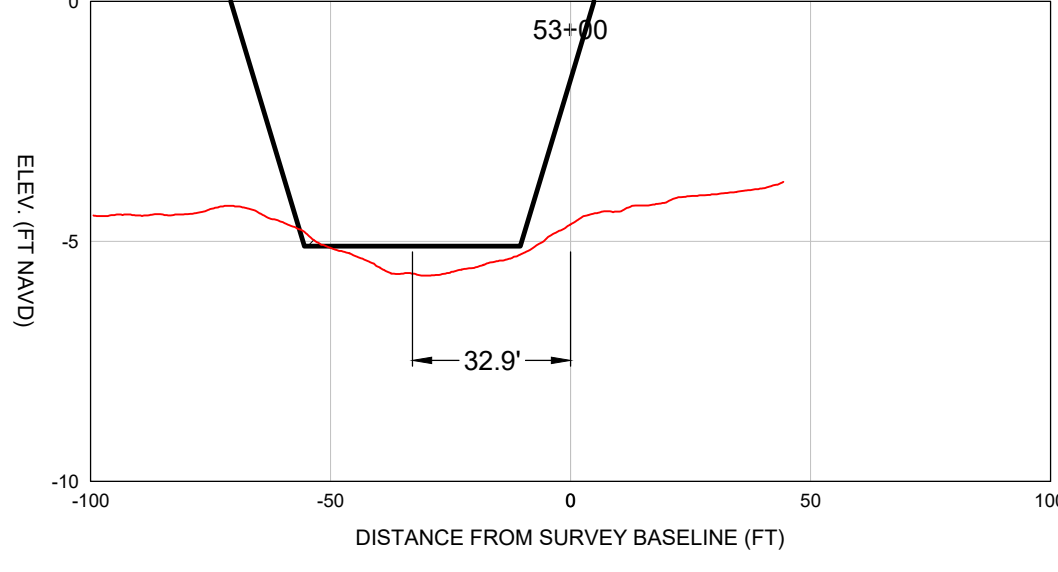
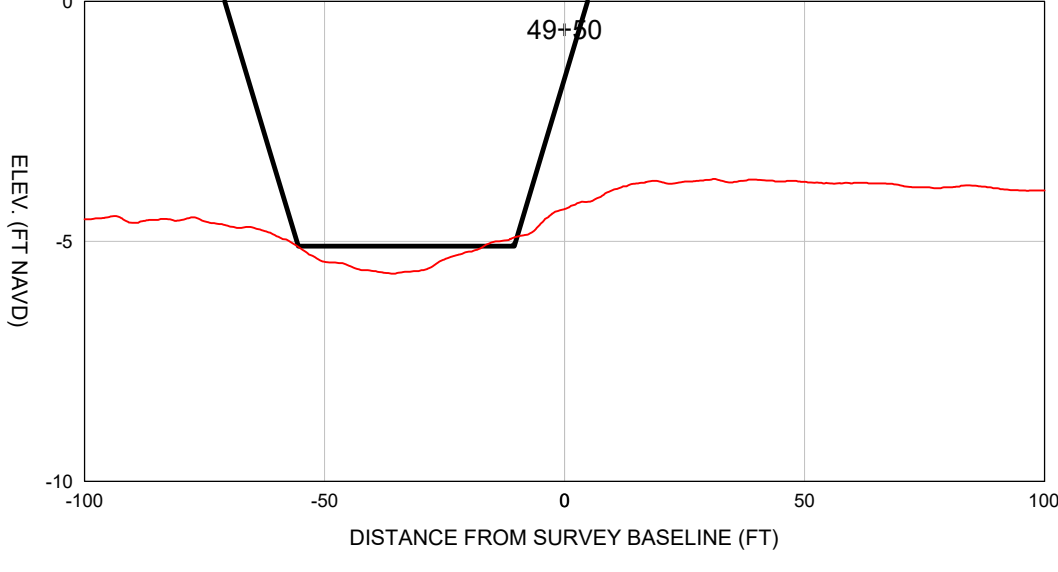
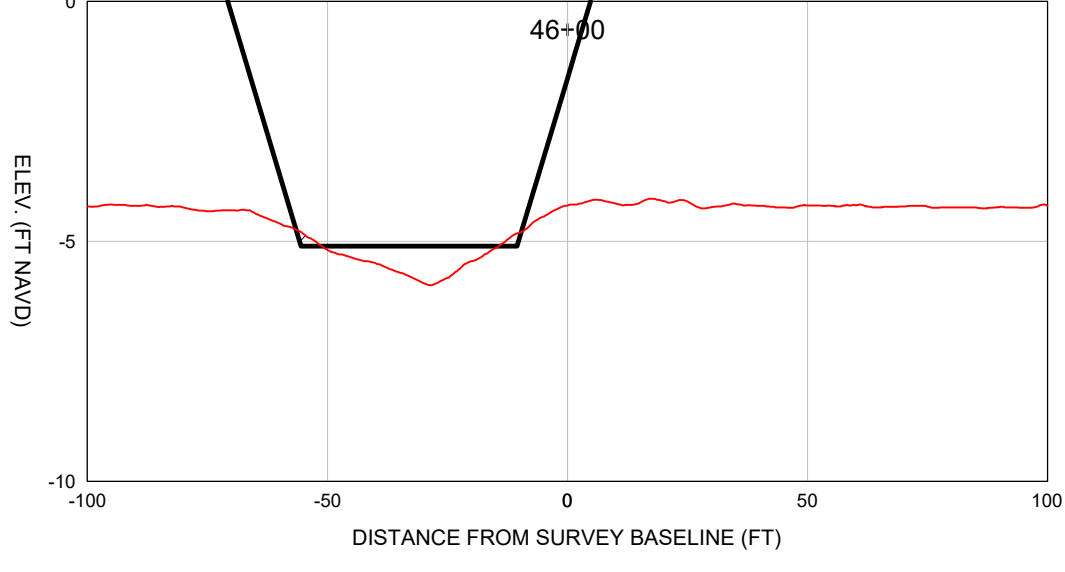
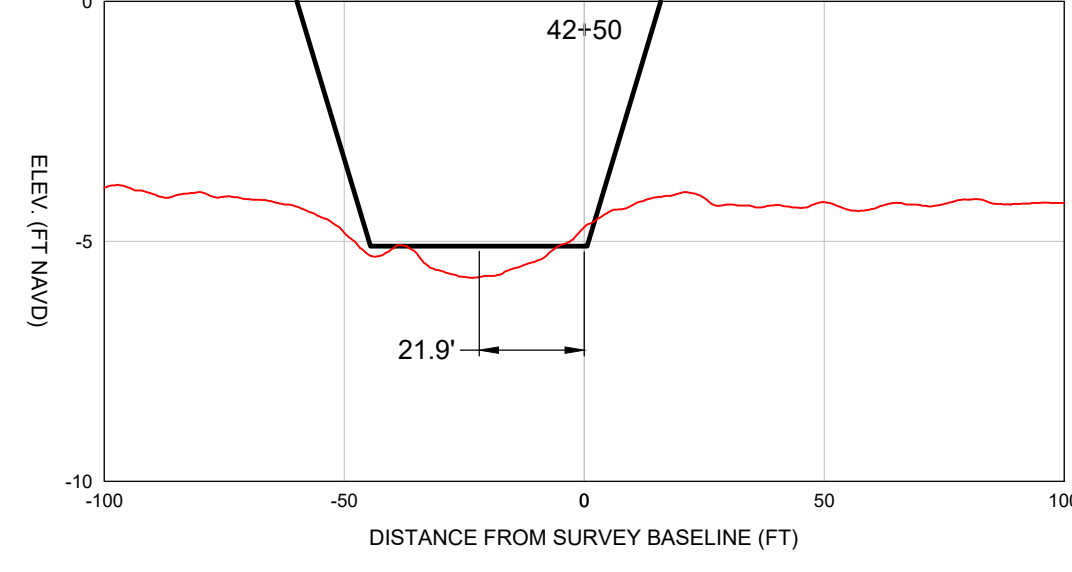
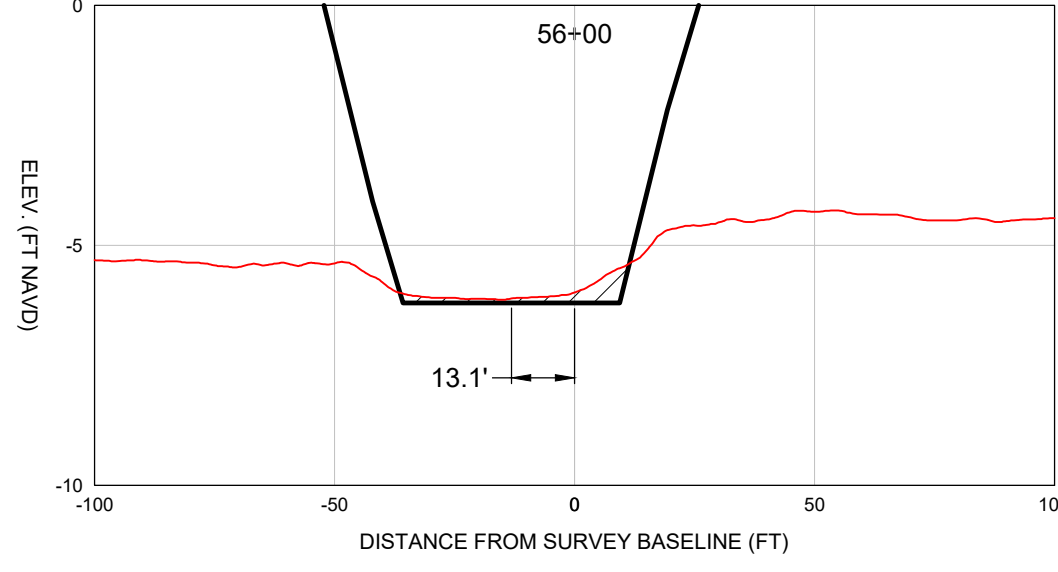
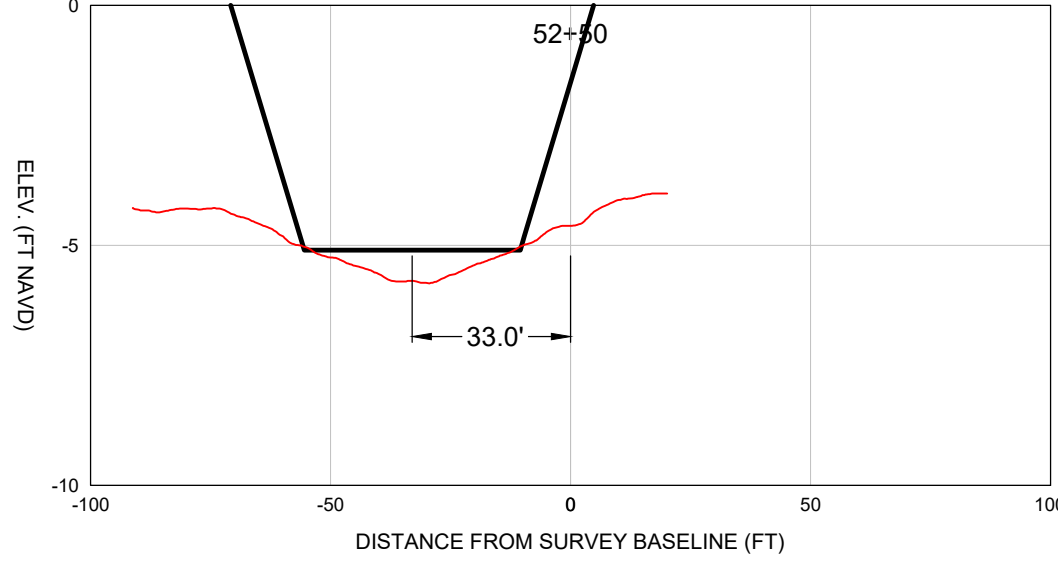
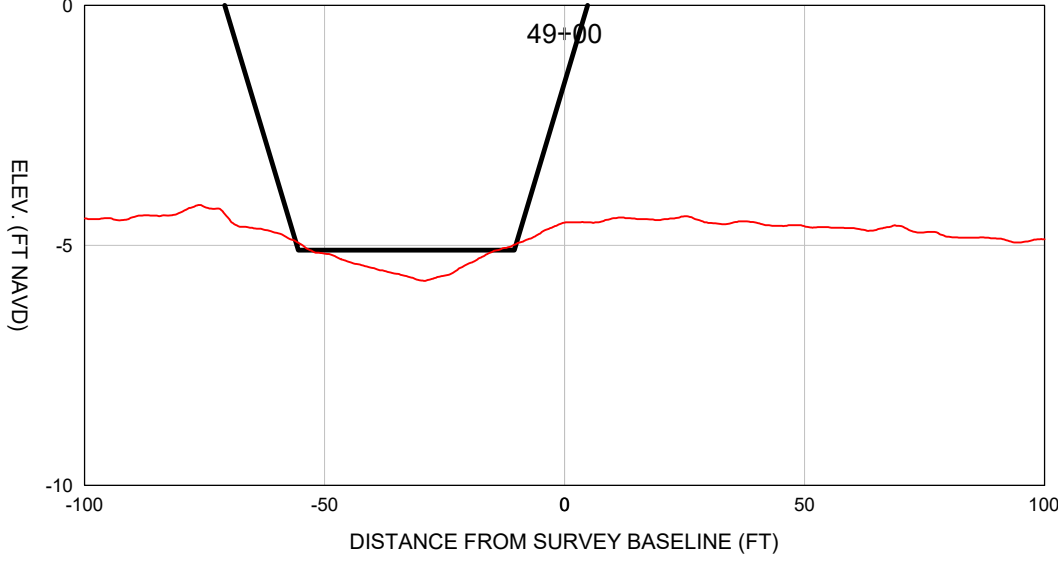
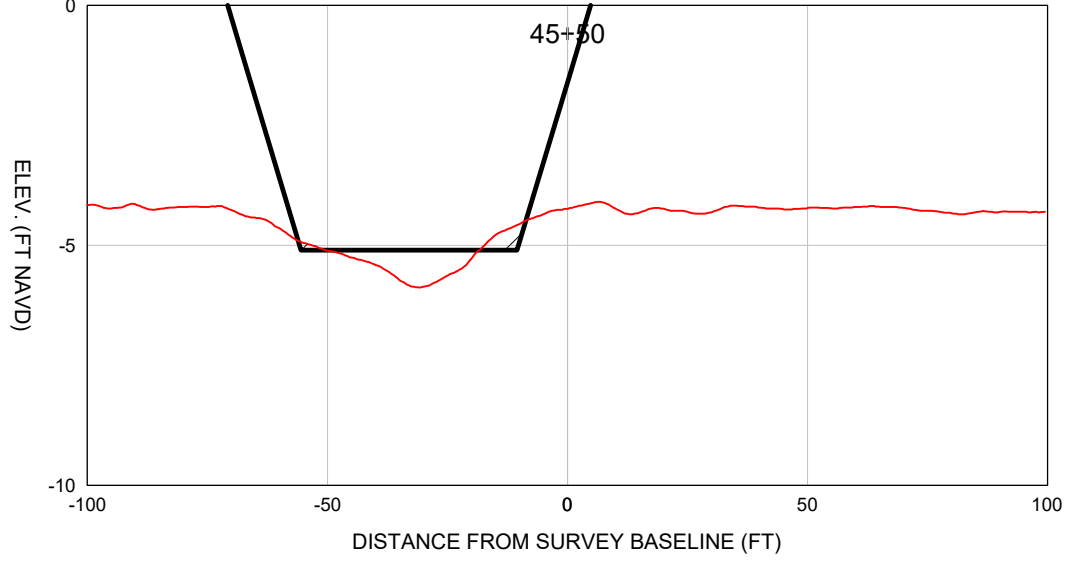
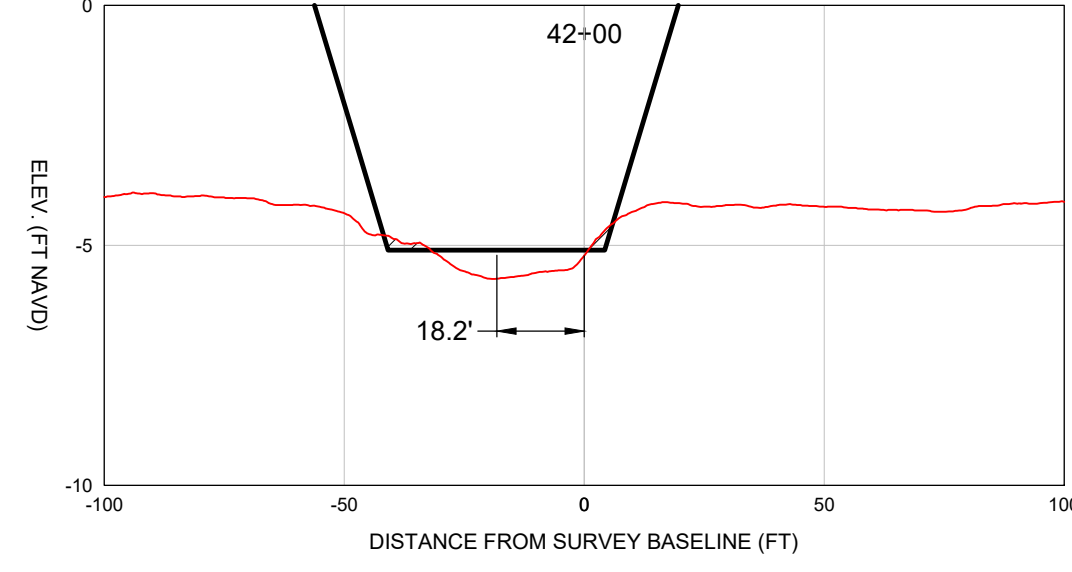
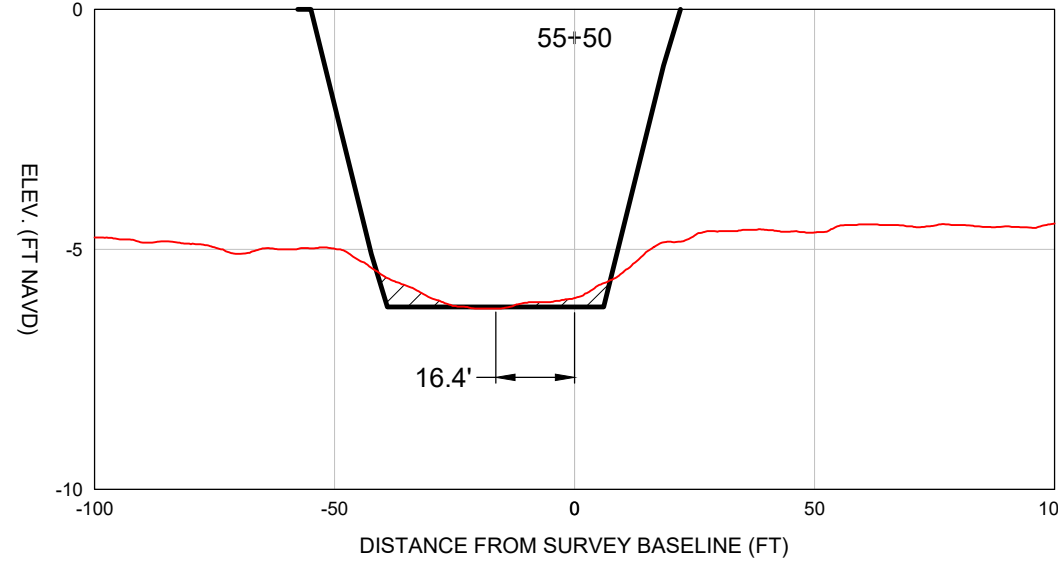
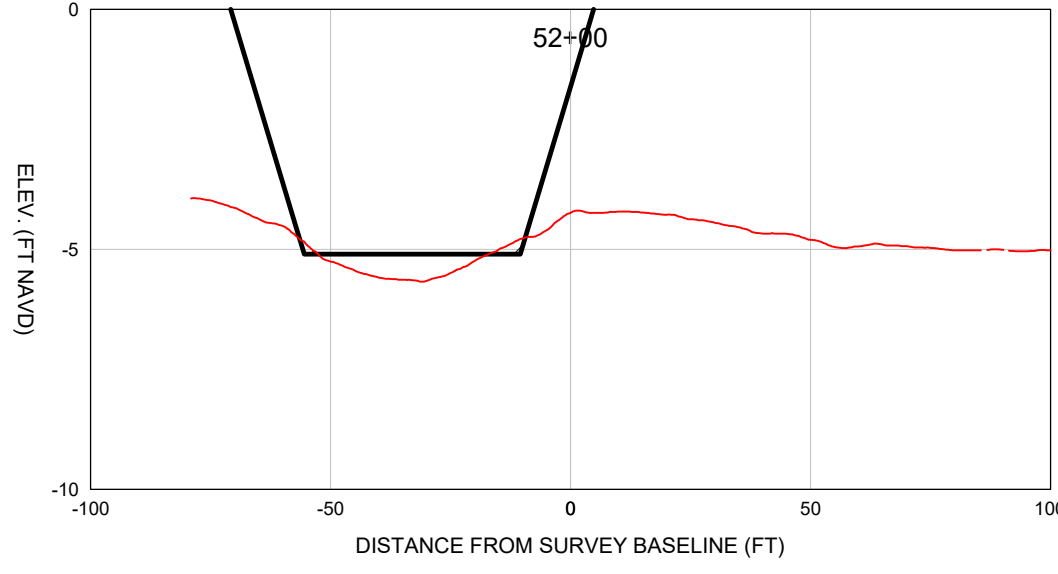
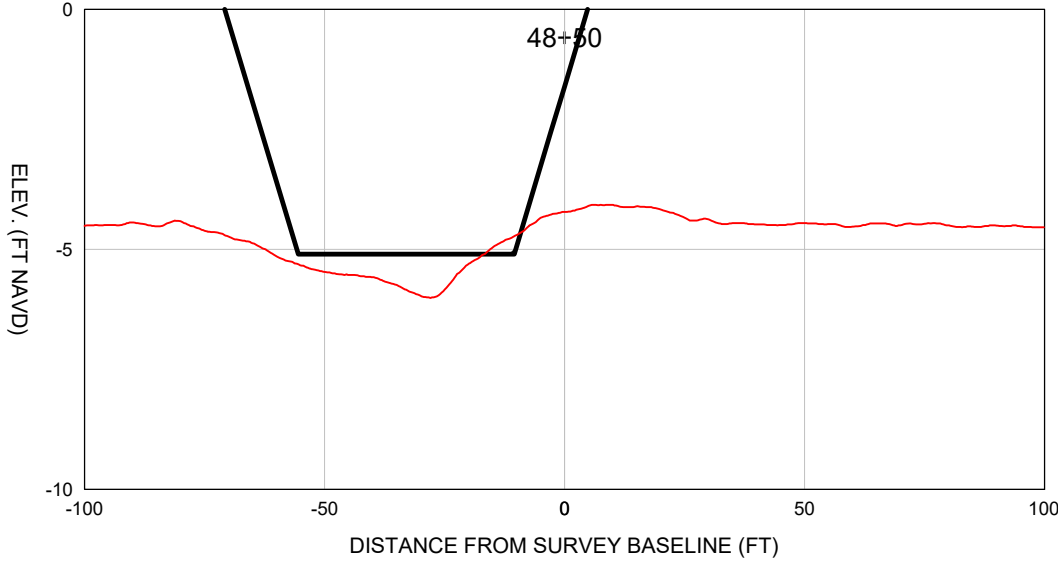
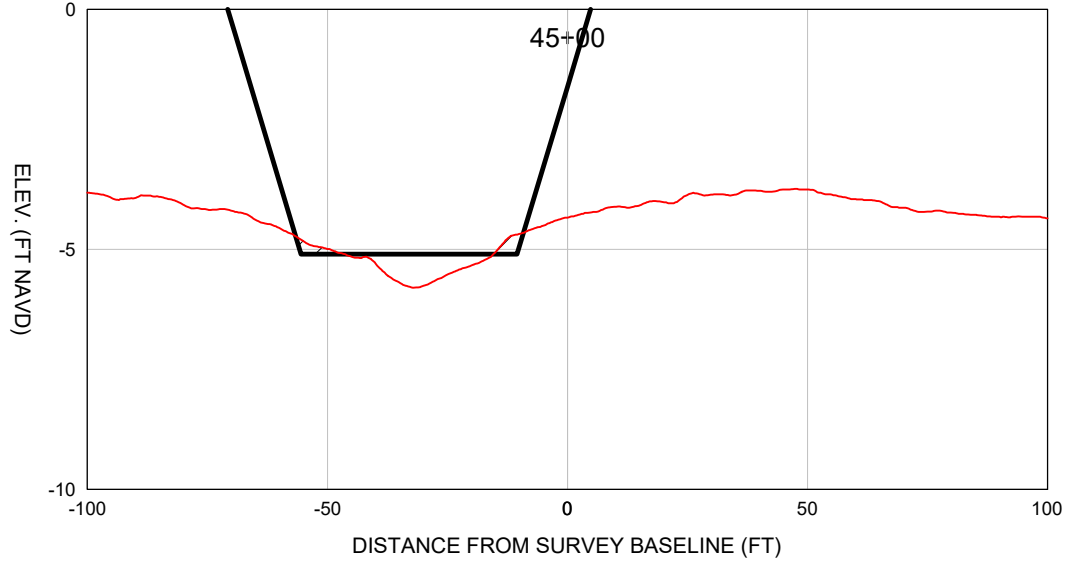
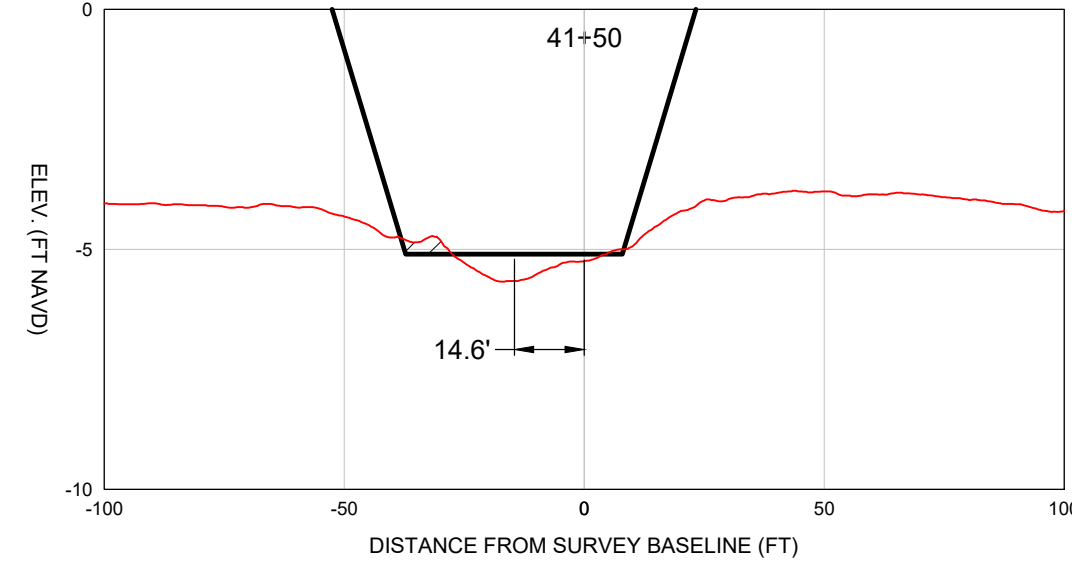
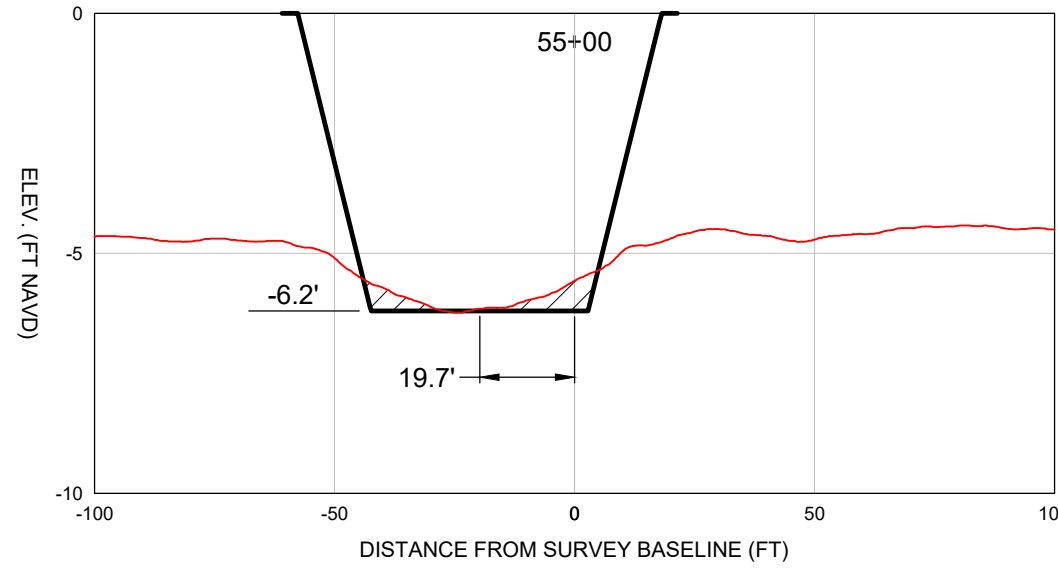
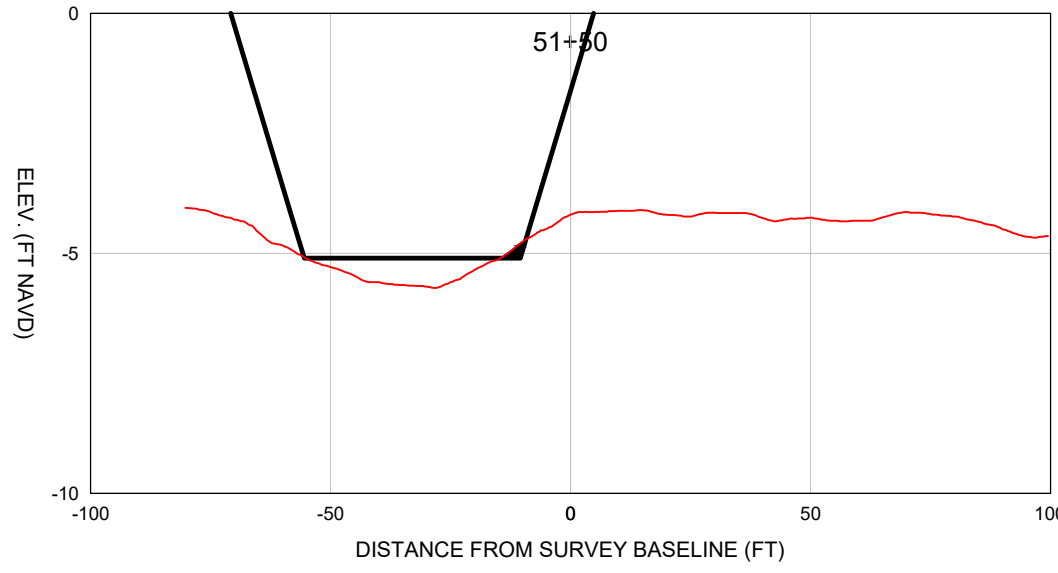
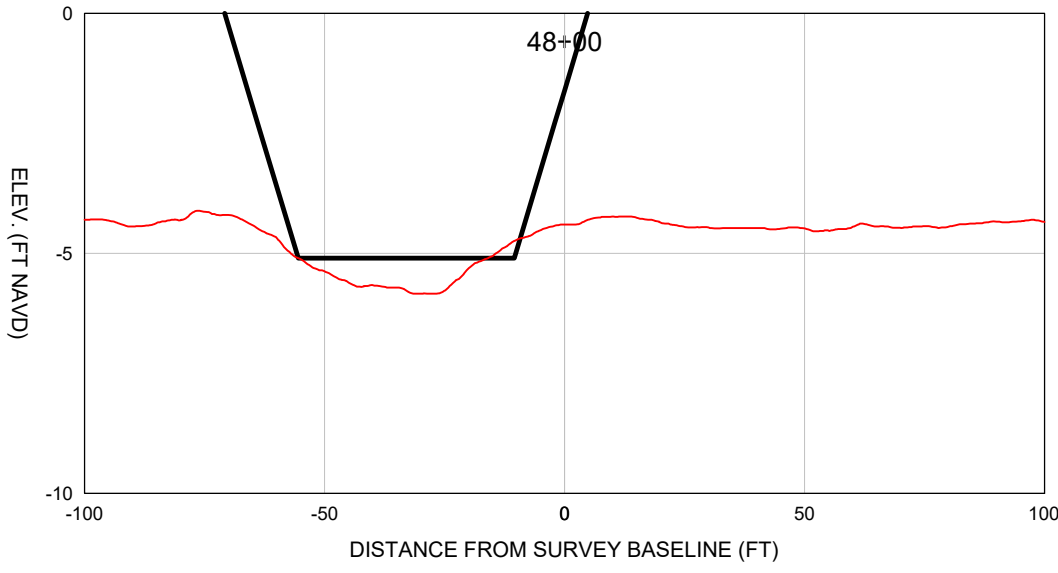
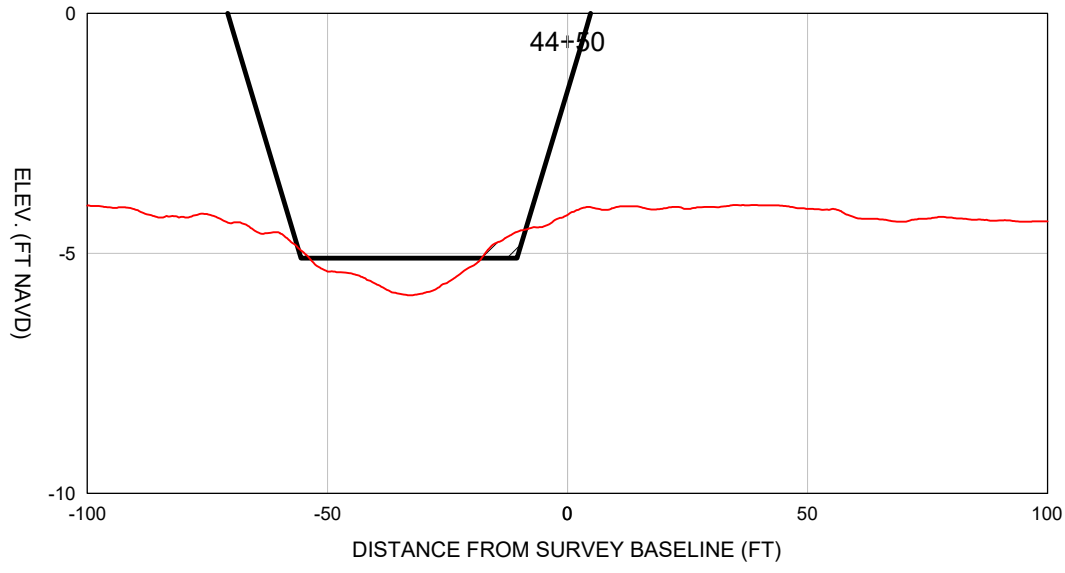
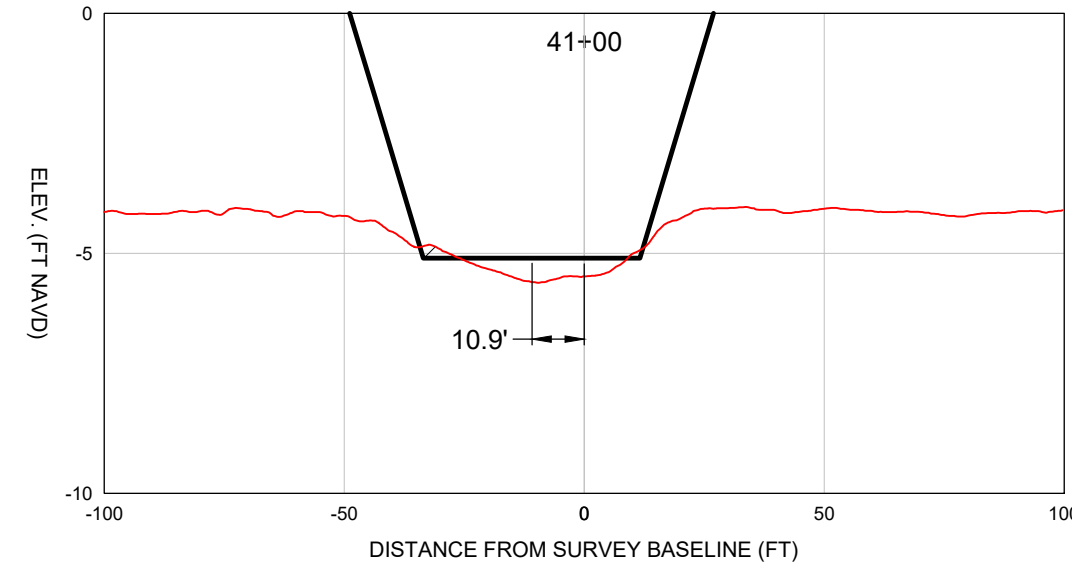
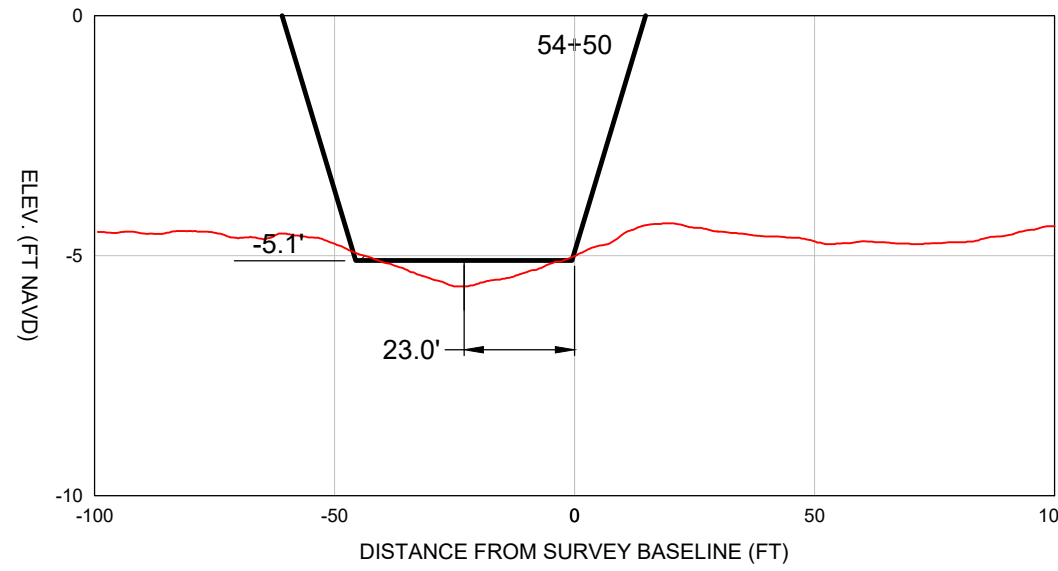
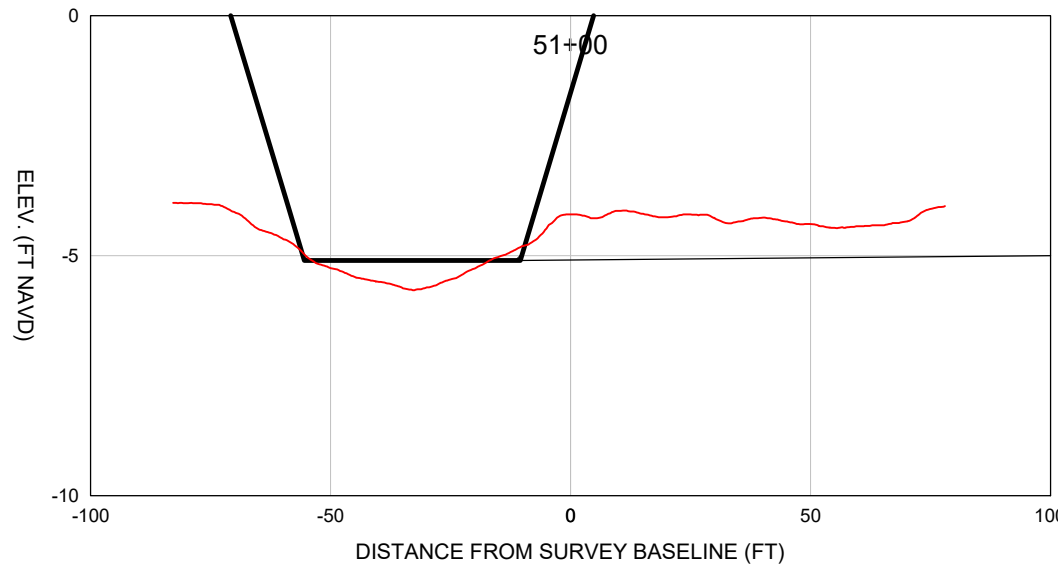
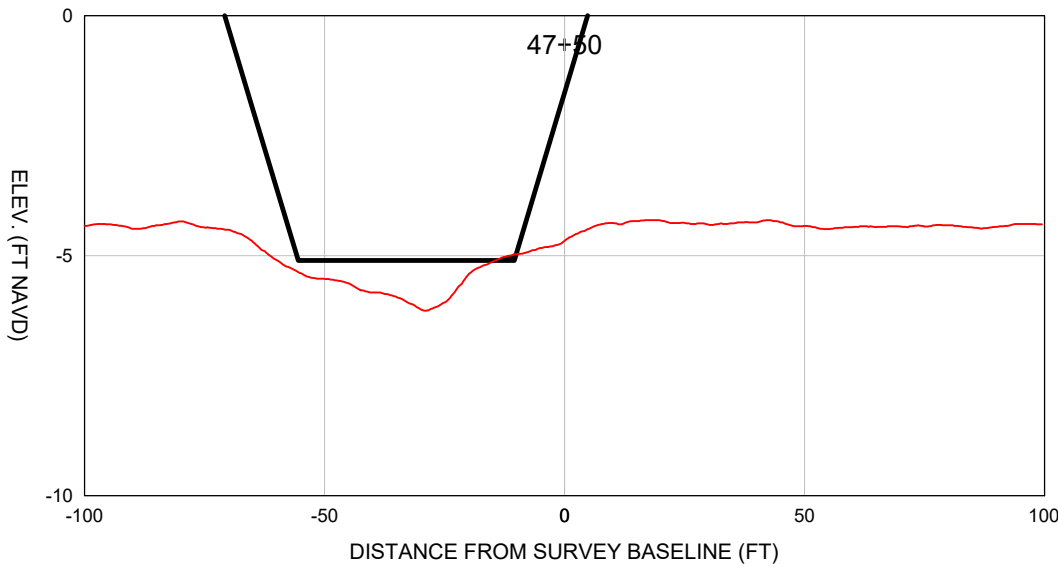
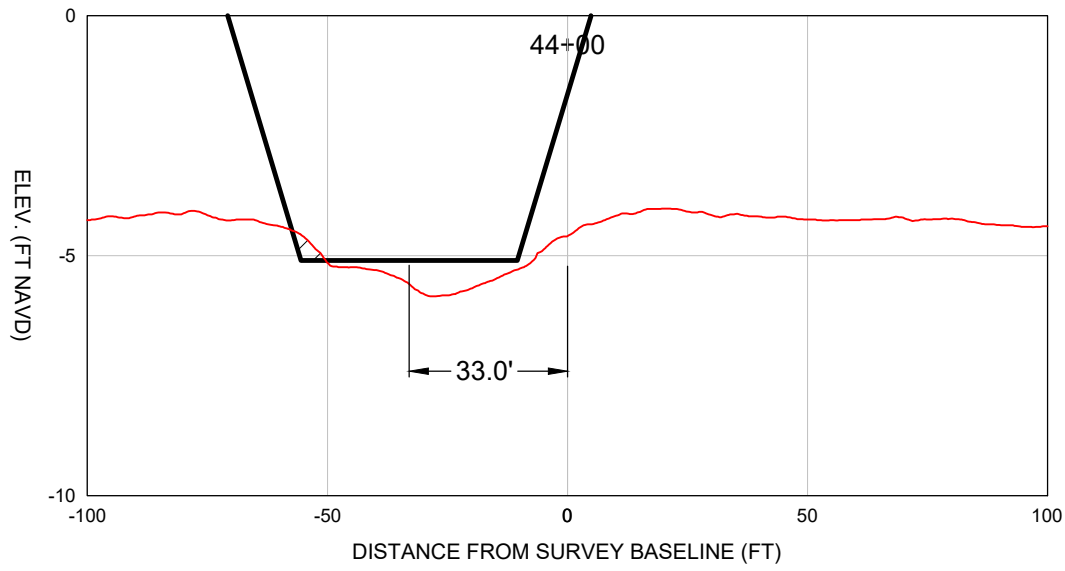
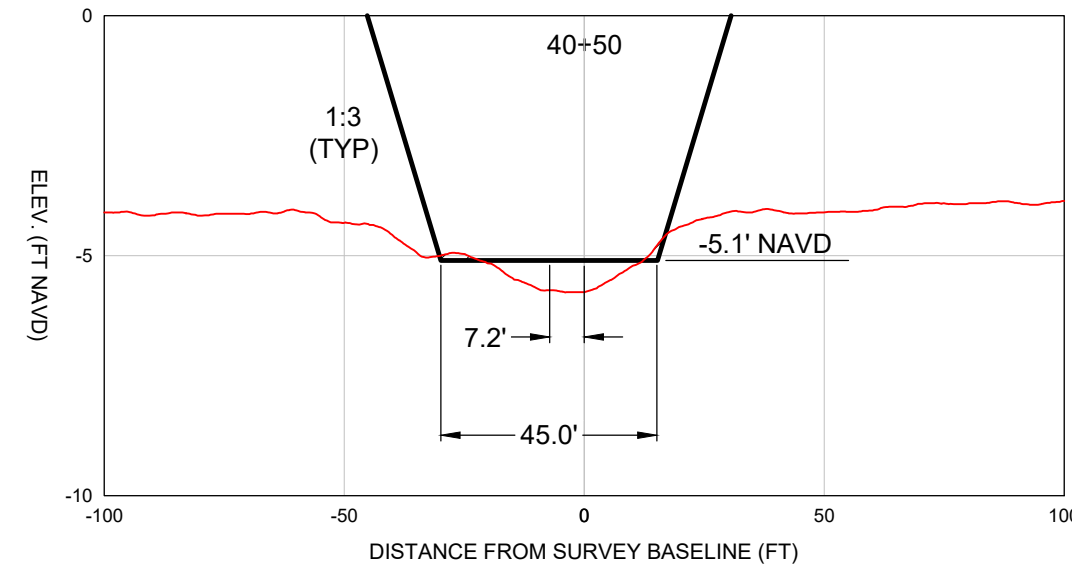
REVISION DESCRIPTION

COASTAL
ENGINEERING
CONSULTANTS
INC.

Serving Florida Since 1977
28421 BONITA CROSSINGS BLVD
BONITA SPRINGS, FLORIDA 34135

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SHEET 2
FILE NO.: 22247-PH-2



LEGEND
= DREDGE AREA
= EXISTING GRADE
(JULY 2022)

SCALE
H: 1" = 40'
V: 1" = 4'

COASTAL & MARINE ENGINEERING
ENVIRONMENTAL & GEOLOGICAL SERVICES
SURVEY AND MAPPING
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www.coastalengineering.com
E-Mail: info@cecil.com

CHARLOTTE COUNTY

PIRATE HARBOR
BATHYMETRIC SURVEY
CROSS SECTIONS: 40+50 TO 57+50

CLIENT:
TITLE:

DATE: 8/22/2022
DRAWN: RHG
CHECKED: RJE
SEC. TYP. RING.
ACAD NO. 22247-Pirate Harbor.dwg
REF. NO. 22.247

AS NOTED
F.B.
P.G.
RNG.
NO. 22.247

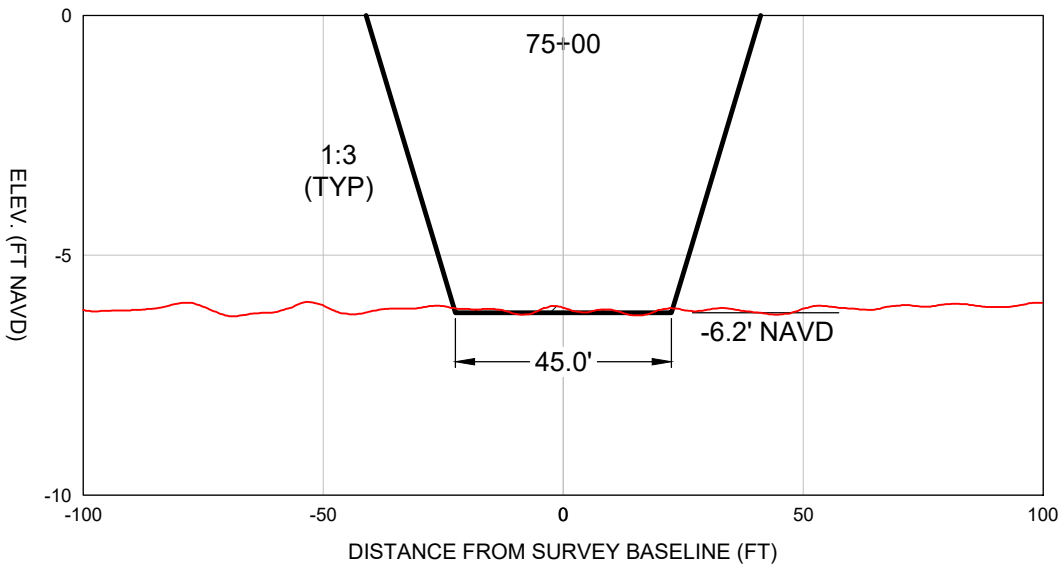
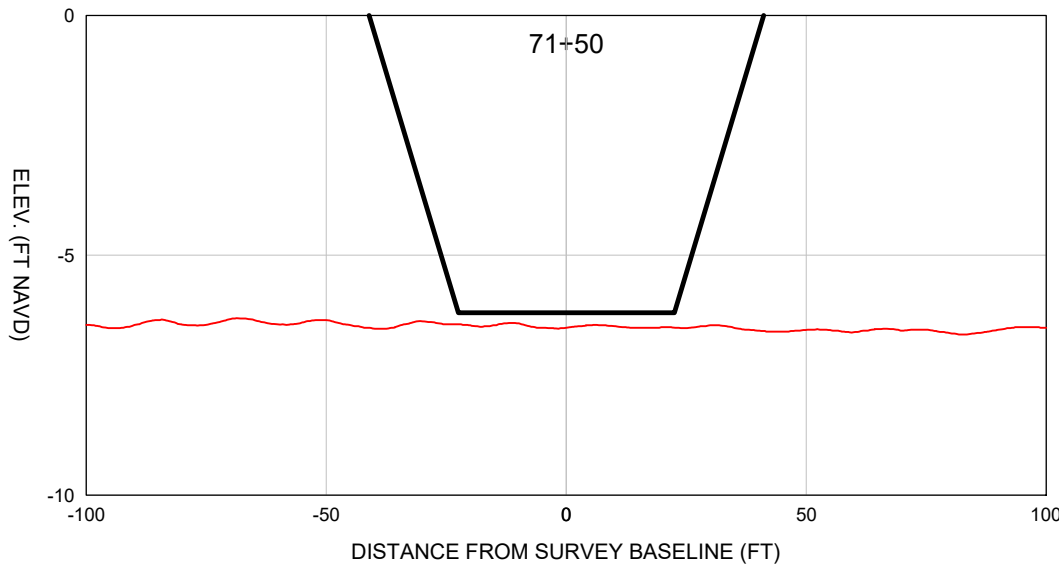
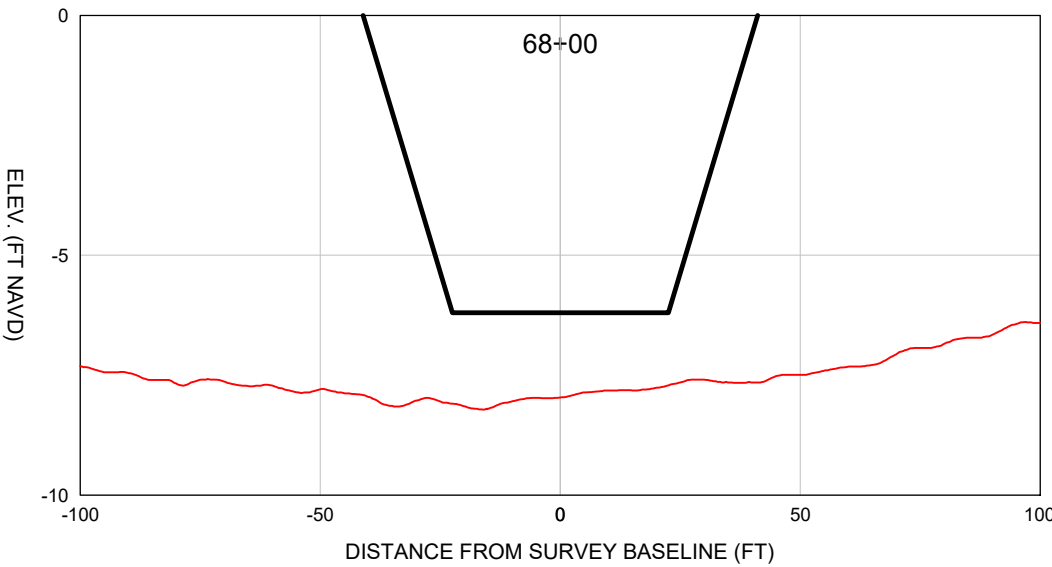
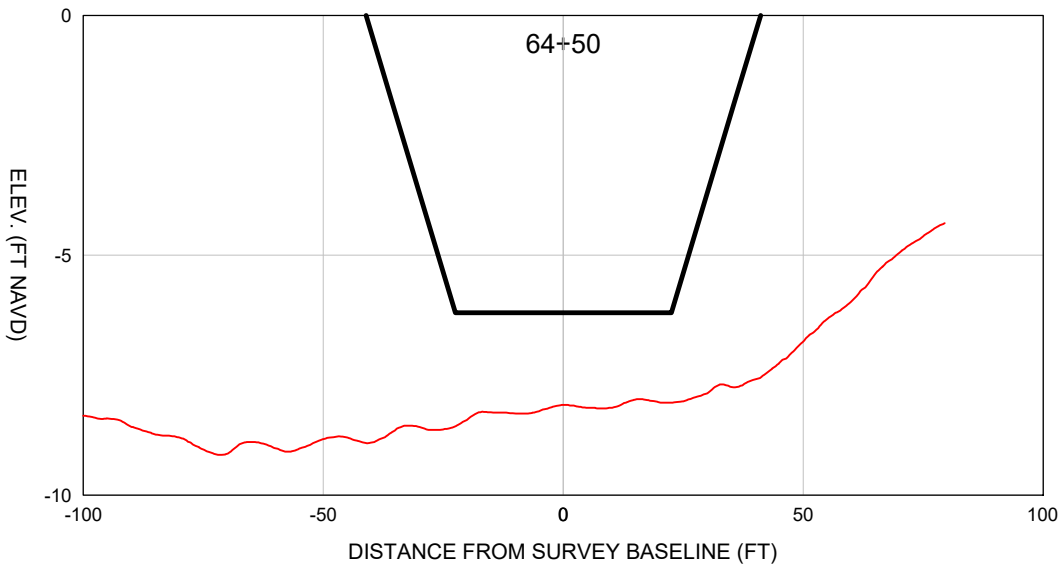
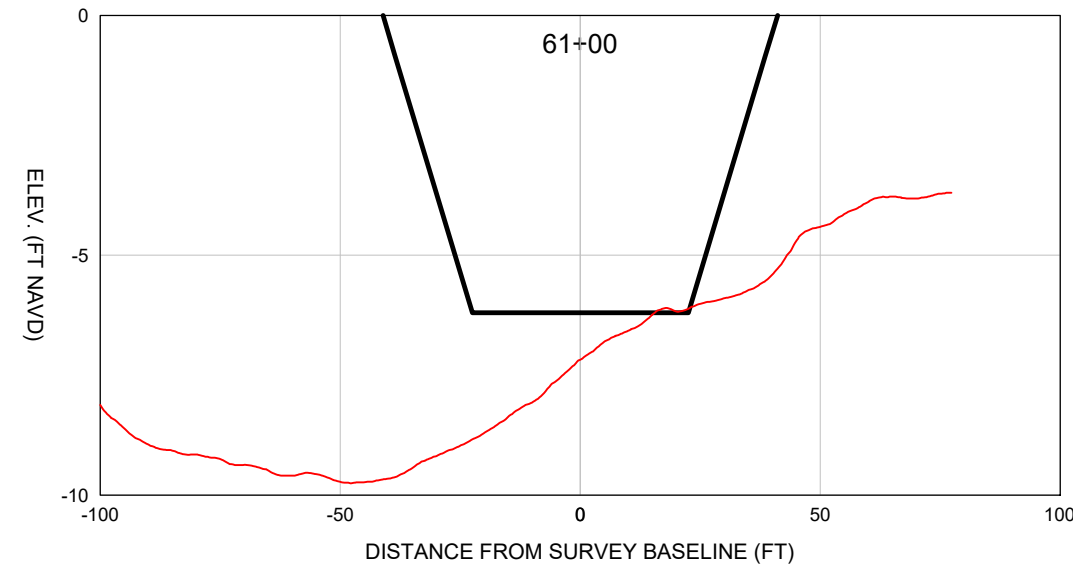
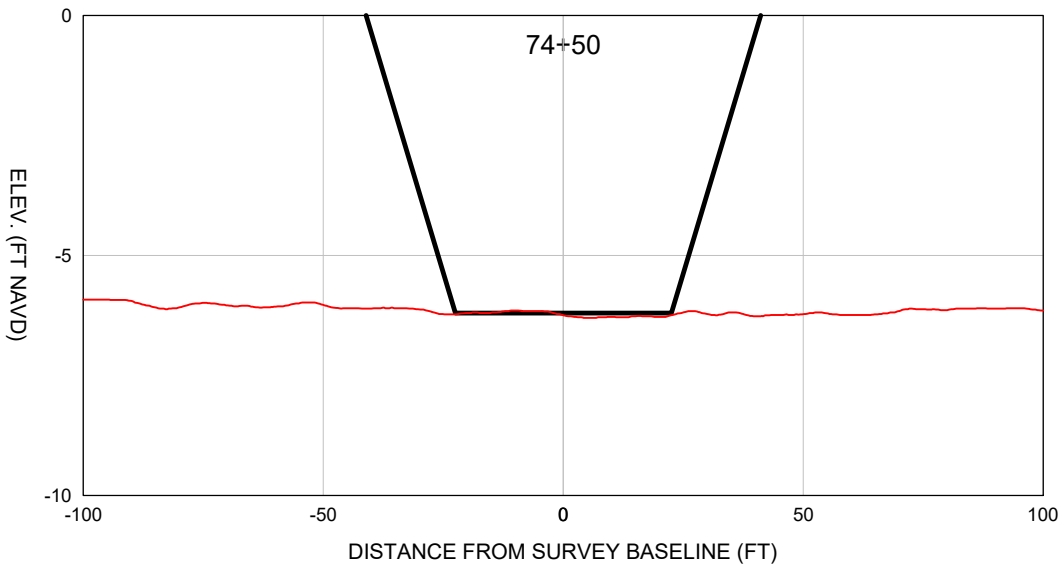
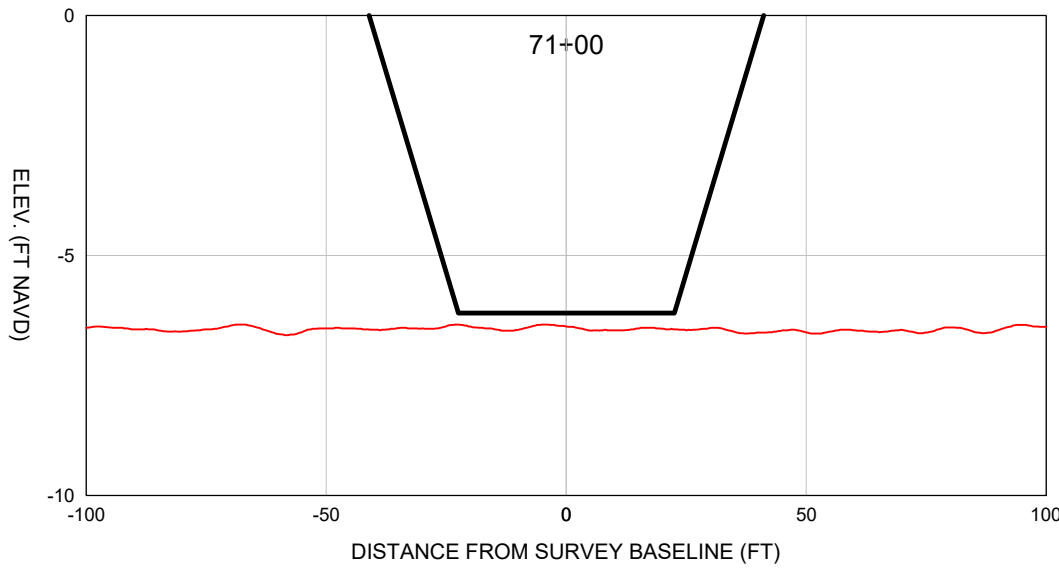
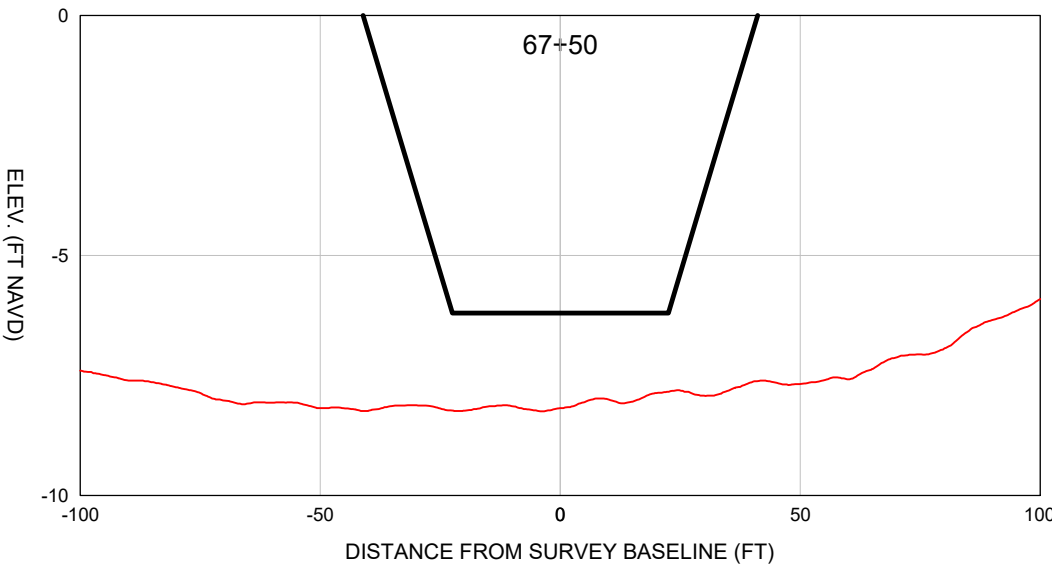
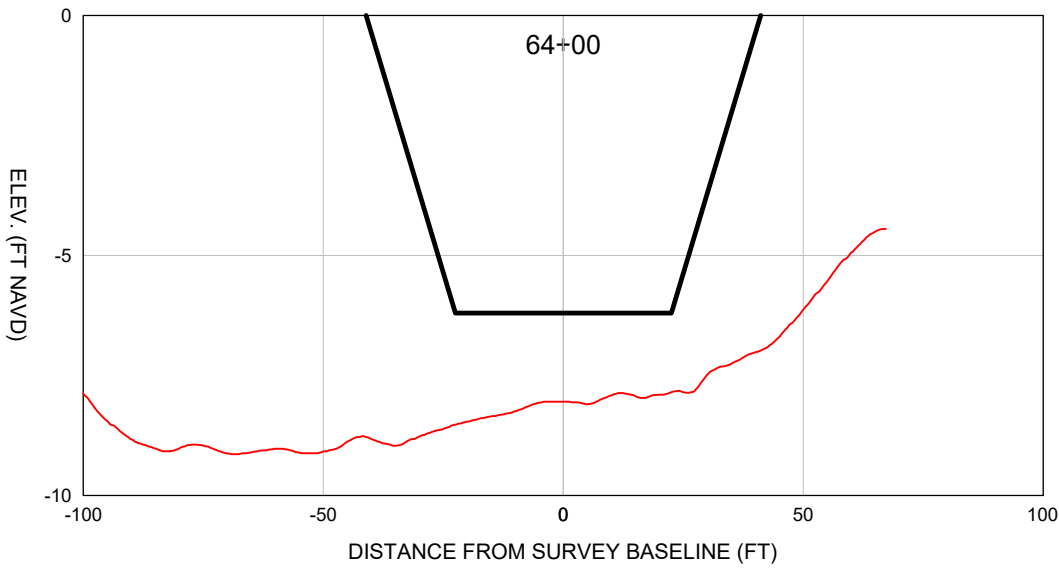
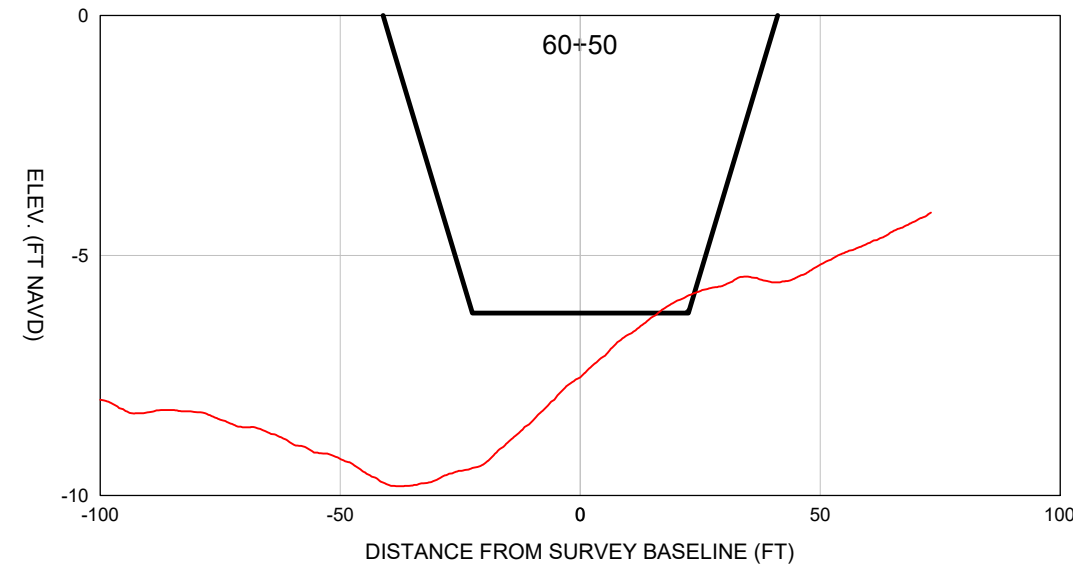
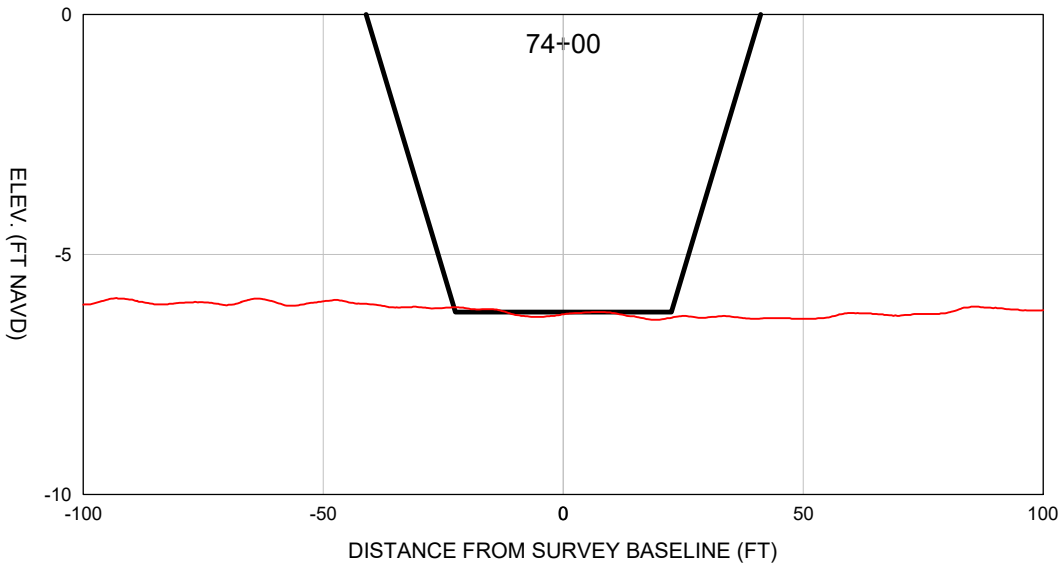
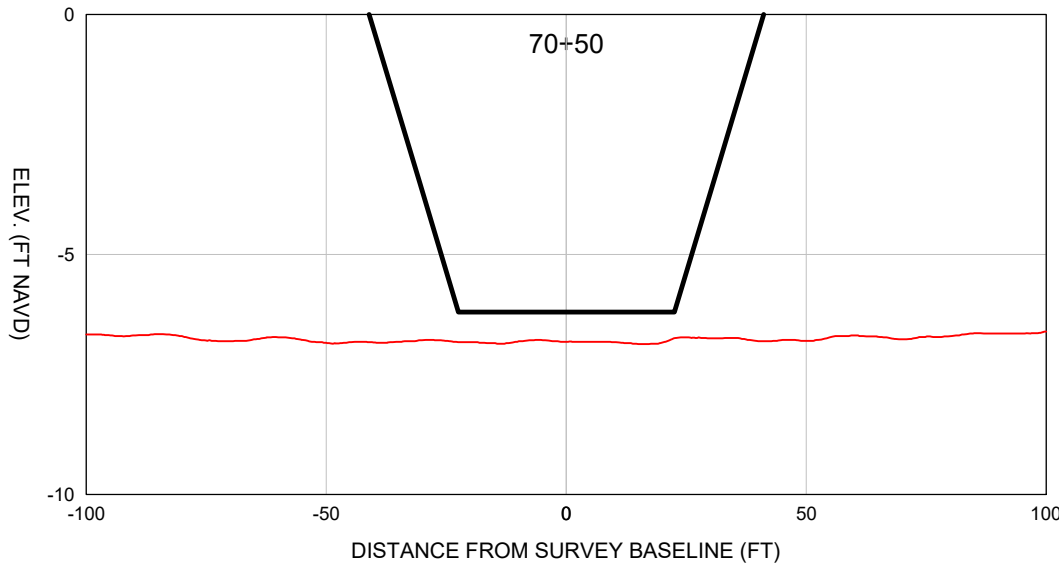
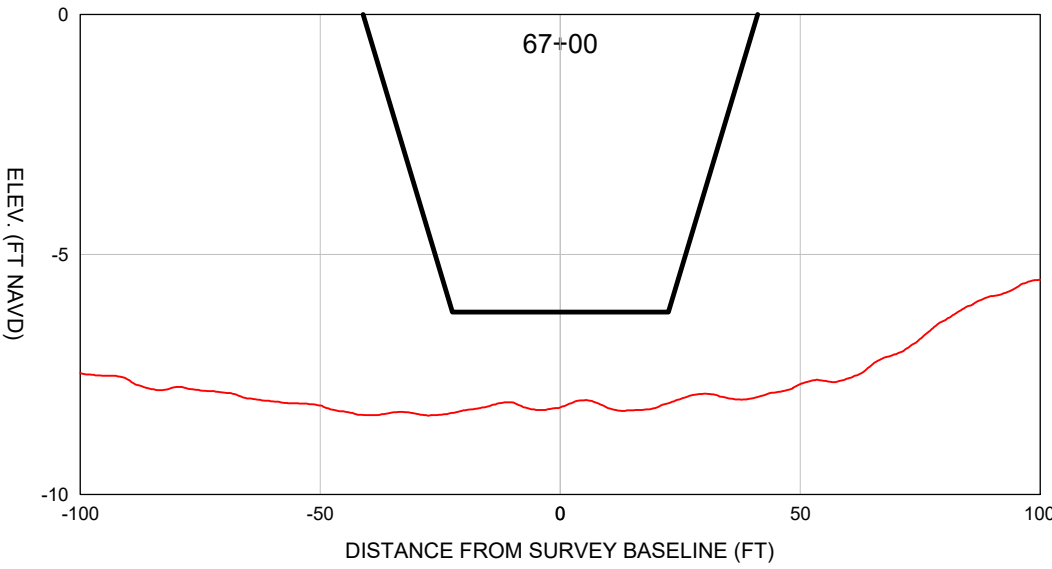
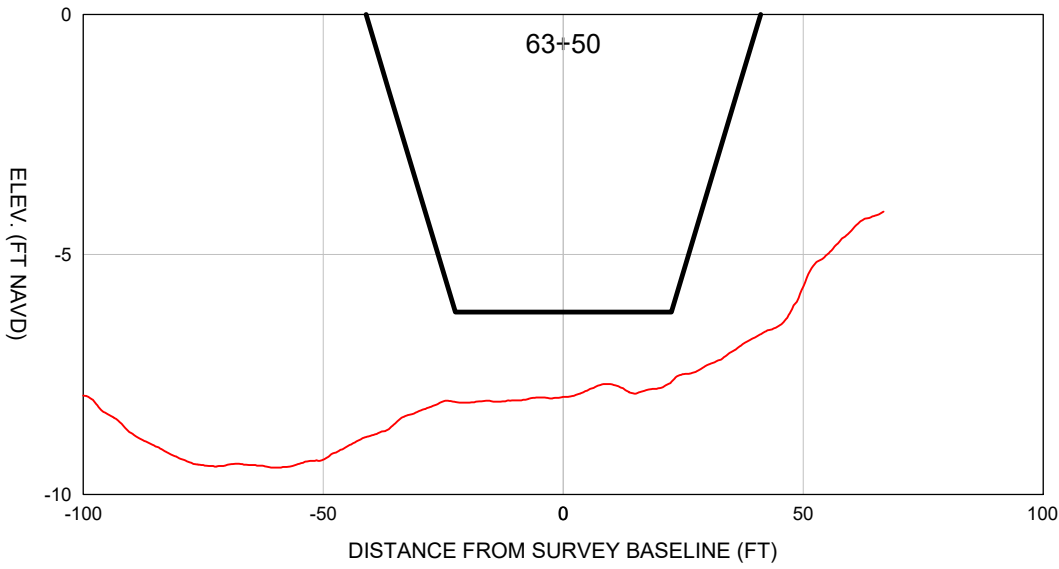
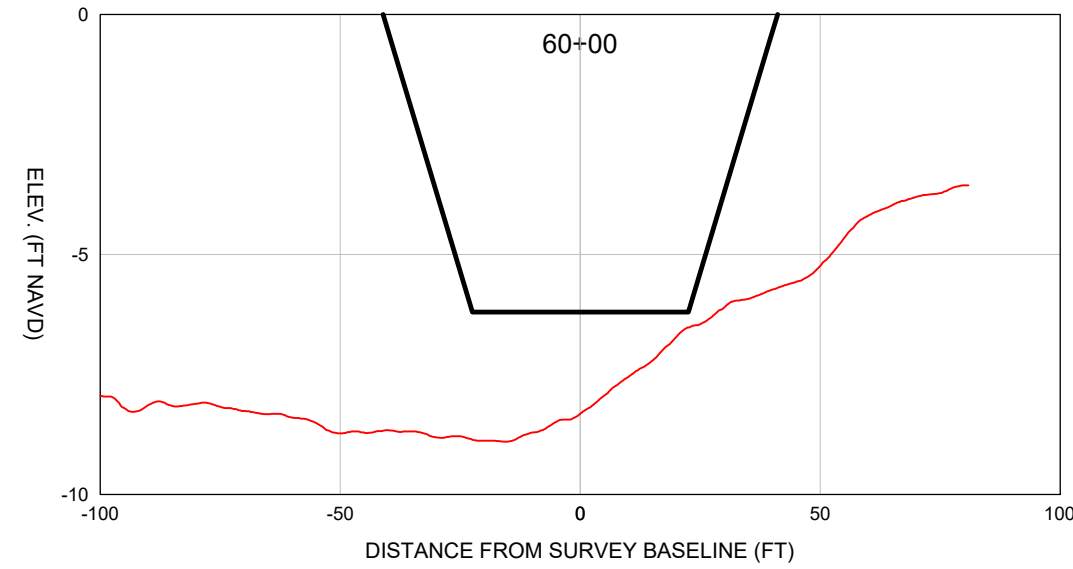
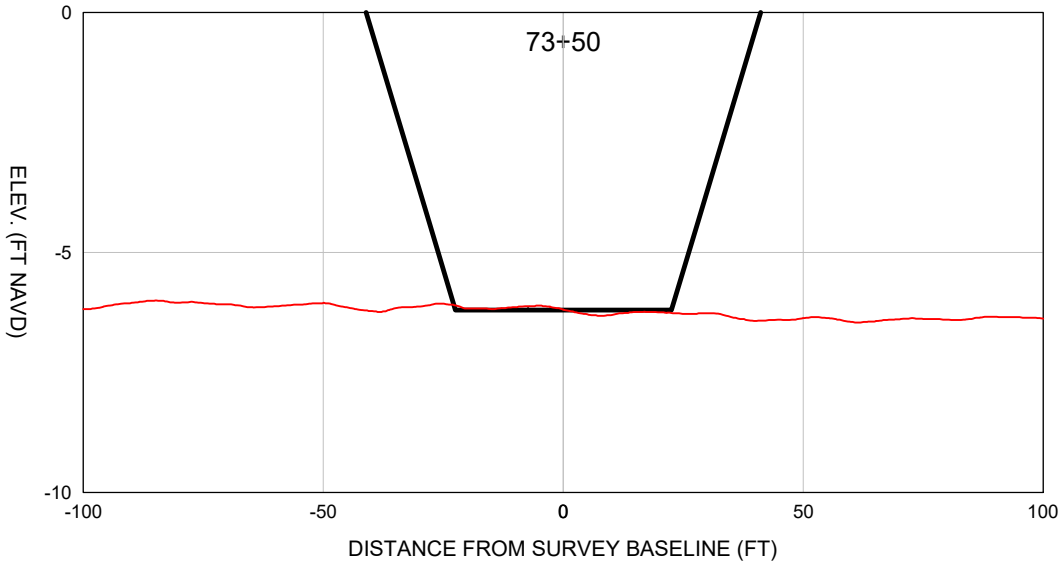
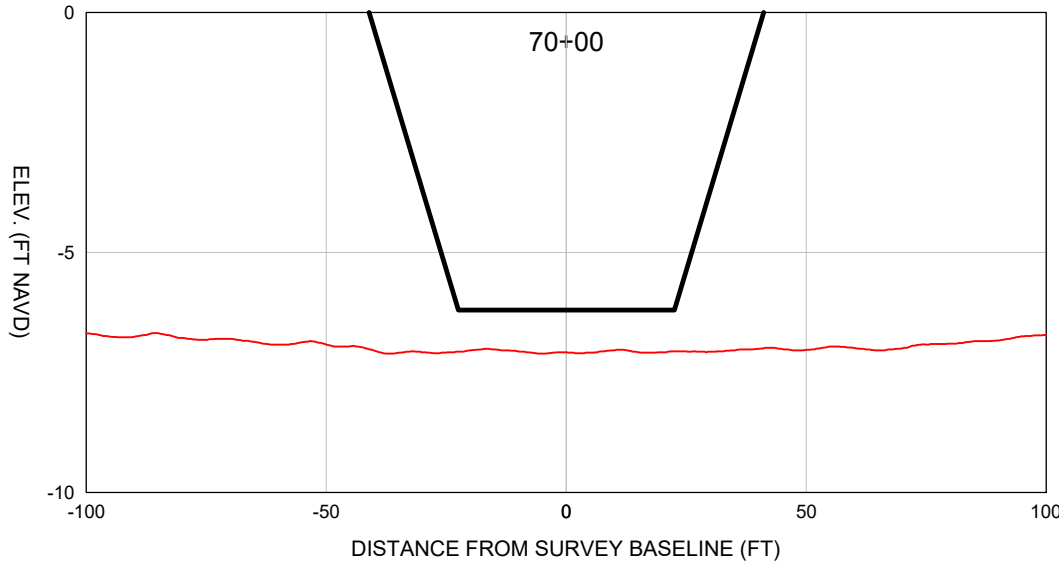
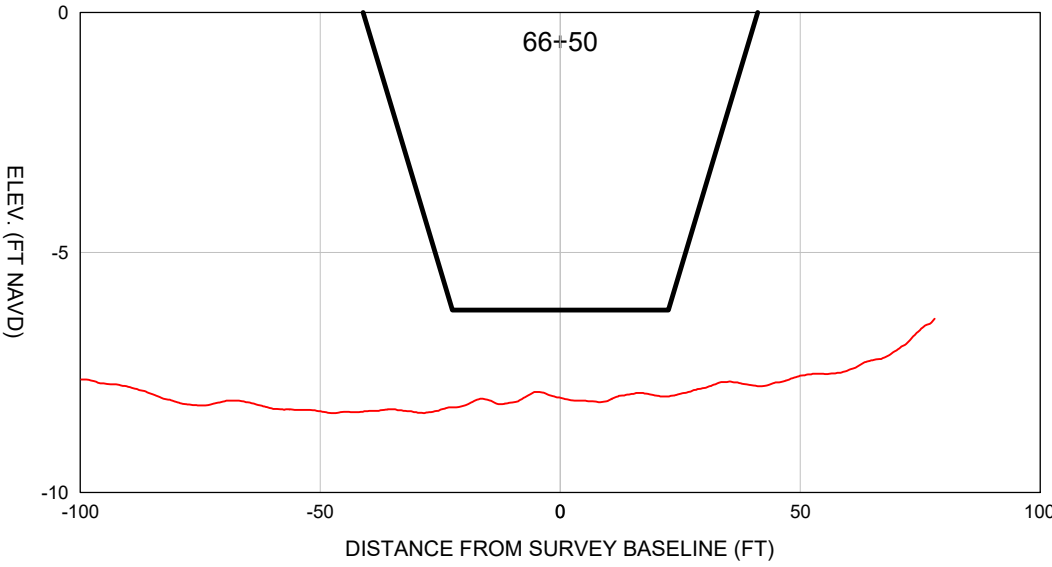
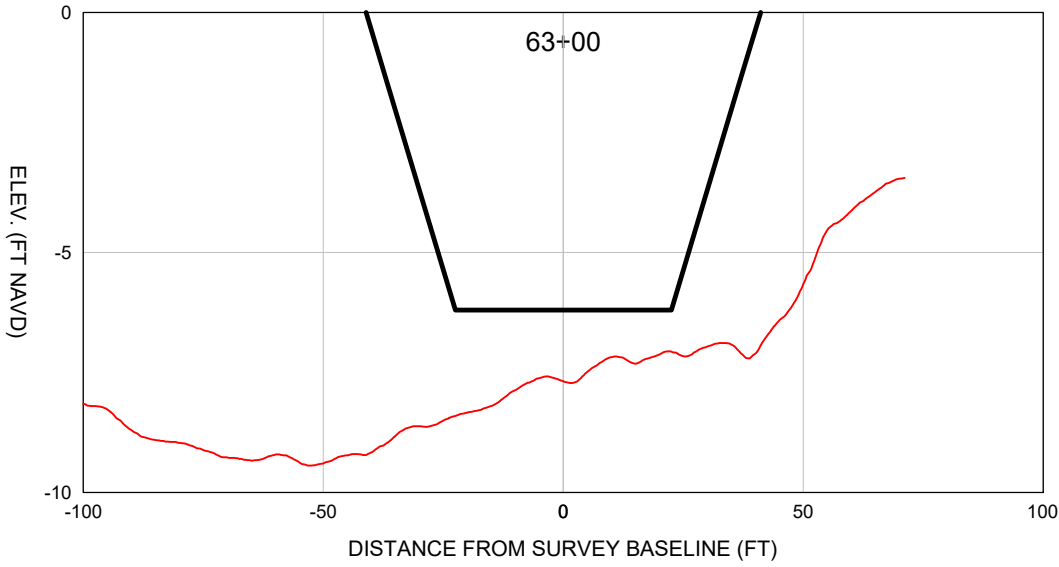
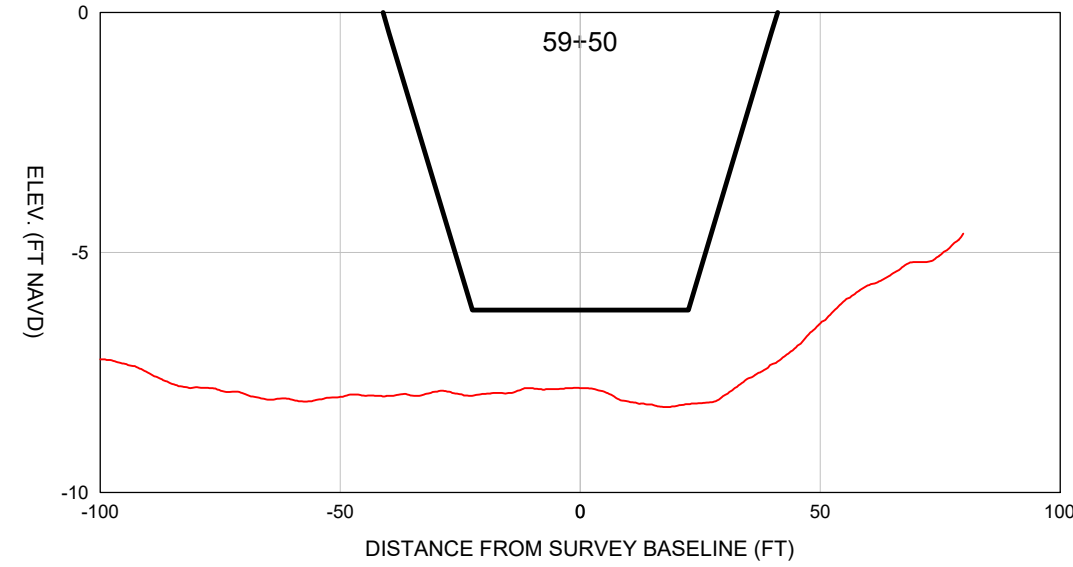
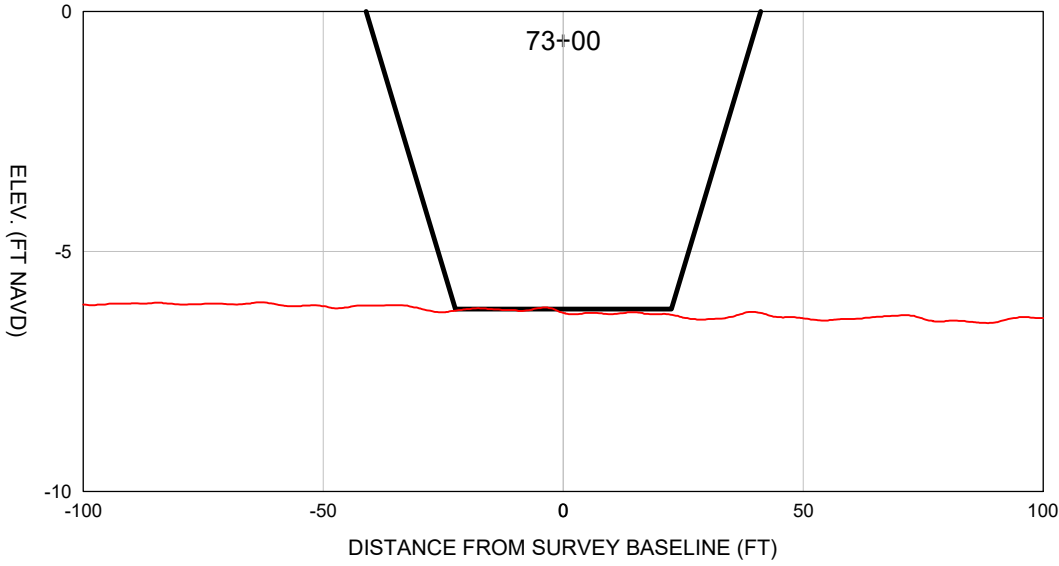
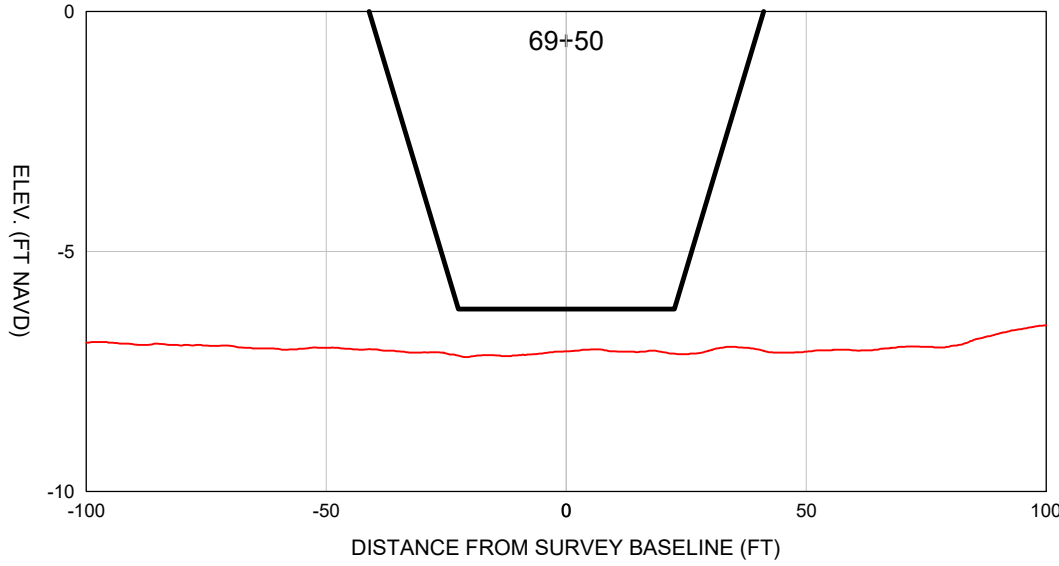
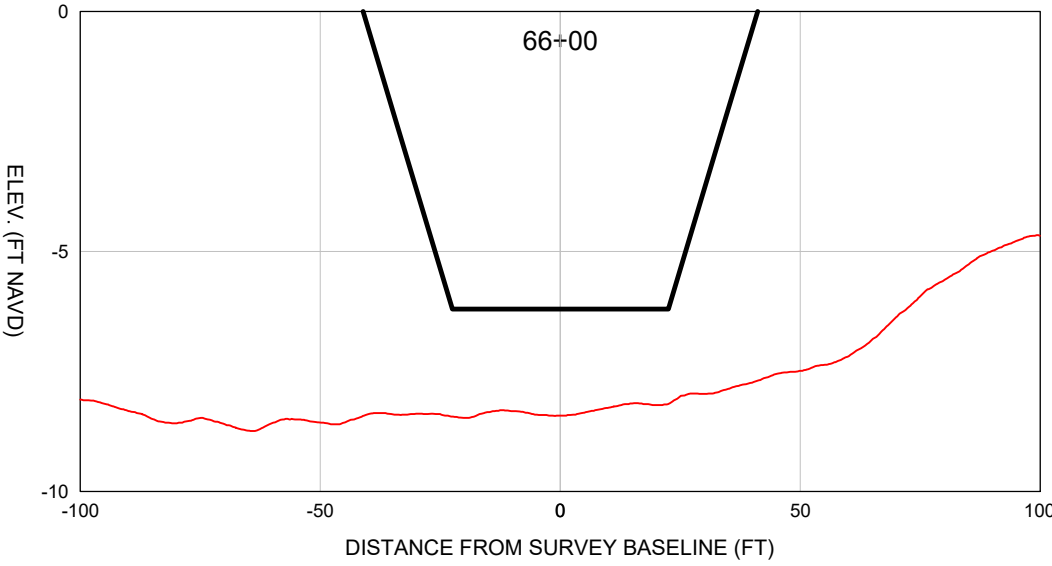
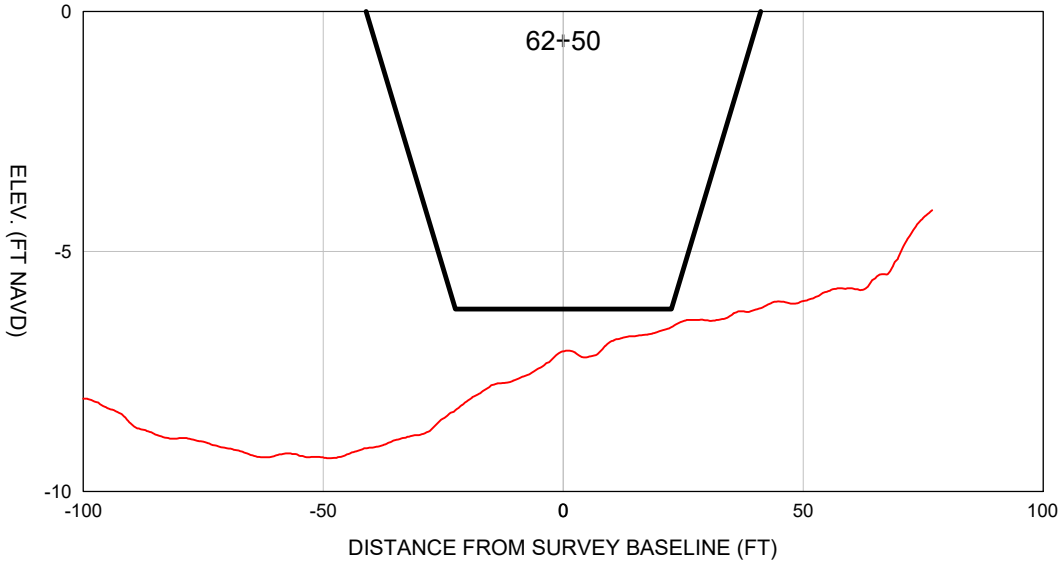
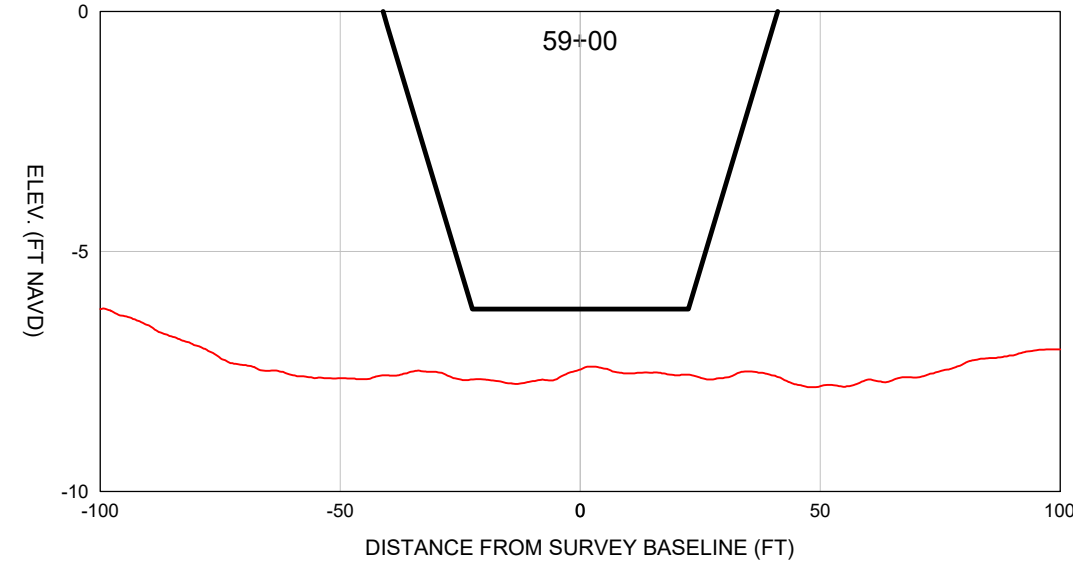
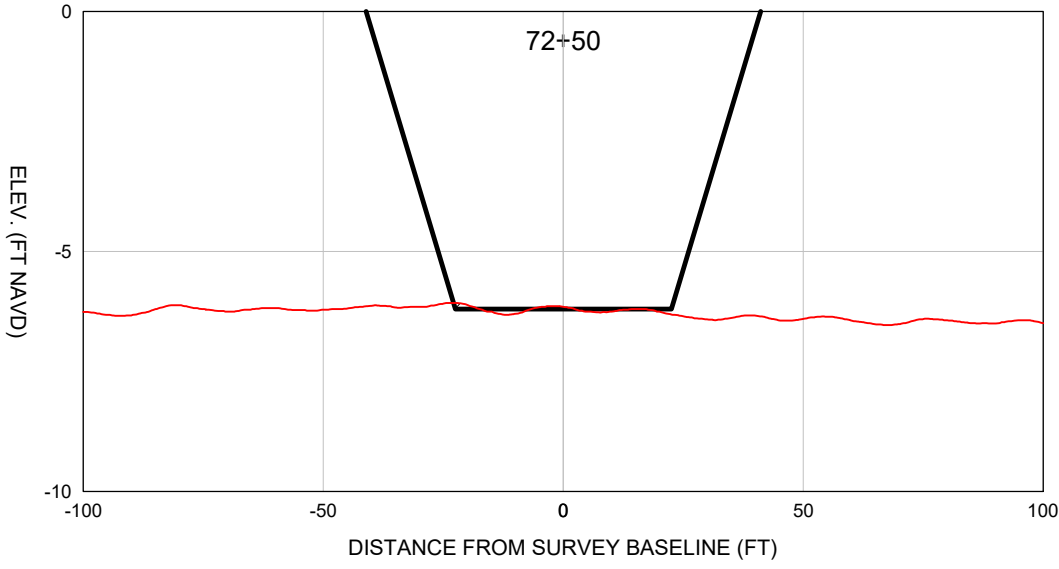
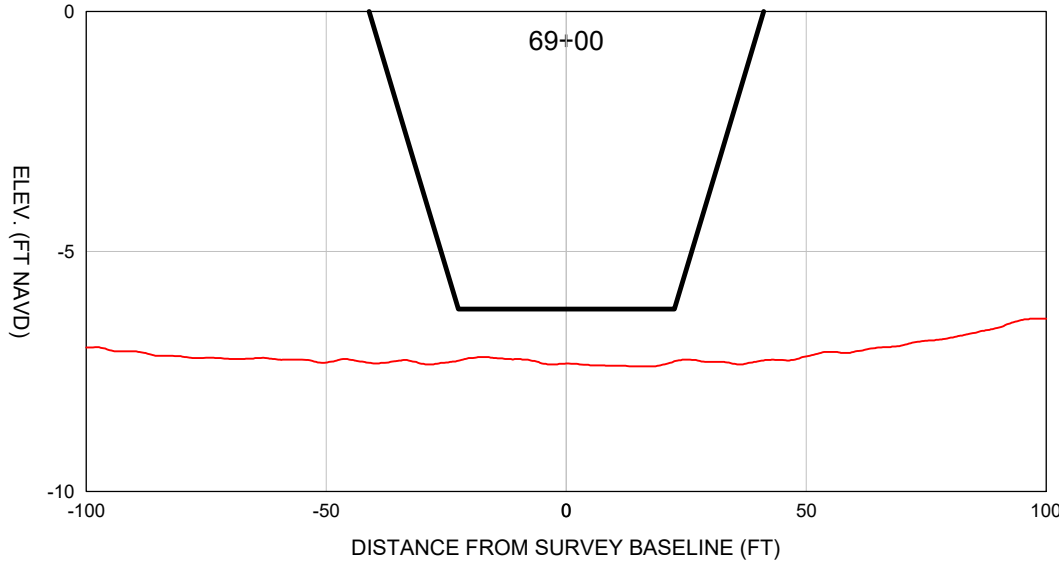
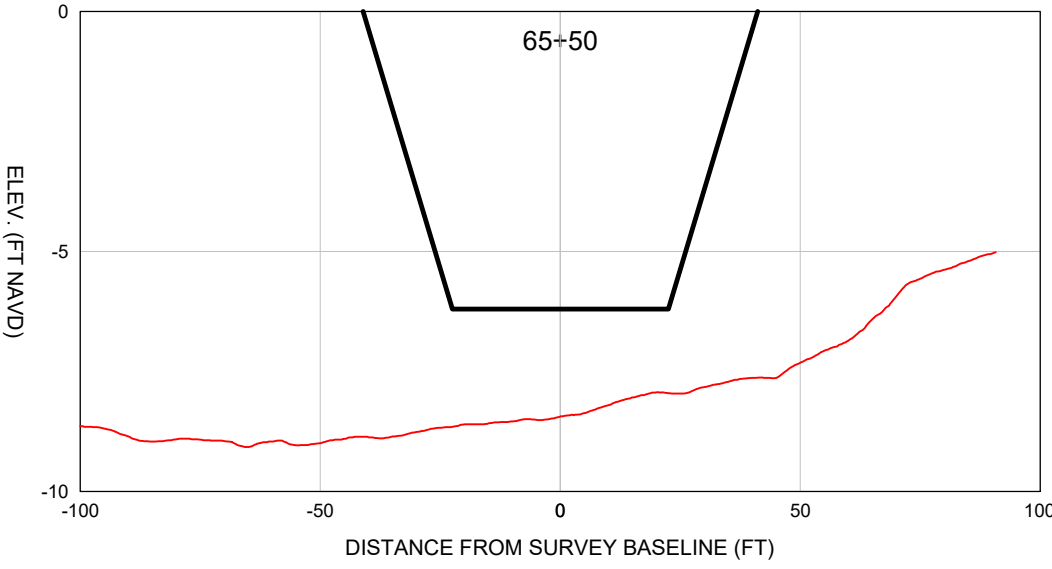
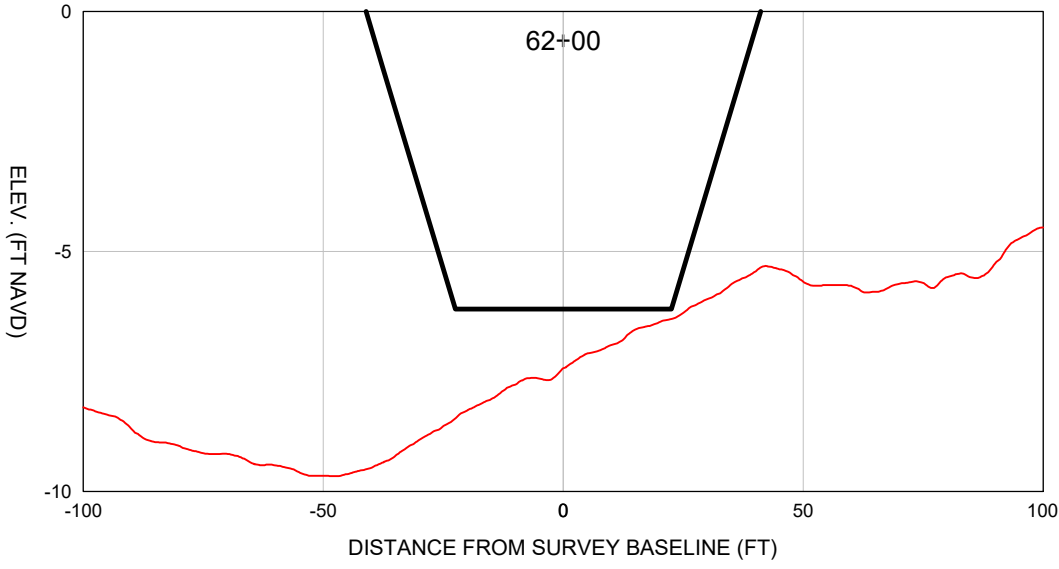
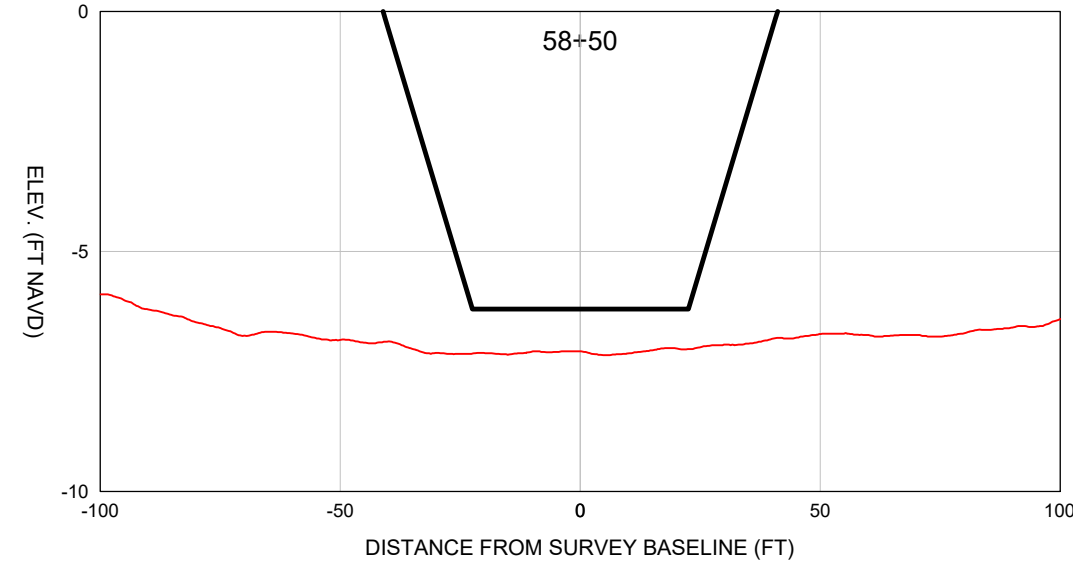
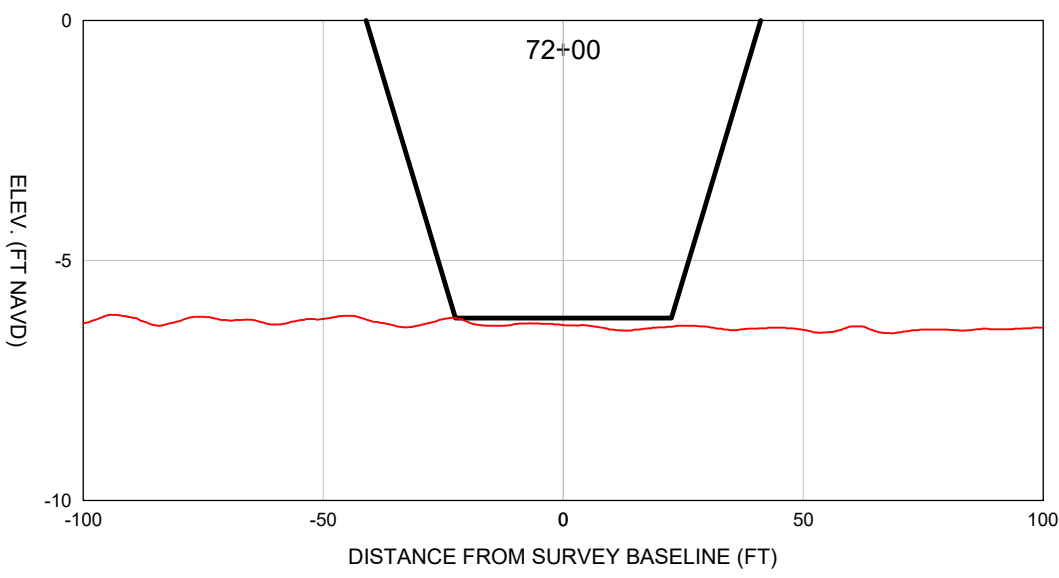
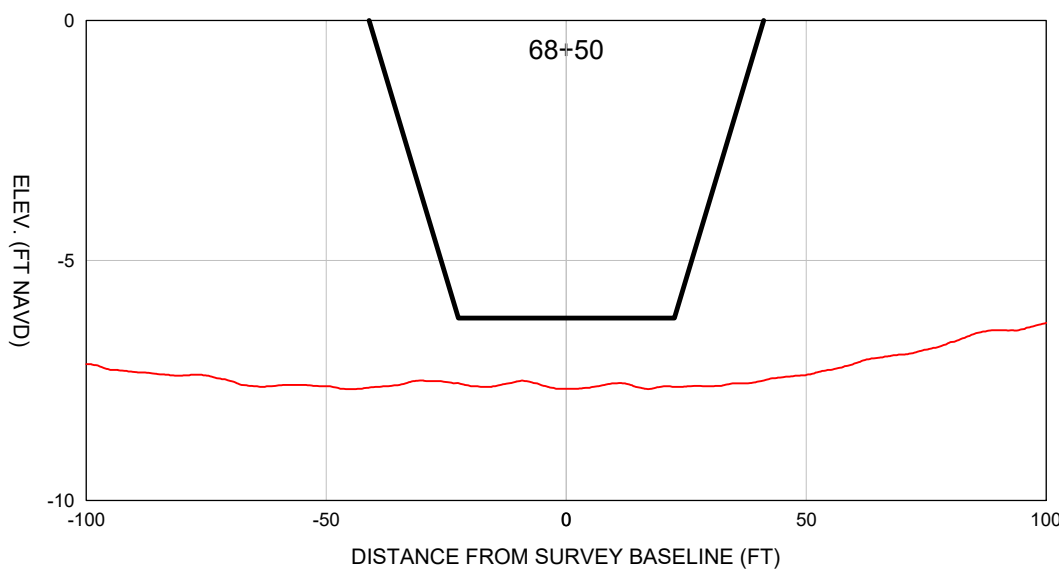
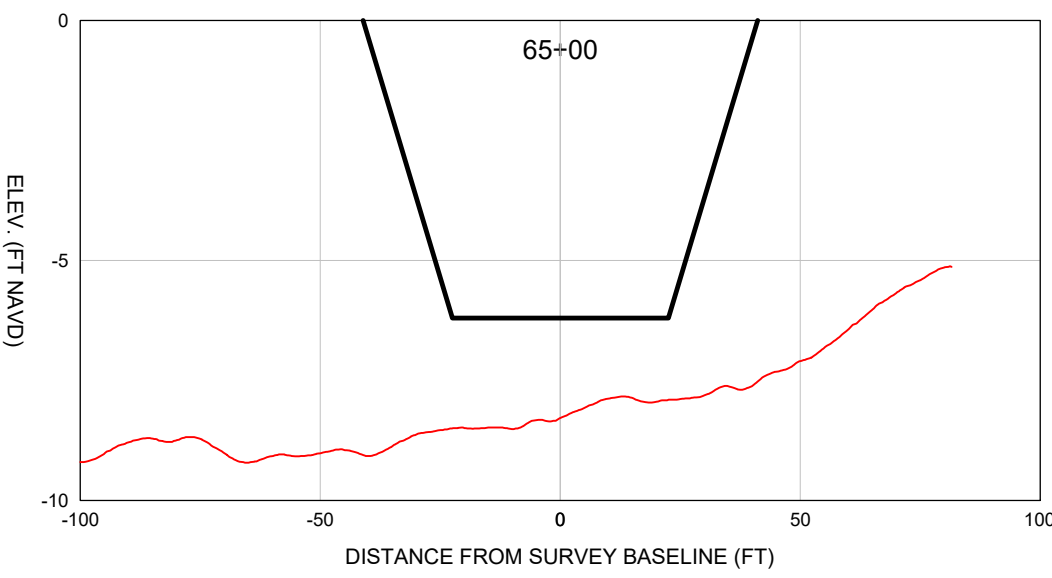
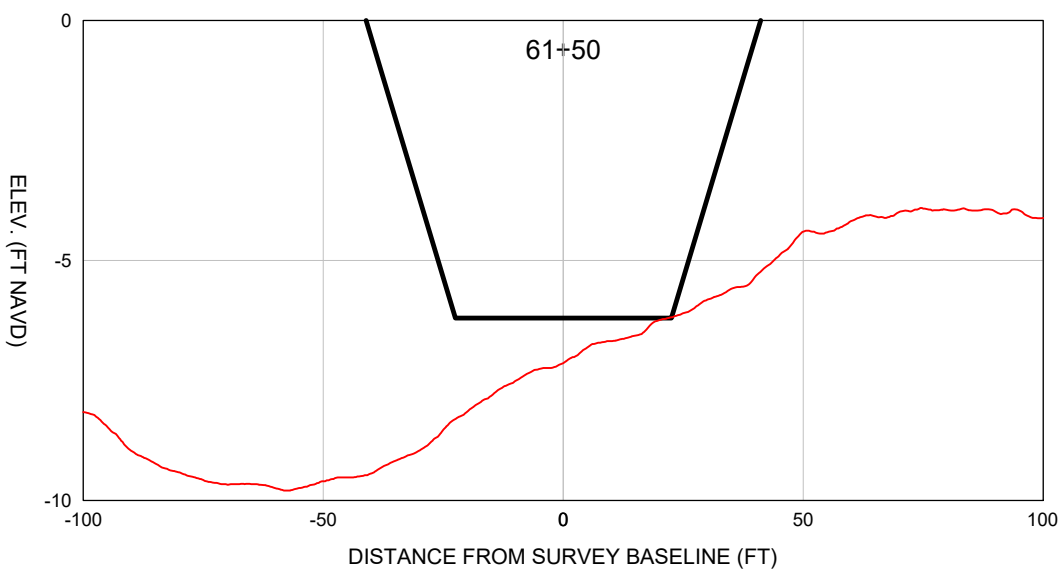
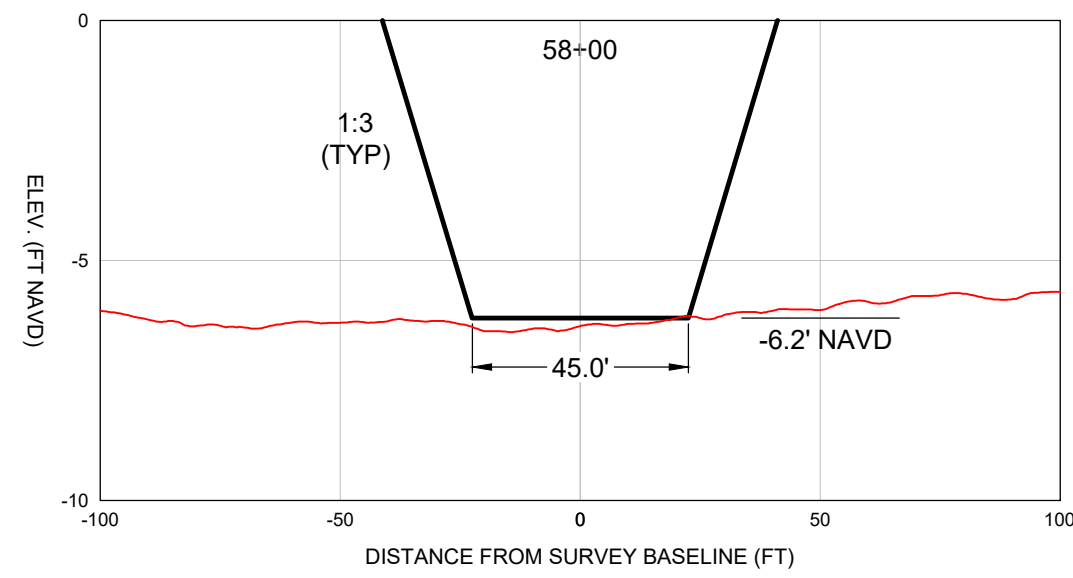
BY
DATE
NO. 22.247

COASTAL
ENGINEERING
CONSULTANTS
INC.

Serving Florida Since 1977
28421 BONITA CROSSINGS BLVD
BONITA SPRINGS, FLORIDA 34135

SHEET 3

FILE NO.: 22247-PH-3



LEGEND
= DREDGE AREA
= EXISTING GRADE
(JULY 2022)

SCALE
H: 1" = 40'
V: 1" = 4'

COASTAL & MARINE ENGINEERING
ENVIRONMENTAL & GEOLOGICAL SERVICES
SURVEY AND MAPPING
ENGINEERING: CA 2464
SURVEYING: LB 2464

PHONE: (239)643-2324
FAX: (239)643-1143
www.coastal-engineering.com
E-Mail: info@cecil.com

CHARLOTTE COUNTY
PIRATE HARBOR
BATHYMETRIC SURVEY
CROSS SECTIONS: 58+00 TO 75+00

CLIENT:
TITLE:

DATE: 8/22/2022
DRAWN: RHG
CHECKED: RJE
SEC. TYP. RING.
ACAD NO. 22247-Pirate Harbor.dwg
REF. NO. 22.247

AS NOTED
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SHEET 4

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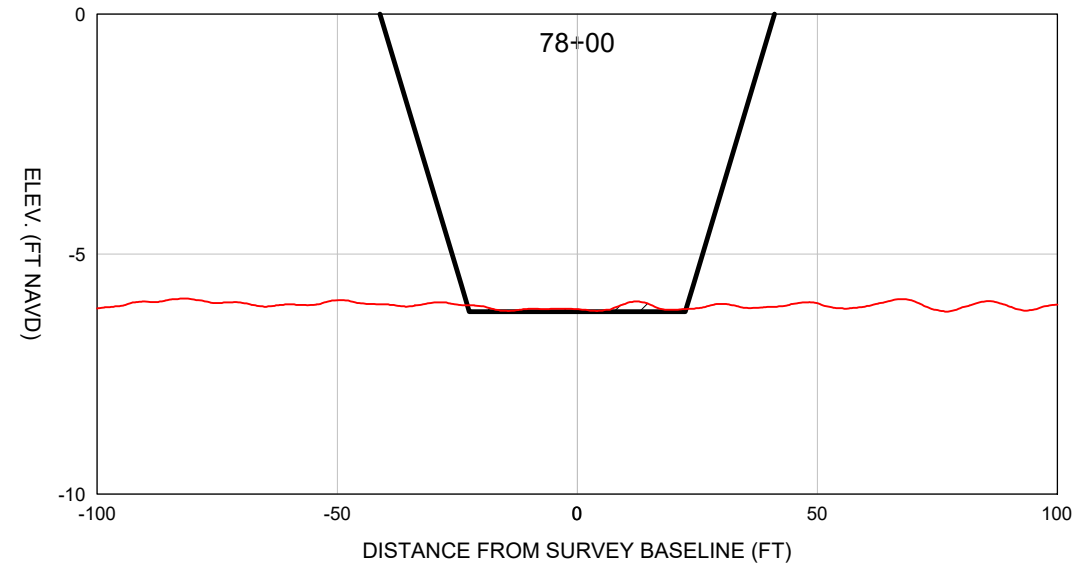
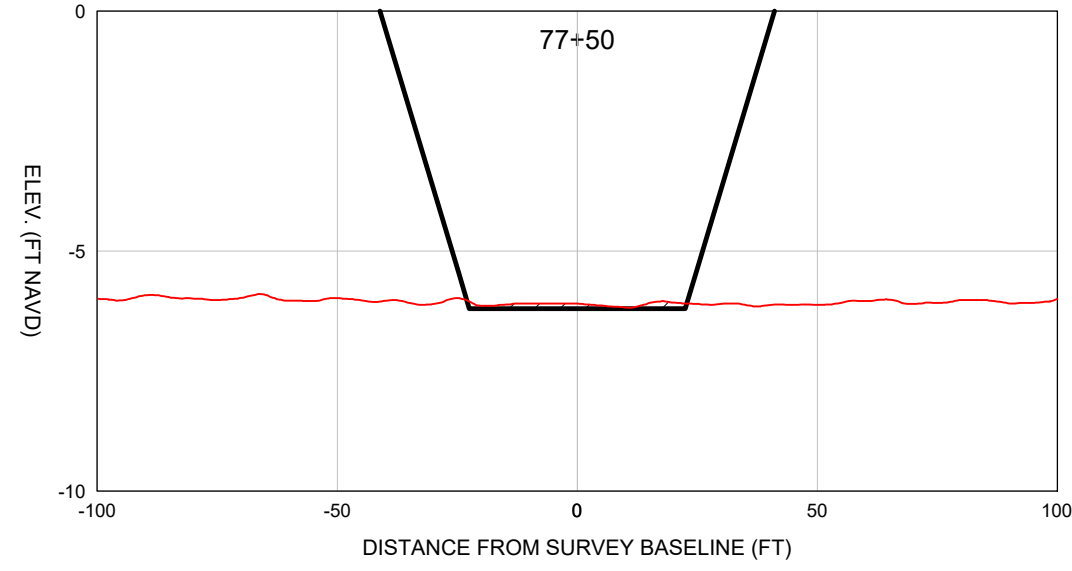
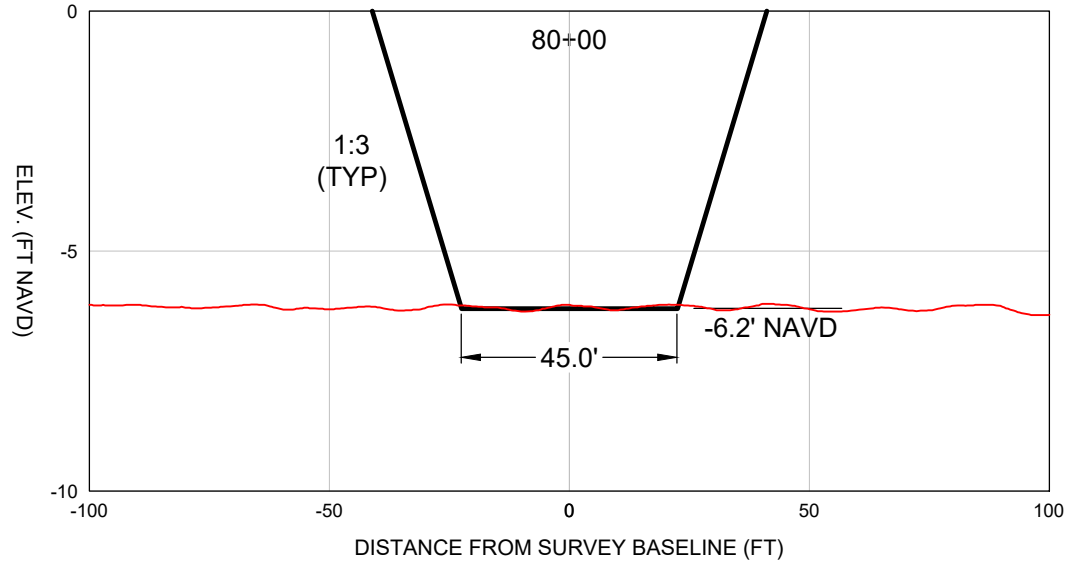
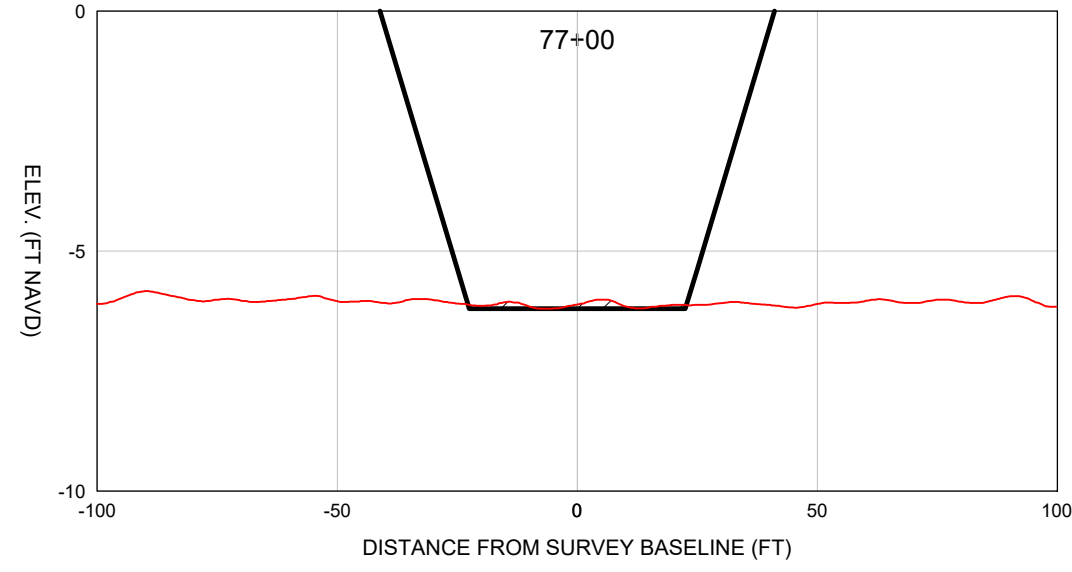
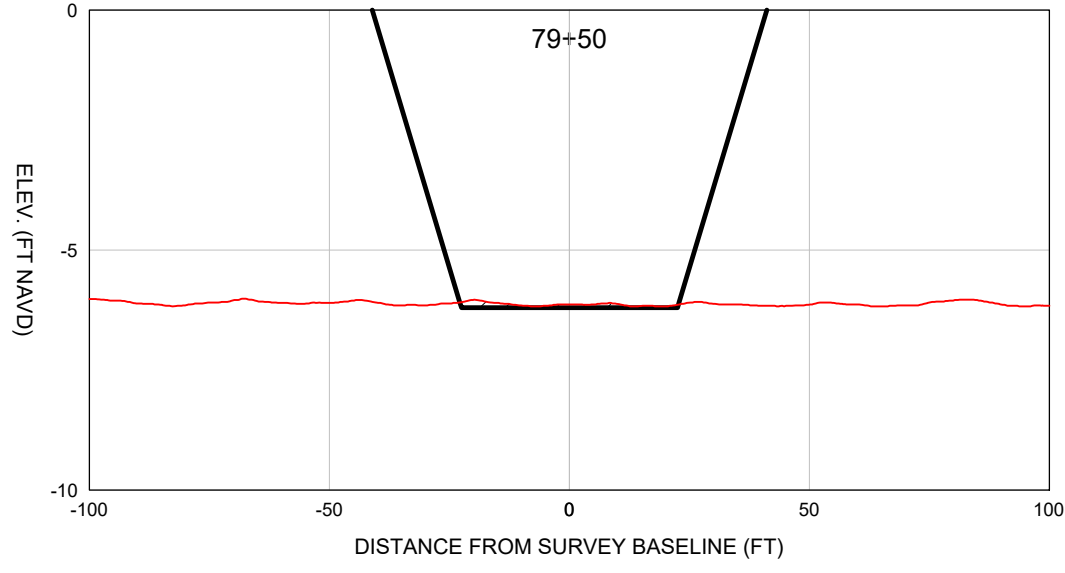
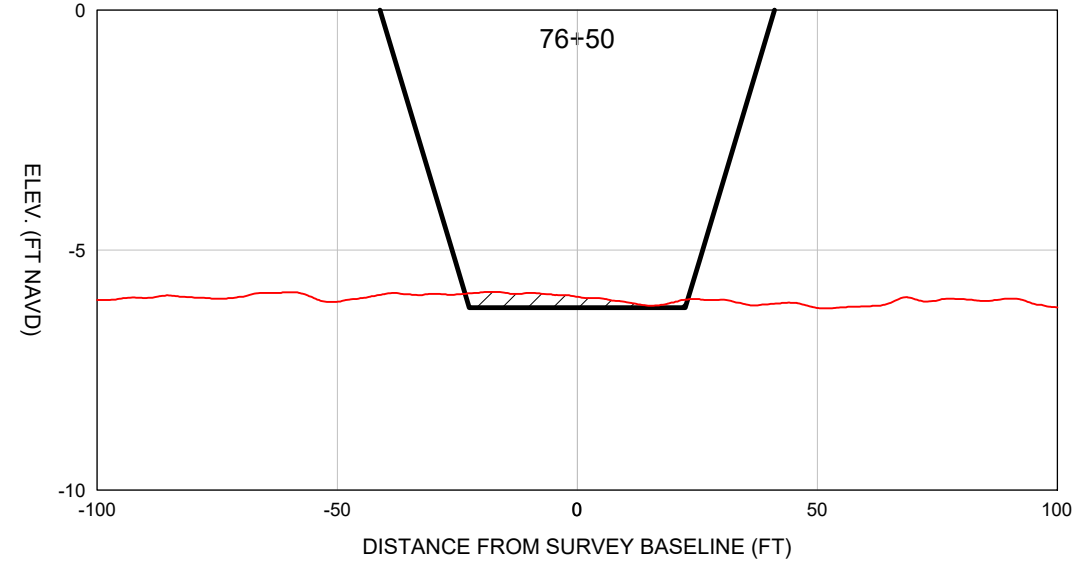
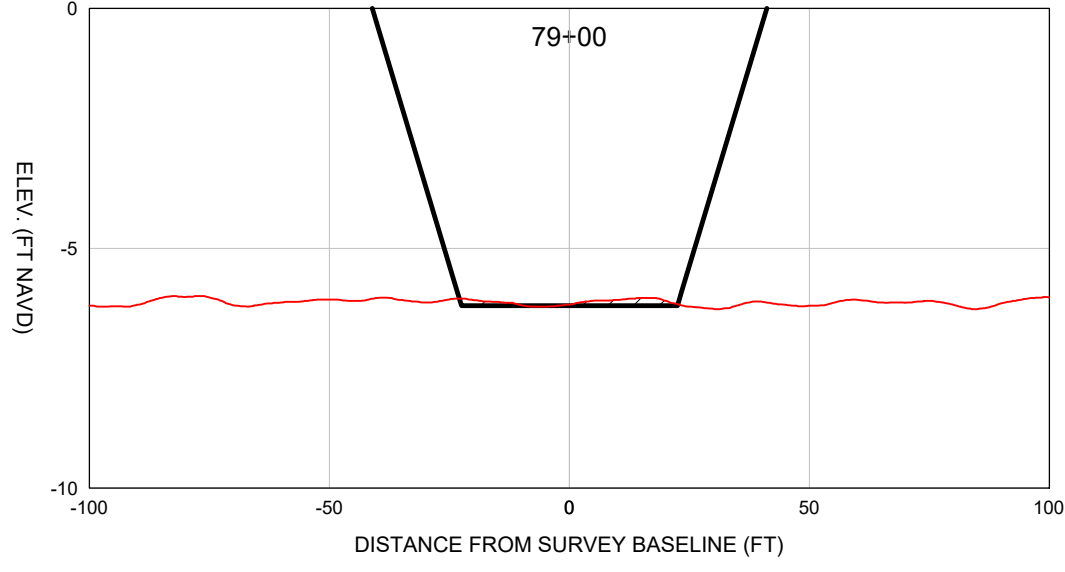
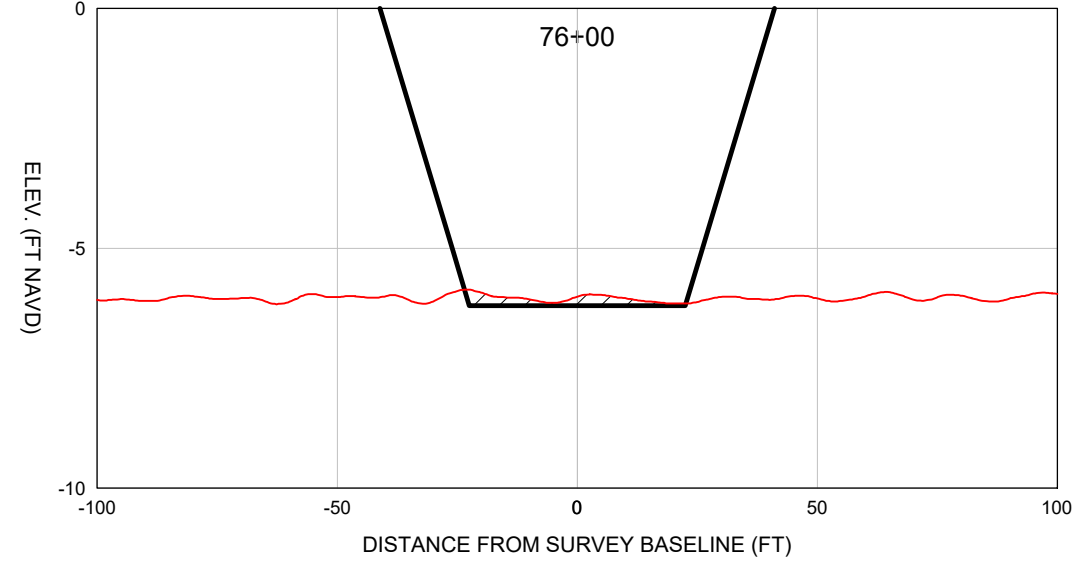
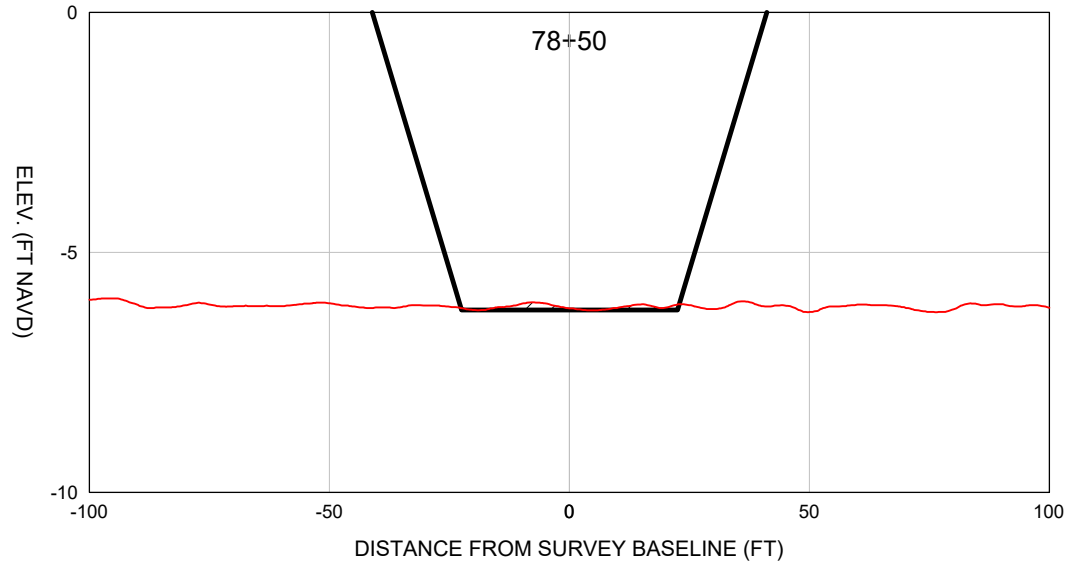
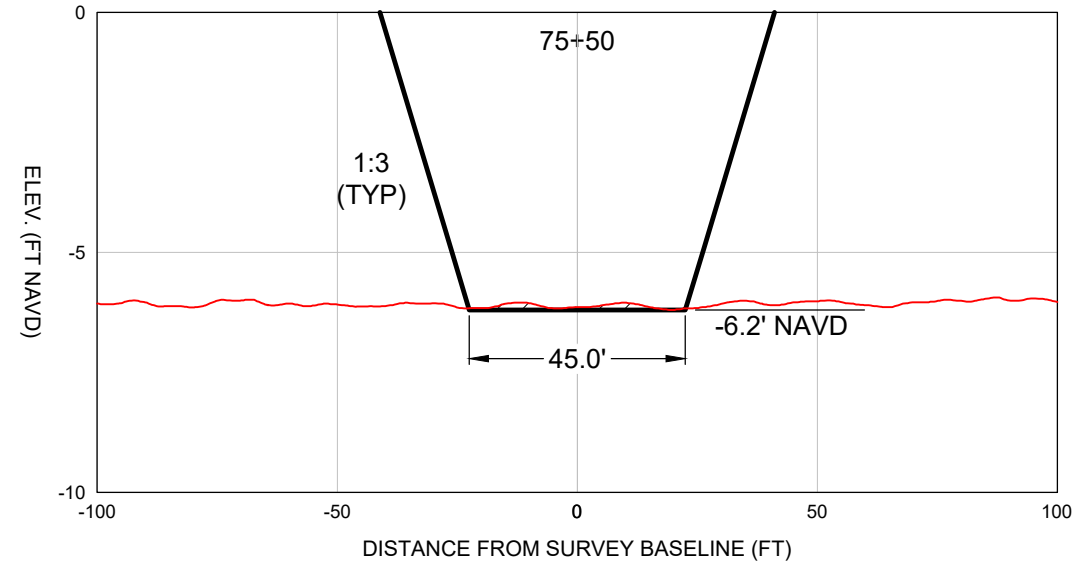
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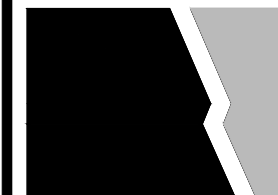


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(JULY 2022)

SCALE

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 Serving Florida Since 1977 28421 BONITA CROSSINGS BLVD BONITA SPRINGS, FLORIDA 34135	COASTAL & MARINE ENGINEERING ENVIRONMENTAL & GEOLOGICAL SERVICES SURVEY AND MAPPING ENGINEERING: CA 2464 SURVEYING: LB 2464		CLIENT: CHARLOTTE COUNTY		DATE: 8/22/2022	SCALE: AS NOTED
	TITLE: PIRATE HARBOR BATHYMETRIC SURVEY CROSS SECTIONS: 75+50 TO 80+00		DRAWN: RHG F.B.		DRAWN: 8/22/2022	SCALE: AS NOTED
	PHONE: (239)643-2324 FAX: (239)643-1143 www.coastaleng.com E-Mail: info@cecil.com		CHECKED: RJE PG.		CHECKED: 8/22/2022	SCALE: AS NOTED
	28421 BONITA CROSSINGS BLVD BONITA SPRINGS, FLORIDA 34135		SEC. TWP. RING.		SEC. TWP. RING.	SCALE: AS NOTED
28421 BONITA CROSSINGS BLVD BONITA SPRINGS, FLORIDA 34135		ACAD NO. 22247-Pirate Harbor.dwg		REF. NO. 22.247		REF. NO. 22.247
SHEET 5		BY		DATE		DATE
FILE NO.: 22247-PH-5		REVISION DESCRIPTION		NO.		NO.