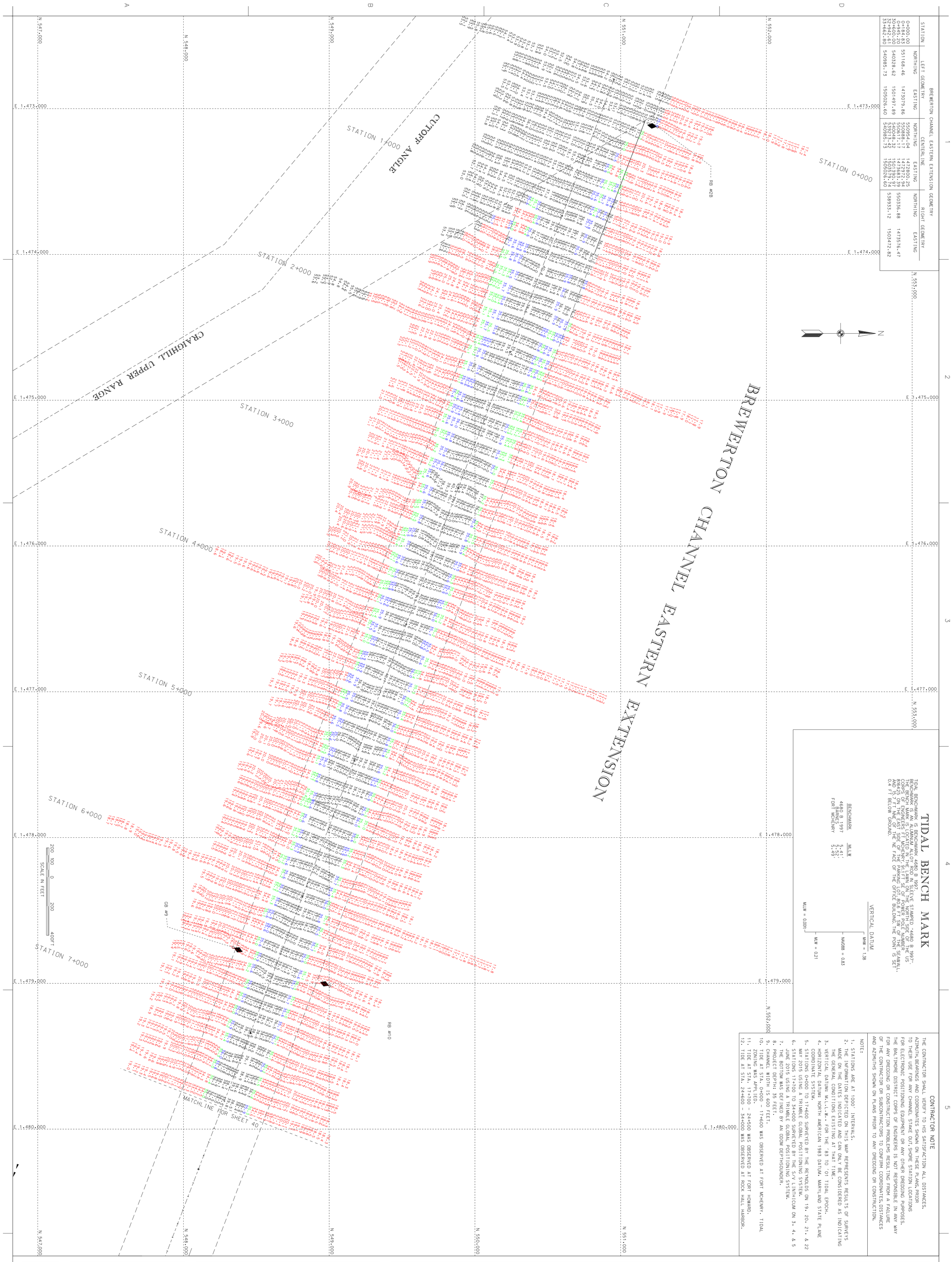

BREWERTON CHANNEL EASTERN EXTENSION GEOMETRY

STATION	LEFT GEOMETRY NORTHING	LEFT GEOMETRY EASTING	CENTERLINE NORTHING	CENTERLINE EASTING	RIGHT GEOMETRY NORTHING	RIGHT GEOMETRY EASTING
0+000.00	511168.46	1473079.86	550954.04	1472800.25	550336.88	1473576.47
0+184.83	540328.62	1501497.89	550617.17	1472972.94	538933.12	1503472.82
0+945.20	540985.73	1505026.60	549218.32	1473683.39		
30+800.00			539218.32	1503379.74		
33+662.80			540985.73	1505026.60		

TIDAL BENCH MARK

TIDAL BENCHMARK IS BENCHMARK 4680 B 1997 SLEEVE STAMPED "4680 B 1997". BENCHMARK IS LOCATED ALONG THE NORTH SIDE OF THE US CORPS OF ENGINEERS FT MCHENRY 911 FT SE OF POWER POLE NUMBER 816425 ON THE EAST SIDE OF THE PARKING LOT. 80.6 FT SW OF THE SEAWALL. AND 15.7 FT NORTHWESTERLY OF THE NE FACE OF THE OFFICE BUILDING. THE POINT IS SET 0.4 FT BELOW GROUND.

BENCHMARK	MLLW
4680 B 1997	5.41'
BALTIMORE	5.49'
FORT MCHENRY	

VERTICAL DATUM

MHW = 1.38

NAVD88 = 0.83

MLW = 0.21

MLLW = 0.00

CONTRACTOR NOTE

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NOTE:

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3. VERTICAL DATUM: M.L.L.W. FOR THE '83 TO '01 TIDAL EPOCH.
4. HORIZONTAL DATUM: NORTH AMERICAN 1983 DATUM. MARYLAND STATE PLANE COORDINATE SYSTEM.
5. STATIONS 0+000 TO 17+600 SURVEYED BY THE REYNOLDS ON 19, 20, 21, & 22 MAY 2015 USING A TRIMBLE GLOBAL POSITIONING SYSTEM.
6. STATIONS 17+700 TO 34+000 SURVEYED BY THE S/V LINTHICUM ON 3, 4, & 5 JUNE 2015 USING A TRIMBLE GLOBAL POSITIONING SYSTEM.
7. THE BOTTOM WAS DEFINED BY AN ODOM DEPTHSOUNDER.
8. PROJECT DEPTH: 35 FEET.
9. CHANNEL WIDTH IS 600 FEET.
10. TIDE AT STA. 0+000 - 17+600 WAS OBSERVED AT FORT MCHENRY. TIDAL ZONING WAS APPLIED.
11. TIDE AT STA. 17+700 - 24+500 WAS OBSERVED AT FORT HOWARD.
12. TIDE AT STA. 24+600 - 34+000 WAS OBSERVED AT ROCK HALL HARBOR.

Sheet reference number: V-139
Sheet 39 of 59

BALTIMORE HARBOR
MARYLAND

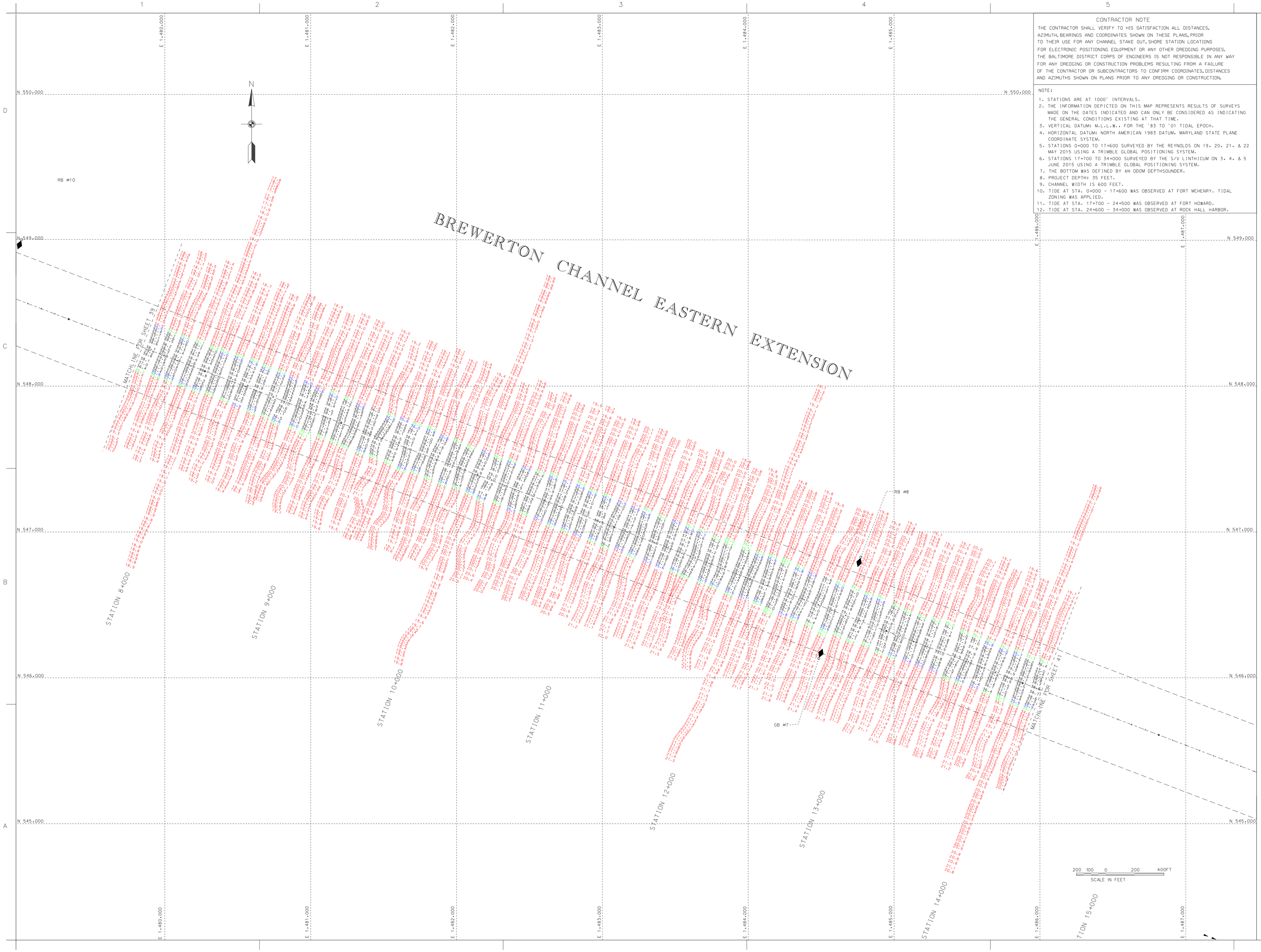
CONDITION SURVEY
BREWERTON CHANNEL EASTERN EXTENSION
STATION 0+000 TO 7+500

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

Designed by:		Date: JUNE '15	Rev.
Dwn by: JAH	Ckd by: SMC	Design file no. FILE: 17 MAP: 15-093	
Reviewed by: SMG		Drawing code:	
Submitted by:		File name: BH_11_BE_20150522 Plot date: Plot scale:	

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.

US Army Corps of Engineers
Baltimore District



CONTRACTOR NOTE

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11. TIDE AT STA. 17+700 - 24+500 WAS OBSERVED AT FORT HOWARD.
12. TIDE AT STA. 24+600 - 34+000 WAS OBSERVED AT ROCK HALL HARBOR.

US Army Corps of Engineers
Baltimore District

Mark	Description	Date	Appr.

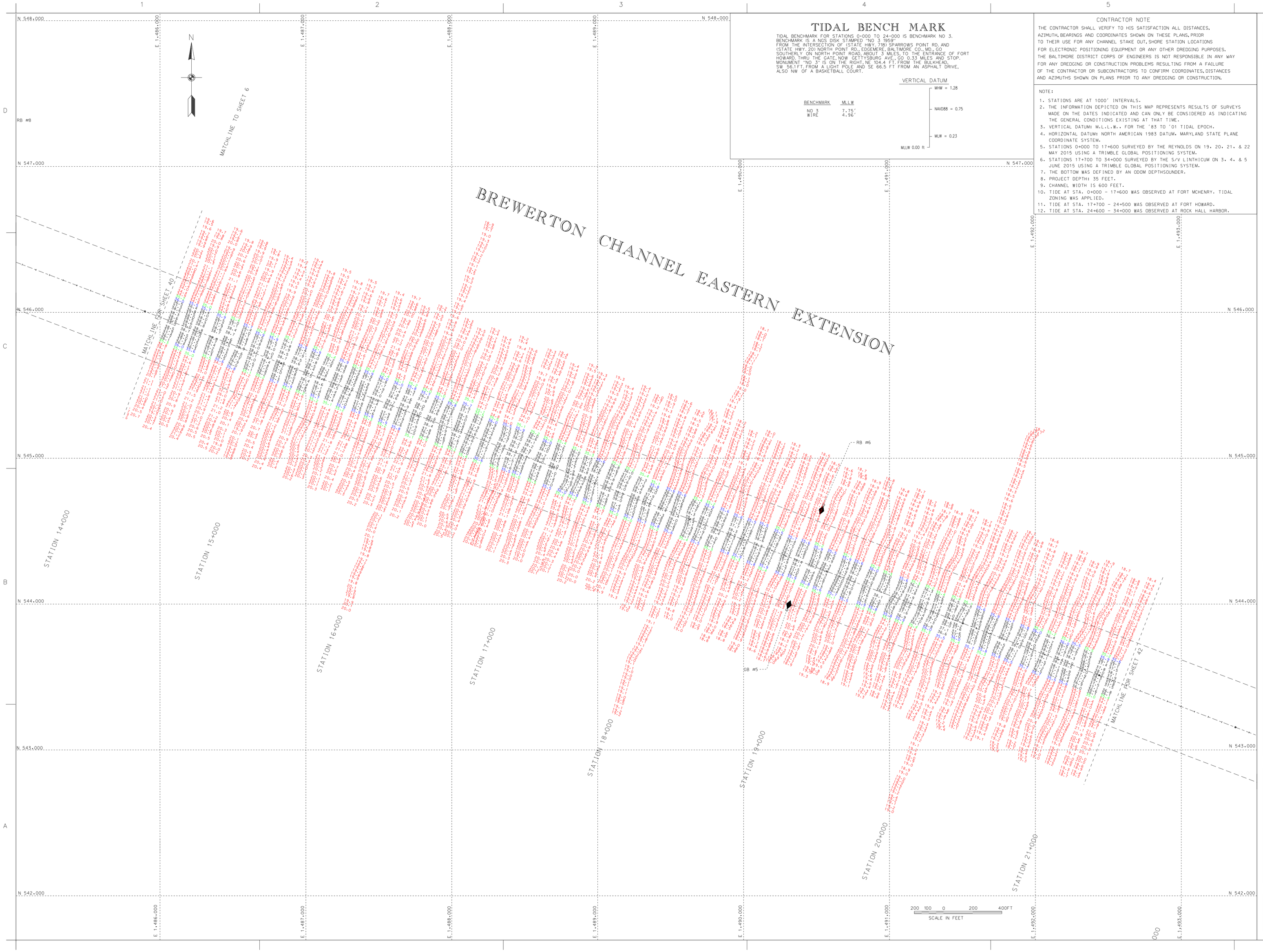
U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

Designed by:
Date: 08/05/15
Dwn by: JMB
Cad by: JMB
Design file no.: 2015-01-094
Drawing code:
Reviewed by: SAG
Submitted by:
File name: Rev_C_BE_20150522
Plot date:
Plot scale:
Rev.

BALTIMORE HARBOR
MARYLAND

CONDITION SURVEY
BREWERTON CHANNEL EASTERN EXTENSION
STATION 7+600 TO 14+100

Sheet reference number:
V-140
Sheet 40 of 59



TIDAL BENCH MARK

TIDAL BENCHMARK FOR STATIONS 0+000 TO 24+000 IS BENCHMARK NO 3. BENCHMARK IS A NGS DISK STAMPED "NO 3 1959". FROM THE INTERSECTION OF (STATE HWY.716) SPARROWS POINT RD. AND (STATE HWY. 20) NORTH POINT RD., EDGEMERE, BALTIMORE, CO., MD., GO SOUTHERLY ON NORTH POINT ROAD, ABOUT .3 MILES, TO THE ENTRANCE OF FORT HOWARD. THRU THE GATE, NOW GETTYSBURG AVE., GO 0.33 MILES AND STOP. MONUMENT "NO 3" IS ON THE RIGHT, NE 104.4 FT. FROM THE BULKHEAD, SW 56.1FT. FROM A LIGHT POLE AND SE 66.5 FT FROM AN ASPHALT DRIVE, ALSO NW OF A BASKETBALL COURT.

BENCHMARK	MLLW
NO 3	7.75'
WIRE	4.96'

VERTICAL DATUM

- MHW = 1.28
- NAVD88 = 0.75
- MLW = 0.23
- MLLW 0.00 ft

CONTRACTOR NOTE

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8. PROJECT DEPTH: 35 FEET.
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11. TIDE AT STA. 17+700 - 24+500 WAS OBSERVED AT FORT HOWARD.
12. TIDE AT STA. 24+600 - 34+000 WAS OBSERVED AT ROCK HALL HARBOR.

US Army Corps of Engineers
Baltimore District

Mark	Description	Date	Appr.

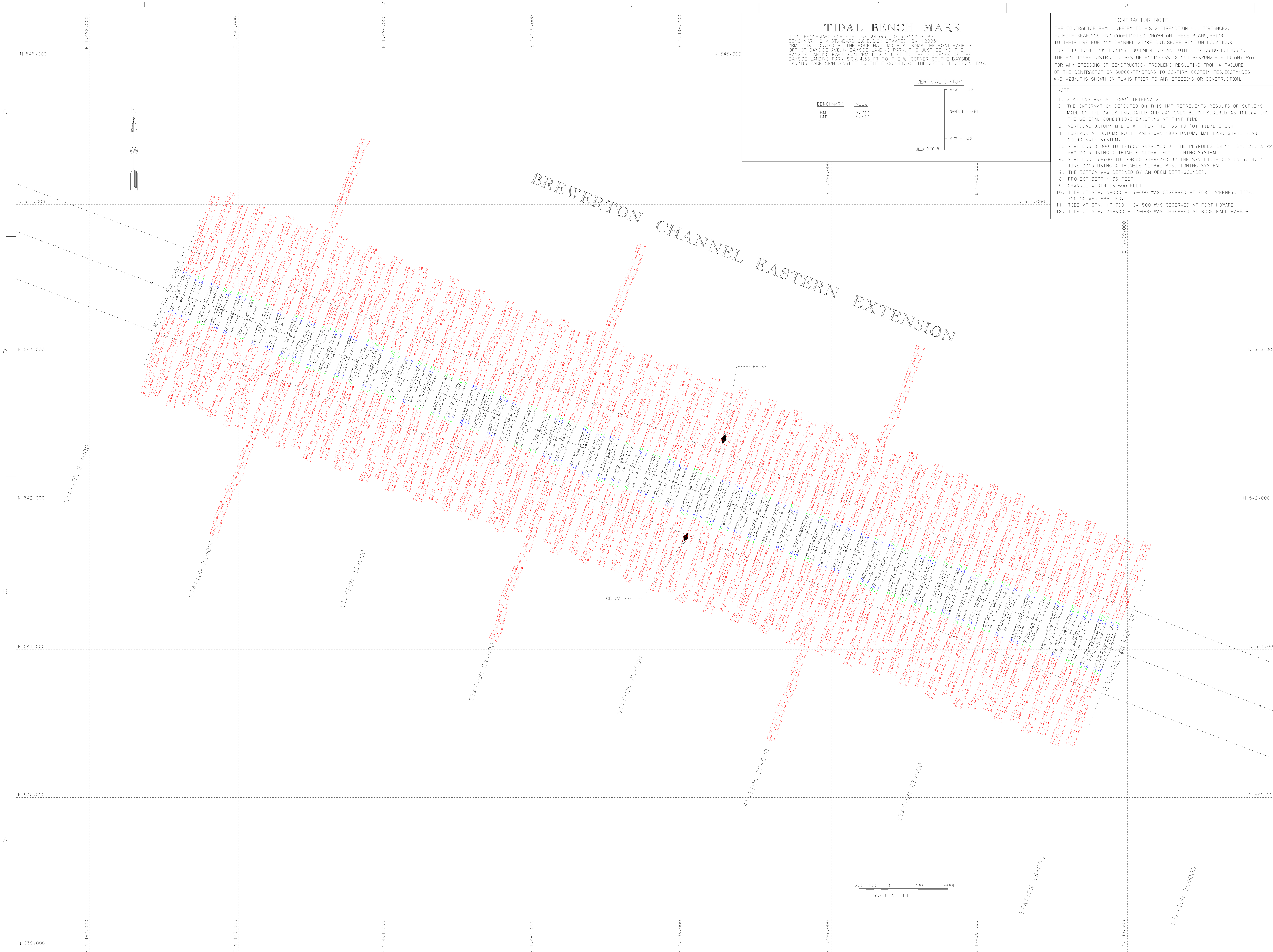
U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

Designed by:
Date by: 10/2015
Drawn by: SMO
Checked by: SMO
Reviewed by: SMO
Submitted by:
Design file no. 01CP1-Tasks-Sp095
Drawing scale:
File name: BH_1-06_20160622
Plot date:
Plot scale:
Plot down:
Rev.

BALTIMORE HARBOR
MARYLAND

CONDITION SURVEY
CHANNEL EASTERN EXTENSION
STATION 14+200 TO 21+900

Sheet reference number:
V-141
Sheet 41 of 59



TIDAL BENCH MARK

TIDAL BENCHMARK FOR STATIONS 24+000 TO 34+000 IS BM 1.
BENCHMARK IS A STANDARD C.O.E. DISK STAMPED "BM 1 2005".
"BM 1" IS LOCATED AT THE ROCK HALL, MD. BOAT RAMP. THE BOAT RAMP IS OFF OF BAYSIDE AVE. IN BAYSIDE LANDING PARK. IT IS JUST BEHIND THE BAYSIDE LANDING PARK SIGN. "BM 1" IS 14.9 FT. TO THE S CORNER OF THE BAYSIDE LANDING PARK SIGN. 4.85 FT. TO THE W CORNER OF THE BAYSIDE LANDING PARK SIGN. 52.61 FT. TO THE E CORNER OF THE GREEN ELECTRICAL BOX.

BENCHMARK	MLLW
BM1	5.71'
BM2	5.51'

VERTICAL DATUM

- MHW = 1.39
- NAVD88 = 0.81
- MLW = 0.22
- MLLW 0.00 ft

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7. THE BOTTOM WAS DEFINED BY AN ODOM DEPTHSOUNDER.
8. PROJECT DEPTH: 35 FEET.
9. CHANNEL WIDTH IS 600 FEET.
10. TIDE AT STA. 0+000 - 17+600 WAS OBSERVED AT FORT MCHENRY. TIDAL ZONING WAS APPLIED.
11. TIDE AT STA. 17+700 - 24+500 WAS OBSERVED AT FORT HOWARD.
12. TIDE AT STA. 24+600 - 34+000 WAS OBSERVED AT ROCK HALL HARBOR.

Mark	Description	Date	Appr.	Mark	Description	Date	Appr.
		20 MAR. '07	WSB				

US Army Corps of Engineers
Baltimore District

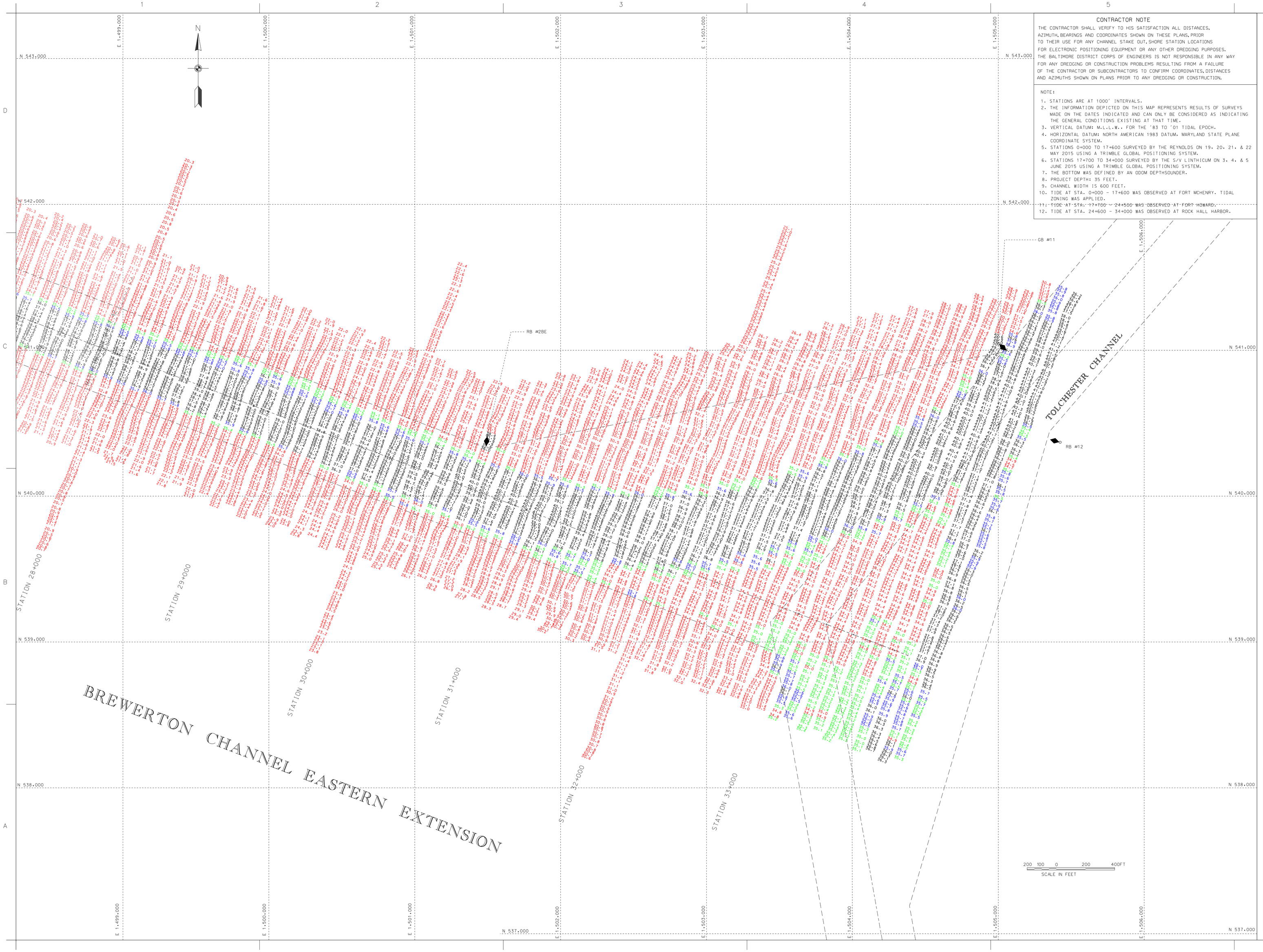
U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

Designed by:		Date: JUNE '15	Rev.
Dwn by: JAH	Ckd by: SMG	Design file no. FILE: 17 MAP: 15-096	
Reviewed by: SMG		Drawing code:	
Submitted by:		File name: BH_11_BE_20150522 Plot date: Plot scale:	

BALTIMORE HARBOR
MARYLAND

CONDITION SURVEY
BREWERTON CHANNEL EASTERN EXTENSION
STATION 21+200 TO 27+900

Sheet reference number:
V-142
Sheet 42 of 59



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8. PROJECT DEPTH: 35 FEET.
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12. TIDE AT STA. 24+600 - 34+000 WAS OBSERVED AT ROCK HALL HARBOR.

US Army Corps of Engineers
Baltimore District

Mark	Description	Date	Appr.

Mark	Description	Date	Appr.

U.S. ARMY CORPS OF ENGINEERS
BALTIMORE DISTRICT

Designed by: Date: SMC 15
Dwn by: Ckd by: Design file no.: JMH SMC D15B-097
Reviewed by: Drawing scale:
SMC
Submitted by: File name: BL_CAM_20150522
Plot date:
Plot scale:

Rev.

BALTIMORE HARBOR
MARYLAND

CONDITION SURVEY
CHANNEL EASTERN EXTENSION
BREWERTON CHANNEL
STATION 28+000 TO 34+000

Sheet reference number:
V-143
Sheet 43 of 59