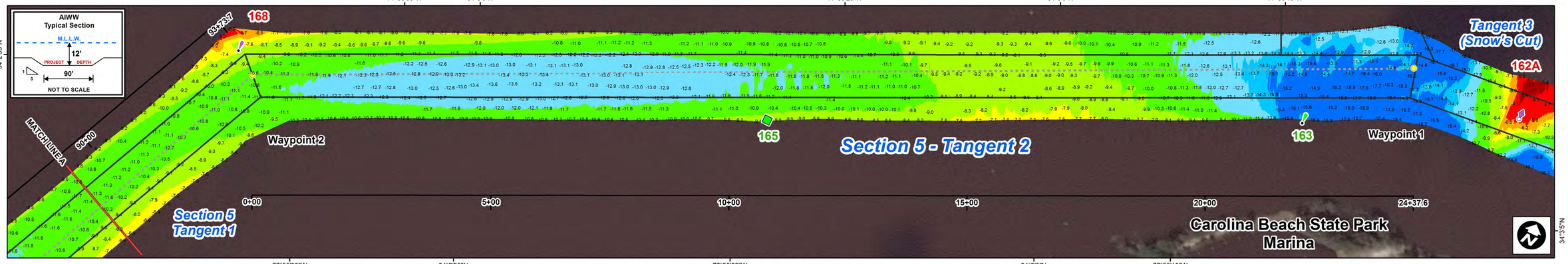
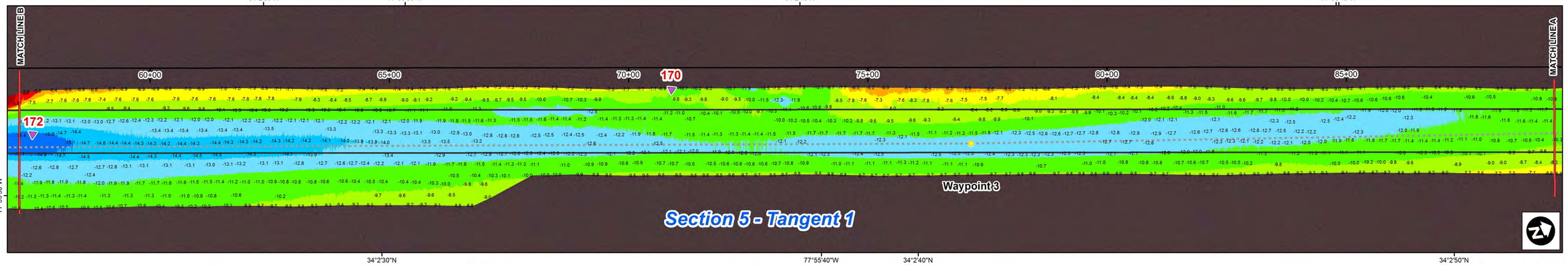
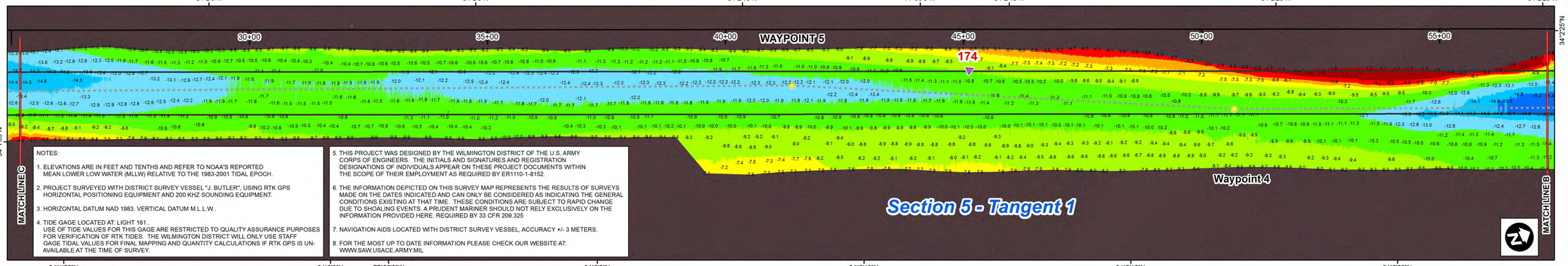
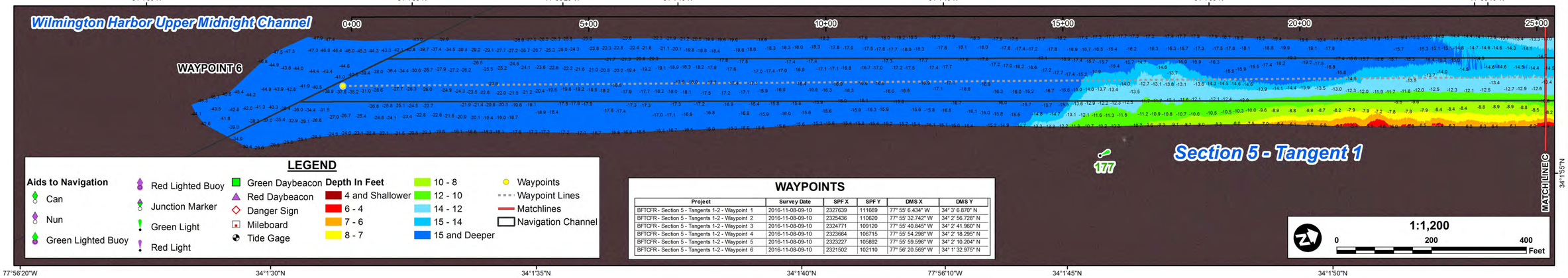






NOTES:

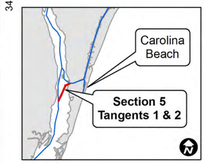
1. ELEVATIONS ARE IN FEET AND TENTHS AND REFER TO NOAA'S REPORTED MEAN LOWER LOW WATER (MLLW) RELATIVE TO THE 1983-2001 TIDAL EPOCH.
2. PROJECT SURVEYED WITH DISTRICT SURVEY VESSEL "J. BUTLER", USING RTK GPS HORIZONTAL POSITIONING EQUIPMENT AND 200 KHZ SOUNDING EQUIPMENT.
3. HORIZONTAL DATUM NAD 1983. VERTICAL DATUM M.L.L.W..
4. TIDE GAGE LOCATED AT: LIGHT 161.. USE OF TIDE VALUES FOR THIS GAGE ARE RESTRICTED TO QUALITY ASSURANCE PURPOSES FOR VERIFICATION OF RTK TIDES. THE WILMINGTON DISTRICT WILL ONLY USE STAFF GAGE TIDAL VALUES FOR FINAL MAPPING AND QUANTITY CALCULATIONS IF RTK GPS IS UN-AVAILABLE AT THE TIME OF SURVEY.
5. THIS PROJECT WAS DESIGNED BY THE WILMINGTON DISTRICT OF THE U.S. ARMY CORPS OF ENGINEERS. THE INITIALS AND SIGNATURES AND REGISTRATION DESIGNATIONS OF INDIVIDUALS APPEAR ON THESE PROJECT DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER1110-1-8152.
6. THE INFORMATION DEPICTED ON THIS SURVEY MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE. REQUIRED BY 33 CFR 209.325
7. NAVIGATION AIDS LOCATED WITH DISTRICT SURVEY VESSEL, ACCURACY +/- 3 METERS.
8. FOR THE MOST UP TO DATE INFORMATION PLEASE CHECK OUR WEBSITE AT: WWW.SAW.USACE.ARMY.MIL



WAYPOINTS

Project	Survey Date	SPF X	SPF Y	DMS X	DMS Y
BFTCFR - Section 5 - Tangents 1-2 - Waypoint 1	2016-11-08-09-10	2327639	111669	77° 55' 6.434" W	34° 3' 6.870" N
BFTCFR - Section 5 - Tangents 1-2 - Waypoint 2	2016-11-08-09-10	2325436	110620	77° 55' 32.742" W	34° 2' 56.728" N
BFTCFR - Section 5 - Tangents 1-2 - Waypoint 3	2016-11-08-09-10	2324771	109120	77° 55' 40.845" W	34° 2' 41.960" N
BFTCFR - Section 5 - Tangents 1-2 - Waypoint 4	2016-11-08-09-10	2323664	106715	77° 55' 54.298" W	34° 2' 18.295" N
BFTCFR - Section 5 - Tangents 1-2 - Waypoint 5	2016-11-08-09-10	2323227	105892	77° 55' 59.596" W	34° 2' 10.204" N
BFTCFR - Section 5 - Tangents 1-2 - Waypoint 6	2016-11-08-09-10	2321502	102110	77° 56' 20.569" W	34° 1' 32.975" N

US Army Corps of Engineers
Wilmington District



Surveyed By: LMT, SRV
Mapped By: SGD

Survey Date: November 8-10, 2016
Map Date: November 16, 2016
Map Scale: 1:1,200
Imagery Date: October 17, 2016
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MAP FILE : SS_T01_02_2016-11-08-09-10_CS.MXD

HYDROGRAPHIC SURVEY

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WILMINGTON, NORTH CAROLINA

Atlantic Intracoastal Waterway
Beaufort to Cape Fear River

SECTION 5 - TANGENTS 1-2

Carolina Beach, North Carolina