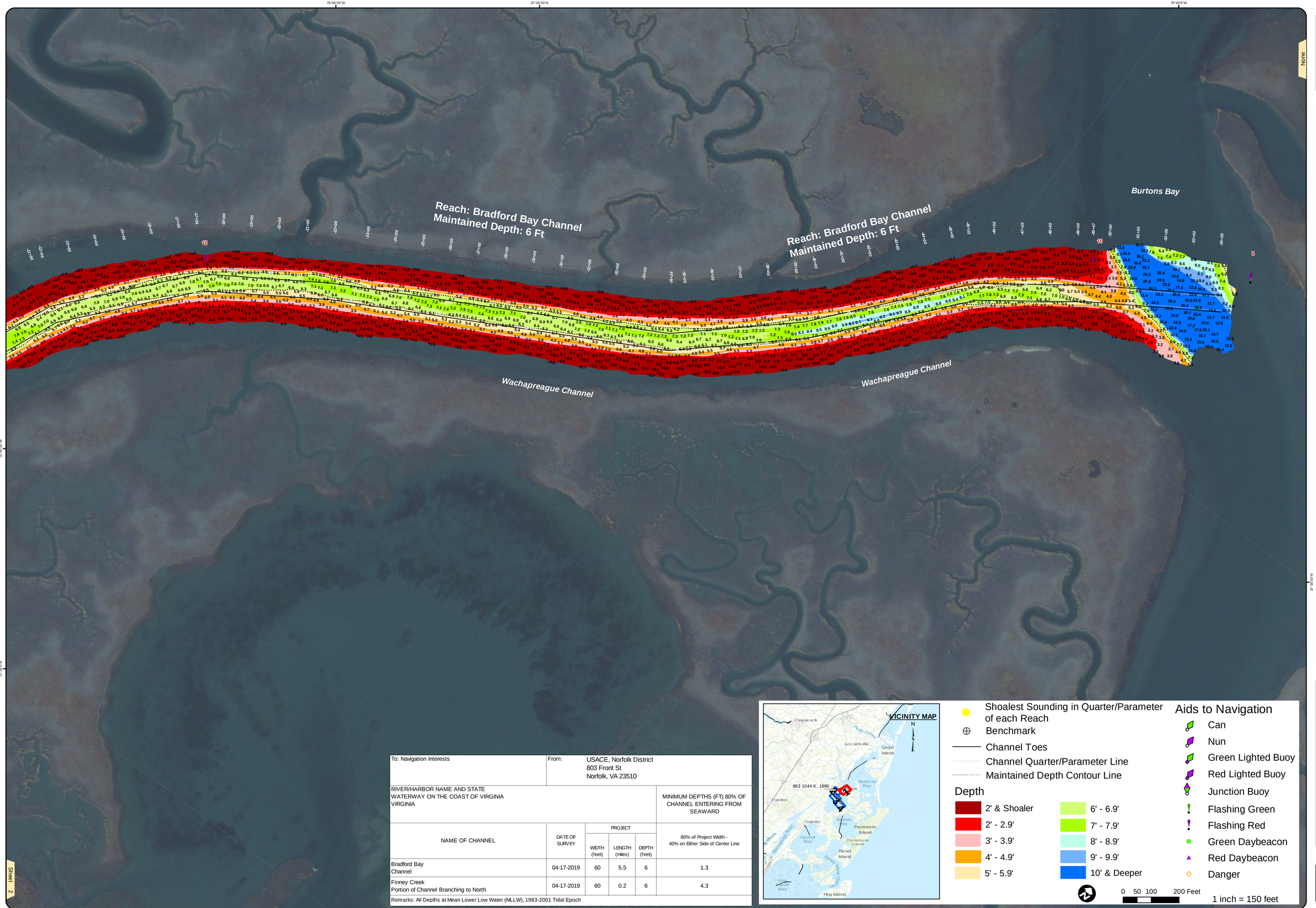


To: Navigation Interests	From: USACE, Norfolk District 803 Front St Norfolk, VA 23510				
RIVER/HARBOR NAME AND STATE WATERWAY ON THE COAST OF VIRGINIA VIRGINIA					MINIMUM DEPTHS (FT) 80% OF CHANNEL ENTERING FROM SEAWARD
NAME OF CHANNEL	DATE OF SURVEY	PROJECT			80% of Project Width - 40% on Either Side of Center Line
		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	
Bradford Bay Channel	04-17-2019	60	5.5	6	1.3
Finney Creek Portion of Channel Branching to North	04-17-2019	60	0.2	6	4.3

Remarks: All Depths at Mean Lower Low Water (MLLW), 1983-2001 Tidal Epoch

US Army Corps of Engineers
Norfolk District

NOTES:

1. PROJECT: BRADFORD BAY CHANNEL 6 FT DEEP AND 60 FT WIDE CONNECTING BRADFORD BAY TO BURTONS BAY. FINNEY CREEK IS A CHANNEL 6 FT DEEP, 60 FT WIDE AND 0.2 MILES LONG STARTING AT 6 FT CONTOUR WITH JCT OF WATERWAY OF COAST OF VIRGINIA TOWARDS PUBLIC LANDING
2. NOT FOR NAVIGATION USE. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATE(S) INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME.
3. SOUNDINGS: SHOWN IN FEET CENTERED ON POINT OF SHOALEST DEPTH IN 20 FT RADIUS.
4. BACKGROUND: DIGITAL GLOBE IMAGE CONNECT - 2017-11-25 - WV03 IMAGERY WEB SERVICE.
5. AIDS TO NAVIGATION LOCATED WITH SURVEY VESSEL +/- 10 FEET ON DATE OF SURVEY.
6. SURVEY XYZ (*.XYZ) AND METADATA (*.MET) FILE NAME REFERENCED BY eHYDRO FILE NAME.

PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: RTK/LEICA SMART NET

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: RTK/LEICA SMART NET
TIDE APPLICATION: DIRECT
SYSTEM/METHOD: SINGLE & MULTI-BEAM
BIN SIZE: 5x5'
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
NOS "863 1044 K, 1998"	7.33'	4.69' (GEOID12A)	4.02'	-54+18 to 112+00, 22+00 to 32+90, Ext. to USCG Base

NOTE: PORTION OF DATA SUPPLIMENTED WITH SURVEY DATED AUGUST 13, 2018

Placement Site 200+00 to 215+00

WATERWAY ON THE COAST OF VIRGINIA (WCV) BRADFORD BAY AND FINNEY CREEK PROJECT CONDITION SURVEY

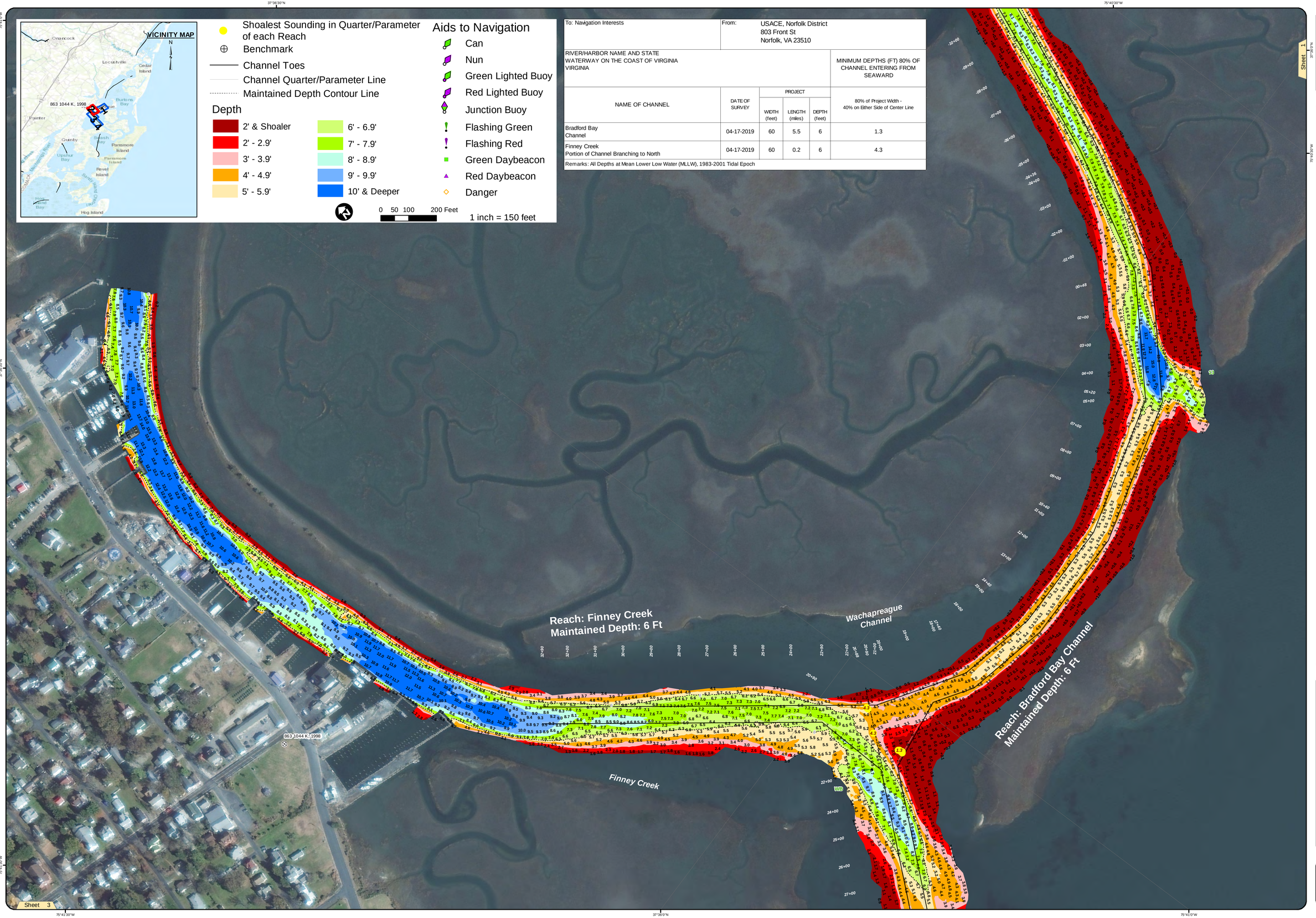
SURVEY DATES:
April 17 & 18, 2019

SURVEY BY: USACE Team Lead: Joseph N. Moore Jr.
eHYDRO FILE: WC_50_BFC_20190417_CS

SHEET 1 of 4
Map Produced: 5/16/2019

APPROVED:
Jeff Swallow
Digitally signed by Jeff Swallow
Date: 2019.05.16 08:13:26 -04'00'
Chief, Navigation Analysis Section

APPROVED:
Digitally signed by Eric Legaspi
Date: 2019.05.17 10:36:08 -04'00'
Chief, Navigation Support and Survey Section



To: Navigation Interests	From: USACE, Norfolk District 803 Front St Norfolk, VA 23510				
RIVER/HARBOR NAME AND STATE WATERWAY ON THE COAST OF VIRGINIA VIRGINIA					MINIMUM DEPTHS (FT) 80% OF CHANNEL ENTERING FROM SEAWARD
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		WIDTH (feet)	LENGTH (miles)	DEPTH (feet)	
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Remarks: All Depths at Mean Lower Low Water (MLLW), 1983-2001 Tidal Epoch

US Army Corps of Engineers
Norfolk District

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: RTK/LEICA SMART NET

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
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TIDE APPLICATION: DIRECT
SYSTEM/METHOD: SINGLE & MULTI-BEAM
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GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
NOS "863 1044 K, 1998"	7.33'	4.69' (GEOID12A)	4.02'	-54+18 to 112+00, 22+00 to 32+90, Ext. to USCG Base

NOTE: PORTION OF DATA SUPPLIMENTED WITH SURVEY DATED AUGUST 13, 2018

Placement Site 200+00 to 215+00

WATERWAY ON THE COAST OF VIRGINIA (WCV) BRADFORD BAY AND FINNEY CREEK PROJECT CONDITION SURVEY

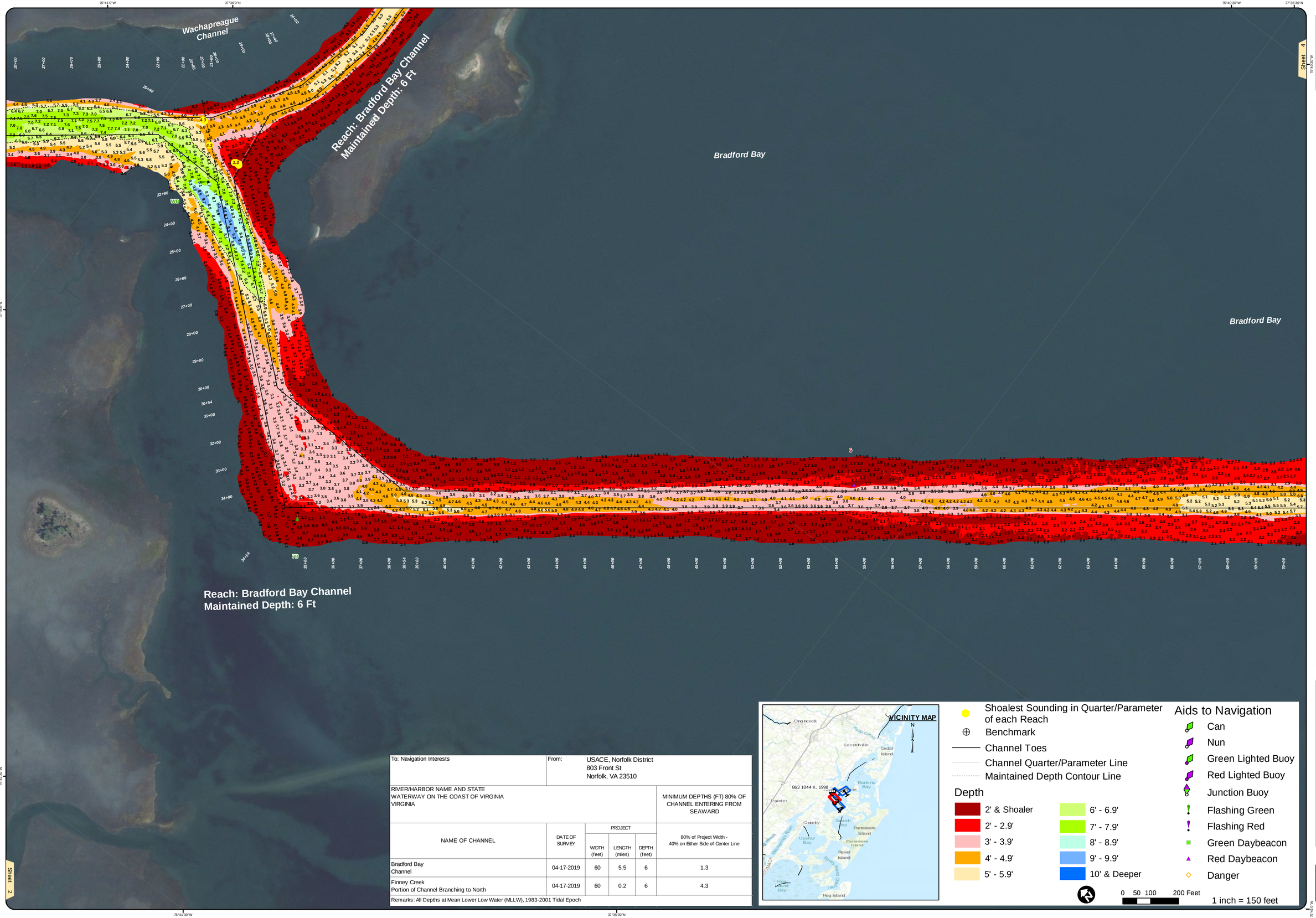
SURVEY DATES:
April 17 & 18, 2019

SURVEY BY: USACE Team Lead: Joseph N. Moore Jr.
eHYDRO FILE: WC_50_BFC_20190417_CS

SHEET 2 of 4
Map Produced: 5/16/2019

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section



To: Navigation Interests	From: USACE, Norfolk District 803 Front St Norfolk, VA 23510				
RIVER/HARBOR NAME AND STATE WATERWAY ON THE COAST OF VIRGINIA VIRGINIA					MINIMUM DEPTHS (FT) 80% OF CHANNEL ENTERING FROM SEAWARD
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Bradford Bay Channel	04-17-2019	60	5.5	6	1.3
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Remarks: All Depths at Mean Lower Low Water (MLLW), 1983-2001 Tidal Epoch					

US Army Corps of Engineers
Norfolk District

NOTES:

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PROJECTED COORDINATE SYSTEM: STATE PLANE
DATUM NAME: NAD 83
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1 FOOT
HORIZONTAL CONTROL: RTK/LEICA SMART NET

VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL EPOCH: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: RTK/LEICA SMART NET
TIDE APPLICATION: DIRECT
SYSTEM/METHOD: SINGLE & MULTI-BEAM
BIN SIZE: 5x5'
BIN SELECTION METHOD: AVERAGE CELL CENTER

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88	MEAN RANGE OF TIDE	AREA
NOS "863 1044 K, 1998"	7.33'	4.69' (GEOID12A)	4.02'	-54+18 to 112+00, 22+00 to 32+90, Ext. to USCG Base Placement Site 200+00 to 215+00

NOTE: PORTION OF DATA SUPPLIMENTED WITH SURVEY DATED AUGUST 13, 2018

WATERWAY ON THE COAST OF VIRGINIA (WCV)
BRADFORD BAY AND FINNEY CREEK PROJECT CONDITION SURVEY

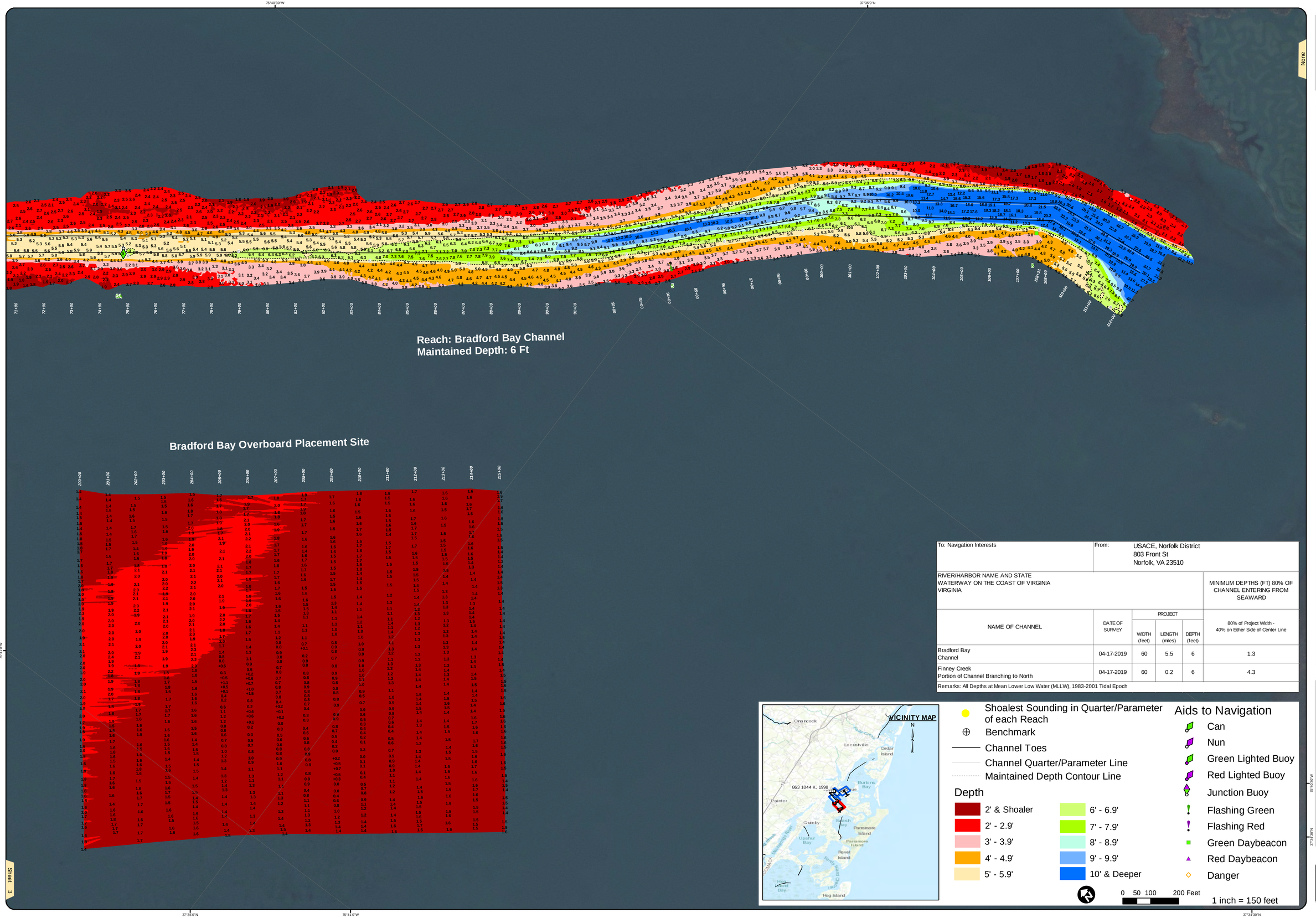
SURVEY DATES:
April 17 & 18, 2019

SURVEY BY: USACE Team Lead: Joseph N. Moore Jr.
eHYDRO FILE: WC_50_BFC_20190417_CS

SHEET 3 of 4
Map Produced: 5/16/2019

APPROVED:
Chief, Navigation Analysis Section

APPROVED:
Chief, Navigation Support and Survey Section



To: Navigation Interests		From: USACE, Norfolk District 803 Front St Norfolk, VA 23510			
RIVER/HARBOR NAME AND STATE WATERWAY ON THE COAST OF VIRGINIA VIRGINIA					MINIMUM DEPTHS (FT) 80% OF CHANNEL ENTERING FROM SEAWARD
NAME OF CHANNEL	DATE OF SURVEY	PROJECT			80% of Project Width - 40% on Either Side of Center Line
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Bradford Bay Channel	04-17-2019	60	5.5	6	1.3
Finney Creek Portion of Channel Branching to North	04-17-2019	60	0.2	6	4.3
Remarks: All Depths at Mean Lower Low Water (MLLW), 1983-2001 Tidal Epoch					

Shoalest Sounding in Quarter/Parameter of each Reach
Benchmark
Channel Toes
Channel Quarter/Parameter Line
Maintained Depth Contour Line

Depth

- 2' & Shoaler
- 2' - 2.9'
- 3' - 3.9'
- 4' - 4.9'
- 5' - 5.9'
- 6' - 6.9'
- 7' - 7.9'
- 8' - 8.9'
- 9' - 9.9'
- 10' & Deeper

Aids to Navigation

- Can
- Nun
- Green Lighted Buoy
- Red Lighted Buoy
- Junction Buoy
- Flashing Green
- Flashing Red
- Green Daybeacon
- Red Daybeacon
- Danger

0 50 100 200 Feet

1 inch = 150 feet

US Army Corps of Engineers
Norfolk District

NOTES:

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VERTICAL REFERENCE DATUM: NOS MLLW
TIDAL DATUM: 1983-2001
IMPLIED VERTICAL ACCURACY: +/- 0.5 FEET
VERTICAL CONTROL: RTK/LEICA SMART NET
DIRECT VERTICAL DATUM: ONEST
SINGLE & MULTI-BEAM
SYSTEM/METHOD: 5X5
BIN SIZE: AVERAGE CELL CENTER
BIN SELECTION METHOD:

AREA	MEAN RANGE OF TIDE	MEAN DIURNAL TIDE
54+00 to 112+00 22+00 to 32+80, Ext. to USCG Base Placement Site 200+00 to 215+00	4.0'	4.6'

GEODETIC CONTROL MONUMENTS

MONUMENT	MLLW	NAVD88
NOS 863 1044 K, 1998'	7.13'	4.69' (GEOID12A)

NOTE: PORTION OF DATA SUPPLIMENTED WITH SURVEY DATED AUGUST 13, 2018

PROJECTED COORDINATE SYSTEM: STATE PLANE
NAD 1983 (2011)
HORIZONTAL ZONE: VIRGINIA SOUTH ZONE
PROJECTED COORDINATE UNITS: US SURVEY FEET
IMPLIED HORIZONTAL ACCURACY: +/- 1.0 FEET
HORIZONTAL CONTROL: RTK/LEICA SMART NET

WATERWAY ON THE COAST OF VIRGINIA (WCV)
BRADFORD BAY AND FINNEY CREEK
PROJECT CONDITION SURVEY

SURVEY DATES:
April 17 & 18, 2019

SURVEY BY: USACE Team Lead: Joseph N. Moore Jr.
eHYDRO FILE: WC_50_BFC_20190417_CS

SHEET 4 of 4
Map Produced: 5/16/2019

APPROVED:

Chief, Navigation Analysis Section

APPROVED:

Chief, Navigation Support and Survey Section