APPENDIX F:
November 2017 & May 2018 Monitoring Survey Drawings

This appendix contains reduced versions of the survey drawings produced by McKim and Creed, Inc.[1] for the November 2017 and May 2018 Bald Head Island beach profile and borrow site monitoring surveys.

[1] McKim & Creed, Inc.; 243 North Front Street; Wilmington, NC 28401

November 2017 Drawings

I, DAVID L. JONES, JR. PLS L-3672,
CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION
FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION THAT THE
POSITIONAL ACCURACY IS 0.093'; THAT THIS PLAT MEETS THE REQUIREMENTS
OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA
(21 NCAC 56. 1600);

THAT THE GPS SURVEY MADE WAS UNDER MY SUPERVISION AND THE
FOLLOWING INFORMATION WAS USED TO PERFORM THIS SURVEY.

CLASS OF SURVEY: CLASS C
POSITIONAL ACCURACY: 0.093'
TYPE OF GPS FIELD PROCEDURE: RTK
DATES OF SURVEY: OCT 27-NOV 04, 2017
DATUM/EPOCH: NC GRID NAD 83/96; VERTICAL NGVD 29
PUBLISHED/FIXED-CONTROL USED: EXISTING CORPS OF ENGINEERS
BASELINE
GEOID MODEL: GEOID 12A
COMBINED GRID FACTOR:1.000164272
UNITS: FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL

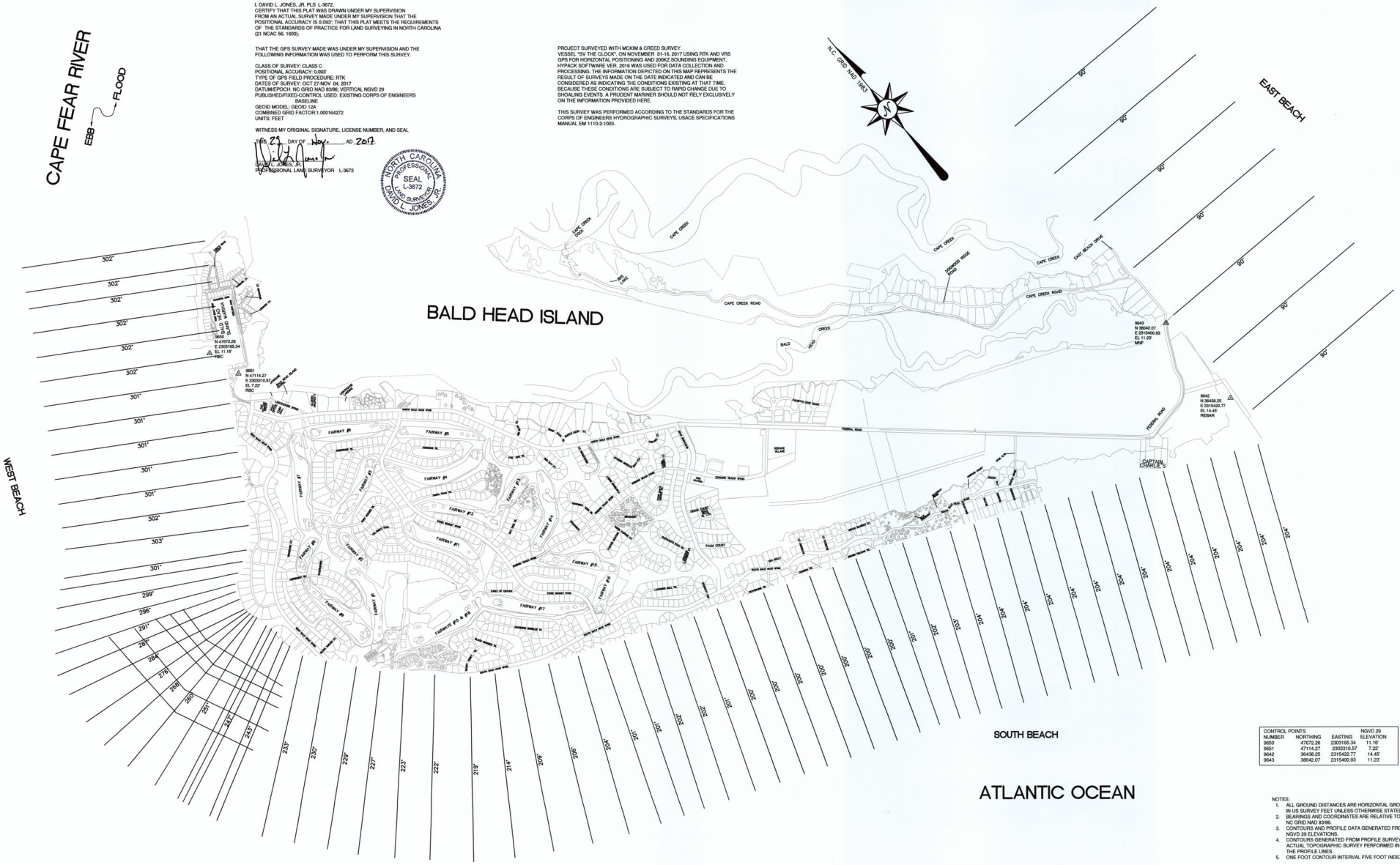
THIS 29 DAY OF Nov. AD 2017.

DAVID L. JONES, JR.
PROFESSIONAL LAND SURVEYOR L-3672

NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES, JR.

PROJECT SURVEYED WITH MCKIM & CREED SURVEY
VESSEL "SV THE CLOCK", ON NOVEMBER 01-16, 2017 USING RTK AND VRS
GPS FOR HORIZONTAL POSITIONING AND 200KZ SOUNDING EQUIPMENT.
HYPACK SOFTWARE VER. 2016 WAS USED FOR DATA COLLECTION AND
PROCESSING. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE
RESULT OF SURVEYS MADE ON THE DATE INDICATED AND CAN BE
CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.
BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO
SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY
ON THE INFORMATION PROVIDED HERE.

THIS SURVEY WAS PERFORMED ACCORDING TO THE STANDARDS FOR THE
CORPS OF ENGINEERS HYDROGRAPHIC SURVEYS, USACE SPECIFICATIONS
MANUAL EM 1110-2-1003.



CONTROL POINTS NUMBER	NORTHING	EASTING	NGVD 29 ELEVATION
9650	47672.26	2303165.34	11.16'
9651	47114.27	2303310.57	7.22'
9642	36438.25	2315422.77	14.45'
9643	38042.07	2315400.93	11.23'

NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/96.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
5. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

NOTE: ELEVATIONS BASED ON NGVD 29

SCALE: 1" = 700'
0 350 700 1400 2100

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
FOR
THE VILLAGE OF BALD HEAD ISLAND

VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
NOVEMBER 28, 2017

JOB NUMBER:	00784--0068
SCALE:	1" = 700'
CAD NUMBER:	VT101--00784-0068_NAD83_NOVEMBER2017.DWG
PLS:	DLJ
PARTY CHIEF:	PARTY_CHIEF
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2017-092

SHEET 1 OF 4

BASELINE COORDINATES NAD 83

STATION	NORTHING	EASTING
0+00	47515.48	2303309.44
4+00	47173.53	2303101.89
8+00	46832.64	2302892.61
12+00	46491.75	2302683.33
16+00	46150.86	2302474.04
20+00	45809.97	2302264.76
24+00	45469.09	2302055.48
28+00	45128.20	2301846.20
32+00	44843.33	2301565.80
36+00	44646.22	2301218.79
38+00	44550.49	2301043.19
39+60	44473.90	2300902.70
41+50	44364.98	2300765.04
43+47	44168.12	2300757.57
44+25	44090.18	2300754.61
45+07	44008.77	2300755.07
46+00	43926.71	2300784.97
46+89	43836.43	2300813.58
50+00	43541.93	2300913.55
52+64	43291.94	2300998.42

STATION	NORTHING	EASTING
56+56	42934.12	2301148.48
60+51	42628.89	2301399.21
65+50	42243.31	2301715.96
69+46	41937.32	2301967.34
73+39	41660.76	2302245.74
76+37	41320.39	2302609.27
84+16	40924.66	2303031.94
88+23	40705.10	2303371.89
92+15	40513.87	2303714.08
97+10	40272.39	2304146.19
102+08	40056.87	2304593.81
106+00	39915.60	2304959.47
110+00	39771.45	2305332.60
114+00	39627.29	2305705.73
118+00	39483.14	2306078.86
122+00	39338.99	2306451.99
126+00	39194.83	2306825.11
130+00	39050.68	2307198.24
134+00	38906.52	2307571.37
138+00	38766.86	2307946.17

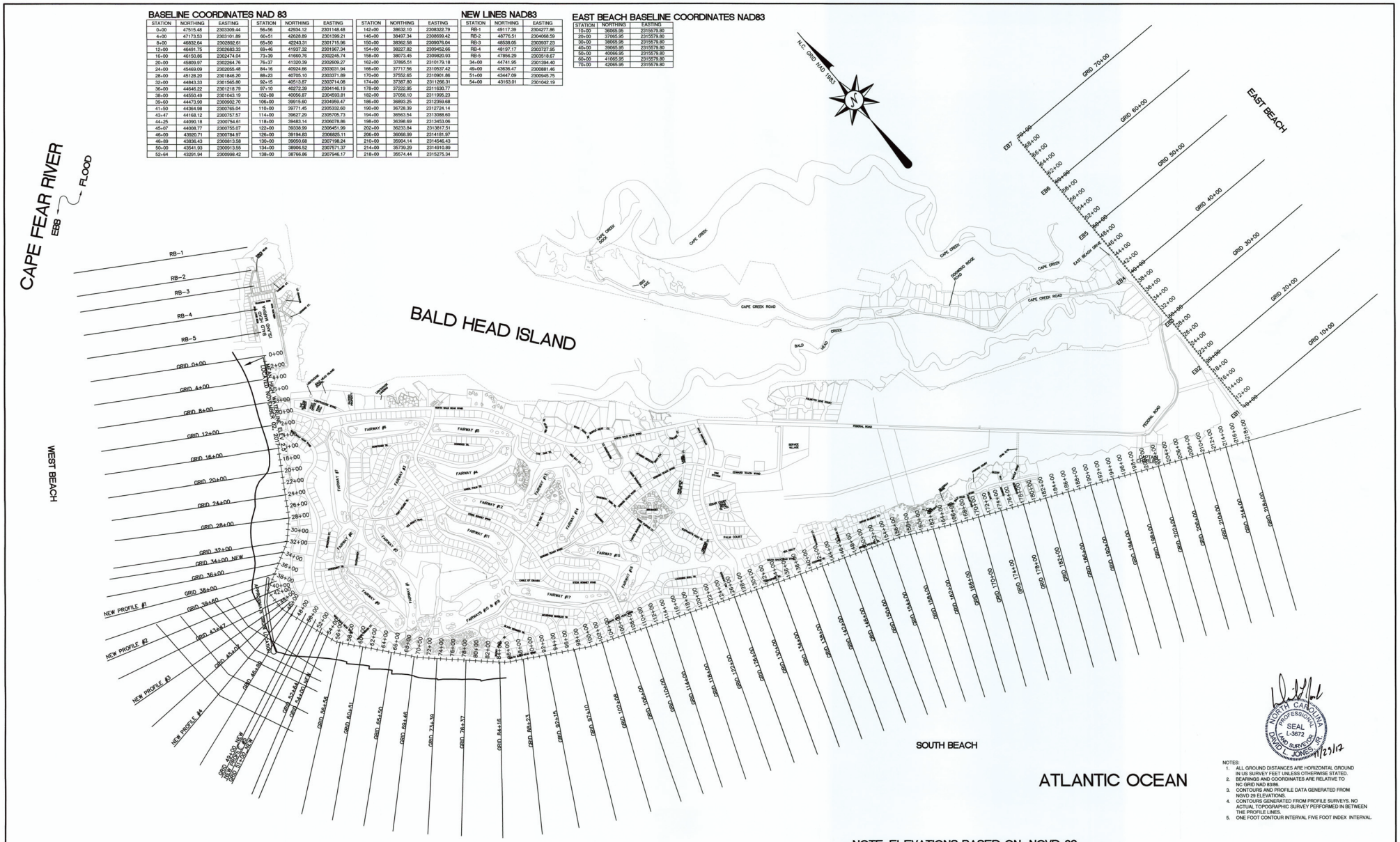
STATION	NORTHING	EASTING
142+00	38632.10	2308322.79
146+00	38497.34	2308699.42
150+00	38362.58	2309076.04
154+00	38227.82	2309452.66
158+00	38073.45	2309820.93
162+00	37895.51	2310179.18
166+00	37717.56	2310537.42
170+00	37552.65	2310901.86
174+00	37387.80	2311266.31
178+00	37222.95	2311630.77
182+00	37058.10	2311995.23
186+00	36893.25	2312359.68
190+00	36728.39	2312724.14
194+00	36563.54	2313088.60
198+00	36398.69	2313453.06
202+00	36233.84	2313817.51
206+00	36068.99	2314181.97
210+00	35904.14	2314546.43
214+00	35739.29	2314910.89
218+00	35574.44	2315275.34

NEW LINES NAD83

STATION	NORTHING	EASTING
RB-1	49117.39	2304277.86
RB-2	48776.51	2304068.59
RB-3	48538.05	2303937.23
RB-4	48197.17	2303727.95
RB-5	47856.29	2303518.67
34+00	44741.95	2301394.40
49+00	43636.47	2300881.46
51+00	43447.09	2300945.75
54+00	43163.01	2301042.19

EAST BEACH BASELINE COORDINATES NAD83

STATION	NORTHING	EASTING
10+00	39065.95	2315579.80
20+00	37065.95	2315579.80
30+00	38065.95	2315579.80
40+00	39065.95	2315579.80
50+00	40066.95	2315579.80
60+00	41065.95	2315579.80
70+00	42065.95	2315579.80



NOTE: ELEVATIONS BASED ON NGVD 29

NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES 11/29/17

NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/86.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
5. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

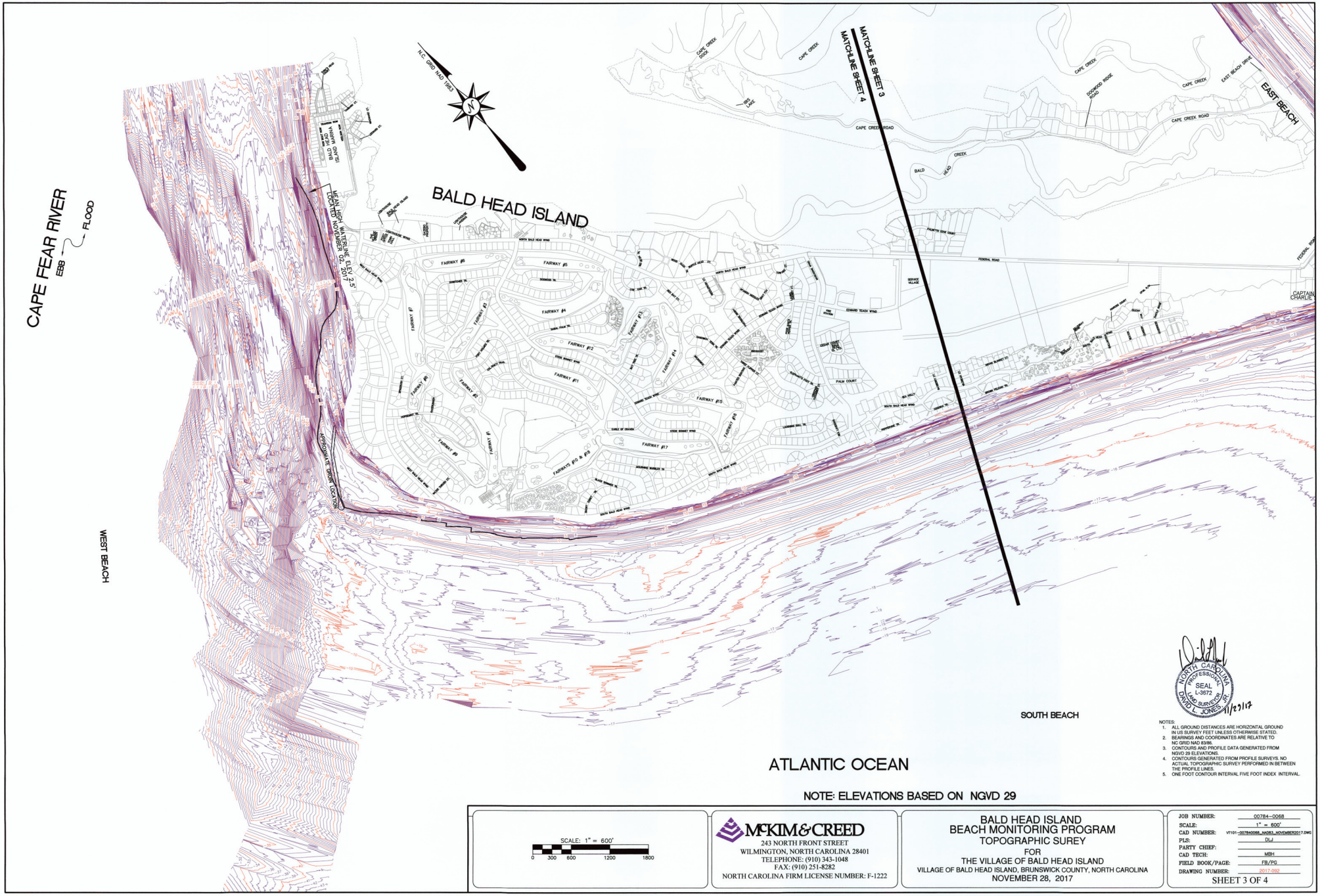
SCALE: 1" = 700'
0 350 700 1400 2100

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
PROFILE SURVEY
FOR
THE VILLAGE OF BALD HEAD ISLAND
VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
NOVEMBER 28, 2017

JOB NUMBER:	00784-0068
SCALE:	1" = 700'
CAD NUMBER:	VT101-00784\0068_NAD83_NOVEMBER2017.DWG
PLS:	DLJ
PARTY CHIEF:	
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2017-092

SHEET 2 OF 4



NOTE: ELEVATIONS BASED ON NGVD 29

NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/86.
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4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
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NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES
11/27/17

SCALE: 1" = 600'
0 300 600 1200 1800

McKIM&CREED
243 NORTH FRONT STREET
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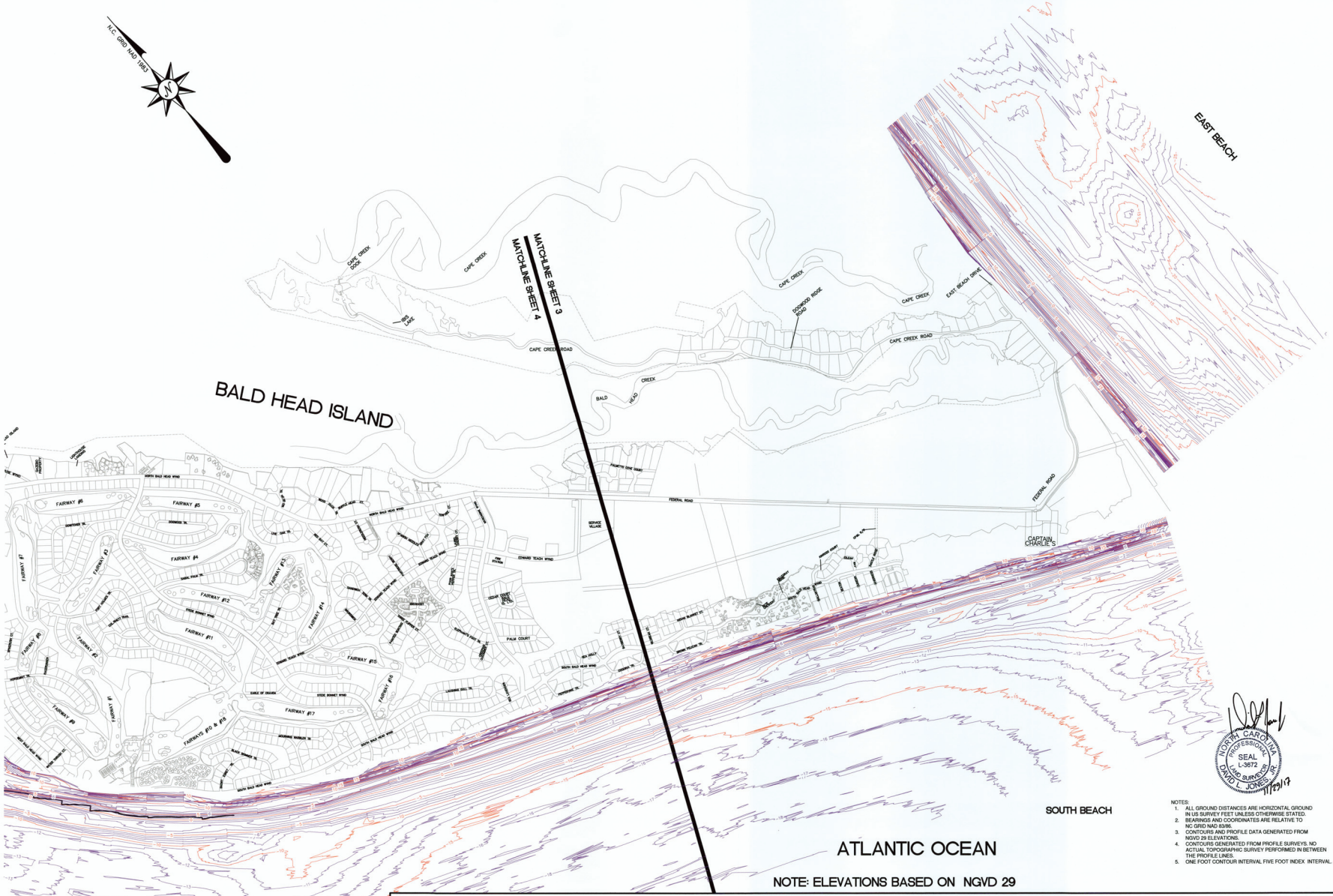
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
TOPOGRAPHIC SUREY
FOR
THE VILLAGE OF BALD HEAD ISLAND
VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
NOVEMBER 28, 2017

JOB NUMBER:	00784-0068
SCALE:	1" = 600'
CAD NUMBER:	VT101-00784-0068_NAD83_NOVEMBER2017.DWG
PLS:	DLJ
PARTY CHIEF:	
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2017-092

SHEET 3 OF 4



NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JOHNSON, JR.
11/29/17

NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/86.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
5. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

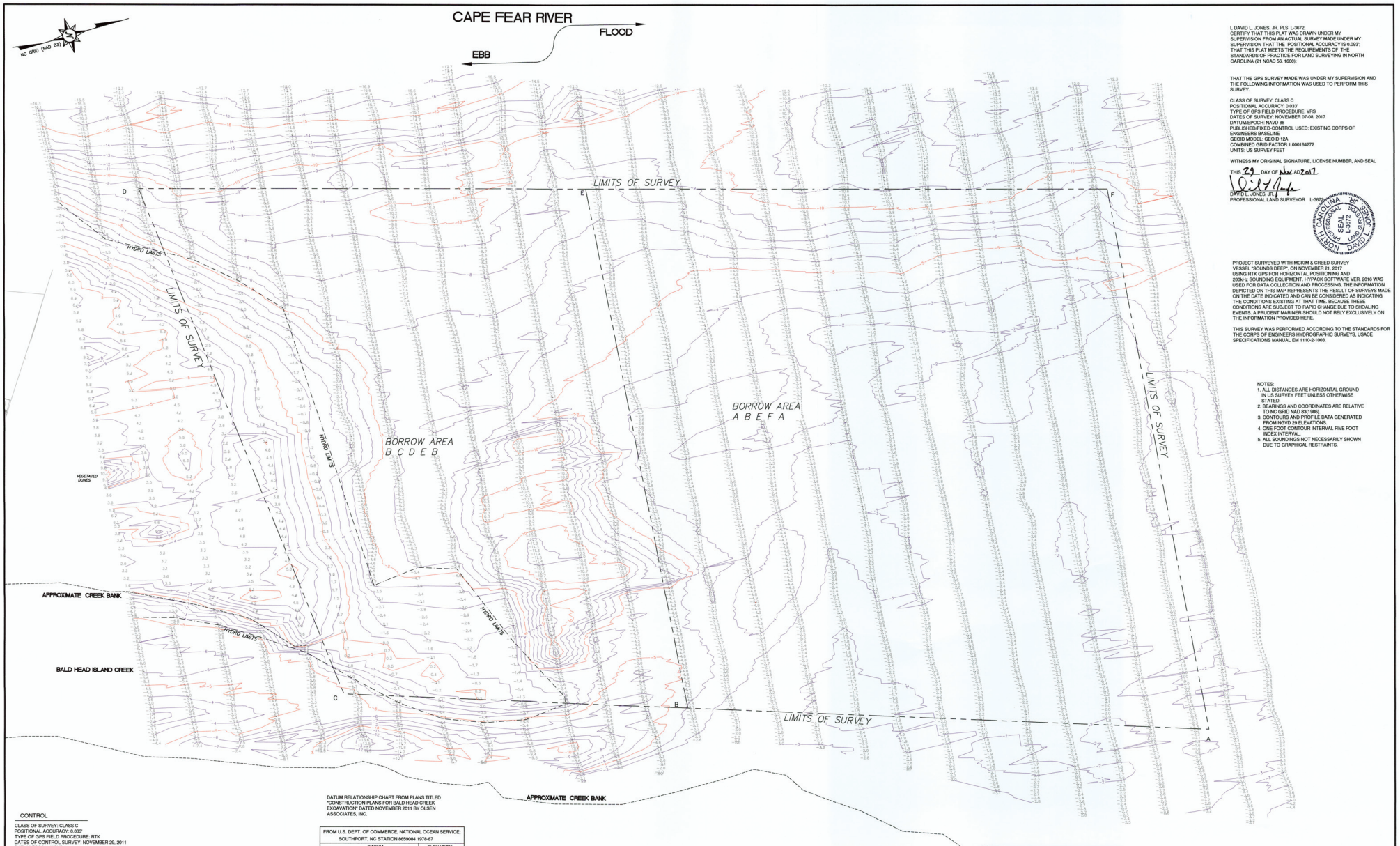
SCALE: 1" = 600'
0 300 600 1200 1800

McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
TOPOGRAPHIC SUREY
FOR
THE VILLAGE OF BALD HEAD ISLAND
VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
NOVEMBER 28, 2017

JOB NUMBER:	00784-0068
SCALE:	1" = 600'
CAD NUMBER:	VI101-007840068_NAD83_NOVEMBER2017.DWG
PLS:	DLJ
PARTY CHIEF:	
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2017-092

SHEET 4 OF 4



I, DAVID L. JONES, JR. PLS L-3672, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION THAT THE POSITIONAL ACCURACY IS 0.093'; THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600);

THAT THE GPS SURVEY MADE WAS UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THIS SURVEY:

CLASS OF SURVEY: CLASS C
POSITIONAL ACCURACY: 0.033'
TYPE OF GPS FIELD PROCEDURE: VRS
DATES OF SURVEY: NOVEMBER 07-08, 2017
DATUM/EPOCH: NAVD 88
PUBLISHED/FIXED-CONTROL USED: EXISTING CORPS OF ENGINEERS BASELINE
GEOID MODEL: GEOID 12A
COMBINED GRID FACTOR:1.000164272
UNITS: US SURVEY FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL

THIS 29 DAY OF Nov AD 2017.

DAVID L. JONES, JR.
PROFESSIONAL LAND SURVEYOR L-3672

NORTH CAROLINA PROFESSIONAL SEAL L-3672 DAVID L. JONES, JR.

PROJECT SURVEYED WITH MCKIM & CREED SURVEY VESSEL "SOUNDS DEEP", ON NOVEMBER 21, 2017 USING RTK GPS FOR HORIZONTAL POSITIONING AND 200kHz SOUNDING EQUIPMENT. HYPACK SOFTWARE VER. 2016 WAS USED FOR DATA COLLECTION AND PROCESSING. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULT OF SURVEYS MADE ON THE DATE INDICATED AND CAN BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE.

THIS SURVEY WAS PERFORMED ACCORDING TO THE STANDARDS FOR THE CORPS OF ENGINEERS HYDROGRAPHIC SURVEYS, USACE SPECIFICATIONS MANUAL EM 1110-2-1003.

NOTES:
1. ALL DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83(1986).
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.
5. ALL SOUNDINGS NOT NECESSARILY SHOWN DUE TO GRAPHICAL RESTRAINTS.

CONTROL

CLASS OF SURVEY: CLASS C
POSITIONAL ACCURACY: 0.033'
TYPE OF GPS FIELD PROCEDURE: RTK
DATES OF CONTROL SURVEY: NOVEMBER 29, 2011
DATUM/EPOCH: NGVD 29
PUBLISHED/FIXED-CONTROL USED: EXISTING COPRS OF ENGINEERS BASELINE
GEOID MODEL: GEOID 03
COMBINED GRID FACTOR:1.000164272
UNITS: US SURVEY FEET

CONTROL POINTS NUMBER	NORTHING	EASTING	NGVD 29 ELEVATION
9650	47672.26	2303165.34	11.16'
9651	47114.27	2303310.57	7.22'
9628	42418.95	2301572.77	5.83'
9629	41868.03	2302025.28	7.35'

DATUM RELATIONSHIP CHART FROM PLANS TITLED "CONSTRUCTION PLANS FOR BALD HEAD CREEK EXCAVATION" DATED NOVEMBER 2011 BY OLSEN ASSOCIATES, INC.

FROM U.S. DEPT. OF COMMERCE, NATIONAL OCEAN SERVICE; SOUTHPORT, NC STATION 8659084 1978-87	
DATUM	ELEVATION (FT-NGVD 29)
MEAN HIGHER HIGH WATER (MHHW)	+4.63
MEAN HIGH WATER (MHW)	+4.32
NAVD 1988	+2.91
MEAN TIDE LEVEL (MTL)	+2.16
NGVD 29	+1.81
MEAN LOW WATER	0.00
MEAN LOWER LOW WATER (MLLW)	-0.17

NOTE: ELEVATIONS BASED ON NGVD 29

SCALE: 1" = 100'
0 50 100 200 300

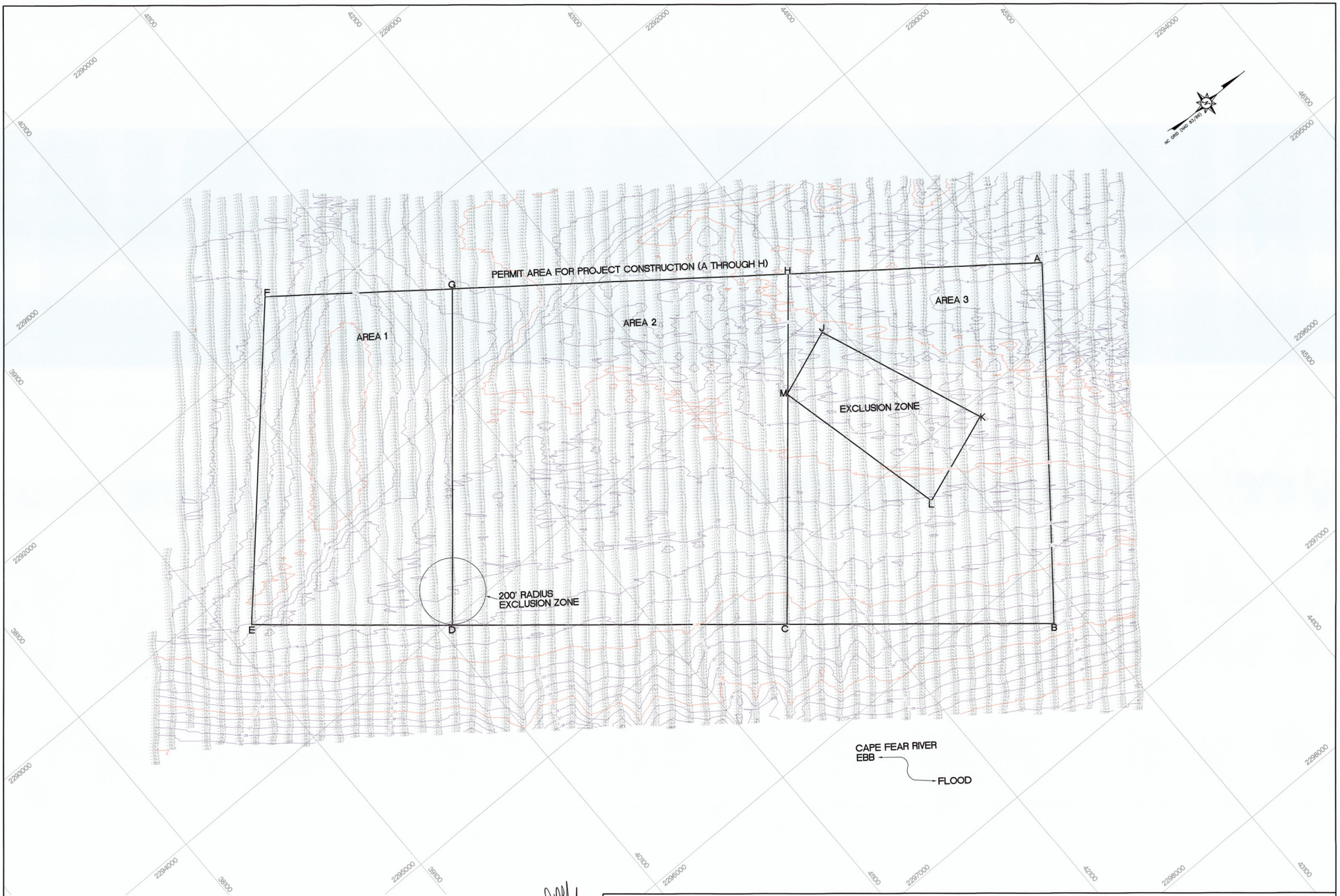
McKIM&CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND CREEK

BORROW AREA SURVEY
FOR
VILLAGE OF BALD HEAD ISLAND
VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
NOVEMBER 27, 2017 1" = 100'

JOB NUMBER:	00784-0068
SCALE:	1" = 100'
CAD NUMBER:	V101-00784\068_NOVEMBER2017_CREEK\BORROW.DWG
PLS:	DLJ
PARTY CHIEF:	JL
CAD TECH:	MBH
FIELD BOOK/PAGE:	
DRAWING NUMBER:	2017-094

SHEET 1 OF 1



NOTES:
SOUNDINGS ARE EXPRESSED IN FEET AND TENTHS AND REFER TO NGVD29 DATUM AS STATED HEREON.
PROJECT SURVEYED WITH McKIM & CREED SURVEY VESSEL "SOUNDS DEEP", USING VRS GPS FOR HORIZONTAL POSITIONING, AND 200 KHZ SOUNDING EQUIPMENT, AND CORRECTED TO HORIZONTAL DATUM NAD83 AND NGVD 29 VERTICAL DATUM.

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULT OF SURVEYS MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE.

NOTES:
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2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/86.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

NORTH CAROLINA PROFESSIONAL SEAL L-3873 LAND SURVEYOR DANIEL JONES JR.
11/13/17

SCALE: 1" = 200'
0 100 200 400 600

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

JAY BIRD SHOAL BORROW AREA
FOR
THE VILLAGE OF BALD HEAD ISLAND
EXISTING CONDITIONS HYDROGRAPHIC SURVEY

VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
NOVEMBER 2017 SCALE 1" = 200'

JOB NUMBER:	00784--0068
SCALE:	1" = 200'
CAD NUMBER:	V:\101--00784\0068--JAYBIRD_NOVEMBER\2017.DWG
FLS:	DLJ
PARTY CHIEF:	JS
CAD TECH:	MBH
FIELD BOOK/PAGE:	
DRAWING NUMBER:	2017-093

SHEET 1 OF 1

May 2018 Drawings

I, DAVID L. JONES, JR. PLS L-3672,
CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION
FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION THAT THE
POSITIONAL ACCURACY IS 0.093'; THAT THIS PLAT MEETS THE REQUIREMENTS
OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA
(21 NCAC 56. 1600);

THAT THE GPS SURVEY MADE WAS UNDER MY SUPERVISION AND THE
FOLLOWING INFORMATION WAS USED TO PERFORM THIS SURVEY.

CLASS OF SURVEY: CLASS C
POSITIONAL ACCURACY: 0.093'
TYPE OF GPS FIELD PROCEDURE: RTK
DATES OF SURVEY: APRIL 25 - MAY 25, 2018
DATUM/EPOCH: NC GRID NAD 83/86; VERTICAL NGVD 29
PUBLISHED/FIXED-CONTROL USED: EXISTING CORPS OF ENGINEERS BASELINE
GEOID MODEL: GEOID 12A
COMBINED GRID FACTOR:1.000164272
UNITS: FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL.

THIS 29th DAY OF MAY AD 2018

DAVID L. JONES, JR.
PROFESSIONAL LAND SURVEYOR L-3672

NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES, JR.

PROJECT SURVEYED WITH MCKIM & CREED SURVEY
VESSEL "SV SOUNDS DEEP", ON APRIL 25-MAY 25, 2018 USING RTK AND VRS
GPS FOR HORIZONTAL POSITIONING AND 200KZ SOUNDING EQUIPMENT.
HYPACK SOFTWARE VER. 2017 WAS USED FOR DATA COLLECTION AND
PROCESSING. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE
RESULT OF SURVEYS MADE ON THE DATE INDICATED AND CAN BE
CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME.
BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO
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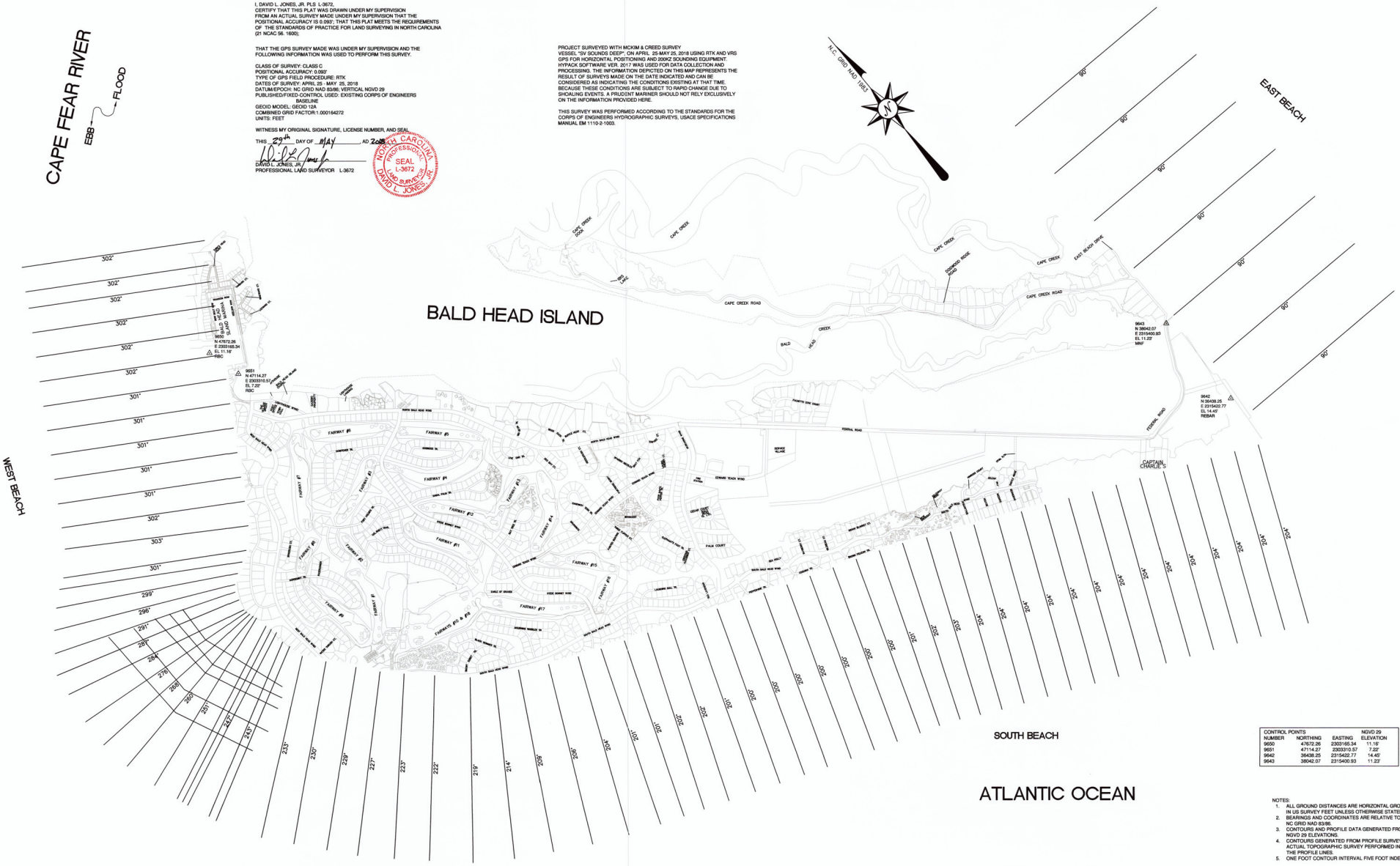
THIS SURVEY WAS PERFORMED ACCORDING TO THE STANDARDS FOR THE
CORPS OF ENGINEERS HYDROGRAPHIC SURVEYS, USACE SPECIFICATIONS
MANUAL EM 1110-2-1003.



CONTROL POINTS NUMBER	NORTHING	EASTING	NGVD 29 ELEVATION
9650	47872.26	2303165.34	11.16'
9651	47114.27	2303310.57	7.22'
9642	36438.25	2315422.77	14.45'
9643	38042.07	2315400.93	11.23'

NOTES:
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3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
5. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

NOTE: ELEVATIONS BASED ON NGVD 29

SCALE: 1" = 700'
0 350 700 1400 2100

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
FOR
THE VILLAGE OF BALD HEAD ISLAND

VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
MAY 25, 2018

JOB NUMBER:	00784-0071
SCALE:	1" = 700'
CAD NUMBER:	VT101-007840071_NAD83_MAY2018.DWG
PLS:	DLJ
PARTY CHIEF:	PARTY_CHIEF
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2018-042

SHEET 1 OF 4

BASELINE COORDINATES NAD 83

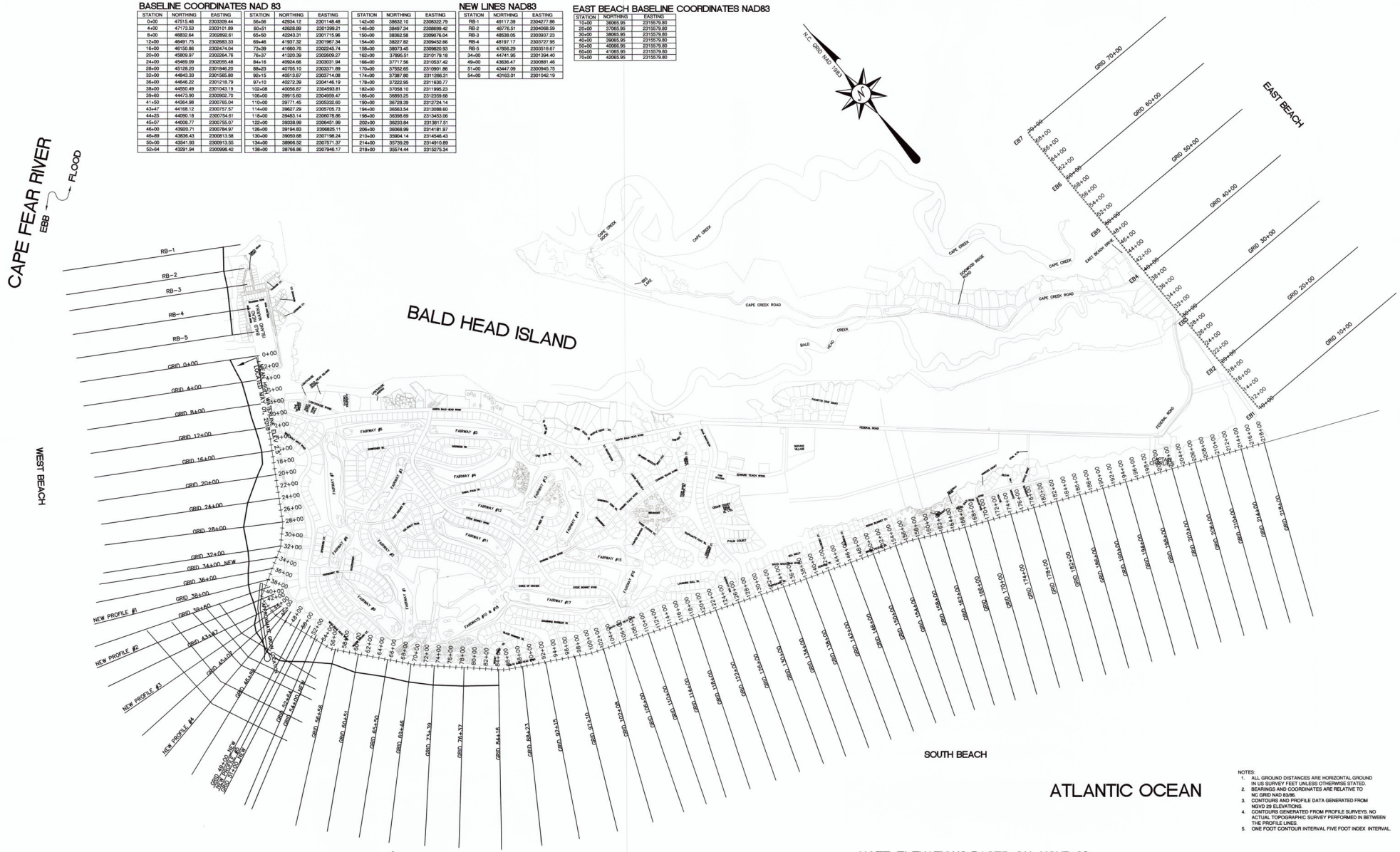
STATION	NORTHING	EASTING	STATION	NORTHING	EASTING	STATION	NORTHING	EASTING
0+00	47513.48	2303039.44	56+56	42834.12	2301148.48	142+00	38632.10	2308322.79
4+00	47173.53	2303101.89	60+51	42628.89	2301399.21	146+00	38497.34	2308699.42
8+00	46832.64	2302892.61	65+50	42243.31	2301715.96	150+00	38362.58	2309076.04
12+00	46491.75	2302683.33	69+46	41937.32	2301967.34	154+00	38227.82	2309452.66
16+00	46150.86	2302474.04	73+39	41660.76	2302245.74	158+00	38073.45	2309820.93
20+00	45809.97	2302264.76	76+37	41320.39	2302609.27	162+00	37895.51	2310179.18
24+00	45469.09	2302055.48	84+16	40824.66	2303031.94	166+00	37717.56	2310537.42
28+00	45128.20	2301846.20	88+23	40705.10	2303371.89	170+00	37552.65	2310901.86
32+00	44843.33	2301565.80	92+15	40513.87	2303714.08	174+00	37387.80	2311266.31
36+00	44646.22	2301218.79	97+10	40272.39	2304146.19	178+00	37222.95	2311630.77
38+00	44550.49	2301043.19	102+08	40056.87	2304593.81	182+00	37058.10	2311995.23
39+60	44473.90	2300902.70	106+00	39915.60	2304959.47	186+00	36893.25	2312359.68
41+50	44384.98	2300765.04	110+00	39771.45	2305332.60	190+00	36728.39	2312724.14
43+47	44168.12	2300757.57	114+00	39627.29	2305705.73	194+00	36563.54	2313088.60
44+25	44090.18	2300754.61	118+00	39483.14	2306078.86	198+00	36398.69	2313453.06
45+07	44008.77	2300755.07	122+00	39338.99	2306451.99	202+00	36233.84	2313817.51
46+00	43920.71	2300784.97	126+00	39194.83	2306825.11	206+00	36068.99	2314181.97
46+89	43836.43	2300813.58	130+00	39050.68	2307198.24	210+00	35904.14	2314546.43
50+00	43541.93	2300913.55	134+00	38906.52	2307571.37	214+00	35739.29	2314910.89
52+54	43291.94	2300998.42	138+00	38766.86	2307946.17	218+00	35574.44	2315275.34

NEW LINES NAD83

STATION	NORTHING	EASTING
RB-1	49117.39	2304077.86
RB-2	48776.51	2304068.59
RB-3	48538.05	2303937.23
RB-4	48197.17	2303727.95
RB-5	47856.29	2303518.67
34+00	44741.95	2301394.40
49+00	43636.47	2300891.46
51+00	43447.09	2300945.75
54+00	43163.01	2301042.19

EAST BEACH BASELINE COORDINATES NAD83

STATION	NORTHING	EASTING
10+00	38065.95	2315579.80
20+00	37965.95	2315579.80
30+00	38065.95	2315579.80
40+00	39065.95	2315579.80
50+00	40065.95	2315579.80
60+00	41065.95	2315579.80
70+00	42065.95	2315579.80



NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/86.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
5. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

NOTE: ELEVATIONS BASED ON NGVD 29

NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES, JR.
5-29-18

SCALE: 1" = 700'
0 350 700 1400 2100

McKIM & CREED
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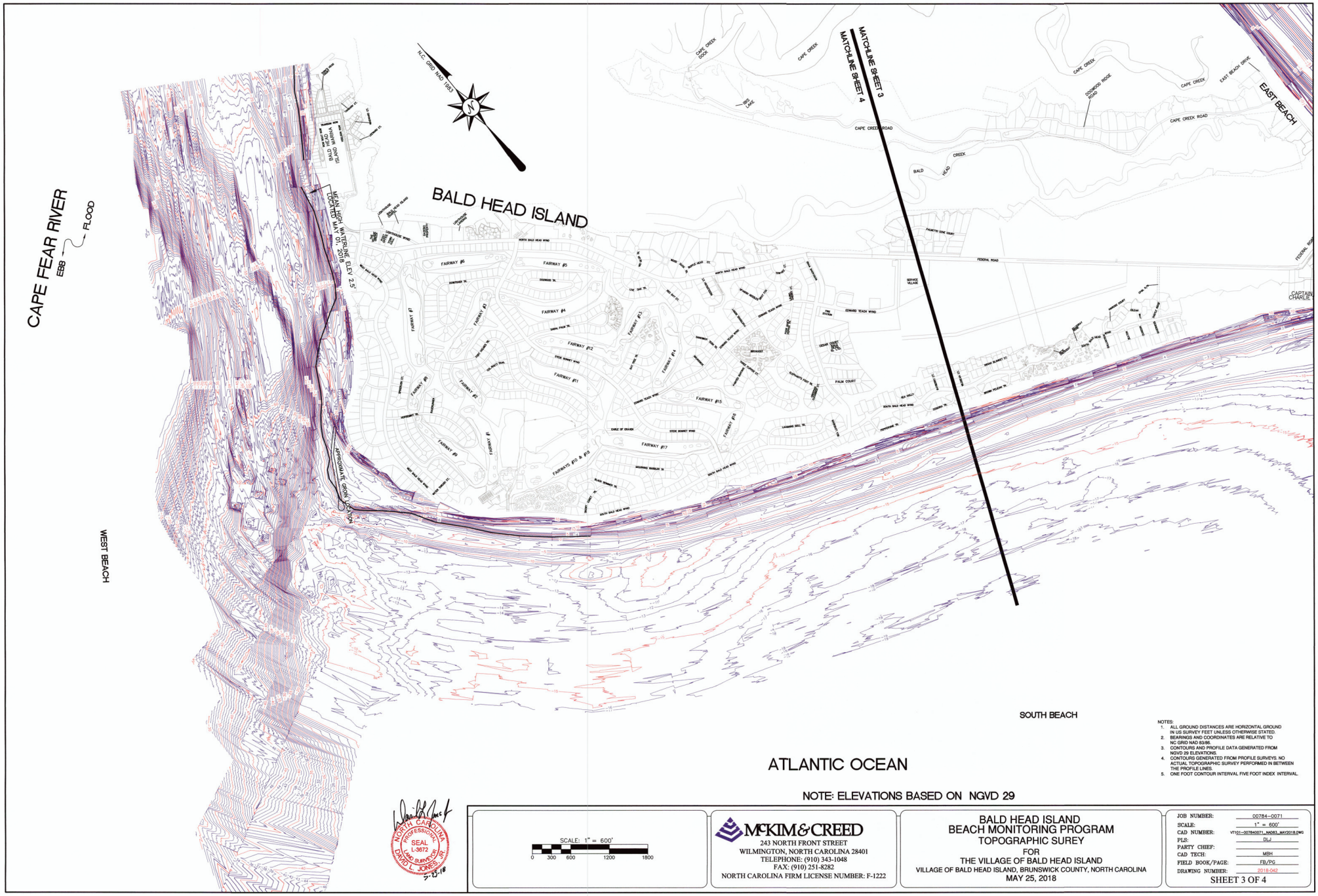
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
PROFILE SURVEY
FOR
THE VILLAGE OF BALD HEAD ISLAND
VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
MAY 25, 2018

JOB NUMBER:	00784-0071
SCALE:	1" = 700'
CAD NUMBER:	VT101-00784071_NAD83_MAY2018.DWG
PLS:	DLJ
PARTY CHIEF:	
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2018-042

SHEET 2 OF 4



NOTE: ELEVATIONS BASED ON NGVD 29

NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/86.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
5. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES
5-25-18

SCALE: 1" = 600'
0 300 600 1200 1800

McKIM & CREED
243 NORTH FRONT STREET
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TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND BEACH MONITORING PROGRAM TOPOGRAPHIC SUREY

FOR

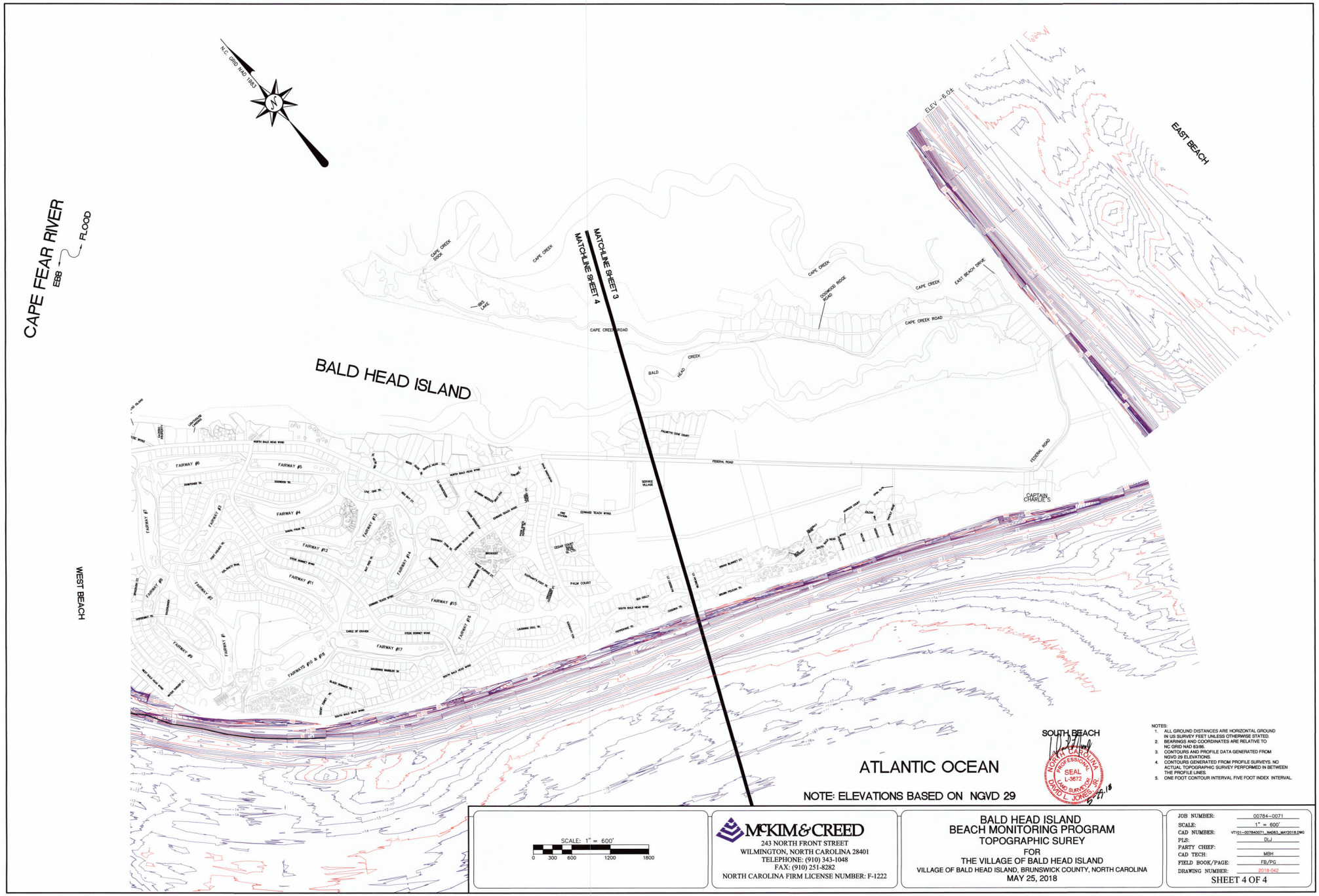
THE VILLAGE OF BALD HEAD ISLAND

VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA

MAY 25, 2018

JOB NUMBER:	00784-0071
SCALE:	1" = 600'
CAD NUMBER:	VT101-00784-0071_NAD83_MAY2018.DWG
PLS:	DLJ
PARTY CHIEF:	
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2018-042

SHEET 3 OF 4



NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/96.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. CONTOURS GENERATED FROM PROFILE SURVEYS. NO ACTUAL TOPOGRAPHIC SURVEY PERFORMED IN BETWEEN THE PROFILE LINES.
5. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

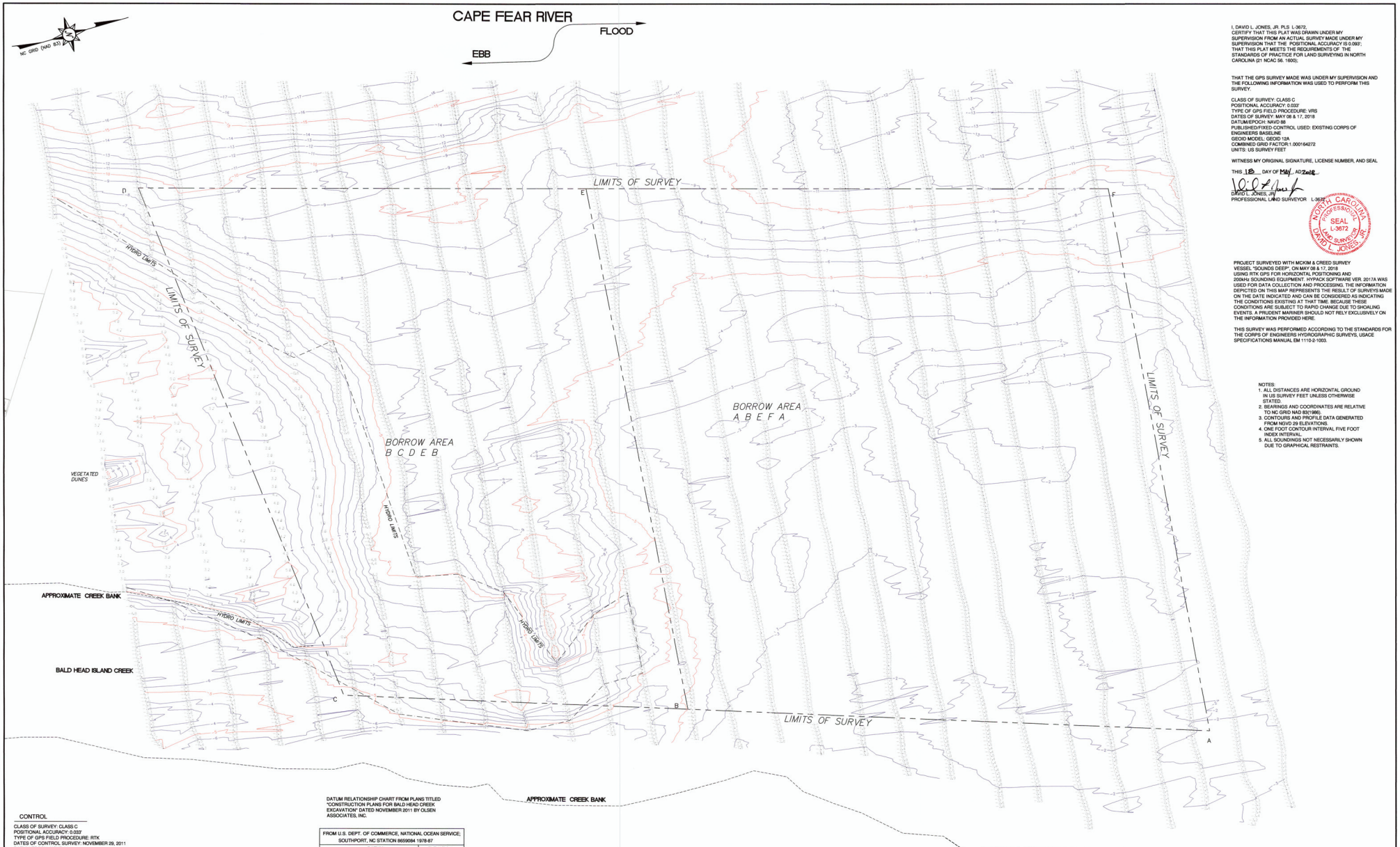
NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES, JR.
5-25-18

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
TOPOGRAPHIC SUREY
FOR
THE VILLAGE OF BALD HEAD ISLAND
VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
MAY 25, 2018

JOB NUMBER:	00784-0071
SCALE:	1" = 600'
CAD NUMBER:	VT101-007840071_NAD83_MHW2018.DWG
PLS:	DLJ
PARTY CHIEF:	
CAD TECH:	MBH
FIELD BOOK/PAGE:	FB/PG
DRAWING NUMBER:	2018-042

SHEET 4 OF 4



I, DAVID L. JONES, JR. PLS L-3672,
CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION THAT THE POSITIONAL ACCURACY IS 0.093'; THAT THIS PLAT MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600);

THAT THE GPS SURVEY MADE WAS UNDER MY SUPERVISION AND THE FOLLOWING INFORMATION WAS USED TO PERFORM THIS SURVEY.

CLASS OF SURVEY: CLASS C
POSITIONAL ACCURACY: 0.033'
TYPE OF GPS FIELD PROCEDURE: VRS
DATES OF SURVEY: MAY 08 & 17, 2018
DATUM/EPOCH: NAD 88
PUBLISHED/FIXED-CONTROL USED: EXISTING CORPS OF ENGINEERS BASELINE
GEOID MODEL: GEOID 12A
COMBINED GRID FACTOR:1.000164272
UNITS: US SURVEY FEET

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND SEAL

THIS 18 DAY OF May, AD 2018

DAVID L. JONES, JR.
PROFESSIONAL LAND SURVEYOR L-3672

NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR DAVID L. JONES, JR.

PROJECT SURVEYED WITH MCKIM & CREED SURVEY VESSEL "SOUNDS DEEP", ON MAY 08 & 17, 2018 USING RTK GPS FOR HORIZONTAL POSITIONING AND 200kHz SOUNDING EQUIPMENT. HYPACK SOFTWARE VER. 2017A WAS USED FOR DATA COLLECTION AND PROCESSING. THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULT OF SURVEYS MADE ON THE DATE INDICATED AND CAN BE CONSIDERED AS INDICATING THE CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS. A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE.

THIS SURVEY WAS PERFORMED ACCORDING TO THE STANDARDS FOR THE CORPS OF ENGINEERS HYDROGRAPHIC SURVEYS, USACE SPECIFICATIONS MANUAL EM 1110-2-1003.

NOTES:
1. ALL DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83(1990).
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.
5. ALL SOUNDINGS NOT NECESSARILY SHOWN DUE TO GRAPHICAL RESTRAINTS.

CONTROL

CLASS OF SURVEY: CLASS C
POSITIONAL ACCURACY: 0.033'
TYPE OF GPS FIELD PROCEDURE: RTK
DATES OF CONTROL SURVEY: NOVEMBER 29, 2011
DATUM/EPOCH: NGVD 29
PUBLISHED/FIXED-CONTROL USED: EXISTING CORPS OF ENGINEERS BASELINE
GEOID MODEL: GEOID 03
COMBINED GRID FACTOR:1.000164272
UNITS: US SURVEY FEET

CONTROL POINTS NUMBER	NORTHING	EASTING	NGVD 29 ELEVATION
9650	47672.26	2303165.34	11.16'
9651	47114.27	2303310.57	7.33'
9628	42418.95	2301572.77	5.83'
9629	41868.03	2302025.28	7.35'

DATUM RELATIONSHIP CHART FROM PLANS TITLED "CONSTRUCTION PLANS FOR BALD HEAD CREEK EXCAVATION" DATED NOVEMBER 2011 BY OLSEN ASSOCIATES, INC.

FROM U.S. DEPT. OF COMMERCE, NATIONAL OCEAN SERVICE; SOUTHPORT, NC STATION 8659084 1978-87	
DATUM	ELEVATION (FT-NGVD 29)
MEAN HIGHER HIGH WATER (MHHW)	+4.63
MEAN HIGH WATER (MHW)	+4.32
NAVD 1988	+2.91
MEAN TIDE LEVEL (MTL)	+2.16
NGVD 29	+1.81
MEAN LOW WATER	0.00
MEAN LOWER LOW WATER (MLLW)	-0.17

NOTE: ELEVATIONS BASED ON NGVD 29

SCALE: 1" = 100'
0 50 100 200 300

McKIM&CREED
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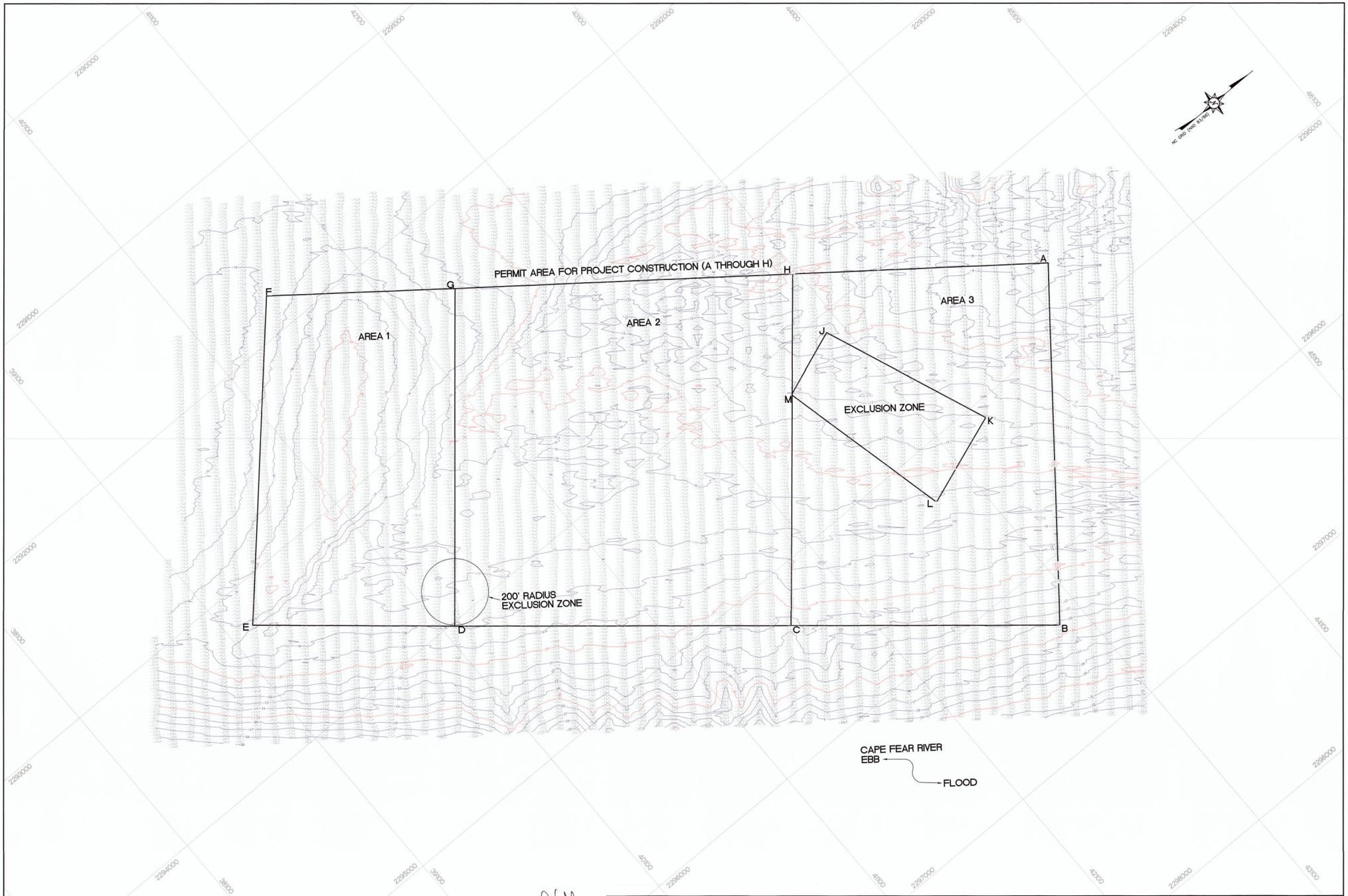
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1048
FAX: (910) 251-8282
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

BALD HEAD ISLAND CREEK

BORROW AREA SURVEY
FOR
VILLAGE OF BALD HEAD ISLAND
VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
MAY 18, 2018 1" = 100'

JOB NUMBER:	00784-0071
SCALE:	1" = 100'
CAD NUMBER:	V:\100-00784\0071_MH\2018_CREEK\BORROW.DWG
PLS:	DLJ
PARTY CHIEF:	JL
CAD TECH:	MBH
FIELD BOOK/PAGE:	
DRAWING NUMBER:	2018

SHEET 1 OF 1



NOTES:
SOUNDINGS ARE EXPRESSED IN FEET AND TENTHS AND REFER TO NGVD29 DATUM AS STATED HEREON.
PROJECT SURVEYED WITH MeKIM & CREED SURVEY VESSEL "SOUNDS DEEP", USING VRS GPS FOR HORIZONTAL POSITIONING, AND 200 KHZ SOUNDING EQUIPMENT, AND CORRECTED TO HORIZONTAL DATUM NAD83 AND NGVD 29 VERTICAL DATUM.

THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULT OF SURVEYS MADE ON THE DATE INDICATED AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS EXISTING AT THAT TIME. BECAUSE THESE CONDITIONS ARE SUBJECT TO RAPID CHANGE DUE TO SHOALING EVENTS, A PRUDENT MARINER SHOULD NOT RELY EXCLUSIVELY ON THE INFORMATION PROVIDED HERE.

NOTES:
1. ALL GROUND DISTANCES ARE HORIZONTAL GROUND IN US SURVEY FEET UNLESS OTHERWISE STATED.
2. BEARINGS AND COORDINATES ARE RELATIVE TO NC GRID NAD 83/98.
3. CONTOURS AND PROFILE DATA GENERATED FROM NGVD 29 ELEVATIONS.
4. ONE FOOT CONTOUR INTERVAL FIVE FOOT INDEX INTERVAL.

NORTH CAROLINA PROFESSIONAL SEAL L-3672 LAND SURVEYOR CARTER L. JONES, JR.
5-10-18

SCALE: 1" = 200'
0 100 200 400 600

McKIM & CREED
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NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

JAY BIRD SHOAL BORROW AREA
FOR
THE VILLAGE OF BALD HEAD ISLAND
EXISTING CONDITIONS HYDROGRAPHIC SURVEY

VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
MAY 2018 SCALE 1" = 200'

JOB NUMBER:	00784-0071
SCALE:	1" = 200'
CAD NUMBER:	VT1101-00784X0071-JAYBIRD_MAY2018.DWG
PLS:	DLJ
PARTY CHIEF:	JS
CAD TECH:	MBH
FIELD BOOK/PAGE:	
DRAWING NUMBER:	2018-038

SHEET 1 OF 1