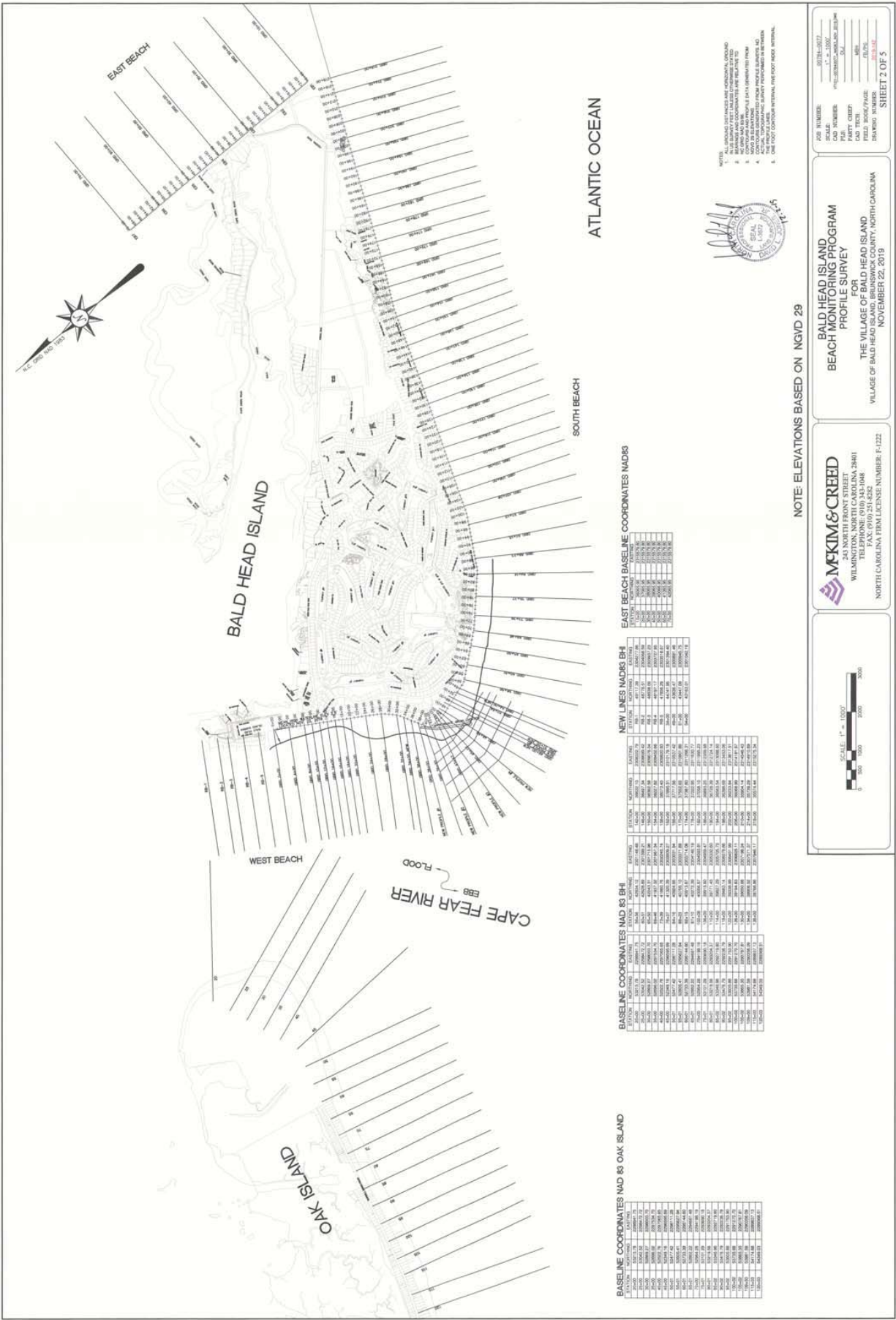


APPENDIX F: November 2019 & May 2020 Monitoring Survey Drawings

This appendix contains reduced versions of the survey drawings produced by McKim and Creed, Inc.¹ for the November 2019 and May 2020 Bald Head Island beach profile and borrow site monitoring surveys.

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

November 2019 Drawings



NOTE:
 1. ALL SHOWN DISTANCES ARE HORIZONTAL UNLESS NOTED OTHERWISE.
 2. BEACH AND OCCUPANCY ARE NOT TO BE CONSIDERED.
 3. COORDINATES AND PROFILE ELEVATIONS ARE BASED ON THE 1983 NORTH CAROLINA DATUM.
 4. ELEVATIONS DETERMINED FROM PROFILE SURVEYS.
 5. ELEVATIONS DETERMINED FROM PROFILE SURVEYS.
 6. THE FOOT COUNTS INTERNAL FIVE FOOT FACE, INTERNAL.

EAST BEACH BASELINE COORDINATES NAD83

STATIONING	EASTING	NORTHING	ELEVATION
100+00	100000.00	100000.00	100.00
100+01	100001.00	100001.00	101.00
100+02	100002.00	100002.00	102.00
100+03	100003.00	100003.00	103.00
100+04	100004.00	100004.00	104.00
100+05	100005.00	100005.00	105.00
100+06	100006.00	100006.00	106.00
100+07	100007.00	100007.00	107.00
100+08	100008.00	100008.00	108.00
100+09	100009.00	100009.00	109.00
100+10	100010.00	100010.00	110.00
100+11	100011.00	100011.00	111.00
100+12	100012.00	100012.00	112.00
100+13	100013.00	100013.00	113.00
100+14	100014.00	100014.00	114.00
100+15	100015.00	100015.00	115.00
100+16	100016.00	100016.00	116.00
100+17	100017.00	100017.00	117.00
100+18	100018.00	100018.00	118.00
100+19	100019.00	100019.00	119.00
100+20	100020.00	100020.00	120.00

NEW LINES NAD83 BH

STATIONING	EASTING	NORTHING	ELEVATION
100+21	100021.00	100021.00	121.00
100+22	100022.00	100022.00	122.00
100+23	100023.00	100023.00	123.00
100+24	100024.00	100024.00	124.00
100+25	100025.00	100025.00	125.00
100+26	100026.00	100026.00	126.00
100+27	100027.00	100027.00	127.00
100+28	100028.00	100028.00	128.00
100+29	100029.00	100029.00	129.00
100+30	100030.00	100030.00	130.00
100+31	100031.00	100031.00	131.00
100+32	100032.00	100032.00	132.00
100+33	100033.00	100033.00	133.00
100+34	100034.00	100034.00	134.00
100+35	100035.00	100035.00	135.00
100+36	100036.00	100036.00	136.00
100+37	100037.00	100037.00	137.00
100+38	100038.00	100038.00	138.00
100+39	100039.00	100039.00	139.00
100+40	100040.00	100040.00	140.00

BASELINE COORDINATES NAD 83 BH

STATIONING	EASTING	NORTHING	ELEVATION
100+41	100041.00	100041.00	141.00
100+42	100042.00	100042.00	142.00
100+43	100043.00	100043.00	143.00
100+44	100044.00	100044.00	144.00
100+45	100045.00	100045.00	145.00
100+46	100046.00	100046.00	146.00
100+47	100047.00	100047.00	147.00
100+48	100048.00	100048.00	148.00
100+49	100049.00	100049.00	149.00
100+50	100050.00	100050.00	150.00
100+51	100051.00	100051.00	151.00
100+52	100052.00	100052.00	152.00
100+53	100053.00	100053.00	153.00
100+54	100054.00	100054.00	154.00
100+55	100055.00	100055.00	155.00
100+56	100056.00	100056.00	156.00
100+57	100057.00	100057.00	157.00
100+58	100058.00	100058.00	158.00
100+59	100059.00	100059.00	159.00
100+60	100060.00	100060.00	160.00

BASELINE COORDINATES NAD 83 OAK ISLAND

STATIONING	EASTING	NORTHING	ELEVATION
100+61	100061.00	100061.00	161.00
100+62	100062.00	100062.00	162.00
100+63	100063.00	100063.00	163.00
100+64	100064.00	100064.00	164.00
100+65	100065.00	100065.00	165.00
100+66	100066.00	100066.00	166.00
100+67	100067.00	100067.00	167.00
100+68	100068.00	100068.00	168.00
100+69	100069.00	100069.00	169.00
100+70	100070.00	100070.00	170.00
100+71	100071.00	100071.00	171.00
100+72	100072.00	100072.00	172.00
100+73	100073.00	100073.00	173.00
100+74	100074.00	100074.00	174.00
100+75	100075.00	100075.00	175.00
100+76	100076.00	100076.00	176.00
100+77	100077.00	100077.00	177.00
100+78	100078.00	100078.00	178.00
100+79	100079.00	100079.00	179.00
100+80	100080.00	100080.00	180.00

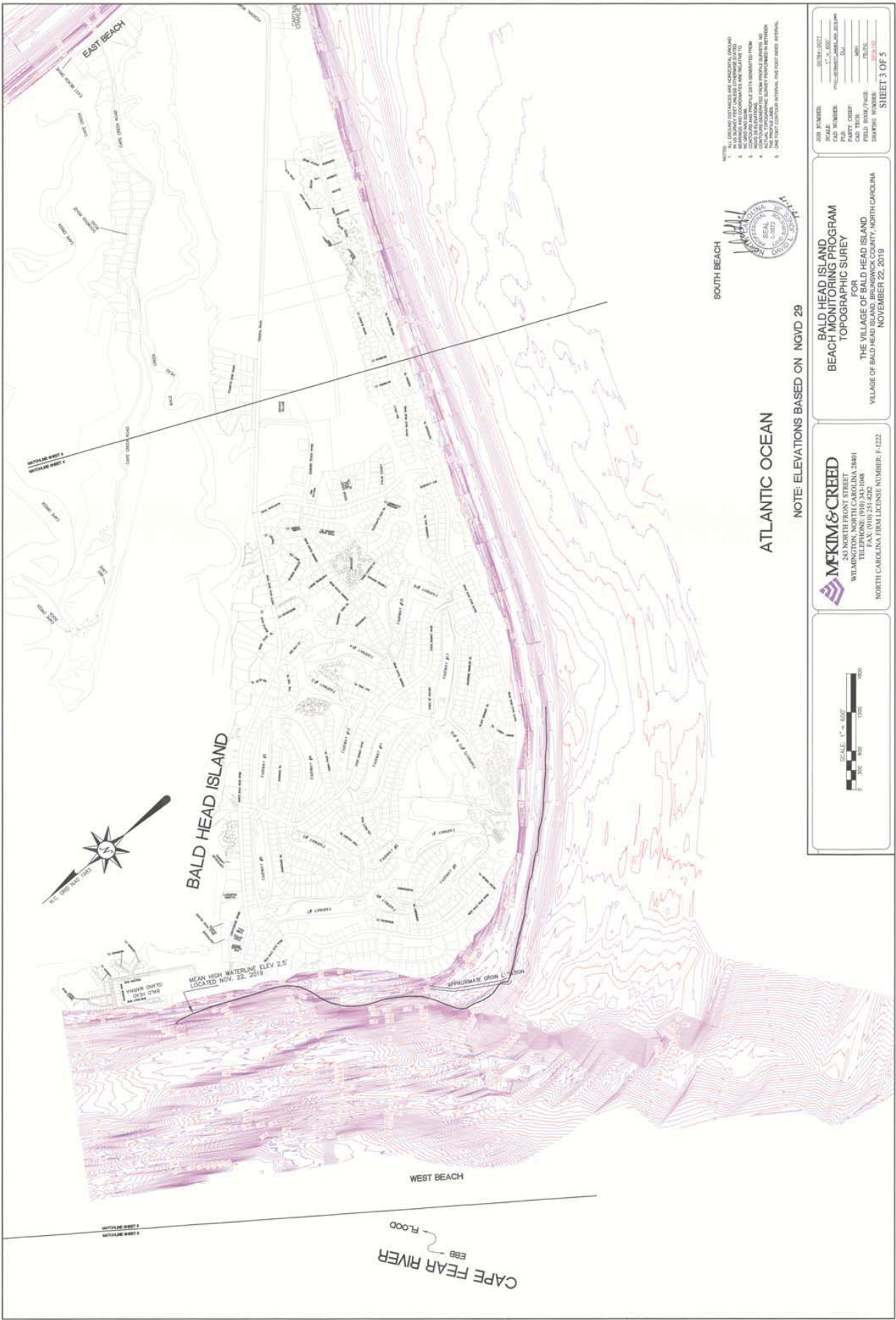
NOTE: ELEVATIONS BASED ON NGVD 29



MCKIM & CREED
 ENGINEERS, ARCHITECTS, PLANNERS
 WILMINGTON, NORTH CAROLINA 28401
 TELEPHONE: (910) 343-1000
 NORTH CAROLINA EXAM LICENSE NUMBER: F-1122

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 22, 2019

JOB NUMBER: 2019-1017
 SCALE: 1" = 1000'
 DATE: 11/22/19
 PARTY CHIEF: JAC
 FIELD BOOK/PAGE: 10/29
 DRAWING NUMBER: 2019-1017
 SHEET 2 OF 5



NOTES:

1. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE IN FEET AND ARE BASED ON NGVD 29.
2. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
3. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
4. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
5. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
6. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
7. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
8. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
9. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.
10. ALL ELEVATIONS UNLESS OTHERWISE NOTED ARE BASED ON NGVD 29.



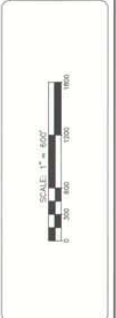
ATLANTIC OCEAN

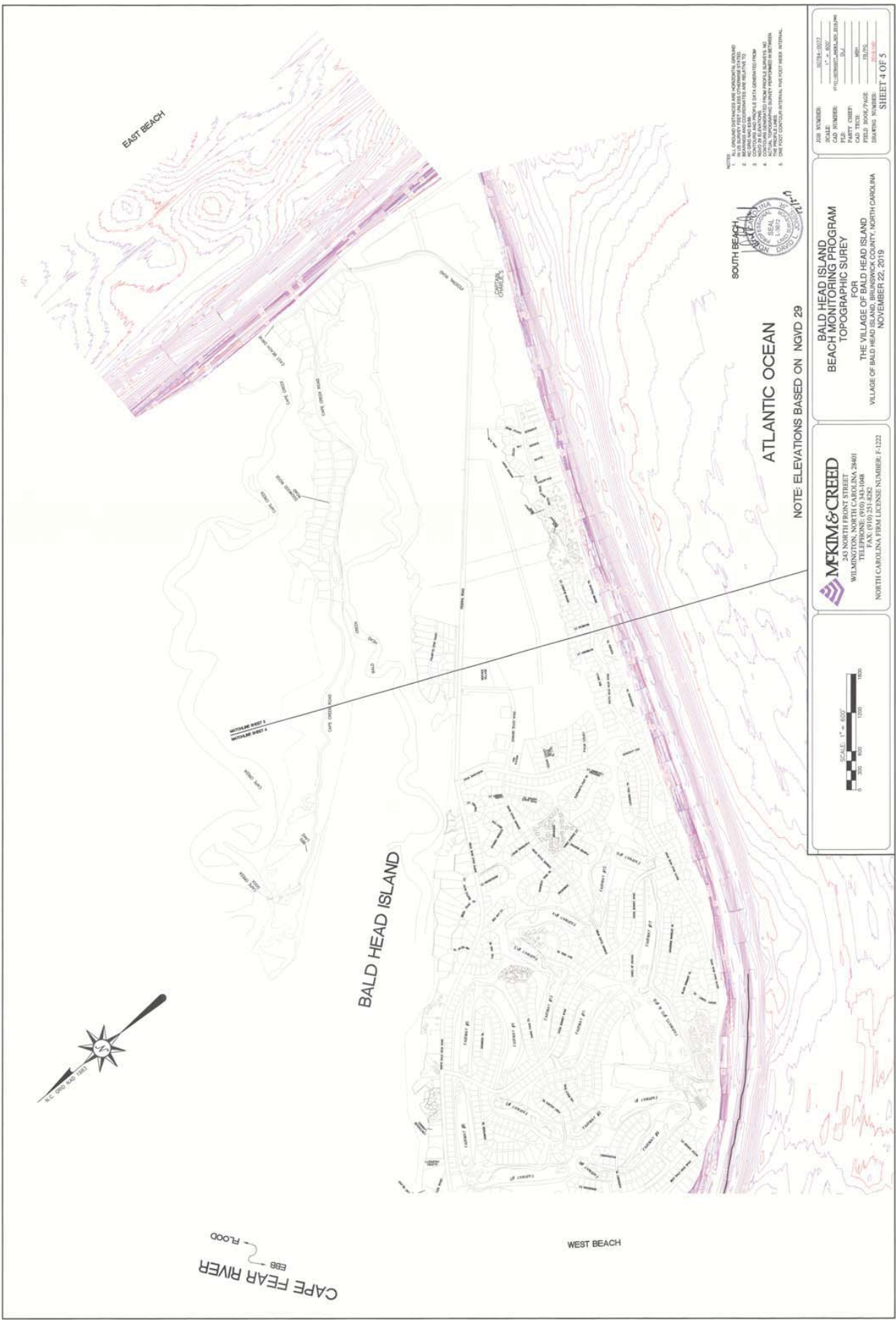
NOTE: ELEVATIONS BASED ON NGVD 29

JOB NUMBER	00214-0017
SCALE	1" = 400'
DRAWN BY	W. J. HARRIS
CHECKED BY	W. J. HARRIS
DATE	11/22/11
PARTY CHECKED	W. J. HARRIS
FIELD BOOK/PAGE	11/22/11
DRAWING NUMBER	11/22/11

BALD HEAD ISLAND BEACH MONITORING PROGRAM TOPOGRAPHIC SURVEY
 FOR
 THE VILLAGE OF BALD HEAD ISLAND
 VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
 NOVEMBER 22, 2011

MCKIM & CREED
 A PROFESSIONAL SURVEYING FIRM
 WILMINGTON, NORTH CAROLINA 28401
 TELEPHONE: (910) 341-1048
 NORTH CAROLINA FIRM LICENSE NUMBER: F-1222





EAST BEACH

BALD HEAD ISLAND

ATLANTIC OCEAN

NOTE: ELEVATIONS BASED ON NGVD 29

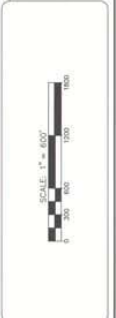
- NOTES:
1. ALL ELEVATIONS REFER TO MEAN SEA LEVEL UNLESS OTHERWISE NOTED.
 2. ALL ELEVATIONS ARE BASED ON NGVD 29.
 3. ALL ELEVATIONS ARE BASED ON NGVD 29.
 4. ALL ELEVATIONS ARE BASED ON NGVD 29.
 5. ALL ELEVATIONS ARE BASED ON NGVD 29.
 6. ALL ELEVATIONS ARE BASED ON NGVD 29.



JOB NUMBER:	00174-0017
SCALE:	1" = 500'
DATE:	NOVEMBER 2018
PARTY CHECK:	OK
FIELD BOOK/PAGE:	11/15
DRAWING NUMBER:	00174-0017
SHEET 4 OF 5	

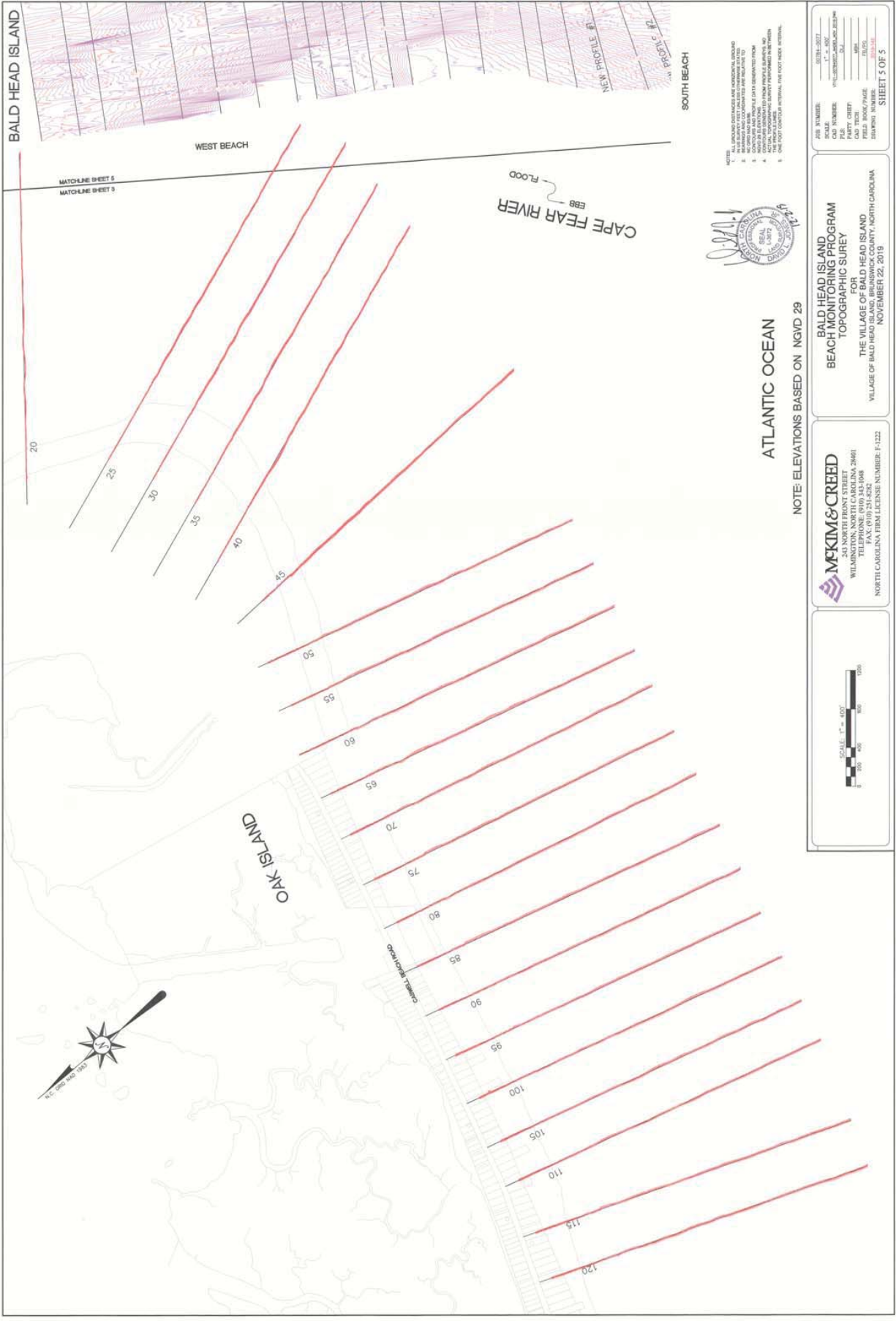
BALD HEAD ISLAND BEACH MONITORING PROGRAM TOPOGRAPHIC SURVEY
 FOR THE VILLAGE OF BALD HEAD ISLAND
 VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
 NOVEMBER 22, 2018

MCKIM & CREED
 A PROFESSIONAL SURVEYING FIRM
 WILMINGTON, NORTH CAROLINA 28401
 TELEPHONE: (910) 343-1048
 NORTH CAROLINA FIRM LICENSE NUMBER: F1222



CAPE FEAR RIVER
 EBB
 FLOOD

WEST BEACH



BALD HEAD ISLAND

WEST BEACH

SOUTH BEACH

CAPE FEAR RIVER
 FLOOD
 EBB

MATCHLINE SHEET 5
 MATCHLINE SHEET 3

20

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110

115

120

OAK ISLAND

Oak Island Towers



- NOTES:
1. ALL ELEVATIONS ARE MEASUREMENTS TAKEN ON THE BEACH SURFACE UNLESS OTHERWISE NOTED.
 2. ELEVATIONS ARE MEASUREMENTS TAKEN RELATIVE TO THE MEAN LOW WATER TIDE.
 3. ELEVATIONS ARE MEASUREMENTS TAKEN FROM THE SURFACE OF THE SAND.
 4. ELEVATIONS ARE MEASUREMENTS TAKEN FROM THE SURFACE OF THE SAND.
 5. ELEVATIONS ARE MEASUREMENTS TAKEN FROM THE SURFACE OF THE SAND.
 6. ONE FOOT CORRECTION INTERNAL, FIVE FOOT EXTERNAL.



ATLANTIC OCEAN

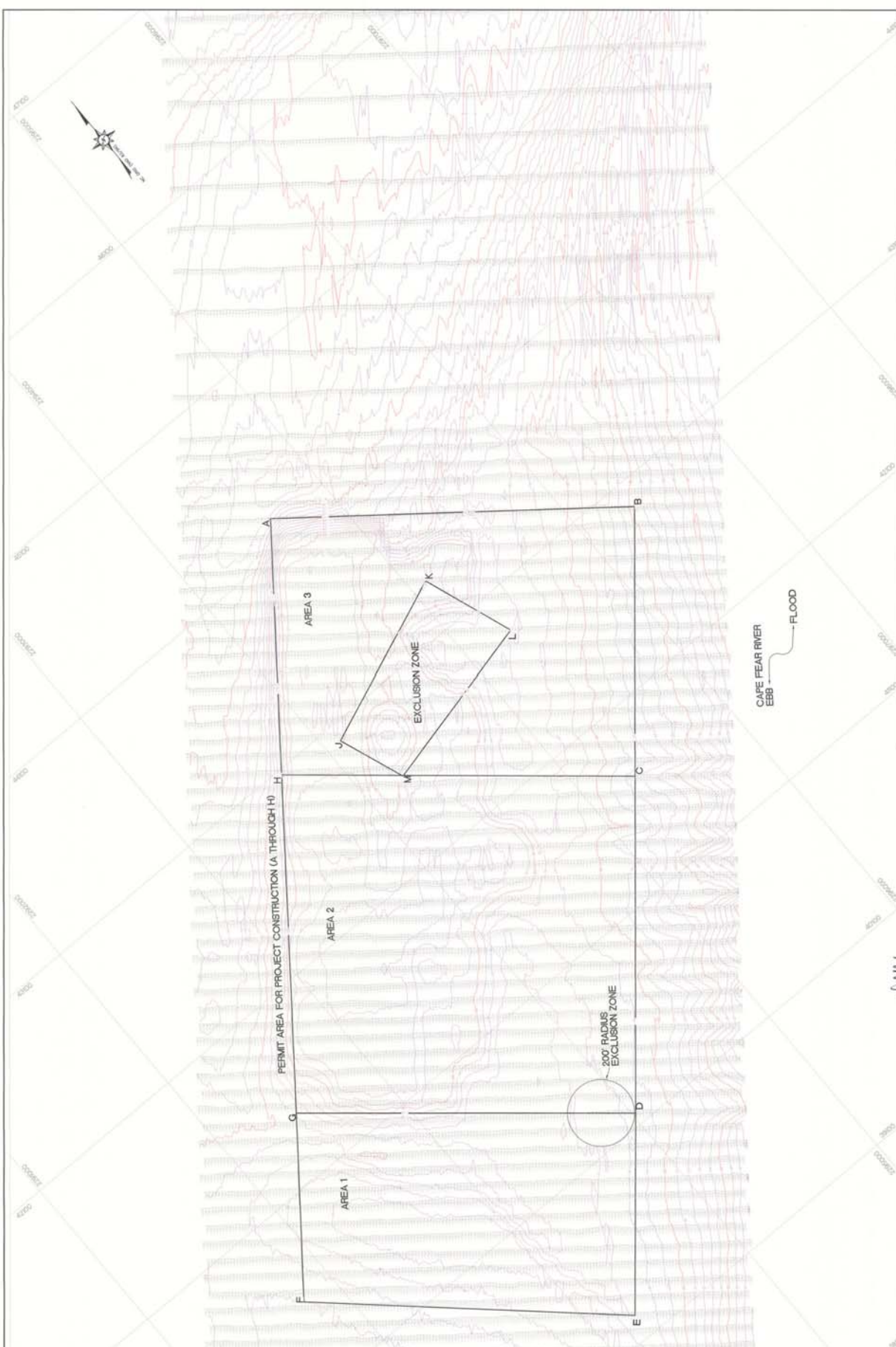
NOTE: ELEVATIONS BASED ON NGVD 29

JOB NUMBER:	00724-2017
SCALE:	1" = 100'
DATE:	11/28/17
PROJECT NUMBER:	00724-2017
PROJECT NAME:	BALD HEAD ISLAND
PROJECT LOCATION:	BALD HEAD ISLAND
PROJECT OWNER:	THE VILLAGE OF BALD HEAD ISLAND
PROJECT NUMBER:	00724-2017
PROJECT NAME:	BALD HEAD ISLAND
PROJECT LOCATION:	BALD HEAD ISLAND
PROJECT OWNER:	THE VILLAGE OF BALD HEAD ISLAND

**BALD HEAD ISLAND
 BEACH MONITORING PROGRAM
 TOPOGRAPHIC SURVEY**
 FOR
 THE VILLAGE OF BALD HEAD ISLAND
 VILLAGE OF BALD HEAD ISLAND, WILSON COUNTY, NORTH CAROLINA
 NOVEMBER 28, 2018

MCKIM & CREED
 401 NORTH BRANT STREET
 WILMINGTON, NORTH CAROLINA, 28401
 TELEPHONE: (910) 343-1048
 NORTH CAROLINA FIRM LICENSE NUMBER: F1122





DATE: 08/11/2011
 JOB NUMBER: 11010000000000000000
 JOB NUMBER: 11010000000000000000
 PARTY: CREEK
 PROJECT: JAY BIRD SHOAL BORROW AREA
 SHEET NUMBER: 1 OF 1

JAY BIRD SHOAL BORROW AREA
 FOR
 THE VILLAGE OF BALD HEAD ISLAND
 EXISTING CONDITIONS HYDROGRAPHIC SURVEY
 VILLAGE OF BALD HEAD ISLAND, BRANSON COUNTY, NORTH CAROLINA
 NOVEMBER 2011 SCALE 1"=50'

MCKIM & CREED
 30 NORTH FRONT STREET
 WELLSVILLE, OHIO 43081-2846
 TELEPHONE (614) 843-3400
 NORTH CAROLINA LICENSE NUMBER: F-1222

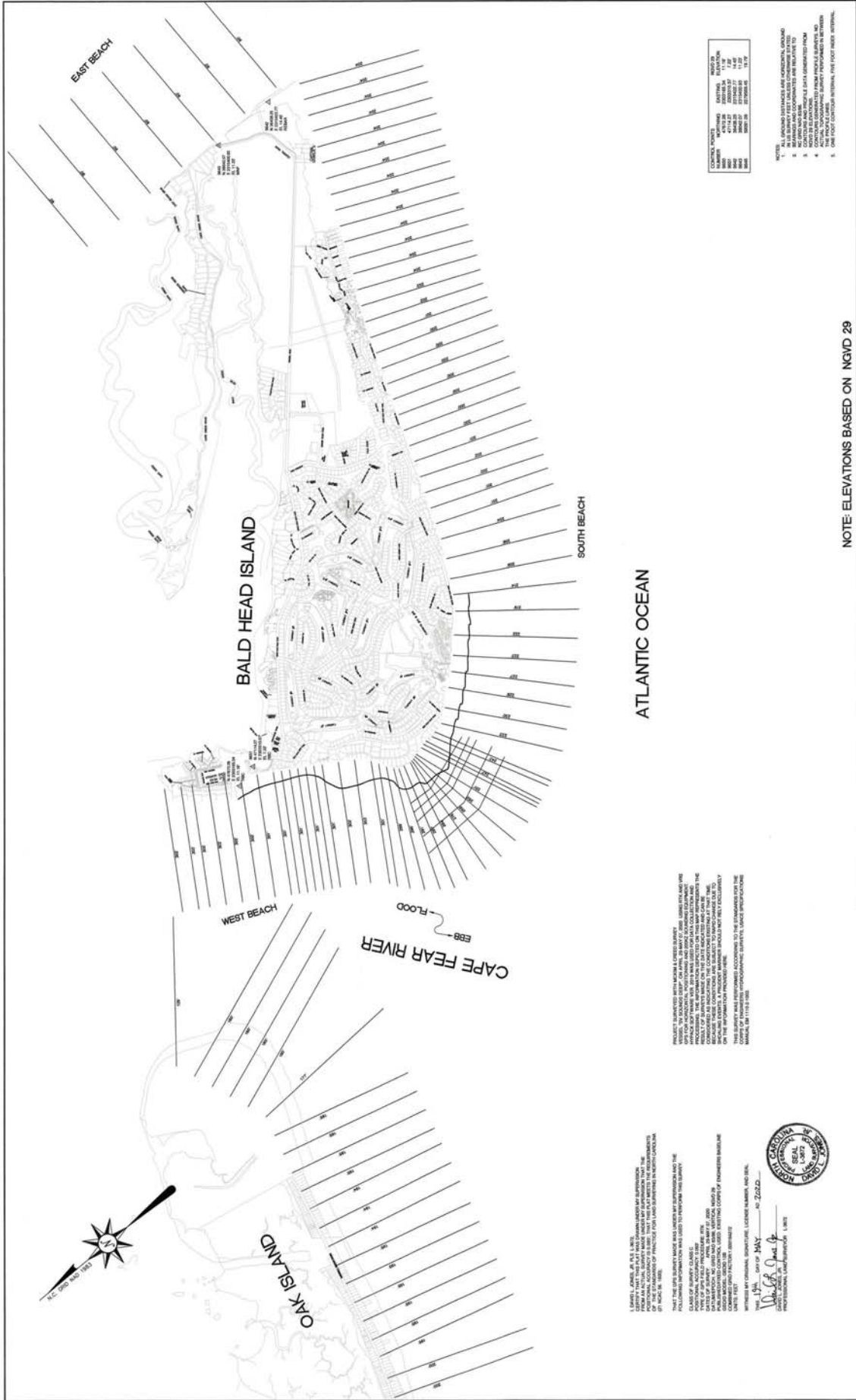


NOTES:
 1. ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
 3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 4. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
 5. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.



THIS SURVEY AND ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.

May 2020 Drawings



CONTRACT NO.	DATE	DESCRIPTION
10000	10/15/19	CONTRACT FOR SERVICES
10001	10/15/19	CONTRACT FOR SERVICES
10002	10/15/19	CONTRACT FOR SERVICES
10003	10/15/19	CONTRACT FOR SERVICES
10004	10/15/19	CONTRACT FOR SERVICES
10005	10/15/19	CONTRACT FOR SERVICES
10006	10/15/19	CONTRACT FOR SERVICES
10007	10/15/19	CONTRACT FOR SERVICES
10008	10/15/19	CONTRACT FOR SERVICES
10009	10/15/19	CONTRACT FOR SERVICES
10010	10/15/19	CONTRACT FOR SERVICES

- NOTES:
1. THE ELEVATIONS SHOWN ON THIS MAP ARE BASED ON NGVD 29.
 2. THE ELEVATIONS SHOWN ON THIS MAP ARE BASED ON NGVD 29.
 3. THE ELEVATIONS SHOWN ON THIS MAP ARE BASED ON NGVD 29.
 4. THE ELEVATIONS SHOWN ON THIS MAP ARE BASED ON NGVD 29.
 5. THE ELEVATIONS SHOWN ON THIS MAP ARE BASED ON NGVD 29.

ATLANTIC OCEAN

NOTE: ELEVATIONS BASED ON NGVD 29

THIS MAP IS A REPRODUCTION OF A MAP PREPARED BY THE ENGINEER AND ARCHITECT FOR THE PURPOSES OF THE PROJECT DESCRIBED HEREIN. THE ENGINEER AND ARCHITECT MAKE NO WARRANTY, REPRESENTATION OR GUARANTEE AS TO THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE INFORMATION PROVIDED HEREON IS SUBJECT TO THE TERMS AND CONDITIONS OF THE PROFESSIONAL FEE AGREEMENT. THE ENGINEER AND ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE ENGINEER AND ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON. THE ENGINEER AND ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED HEREON.

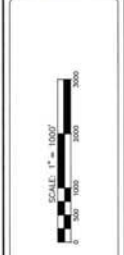
I, **DAVID L. JAMES, JR.**, P.E., S.W.P.E.,
 STATE OF NORTH CAROLINA, COUNTY OF WILMINGTON, BEING SOBER AND OF SOUND MIND, DO HEREBY CERTIFY THAT I AM THE REGISTERED PROFESSIONAL ENGINEER AND ARCHITECT FOR THE PROJECT DESCRIBED HEREIN. I AM A MEMBER OF THE NORTH CAROLINA SOCIETY OF PROFESSIONAL ENGINEERS AND ARCHITECTS. I AM A MEMBER OF THE NORTH CAROLINA SOCIETY OF PROFESSIONAL ENGINEERS AND ARCHITECTS. I AM A MEMBER OF THE NORTH CAROLINA SOCIETY OF PROFESSIONAL ENGINEERS AND ARCHITECTS.



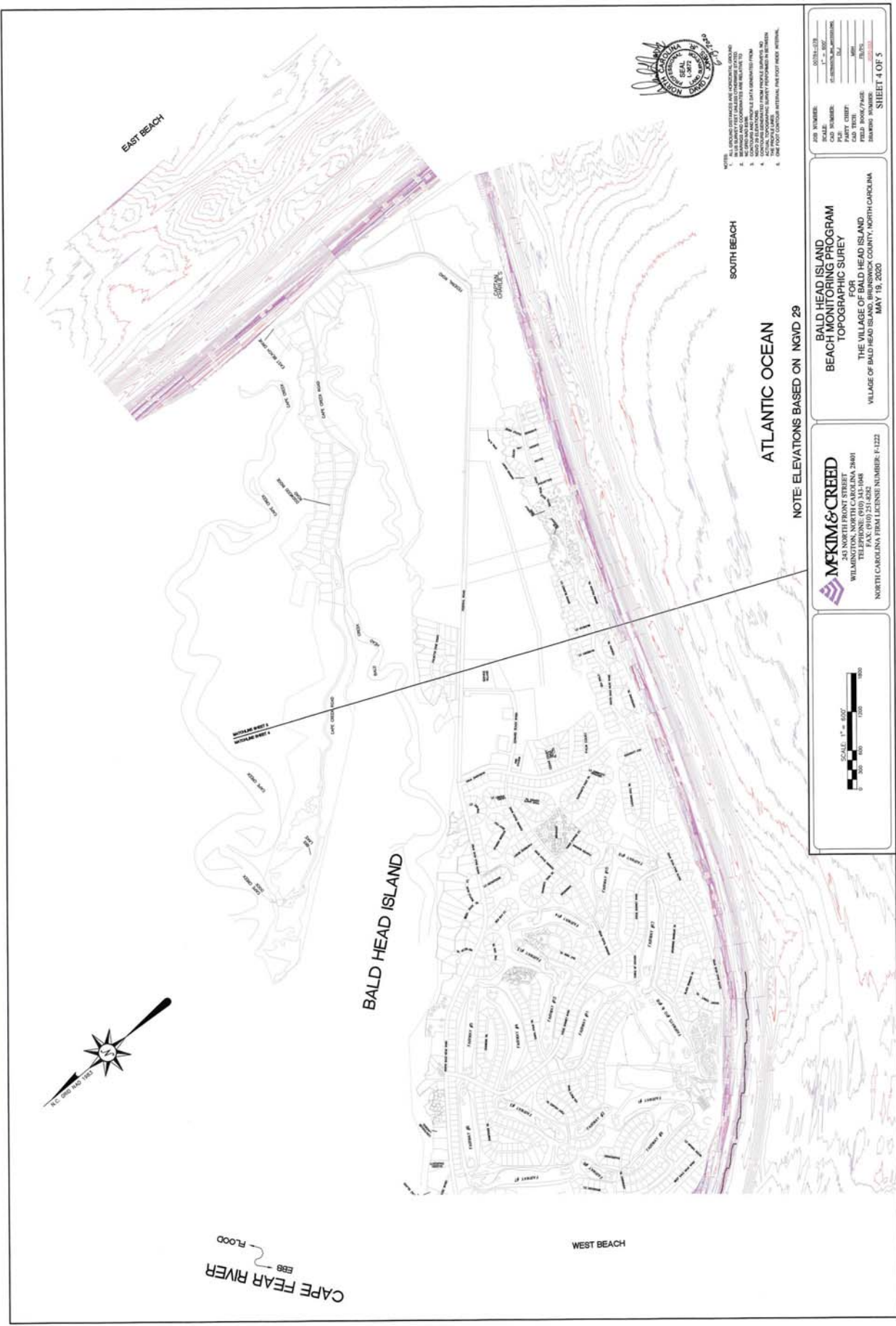
NO. OF SHEETS	TOTAL SHEETS
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10

BALD HEAD ISLAND
BEACH MONITORING PROGRAM
 FOR
THE VILLAGE OF BALD HEAD ISLAND
 VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
 MAY 19, 2020

McKIM & CREED
 243 NORTH FRONT STREET
 WILMINGTON, NORTH CAROLINA 28401
 TEL: (910) 251-4200
 FAX: (910) 251-4205
 NORTH CAROLINA TBM LICENSE NUMBER: F-122



SHEET 1 OF 5



EAST BEACH

SOUTH BEACH

ATLANTIC OCEAN

BALD HEAD ISLAND

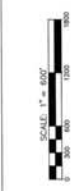
CAPE FEAR RIVER
E888
FLOOD

WEST BEACH



- NOTES:
1. THIS SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEYING AND MAPPING ACT OF 2002.
 2. ALL DATA IS BASED ON THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM.
 3. ALL DATA IS BASED ON THE 1985 MEAN SEA LEVEL DATUM.
 4. THIS SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEYING AND MAPPING ACT OF 2002.
 5. THE SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEYING AND MAPPING ACT OF 2002.
 6. THE SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEYING AND MAPPING ACT OF 2002.

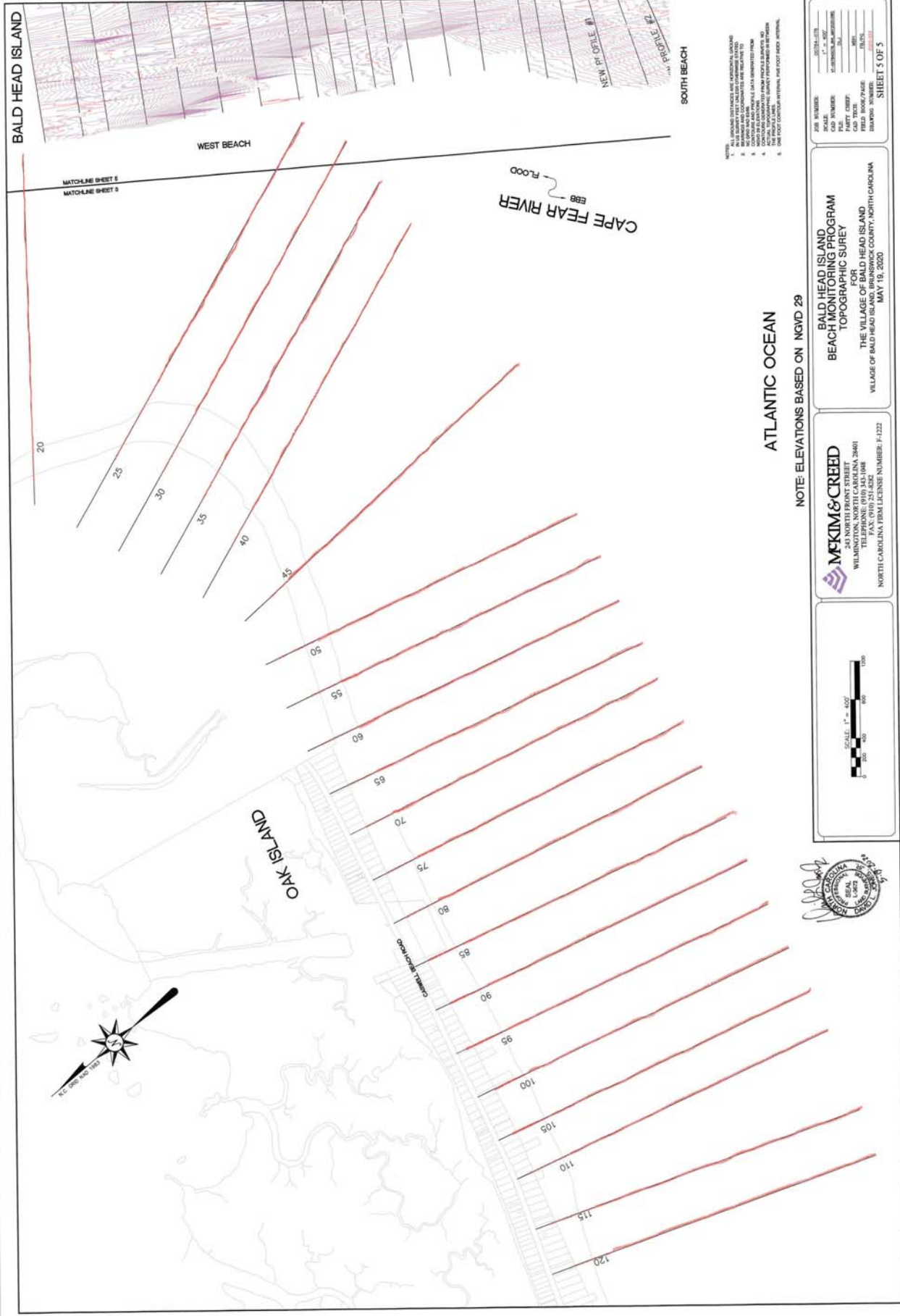
NOTE ELEVATIONS BASED ON NGVD 29



MCKIM & CREED
343 NORTH FRONT STREET
WILMINGTON, NORTH CAROLINA 28401
TELEPHONE: (910) 343-1488
FAX: (910) 343-1489
NORTH CAROLINA FIRM LICENSE NUMBER: F-1222

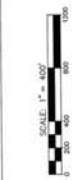
**BALD HEAD ISLAND
BEACH MONITORING PROGRAM
TOPOGRAPHIC SURVEY
FOR
THE VILLAGE OF BALD HEAD ISLAND
WILMINGTON COUNTY, NORTH CAROLINA
MAY 19, 2020**

JOB NUMBER:	2020-032
DATE:	05/19/2020
SCALE:	1" = 600'
PROJECT:	BALD HEAD ISLAND BEACH MONITORING PROGRAM
DRAWN BY:	JLW
CHECKED BY:	JLW
DATE:	05/19/2020
FIELD BOOK/PAGE:	1/1
DATE:	05/19/2020
SHEET 4 OF 5	



- NOTE: ALL ELEVATIONS INDICATED ARE MEAN SEA LEVEL UNLESS OTHERWISE NOTED.
1. ALL ELEVATIONS ARE MEAN SEA LEVEL UNLESS OTHERWISE NOTED.
 2. ELEVATIONS ARE BASED ON NGVD 29.
 3. ELEVATIONS ARE BASED ON NGVD 29.
 4. ELEVATIONS ARE BASED ON NGVD 29.
 5. ELEVATIONS ARE BASED ON NGVD 29.
 6. ELEVATIONS ARE BASED ON NGVD 29.

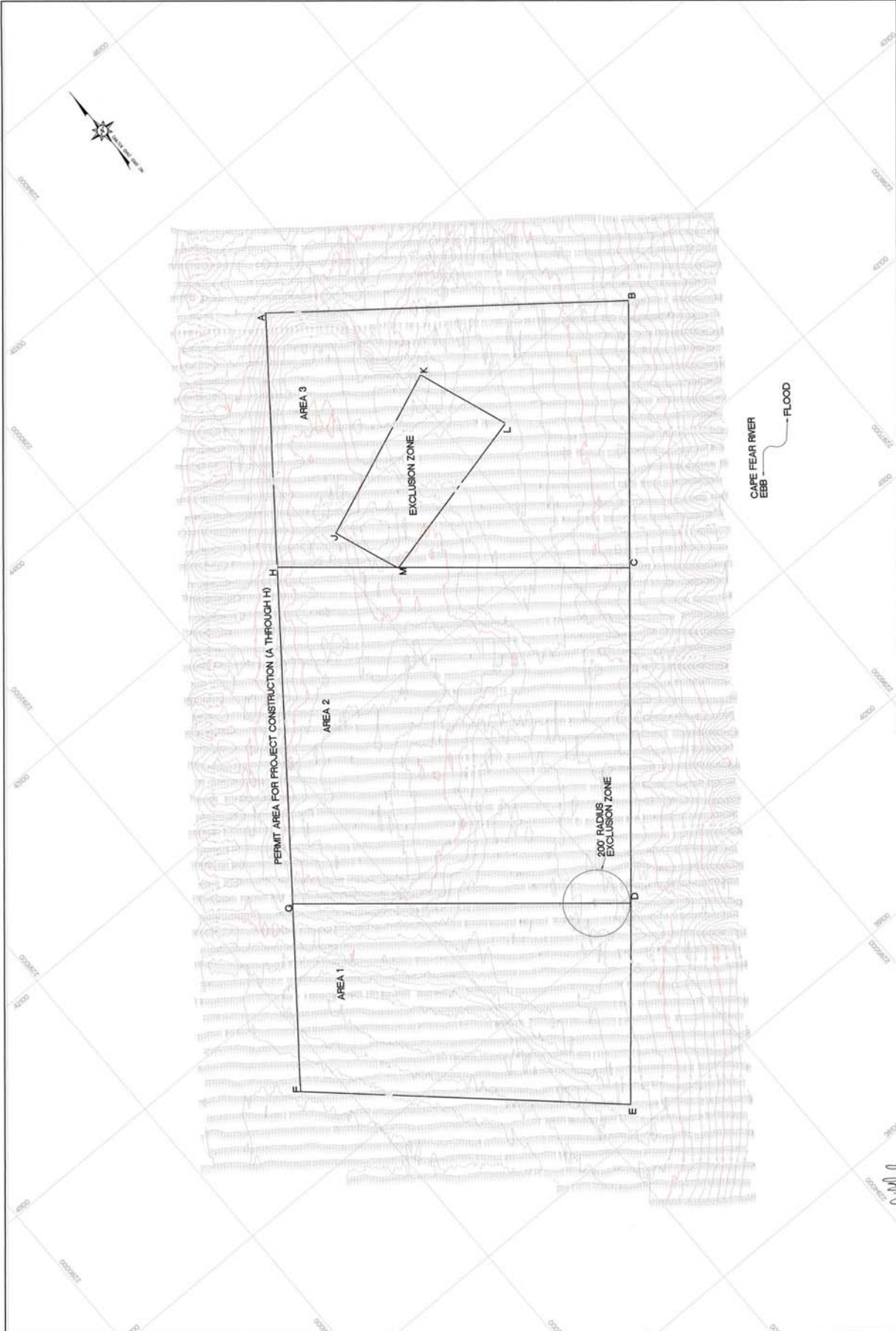
NOTE: ELEVATIONS BASED ON NGVD 29



MCKIM & CREED
 340 NORTH FRONT STREET
 WILMINGTON, NORTH CAROLINA 28401
 TEL: (910) 251-4300
 FAX: (910) 251-4325
 NORTH CAROLINA TRIAL LICENSE NUMBER: F-1222

BALD HEAD ISLAND BEACH MONITORING PROGRAM TOPOGRAPHIC SURVEY FOR THE VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
 MAY 19, 2020

JOB NUMBER:	1918
SCALE:	1" = 400'
CAD NUMBER:	1918
DATE:	05/19/20
DRAWN BY:	JCH
CHECKED BY:	JCH
DATE:	05/19/20
PROJECT NUMBER:	1918
SHEET NUMBER:	5 OF 5



DATE	05/18/2009
SCALE	1" = 200'
PROJECT	JAY BIRD SHOAL BORROW AREA
CLIENT	THE VILLAGE OF BALD HEAD ISLAND
FIELD BOOK/DATE	EXISTING CONDITIONS HYDROGRAPHIC SURVEY
DATE	MAY 18, 2009
SCALE	1" = 200'
SHEET	1 OF 1

JAY BIRD SHOAL BORROW AREA
THE VILLAGE OF BALD HEAD ISLAND
 EXISTING CONDITIONS HYDROGRAPHIC SURVEY
 VILLAGE OF BALD HEAD ISLAND, BRUNSWICK COUNTY, NORTH CAROLINA
 MAY 18, 2009 SCALE 1" = 200'

MCKIM & CREED
 WILMINGTON, NORTH CAROLINA 28401
 TEL: (910) 341-2200
 FAX: (910) 341-2201
 NORTH CAROLINA TRIAL LICENSE NUMBER F-1222



- NOTES:
1. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN FEET AND DECIMALS THEREOF.
 2. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
 3. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.
 4. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE SPECIFIED.

THIS SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEYING ACT OF 1968 AND THE SURVEYING REGULATIONS OF THE STATE OF NORTH CAROLINA. THE SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEYING ACT OF 1968 AND THE SURVEYING REGULATIONS OF THE STATE OF NORTH CAROLINA. THE SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE SURVEYING ACT OF 1968 AND THE SURVEYING REGULATIONS OF THE STATE OF NORTH CAROLINA.

