



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
PENSACOLA REGULATORY OFFICE
41 NORTH JEFFERSON STREET, SUITE 301
PENSACOLA, FLORIDA 32502

REPLY TO
ATTENTION OF

November 14, 2014

Pensacola Permits Section
SAJ-2014-00327 (SP-SWA)

Walton County Board of County Commissioners
117 Montgomery Circle
DeFuniak Springs, Florida 32435

Ladies and Gentlemen:

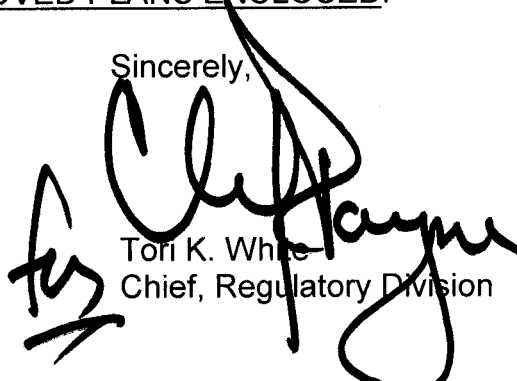
The U.S. Army Corps of Engineers (Corps) is pleased to enclose the Department of the Army permit, which should be available at the construction site. Work may begin immediately but the Corps must be notified of:

- a. The date of commencement of the work,
- b. The dates of work suspensions and resumptions of work, if suspended over a week, and
- c. The date of final completion.

This information should be mailed to the Special Projects and Enforcement Branch of the Regulatory Division of the Jacksonville District at 41 North Jefferson Street, Suite 301, Pensacola, Florida 32502. The Special Projects and Enforcement Branch is also responsible for inspections to determine whether Permittees have strictly adhered to permit conditions.

IT IS NOT LAWFUL TO DEVIATE FROM
THE APPROVED PLANS ENCLOSED.

Sincerely,



Tori K. White
Chief, Regulatory Division

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee: Walton County Board of County Commissioners
117 Montgomery Circle
DeFuniak Springs, Florida 32435

Permit No: SAJ-2014-00327 (SP-SWA)

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The project is to establish four (4) nearshore artificial reef areas, which will be referred to as the "Miramar Beach Snorkel Reef", "Topsail Hill Snorkel Reef", "Grayton Beach Snorkel Reef" and the "Inlet Beach Snorkel Reef". The sites range from 200 to 280 feet wide (east-west) by 800 to 900 long (north-south) and would provide habitat and recreational snorkeling/diving opportunities. The total area of all four reef sites is approximately 794,500 square feet (18.23 acres). Additionally, each reef site will have a 20-foot deployment buffer on each side. Material to be deployed within the reef areas will consist of pre-fabricated, pile-supported reefs modules (Eco-System Reef Modules or similar). Each tiered reef module will be 5 feet in diameter and will be mounted on 10-inch diameter piles. The material to be deployed will have a maximum profile height of no more than 10 feet and would result in a minimum authorized depth of -6 feet at mean low water (MLW).

Project Location: The project includes 4 nearshore artificial reef areas in the Gulf of Mexico offshore of Walton County. The Miramar Beach Reef is located approximately 120 feet south of the Mean High Water Line (MHWL) Miramar County Park/Access, the Topsail Hill Reef is located approximately 160 feet south of the MHWL at Topsail Hill Preserve State Park, the Grayton Beach Reef is located approximately 350 feet south of the MHWL at the Grayton Beach State Park and the Inlet Beach Reef is located approximately 400 feet southwest of the MHWL at Inlet Beach County Park/Access.

Latitude & Longitude:

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Miramar Beach Snorkel Reef	Longitude	Latitude
Northwest Corner	86.3888° W	30.3774° N
Southwest Corner	86.3892° W	30.3749° N
Southeast Corner	86.3885° W	30.3748° N
Northeast Corner	86.3881° W	30.3773° N

Topsail Hill Snorkel Reef	Longitude	Latitude
Northwest Corner	86.2778° W	30.3578° N
Southwest Corner	86.2785° W	30.3554° N
Southeast Corner	86.2776° W	30.3552° N
Northeast Corner	86.2769° W	30.3576° N

Grayton Beach Snorkel Reef	Longitude	Latitude
Northwest Corner	86.1577° W	30.3238° N
Southwest Corner	86.1586° W	30.3217° N
Southeast Corner	86.1580° W	30.3215° N
Northeast Corner	86.1571° W	30.3236° N

Inlet Beach Snorkel Reef	Longitude	Latitude
Northwest Corner	86.0055° W	30.2719° N
Southwest Corner	86.0067° W	30.2696° N
Southeast Corner	86.0061° W	30.2694° N
Northeast Corner	86.0049° W	30.2716° N

Permit Conditions

General Conditions:

1. The time limit for completing the work authorized ends on **November 6, 2019**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this

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permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. **Reporting Addresses:** The Permittee shall reference this permit number, SAJ-2014-00327 (SP-SWA), on all correspondence. Unless specifically notified to the contrary, the Permittee shall use the following addresses for transmitting correspondence to the referenced agencies:

- (a) U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section
41 North Jefferson Street, Suite 301
Pensacola, Florida 32502
The Permittee shall reference this permit number, SAJ-2014-00327 (SP-SWA), on all submittals.
Or email at: CESAJ-ComplyDocs@usace.army.mil

- (b) National Oceanic and Atmospheric Administration (NOAA), Marine Chart Division, Office of Coast Survey, N/CS26, Sta. 7317
1315 East-West Highway
Silver Springs, MD, 20910-3282
Or email at: ocs.ndb@noaa.gov.

- (c) Commander, U.S. Coast Guard (USCG)
8th Coast Guard District
Hale Boggs Federal Building
500 Poydras Street
New Orleans, LA 70130

- (d) Florida Fish and Wildlife Conservation Commission (FWC), Artificial Reef Program,
620 S. Meridian Street, Box 4B2
Tallahassee, FL 32399.
Or email at: artificialreefdeployments@MyFWC.com

2. Initial Agency Notification: The Permittee shall provide to the Corps, NOAA and USCG written notification of the planned deployment start date at least two weeks prior to the initial deployment on the authorized artificial reef site.

3. Protection of Existing Resources: The Permittee shall not deploy artificial reef materials until an assessment of the bottom conditions have been accomplished by diver, submersible video camera, fathometer, depth/bottom sounder (e.g. "fish finder"), or side-scan sonar. The inspection of the deployment area may occur at the time of deployment, but no more than one year prior to deployment. The Permittee shall maintain a deployment buffer of at least 200 feet from any submerged beds of sea grasses, coral reefs, live bottom, areas supporting growth of sponges, sea fans, soft corals, and other sessile macroinvertebrates generally associated with rock outcrops, oyster reefs, scallop beds, clam beds, or areas where there are unique or unusual concentrations of bottom-dwelling marine organisms. If, during the inspection, evidence is observed of cultural/archaeological resources, such as sunken vessels, ballast, historic refuse piles, or careenage areas the Corps will be notified by the Permittee and the above referenced deployment buffer will be implemented. The Permittee shall maintain a record of the information gained during the inspection such that it can be provided upon request to the Corps.

4. Pre-Deployment Notification: No less than 14 days prior to deployment of material on an artificial reef, the Permittee shall transmit by electronic mail ("email") a complete and signed "*Florida Artificial Reef Materials Cargo Manifest and Pre-Deployment Notification*" form, attached to this permit, to the Corps and FWC to allow inspection of the proposed reef materials as deemed necessary by the agencies. Inspection is allowable at the staging area. By signing the Pre-Deployment Notification the Permittee certifies that all materials are free from asphalt, petroleum, other hydrocarbons and toxic residues. The Permittee shall not deploy material if notified by the Corps or FWC that the material is questionable. The material needs to be evaluated before it is released for deployment. Any material that is deemed unacceptable for reef material will be disposed in an approved upland disposal site.

Deployment of the material shall not occur until after the end of the 14-day inspection period. The Permittee shall ensure both a copy of the Corps permit and the signed "*Florida Artificial Reef Materials Cargo Manifest and Pre-Deployment Notification Form*" are maintained aboard the deployment vessel at all times during loading, transit, and deployment.

5. Post-Deployment Placement Report/As-Built Drawing: No more than 30 days after deployment at the reef site, the Permittee shall transmit by email to the Corps, FWC, and NOAA a complete and signed "*Florida Artificial Reef Materials Placement Report and Post-Deployment Notification*" form attached to this permit. Please note, the

Corps requires the latitude and longitude to be accurate within 5 meters horizontal distance on the post-deployment report. Attach to the report, an as-built drawing that contains the approximate deployment configurations and the height of the material after placement. Depth shall be verified utilizing fathometer, depth sounder, or similar device accurate to within 1 meter. Also, include information on the condition of the material at the time of deployment. The report and drawing shall be limited to a few pages per deployment. Representative photographs and/or video, if available, are encouraged to be submitted.

6. Ownership/Maintenance/Liability: By signing this permit, the Permittee certifies and acknowledges ownership of all artificial reef materials deployed on the reef, accepts responsibility for maintenance of the artificial reef, and possesses the ability to assume liability for all damages that may arise with respect to the artificial reef.

7. Assurance of Navigation and Maintenance: The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structures or work herein authorized, or if in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

8. Sea Turtle, Smalltooth Sawfish and Sturgeon Conditions: The Permittee shall comply with the attached National Marine Fisheries Service's "*Sea Turtle and Smalltooth Sawfish Construction Conditions*", which also applies to sturgeon.

9. Manatee Conditions: The Permittee shall comply with the attached "*Standard Manatee Conditions for In-Water Work – 2011.*"

10. Protected Species Guidance: The Permittee shall comply with the attached "*Vessel Strike Avoidance Measures and Injured or Dead Protected Species Reporting*" guidance for marine turtles and marine mammals.

11. Compliance Monitoring: As part of the monitoring process the Permittee shall conduct surveys by fathometer scan or scuba dive the deployment area once per year to verify material location and condition and compare to such information from previous monitoring events to distinguish changes in either. The monitoring report should include a spreadsheet representation of the site inspected and data gained with a written narrative and submitted in accordance with Special Condition 1.

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12. **Self-Certification:** Within 60 days of completion of the authorized work or at the expiration of the construction authorization of this permit, whichever occurs first, the Permittee shall complete the attached "*Self-Certification Statement of Compliance*" form and submit to the Corps. In the event that the completed work deviates, in any manner, from the authorized work, the Permittee shall describe, on the Self-Certification Form, the deviations between the work authorized by the permit and the work as constructed. Please note that the description of any deviations on the Self-Certification Form does not constitute approval of any deviations by the Corps.

13. **Cultural Resources/Historic Properties:**

a. No structure or work shall adversely affect impact or disturb properties listed in the National Register of Historic Places (NRHP) or those eligible for inclusion in the NRHP.

b. If during the ground disturbing activities and construction work within the permit area, there are archaeological/cultural materials encountered which were not the subject of a previous cultural resources assessment survey (and which shall include, but not be limited to: pottery, modified shell, flora, fauna, human remains, ceramics, stone tools or metal implements, dugout canoes, evidence of structures or any other physical remains that could be associated with Native American cultures or early colonial or American settlement), the Permittee shall immediately stop all work in the vicinity and notify the Corps. The Corps shall then notify the Florida State Historic Preservation Officer (SHPO) and the appropriate Tribal Historic Preservation Officer(s) (THPO(s)) to assess the significance of the discovery and devise appropriate actions.

c. A cultural resources assessment may be required of the permit area, if deemed necessary by the SHPO, THPO(s), or Corps, in accordance with 36 CFR 800 or 33 CFR 325, Appendix C (5). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume on non-federal lands without written authorization from the SHPO and the Corps.

d. In the unlikely event that unmarked human remains are identified on non-federal lands, they will be treated in accordance with Section 872.05 Florida Statutes. All work in the vicinity shall immediately cease and the Permittee shall immediately notify the medical examiner, Corps, and State Archeologist. The Corps shall then notify the appropriate SHPO and THPO(s). Based, on the circumstances of the discovery, equity to all parties, and considerations of the public interest, the Corps may modify, suspend or revoke the permit in accordance with 33 CFR Part 325.7. Such activity shall not resume without written authorization from the State Archeologist, SHPO and the Corps.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

() Section 404 of the Clean Water Act (33 U.S.C. 1344).

() Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

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Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

x Larry D Jones 11-12-2014
(PERMITTEE) (DATE)

x REPRESENTATIVE: x Larry D Jones
WALTON County Board of County Commissioners
(PERMITTEE NAME-PRINTED)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

[Signature] 14 Nov 2014
(DISTRICT ENGINEER) (DATE)
Alan M. Dodd,
Colonel, U.S. Army
District Commander

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PERMITTEE: Walton County Board of County Commissioners
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When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE-SIGNATURE)

(DATE)

(NAME-PRINTED)

(ADDRESS)

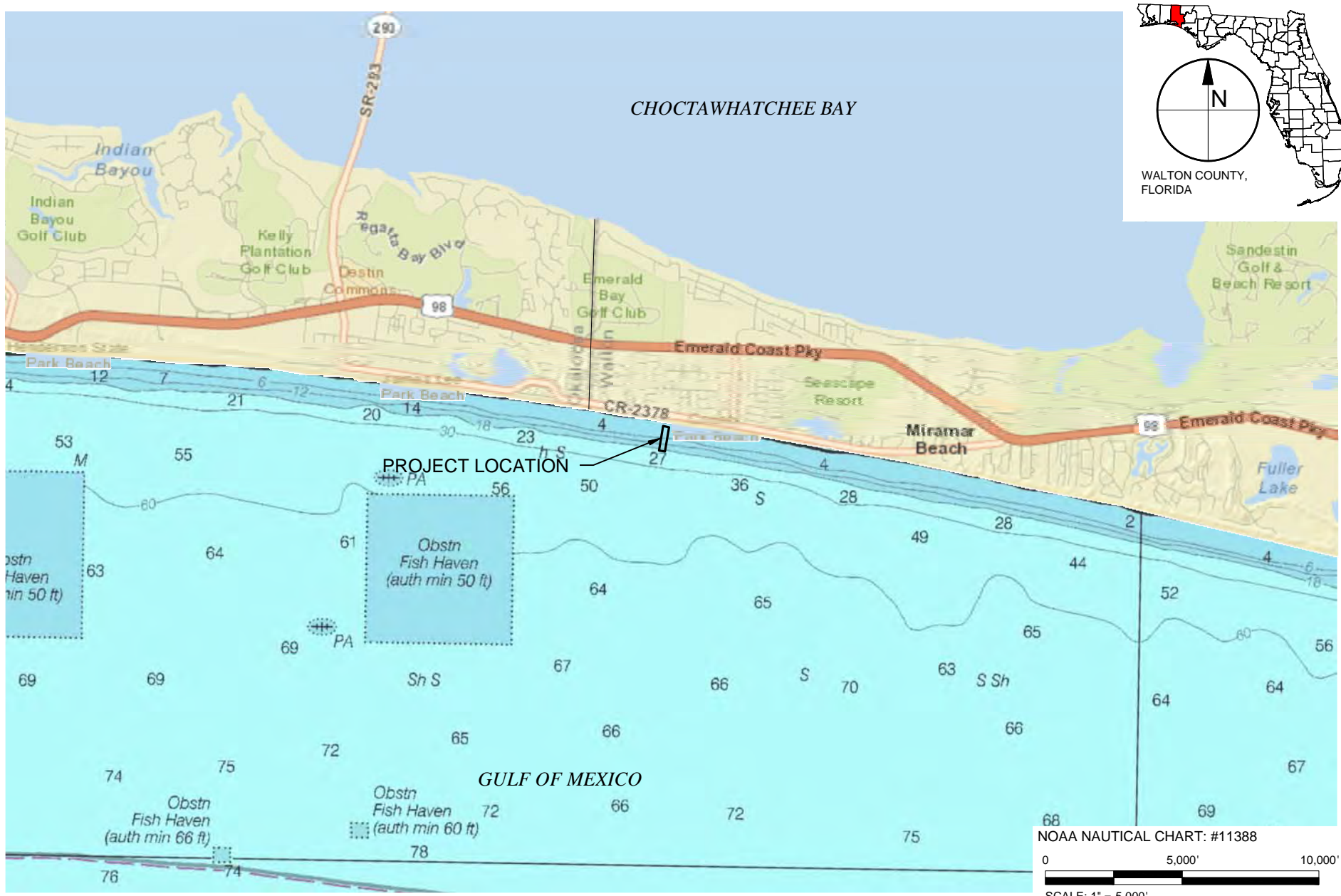
(CITY, STATE, AND ZIP CODE)

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PERMITTEE: Walton County Board of County Commissioners
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***Attachments to Department of the Army
Permit Number SAJ-2014-00327***

1. PERMIT DRAWINGS: Twenty-four (24) pages, dated 16 September 2014.
2. WATER QUALITY CERTIFICATION: Specific Conditions of the water quality permit/certification in accordance with General Condition number 5 on page 3 of this DA permit. Twenty-one (21) pages.
3. SEA TURTLE, SAWFISH AND STURGEON CONDITIONS: One (1) page.
4. MANATEE CONDITIONS: One (1) page.
5. VESSEL STRIKE AVOIDANCE MEASURES: Two (2) pages.
6. FLORIDA ARTIFICIAL REEF MATERIALS CARGO MANIFEST AND PRE-DEPLOYMENT NOTIFICATION FORM: Two (2) pages.
7. FLORIDA ARTIFICIAL REEF MATERIALS PLACEMENT REPORT AND POST-DEPLOYMENT NOTIFICATION FORM: One (1) page.
8. SELF-CERTIFICATION FORM: One (1) page.

ANTON_X:\S\PROJECTS\C2014-007 SWARA REFERENCE PERMITS\BOKREL\MIRAMAR\C2014-007-P-MIRAMAR-LOCATION.MXD



NOAA NAUTICAL CHART: #11388
 0 5,000' 10,000'
 SCALE: 1" = 5,000'



TAYLOR ENGINEERING INC.
 1221 AIRPORT ROAD
 SUITE 210
 DESTIN, FL 32541
 CERTIFICATE OF AUTHORIZATION # 4815

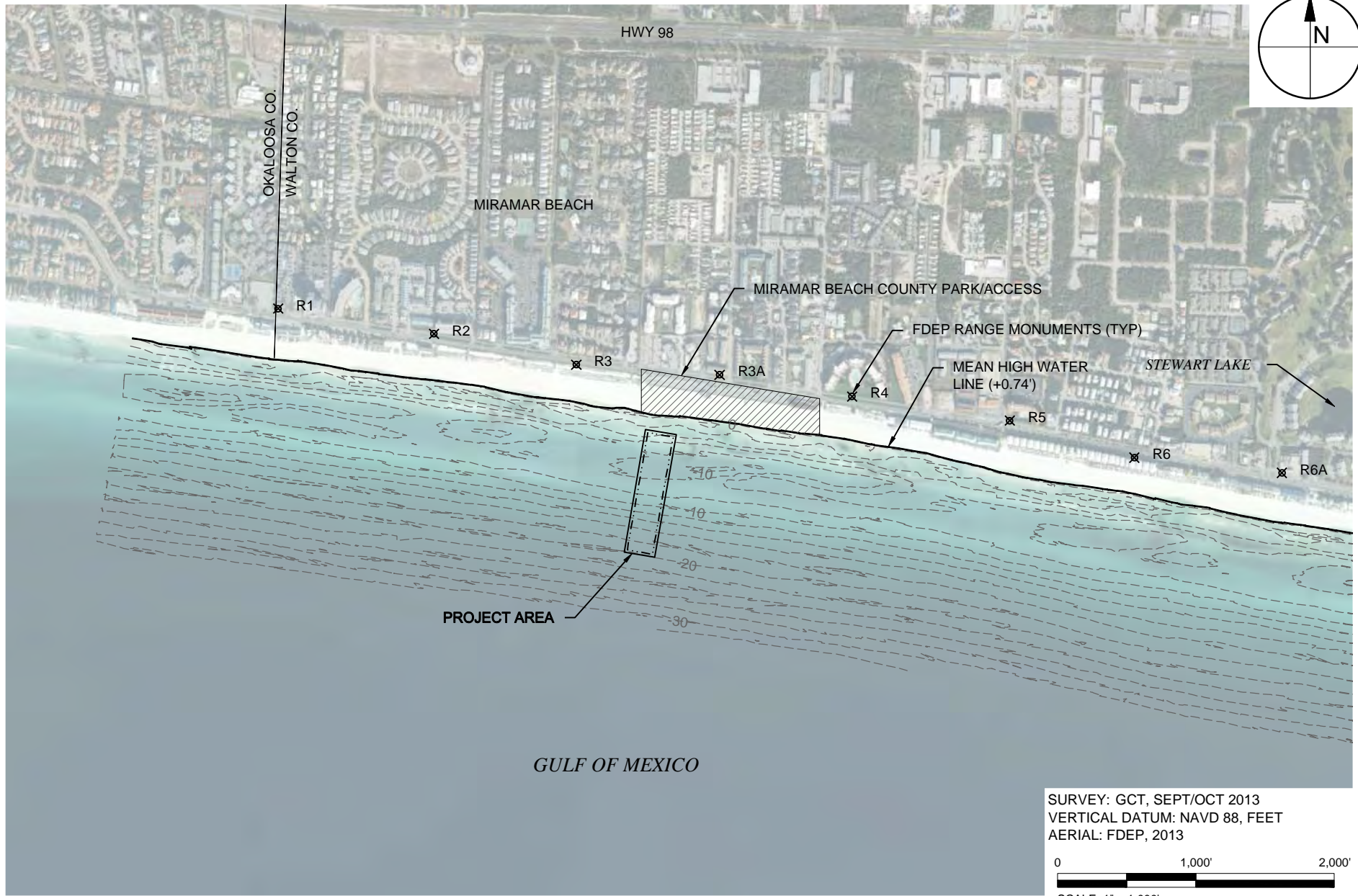
FIGURE 1
 LOCATION MAP
 MIRAMAR BEACH SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

PROJECT	C2014-007
DRAWN BY	AF
SHEET	1 of 6
DATE	JAN 2014

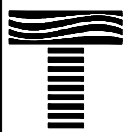
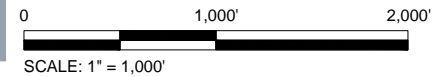
SEAL	
MATTHEW TRAMMELL P.E.# 69244	DATE

PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

ANTON_X:\S\PROJECTS\C2014-007 SWARA REEF\PERMITS\NORTEL\MIRAMAR\C2014-007-P-MIRAMAR-OVERVIEW.DWG 1/2/2014 11:28:49 AM



SURVEY: GCT, SEPT/OCT 2013
 VERTICAL DATUM: NAVD 88, FEET
 AERIAL: FDEP, 2013



TAYLOR ENGINEERING INC.

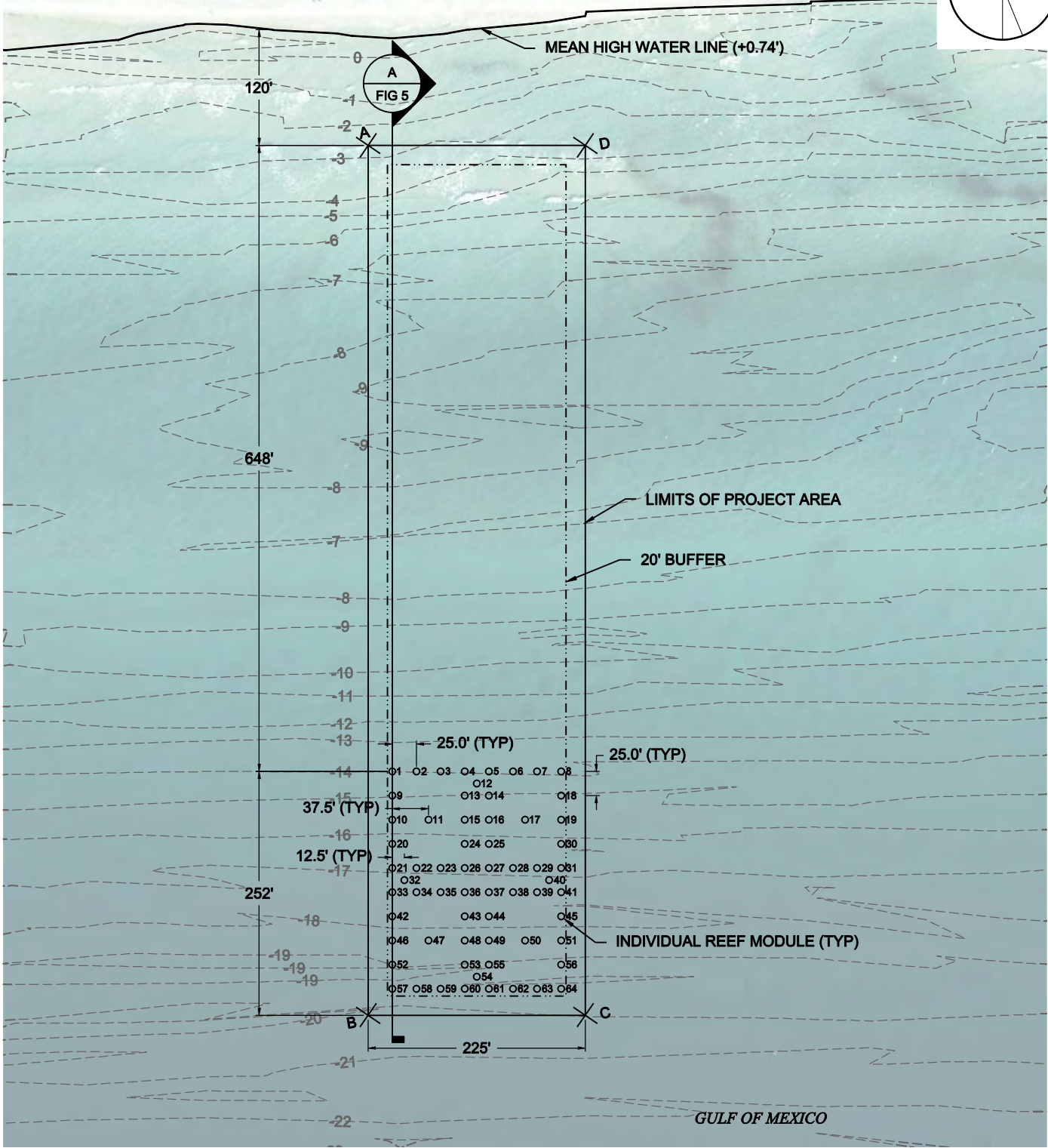
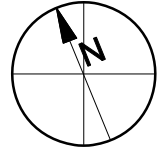
1221 AIRPORT ROAD
 SUITE 210
 DESTIN, FL 32541
 CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 2
 PROJECT OVERVIEW
 MIRAMAR BEACH SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

PROJECT	C2014-007
DRAWN BY	AF
SHEET	2 of 6
DATE	JAN 2014

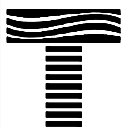
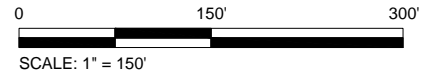
SEAL	
MATTHEW TRAMMELL P.E.# 69244	DATE

MIRAMAR BEACH COUNTY PARK/ACCESS



NOTES:

AERIAL: FDEP, 2014
 SURVEY: GCT, SEPT/OCT 2013
 HORIZONTAL DATUM: NAD 83 STATE PLANE FLORIDA NORTH, FEET
 VERTICAL DATUM: NAVD 88, FEET



TAYLOR ENGINEERING INC.

1221 AIRPORT ROAD
 SUITE 210
 DESTIN, FL 32541

CERTIFICATE OF AUTHORIZATION # 4815

**FIGURE 3
 REEF PLAN**

MIRAMAR BEACH SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

PROJECT	DRAWN BY	SHEET	DATE
C2014-007	AF	3 of 6	JAN 2014

SEAL

MATTHEW TRAMMELL P.E.# 69244

DATE

ANTON_X:\S\PROJECTS\C2014-007 SWARA REEF\PERMITS\NORVEL\MIRAMAR\C2014-007-P-MIRAMAR REEF PLAN.DWG 1/21/2014 11:23:57 AM

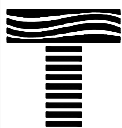
PROJECT AREA						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
A	1,372,922.07	505,841.23	N30.377352	W86.388799	N30° 22.6411"	W86° 23.32797"
B	1,372,765.78	504,954.91	N30.374908	W86.389248	N30° 22.4945"	W86° 23.35491"
C	1,372,987.36	504,915.84	N30.374811	W86.388544	N30° 22.4886"	W86° 23.31263"
D	1,373,143.65	505,802.16	N30.377255	W86.388095	N30° 22.6353"	W86° 23.28569"

NOTES:
HORIZONTAL DATUM: NAD 83 STATE PLANE FLORIDA NORTH, FEET
VERTICAL DATUM: NAVD 88, FEET
LAT/LONG: NAD 83 DATUM, DECIMAL DEGREES AND DEGREES/DECIMAL MINUTES

INDIVIDUAL REEF MODULE TABLE						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
1	1,372,834.24	505,199.23	N30.375583	W86.389044	N30° 22.5350"	W86° 23.34265"
2	1,372,858.86	505,194.89	N30.375572	W86.388966	N30° 22.5343"	W86° 23.33796"
3	1,372,883.48	505,190.55	N30.375561	W86.388888	N30° 22.5337"	W86° 23.33326"
4	1,372,908.10	505,186.20	N30.375551	W86.388809	N30° 22.5330"	W86° 23.32856"
5	1,372,932.72	505,181.86	N30.375540	W86.388731	N30° 22.5324"	W86° 23.32386"
6	1,372,957.34	505,177.52	N30.375529	W86.388653	N30° 22.5317"	W86° 23.31917"
7	1,372,981.96	505,173.18	N30.375518	W86.388574	N30° 22.5311"	W86° 23.31447"
8	1,373,006.59	505,168.84	N30.375507	W86.388496	N30° 22.5304"	W86° 23.30977"
9	1,372,829.90	505,174.61	N30.375515	W86.389057	N30° 22.5309"	W86° 23.34340"
10	1,372,825.56	505,149.99	N30.375447	W86.389069	N30° 22.5268"	W86° 23.34415"
11	1,372,862.49	505,143.48	N30.375431	W86.388952	N30° 22.5259"	W86° 23.33710"
12	1,372,918.24	505,171.72	N30.375511	W86.388776	N30° 22.5307"	W86° 23.32659"
13	1,372,903.76	505,161.58	N30.375483	W86.388822	N30° 22.5290"	W86° 23.32931"
14	1,372,928.38	505,157.24	N30.375472	W86.388744	N30° 22.5283"	W86° 23.32461"
15	1,372,899.42	505,136.96	N30.375415	W86.388834	N30° 22.5249"	W86° 23.33006"
16	1,372,924.04	505,132.62	N30.375404	W86.388756	N30° 22.5242"	W86° 23.32536"
17	1,372,960.97	505,126.11	N30.375388	W86.388639	N30° 22.5233"	W86° 23.31831"
18	1,373,002.24	505,144.22	N30.375439	W86.388509	N30° 22.5264"	W86° 23.31052"
19	1,372,997.90	505,119.60	N30.375371	W86.388521	N30° 22.5223"	W86° 23.31127"
20	1,372,821.22	505,125.37	N30.375379	W86.389082	N30° 22.5228"	W86° 23.34490"
21	1,372,816.88	505,100.75	N30.375311	W86.389094	N30° 22.5187"	W86° 23.34565"
22	1,372,841.50	505,096.41	N30.375301	W86.389016	N30° 22.5180"	W86° 23.34095"
23	1,372,866.12	505,092.07	N30.375290	W86.388938	N30° 22.5174"	W86° 23.33625"
24	1,372,895.08	505,112.34	N30.375347	W86.388847	N30° 22.5208"	W86° 23.33081"
25	1,372,919.70	505,108.00	N30.375336	W86.388768	N30° 22.5202"	W86° 23.32611"
26	1,372,890.74	505,087.72	N30.375279	W86.388859	N30° 22.5167"	W86° 23.33155"
27	1,372,915.36	505,083.38	N30.375268	W86.388781	N30° 22.5161"	W86° 23.32686"
28	1,372,939.98	505,079.04	N30.375257	W86.388703	N30° 22.5154"	W86° 23.32216"
29	1,372,964.60	505,074.70	N30.375247	W86.388624	N30° 22.5148"	W86° 23.31746"
30	1,372,993.56	505,094.98	N30.375304	W86.388534	N30° 22.5182"	W86° 23.31202"
31	1,372,989.22	505,070.36	N30.375236	W86.388546	N30° 22.5141"	W86° 23.31276"
32	1,372,827.02	505,086.27	N30.375272	W86.389061	N30° 22.5163"	W86° 23.34367"
33	1,372,812.54	505,076.13	N30.375244	W86.389107	N30° 22.5146"	W86° 23.34640"
34	1,372,837.16	505,071.79	N30.375233	W86.389028	N30° 22.5140"	W86° 23.34170"
35	1,372,861.78	505,067.45	N30.375222	W86.388950	N30° 22.5133"	W86° 23.33700"
36	1,372,886.40	505,063.10	N30.375211	W86.388872	N30° 22.5127"	W86° 23.33230"
37	1,372,911.02	505,058.76	N30.375200	W86.388793	N30° 22.5120"	W86° 23.32761"
38	1,372,935.64	505,054.42	N30.375189	W86.388715	N30° 22.5114"	W86° 23.32291"
39	1,372,960.26	505,050.08	N30.375179	W86.388637	N30° 22.5107"	W86° 23.31821"
40	1,372,974.74	505,060.22	N30.375207	W86.388591	N30° 22.5124"	W86° 23.31549"
41	1,372,984.88	505,045.74	N30.375168	W86.388559	N30° 22.5101"	W86° 23.31351"
42	1,372,808.20	505,051.51	N30.375176	W86.389119	N30° 22.5105"	W86° 23.34714"
43	1,372,882.06	505,038.48	N30.375143	W86.388884	N30° 22.5086"	W86° 23.33305"
44	1,372,906.68	505,034.14	N30.375132	W86.388806	N30° 22.5079"	W86° 23.32835"
45	1,372,980.54	505,021.12	N30.375100	W86.388571	N30° 22.5060"	W86° 23.31426"

INDIVIDUAL REEF MODULE TABLE						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
46	1,372,803.86	505,026.89	N30.375108	W86.389132	N30° 22.5065"	W86° 23.34789"
47	1,372,840.79	505,020.38	N30.375092	W86.389014	N30° 22.5055"	W86° 23.34085"
48	1,372,877.72	505,013.86	N30.375075	W86.388897	N30° 22.5045"	W86° 23.33380"
49	1,372,902.34	505,009.52	N30.375065	W86.388818	N30° 22.5039"	W86° 23.32910"
50	1,372,939.27	505,003.01	N30.375048	W86.388701	N30° 22.5029"	W86° 23.32206"
51	1,372,976.20	504,996.50	N30.375032	W86.388583	N30° 22.5019"	W86° 23.31501"
52	1,372,799.51	505,002.27	N30.375040	W86.389144	N30° 22.5024"	W86° 23.34864"
53	1,372,873.37	504,989.24	N30.375007	W86.388909	N30° 22.5004"	W86° 23.33455"
54	1,372,883.51	504,974.76	N30.374968	W86.388876	N30° 22.4981"	W86° 23.33257"
55	1,372,897.99	504,984.90	N30.374997	W86.388831	N30° 22.4998"	W86° 23.32985"
56	1,372,971.86	504,971.88	N30.374964	W86.388596	N30° 22.4979"	W86° 23.31576"
57	1,372,795.17	504,977.65	N30.374972	W86.389156	N30° 22.4983"	W86° 23.34939"
58	1,372,819.79	504,973.31	N30.374961	W86.389078	N30° 22.4977"	W86° 23.34469"
59	1,372,844.41	504,968.96	N30.374950	W86.389000	N30° 22.4970"	W86° 23.33999"
60	1,372,869.03	504,964.62	N30.374940	W86.388922	N30° 22.4964"	W86° 23.33530"
61	1,372,893.65	504,960.28	N30.374929	W86.388843	N30° 22.4957"	W86° 23.33060"
62	1,372,918.27	504,955.94	N30.374918	W86.388765	N30° 22.4951"	W86° 23.32590"
63	1,372,942.89	504,951.60	N30.374907	W86.388687	N30° 22.4944"	W86° 23.32120"
64	1,372,967.51	504,947.26	N30.374896	W86.388608	N30° 22.4938"	W86° 23.31651"

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TAYLOR ENGINEERING INC.

1221 AIRPORT ROAD
SUITE 210
DESTIN, FL 32541

CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 4
PROJECT AREA AND REEF MODULE TABLES
MIRAMAR BEACH SNORKEL REEF - SWARA/HG
WALTON COUNTY, FLORIDA

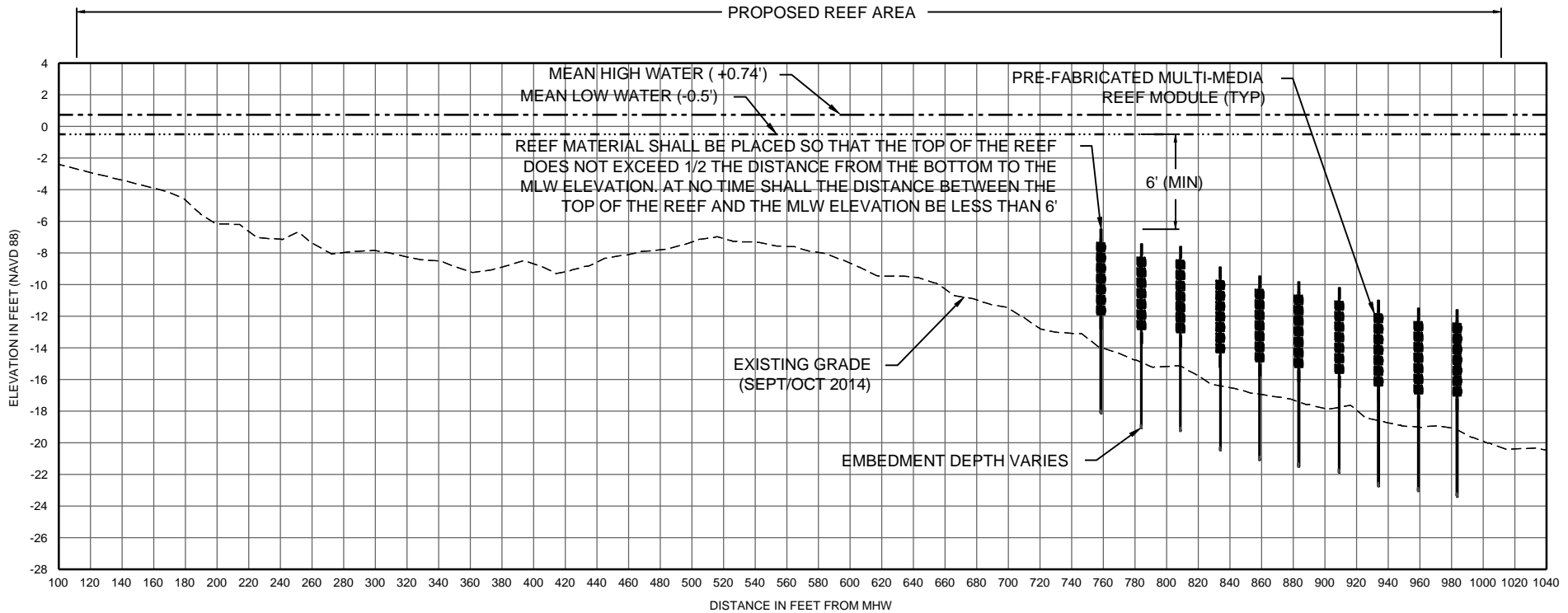
PROJECT: C2014-007 DRAWN BY: AF SHEET: 4 of 6 DATE: JAN 2014

SEAL

MATTHEW TRAMMELL P.E.# 69244

DATE

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A **TYPICAL SECTION**
FIG 3 SCALE: 1" = 100'
 V-SCALE: 1" = 10'

SURVEY: GCT, SEPT/OCT 2013
 VERTICAL DATUM: NAVD 88, FEET

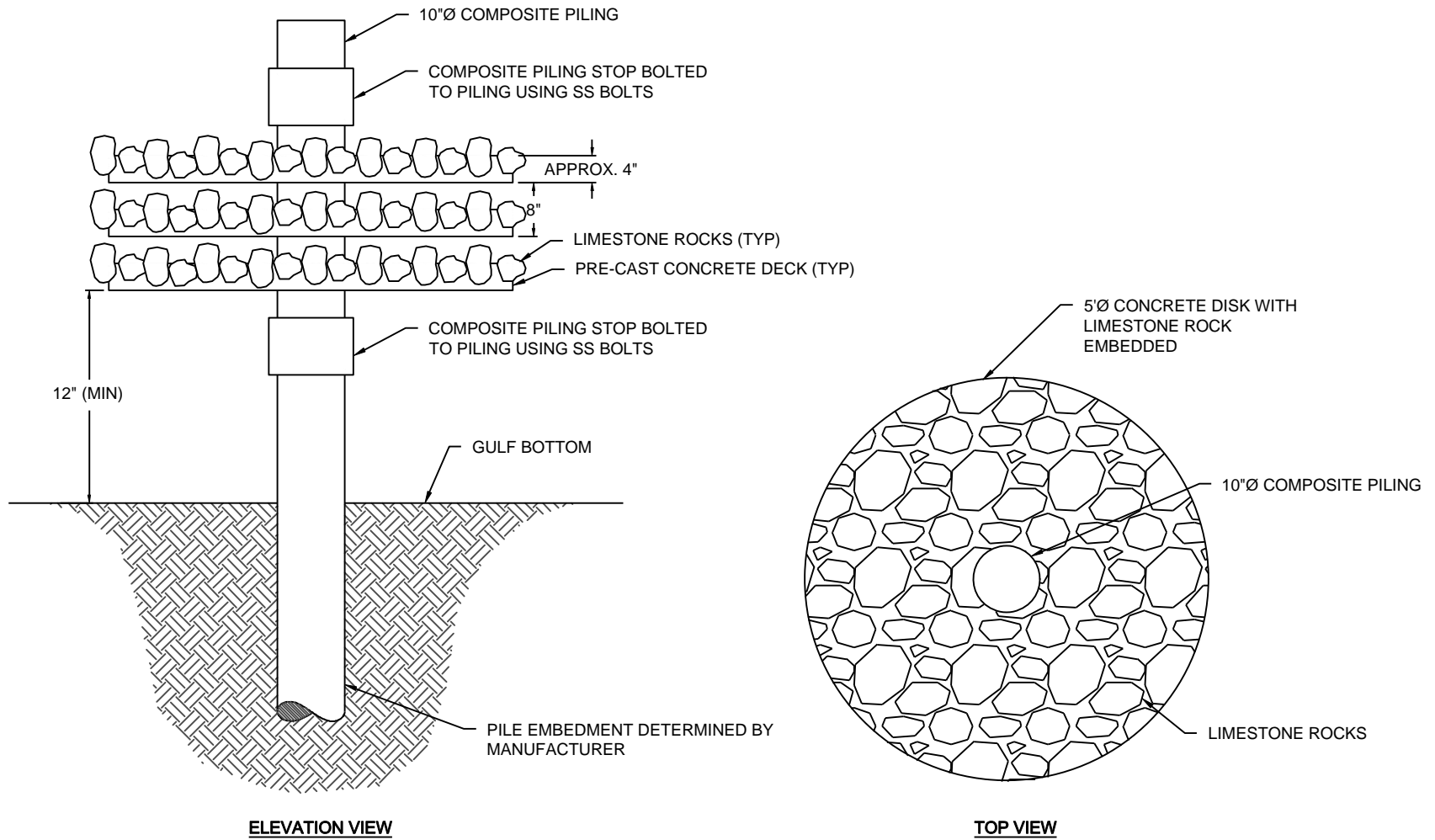
TAYLOR ENGINEERING INC.

1221 AIRPORT ROAD
 SUITE 210
 DESTIN, FL 32541
CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 5
 TYPICAL SECTION
 MIRAMAR BEACH SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

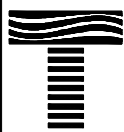
PROJECT	C2014-007	SEAL
DRAWN BY	AF	
SHEET	5 of 6	
DATE	JAN 2014	
		<small>MATTHEW TRAMMELL P.E.# 69244</small>
		<small>DATE</small>

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PRE-FABRICATED MULTI-MEDIA REEF MODULE

NOT TO SCALE



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FIGURE 6
REEF DETAILS
MIRAMAR BEACH SNORKEL REEF - SWARA/HG
WALTON COUNTY, FLORIDA

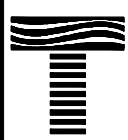
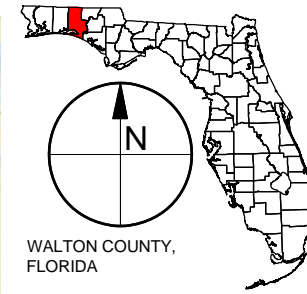
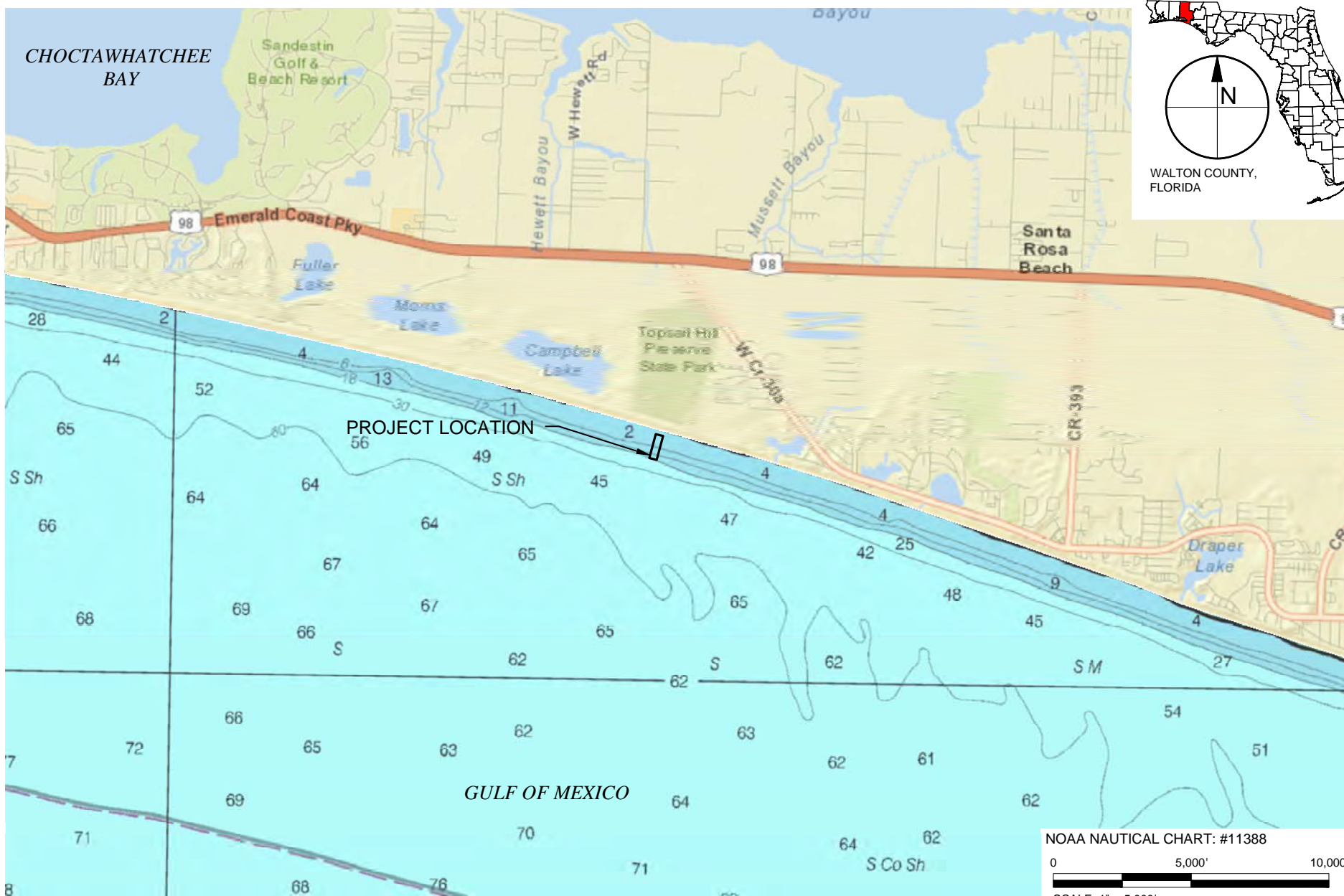
PROJECT	C2014-007
DRAWN BY	AF
SHEET	6 of 6
DATE	JAN 2014

SEAL

MATTHEW TRAMMELL P.E.# 69244

DATE

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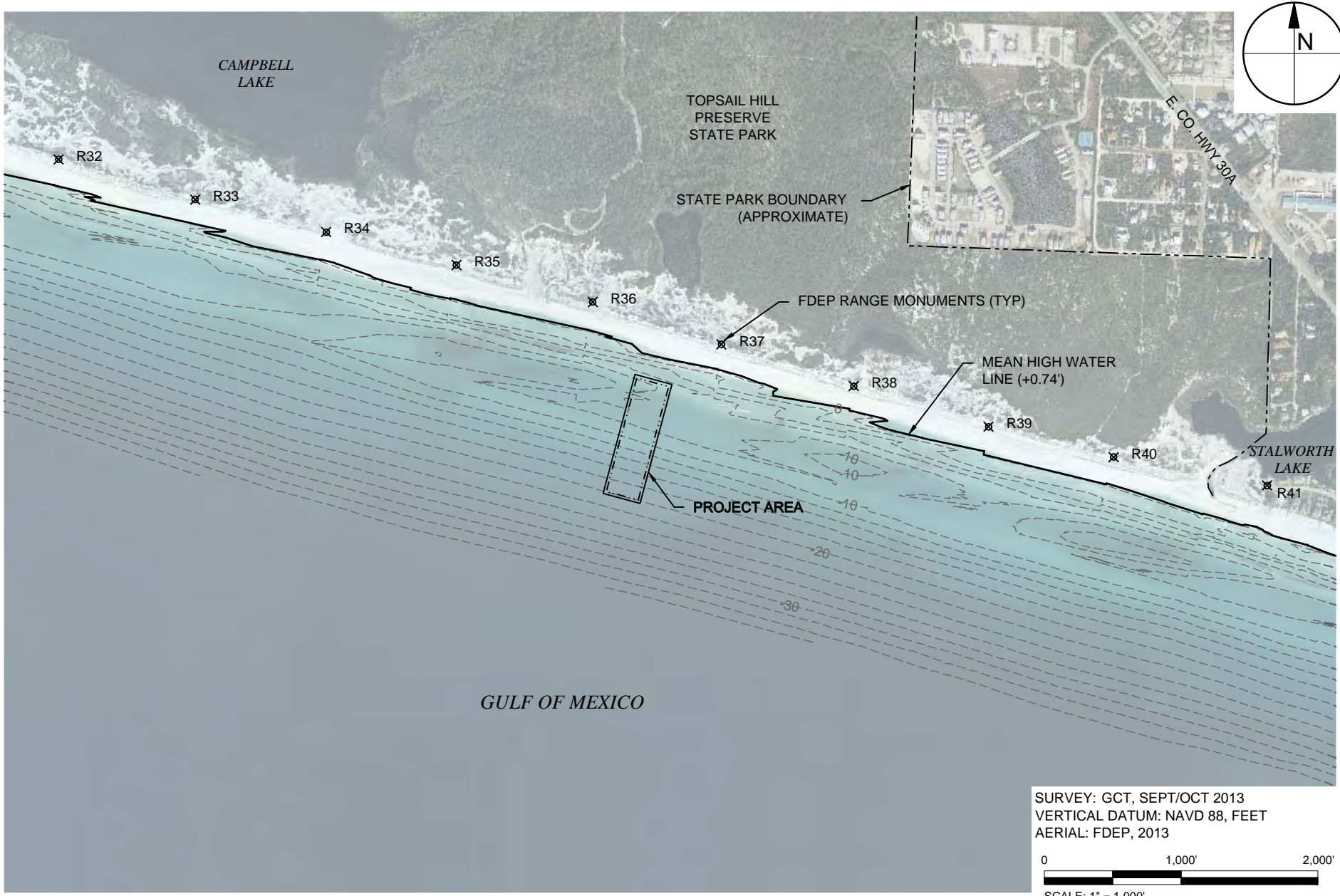
FIGURE 1
 LOCATION MAP
 TOPSAIL HILL SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

PROJECT	C2014-007
DRAWN BY	AF
SHEET	1 of 6
DATE	JAN 2014

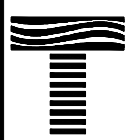
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MATTHEW TRAMMELL P.E.# 69244	DATE

PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

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SURVEY: GCT, SEPT/OCT 2013
 VERTICAL DATUM: NAVD 88, FEET
 AERIAL: FDEP, 2013



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 CERTIFICATE OF AUTHORIZATION # 4815

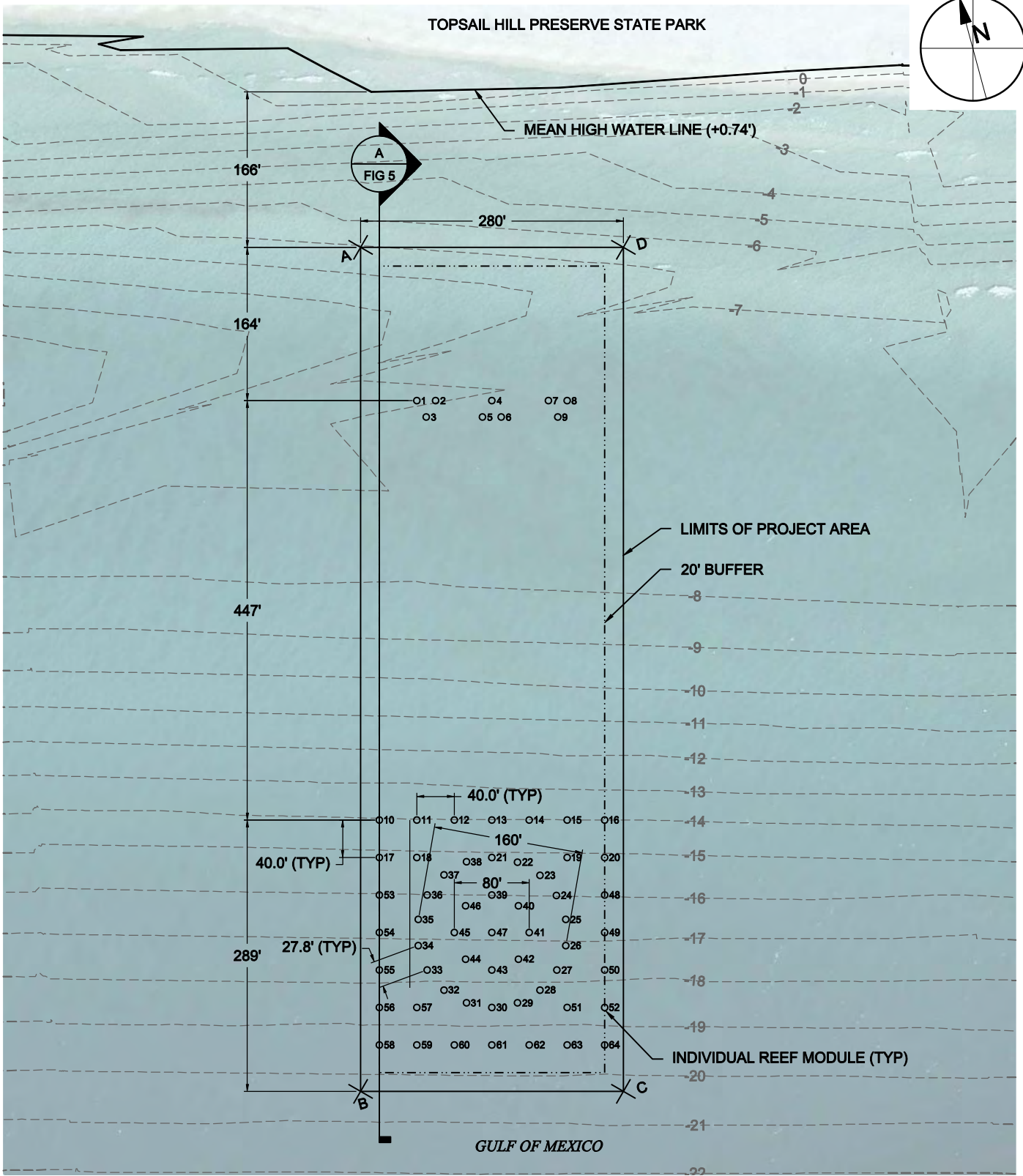
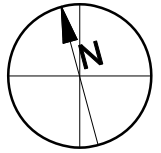
FIGURE 2
 PROJECT OVERVIEW
 TOPSAIL HILL SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

PROJECT	C2014-007
DRAWN BY	AF
SHEET	2 of 6
DATE	JAN 2014

SEAL	
MATTHEW TRAMMELL P.E.# 69244	DATE

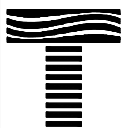
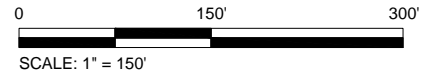
PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

TOPSAIL HILL PRESERVE STATE PARK



NOTES:

AERIAL: FDEP, 2013
 SURVEY: GCT, SEPT/OCT 2013
 HORIZONTAL DATUM: NAD 83 STATE PLANE FLORIDA NORTH, FEET
 VERTICAL DATUM: NAVD 88, FEET



TAYLOR ENGINEERING INC.

1221 AIRPORT ROAD
 SUITE 210
 DESTIN, FL 32541

CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 3
REEF PLAN
 TOPSAIL HILL SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

PROJECT	DRAWN BY	SHEET	DATE
C2014-007	AF	3 of 6	JAN 2014

SEAL

MATTHEW TRAMMELL P.E.# 69244

DATE

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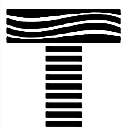
PROJECT AREA						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
A	1,407,814.56	498,180.59	N30.357834	W86.277783	N30° 21.4700"	W86° 16.66697"
B	1,407,581.62	497,311.25	N30.355434	W86.278478	N30° 21.3260"	W86° 16.70870"
C	1,407,852.08	497,238.78	N30.355246	W86.277617	N30° 21.3148"	W86° 16.65704"
D	1,408,085.02	498,108.12	N30.357646	W86.276922	N30° 21.4588"	W86° 16.61531"

NOTES:
HORIZONTAL DATUM: NAD 83 STATE PLANE FLORIDA NORTH, FEET
VERTICAL DATUM: NAVD 88, FEET
LAT/LONG: NAD 83 DATUM, DECIMAL DEGREES AND DEGREES/DECIMAL MINUTES

INDIVIDUAL REEF MODULE TABLE						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
1	1,407,830.17	498,007.03	N30.357357	W86.277725	N30° 21.4414"	W86° 16.66349"
2	1,407,849.49	498,001.85	N30.357344	W86.277663	N30° 21.4406"	W86° 16.65980"
3	1,407,835.30	497,987.54	N30.357304	W86.277708	N30° 21.4382"	W86° 16.66245"
4	1,407,907.44	497,986.33	N30.357304	W86.277479	N30° 21.4382"	W86° 16.64873"
5	1,407,893.25	497,972.01	N30.357264	W86.277523	N30° 21.4358"	W86° 16.65138"
6	1,407,912.57	497,966.83	N30.357250	W86.277462	N30° 21.4350"	W86° 16.64769"
7	1,407,965.40	497,970.80	N30.357263	W86.277294	N30° 21.4358"	W86° 16.63766"
8	1,407,984.72	497,965.62	N30.357250	W86.277233	N30° 21.4350"	W86° 16.63397"
9	1,407,970.53	497,951.30	N30.357210	W86.277277	N30° 21.4326"	W86° 16.63662"
10	1,407,675.84	497,585.63	N30.356192	W86.278193	N30° 21.3715"	W86° 16.69159"
11	1,407,714.48	497,575.27	N30.356165	W86.278070	N30° 21.3699"	W86° 16.68421"
12	1,407,753.12	497,564.92	N30.356138	W86.277947	N30° 21.3683"	W86° 16.67683"
13	1,407,791.75	497,554.57	N30.356112	W86.277824	N30° 21.3667"	W86° 16.66945"
14	1,407,830.39	497,544.21	N30.356085	W86.277701	N30° 21.3651"	W86° 16.66207"
15	1,407,869.03	497,533.86	N30.356058	W86.277578	N30° 21.3635"	W86° 16.65469"
16	1,407,907.67	497,523.51	N30.356031	W86.277455	N30° 21.3619"	W86° 16.64731"
17	1,407,665.49	497,546.99	N30.356085	W86.278224	N30° 21.3651"	W86° 16.69345"
18	1,407,704.13	497,536.64	N30.356059	W86.278101	N30° 21.3635"	W86° 16.68607"
19	1,407,858.68	497,495.22	N30.355951	W86.277609	N30° 21.3571"	W86° 16.65655"
20	1,407,897.31	497,484.87	N30.355925	W86.277486	N30° 21.3555"	W86° 16.64917"
21	1,407,781.40	497,515.93	N30.356005	W86.277855	N30° 21.3603"	W86° 16.67131"
22	1,407,806.54	497,504.13	N30.355974	W86.277775	N30° 21.3584"	W86° 16.66649"
23	1,407,825.98	497,484.37	N30.355920	W86.277712	N30° 21.3552"	W86° 16.66273"
24	1,407,837.31	497,459.18	N30.355851	W86.277675	N30° 21.3511"	W86° 16.66050"
25	1,407,840.39	497,431.68	N30.355776	W86.277664	N30° 21.3466"	W86° 16.65984"
26	1,407,833.20	497,404.85	N30.355702	W86.277685	N30° 21.3421"	W86° 16.66112"
27	1,407,817.26	497,382.09	N30.355639	W86.277735	N30° 21.3383"	W86° 16.66409"
28	1,407,794.51	497,366.15	N30.355594	W86.277806	N30° 21.3356"	W86° 16.66837"
29	1,407,767.67	497,358.96	N30.355573	W86.277891	N30° 21.3344"	W86° 16.67345"
30	1,407,739.99	497,361.38	N30.355578	W86.277979	N30° 21.3347"	W86° 16.67872"
31	1,407,714.81	497,373.12	N30.355610	W86.278059	N30° 21.3366"	W86° 16.68355"
32	1,407,695.16	497,392.77	N30.355663	W86.278122	N30° 21.3398"	W86° 16.68734"
33	1,407,683.42	497,417.95	N30.355731	W86.278161	N30° 21.3439"	W86° 16.68965"
34	1,407,681.00	497,445.63	N30.355807	W86.278170	N30° 21.3484"	W86° 16.69019"
35	1,407,688.19	497,472.47	N30.355882	W86.278148	N30° 21.3529"	W86° 16.68891"
36	1,407,704.13	497,495.22	N30.355945	W86.278099	N30° 21.3567"	W86° 16.68594"
37	1,407,726.89	497,511.16	N30.355990	W86.278028	N30° 21.3594"	W86° 16.68166"
38	1,407,753.72	497,518.35	N30.356010	W86.277943	N30° 21.3606"	W86° 16.67658"
39	1,407,771.05	497,477.29	N30.355898	W86.277886	N30° 21.3539"	W86° 16.67316"
40	1,407,795.34	497,458.66	N30.355848	W86.277808	N30° 21.3509"	W86° 16.66849"
41	1,407,799.33	497,428.30	N30.355765	W86.277794	N30° 21.3459"	W86° 16.66764"
42	1,407,780.70	497,404.01	N30.355697	W86.277852	N30° 21.3418"	W86° 16.67111"
43	1,407,750.34	497,400.02	N30.355685	W86.277948	N30° 21.3411"	W86° 16.67687"
44	1,407,726.05	497,418.66	N30.355735	W86.278026	N30° 21.3441"	W86° 16.68155"
45	1,407,722.06	497,449.01	N30.355818	W86.278040	N30° 21.3491"	W86° 16.68240"

INDIVIDUAL REEF MODULE TABLE						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
46	1,407,740.70	497,473.30	N30.355886	W86.277982	N30° 21.3532"	W86° 16.67892"
47	1,407,760.70	497,438.66	N30.355792	W86.277917	N30° 21.3475"	W86° 16.67502"
48	1,407,886.96	497,446.23	N30.355818	W86.277517	N30° 21.3491"	W86° 16.65102"
49	1,407,876.61	497,407.60	N30.355711	W86.277548	N30° 21.3427"	W86° 16.65288"
50	1,407,866.25	497,368.96	N30.355605	W86.277579	N30° 21.3363"	W86° 16.65473"
51	1,407,817.26	497,340.68	N30.355525	W86.277733	N30° 21.3315"	W86° 16.66396"
52	1,407,855.90	497,330.32	N30.355498	W86.277610	N30° 21.3299"	W86° 16.65659"
53	1,407,655.14	497,508.35	N30.355979	W86.278255	N30° 21.3587"	W86° 16.69530"
54	1,407,644.78	497,469.71	N30.355872	W86.278286	N30° 21.3523"	W86° 16.69715"
55	1,407,634.43	497,431.08	N30.355765	W86.278317	N30° 21.3459"	W86° 16.69901"
56	1,407,624.08	497,392.44	N30.355659	W86.278348	N30° 21.3395"	W86° 16.70086"
57	1,407,662.72	497,382.09	N30.355632	W86.278225	N30° 21.3379"	W86° 16.69348"
58	1,407,613.73	497,353.80	N30.355552	W86.278379	N30° 21.3331"	W86° 16.70272"
59	1,407,652.36	497,343.45	N30.355525	W86.278256	N30° 21.3315"	W86° 16.69534"
60	1,407,691.00	497,333.10	N30.355498	W86.278133	N30° 21.3299"	W86° 16.68796"
61	1,407,729.64	497,322.74	N30.355472	W86.278010	N30° 21.3283"	W86° 16.68058"
62	1,407,768.27	497,312.39	N30.355445	W86.277887	N30° 21.3267"	W86° 16.67320"
63	1,407,806.91	497,302.04	N30.355418	W86.277764	N30° 21.3251"	W86° 16.66582"
64	1,407,845.55	497,291.69	N30.355391	W86.277641	N30° 21.3235"	W86° 16.65844"

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TAYLOR ENGINEERING INC.

1221 AIRPORT ROAD
SUITE 210
DESTIN, FL 32541

CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 4
PROJECT AREA AND REEF MODULE TABLES
TOPSAIL HILL SNORKEL REEF - SWARA/HG
WALTON COUNTY, FLORIDA

PROJECT: C2014-007 DRAWN BY: AF SHEET: 4 of 6 DATE: JAN 2014

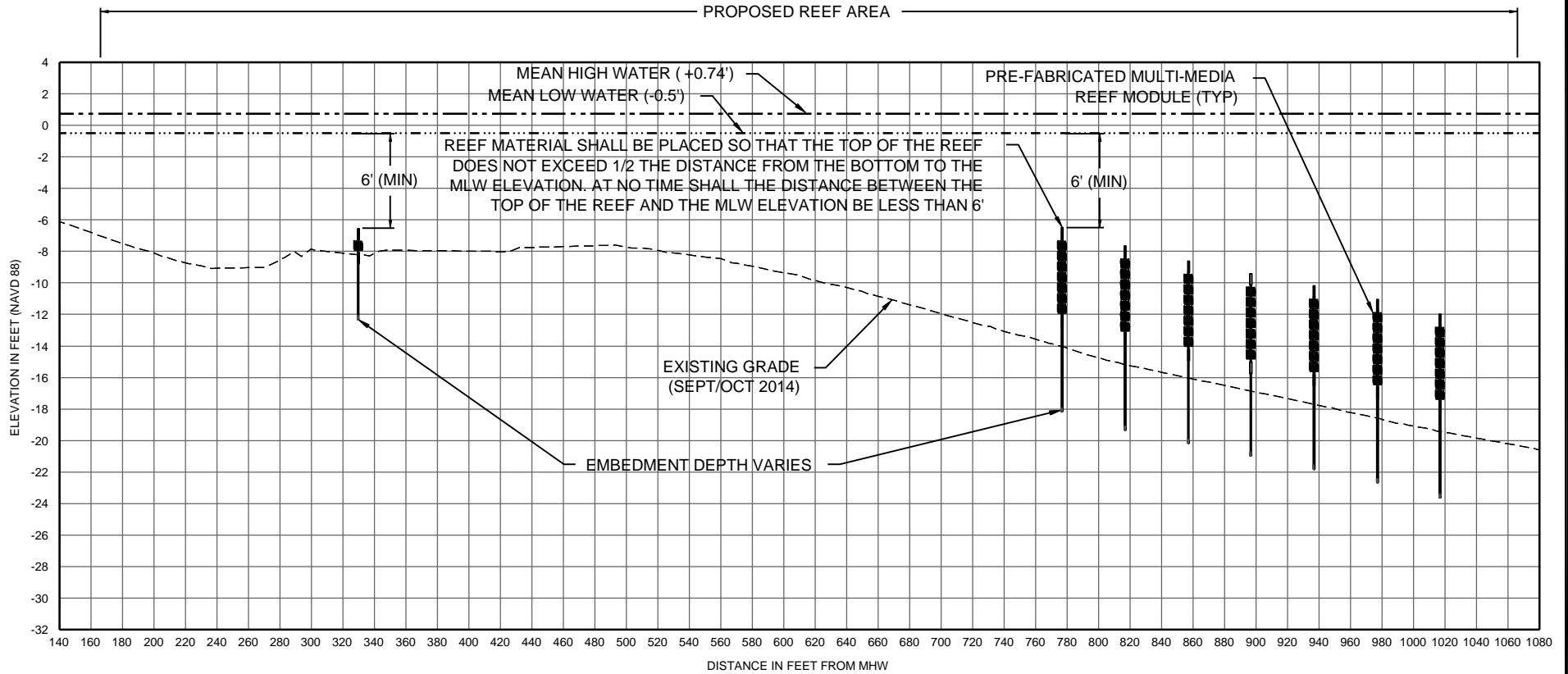
SEAL

MATTHEW TRAMMELL P.E.# 69244

DATE

PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

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A **TYPICAL SECTION**
FIG 3 SCALE: 1" = 100'
 V-SCALE: 1" = 10'

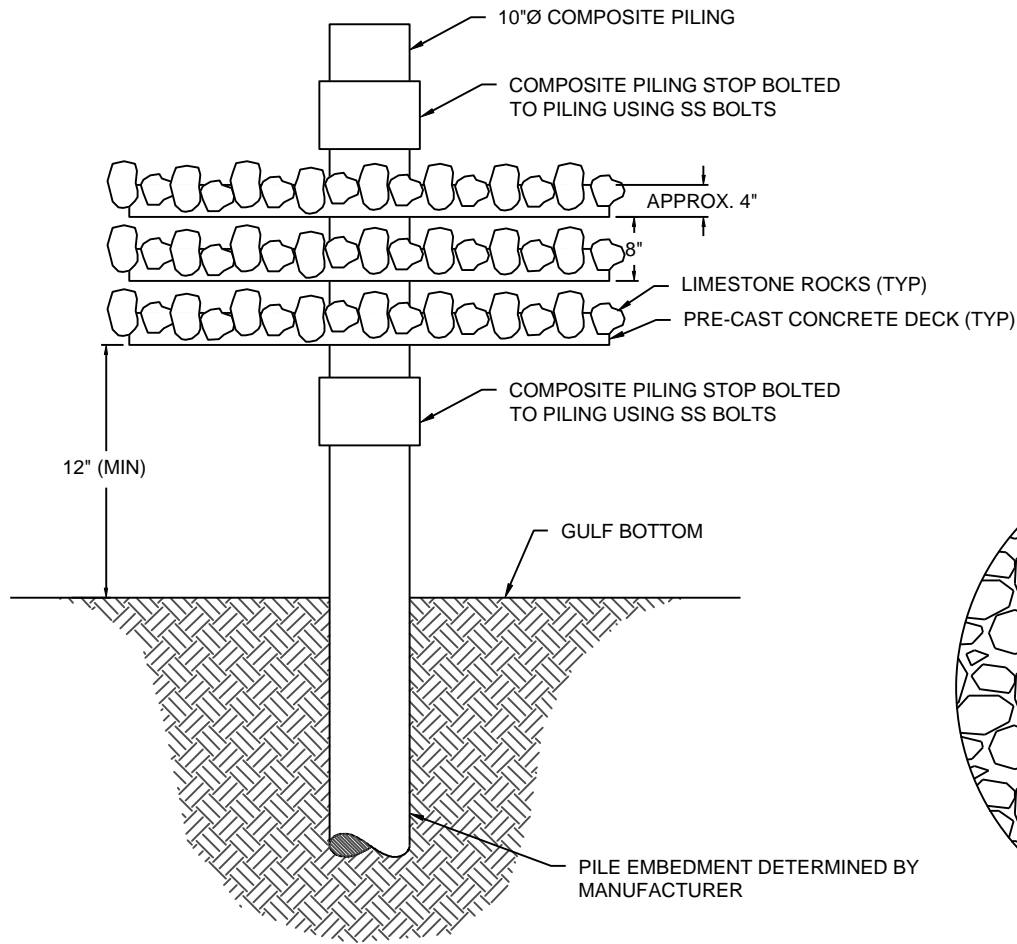
SURVEY: GCT, SEPT/OCT 2013
 VERTICAL DATUM: NAVD 88, FEET

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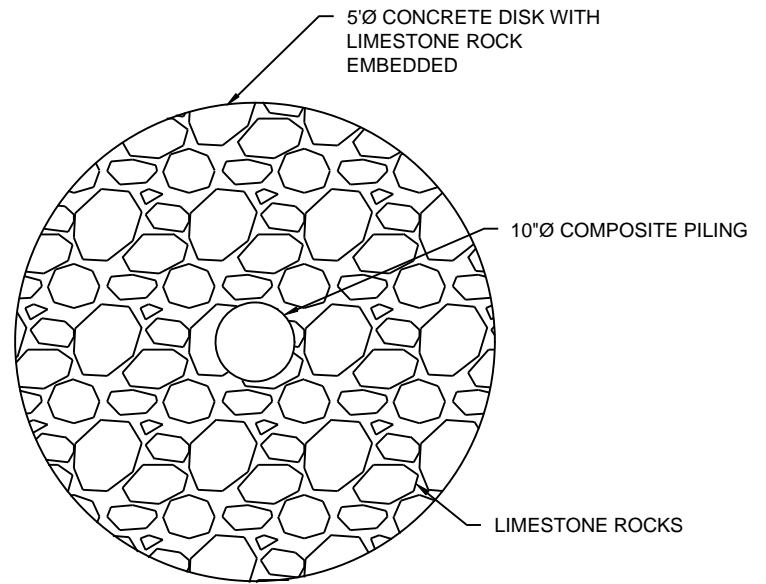
FIGURE 5
 TYPICAL SECTION
 TOPSAIL HILL SNORKEL REEF - SWARA/HG
 WALTON COUNTY, FLORIDA

PROJECT	C2014-007	SEAL
DRAWN BY	AF	
SHEET	5 of 6	
DATE	JAN 2014	
	MATTHEW TRAMMELL P.E.# 69244	DATE

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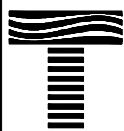
ELEVATION VIEW



TOP VIEW

PRE-FABRICATED MULTI-MEDIA REEF MODULE

NOT TO SCALE



TAYLOR ENGINEERING INC.

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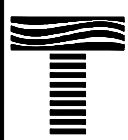
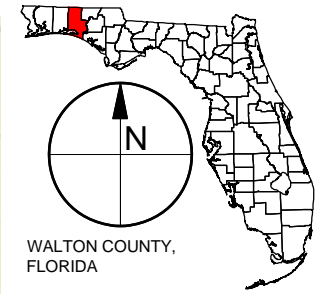
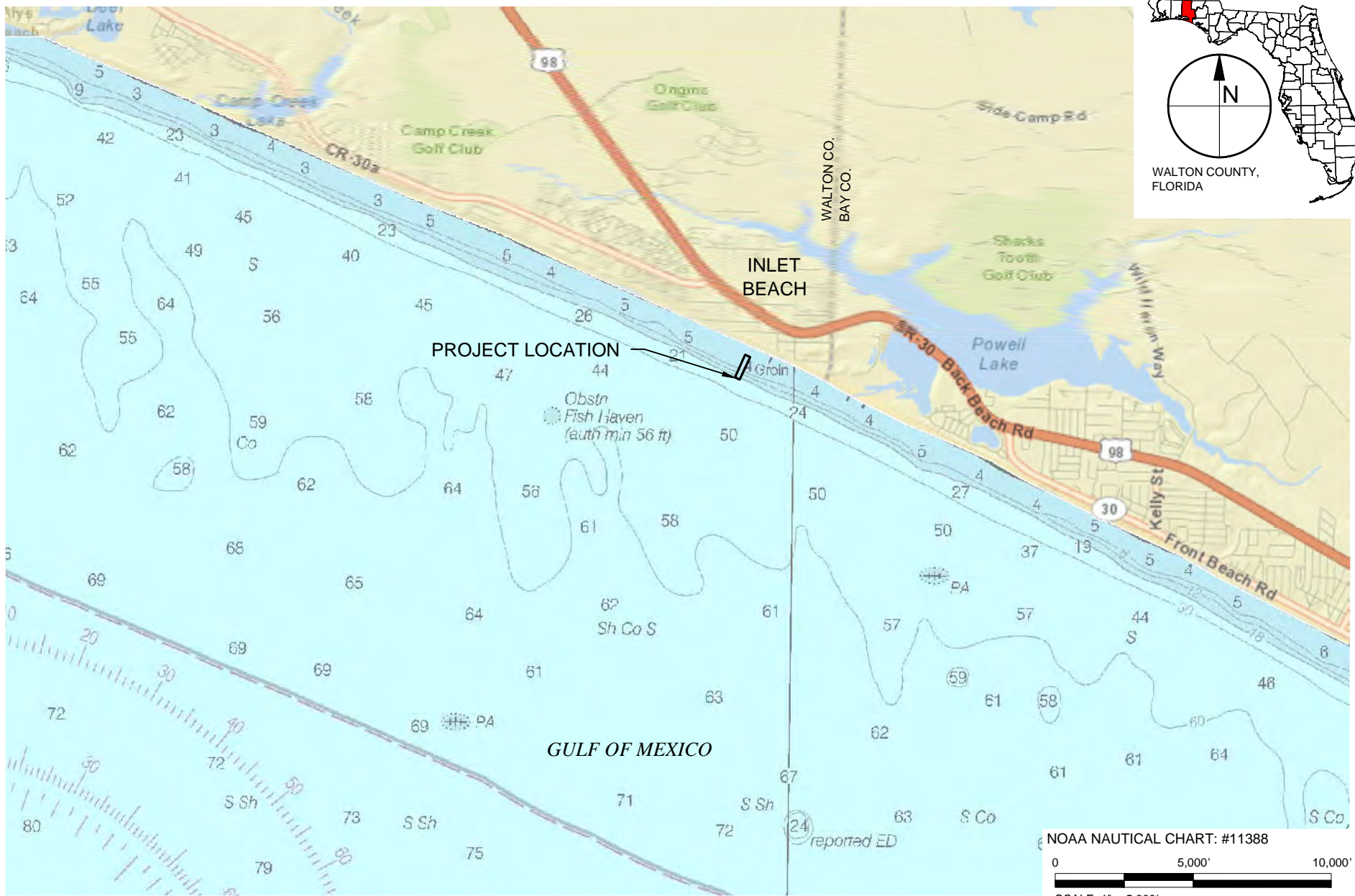
FIGURE 6
REEF DETAILS
TOPSAIL HILL SNORKEL REEF - SWARA/HG
WALTON COUNTY, FLORIDA

PROJECT	C2014-007	SEAL
DRAWN BY	AF	
SHEET	6 of 6	
DATE	JAN 2014	

MATTHEW TRAMMELL P.E.# 69244

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ANTON_X:\S\PROJECTS\2014-007 SWARA REEF\PERMITS\NORTEL\INLET\2014-007-P-INLET LOCATION MAP.DWG 12/20/14 11:48:12 AM



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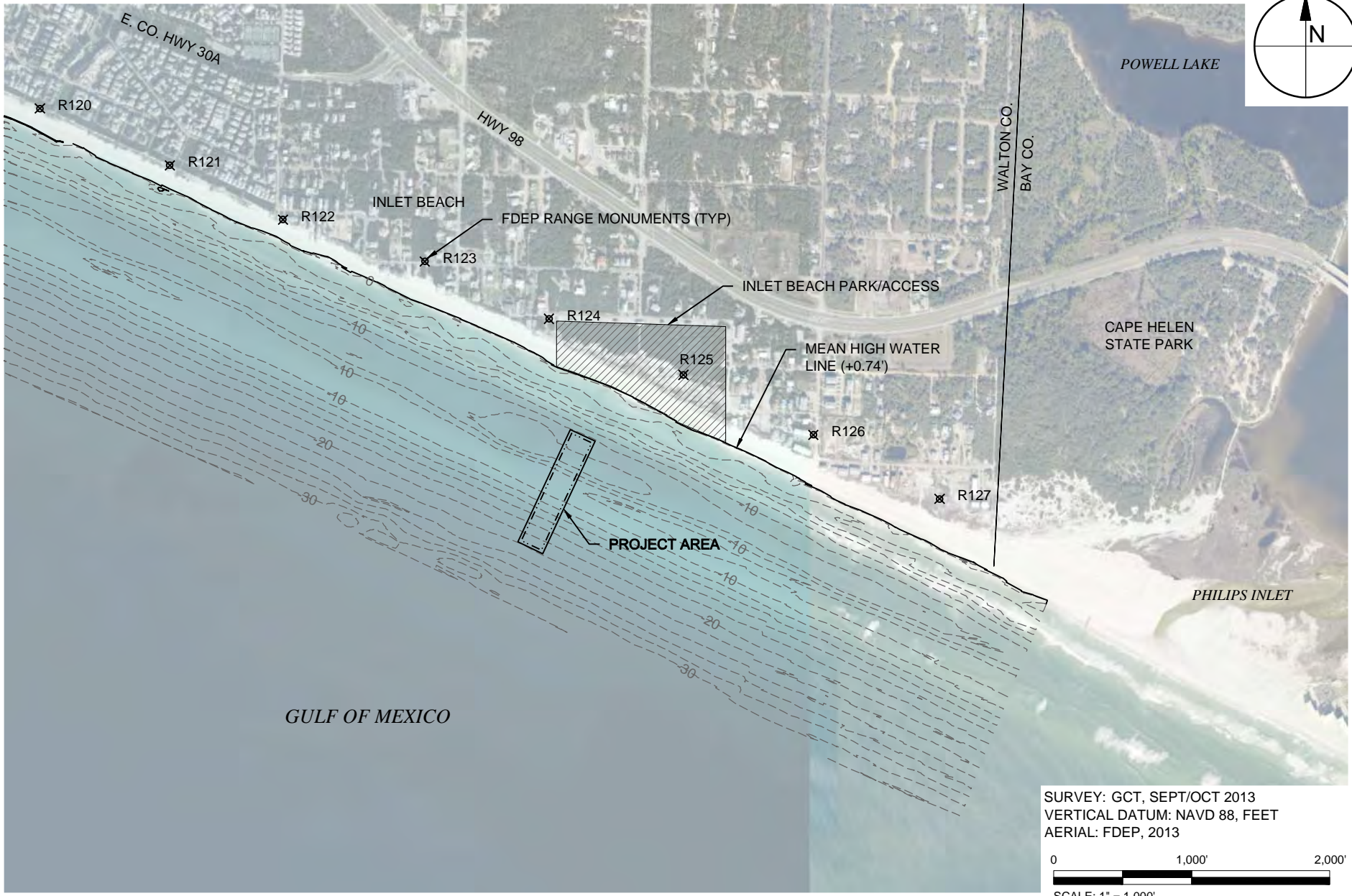
FIGURE 1
 LOCATION MAP
 INLET BEACH SNORKEL REEF - SWARA/AF
 WALTON COUNTY, FLORIDA

PROJECT	C2013-059
DRAWN BY	AF
SHEET	1 of 6
DATE	JAN 2014

SEAL	
MATTHEW TRAMMELL P.E.# 69244	DATE

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SURVEY: GCT, SEPT/OCT 2013
 VERTICAL DATUM: NAVD 88, FEET
 AERIAL: FDEP, 2013

0 1,000' 2,000'

SCALE: 1" = 1,000'

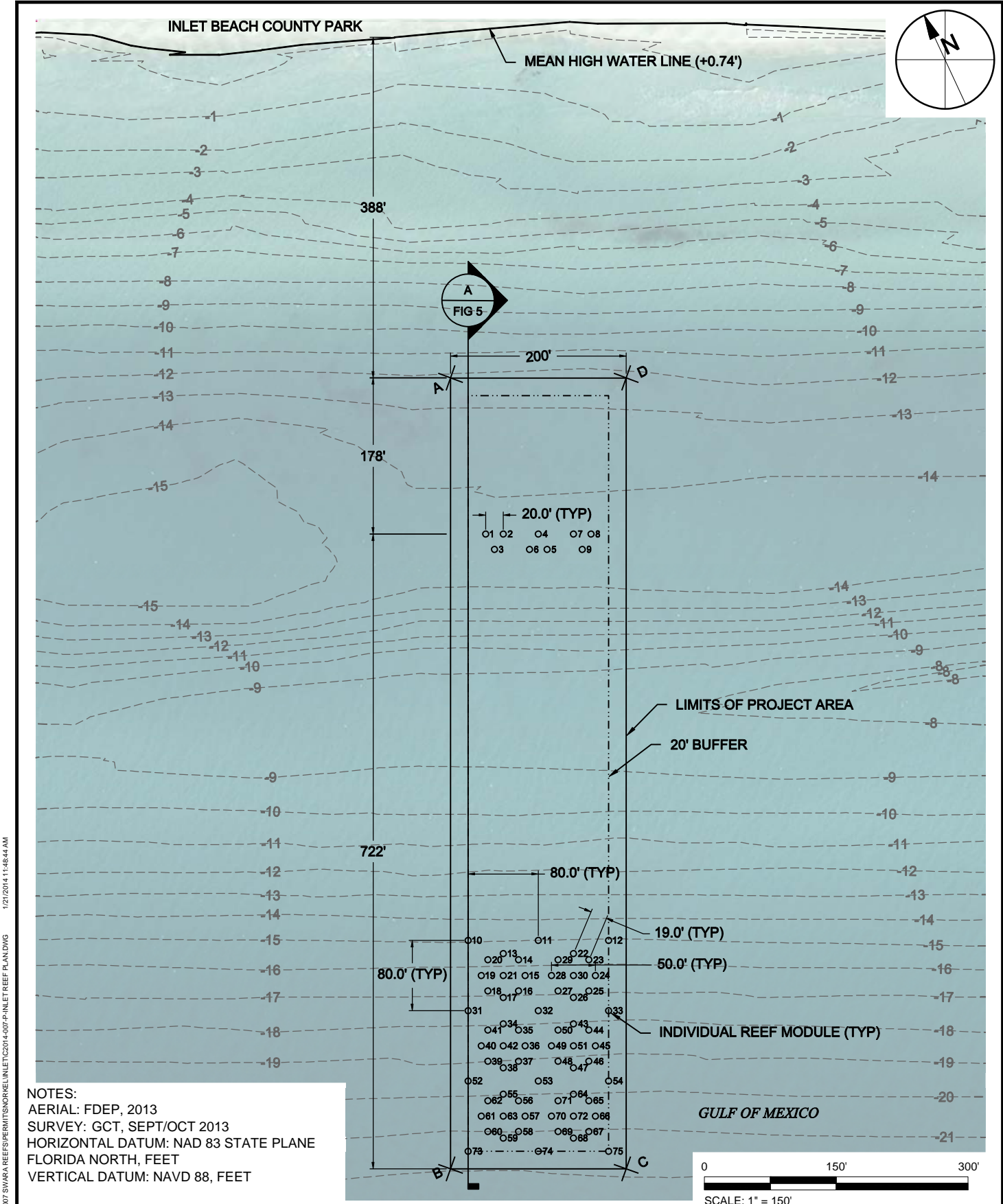


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FIGURE 2
 PROJECT OVERVIEW
 INLET BEACH SNORKEL REEF - SWARA/AF
 WALTON COUNTY, FLORIDA

PROJECT	C2013-059	SEAL
DRAWN BY	AF	
SHEET	2 of 6	
DATE	JAN 2014	MATTHEW TRAMMELL P.E.# 69244
		DATE

PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.



NOTES:
 AERIAL: FDEP, 2013
 SURVEY: GCT, SEPT/OCT 2013
 HORIZONTAL DATUM: NAD 83 STATE PLANE
 FLORIDA NORTH, FEET
 VERTICAL DATUM: NAVD 88, FEET


TAYLOR ENGINEERING INC.
 1221 AIRPORT ROAD
 SUITE 210
 DESTIN, FL 32541
 CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 3
REEF PLAN
INLET BEACH SNORKEL REEF - SWARA/AF
WALTON COUNTY, FLORIDA

PROJECT	DRAWN BY	SHEET	DATE
C2013-059	AF	3 of 6	JAN 2014

SEAL

 MATTHEW TRAMMELL P.E.# 69244
 DATE

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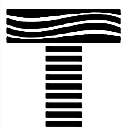
PROJECT AREA						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
A	1,493,267.37	465,678.33	N30.271858	W86.005511	N30° 16.3115"	W86° 0.33063"
B	1,492,886.96	464,862.68	N30.269601	W86.006681	N30° 16.1761"	W86° 0.40088"
C	1,493,068.22	464,778.14	N30.269375	W86.006104	N30° 16.1625"	W86° 0.36622"
D	1,493,448.62	465,593.80	N30.271632	W86.004933	N30° 16.2979"	W86° 0.29597"

NOTES:
HORIZONTAL DATUM: NAD 83 STATE PLANE FLORIDA NORTH, FEET
VERTICAL DATUM: NAVD 88, FEET
LAT/LONG: NAD 83 DATUM, DECIMAL DEGREES AND DEGREES/DECIMAL MINUTES

INDIVIDUAL REEF MODULE TABLE						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
1	1,493,228.57	465,500.48	N30.271367	W86.005626	N30° 16.2820"	W86° 0.33756"
2	1,493,246.70	465,492.03	N30.271345	W86.005568	N30° 16.2807"	W86° 0.33409"
3	1,493,230.24	465,480.39	N30.271312	W86.005620	N30° 16.2787"	W86° 0.33719"
4	1,493,282.95	465,475.12	N30.271300	W86.005453	N30° 16.2780"	W86° 0.32716"
5	1,493,284.62	465,455.04	N30.271244	W86.005447	N30° 16.2747"	W86° 0.32679"
6	1,493,266.49	465,463.49	N30.271267	W86.005504	N30° 16.2760"	W86° 0.33026"
7	1,493,319.20	465,458.22	N30.271254	W86.005337	N30° 16.2753"	W86° 0.32023"
8	1,493,337.33	465,449.77	N30.271232	W86.005279	N30° 16.2739"	W86° 0.31676"
9	1,493,320.87	465,438.13	N30.271199	W86.005331	N30° 16.2720"	W86° 0.31986"
10	1,493,015.02	465,089.84	N30.270230	W86.006285	N30° 16.2138"	W86° 0.37711"
11	1,493,087.53	465,056.03	N30.270140	W86.006054	N30° 16.2084"	W86° 0.36325"
12	1,493,160.09	465,022.19	N30.270050	W86.005823	N30° 16.2030"	W86° 0.34937"
13	1,493,045.05	465,059.29	N30.270148	W86.006189	N30° 16.2089"	W86° 0.37133"
14	1,493,057.86	465,045.23	N30.270109	W86.006148	N30° 16.2066"	W86° 0.36886"
15	1,493,057.06	465,026.17	N30.270057	W86.006149	N30° 16.2034"	W86° 0.36896"
16	1,493,042.92	465,013.19	N30.270021	W86.006194	N30° 16.2012"	W86° 0.37162"
17	1,493,023.81	465,014.02	N30.270022	W86.006254	N30° 16.2013"	W86° 0.37525"
18	1,493,010.88	465,028.13	N30.270061	W86.006296	N30° 16.2036"	W86° 0.37774"
19	1,493,011.74	465,047.30	N30.270113	W86.006294	N30° 16.2068"	W86° 0.37763"
20	1,493,025.82	465,060.17	N30.270149	W86.006250	N30° 16.2090"	W86° 0.37498"
21	1,493,034.37	465,036.68	N30.270085	W86.006222	N30° 16.2051"	W86° 0.37330"
22	1,493,117.55	465,025.48	N30.270057	W86.005958	N30° 16.2034"	W86° 0.35746"
23	1,493,130.37	465,011.42	N30.270019	W86.005917	N30° 16.2011"	W86° 0.35499"
24	1,493,129.56	464,992.36	N30.269967	W86.005918	N30° 16.1980"	W86° 0.35510"
25	1,493,115.43	464,979.38	N30.269930	W86.005963	N30° 16.1958"	W86° 0.35775"
26	1,493,096.31	464,980.21	N30.269932	W86.006023	N30° 16.1959"	W86° 0.36139"
27	1,493,083.38	464,994.32	N30.269970	W86.006065	N30° 16.1982"	W86° 0.36388"
28	1,493,084.25	465,013.49	N30.270023	W86.006063	N30° 16.2014"	W86° 0.36376"
29	1,493,098.33	465,026.36	N30.270059	W86.006019	N30° 16.2035"	W86° 0.36112"
30	1,493,106.88	465,002.87	N30.269995	W86.005991	N30° 16.1997"	W86° 0.35944"
31	1,492,981.22	465,017.33	N30.270030	W86.006389	N30° 16.2018"	W86° 0.38335"
32	1,493,053.72	464,983.53	N30.269940	W86.006158	N30° 16.1964"	W86° 0.36949"
33	1,493,126.22	464,949.72	N30.269849	W86.005927	N30° 16.1910"	W86° 0.35563"
34	1,493,011.24	464,986.78	N30.269947	W86.006293	N30° 16.1968"	W86° 0.37757"
35	1,493,024.06	464,972.73	N30.269909	W86.006252	N30° 16.1945"	W86° 0.37510"
36	1,493,023.25	464,953.67	N30.269856	W86.006253	N30° 16.1914"	W86° 0.37521"
37	1,493,009.11	464,940.69	N30.269820	W86.006298	N30° 16.1892"	W86° 0.37786"
38	1,492,990.00	464,941.52	N30.269822	W86.006358	N30° 16.1893"	W86° 0.38150"
39	1,492,977.07	464,955.63	N30.269860	W86.006400	N30° 16.1916"	W86° 0.38399"
40	1,492,977.93	464,974.80	N30.269913	W86.006398	N30° 16.1948"	W86° 0.38387"
41	1,492,992.01	464,987.67	N30.269949	W86.006354	N30° 16.1969"	W86° 0.38123"
42	1,493,000.56	464,964.18	N30.269884	W86.006326	N30° 16.1931"	W86° 0.37954"
43	1,493,083.74	464,952.98	N30.269857	W86.006062	N30° 16.1914"	W86° 0.36371"
44	1,493,096.56	464,938.92	N30.269819	W86.006021	N30° 16.1891"	W86° 0.36124"
45	1,493,095.75	464,919.86	N30.269766	W86.006022	N30° 16.1860"	W86° 0.36134"

INDIVIDUAL REEF MODULE TABLE						
POINT	EASTING	NORTHING	LAT (DEC DEG)	LONG (DEC DEG)	LAT (DEG, DEC MIN)	LONG (DEG, DEC MIN)
46	1,493,081.62	464,906.88	N30.269730	W86.006067	N30° 16.1838"	W86° 0.36400"
47	1,493,062.50	464,907.71	N30.269731	W86.006127	N30° 16.1839"	W86° 0.36763"
48	1,493,049.58	464,921.82	N30.269770	W86.006169	N30° 16.1862"	W86° 0.37012"
49	1,493,050.44	464,940.99	N30.269823	W86.006167	N30° 16.1894"	W86° 0.37001"
50	1,493,064.52	464,953.86	N30.269858	W86.006123	N30° 16.1915"	W86° 0.36736"
51	1,493,073.07	464,930.37	N30.269794	W86.006095	N30° 16.1876"	W86° 0.36568"
52	1,492,947.41	464,944.83	N30.269829	W86.006493	N30° 16.1898"	W86° 0.38960"
53	1,493,019.91	464,911.02	N30.269739	W86.006262	N30° 16.1843"	W86° 0.37573"
54	1,493,092.42	464,877.21	N30.269649	W86.006031	N30° 16.1789"	W86° 0.36187"
55	1,492,977.43	464,914.28	N30.269746	W86.006397	N30° 16.1848"	W86° 0.38382"
56	1,492,990.25	464,900.22	N30.269708	W86.006356	N30° 16.1825"	W86° 0.38134"
57	1,492,989.44	464,881.16	N30.269656	W86.006358	N30° 16.1793"	W86° 0.38145"
58	1,492,975.30	464,868.18	N30.269620	W86.006402	N30° 16.1772"	W86° 0.38410"
59	1,492,956.19	464,869.02	N30.269621	W86.006462	N30° 16.1773"	W86° 0.38774"
60	1,492,943.26	464,883.12	N30.269660	W86.006504	N30° 16.1796"	W86° 0.39023"
61	1,492,944.12	464,902.29	N30.269712	W86.006502	N30° 16.1827"	W86° 0.39012"
62	1,492,958.20	464,915.17	N30.269748	W86.006458	N30° 16.1849"	W86° 0.38747"
63	1,492,966.75	464,891.67	N30.269684	W86.006430	N30° 16.1810"	W86° 0.38579"
64	1,493,049.93	464,880.47	N30.269656	W86.006166	N30° 16.1794"	W86° 0.36995"
65	1,493,062.75	464,866.41	N30.269618	W86.006125	N30° 16.1771"	W86° 0.36748"
66	1,493,061.94	464,847.35	N30.269566	W86.006126	N30° 16.1739"	W86° 0.36759"
67	1,493,047.81	464,834.37	N30.269529	W86.006171	N30° 16.1718"	W86° 0.37024"
68	1,493,028.69	464,835.21	N30.269531	W86.006231	N30° 16.1719"	W86° 0.37387"
69	1,493,015.77	464,849.31	N30.269569	W86.006273	N30° 16.1742"	W86° 0.37637"
70	1,493,016.63	464,868.49	N30.269622	W86.006271	N30° 16.1773"	W86° 0.37625"
71	1,493,030.71	464,881.36	N30.269658	W86.006227	N30° 16.1795"	W86° 0.37361"
72	1,493,039.26	464,857.86	N30.269594	W86.006199	N30° 16.1756"	W86° 0.37192"
73	1,492,913.60	464,872.33	N30.269629	W86.006597	N30° 16.1777"	W86° 0.39584"
74	1,492,986.10	464,838.52	N30.269538	W86.006366	N30° 16.1723"	W86° 0.38198"
75	1,493,058.61	464,804.71	N30.269448	W86.006135	N30° 16.1669"	W86° 0.36811"

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TAYLOR ENGINEERING INC.

1221 AIRPORT ROAD
SUITE 210
DESTIN, FL 32541

CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 4
PROJECT AREA AND REEF MODULE TABLES
INLET BEACH SNORKEL REEF - SWARA/AF
WALTON COUNTY, FLORIDA

PROJECT: C2013-059 DRAWN BY: AF SHEET: 4 of 6 DATE: JAN 2014

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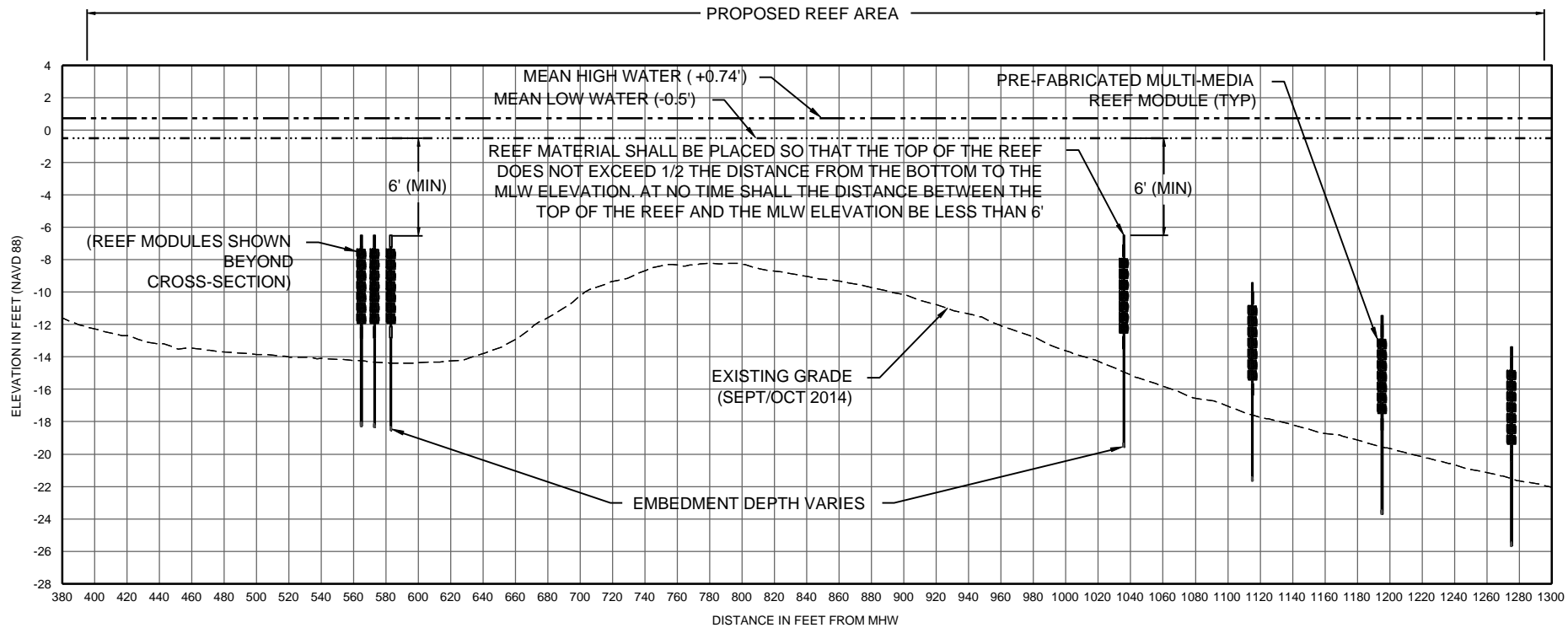
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A
FIG 3
TYPICAL SECTION
 SCALE: 1" = 100'
 V-SCALE: 1" = 10'

SURVEY: GCT, SEPT/OCT 2013
 VERTICAL DATUM: NAVD 88, FEET



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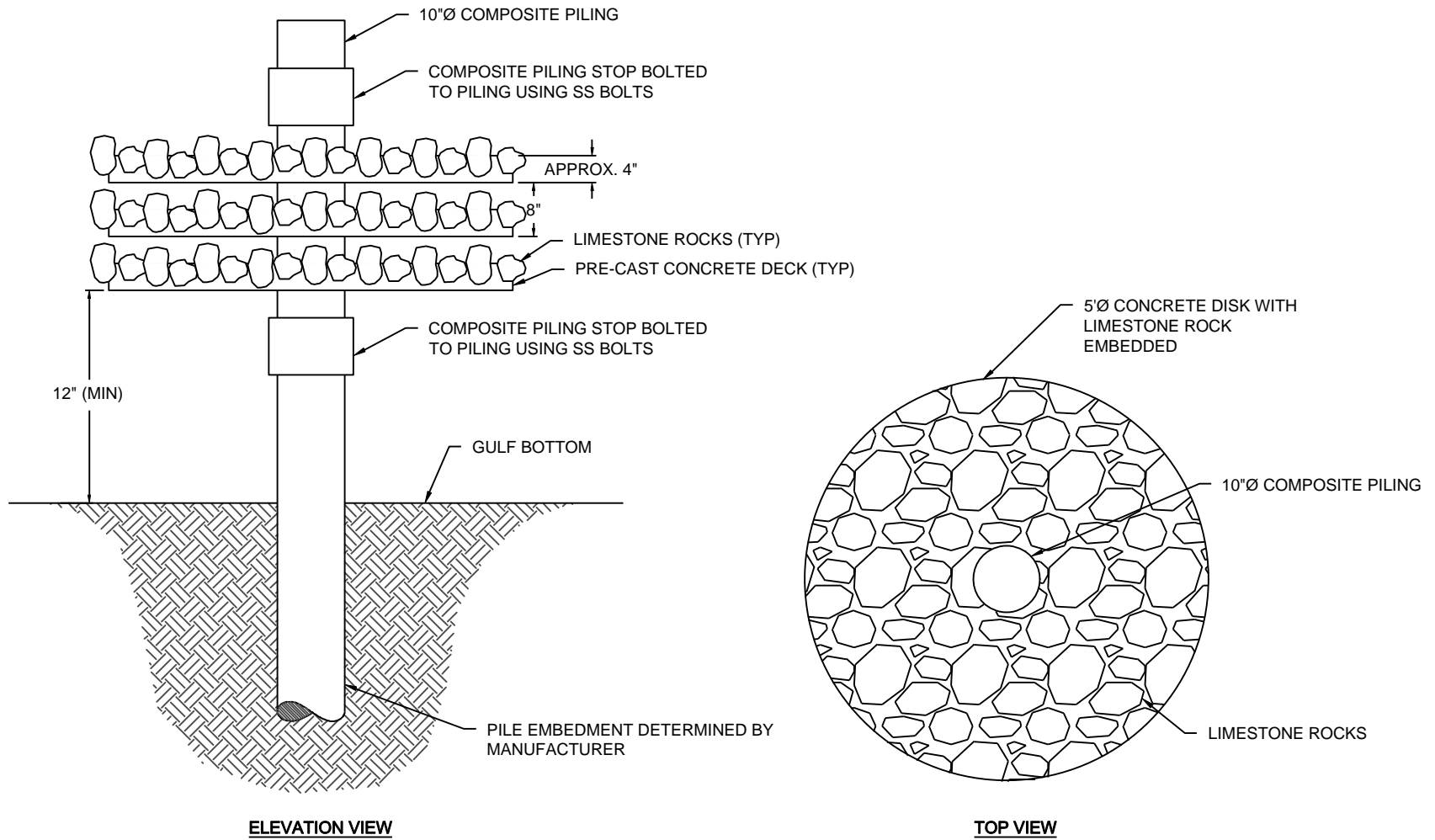
FIGURE 5
 TYPICAL SECTION
 INLET BEACH SNORKEL REEF - SWARA/AF
 WALTON COUNTY, FLORIDA

PROJECT	C2013-059	SEAL
DRAWN BY	AF	
SHEET	5 of 6	
DATE	JAN 2014	

MATTHEW TRAMMELL P.E.# 69244

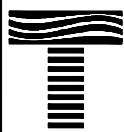
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PRE-FABRICATED MULTI-MEDIA REEF MODULE

NOT TO SCALE



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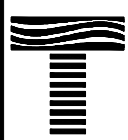
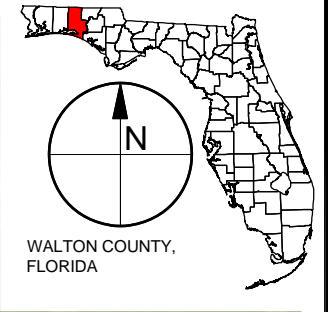
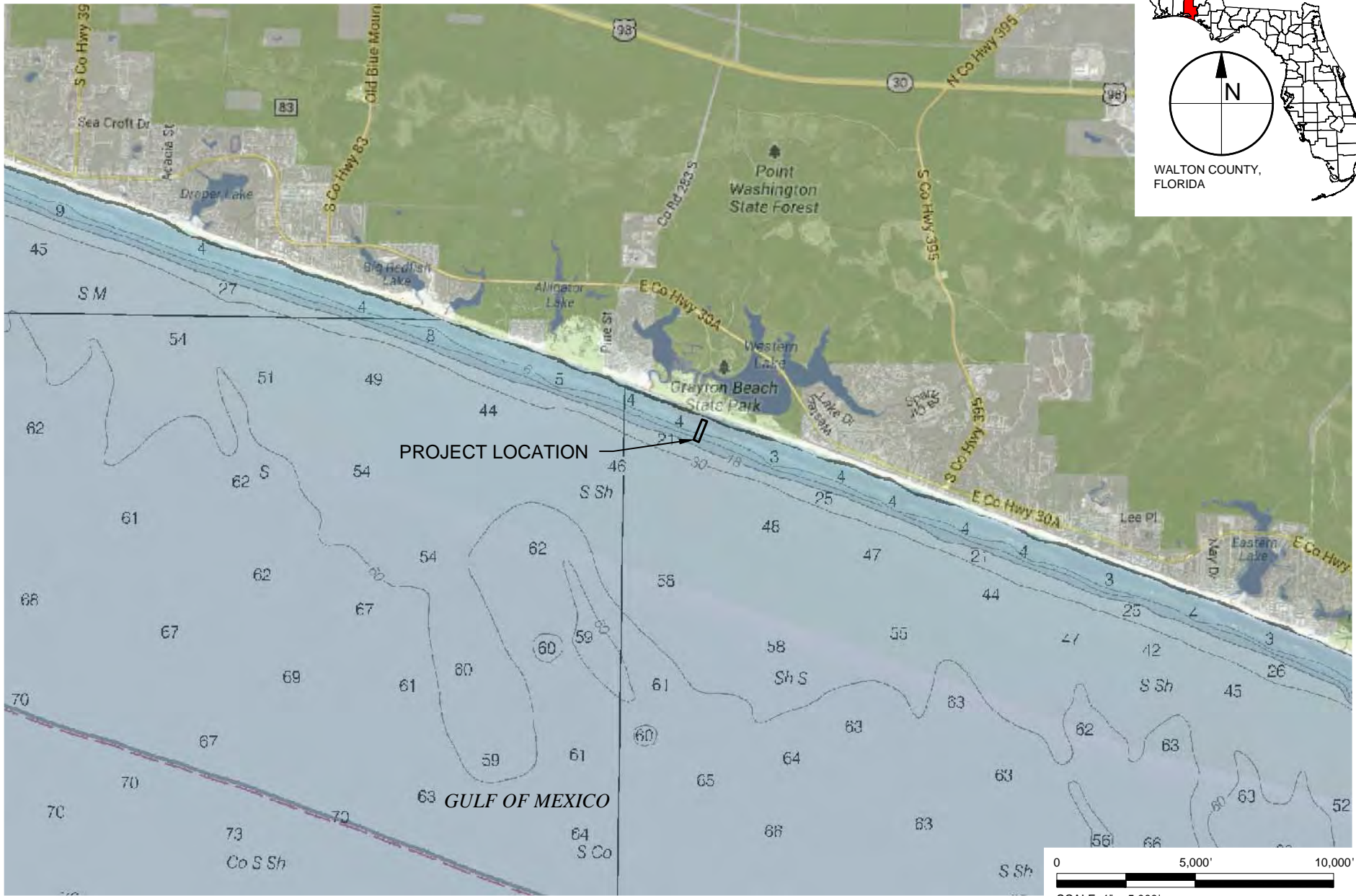
FIGURE 6
REEF DETAILS
INLET BEACH SNORKEL REEF - SWARA/AF
WALTON COUNTY, FLORIDA

PROJECT	C2013-059	SEAL
DRAWN BY	AF	
SHEET	6 of 6	
DATE	JAN 2014	

MATTHEW TRAMMELL P.E.# 69244

DATE

ANTON_X:\S\PROJECTS\2013-15 GRAYTON BEACH SNORKEL REEF\PERMIT\2013-153-PL-LOCATION MAP.DWG 10/18/2013 12:40:35 PM



TAYLOR ENGINEERING INC.
 1221 AIRPORT ROAD
 SUITE 210
 DESTIN, FL 32541
 CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 1
 LOCATION MAP
 GRAYTON BEACH SNORKEL REEF - SWARA/CCA
 WALTON COUNTY, FLORIDA

PROJECT	C2013-059
DRAWN BY	AF
SHEET	1 of 6
DATE	OCT 2013

SEAL	
MATTHEW TRAMMELL P.E. # 69244	
DATE	

PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

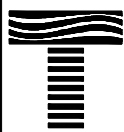
ANTON_X:\S\PROJECTS\2013-153 GRAYTON BEACH SNORKEL REEF\PERMIT\2013-153-P-OVERVIEW.DWG 10/18/2013 12:40:41 PM



SURVEY: FDEP, JULY 2008
 VERTICAL DATUM: NAVD 88, FEET
 AERIAL: ESRI, 2010

0 1,000' 2,000'

SCALE: 1" = 1,000'



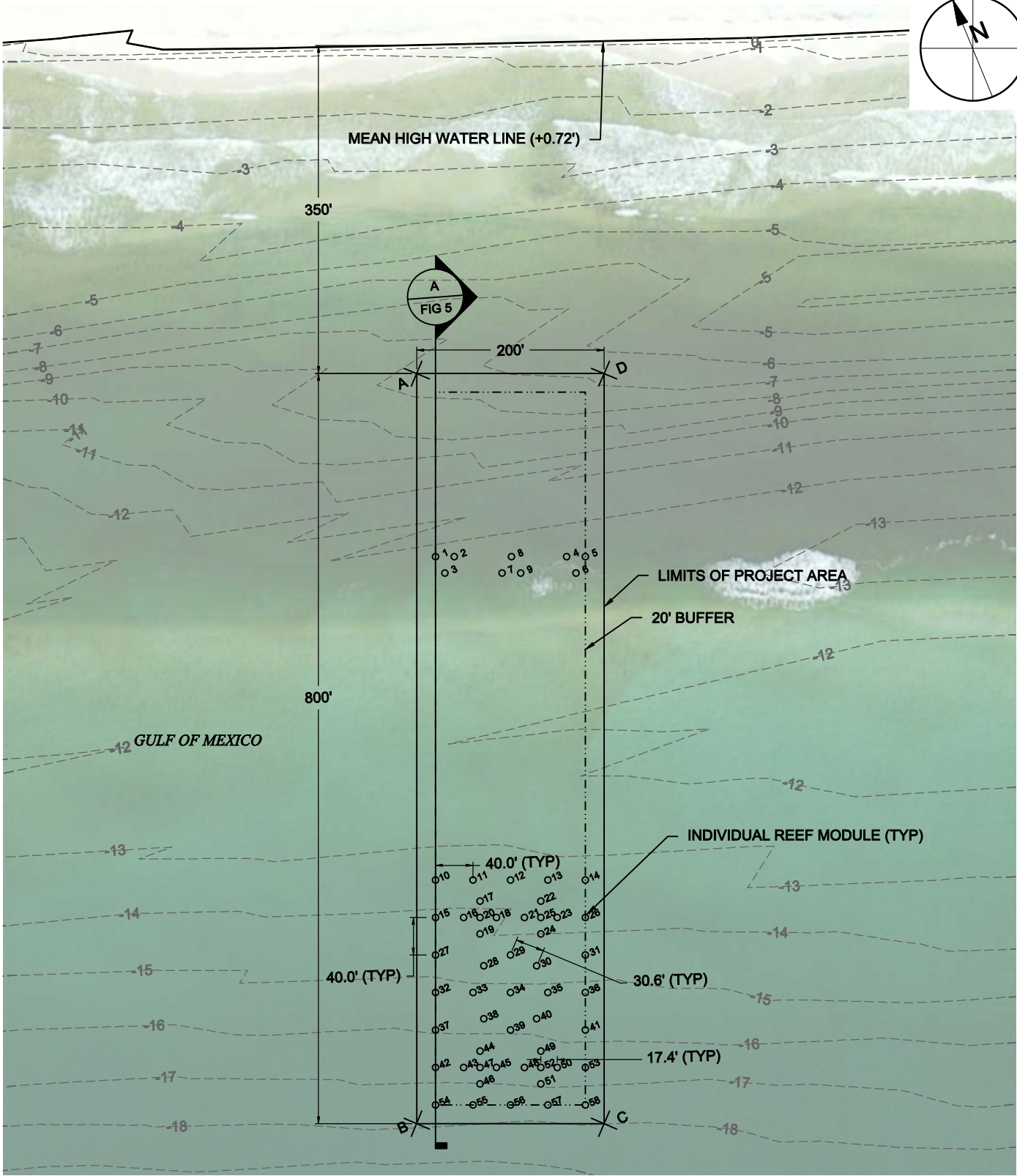
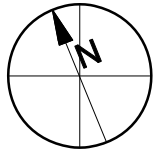
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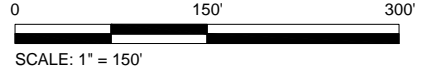
FIGURE 2
 PROJECT OVERVIEW
 GRAYTON BEACH SNORKEL REEF - SWARA/CCA
 WALTON COUNTY, FLORIDA

PROJECT	C2013-059
DRAWN BY	AF
SHEET	2 of 6
DATE	OCT 2013

SEAL	
MATTHEW TRAMMELL P.E.# 69244	DATE



NOTES:
 AERIAL: ESRI, 2010
 SURVEY: FDEP, JULY 2008
 HORIZONTAL DATUM: NAD 83 STATE PLANE FLORIDA NORTH, FEET
 VERTICAL DATUM: NAVD 88, FEET



ANTON_X:\SIS\PROJECTS\2013\153 GRAYTON BEACH SNORKEL REEF\PERMIT\2013_153-R-REEF-PLAN.DWG 10/16/2013 12:40:57 PM

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 CERTIFICATE OF AUTHORIZATION # 4815

**FIGURE 3
 REEF PLAN**
 GRAYTON BEACH SNORKEL REEF - SWARA/CCA
 WALTON COUNTY, FLORIDA

PROJECT	DRAWN BY	SHEET	DATE
C2013-059	AF	3 of 6	OCT 2013

SEAL

 MATTHEW TRAMMELL P.E.# 69244

DATE

 DATE

PRELIMINARY DRAWINGS: THESE DRAWINGS ARE NOT IN FINAL FORM, BUT ARE BEING TRANSMITTED FOR AGENCY REVIEW.

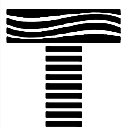
ANTON_X:\S\PROJECTS\2013-153 GRAYTON BEACH SNORKEL REEF\PERMIT\2013-153-P-REEF-PLANDWG 10/16/2013 12:40:58 PM

PROJECT AREA				
ID	LAT	LONG	LAT	LONG
	(DEC. DEGREES)		(DEG, DEC. MINUTES)	
A	30.3238	-86.1577	30d 19.4266m	-86d -9.4613m
B	30.3217	-86.1586	30d 19.3037m	-86d -9.5168m
C	30.3215	-86.1580	30d 19.2917m	-86d -9.4813m
D	30.3236	-86.1571	30d 19.4146m	-86d -9.4259m

NOTES:
 HORIZONTAL DATUM: NAD 83 STATE PLANE FLORIDA NORTH, FEET
 VERTICAL DATUM: NAVD 88, FEET
 LAT/LONG: NAD 83 DATUM, DECIMAL DEGREES AND DEGREES/DECIMAL MINUTES

INDIVIDUAL REEF MODULE TABLE				
ID	LAT	LONG	LAT	LONG
	(DEC. DEGREES)		(DEG, DEC. MINUTES)	
1	30.3233	-86.1579	30d 19.3954m	-86d -9.4712m
2	30.3232	-86.1578	30d 19.3942m	-86d -9.4677m
3	30.3232	-86.1578	30d 19.3921m	-86d -9.4707m
4	30.3231	-86.1574	30d 19.387m	-86d -9.4465m
5	30.3231	-86.1574	30d 19.3858m	-86d -9.4429m
6	30.3231	-86.1574	30d 19.3837m	-86d -9.4459m
7	30.3231	-86.1577	30d 19.3884m	-86d -9.4599m
8	30.3232	-86.1576	30d 19.3905m	-86d -9.4569m
9	30.3231	-86.1576	30d 19.3872m	-86d -9.4564m
10	30.3224	-86.1583	30d 19.3424m	-86d -9.4952m
11	30.3223	-86.1581	30d 19.34m	-86d -9.4881m
12	30.3223	-86.1580	30d 19.3376m	-86d -9.481m
13	30.3223	-86.1579	30d 19.3352m	-86d -9.4739m
14	30.3222	-86.1578	30d 19.3328m	-86d -9.4669m
15	30.3223	-86.1583	30d 19.3363m	-86d -9.498m
16	30.3222	-86.1582	30d 19.3345m	-86d -9.4927m
17	30.3223	-86.1581	30d 19.3361m	-86d -9.4883m
18	30.3222	-86.1581	30d 19.3324m	-86d -9.4865m
19	30.3222	-86.1582	30d 19.3307m	-86d -9.4908m
20	30.3222	-86.1582	30d 19.3334m	-86d -9.4896m
21	30.3222	-86.1580	30d 19.3306m	-86d -9.4812m
22	30.3222	-86.1579	30d 19.3322m	-86d -9.4768m
23	30.3221	-86.1579	30d 19.3285m	-86d -9.475m
24	30.3221	-86.1580	30d 19.3268m	-86d -9.4793m
25	30.3222	-86.1580	30d 19.3295m	-86d -9.478m
26	30.3221	-86.1578	30d 19.3267m	-86d -9.4696m
27	30.3222	-86.1583	30d 19.3301m	-86d -9.5007m
28	30.3221	-86.1582	30d 19.3252m	-86d -9.4924m
29	30.3221	-86.1581	30d 19.3253m	-86d -9.4866m

INDIVIDUAL REEF MODULE TABLE				
ID	LAT	LONG	LAT	LONG
	(DEC. DEGREES)		(DEG, DEC. MINUTES)	
30	30.3220	-86.1580	30d 19.3218m	-86d -9.4824m
31	30.3220	-86.1579	30d 19.3205m	-86d -9.4724m
32	30.3221	-86.1584	30d 19.324m	-86d -9.5035m
33	30.3220	-86.1583	30d 19.3216m	-86d -9.4964m
34	30.3220	-86.1582	30d 19.3192m	-86d -9.4893m
35	30.3219	-86.1580	30d 19.3168m	-86d -9.4823m
36	30.3219	-86.1579	30d 19.3144m	-86d -9.4752m
37	30.3220	-86.1584	30d 19.3179m	-86d -9.5063m
38	30.3219	-86.1583	30d 19.3165m	-86d -9.4963m
39	30.3219	-86.1582	30d 19.313m	-86d -9.4921m
40	30.3219	-86.1581	30d 19.3131m	-86d -9.4863m
41	30.3218	-86.1580	30d 19.3082m	-86d -9.4779m
42	30.3219	-86.1585	30d 19.3117m	-86d -9.5091m
43	30.3218	-86.1584	30d 19.3099m	-86d -9.5038m
44	30.3219	-86.1583	30d 19.3115m	-86d -9.4994m
45	30.3218	-86.1583	30d 19.3078m	-86d -9.4976m
46	30.3218	-86.1584	30d 19.3062m	-86d -9.5019m
47	30.3218	-86.1583	30d 19.3089m	-86d -9.5006m
48	30.3218	-86.1582	30d 19.306m	-86d -9.4922m
49	30.3218	-86.1581	30d 19.3076m	-86d -9.4879m
50	30.3217	-86.1581	30d 19.3039m	-86d -9.486m
51	30.3217	-86.1582	30d 19.3023m	-86d -9.4904m
52	30.3217	-86.1582	30d 19.3049m	-86d -9.4891m
53	30.3217	-86.1580	30d 19.3021m	-86d -9.4807m
54	30.3218	-86.1585	30d 19.3056m	-86d -9.5118m
55	30.3217	-86.1584	30d 19.3032m	-86d -9.5047m
56	30.3217	-86.1583	30d 19.3008m	-86d -9.4977m
57	30.3216	-86.1582	30d 19.2983m	-86d -9.4906m
58	30.3216	-86.1581	30d 19.2959m	-86d -9.4835m



TAYLOR ENGINEERING INC.

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CERTIFICATE OF AUTHORIZATION # 4815

FIGURE 4
 PROJECT AREA AND REEF MODULE TABLES
 GRAYTON BEACH SNORKEL REEF - SWARA/CCA
 WALTON COUNTY, FLORIDA

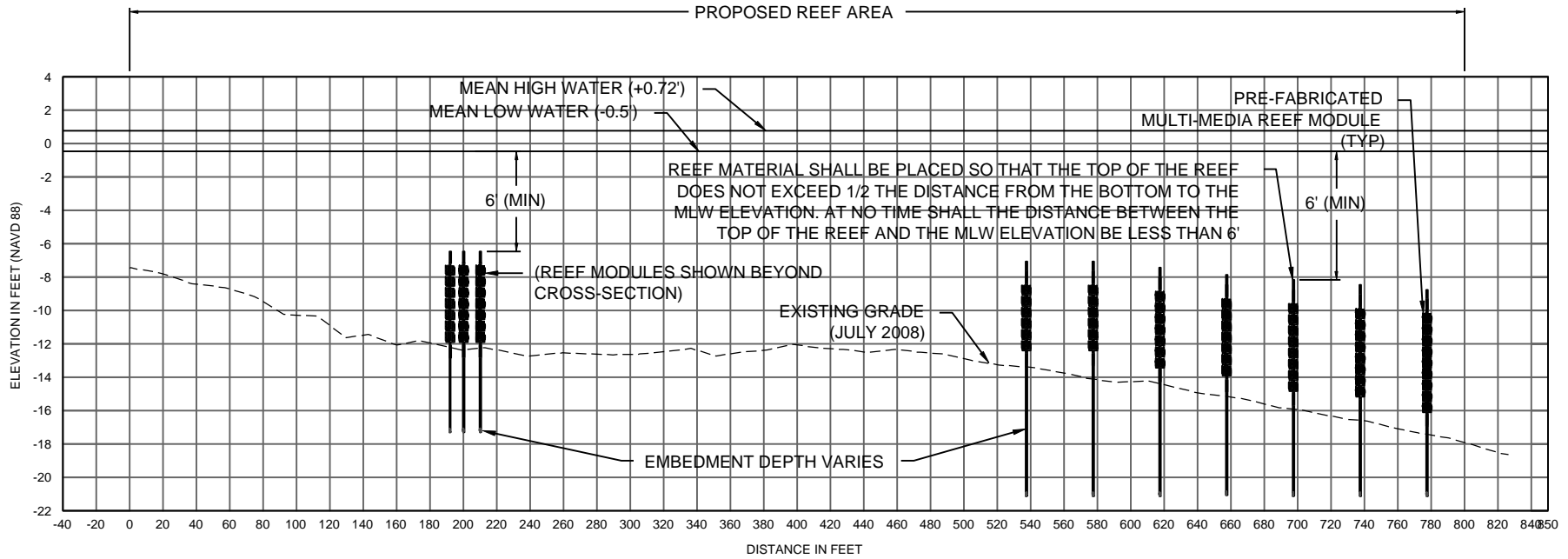
PROJECT C2013-059 DRAWN BY AF SHEET 4 of 6 DATE OCT 2013

SEAL

MATTHEW TRAMMELL P.E.# 69244

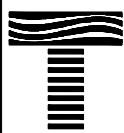
DATE

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A **TYPICAL SECTION**
FIG 3 SCALE: 1" = 100'
 V-SCALE: 1" = 10'

SURVEY: FDEP, JULY 2008
 VERTICAL DATUM: NAVD 88, FEET



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 DESTIN, FL 32541
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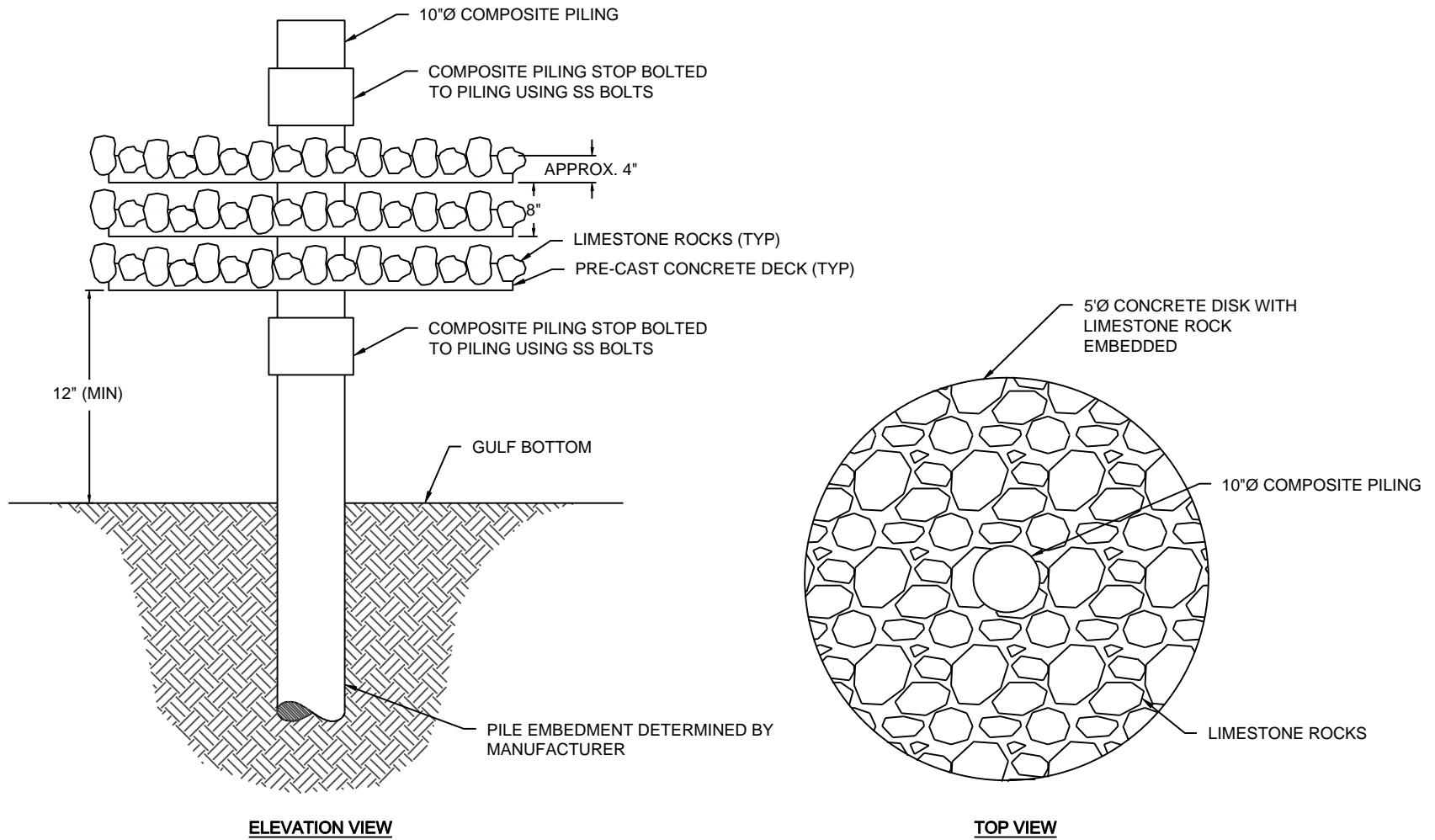
FIGURE 5
 TYPICAL SECTION
 GRAYTON BEACH SNORKEL REEF - SWARA/CCA
 WALTON COUNTY, FLORIDA

PROJECT	C2013-059	SEAL
DRAWN BY	AF	
SHEET	5 of 6	
DATE	OCT 2013	

MATTHEW TRAMMELL P.E.# 69244

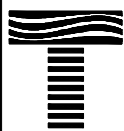
DATE

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PRE-FABRICATED MULTI-MEDIA REEF MODULE

NOT TO SCALE



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FIGURE 6
REEF DETAILS
GRAYTON BEACH SNORKEL REEF - SWARA/CCA
WALTON COUNTY, FLORIDA

PROJECT	C2013-059	SEAL
DRAWN BY	AF	
SHEET	6 of 6	
DATE	OCT 2013	DATE
		MATTHEW TRAMMELL P.E.# 69244



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

- a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.
- b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.
- c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.
- d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.
- e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.
- f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.
- g. Any special construction conditions, required of your specific project, outside these general conditions, if applicable, will be addressed in the primary consultation.

Revised: March 23, 2006

O:\forms\Sea Turtle and Smalltooth Sawfish Construction Conditions.doc



STANDARD MANATEE CONDITIONS FOR IN-WATER WORK

2011

The permittee shall comply with the following conditions intended to protect manatees from direct project effects:

- a. All personnel associated with the project shall be instructed about the presence of manatees and manatee speed zones, and the need to avoid collisions with and injury to manatees. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act, the Endangered Species Act, and the Florida Manatee Sanctuary Act.
- b. All vessels associated with the construction project shall operate at "Idle Speed/No Wake" at all times while in the immediate area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.
- c. Siltation or turbidity barriers shall be made of material in which manatees cannot become entangled, shall be properly secured, and shall be regularly monitored to avoid manatee entanglement or entrapment. Barriers must not impede manatee movement.
- d. All on-site project personnel are responsible for observing water-related activities for the presence of manatee(s). All in-water operations, including vessels, must be shutdown if a manatee(s) comes within 50 feet of the operation. Activities will not resume until the manatee(s) has moved beyond the 50-foot radius of the project operation, or until 30 minutes elapses if the manatee(s) has not reappeared within 50 feet of the operation. Animals must not be herded away or harassed into leaving.
- e. Any collision with or injury to a manatee shall be reported immediately to the Florida Fish and Wildlife Conservation Commission (FWC) Hotline at 1-888-404-3922. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-731-3336) for north Florida or Vero Beach (1-772-562-3909) for south Florida, and to FWC at ImperiledSpecies@myFWC.com



Vessel Strike Avoidance Measures and Reporting for Mariners NOAA Fisheries Service, Southeast Region

Background

The National Marine Fisheries Service (NMFS) has determined that collisions with vessels can injure or kill protected species (e.g., endangered and threatened species, and marine mammals). The following standard measures should be implemented to reduce the risk associated with vessel strikes or disturbance of these protected species to discountable levels. NMFS should be contacted to identify any additional conservation and recovery issues of concern, and to assist in the development of measures that may be necessary.

Protected Species Identification Training

Vessel crews should use an Atlantic and Gulf of Mexico reference guide that helps identify protected species that might be encountered in U.S. waters of the Atlantic Ocean, including the Caribbean Sea, and Gulf of Mexico. Additional training should be provided regarding information and resources available regarding federal laws and regulations for protected species, ship strike information, critical habitat, migratory routes and seasonal abundance, and recent sightings of protected species.

Vessel Strike Avoidance

In order to avoid causing injury or death to marine mammals and sea turtles the following measures should be taken when consistent with safe navigation:

1. Vessel operators and crews should maintain a vigilant watch for marine mammals and sea turtles to avoid striking sighted protected species.
2. When whales are sighted, maintain a distance of 100 yards or greater between the whale and the vessel.
3. When sea turtles or small cetaceans are sighted, attempt to maintain a distance of 50 yards or greater between the animal and the vessel whenever possible.
4. When small cetaceans are sighted while a vessel is underway (e.g., bow-riding), attempt to remain parallel to the animal's course. Avoid excessive speed or abrupt changes in direction until the cetacean has left the area.
5. Reduce vessel speed to 10 knots or less when mother/calf pairs, groups, or large assemblages of cetaceans are observed near an underway vessel, when safety permits. A single cetacean at the surface may indicate the presence of submerged animals in the vicinity; therefore, prudent precautionary measures should always be exercised. The vessel should attempt to route around the animals, maintaining a minimum distance of 100 yards whenever possible.

6. Whales may surface in unpredictable locations or approach slowly moving vessels. When an animal is sighted in the vessel's path or in close proximity to a moving vessel and when safety permits, reduce speed and shift the engine to neutral. Do not engage the engines until the animals are clear of the area.

Additional Requirements for the North Atlantic Right Whale

1. If a sighted whale is believed to be a North Atlantic right whale, federal regulation requires a minimum distance of 500 yards be maintained from the animal (50 CFR 224.103 (c)).
2. Vessels entering North Atlantic right whale critical habitat are required to report into the Mandatory Ship Reporting System.
3. Mariners should check with various communication media for general information regarding avoiding ship strikes and specific information regarding North Atlantic right whale sighting locations. These include NOAA weather radio, U.S. Coast Guard NAVTEX broadcasts, and Notices to Mariners. Commercial mariners calling on United States ports should view the most recent version of the NOAA/USCG produced training CD entitled "A Prudent Mariner's Guide to Right Whale Protection" (contact the NMFS Southeast Region, Protected Resources Division for more information regarding the CD).
4. Injured, dead, or entangled right whales should be immediately reported to the U.S. Coast Guard via VHF Channel 16.

Injured or Dead Protected Species Reporting

Vessel crews should report sightings of any injured or dead protected species immediately, regardless of whether the injury or death is caused by your vessel.

Report marine mammals to the Southeast U.S. Stranding Hotline: 877-433-8299

Report sea turtles to the NMFS Southeast Regional Office: 727-824-5312

If the injury or death of a marine mammal was caused by a collision with your vessel, responsible parties should remain available to assist the respective salvage and stranding network as needed. NMFS' Southeast Regional Office should be immediately notified of the strike by email (takereport.nmfsser@noaa.gov) using the attached vessel strike reporting form.

For additional information, please contact the Protected Resources Division at:

NOAA Fisheries Service
Southeast Regional Office

263 13th Avenue South
St. Petersburg, FL 33701

Tel: (727) 824-5312

Visit us on the web at <http://sero.nmfs.noaa.gov>



FLORIDA ARTIFICIAL REEF MATERIALS CARGO MANIFEST AND PRE-DEPLOYMENT NOTIFICATION (Issued pursuant to Ch. 379.249(6)(b), Florida Statutes)



I, _____
 Name of individual managing reef deployment (print) _____ Signature _____ Date _____

whose address is _____, (____) _____ - _____
 Street City State Zip Code Phone

declare that I am staging and transporting the following artificial reef construction materials allowable pursuant to the U.S. Army Corps of Engineers Artificial Reef Permit referenced below and agree to comply with all permit conditions in the permit listed below and attached to this manifest. I understand this artificial reef site is open to public access and this authorization does not provide any rights or exclusive private use over those rights or uses to the general public.

The address of the land based reef materials staging area is: _____

Transporting Vessel Registration Number: _____

Vessel Owner: _____ Vessel Operator: _____

The following items are to be deployed as reef material (attach additional sheets when more than four locations):

MATERIAL TAG ID NUMBER(S), if applicable	Descriptions of material (number of pieces, type, dimension, weight)	GPS Coordinates degrees, minutes, decimal minutes (DD°MM.mmm')
		Lat: ____ ° ____ . ____ ' Lon: ____ ° ____ . ____ '
		Lat: ____ ° ____ . ____ ' Lon: ____ ° ____ . ____ '
		Lat: ____ ° ____ . ____ ' Lon: ____ ° ____ . ____ '
		Lat: ____ ° ____ . ____ ' Lon: ____ ° ____ . ____ '

A copy of the below referenced permit(s) and all associated conditions is attached to this manifest and shall be carried on board the vessel during loading, storing, or transporting artificial reef material.

-- OFFICIAL USE ONLY --
 (TO BE COMPLETED BY PERMIT HOLDER, OR AUTHORIZED ARTIFICIAL REEF INSPECTOR)

Permit Holder: _____
 Name of U.S. Department of the Army, Corps of Engineers (ACOE) Permit Holder

ACOE permit number _____, permitted site name _____

issued on _____ and has an expiration date of _____.

Local tracking number (if applicable): _____

 (Name of FWC authorized Artificial Reef Inspector, printed)

 (Signature) _____ (Date)

EXPLANATION SHEET FOR THE ARTIFICIAL REEF MATERIALS CARGO MANIFEST FORM

The attached artificial reef cargo manifest has been developed in compliance with subsection 379.249(6)(b), Florida Statutes, which states that:

“It is unlawful for any person to: store, possess or transport on or across state waters any materials reasonably suited for artificial reef construction and stored in such a manner providing ready access for use and placement as an artificial reef, unless a valid cargo manifest issued by the commission or a commission-certified inspector is onboard the transporting vessel. The manifest will serve as authorization to use a valid permitted site or land-based staging area, which will validate that the type of artificial reef construction material being transported is permissible for use at the permitted site, and will describe and quantify the artificial reef material being transported. The manifest will also include the latitude and longitude coordinates of the proposed deployment location, the valid permit number, and the copy off the permit conditions for the permitted site. The manifest must be available for inspection by any authorized law enforcement officer or commission employee.”

This requirement for a cargo manifest became part of the statutory revision of the artificial reef program statute Section 379.249 Florida Statutes (F.S.), modified during the 2000 State of Florida Legislature. The statutory language allows a “commission certified inspector” to complete and approve the artificial reef materials cargo manifest. Therefore, we are providing the attached cargo manifest form to all local coastal government artificial reef coordinators and eligible non-profit corporations who may physically construct artificial reefs with the approval of the permit holders.

INSTRUCTIONS

A separate cargo manifest form is to be completed for each load to be transported offshore (i.e., one manifest per voyage). The manifest is to list all, and only, the reef materials onboard.

The top of the form is to be filled out by the reef builder with his/her contact information and the information about the proposed reef materials to be deployed written into the boxes. If several materials are identical but have different tag numbers, please write “SAME” in the box for the other materials. Also put “SAME” under additional coordinates if all materials are going to the same deployment site.

The shaded portion of the form at the bottom is to be filled out by the materials inspector. The cargo manifest must be completed by an entity representing the holder of the applicable artificial reef permit to assure that all materials meet the requirements of the permit.

Completion of the artificial reef materials cargo manifest is required for all construction activities.

The requirement to complete this document is not intended to be an undue burden on entities wishing to legally construct artificial reefs within permitted sites, but is a tool to assist law enforcement personnel in preventing the illegal construction of artificial reefs without the knowledge of the permit holder or in areas outside of legally permitted sites. It is intended to allow law enforcement staff to determine whether or not a load of materials is legal under the permit conditions. Without a properly completed Cargo Manifest Form on board, reef builders will be returned to port pursuant to Chapter 379.249 (6) (b). It is not necessary to send a copy of the Cargo Manifest Form to the FWC artificial reef section in Tallahassee. Documentation of the reef building activity should be maintained by the entity issuing the manifest in the event of any FWC inquiries.

Reminder: the placement of all public artificial reefs in state or adjacent federal waters requires the submittal of a Materials Placement Report to the FWC artificial reef program within 30 days of public reef deployment in accordance with s. 379.249 F.S.



FLORIDA ARTIFICIAL REEF MATERIALS PLACEMENT REPORT AND POST-DEPLOYMENT NOTIFICATION



US Army Corps
of Engineers

To Be Completed For Each Deployment Location or Date of Deployment

County or Municipality: _____

Date of Placement: _____

Grant No. FWC - _____
(if applicable)

U.S. Army Corps Permit No.: _____

Total project cost: \$ _____ (Funding Source(s) and Amount(s): FWC \$ _____ Local \$ _____ Other \$ _____)

Name of Permitted Reef Site: _____

Location Name for This Deployment: _____

Latitude: _____° _____' _____" North
Degrees minutes decimal minutes

Longitude: _____° _____' _____" West
Degrees minutes decimal minutes

GPS Brand: _____ GPS Model number: _____

Geographical Location: _____ at _____ degrees from _____
(nautical miles) (bearing) (reference inlet)

Water Depth: _____ feet (minus) Max. Material Height: _____ feet (equals) Actual Vertical Clearance: _____ feet

TYPE AND AMOUNT OF MATERIAL DEPLOYED AT THE LOCATION DESCRIBED ABOVE:

(ATTACH A PHOTOGRAPH OF THE MATERIAL ON THE BARGE IMMEDIATELY PRIOR TO DEPLOYMENT)

Primary Type of Material: _____ Number of Pieces: _____

Dimensions: _____

Secondary Type of Material: _____ Number of Pieces: _____

Dimensions: _____

How was tonnage calculated?(Check all that apply, attach additional sheets if necessary): Before & after barge draft calculation

Known weight of individual pieces

Trucking receipts

TOTAL TONNAGE FOR THIS DEPLOYMENT: _____

I DO HEREBY CERTIFY THAT THE ABOVE INFORMATION IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE

Observer's Name: _____
(PLEASE PRINT)

Title: _____
(PLEASE PRINT)

Observer's Signature: _____

Date: _____

Observer's Remarks: _____

I DO HEREBY CERTIFY THAT THE ABOVE INFORMATION COMPLIES WITH THE ABOVE REFERENCED PERMIT CONDITIONS

Permittee's Staff Name: _____
(PLEASE PRINT)

Title: _____
(PLEASE PRINT)

Permittee's Staff Signature: _____

Date: _____

Local Tracking number _____ FWC Tracking number _____ Entered by _____ on _____ date

SELF-CERTIFICATION STATEMENT OF COMPLIANCE

Permit Number: SAJ-2014-00327 (SP-SWA)

Permittee's Name & Address (please print or type): _____

Telephone Number: _____

Location of the Work: _____

Date Work Started: _____ Date Work Completed: _____

Description of the Work (e.g. bank stabilization, residential or commercial filling, docks, dredging, etc.):

Acreage or Square Feet of Impacts to Waters of the United States: _____

Describe Mitigation completed (if applicable): _____

Describe any Deviations from the Permit (attach drawing(s) depicting the deviations):

I certify that all work, and mitigation (if applicable) was done in accordance with the limitations and conditions as described in the permit. Any deviations as described above are depicted on the attached drawing(s).

Signature of Permittee

Date