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Sea Island Shore Protection Project 2018 Beach Nourishment

March 2, 2018

Shore Protection Act Permit Application

Applicant:
Sea Island Acquisition, LLC

Agent:
Resource & Land Consultants, LLC

Consulting Engineer:
Coastal Science & Engineering



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Attachments:

- A: SPA Application Form & Revocable License
- B: Vicinity Map
- C: Permit Exhibits
- D: Warranty Deed
- E: Adjacent Landowners
- F: Zoning Certification Request
- G: Hurricane Resistant Standards Certification
- H: Coastal Science & Engineering *Geotechnical Data Analyses*" (CSE 2018)
- I: Biological Assessment



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1.0 Introduction

Sea Island Acquisition, LLC (applicant) is seeking authorization from the Shore Protection Committee (SPC) to conduct shoreline engineering activities in accordance with O.C.G.A. § 12-5-239(c)(3) to nourish and restore the beach at Sea Island. The applicant is proposing a storm protection project consisting of beach nourishment activities utilizing an offshore borrow source to provide from 1,315,000 to 2,500,000 cubic yards (cy) of beach quality sediment to the Sea Island shoreline. The applicant anticipates a targeted volume equal to 1,315,000 cy.

Due to damage caused by named storms occurring in 2016 and 2017, the applicant retained Coastal Science and Engineering in Columbia, S.C. (CSE) to evaluate the Sea Island beach. After CSE conducted an extensive review and survey of the project area, they determined that the existing beach had been compromised at some locations and was no longer providing the level of storm protection applicant desires for the adjacent developed upland areas. Also, the current beach conditions provide less nesting habitat for sea turtles and offers reduced recreational value. As a result of these findings, CSE recommended a beach nourishment and sand recycling project, with a minimum of 1,315,000 cy of beach quality sediment obtained from an offshore borrow area and placed along the Sea Island shoreline between the existing groins. Upon completion of the proposed project, the applicant will improve the storm protection functions, increase wildlife habitat, and improve recreational values inherent to a healthy beach system to the Sea Island shoreline.

The project area is located along the intertidal beach from a location 1,200 feet south of the existing south groin to the north groin, on Sea Island, Glynn County, Georgia (GA). The offshore borrow area is located in State waters approximately 4 miles east/southeast of Sea Island situated on bathymetric high areas that are well removed from inlet shoals and the Brunswick entrance channel. The location of the beach and borrow areas are depicted on the attached exhibits prepared by Coastal Science & Engineering, dated January 2018 (Sheets 01, 02, and 11).

The overall project purpose is for shoreline protection through beach nourishment, which will restore the natural functions of the beach, including but not limited to the following:

- Provide a higher level of shoreline protection for adjacent upland properties.
- Restore a viable dry-sand beach to accommodate existing recreational uses.
- Replenish chronic erosion and sand losses since 1997 and provide sufficient material to manage and maintain the design beach.
- Provide a restored foredune.

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- Provide additional environmental habitat for turtles, birds, and beach flora and fauna.
- Address the alongshore variations in erosion rates.
- Provide a reservoir of sand to recycle to erosional areas of the beach in the future.

The applicant seeks a specific finding by the SPC pursuant to O.C.G.A. 12-5-239(k)(2) that an emergency exists at the project site that warrants construction of the project as permitted by the Committee without waiting for termination of all administrative proceedings, in the event of a timely appeal of the permit. As explained in the application, erosion caused by Hurricanes Matthew and Irma has resulted in significant loss of sand from the beach at Sea Island, which threatens upland real property, structures and shoreline engineering activities. To minimize impacts to sea turtles, the project as proposed would not commence until November 1, but the applicant seeks the finding of an emergency and authorization from the Committee now, so that it can commence work on that date, even if there are administrative proceedings then pending.

2.0 Sea Island Beach Storm Protection History

Sea Island has been developed as a premier resort and residential community since the 1920s. Like many US barrier islands, it has sustained erosion over time due to irregular wave patterns and sediment transport around the shoals of Hampton River Inlet and Brunswick Harbor entrance. Gould's Inlet, an unstable migrating channel at the downcoast end of the island has also influenced the Sea Island shoreline. Sea-level rise of nearly 1 ft over the past century has also been a factor, but is less important to the shoreline dynamics at decadal time scales because of local influences of the tidal inlets. Large-scale changes in nearshore shoals at the ends of Sea Island modify the flow of sand along the island and cause irregular shoreline changes that complicate management of the beach.

In response to the dynamic changes along Sea Island, most of the shoreline was armored by the early 1980s. Sloping concrete seawalls and quarry-stone revetments were constructed along the back beach as erosion encroached on development. Much of the dry-sand beach along the island was lost to erosion in the 1980s. Since then, the applicant has completed three nourishment projects via hydraulic dredge as listed in Table 3. These projects total ~2,500,000 cy, with the majority of the sand obtained from the inshore shoals of Hampton River Inlet. All projects were completed between 1986 and 1997.

In conjunction with the 1990 nourishment project, the applicant constructed two groins (near stations 95+00 and 260+00) for purposes of retaining a portion of the nourishment volume within Sea Island. The applicant implemented a sand-recycling program between 1993 and 2015 under the 1990 nourishment permit and periodically shifted sand from accumulation areas (groin "fillets") to the center of the island. Recycling was generally

performed every other winter as needed based on beach monitoring surveys. This program was successful in maintaining a sand cover over most of the sloping concrete seawall most of the time and in providing a viable dry beach for recreation and turtle nesting along much of the island.

Table 3. Three nourishment projects via hydraulic dredge have been completed by the applicant since the 1980s. Proposed borrow area is within Georgia state waters but away from Hampton River Inlet, Gould’s Inlet and Brunswick navigation channel.

Sea Island Beach Nourishment History				
Year	Funding Source	Status	Project Type	Volume (cy)
1986	Sea Island Company	Completed	Black Banks River Borrow Area (BA) Dredging	~192,000
1990	Sea Island Company	Completed	Hampton River Inlet BA via Dredge	~2,000,000
1997	Sea Island Company	Completed	Hampton River Inlet BA via Dredge	~350,000
2018–2019	Sea Island Company	Proposed	Offshore BA Dredging	Up to 2,500,000

Surveys by Oertel (1993–2015) indicate that a total of ~1.3 million cubic yards were recycled along Sea Island between 1990 and 2015. A typical recycling volume has been ~150,000 cy per event. Using Oertel’s shoreline monitoring data, the applicant estimates the underlying erosion rates along the center of the island since 1990 have ranged from 3 cubic yards per foot per year (cy/ft/yr) to 8 cy/ft/yr, after factoring out the recycling impacts. Rates of this order are many times greater than the expected shoreline recession rate due to sea-level rise (<0.5 ft/yr). The applicant proposes to counteract erosion for at least 5–10 years via addition of a sand volume that exceeds the underlying erosion rates along Sea Island.

3.0 Existing Conditions

During the past two years, Sea Island has been impacted by Hurricane Matthew and Hurricane Irma. These events have exacerbated erosion and eliminated the dry-sand beach along the center ~2 miles of shoreline. The applicant has established a survey control line and has measured profiles at 500-ft spacing along the island. These data were used by CSE to determine how much sand per unit length of shoreline is contained in a healthy beach section (~125 cy/ft from the seawall to –7 ft NAVD) and to compare that value with the amount at each profile. The analysis, combined with the underlying erosion rates, provided a measure of scale of the project needed for beach restoration (see Fig 1). Presently, over half of the Sea Island oceanfront lacks any dry sand beach area at high tide, which leaves the rock revetments exposed and results in the absence of habitat for sea turtle nesting and other species.

The activities proposed are located outside of the +/-80 acres area on the south end of the island that is protected in perpetuity by a conservation easement held by the St. Simons Land Trust. This conservation easement was given voluntarily by the applicant to insure that no additional development would occur south of the Reserve project authorized by SPC permit #438.

4.0 Project Description

The proposed project will include placement via hydraulic (cutterhead) dredge of 1,315,000 to 2,500,000 cy of beach-quality sediment along portions of the project shoreline. The project encompasses four reaches with Reach "1" beginning 1,200' south of the existing south groin (The Reserve, authorized under SPC Permit #438); Reach "A" extending from the south groin on Sea Island 4,000 lf north to approximately East 9th Street; Reach "B" will extend 9,000 lf from approximately East 9th Street to East 34th Street; and, Reach "C" will extend 3,500 lf north from East 34th Street to the north groin (Sheets 02 to 06).

Sand will be obtained from an offshore borrow area within Georgia state waters situated on bathymetric high areas that are well removed from inlet shoals and the Brunswick entrance channel. The proposed borrow area is ~4 miles east/southeast of Sea Island with rough dimensions of 10,000 lf by 1,700 lf (~255 acres) (Sheets 11 and 12). Nourishment sand will be pumped to the beach, shaped, and graded to slopes and elevations similar to the existing beach (Sheets 07 to 10).

Plans call for nourishment to restore a continuous dry-sand beach between the existing groins and to supplement the volume with sufficient material to perform sand transfers (recycling) within the project area after hydraulic nourishment is complete. Sand transfers will be performed via land-based equipment and will include transfers as needed from Reach "A" and Reach "C" to affected portions of the project area to maintain the project purpose. This work would be consistent with previously authorized beach management recycling work performed by the applicant following the 1990 and 1997 nourishment projects. A quantity of sand necessary to carry out construction of the Reserve project is also included.

The majority of the nourishment volume will be placed along Reach "B" which has experienced severe erosion in recent years (Sheets 04, 05, 08 and 09). Due to losses resulting from recent hurricanes, sand would be placed in Reach A near the resort either by recycling from other portions of Reach A or Reach C prior to or during dredging (or both), or by direct deposit by dredge based upon the final construction schedule.

Maintenance and recycling would occur:

- Up to once per year outside of turtle nesting season to maintain overall project purpose of storm protection, wildlife habitat, and recreation, upon notice to Georgia Department of Natural Resources, Coastal Resources Division (CRD) and Savannah District U.S. Army Corps of Engineers (USACE);
- At any time to correct unusual erosion rates or to correct damage caused by discrete events, upon notice to CRD and USACE;
- In the event of an approaching storm, shaping of dunes to raise low-lying areas for upland protection, upon notice to CRD and USACE; and, Material for recycling would be obtained from any location above MLLW within Reach A and Reach C, and provided the material meets regulatory guidelines, could be placed within any Reach based upon site conditions and needs relevant to maintain the overall project purpose of shoreline protection, wildlife habitat, and recreational use.

All work would be performed outside the prescribed turtle nesting season (ie – construction between 1 November and 30 April), unless necessary due to emergencies caused by passing storms or for preventative measures for approaching storms. The timing and scale of non-emergency proposed sand transfers would depend on actual erosion rates and site-specific conditions. The applicant proposes to measure the rate of sand losses and gains by reach and to transfer sand according to the need to maintain the storm protection, wildlife habitat, and recreational values associated with the overall project purpose. The schedule and need for future sand transfers is expected to vary depending on the frequency and severity of erosion events.

Nourishment Plan

Beach Nourishment

The nourishment design is based on the present condition of the beach, historical erosion rates, impacts from recent hurricanes, storm protection requirements, appropriate recreational use requirements, environmental considerations, and available budget. Existing sand deficits by section along the beach were determined by comparing beach volumes seaward of shore-protection structures. A target minimum profile was defined in terms of a sand quantity per unit length of beach (cubic yards per foot—cy/ft) considered necessary to withstand normal seasonal changes in the profile while maintaining a continuous dry-sand beach. For Sea Island, healthy sections of beach which meet this criterion were found to contain ~125 cy/ft measured to -7 ft NAVD datum (CSE unpublished beach monitoring data 2017). Each section of the beach was compared to this value to determine volume deficits.

The nourishment plan includes sufficient volume to restore the deficit in the area between the existing groins, including the volume necessary to accommodate the Reserve project, as well as advance nourishment to account for anticipated future erosion. The advance nourishment volume is designed to accommodate a minimum of five years of normal erosion to over ten years of erosion. The final nourishment volume will depend on the bids for construction and the budget available. The minimum-scale project will be 1,315,000 cy and the maximum scale will be 2,500,000 cy. Table 1 lists the proposed fill lengths, volumes, and fill density by reach. Adjustment in fill volumes will be made according to beach conditions at the time of construction, but with an effort to maintain approximate proportionate adjustments along all reaches from the minimum volumes listed in Table 1. The applicant anticipates the final project will be close to the minimum scale project, but future erosion events could require additional dredging operations over the life of the permit.

Table 1. Proposed beach nourishment volumes by reach. *[Applicant’s project baseline in feet (engineering nomenclature) extending from Gould’s Inlet (0+00) to Hampton River Inlet (285+00).]

Reach	Stationing*	Locality	Length (ft)	Minimum Volume (cy)	Maximum Volume (cy)	Fill Density Range (cy/ft)
A & 1**	95+00–135+00	South groin to ~9 th Street	4,000	220,000	270,000	55–67.5
B	135+00–225+00	~9 th Street to ~34 th Street	9,000	967,500	2,070,000	107.5–230
C	225+00–260+00	34 th Street to North Groin	3,500	127,500	160,000	36.4–45.7

**Reach 1 is 1,200 lf extending south from south groin at Station 95

Figure 1 is a graph of the October 2017 beach volumes by station (500-ft intervals) along Sea Island (solid red line), the target minimum beach volume (dashed red line), and the deficit volume by station (difference between the red lines), and the proposed nourishment volumes. Historical studies confirm that sand tends to move from the center to the ends of Sea Island (Griffin & Henry 1984, Oertel 1993–2016, CSE unpublished data 2017). The nourishment plan takes this natural transport pattern and historical erosion rates into account by placing advance fill along Reach “B.”

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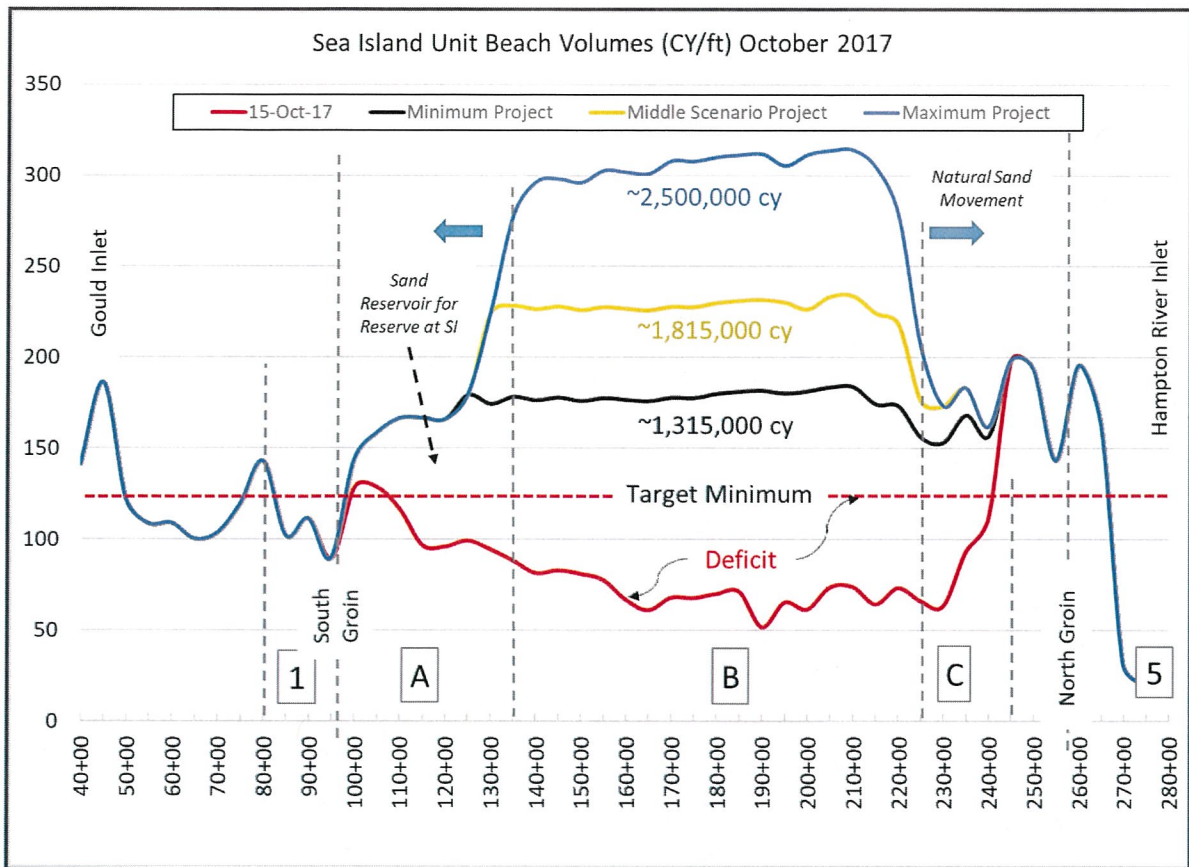


Figure 1. Graph showing the October 2017 post storm beach volumes along Sea Island (red), the target minimum beach volume for a dry beach (measured to -7 ft NAVD), and the resulting unit volumes after nourishment under the proposed minimum volume (1,315,000 cy) and maximum volume (2,500,000 cy). Principal reaches are A, B, and C.

As stated previously, Reach A volumes include the quantities necessary to construct the activities authorized under SPC Permit #438 and repair recent hurricane damage. Depending upon the final construction schedule, the sand required for the Reserve project would be placed either directly by the dredge operation, or by mechanical transfer from Reach A.

Nourishment will be accomplished by hydraulic dredge (cutterhead suction dredge), pipelines to the beach, and heavy equipment (bulldozers and loaders) shaping the fill on the beach. Temporary sand-training dikes will be used to contain the slurry discharge parallel to the shore. Once the sand is pumped onto the beach, bulldozers will shape the fill into the design template from the backshore to the approximate mean sea-level (MSL) contour. Sand below MSL will be shaped and redistributed to a natural profile by waves. Sand fencing and/or native vegetation will be installed in strategic locations along a proposed dune following nourishment, in accordance with a DNR-approved vegetation plan.

The principal nourishment sections will consist of a nearly horizontal berm at +7 ft NAVD (~4.4 NAVD88 ft above local mean high water). Berm widths will vary according to fill density. The seaward slope will be initially constructed at 1 on 25, then will adjust naturally to waves and tides. Sheets 03 to 06 illustrate the nourishment plan superimposed on a 2016 rectified, aerial orthophoto of Sea Island. The approximate limits of the berm and toe of fill are shown for the minimum and maximum proposed nourishment volumes. Sheets 07 to 10 illustrate representative nourishment sections for each reach. The aerial orthophoto used in Sheets 03 to 06 was obtained in spring 2016 before Hurricane *Matthew* (October 2016) and Hurricanes *Irma*. In general, the active dry-sand beach along Sea Island is situated between the +6-ft and the +8-ft NAVD elevations. During neap tides and low wave conditions, dry sand may be found at lower elevations. Native vegetation is generally limited to elevations above +7-ft NAVD at Sea Island (CSE unpublished data).

Artificial Dune

The nourishment plan incorporates an artificial dune along up to 10,000 lf between stations 135+00 and 235+00. The dune will toe into the seaward crest of the existing revetment and will be no higher than +12 ft NAVD with a crest width of 15–20 ft. The seaward dune slope will be 1 on 4 or gentler, merging with the constructed berm at +7 ft NAVD. Proposed dune and beach-fill sections are illustrated on Sheets 07 to 10. Sand fencing and/or native dune grasses will be installed along the artificial dune soon after completion of nourishment following GADNR specifications and guidance.

The alongshore limits of the dune will be determined based on conditions at the time of construction. The applicant's goal is to re-establish a continuous protective dune along Reaches A, B, and C.

Borrow Area

The applicant, through its consultant CSE, completed a sand search and confirmation borings for the proposed offshore borrow area. Cores were initially obtained over portions of the Hampton River Inlet delta (seaward shoals) and a bathymetric high ~4 miles east/southeast of Sea Island. Following discussions with state experts (Dr. C. Alexander, Skidaway Institute, pers comm, March 2017), the applicant elected to focus the sand search on the bathymetric high. Twenty-five (25) additional borings were obtained within a grid ~2 miles long and 0.5 mile wide. CSE also collected detailed bathymetric data to map the area (see Sheet 12).

A cultural resources study is underway (magnetometer, side-scan, and shallow seismic surveys) in accordance with GADNR standards for such surveys, to identify the presence of obstructions, vessel remains, or other objects that would adversely impact dredging operations. Tidewater Atlantic Research Inc (TAR—Dr. Gordon Watts) is conducting the

survey for the applicant and has coordinated the trackline spacing and related specifications for the investigation with Georgia State Historic Presentation Office (GASHPO). Results will be submitted as soon as they are available (anticipated March 2018).

A total of 28 confirmation borings averaging over 9 feet (ft) long were obtained by the applicant. These borings provide relatively close-spaced sediment samples for laboratory analysis. Accompanying this permit application is a “*Geotechnical Data Analyses*” (CSE 2018; Attachment H) which provides details of the survey and sediment quality analysis. Sheets 11 and 12 show the bathymetry and core locations in and around the proposed borrow area. Based on the sediment grain size and low-percent mud in the sediments, the applicant delineated a 255-acre area inside the state 3-nautical-mile limit as shown in Figure 2. The area is directly represented by 19 borings and is flanked by another 9 borings just outside the selected area. Core density is ~13 cores per acre.

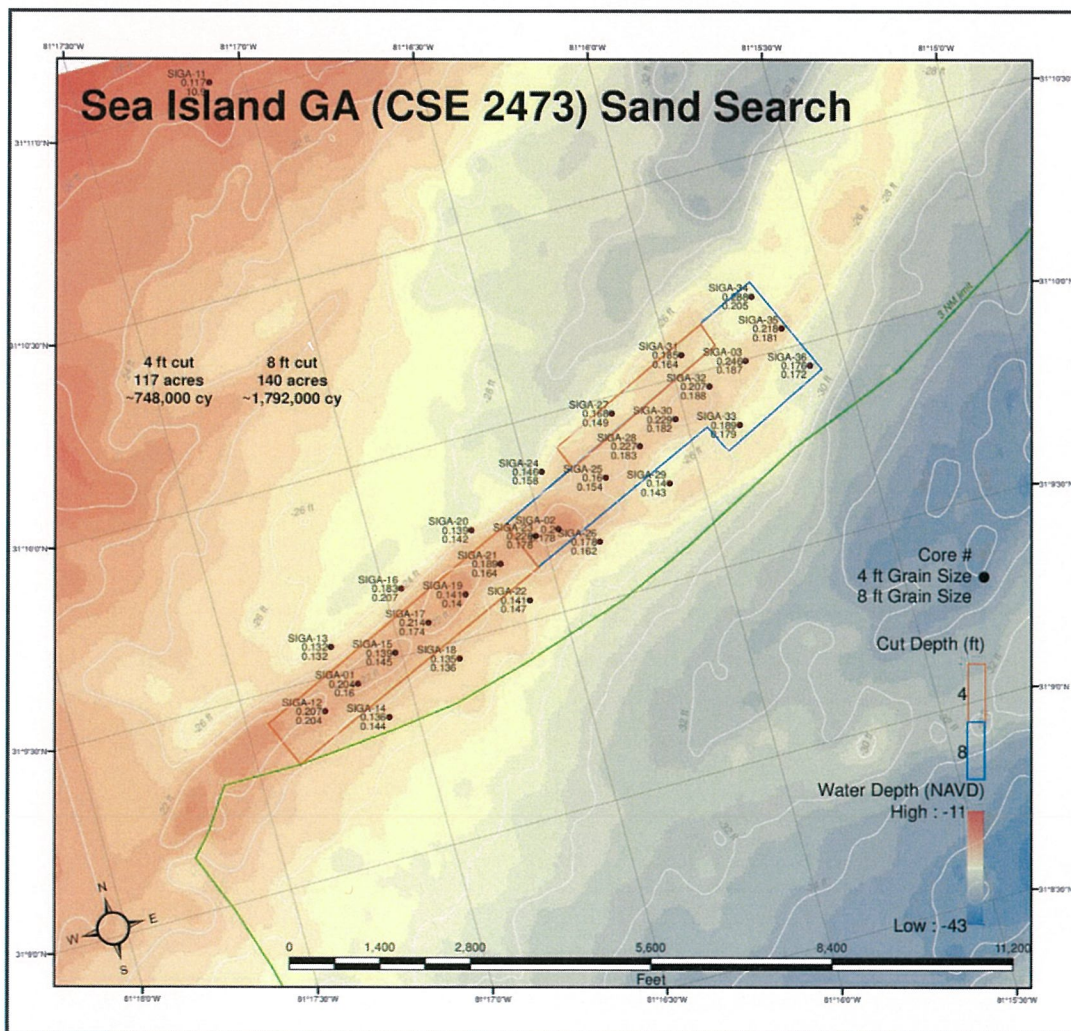


Figure 2. Proposed borrow area offshore of Sea Island within Georgia state waters. A total of 19 borings are within the borrow area.

Table 2 lists the composited grain-size statistics for the upper 4 ft and 8 ft of substrate based on weighting results of individual samples (see CSE 2018).

Table 2. Borrow area sediment statistics—weighted composites to the indicated substrate (“cut”) depth based on individual core samples (see CSE 2018—*Geotechnical Data Analyses* for details).

2473 Sea Island GA		Mean (mm)	STD (mm)	Shell (%)	Gravel (%)	Mud (%)	Ra	Munsell color
Sample	Cut Depth							
SIGA 1	4 ft	0.204	0.487	10.7	2.4	1.2	1.16	5Y-5/2
SIGA 12	4 ft	0.207	0.568	10.3	2.7	0.2	1.04	5Y-6/2
SIGA 15	4 ft	0.139	0.573	11.9	0.9	4.2	1.97	5Y-5/2
SIGA 17	4 ft	0.214	0.513	9.1	1.7	1.3	1.09	5Y-5/2
SIGA 19	4 ft	0.141	0.611	15.1	0.6	2.4	2.24	5Y-5/1
SIGA 21	4 ft	0.189	0.551	12.4	1.0	1.2	1.12	5Y-7/1
SIGA 25	4 ft	0.154	0.488	15.2	1.7	3.2	1.45	5Y-5/2
SIGA 27	4 ft	0.168	0.459	12.4	1.2	6.4	1.36	5Y-5/1
SIGA 31	4 ft	0.185	0.467	11.8	1.4	4.9	1.26	5Y-5/1
SIGA 2	8 ft	0.200	0.604	5.7	0.9	1.1	1.01	5Y-5/2
SIGA 3	8 ft	0.187	0.519	9.2	1.3	3.5	1.18	5Y-5/1
SIGA 23	8 ft	0.226	0.513	11.5	1.3	2.9	1.07	5Y-5/2
SIGA 28	8 ft	0.183	0.522	8.2	0.9	3.3	1.19	5Y-5/2
SIGA 30	8 ft	0.182	0.476	11.0	1.9	4.5	1.26	5Y-6/2
SIGA 32	8 ft	0.188	0.440	12.2	2.1	2.2	1.28	5Y-5/1
SIGA 33	8 ft	0.179	0.486	13.6	1.4	4.2	1.26	5Y-5/1
SIGA 34	8 ft	0.205	0.456	12.1	2.0	4.7	1.19	5Y-5/2
SIGA 35	8 ft	0.181	0.488	11.0	1.4	3.2	1.25	5Y-5/1
SIGA 36	8 ft	0.172	0.493	12.9	1.3	4.0	1.29	5Y-5/2
TOTAL AVERAGE		0.184	0.511	11.4	1.5	3.1	1.30	

The proposed borrow area was found to contain beach-quality sediments similar in texture and color to the beach sediments along Sea Island (CSE 2018). The northeastern half of the proposed borrow area is proposed for excavations to 8 ft of substrate. The southwestern half is proposed for 4–6 ft cuts. Mean sediment grain size within the proposed borrow area varies from 0.14 millimeter (mm) to 0.29 millimeter with composite means ranging from 0.17 mm to 0.20 mm, depending on the substrate depth (CSE 2018). As Table 2 shows, the overall mean grain size is 0.184 mm. Other composite parameters include shell content (11.4 percent), gravel content (1.5 percent), and mud content (~3 percent). Sheet 14 shows composite grain size distributions for the beach and three composite depths within the proposed borrow area. CSE (2018) computed the overfill factor (R_A) for the applicable borings and cut depths using the existing beach grain size as the “native.” The resulting R_A ’s average 1.3, which suggests the borrow material will perform similarly as the existing sediments on Sea Island beach (CERC 1984). Sediment quality in the proposed borrow area is similar to the native size distribution (Fig 3).

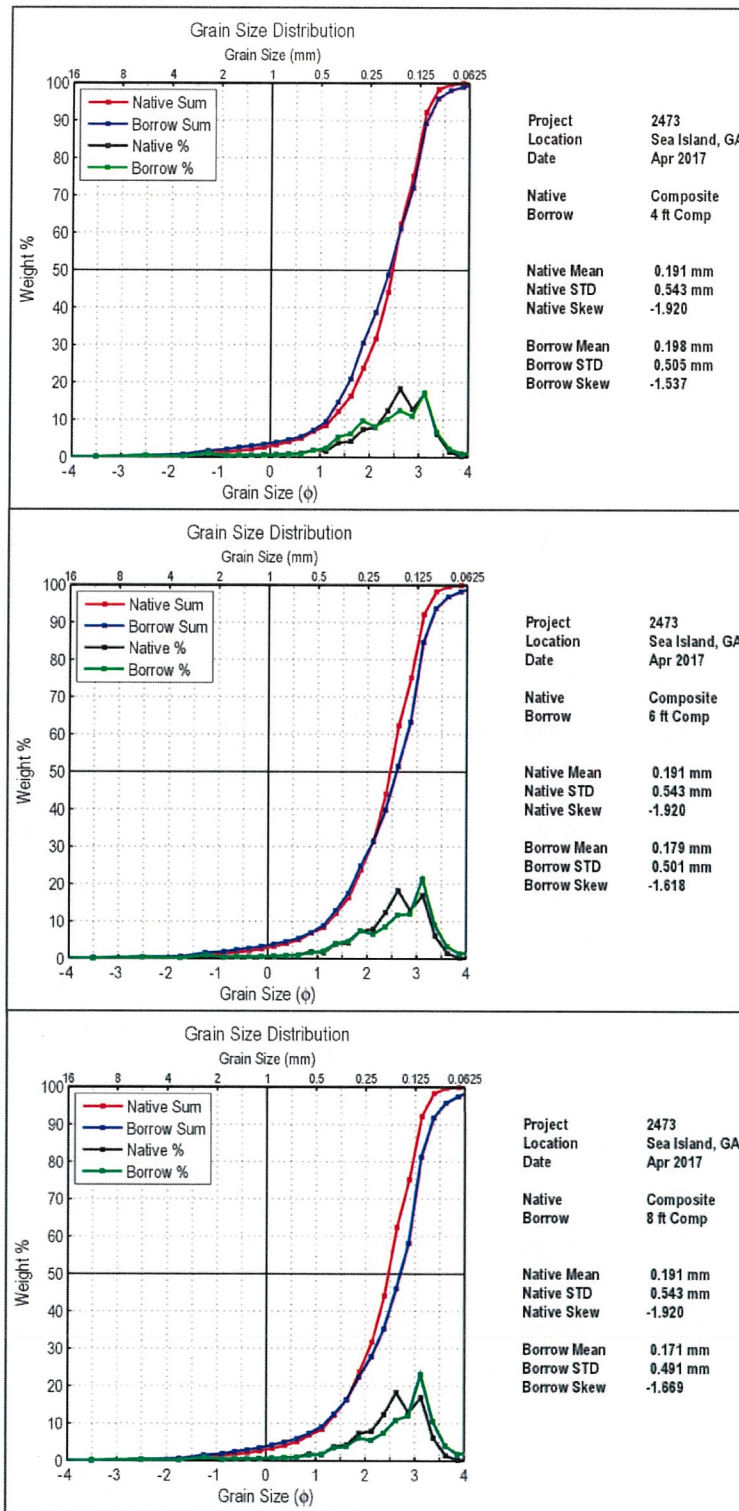


Figure 3. Frequency and cumulative frequency grain-size distributions (GSDs) for the Sea Island beach (“native”) and proposed borrow area (4 ft and 8 ft composites – “Comp”).

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The proposed borrow area is in water depths between 20 ft and 30 ft NAVD. These depths are considered too shallow for operations via ocean-certified hopper dredge. Therefore, the applicant anticipates that construction will be via cutterhead dredge anchored over the borrow area and positioned by tugs. Such operations confine the daily movement to broad swings over ~300 ft widths of the borrow area as the cutterhead cuts a digging face and the pumps draw in a sediment-water slurry. Sheet 13 shows representative bathymetric sections through the borrow area and the anticipated excavation depth. The sand slurry will be pumped to shore via submerged pipeline for direct deposit on the beach. The small quantities of mud in the borrow area are expected to remain in suspension and mix with sediments in the water column. Care will be taken to avoid significant accumulations of muddy sediments on the beach. Should the dredge encounter significant layers of stiff clay which produce “mud rollers” on the beach, the dredge will be relocated to other areas within the permitted borrow area.

5.0 Alternatives Considered

The applicant has evaluated various shore-protection and beach-restoration alternatives since the 1970s. Shoreline armoring was implemented between 1979 and the early 1980s. Recent structural efforts have been limited to maintenance along the exposed sections of revetment in response to storm damages. Buried sections of revetment have required virtually no maintenance.

Before seeking authorization for off-shore dredging and beach nourishment, the applicant considered a number of alternatives. The Shore Protection Act does not require a demonstration that “no reasonable or viable alternative exists” in connection with a permit for beach nourishment, as opposed to shore stabilization activities such as revetments, *see* O.C.G.A. § 12-5-239(c)(3)(C). Nevertheless, the applicant has fully explored all reasonable alternatives, given the current conditions and the expense of nourishment.

Shoreline armoring that is more seaward than the existing armoring has been rejected as a long-term solution to beach erosion along Sea Island because a wider beach will provide increased storm protection, expanded habitat area and better recreational opportunities. A continuous beach will absorb wave energy and will reduce wave runoff and overtopping at the seawall or base of dunes (USACE 2008). A wide berm will provide a sand supply for aeolian transport to build up a natural dune profile, further improving the aesthetic quality of the beach.¹

Beach nourishment without groins was also evaluated. The applicant’s first attempts at shoreline protection on Sea Island by nourishment utilized this approach. Without the groins, the nourished beach washed away in a very short period of time, and thus failed to

1. USACE. 2008. *Coastal Engineering Manual: Coastal Project Planning and Design*. EM 1110-2-1100, Part V, Chapter 4, Beach Fill Design. US Army Corps of Engineers, Washington, DC, pp V-4-1 to V-4-109.

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satisfy the overall project purpose. Due to the erosional patterns of the Sea Island shoreline, nourishment without the existing groins, which have successfully extended the life span of the previous nourishment projects, is not a viable alternative and would result in the accelerated loss of storm protection, wildlife habitat, and recreational values. Several sand sources were considered but rejected as borrow areas:

- Black Banks River Shoals (1986 borrow source) — This area was rejected because it does not contain sufficient volume to meet the goals and objectives of the proposed project. The applicant rejected potential dredging at this location.
- Hampton River Inlet Shoals (1990 and 1997 borrow source) — This area contains extensive beach-quality sands, which have accumulated as part of the ebb-tidal delta of the inlet. It also contains a subaerial area in close proximity (Hupps Bar, sometimes referred to as Pelican Shoals), which has provided important shorebird habitat. The applicant rejected potential dredging at this location.
- Brunswick Entrance Channel Shoals — This area was considered but rejected because it is further distant from most of the project area. The applicant rejected potential dredging at this location.
- Gould's Inlet Shoals — This area was rejected because the available volumes in the ebb-tidal delta are considered insufficient to achieve the goals and objectives of the applicant. Additionally, this locations provides a significant habitat for shorebirds, and is located in designated critical habitat for piping plover (GA-14). The applicant rejected potential dredging at this location.
- Upland Sand Sources — Upland sand sources were rejected because of the scale of the project. An upland sand source of the magnitude required for this project is not readily identifiable. Inland sand sources would have to be loaded at the source, trucked to the beach over local roads, then spread by mechanical equipment along the beach. Volumes over 1 million cubic yards would require upward of 80,000 truckloads and would cause extensive damage to existing roads.

The applicant also evaluated an alternative dredging technique as follows.

- Excavations via Hopper Dredge — This alternative was considered but rejected based on discussions with US dredging companies that have ocean-certified dredges licensed to operate in offshore waters. Generally, ocean-certified hopper dredges require water depths of >25 ft at low tide. The hopper is pumped full and the vessel transits to a pumpout point relatively close to shore. Water depths over the proposed borrow area are less than 25 ft at low tide, limiting how large a load US hopper dredges could take on before hitting the bottom. Water depths between the proposed borrow area and the shore gradually shoal, which would preclude the location of a convenient pumpout close to shore. A final consideration that is applicable in this case is the risk that hopper

dredges may pose to certain threatened and endangered marine mammals such as the right whale which is known to frequent the waters near the borrow area.

The applicant also considered a number of different fill configurations along the beach.

- Profile Nourishment Below Low Water — This alternative was rejected because it is more difficult to control the slurry and the lower shore face at Sea Island toes into the gently sloping platform off the island at depths of approximately -6 ft to -8 ft NAVD. Low wave energy along the Georgia coast limits the rate of bar movement as evidenced by the persistence of detached intertidal shoals off the northern end of Sea Island. Profile nourishment is sometimes feasible where there is a likelihood the deposits will quickly move onshore by natural processes and build up the visible beach. This would not be a viable alternative for achieving the goals and objectives of the applicant in the Sea Island setting.
- Placing All Nourishment on the Subaerial Beach and Existing Dunes — This alternative placement configuration was rejected because of the scale of the project and the excessive height of fill that would be required to accommodate the planned volumes. Any sand placement extending well above the normal dry-beach level becomes subject to scarping and chronic recession until sufficient material shifts downslope. Such scarps would inhibit recreation and turtle nesting while altering the character of the beach.
- Eliminating Dune Construction — This alternative was rejected by the applicant because natural dune growth tends to be relatively slow. This is generally related to the limited dry-beach widths found along the Georgia coast where high tide produces a much wider wet-sand beach. Georgia's temperate climate promotes rapid propagation of vegetation along sections of dry beach that become stable for a couple of years. As vegetation propagates toward the normal yearly uprush limit, the dry-sand area narrows, reducing an aeolian supply to the dunes. These factors inhibit dune growth and would delay reaching the level of dune protection desired by the applicant. Therefore, the applicant proposes to construct a continuous foredune along Reach B where erosion encroaches daily on the existing rock revetments.

6.0 Measures Taken to Avoid and Minimize Impacts

The proposed project has been evaluated to minimize potential impacts to wildlife. A Biological Assessment has been prepared by CSE (Attachment I). The proposed project is unlikely to affect most listed species, and the most likely species to found in the project area are sea turtles. However, the proposed project is anticipated to be constructed between 1 November and 30 April to minimize potential impacts to sea turtles. However, the final project schedule is expected to be determined in coordination with environmental agencies with appropriate conditions should an alternate window be prescribed (ie – turtle monitoring after 1 May). No construction activities will take place during sea turtle

hatching season (1 August to 31 October). Construction will take place over an ~90-day to 120-day period, working 24 hours per day. Turbidity associated with the project is expected to be localized and short-term given the dominance of sand-sized material with ~3 percent mud in the deposits. Turbid plumes are expected to dissipate in minutes to hours within ~500 ft of the discharge point based on prior experience.

The proposed project will result in excavation and mortality of up to ~255 acres of surficial benthic organisms in the borrow area. Underlying sediments in the borrow area have similar textures and grain-size distributions (GSDs) as the overburden that will be excavated (see Fig 3). This will facilitate rapid recolonization of the borrow areas with a similar suite of benthic organisms.³ Filling operations will cover up to ~210 acres of shallow beach and inshore habitat (ocean shoreline), resulting in mortality and displacement of existing benthic populations. Nourishment will provide up to an additional ~92 acres of dry-sand beach (habitat for turtle nesting, shorebird roosting, and recreational area).

A wider dry beach will allow natural expansion of the foredune and its associated vegetation. The recreated wet-sand beach will be similar to or greater in area than the previous wet-sand beach buried by the fill. It is expected that these areas will recolonize naturally and rapidly with a similar suite of species (cf – Jutte et al 2002, CZR 2014).³ An estimated ~8 acres of back beach/revetment area will be converted to an artificial dune with crest elevations no greater than 5 ft above the natural beach elevation. The seaward dune slope will be 1 on 4 (or gentler) to provide a low slope negotiable by nesting sea turtles.

The proposed borrow areas are situated around a submarine ridge where natural bottom depths vary from 20 ft to 30 ft. The excavations will be of the order of 4–8 ft, which is comparable to the natural depth variation in the area. This will minimize creation of deep holes. Sediments in the available borings suggest the proposed borrow areas contain actively mobile sediments. Anaerobic conditions were generally not detected within the upper 8 ft of the substrate for the cores in the proposed borrow area. Small quantities of interstitial mud were detected in some samples. The highest single mud percentage measured in a composited core within the designated borrow area was 6.4 percent. The average of all samples tested was 3.1 percent. Isopach maps of key sediment parameters are given in the “*Geotechnical Data Analysis*” (CSE 2018).⁴ Sheet 12 lists key statistics at each boring location.

2. Jutte, PC, RF Van Dolah, and PT Gayes. 2002. Recovery of benthic communities following offshore dredging, Myrtle Beach, South Carolina. *Jour Shore & Beach*, Vol 70(3), pp 25-30.
3. CZR. 2014. Nags Head beach 2011 nourishment project. Post-Year 2 and Final Report for Town of Nags Head, North Carolina. CZR Incorporated (Wilmington NC) and CSE (Columbia SC), 65 pp plus appendices.
4. CSE. 2018. Geotechnical data analyses. Draft report for Sea Island Company, Sea Island, GA. CSE, Columbia, SC, 45 pp + attachments.

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Applicant will provide all contractors associated with construction a copy of the permit and associated drawings. A copy of the permit will be kept at the construction site at all times.

Sea Turtles

Applicant proposes to construct the project outside of sea turtle nesting and hatching season (May–October). Should portions of the project overlap with turtle nesting season, standard protection and monitoring actions will be completed to minimize impacts to turtles. For construction during non-nesting season, standard reasonable and prudent measures will be taken to minimize potential effects on sea turtles, including but not limited to the following:

- The applicant will perform tilling of the fill berm upon project completion as specified in the contract documents. Tilling will be accomplished to a depth of ~36 inches and will span the dry berm.
- Testing of sand compaction and tilling of nourished areas to a depth of 36” for any areas that exceed 500 cpu standards. Testing will be conducted in February and tilling if required will be completed prior to May 1.
- Visual surveys of escarpments after construction and during February of subsequent years during the monitoring period. Escarpments in excess of 18” extending for more than 100 feet will be mechanically leveled to natural beach contours prior to April 1.
- Visual surveys for escarpments along the beach fill area shall be made weekly, and after storm events, from April 1 to October 31. Escarpments that interfere with marine turtle nesting or that exceed 18” in height for a distance of 100 feet or more shall be graded to the natural beach contour with guidance from pertinent regulatory agencies.

Key action items should construction be required during nesting season would include:

- Daily early morning surveys for sea turtles.
- Nest relocation by qualified personnel for nests laid in areas where they may be impacted by construction activities.
- Equipment storage will be off the beach to the maximum extent practicable and as far landward as possible. Temporary fencing or other measures will be utilized to prevent turtles from being trapped by equipment.
- Direct night-time lighting of the beach will be limited to the immediate construction area and shielded according to USFWS recommendations. If any turtles are observed in the construction area, activities will cease until the turtle(s) returns to the water and any nest is marked.
- Notification of escarpment formations that hinder nesting

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- Monitoring of hatchling success of the relocated nests.

Sediment Quality

The Applicant is proposing a borrow area which contains low percentages of gravel (>2 mm diameter) and shell material. While shell content (CaCO₃) constitutes ~11 percent of the borrow sediments, only about 1.5 percent is gravel size. This means nearly all the shell material is in the form of sand-sized particles. Such material is beneficial for beach stability (Kana and Mohan 1998) and is similar to the native sand quality along the Georgia coast. The accompanying “*Geotechnical Data Analyses*” (CSE 2018) includes detailed comparisons between the native beach sediments and the proposed borrow sediments.

Specific monitoring during construction will include the following:

- 1) Applicant will have qualified personnel under the direction of a Georgia-registered professional engineer and a professional geologist monitoring sediment quality on the beach during construction and correlating it with the borrow area conditions.
- 2) During construction, samples of the beach fill will be obtained at ~200-ft intervals and compared to the native and borrow area samples. Samples along one shore-perpendicular transect will be combined into one physical composite and sent to the laboratory for grain-size analysis. Samples will be analyzed as soon as possible but will not exceed five (5) days after collection. Sediment test results will be submitted monthly to USACE and GADNR for review.
- 3) Additional sampling and frequent observation will be completed during the initial 4–6 hours of pumping when the dredge moves to a new section of the borrow area until the owner’s on-site technical representative (OTR) and contractor are satisfied with the quality of sand. The contractor will also have observers monitoring sediment quality 24 hours per day and will immediately report any significant changes in the discharge to the OTR so that decisions to move the dredge can be accomplished in a timely manner.
- 4) Upon completion of construction, applicant will resample the project area and obtain representative samples of the beach fill using the same stations as the pre-project samples. Results will be compared with pre-project beach samples and borrow area sediment test results. Data will be submitted to the USACE and GADNR in a comprehensive final report.
- 5) Relocation of the dredge if unacceptable sediments are encountered. The contractor in consultation with the owner’s on-site technical representative will notify applicant, USACE, and GADNR if significant non-compatible material is encountered in the borrow area. The dredge will be relocated to other subareas within the permitted borrow area if the following conditions are encountered:

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- a. Evidence of high concentrations of mud persisting for more than 30 minutes in the slurry based on visual observation at the discharge pipe and monitoring of specific gravity of the slurry at the dredge.
 - b. Evidence of high concentrations of non-shell gravel such as chunks of limestone, marl, or similar cemented sediments which persist for more than 30 minutes in the slurry based on visual observation at the discharge pipe and monitoring of specific gravity of the slurry at the dredge.
 - c. Evidence of high concentrations of coarse shell material exceeding pebble-sized clasts (eg – oyster shells, quahogs, etc) which persist for more than 30 minutes in the slurry based on visual observations at the discharge pipe and monitoring of specific gravity of the slurry at the dredge.
- 6) Accumulations of mud rollers and coarse gravel material (ie – rock fragments, large shells). Because of the lag time between excavations in the borrow area and pump-out onto the beach, accumulations of mud rollers and coarse gravel material may occur before the dredge can be relocated. If such accumulations exceed the equivalent of one 15-cy dump truck per 100 linear feet of beach, the applicant will arrange to pick up the coarse material using hand labor or a beach-sweeping device as soon as practicable upon completion of the section or upon completion of the project. To the extent practicable, such accumulations will be raked into stockpiles above the high-tide mark and will be removed prior to completion of the project.
- 7) Beach compaction tilling –The applicant will perform tilling of the fill berm upon project completion as specified in the contract documents. Tilling will be accomplished to a depth of ~36 inches and will span the dry berm. The applicant (through its Agent) will perform post-tilling compaction tests at ~500-ft intervals along the project area and will report the results to USACE and GADNR following standard testing protocols.
- 8) Escarpment Leveling- Before May 1 of each year any escarpment in the beach nourishment area that is higher than 18 inches and more than 100 feet in length will be mechanically leveled to the then-existing beach contour.

7.0 Monitoring Plan

The applicant will establish and complete the following monitoring plan as part of the proposed project:

Beach Surveys – Applicant will conduct topographic and bathymetric beach surveys before and after the project, and for five years post-project. Surveys will be conducted at profiles not to exceed 500 ft in spacing in the alongshore direction and will encompass the beach between a point landward of the stable dune and extending to depths of –10 ft NAVD, or a distance of 2,000 ft from the shoreline, whichever is closer. Post-construction surveys

will compare beach volumes and contour positions to before-and-after project conditions to document beach volume changes and identify any erosion hotspots. Annual reports will be submitted to USACE and GADNR.

Borrow Area Surveys – The applicant will conduct pre-project, post-project, and out-year bi-annual bathymetric surveys of the utilized dredge area for a five years post-project. Surveys will encompass the boundaries of the dredge area and will include a minimum 400 ft buffer along the outside of the area. Surveys will be completed using track lines at a spacing not to exceed 100 ft. Out-year surveys will be completed in Years 1, 3, and 5 (etc) following construction. Data will be used to determine infilling rates and topographical changes to the seafloor. Results will be included in annual monitoring reports in conjunction with the beach surveys.

Sediment Monitoring

Beach – Pre- and post-nourishment beach sediment samples will be taken at the same stations sampled before construction (see “*Geotechnical Data Analyses*”—CSE 2018) for five years post-project. At each station, samples will be obtained using a push core at the toe of the dune, crest of the berm, mid beach face, and shallow underwater zone. Samples will be dried and tested for grain size distribution and shell content. Results will be included in a comprehensive project report.

Borrow Area – Pre-project, post-project, and out-year surficial sediment samples will be obtained in the dredge areas for five years post-project to evaluate possible changes to the sediment characteristics over time as new sediment infills the borrow area. Ten sediment samples will be collected at random locations within each borrow area using push cores ~10 centimeter (cm) in diameter and 10 cm deep. Samples will be analyzed for grain size, shell content, and mud content. Results can be used to infer recovery of the borrow area and what type of benthic community is likely present. Summaries of the findings will be submitted in annual reports to USACE and GADNR.

8.0 Landfill / Hazardous Waste

According to the Hazardous Site Index for Georgia, the subject property is not located over a landfill or hazardous waste site and is otherwise suitable for the proposed project.

9.0 Requirements and Restrictions Regarding Issuance of Permit

The proposed project is regulated under O.C.G.A. § 12-5-239(c)(3) and meets all requirements for issuance of a permit:

O.C.G.A. § 12-5-239(c)(3) states:

(c) No permit shall be issued except in accordance with the following provisions:

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(3) A permit for shoreline engineering activity or for a land alteration on beaches, sand dune, and submerged lands may be issued only when:

(A) The activities associated with the construction of the proposed project are to be temporary in nature, and the completed project will result in complete restoration of any beaches, dunes, or shoreline areas altered as a result of that activity;

Applicant Statement: The activities associated with the construction of the proposed project are temporary and are proposed only for the duration of the dredging of the offshore borrow site and the placement and grading of the sand on the shoreline. Activities proposed for subsequent sand recycling events will also be temporary and will be limited to land-based equipment such as excavators and dump trucks utilized to dredge and haul sand to eroded portions of the project area. Once construction activities are completed, construction related impacts will be restored, and the project will result in the complete restoration of the Sea Island beach, dune, and shoreline within the project limits.

(B) The proposed project will insofar as possible minimize effects to the sand-sharing mechanisms from storm-wave damage and erosion both to the subject parcel and at other shoreline locations;

Applicant Statement: The project will result in the restoration of the Sea Island sand sharing system. A minimum of 1,315,000 cy of beach quality sediment will be obtained from an offshore borrow site and placed along the beach. The project will result in the restoration of the storm protection functions of the Sea Island beach and dune system for over half of the project area, and the enhancement of existing functional, but degraded, sections of the sand sharing system. Restoration through nourishment of the project area will result in reduction in storm-wave damage and erosion to both the Sea Island shoreline directly, and to other shoreline locations by introducing additional sand into the longshore transport system.

(C) In the event that shoreline stabilization is necessary, either low-sloping porous rock structures or other techniques which maximize the dissipation of wave energy and minimize shoreline erosion shall be used. Permits may be granted for shoreline stabilization activities when the applicant has demonstrated that no reasonable or viable alternative exists; provided, however, that beach restoration and nourishment techniques are preferable to the construction of shoreline stabilization activities;

Applicant Statement: The project does not propose shoreline stabilization activities. The applicant is proposing nourishment of the beach, the recommended alternative to shoreline stabilization techniques. The project will result in the restoration and enhancement of storm protection and wildlife habitat functions of the sand sharing system at Sea Island beach.

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(D) A copy of the permit application has been transmitted to the local unit of government wherein the project site lies, if such local unit of government has been certified by the board, requesting comments on such application.

Not applicable.

10.0 Public Interest Statement

O.C.G.A. § 12-5-239(i) states:

(i) In passing upon the application for a permit, the permit-issuing authority shall consider the public interest which for the purposes of this part shall be deemed to be the following considerations:

(1) Whether or not unreasonably harmful, increased alteration of the dynamic dune field or submerged lands, or function of the sand-sharing system will be created;

Applicant Statement: The project will restore and enhance functions related to minimizing storm-wave damage and erosion at the project location and will not unreasonably affect the ability of the existing sand-sharing system to minimize storm-wave damage and erosion at other shoreline locations.

Direct beneficial impacts to the sand sharing system will be realized in the project area by restoring and/or enhancing dry and wet sand beaches. This will result in increased storm and erosion protection. Secondary beneficial impacts to other locations will result by the introduction of a minimum of 1,315,000 cy of beach quality sediments into the longshore transport system. As the material disperses over time with existing transport patterns, updrift and downdrift locations will benefit by the increased supply of beach quality sediment into the sand-sharing system.

(2) Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with the conservation of marine life, wildlife, or other resources;

By employing protective measures that have been required by both state and federal regulatory agencies for other authorized beach nourishment projects, the applicant's proposed project will not unreasonably interfere with the conservation of marine life, wildlife, or other resources. The applicant has conducted extensive studies of shorebirds and sea turtles in the project area and has been actively involved with regulatory agencies in the monitoring and management of sea turtles since the original nourishment project. Studies in turtle nesting areas have demonstrated that nourished beaches increase the number of turtle nests (Broadwell 1991; Nelson et al. 1987). CSE has prepared a Biological Assessment and Essential Fish Habitat Assessment that evaluates the potential effects of the proposed project for listed species that may be present in the project area (Attachment I)

No negative impacts are expected for sea turtles during the proposed project. Nesting data collected on Sea Island indicates that the anticipated work window from November 1 to April 30 will not overlap with the nesting season for loggerhead sea turtles, green sea

turtles, or leatherback turtles on Sea Island. If work past that date is required, additional protective measures will be employed. Upon completion, the proposed project will result in the restoration of valuable sea turtle nesting habitat that does not currently exist at portions of the project site. After construction, testing for compaction will insure that the nourished beach meets GADNR nesting requirements. Also, monitoring and remediation of scarps in accordance with GADNR guidelines will ensure that access for nesting females is maintained.

The project vicinity also provides habitat for shorebirds, including the federally protected Piping Plover (*Charadrius melodus*) and Red Knot (*Calidris canutus rufa*). Piping plover critical habitat Unit GA-14 is located south of the project area. Based upon previous studies conducted by the applicant's consultants, and communications with regulatory agencies, the project is not likely to unreasonably interfere with the conservation of piping plovers, red knots, or piping plover designated critical habitat areas due to the low suitability of the project area for the following reasons:

- The entire project site is located adjacent to human development and numerous beach access points, with high levels of disturbance
- The intertidal areas near Gould's Inlet, Little St. Simons Island, and Hupps Bar offer better habitat and far less human presence, and thus these shorebirds are much more likely to be found outside of the project limits.

Numerous federally listed marine mammals and fish are also known to occur in the project area, including the humpback whale (*Megaptera novaengliae*), North Atlantic right whale (*Eubalaena glacialis*), the west Indian manatee (*Trichechus manatus*), Atlantic sturgeon (*Acipenser oxyrinchus*), and shortnose sturgeon (*Acipenser brevirostrum*). Reasonable and prudent measures will be employed to minimize potential effects on these species as stated in the BA.

(3) Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with reasonable access by and recreational use and enjoyment of public properties impacted by the project. The proposed project is to be constructed on and adjacent to private property where residents and guests are already granted access. The project does not propose any structures or regulations that would interfere with access to or use and enjoyment of public properties.

11.0 Warranty Deed

The warranty deed conveying the subject property (Parcel 6, Oceanfront Strip and Parcel 9, Ocean Forest Clubhouse, Golf Course and Resort Facilities) from Sea Island Company and Sea Island Coastal Properties, LLC to Sea Island Acquisition, LLC, recorded in Deed Book 2808, pages 498-770, on December 16, 2010 is included in Attachment D.

12.0 Vicinity Map

A vicinity map of the project area is included in Attachment B, Sheet 01.

13.0 Adjoining Property Owners

A list of the adjoining property owners is included in Attachment E.

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14.0 Zoning Certification

Zoning certification has been requested from Glynn County Planning & Development. A copy of the request is included in Attachment F.

15.0 Hurricane Certification

A letter certifying that the project has been designed and will be constructed in accordance with applicable hurricane resistant standards is included in Attachment G.

16.0 Permit Drawings

Drawings prepared by CSE dated January 2018, are included in Attachment C.

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ATTACHMENT E
Adjacent Property
Owners

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BESSEMER TRUST CO TRUSTEE
PO BOX 1869
BRENTWOOD, TN 37024-1869

JOINT PURCHASE RESIDENCE TRUST
118 W WESLEY RD NW
ATLANTA, GA 30305

VIESER LOIS J OF THE LOIS J VIESER 1994
REVOC TRUST
41 SCHOOL ST
KEENE, NH 03431

CORN ELIZABETH T C/O SYNOVUS FAMILY
ASSET MANAGEMENT
PO BOX 23024
COLUMBUS, GA 31902

2C PROPERTIES LLC
8401 CHAGRIN RD 16
CHAGRIN FALLS, OH 44023

PHILLIPS JOHN D
4230 GLEN DEVON DR NW
ATLANTA, GA 30327

COTTAGE 6 LLC
PO BOX 2827
RICHMOND HILL, GA 31324

GEORGETEX LTD
307 W SEVENTH ST 1110
FORT WORTH, TX 76102

REVOCABLE TRUST
515 NORTH ST
GREENWICH, CT 06830

PPHP LLC
PATRICIA POPE HATCHER
14 VERNON RD NW
ATLANTA, GA 30305-2964

BRUCE H MOECKEL 2015 REV FAM TRUST
7 RIVER PARK
CROMWELL, CT 06416

MORRIS PAMELA A
PO BOX 31107
SEA ISLAND, GA 31561

DKH CAPITAL LLC
5 CONCOURSE PKWY 200
ATLANTA, GA 30328

Halloran
711 HURON ST
PHILADELPHIA, PA 19118

C478 LLC
ATTN: JAMES P HICKEY
126 HAZEL AV
GLENCOE, IL 60022

C/O MRS. DOROTHY P MCCLAIN, EXECUTOR
160 SHORE RUSH DRIVE
ST. SIMONS ISLAND, GA 31522

POPE HOLDINGS LP
C/O DAVID ALLMAN
2661 ORCHARD RUN
ATLANTA, GA 30339

SMITH ROBERT E & SMITH MELISSA W
3600 BUTLER RD
GLYNDON, MD 21071

REVOCABLE TRUST
549 MERRIMANS LN
WINCHESTER, VA 22601-6207

C/O COLD RIVER LAND, LLC
P.O. BOX 2249
CUMMING, GA 30028

SMITH RICHARD F
4270 HARRIS TRL NW
ATLANTA, GA 30327

SFP SEA ISLAND LLC
225 CAMINO AL LAGO
ATHERTON, CA 94027

BYERS KENNETH G JR & PATRICIA F
5800 WINTERTHUR DR
ATLANTA, GA 30328

COTTAGE 546 LLC
4118 NORTHSIDE DR
ATLANTA, GA 30342

RIDDLE WILLIAM H JR & MARY JO
17 WALSH LN
GREENWICH, CT 06830

BORCHERS JOHN A
166 ENCINAL AV
ATHERTON, CA 94027

DONOHUE ELSA T
30 BRIDLEWOOD RD
NORTHBROOK, IL 60062

SEA ISLAND COTTAGE 315 LLC
P.O. BOX 23089
LOUISVILLE, KY 40223

COSTELLO TIMOTHY P & MAURA B
3640 STRATFORD AVE
DALLAS, TX 75025

OSBORNE & ZIMMERMAN LLC
607 COLLEGE ST
MACON, GA 31201

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COTTAGE 83 LLC
PO BOX 38277
TALLAHASSEE, FL 32315

GRIGG S T JR
117 SHOCKOE SLIP
RICHMOND, VA 23219

SHEA MICHAEL D & LAURA F
1701 OLD MONTICELLO RD
THOMASVILLE, GA 31792

COTTAGE 84 LLC
KATHERINE DUNLEVIE
1111 BAY AV
COLUMBUS, GA 31904

PLATEK ROBERT M & LAURIE
3 BARRON PL
RYE, NY 10580

COTTAGE 57 LLC
104 WILLOW ST
BROOKLYN, NY 11201

LOWE KENNETH W
849 BLUFF DR
KNOXVILLE, TN 37919

GOODMAN-DOTY SEA ISLAND INVESTMENTS
LLP
3020 NANCY CREEK RD
ATLANTA, GA 30327

MOUROT RANDALL J & KAREN B
2212 BEECHWOOD
LITTLE ROCK, AR 72207

16TH STREET PROPERTY PARTNERS LLC
ATTN: ANDREW SUZMAN
3 REIMER RD
SCARSDALE, NY 10583-2805

GTB LOT 187 LLC
ATTN GEOFFREY T BOISI
86 PIPING ROCK RD
LOCUST VALLEY, NY 11560

COTTAGE 178 LLC
C/O FORD PERRY
2734 BERETANIA CIR
CHARLOTTE, NC 28211

C/O COASTAL CPAS LLC
100 MAIN ST
ST SIMONS ISLAND, GA 31522

PEPPIATT HELEN RES TRUST
PO BOX 30334
SEA ISLAND, GA 31561

RICHARDS LAURA HU
PO BOX 400
CARROLLTON, GA 30112

CONRAD L NE JR
PO BOX 31032
1312 CAROLINE LN
SEA ISLAND, GA 31561

LISENBY STEPHEN AL & SUSAN PIPKEN LISENBY
4390 JETT RD
ATLANTA, GA 30327

CASTELLINI MANAGEMENT CO LP
C/O ROBERT H CASTELLINI
312 ELM ST 2600
CINCINNATI, OH 45202

HOLDER C-59 LLC
3333 RIVERWOOD PKWY 400
ATLANTA, GA 30339

PHILLIPS R J JR & NANCY N PHILLIPS
PO BOX 470099
FT WORTH, TX 76147

WILLIAMS SARA D
1000 CRESCENT RIVER PASS
SUWANEE, GA 30024

ALSTON JOHN G SR
87 W PACES FERRY RD
ATLANTA, GA 30305

FISHER ROBERT W & CATHERINE N
3595 HIRAM DOUGLASVILLE HWY 225
HIRAM, GA 30141

THE WM A FICKLING III FAMILY RES TRUST
PO BOX 1976
MACON, GA 31202

GEORGE JOHN P
311 MCALPIN DR
SAVANNAH, GA 31406

KATHLEEN & FRANCIS JR AS TRUSTEES
3399 PEACHTREE RD 1500
ATLANTA, GA 30326

THE MCGUIRK RESIDENCE TRUST
P.O. BOX 723009
ATLANTA, GA 31139-2704

GENERAL GRAPHICS INC
C/O PATRICIA HATCHER
14 VERNON RD
ATLANTA, GA 30305

KELLETT CAROL M
200 GALLERIA PKWY 1800
ATLANTA, GA 30339

COTTAGE 65 LLC
84 HIGHLAND RD
RYE, NY 10580

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A & J ISLAND PROPERTIES LLC
2465 DEMERE RD
ST SIMONS ISLAND, GA 31522

JUDY WHIDDON
P O BOX 26
THOMSON, GA 30824

POWERS JOHN J
49 OX PASTURE ROAD
SOUTHAMPTON, NY 11968

ALLEN ELIZABETH M
3600 NORTHSIDE DR
ATLANTA, GA 30305

RALSTON SYBIL C
PO BOX 31165
SEA ISLAND, GA 31561

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ATTACHMENT F
Zoning Request

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March 1, 2018

Glynn County Community Development
Planning and Zoning Division
Attn: Ms. Denise Keller
700 Gloucester Street, Suite 202
Brunswick, Georgia 31520

**RE: Sea Island Acquisition, LLC / Sea Island Shoreline Protection 2018 Beach Nourishment
Glynn County Parcel No.: 05-05941 & 05-01330**

Dear Ms. Keller:

Resource & Land Consultants, on behalf of Sea Island Acquisition, LLC, has submitted an application to the Georgia Department of Natural Resources, Coastal Resources Division (CRD) requesting authorization under The Shore Protection Act (SPA) (O.C.G.A. §12-5-230) to perform shoreline protection activities within SPA jurisdiction along the beach on Sea Island, Glynn County, Georgia.

The applicant is seeking authorization to perform the following activities in SPA jurisdiction:

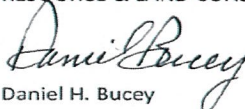
- Dredge beach quality material from an offshore borrow source using cutterhead suction dredge
- Nourish the existing beach utilizing the dredged material that will be pumped onto the beach, and graded and shaped using machinery to the design elevations
- Manage the nourished beach through recycling of sand within the beach system to address erosion to meet the overall project purpose

Attached are drawings produced by Coastal Science & Engineering Sheets 1 through 14, dated February 28, 2018 that depict the proposed activities in the project area. In accordance with O.C.G.A. § 12-5-238(11), the applicant must submit a letter from the local zoning authority in which the property is located stating that the proposed activities do not conflict with zoning laws. In addition, it is the CRD's policy to request that you also initial and date the attached plans so that they can insure that the final permitted facility is consistent with your initial review.

The applicant understands that your preliminary approval of the proposed concept plan does not constitute approval of the project itself or any associated facilities. The applicant further understands that all necessary permits and approvals for activities associated with the development of the subject property will be secured prior to construction.

At your earliest convenience, please provide a letter stating that the applicant's proposal is not in violation of Glynn County zoning laws associated with the project location. We appreciate your timely response to this request. If you should have any questions or require additional information, please contact me at your earliest convenience.

Sincerely,
RESOURCE & LAND CONSULTANTS


Daniel H. Bucey
Principal

Enclosures
cc: Mr. William McHugh; SIA

GA DNR

MAR 02 2018

Marsh & Shore Mgt. Program



Glynn County Community Development Department
1725 Reynolds St., Suite 200
Brunswick, GA 31520
912 554-7428
www.glynncounty.org

ZCL

Zoning Certification Request

Letter to be addressed to:

Mr. Karl Burgess GA DNR, CRD

1 Conservation Way, Suite 300

Brunswick, GA. 31520

Location of property:

(Needs to be accompanied by a plat, survey, or tax map identifying the property.)

Address Sea Island Oceanfront, Sea Island, Georgia

Parcel ID (s) 05-05941 & 05-01330

Purpose of letter (provide a brief explanation of the request):

Shore Protection Act certification, O. C. G. A. § 12-5-238(11)

Please refer to attached letter dated March 1, 2018

Contact information for person making the request:

Name Dan Bucey, RLC, LLC.

Daytime Phone (912) 480-4403

This request has a \$50.00 fee.

[Community Development Home Page](#)



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Overview



Legend

-  Parcels
- Yearly Sales**
-  2014
-  2015
-  2016
-  2017
-  Roads
- USA Major Highways**
-  Limited Access
-  Highway
-  Major Road
-  Local Road
-  Minor Road
-  Other Road
-  Ramp
-  Ferry
-  Pedestrian Way

Parcel ID	05-05941	Owner	SEA ISLAND ACQUISITION LLC	Last 2 Sales			
Class Code	Residential		C/O MR. JAMES L. ROBERTS, IV	Date	Price	Reason	Qual
Taxing District	05-Sea Island		2487 DEMERE RD 400	3/14/2014	\$0	n/a	U
	SEA ISLAND		ST SIMONS ISLAND, GA 31522	12/15/2010	\$0	n/a	U
Acres	56.32	Physical Address	n/a				
		Assessed Value	\$400000				

Date created: 3/1/2018
 Last Data Uploaded: 2/24/2018 4:19:12 AM

 Developed by
 The Schneider Corporation

GA DNR

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Marsh & Shore Mgt. Program



Overview



Legend

-  Parcels
- Yearly Sales**
-  2014
-  2015
-  2016
-  2017
-  Roads

Parcel ID	05-01330	Owner	SIA PROPCO I LLC	Last 2 Sales			
Class Code	Commercial		C/O ROBERTS TATE LLC JAMES L ROBERTS IV	Date	Price	Reason	Qual
Taxing District	05-Sea Island		2487 DEMERE RD 400	3/13/2014	\$0	n/a	U
	SEA ISLAND		ST SIMONS ISLAND, GA 31522	12/15/2010	\$0	n/a	U
Acres	312.16	Physical Address	3610 OGLETHORPE DR				
		Assessed Value	\$6718352				

Date created: 3/1/2018
 Last Data Uploaded: 2/24/2018 4:19:12 AM

 **Developed by**
 The Schneider Corporation

GA DNR

MAR 02 2018

Marsh & Shore Mgt. Program



*A Golden Past.
A Shining Future.*

BOARD OF
COMMISSIONERS

Michael Browning
District 1

Peter Murphy
District 2

Richard Strickland
District 3

Bill Brunson
District 4

Allen Booker
District 5

Mark Stambaugh
At-Large, Post 1

Bob Coleman
At-Large, Post 2

COMMUNITY DEVELOPMENT DEPARTMENT
1725 Reynolds Street, Suite 200, Brunswick, GA 31520
Phone: 912-554-7428/e-Fax: 1-888-252-3726

Via Email: Karl.Burgess@dnr.ga.gov

May 18, 2018

Mr. Karl Burgess
Georgia Department of Natural Resources
Coastal Regional Division
1 Conservation Way, Suite 300
Brunswick, Georgia 31520

RE: Sea Island Oceanfront, Sea Island, Georgia
Parcel IDs 05-05941 & 05-01330
2018 Beach Renourishment

Dear Mr. Burgess:

Please let this letter serve as confirmation that the 2018 Beach Renourishment project Sea Island Acquisition, LLC, has submitted for a Shore Protection Act Permit is not violative of the Glynn County Zoning Ordinance. Please find attached to this letter the project plans initialed and dated, for documentation of project review.

The applicant understands that all necessary permits and approvals for activities associated with the development of the subject property will be secured prior to construction.

Sincerely,

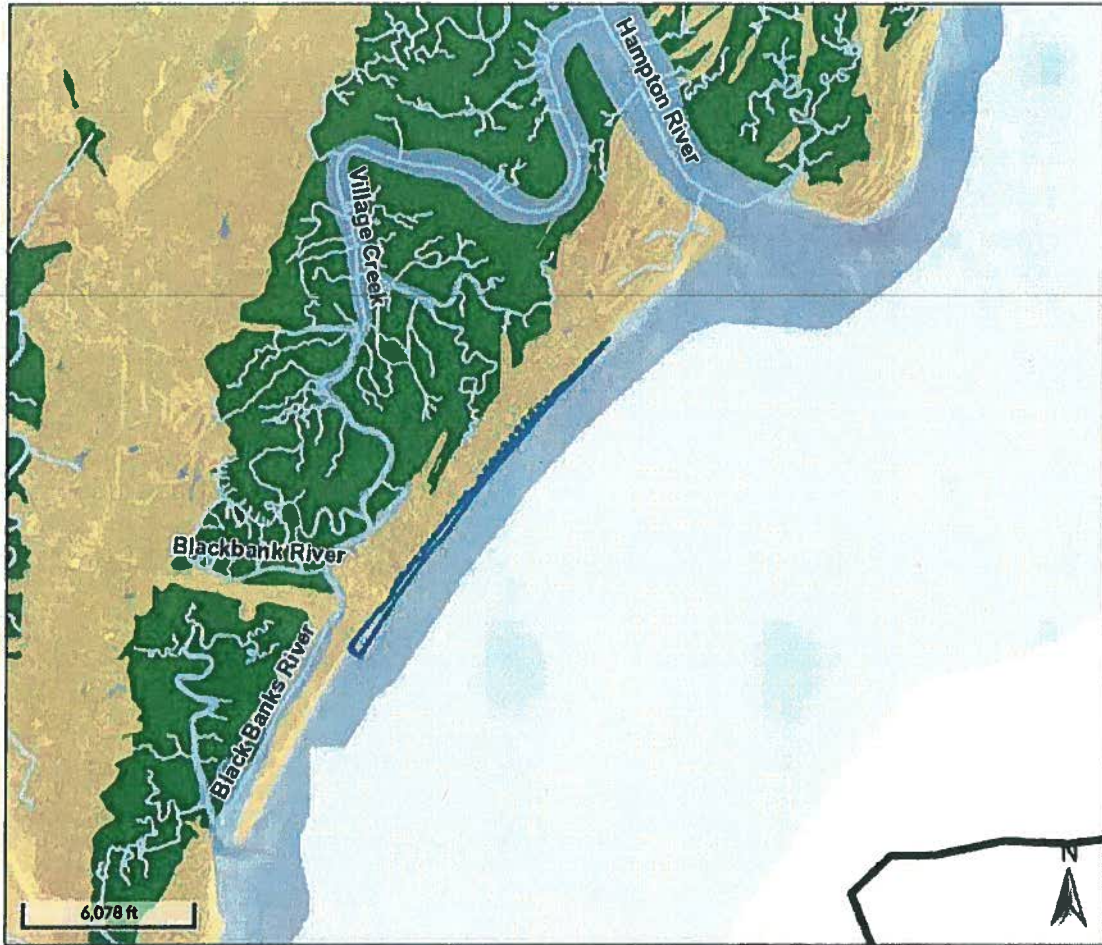
Pamela Thompson
Director

Phone: 912-554-7400
Fax: 912-554-7596
www.glynncounty.org

GA DNR

MAY 18 2018

Marsh & Shore Mgt. Program



- Legend**
-  Parcels
 - Yearly Sales**
 -  2014
 -  2015
 -  2016
 -  2017
 -  Roads
 - USA Major Highways**
 -  Limited Access
 -  Highway
 -  Major Road
 -  Local Road
 -  Minor Road
 -  Other Road
 -  Ramp
 -  Ferry
 -  Pedestrian Way

Parcel ID	05-05941	Owner	SEA ISLAND ACQUISITION LLC	Last 2 Sales			
Class Code	Residential		C/O MR. JAMES L. ROBERTS, IV	Date	Price	Reason	Qual
Taxing District	05-Sea Island		2487 DEMERE RD 400	3/14/2014	\$0	n/a	U
	SEA ISLAND		ST SIMONS ISLAND, GA 31522	12/15/2010	\$0	n/a	U
Acres	56.32	Physical Address	n/a				
		Assessed Value	\$400000				

Date created: 3/1/2018
 Last Data Uploaded: 2/24/2018 4:19:12 AM

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 The Schneider Corporation

*PKT
 5/18/18*

GA DNR
MAY 18 2018
 Marsh & Shore Mgt. Program



Overview



Legend

-  Parcels
- Yearly Sales**
-  2014
-  2015
-  2016
-  2017
-  Roads

Parcel ID	05-01330	Owner	SIA PROPCO II LLC	Last 2 Sales			
Class Code	Commercial		C/O ROBERTS TATE LLC JAMES L ROBERTS IV	Date	Price	Reason	Qual
Taxing District	05-Sea Island		2487 DEMERE RD 400	3/13/2014	\$0	n/a	U
	SEA ISLAND		ST SIMONS ISLAND, GA 31522	12/15/2010	\$0	n/a	U
Acres	312.16	Physical Address	3610 OGLETHORPE DR				
		Assessed Value	\$6718352				

Date created: 3/1/2018
 Last Data Uploaded: 2/24/2018 4:19:12 AM

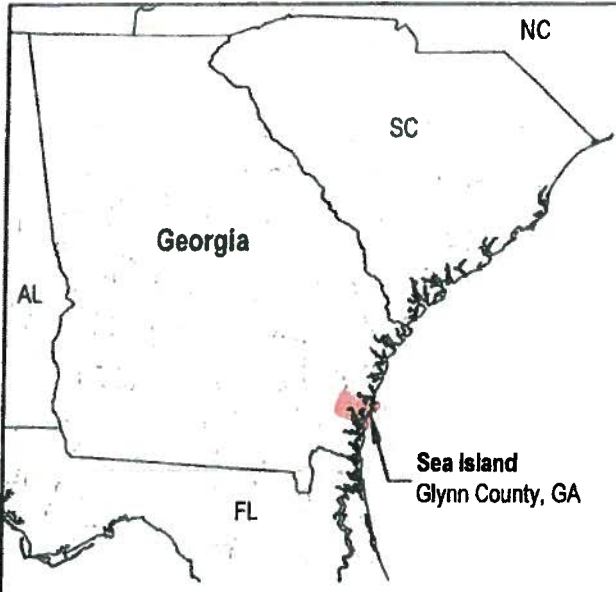
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MAY 18 2018

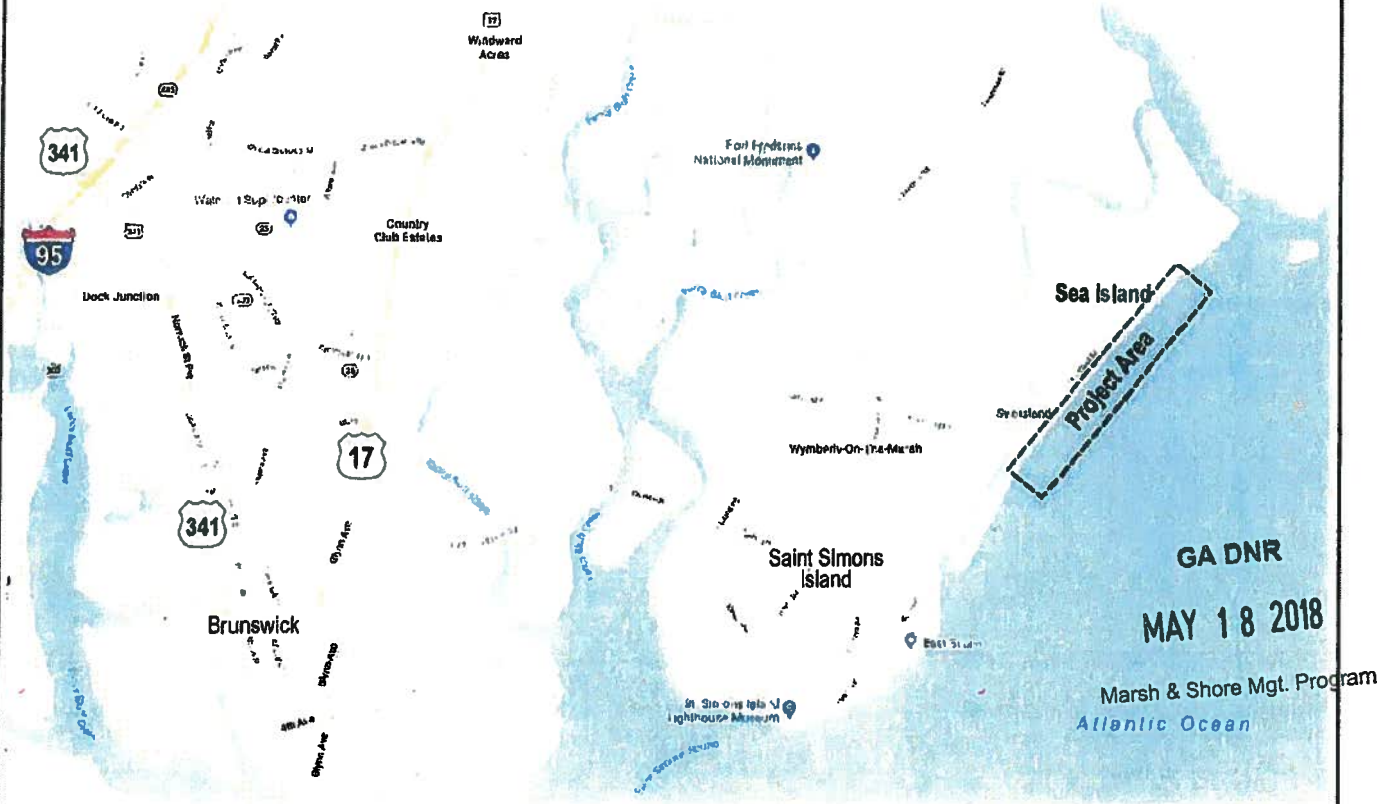
Marsh & Shore Mgt. Program



DIRECTIONS:
From I-95 (Brunswick, GA 31523)

- Take exit 36A to merge onto US-25 S/US-341 S toward Brunswick (5.2 mi)
- Slight right onto Bay St (0.2 mi)
- Continue onto Oglethorpe St (0.1 mi)
- Turn left onto Gloucester St (1.0 mi)
- Keep left to continue on Gloucester St/State Rte 25 Con
- Turn left onto Glynn Ave
- Turn right onto F J Torras Causeway (2.6 mi)
- Continue onto Torras Causeway (1.7 mi)
- Continue onto Kings Way
- Slight left onto Sea Island Rd (4.4 mi)
- Slight left onto Sea Island Dr
- Continue straight to stay on Sea Island Dr (0.3 mi)
- Turn right onto 1st St S
- Turn right toward Dune Ave
- Turn right onto Dune Ave (0.1 mi)

Project Location
 Latitude: 31°11'14.0" N
 Longitude: 81°20'20.0" W



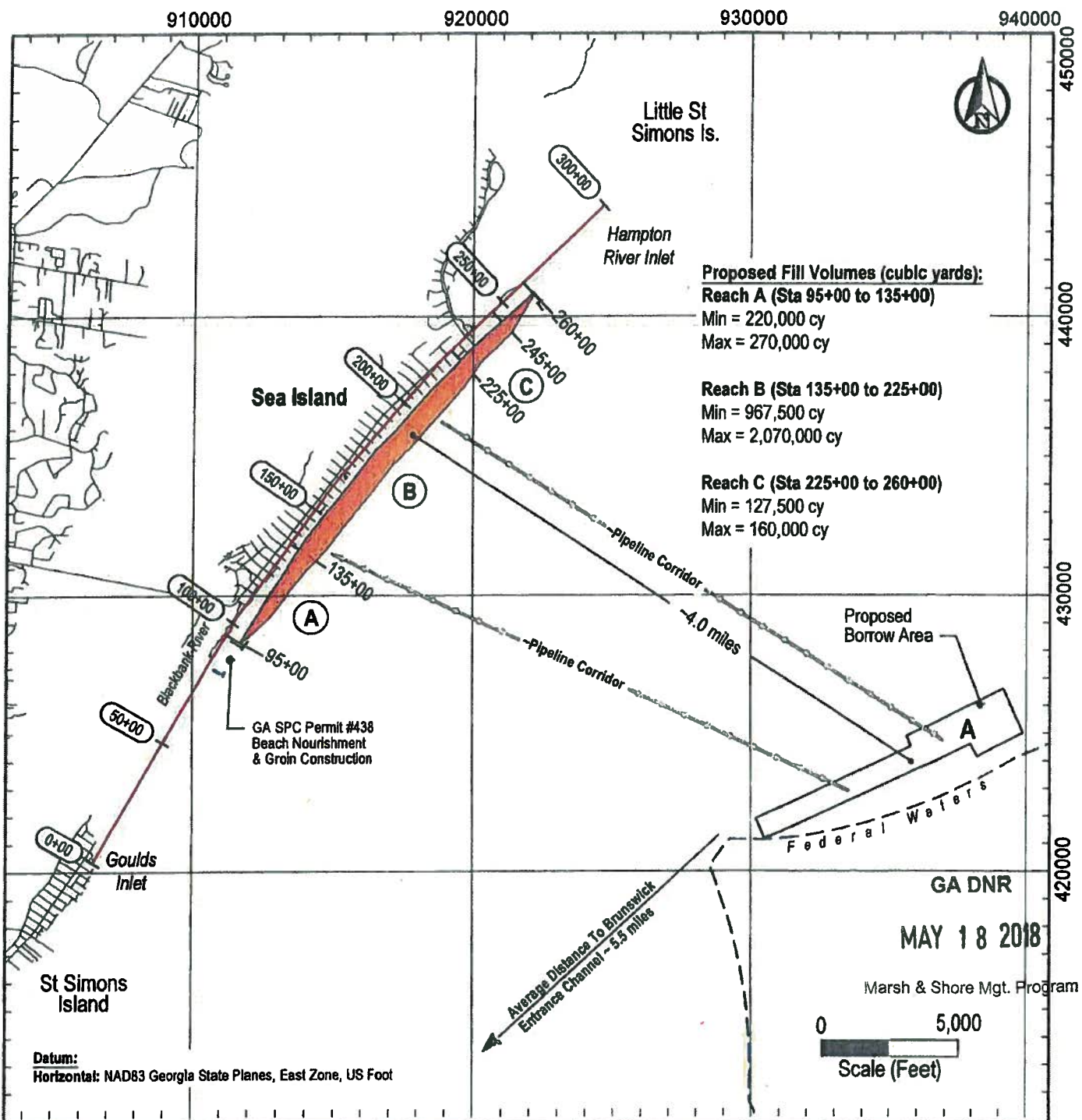
APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

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DRAWING TITLE:
 Vicinity Map

SCALE: AS SHOWN	SHEET #
DATE: 28 Feb 2018	01
TMS#	
PROJECT #: 2473	



Proposed Fill Volumes (cubic yards):
Reach A (Sta 95+00 to 135+00)
 Min = 220,000 cy
 Max = 270,000 cy

Reach B (Sta 135+00 to 225+00)
 Min = 967,500 cy
 Max = 2,070,000 cy

Reach C (Sta 225+00 to 260+00)
 Min = 127,500 cy
 Max = 160,000 cy

GA SPC Permit #438
 Beach Nourishment
 & Groin Construction

Average Distance To Brunswick
 Entrance Channel ~ 5.5 miles

0 5,000
 Scale (Feet)

GA DNR
 MAY 18 2018
 Marsh & Shore Mgt. Program

Datum:
 Horizontal: NAD83 Georgia State Planes, East Zone, US Foot

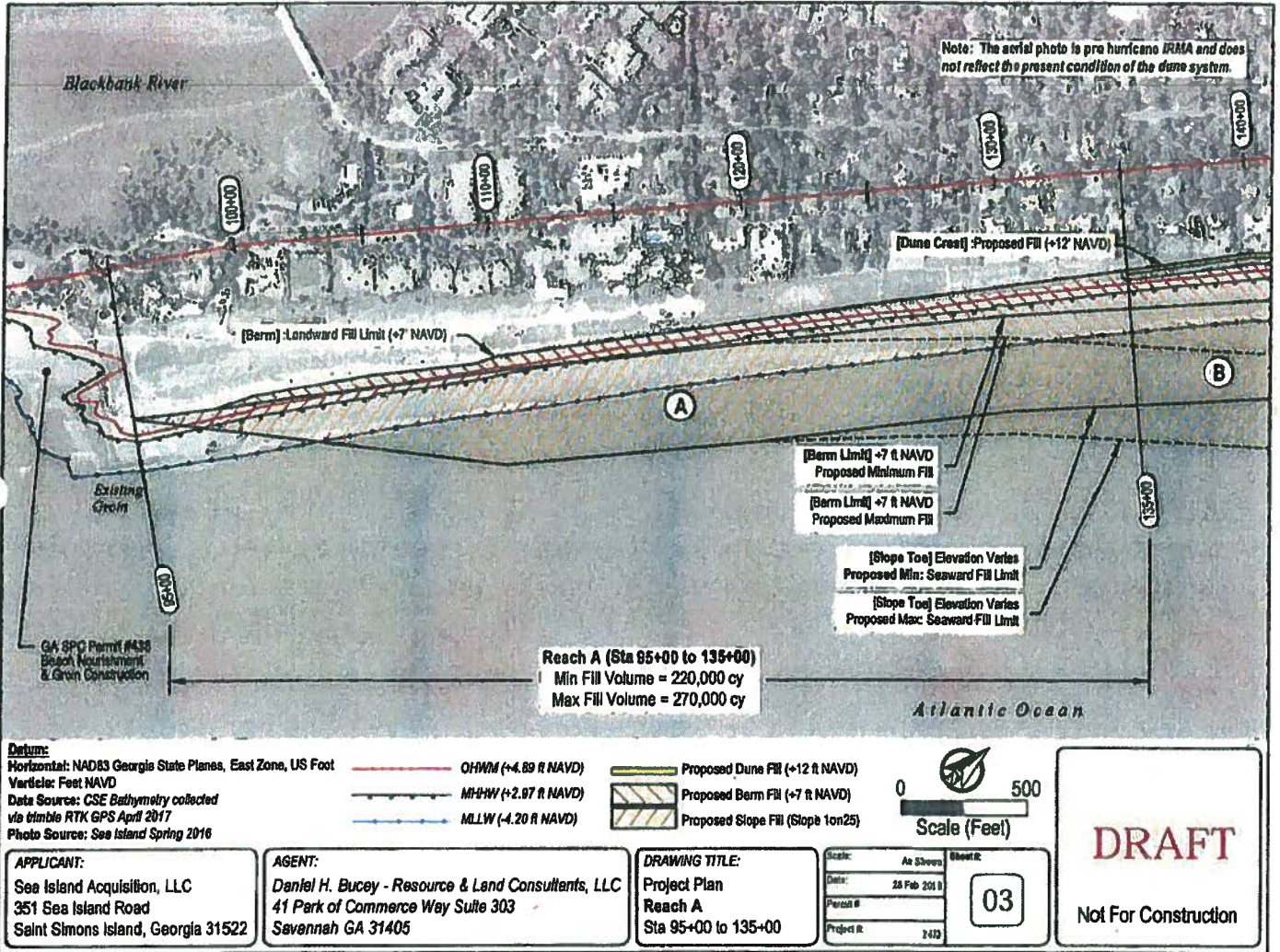
APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

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DRAWING TITLE:
 Overall Project Map

SCALE: AS SHOWN	SHEET #:
DATE: 28 Feb 2018	02
TMS#	
PROJECT #: 2473	



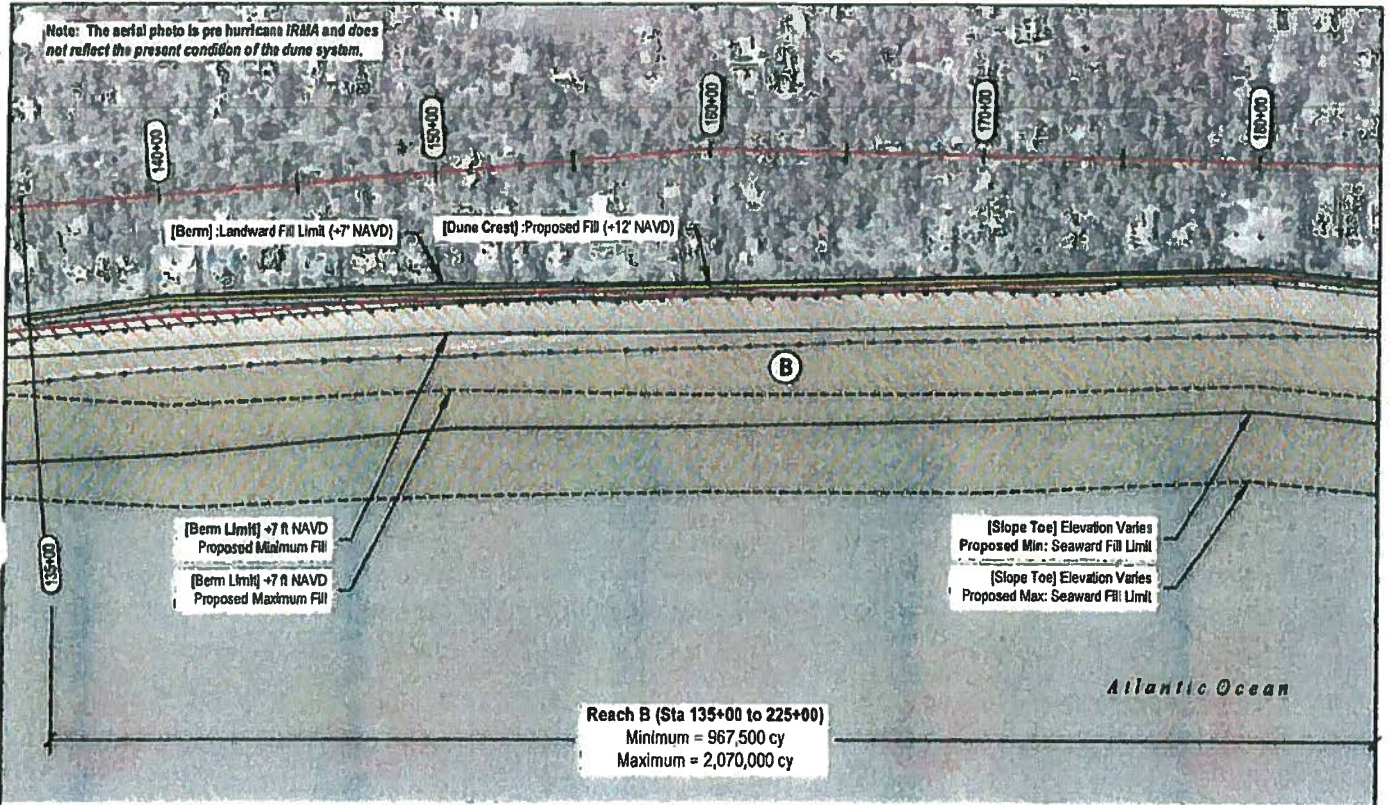
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GA DNR

MAY 18 2018

Marsh & Shore Mgt. Program

Note: The aerial photo is pre hurricane IRMA and does not reflect the present condition of the dune system.



Datum:
 Horizontal: NAD83 Georgia State Planes, East Zone, US Foot
 Vertical: Feet NAVD
 Data Source: CSE Bathymetry collected via trimble RTK GPS April 2017
 Photo Source: Sea Island Spring 2016

— OHWM (+4.89 ft NAVD)
 - - - MHHW (+2.97 ft NAVD)
 - · - · MLLW (-4.20 ft NAVD)

Proposed Dune Fill (+12 ft NAVD)
 Proposed Berm Fill (+7 ft NAVD)
 Proposed Slope Fill (Slope 1on25)



APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

DRAWING TITLE:
 Project Plan
 Reach B
 Sta 135+00 to 180+00

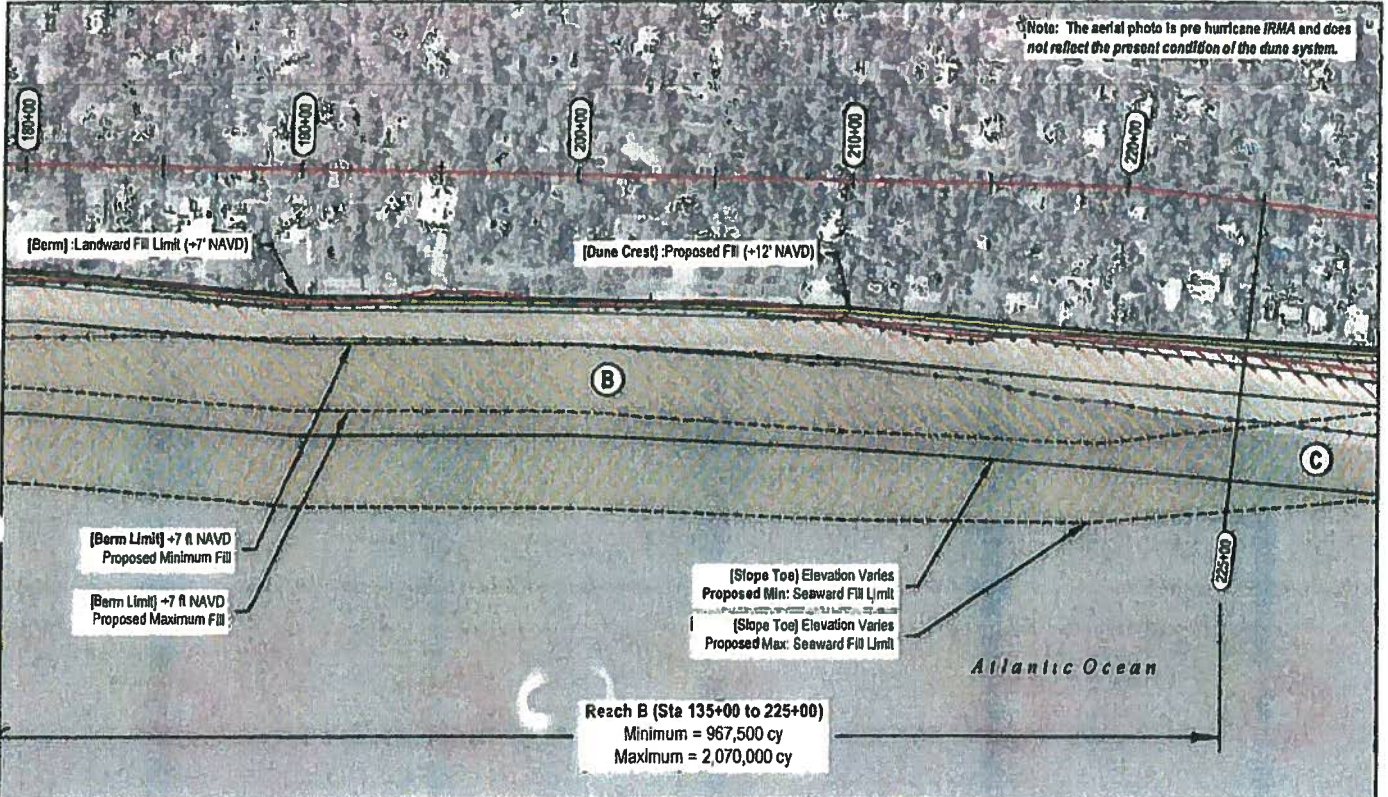
Scale:	As Shown	Sheet #
Date:	28 Feb 2018	04
Permit #		
Project #	2472	

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 MAY 18 2018
 Marsh & Shore Mgt. Program

Note: The aerial photo is pre hurricane IRMA and does not reflect the present condition of the dune system.



Datum:
 Horizontal: NAD83 Georgia State Planes, East Zone, US Foot
 Vertical: Feet NAVD
 Data Source: CSE Bathymetry collected via Trimble RTK GPS April 2017
 Photo Source: Sea Island Spring 2016

OHWM (+4.89 ft NAVD)
 MHHW (+2.97 ft NAVD)
 MLLW (-4.20 ft NAVD)

Proposed Dune Fill (+12 ft NAVD)
 Proposed Berm Fill (+7 ft NAVD)
 Proposed Slope Fill (Slope 1on25)



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APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

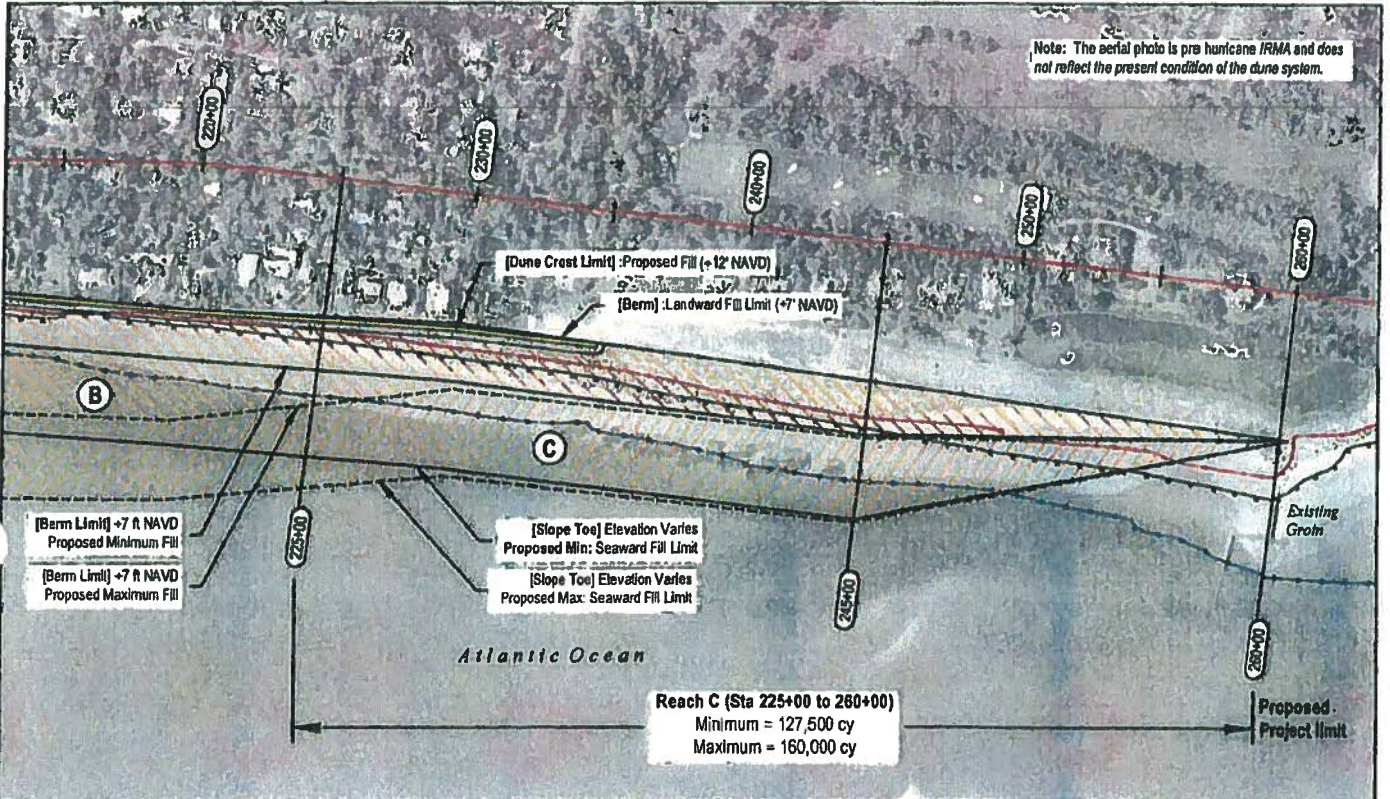
AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

DRAWING TITLE:
 Project Plan
 Reach B
 Sta 180+00 to 225+00

Scale:	As Shown	Sheet #
Date:	28 Feb 2018	05
Parcel #		
Project #	1473	

GA DNR
 MAY 18 2018
 Marsh & Shore Mgt. Program

Note: The aerial photo is pre hurricane IRMA and does not reflect the present condition of the dune system.



Reach C (Sta 225+00 to 260+00)
 Minimum = 127,500 cy
 Maximum = 160,000 cy

Datum:
 Horizontal: NAD83 Georgia State Planes, East Zone, US Foot
 Vertical: Feet NAVD
 Data Source: CSE Bathymetry collected via trimble RTK GPS April 2017
 Photo Source: Sea Island Spring 2016

- OHMM (+4.89 ft NAVD)
- MHHW (+2.97 ft NAVD)
- MLLW (-4.20 ft NAVD)

- Proposed Dune Fill (+12 ft NAVD)
- Proposed Berm Fill (+7 ft NAVD)
- Proposed Slope Fill (Slope 1on25)



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APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey, - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

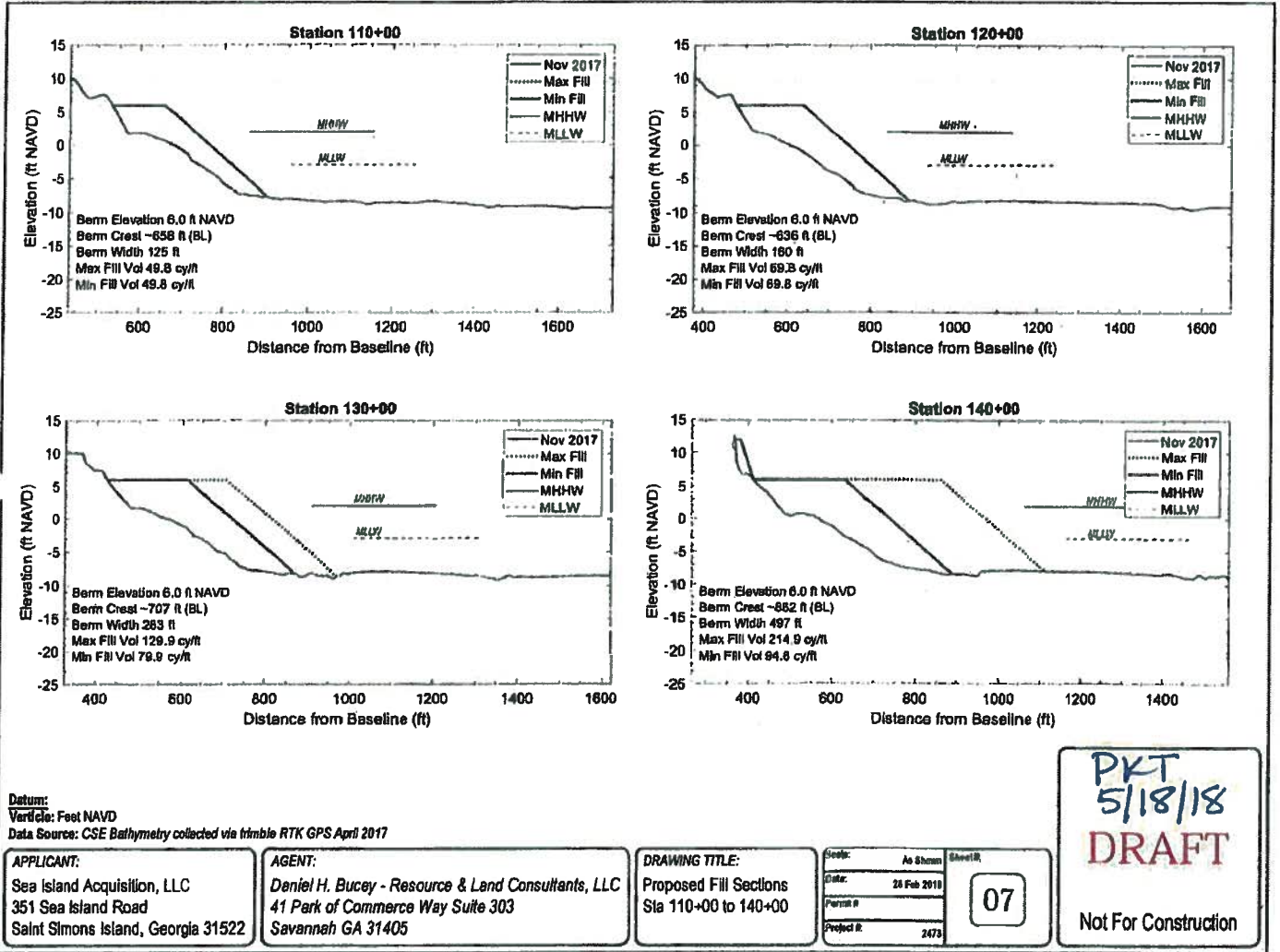
DRAWING TITLE:
 Project Plan
 Reach C
 Sta 225+00 to 260+00

Scale:	As shown	Sheet #:	
Date:	28 Feb 2018	06	
Permit #			
Project #	2473		

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Datum: Vertical: Feet NAVD
 Data Source: CSE Bathymetry collected via Trimble RTK GPS April 2017

APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

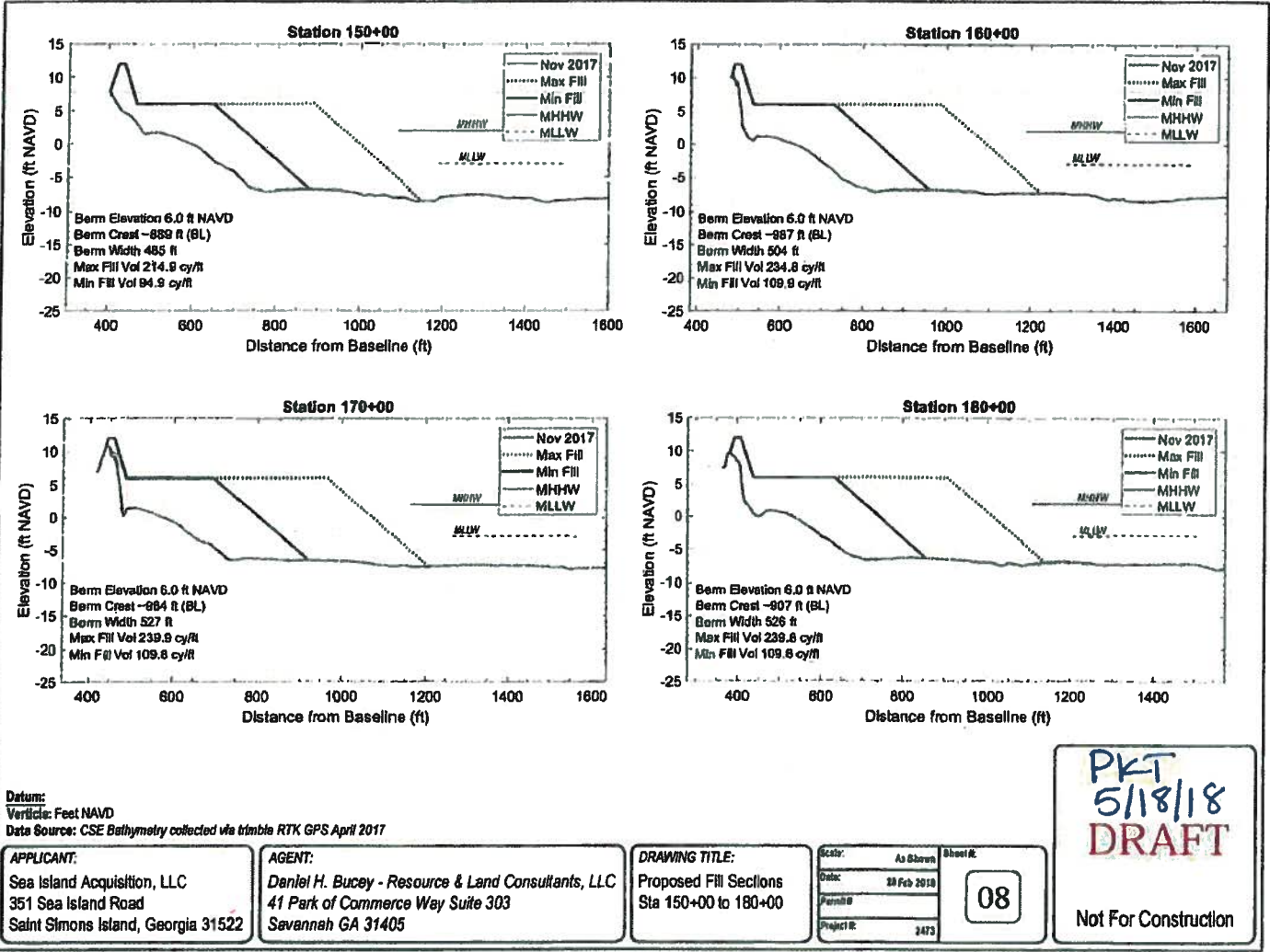
DRAWING TITLE:
 Proposed Fill Sections
 Sta 110+00 to 140+00

Sheet:	As Shown	Sheet #:	07
Date:	28 Feb 2018		
Permit #			
Project #	2473		

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 Marsh & Shore Mgt. Program



Datum:
 Verticals: Feet NAVD
 Data Source: CSE Bathymetry collected via trimble RTK GPS April 2017

APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

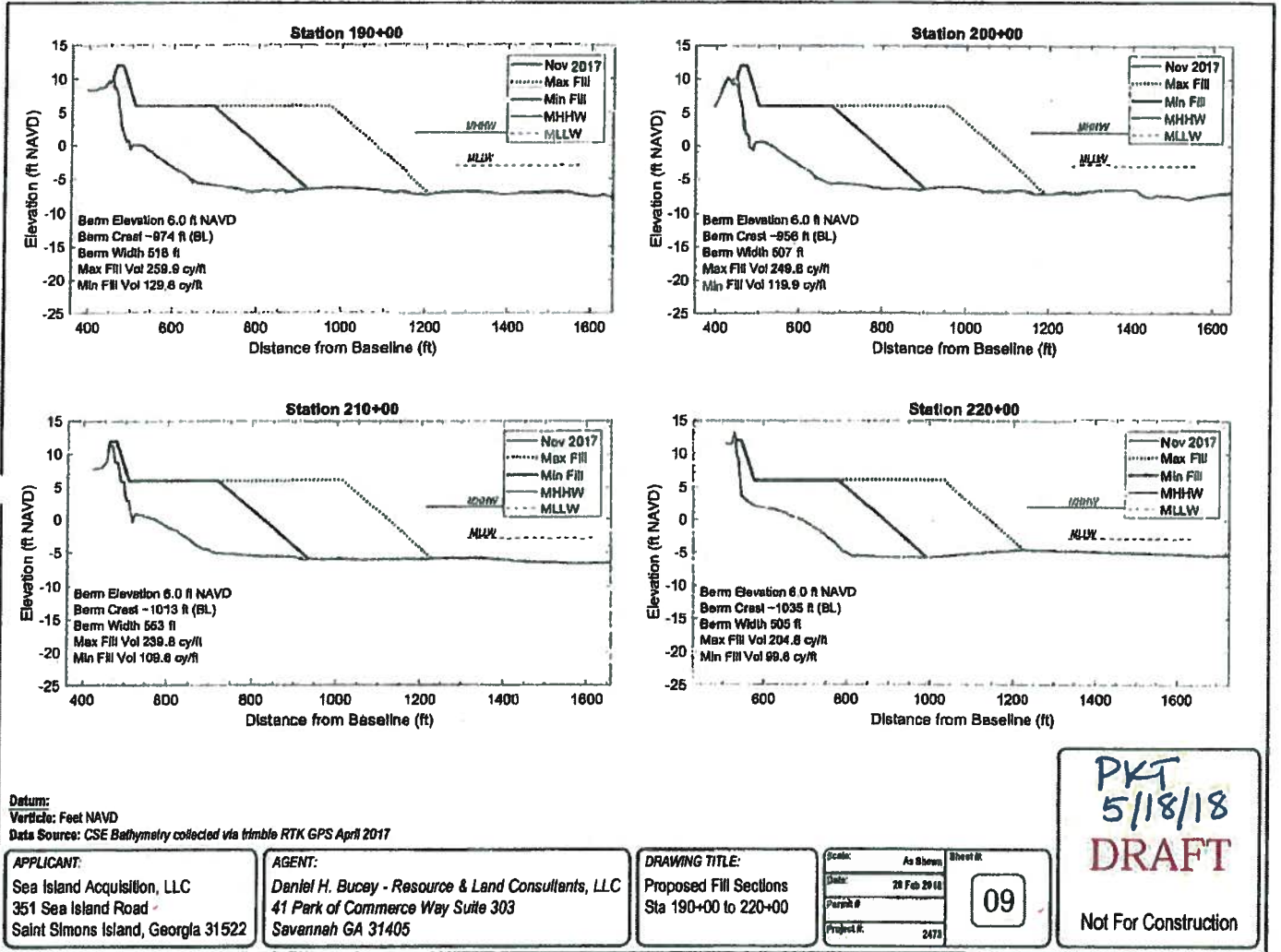
DRAWING TITLE:
 Proposed Fill Sections
 Sta 150+00 to 180+00

Scale: As Shown Sheet #:
 Date: 28 Feb 2018
 Parcel #:
 Project #: 2473

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Datum:
 Vertical: Feet NAVD
 Data Source: CSE Bathymetry collected via Trimble RTK GPS April 2017

APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

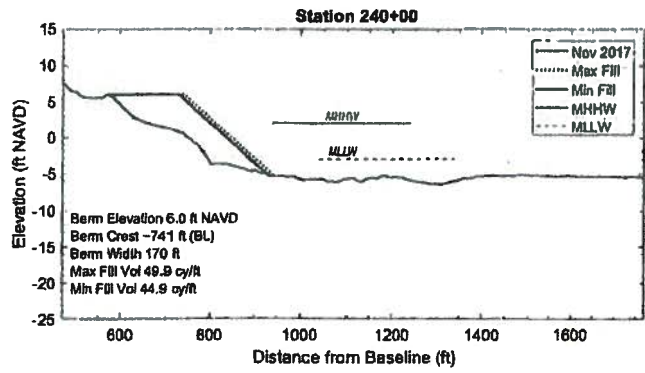
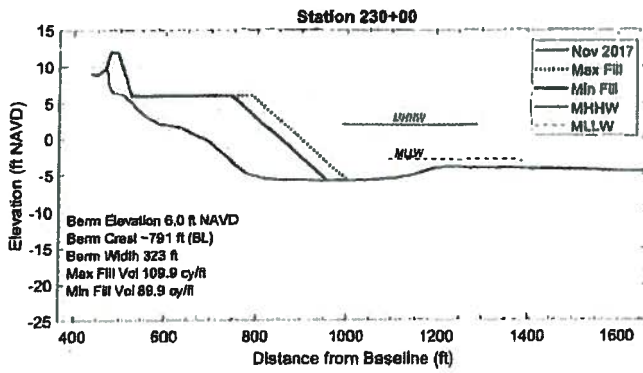
AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

DRAWING TITLE:
 Proposed Fill Sections
 Sta 190+00 to 220+00

Scale:	As Shown	Sheet #
Date:	28 Feb 2018	09
Project #		
Project #	2473	

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Datum:
 Vertical: Feet NAVD
 Data Source: CSE Bathymetry collected via trimble RTK GPS April 2017

APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

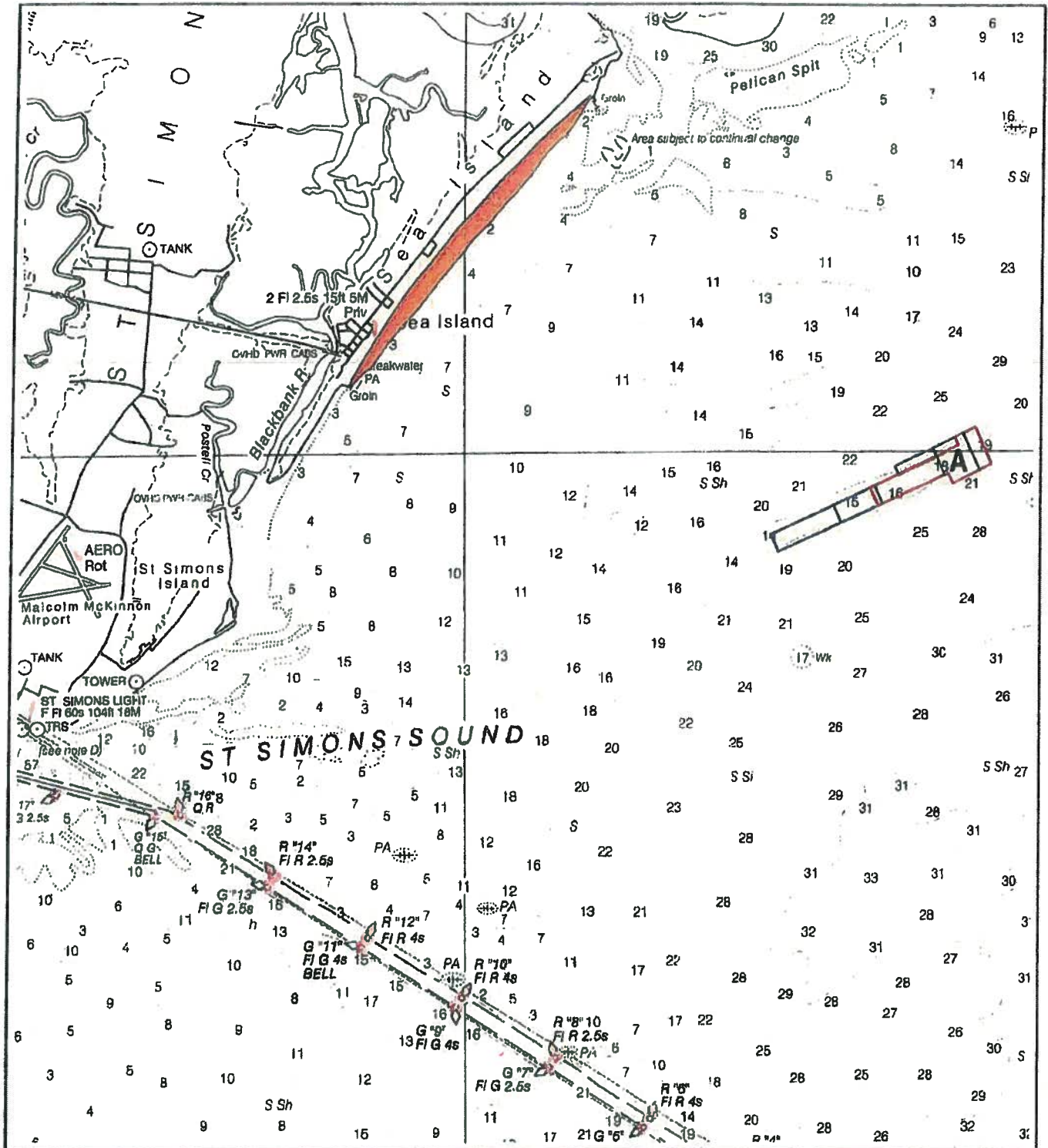
DRAWING TITLE:
 Proposed Filling Sections
 Sta 230+00 to 240+00

Scale:	As Shown	Sheet #:	10
Date:	18 Feb 2018		
Permit #			
Project #	2473		

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APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

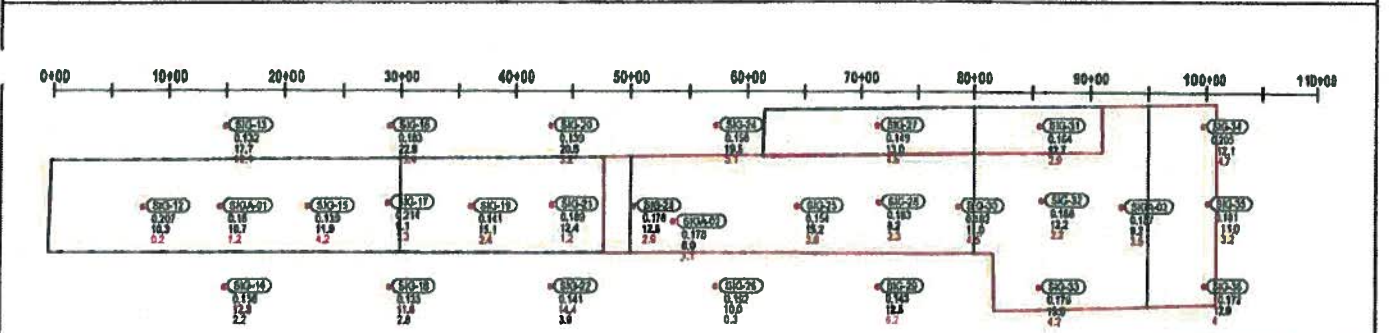
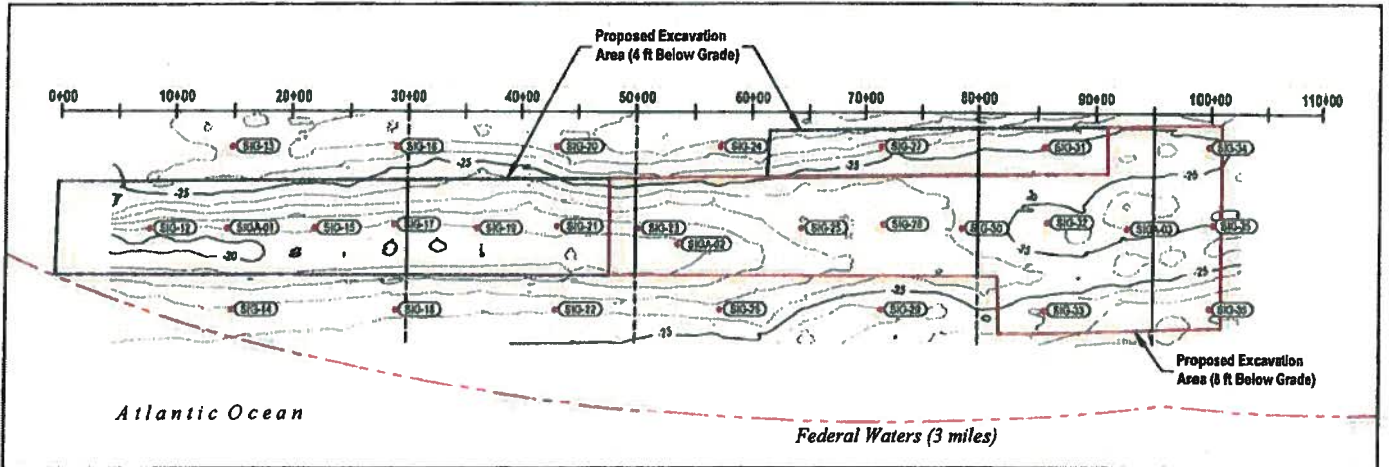
AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

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DRAWING TITLE:
 Area Bathymetry
 NOAA Map 11502

SCALE: AS SHOWN	SHEET #: 11
DATE: 28 Feb 2018	
TMS#	
PROJECT #: 2473	

MAY 18 2018



Datum:
 Horizontal: NAD83 Georgia State Planes, East Zone, US Foot
 Vertical: Feet NAVD
 Data Source: CSE Bathymetry collected via Trimble RTK GPS April 2017

Core Key
 Mean Grain Size (mm)
 Percent Fines
 Percent Mud

0 1,200
 Scale (Feet)

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APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

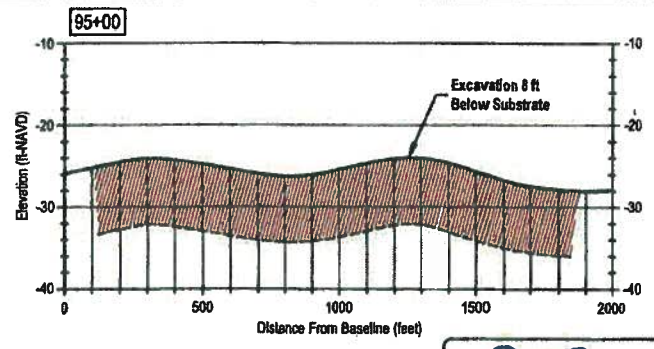
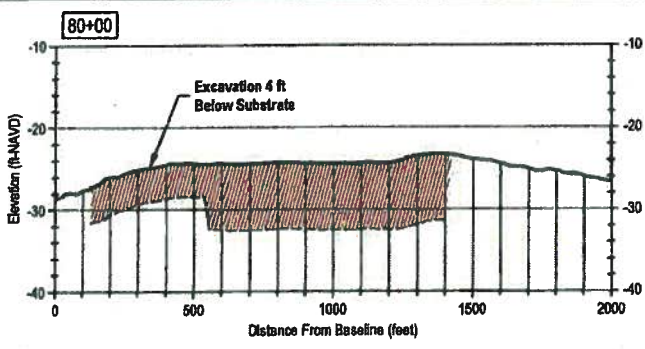
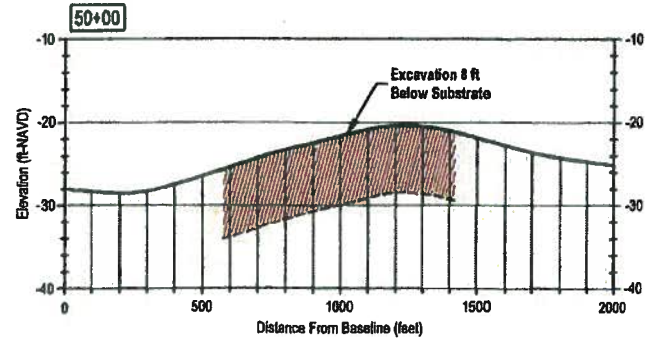
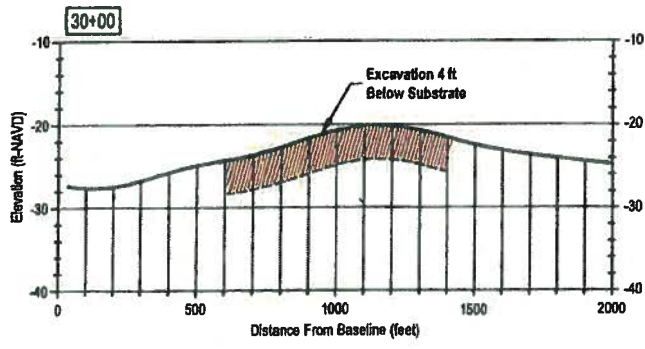
AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

DRAWING TITLE:
 Borrow Area Bathymetry
 & Geotechnical Data

Scale: As Shown Sheet #
 Date: 28 Feb 2018
 Permit #
 Project # 2473

12

GA DNR
 MAY 18 2018
 Marsh & Shore Mgt. Program



Datum:
 Horizontal: NAD83 Georgia State Planes, East Zone, US Foot
 Vertical: Feet NAVD
 Vertical Exaggeration: 30
 Data Source: CSE Bathymetry collected via trimble RTK GPS April 2017

APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

DRAWING TITLE:
 Proposed Borrow Area
 Excavation Sections

Scale:	As Shown	Sheet #:	13
Date:	28 Feb 2018		
Permit #:			
Project #:	2473		

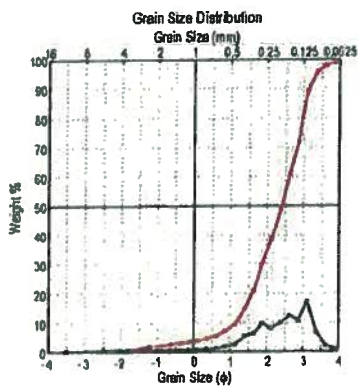
**PKT
5/18/18
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Not For Construction

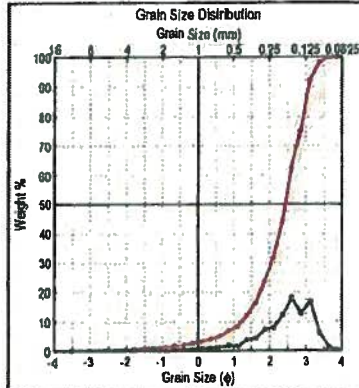
GA DNR

MAY 18 2018

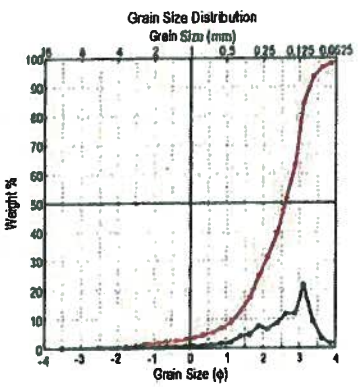
Marsh & Shore Mgt. Program



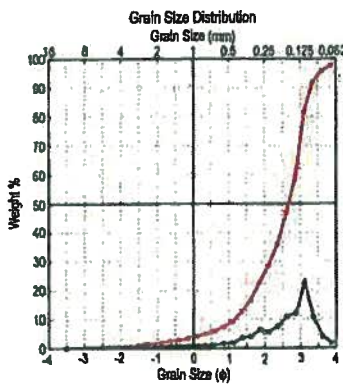
Project 2473
 Location Sea Island, GA
 Date Apr 2017
 Station 4 ft Comp
 Interval (ft) 0-4
 Mean 0.188 mm
 STD 0.505 mm
 Skewness -1.537
 USCS Wentworth
 SP Fine Sand
 Fine Sand Moderately Sorted
 Poorly Graded Strongly Coarse Skewed
 Lepidokurtic
 Total weight (gram) 2217.69
 % finer than 0.075 mm 1.11
 % coarser than 2.00 mm 1.68
 CaCO3 0.0



Native Beach Composite
 Project 2473
 Location Sea Island, GA
 Date Mar 2017
 Station Composite
 Interval (ft) All Beach
 Mean 0.191 mm
 STD 0.543 mm
 Skewness -1.920
 USCS Wentworth
 SP Fine Sand
 Fine Sand Moderately Sorted
 Poorly Graded Strongly Coarse Skewed
 Very Lepidokurtic
 Total weight (gram) 116.67
 % finer than 0.075 mm 0.67
 % coarser than 2.00 mm 1.68
 CaCO3 0.0



Project 2473
 Location Sea Island, GA
 Date Apr 2017
 Station 8 ft Comp
 Interval (ft) 0-6
 Mean 0.179 mm
 STD 0.501 mm
 Skewness -1.618
 USCS Wentworth
 SP Fine Sand
 Fine Sand Moderately Sorted
 Poorly Graded Strongly Coarse Skewed
 Lepidokurtic
 Total weight (gram) 2216.26
 % finer than 0.075 mm 1.11
 % coarser than 2.00 mm 1.68
 CaCO3 0.0



Project 2473
 Location Sea Island, GA
 Date Apr 2017
 Station 8 ft Comp
 Interval (ft) 0-8
 Mean 0.172 mm
 STD 0.489 mm
 Skewness -1.660
 USCS Wentworth
 SP Fine Sand
 Fine Sand Poorly Sorted
 Poorly Graded Strongly Coarse Skewed
 Lepidokurtic
 Total weight (gram) 2215.18
 % finer than 0.075 mm 2.46
 % coarser than 2.00 mm 1.82
 CaCO3 0.0

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 5/18/18
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Not For Construction

APPLICANT:
 Sea Island Acquisition, LLC
 351 Sea Island Road
 Saint Simons Island, Georgia 31522

AGENT:
 Daniel H. Bucey - Resource & Land Consultants, LLC
 41 Park of Commerce Way Suite 303
 Savannah GA 31405

DRAWING TITLE:
 Geotechnical Data
 Grain Size Distributions

Scale:	As Shown	Sheet #
Date:	28 Feb 2015	14
Project #:	2473	

GA DNR
 MAY 18 2018
 Marsh & Shore Mgt. Program

ATTACHMENT G
Hurricane Certification Letter

GA DNR

MAR 02 2018

Marsh & Shore Mgt. Program



301 Sea Island Road Suite 10, St. Simons, GA 31522
912-638-9681 Office 912-289-0339 Fax

February 22, 2018

Karl Burgess
Coastal Resources Division
Department of Natural Resources
One Conservation Way
Brunswick, GA 31523

Mr. Burgess:

This letter serves to relate my understanding that the improvements within the 2018 Sea Island Beach Nourishment project do not violate any hurricane standards.

Sincerely,

Johnathan Roberts, P.E.
Professional Engineer

GA DNR

MAR 02 2018

Marsh & Shore Mgt. Program