September 25, 2025

Josh Noble
Marsh and Shore Management Program Manager
Coastal Resources Division

RE: Revised Application for Issuance of a Shore Protection Act Permit – East Beach Water Impoundment Project, Glynn County, Georgia

Dear Mr. Noble,

On behalf of the applicant, Glynn County Engineering Services, we are submitting this package including an application for a Shore Protection Act (SPA) permit to authorize improvements to impounded open water areas associated with construction of the East Beach Water Impoundment Project (the Project) located near Massengale Park on East Beach, St. Simons Island, Georgia.

The information below details the project, its purpose and need, alternatives considered, location, and other information required for permit review and issuance. Please review the attached application, forms, plans, figures and supplemental information and contact me if you have any questions or need additional information.

Basic Project Details

The Project Area is located on East Beach, St. Simons Island, Glynn County, Georgia and consists of a portion of impoundment area, adjacent borrow site area and access corridor to the beach from Massengale Park. The Project Area is approximately 9.74 acres, and the center is located at 81.3795614ºW, 31.1372264ºN. Refer to Attachment A for a project location map, wetland and waters delineation map, and site photographs. Refer to Attachment C for the SPA jurisdictional line survey exhibit.

The purpose of the project is to improve and protect public safety. The need for the project is the risk to public safety from the current open water and limited, precarious crossing conditions. The need will be met by reducing public contact with open water areas to minimize drowning risk; alleviating safety concerns associated with public contact with potentially contaminated water; improving access for

emergency services vehicles in the Massengale Park Area; and to provide a safe, stable, and accessible connection to beach areas for all members of the public.

The proposed public and community project consists of restoration and filling of an area of East Beach that has developed a tidal pool complex over the past several years that is currently an impounded open water area. The project would fill part of the impounded area while avoiding wetland impacts. Native sand would be harvested onsite to provide clean fill material. Refer to Attachment B for Project Plans.

The project will minimize impacts to the sand sharing system by utilizing an approach of thin layer excavation of the borrow area on the lower beach. No sand will be removed from the sand sharing system. Sand will be added to part of the impounded area that is bordered by developing dunes. Filling of the open water in this area will accomplish the project goals and create additional dry beach that is likely to facilitate increased dune formation and continued establishment of beach vegetation and associated wildlife habitat.

Description of Alternatives Considered

Refer to Attachment B for Alternative schematic plans. Refer to the alternative descriptions and summary below. Refer to Attachment D – USACE Standard Permit Application for the full Alternatives Analysis.

Alternative 1

This alternative would fill the entire open water area with native sand from an onsite borrow area. Native sand would be harvested by shallow scraping of the beach throughout a 12.58-acre borrow area. To fill the 3.83-acre open water area, approximately 10,420 cubic yards of sand would be collected from the borrow area. Wetlands along the open water area would be avoided and protected with best management practices (BMPs). Newly formed dune areas would be impacted by sand harvesting. Alternative 1 would cost $330,000 to $525,000 and would be completed in approximately 60 to 90 days including time for mobilization, surveying, erecting silt fencing and BMPs, dewatering, excavation and grading, demobilization, and site cleanup.

Preferred Alternative 2

Alternative 2 would limit the fill to 2.07 acres of open water as shown on Attachment B– Alternative 2 Plan Sheet. Native sand would be harvested in a 4.87-acre borrow area that is outside of any dune formations or protected species habitats and above the mean high-water line. The borrow area would be excavated to a depth of 11 inches to provide approximately 8,940 cubic yards of sand to fill the impoundment area in front of Massengale Park and the dune breach area. This alternative would avoid impacts to 1.76 acres of open water, avoid impacts to any dunes and dune vegetation, and avoid all wetland impacts. Wetlands along the open water area would be avoided and protected with BMPs. In addition, the dune breach area will create dune habitat as well as improve storm resiliency for the area by creating a uniform dune elevation. Alternative 2 would cost $300,000 to $500,000 and would be completed in approximately 45 to

70 days including time for mobilization, surveying, erecting silt fencing and BMPs, dewatering, excavation and grading, demobilization, and site cleanup.

Alternative 3

Alternative 3 would span the existing open water with a permanent pile supported structure that would extend from Massengale Park to the lower beach area. This structure would consist of approximately 800-900 linear feet of vehicle-rated bridging and boardwalk (H-5 classification, weight rating of 10,000 lbs, 12 feet wide). Alternative 3 would require improvement of an access corridor from Massengale Park and would likely need to include pedestrian access from each side of the structure along the upper beach area. This alternative would impact open water areas with new piles (typically 10-14" treated timber or 8-12" coated steel pipe piles, spaced 6-10 ft on center). Alternative 3 would cost $2,500,000 to $3,500,000 and would be completed in approximately 80-120 days including time for mobilization, surveying, erecting silt fencing and BMPs, staging and laydown, construction, demobilization, and site cleanup.

No action Alternative

The No Action alternative is not viable or practicable as it does not satisfy the purpose and need for the project. Public safety will not be improved and protected by no action on the purpose and needs for the project.

Alternatives Summary

The No action Alternative is not practicable as it does not address the purpose and need of the project. Alternative 1 does address the purpose and need of the project; however, it is not the least impactful alternative due to the potential for impacts to protected habitats and it does not minimize impacts to regulated waters to the maximum extent practicable to accomplish project goals. Alternative 3 minimizes impacts to regulated waters; however, it does not meet the purpose and need of the project of public safety, would affect historic resources, and is not practicable due to cost. Based on this analysis, Preferred Alternative 2 is practicable, minimizes impacts to the sand sharing system, habitats, and waters and satisfies the purpose and will meet the needs of the project.

Landfill/Hazardous Waste Statement

Glynn County does not have any records of landfills or hazardous sites in the Project Area.

Public Interest Statement
Provide a statement demonstrating that ***each*** of the following public interests have been considered:

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**

The project will not harm and will have minimal effects on the sand sharing system. No sand will be removed from the sand sharing system. Sand will be excavated in a thin layer in the borrow area while avoiding all dune habitat impacts. All open water fill will be on the beach in the impoundment. No significant impacts to submerged lands are anticipated; any impacts in the borrow area would be minor and temporary. Creation of beach in the filled impoundment will potentially increase dune habitat and stability with increased areas for beach vegetation colonization. Access to the Project Area from Massengale Park will not impact dunes. All applicable BMPs will be used for project access and construction.

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**

   Impacts to marine life, wildlife, waters and wetlands have been minimized to the maximum extent practicable while designing and planning for the project goals of public safety and access. Preferred Alternative 2 preserves much of the existing impounded area and will not impact wetlands. Open water habitat will be left undisturbed that is adjacent to wetland areas and higher quality vegetated habitat areas to the northeast of the project area. The impoundment will be filled in front of Massengale Park to provide safe public access, emergency services access, and reduce public contact with impoundment water. This project will not unreasonably interfere with natural resources conservation and will provide natural beach areas that could increase available dune habitat.

3. **Whether or not the granting of a permit and the completion of the applicant's proposal will unreasonably interfere with access by and recreational use and enjoyment of public properties impacted by the project**

   The Project Area for this project is a highly used public beach. The impounded area is interfering with public enjoyment and recreational use by limiting stable and safe access to the beach. Granting of a permit for this project will facilitate increased public safety, enjoyment, and recreational use.

Glynn County appreciates your review of the enclosed information. Please review and contact me at (706) 614.4436 if you have any questions or need any additional information.

Best regards,

Stephen M. Bailey, PWS
Principal|Owner
Longleaf Consulting
www.longleafconsulting.com
706.614.4436

Enclosure(s)

Attachment A: Figures

- Figure 1 USGS 7.5 Minute Quadrangle Project Area Location Map
- Figure 2 Wetlands and Waters Delineation Map
- Figure 3 Resource Photos

Attachment B: Project Plans

- Alternative 1 Schematic Design Plans
- Alternative 2 Schematic Design Plans
- Project Design Plans
- Monitoring and Maintenance Plan

Attachment C: Shore Protection Act Application Form and JD Line Exhibit

- Shore Protection Act Permit Application Forms
- Shore Protection Act JD Line Survey Exhibit

Attachment D: USACE Standard Permit Application

Attachment A: Figures

Figure 1: USGS Project Location Map
East Beach Water Impoundment Project
Glynn County, Georgia

LONGLEAF CONSULTING
NATURAL RESOURCES | PERMITTING | RESTORATION

Legend

Project Area

Figure 2: Wetlands and Waters Delineation Map
East Beach Water Impoundment Project
Glynn County, Georgia

LONGLEAF CONSULTING
NATURAL RESOURCES | PERMITTING | RESTORATION

Legend

- Water Impoundment
- Wetlands
- Project Area
- Data Points

Figure 3: Resource Photographs January 2025

Wetland 1

Wetlands 1 and 2 Soil

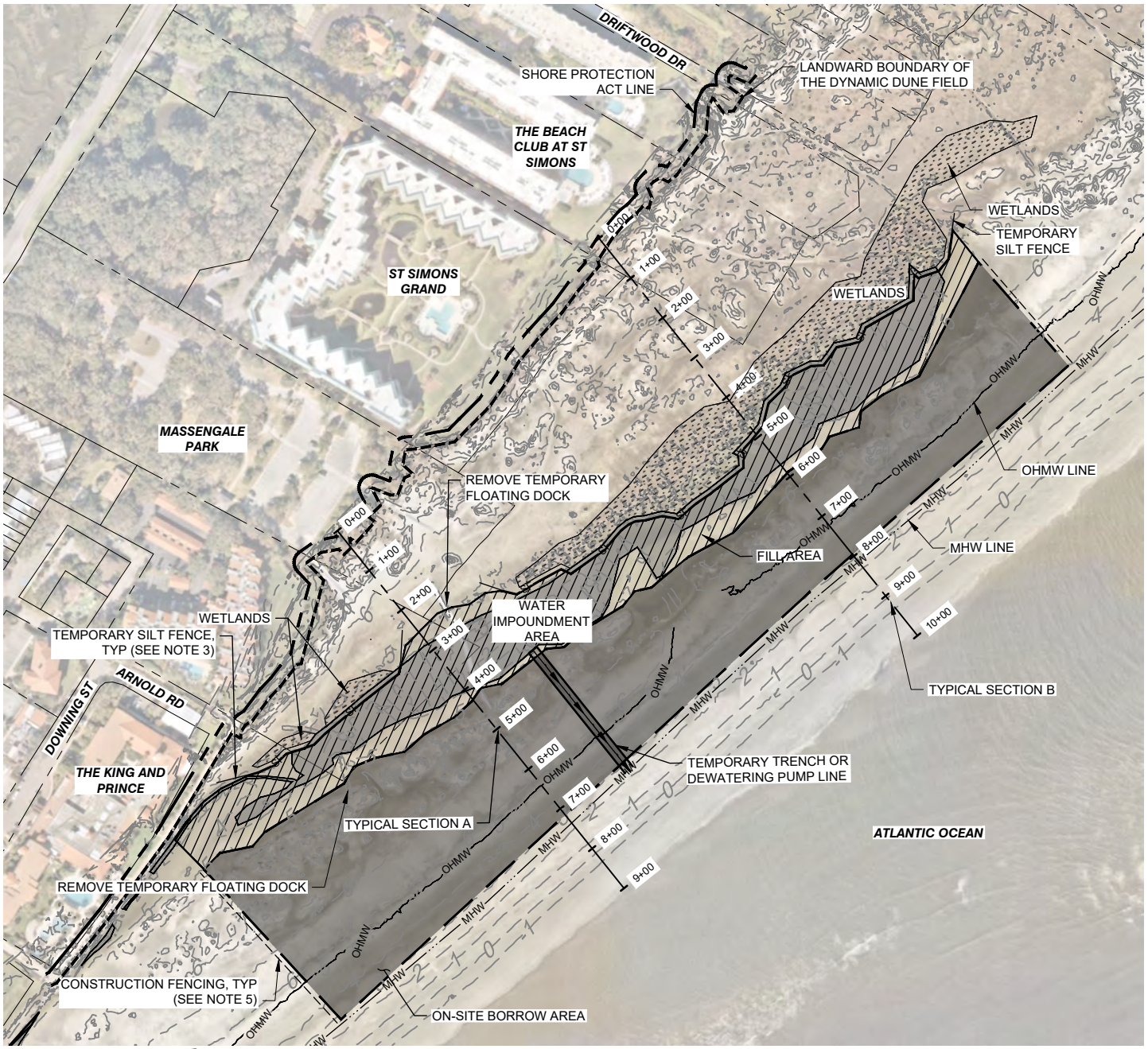
Wetlands 1 and 2

Wetland 3

Wetland 3 Soil

Water Impoundment 1

Attachment B: Project Plans



LEGEND

2	CONTOURS
MHW	MEAN HIGH WATER
	LANDWARD BOUNDARY OF THE DYNAMIC DUNE FIELD
	SPA LINE
OHWM	ORDINARY HIGH WATER MARK
	PARCEL LINES
SF	SILT FENCE
	CONSTRUCTION FENCE
	DEWATERING PUMP LINE
	WETLANDS
	EXISTING WATER IMPOUNDMENT AREA
	ON-SITE BORROW AREA
	FILL AREA

NOTES

1. AERIAL IMAGERY OBTAINED FROM NEARMAP DATED OCTOBER 2024.
2. CONTRACTOR TO PROVIDE MIN, 10' OFFSET BETWEEN WETLAND AREA AND FILL AREA.
3. TEMPORARY SILT FENCE POSITIONING TO BE DETERMINED IN FIELD. AT A MINIMUM, TEMPORARY SILT FENCES SHALL DELINEATE THE 10' OFFSET AND EXTEND BEYOND THE FILL AREA TO PREVENT FILL MATERIAL FROM SPREADING INTO ADJACENT WETLAND AREA. SILT FENCE TO BE ERECTED PRIOR TO CONSTRUCTION AND REMOVED PROMPTLY AFTER CONSTRUCTION.
4. ON-SITE BORROW AREA LOCATED IMMEDIATELY SEAWARD OF FILL AREA. ALL ON-SITE BORROW SHALL OCCUR LANDWARD OF MHW LINE.
5. CONSTRUCTION FENCE POSITIONING TO BE DETERMINED IN FIELD. AT A MINIMUM, CONSTRUCTION FENCE SHALL DELINEATE DUNE VEGETATION OR OTHER SENSITIVE HABITATS THAT ARE TO BE AVOIDED DURING CONSTRUCTION. CONSTRUCTION FENCE TO BE ERECTED PRIOR TO CONSTRUCTION AND REMOVED PROMPTLY AFTER CONSTRUCTION.
6. SHORE PROTECTION ACT LINE IS 25 FT, AS MEASURED AT RIGHT ANGLES, FROM THE LANDWARD BOUNDARY OF THE DYNAMIC DUNE FIELD.

0 300'

SCALE 1" = 300'

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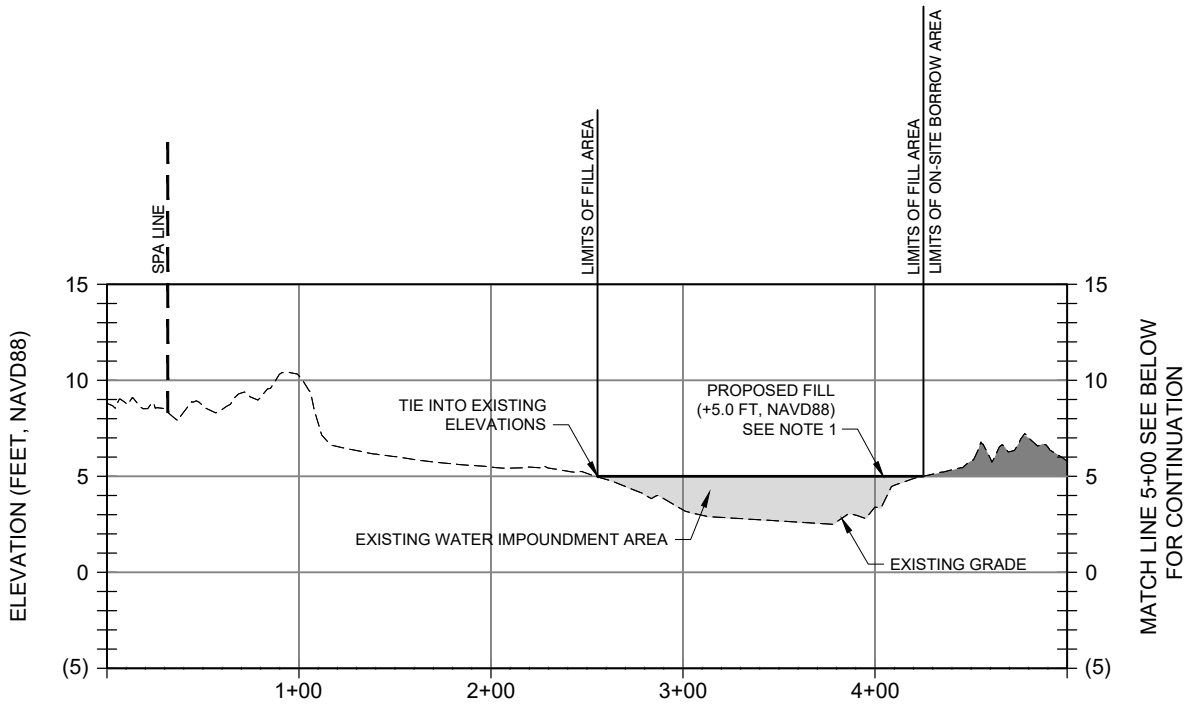
FIGURE 1 ALTERNATIVE 1
SCHEMATIC DESIGN PLAN

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025



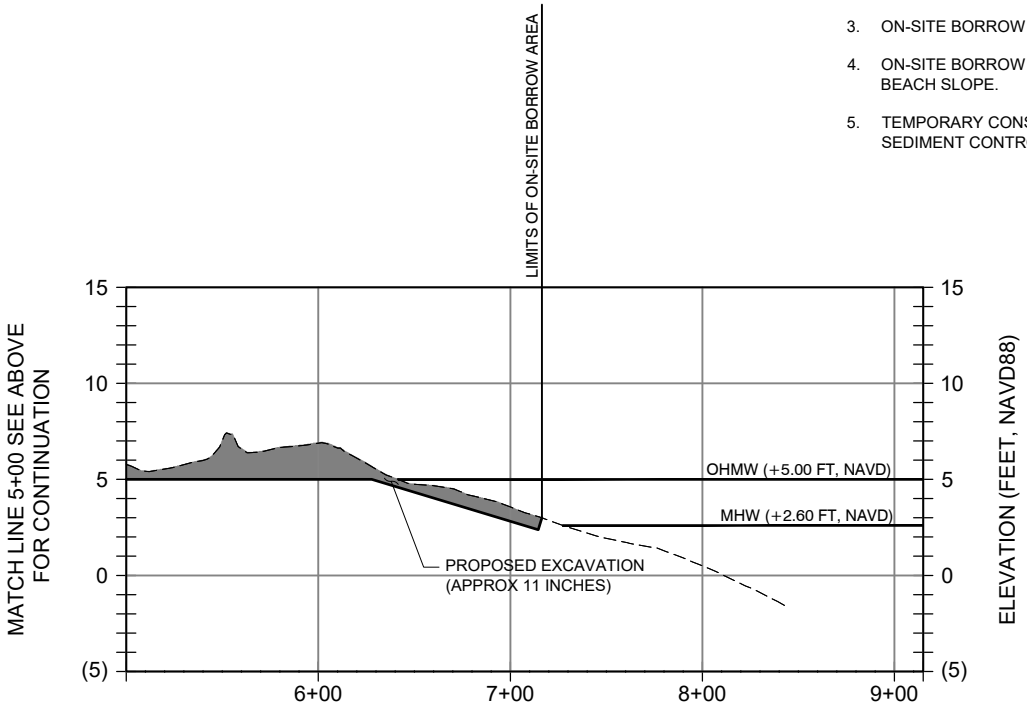
SECTION A

LEGEND

- EXISTING GRADE
- PROPOSED FILL
- ON-SITE-BORROW AREA
- FILL AREA

NOTES

1. FILL MATERIAL TO BE EXCAVATED MATERIAL FROM THE ON-SITE BORROW AREA.
2. PROPOSED EXCAVATION SHALL BE LIMITED TO THE MINIMUM PRACTICABLE TO FILL IN EXISTING WATER IMPOUNDMENT AREA AND DUNE BREACH AREA.
3. ON-SITE BORROW TO OCCUR LANDWARD OF +3.00 FT NAVD.
4. ON-SITE BORROW AREA TO BE GRADED TO MATCH EXISTING BEACH SLOPE.
5. TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES NOT SHOWN FOR CLARITY.



SECTION A

0 10' VERT. SCALE 1" = 10'

0 100' HORIZONTALSCALE 1" = 100'

300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
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FIGURE 2 ALTERNATIVE 1
CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

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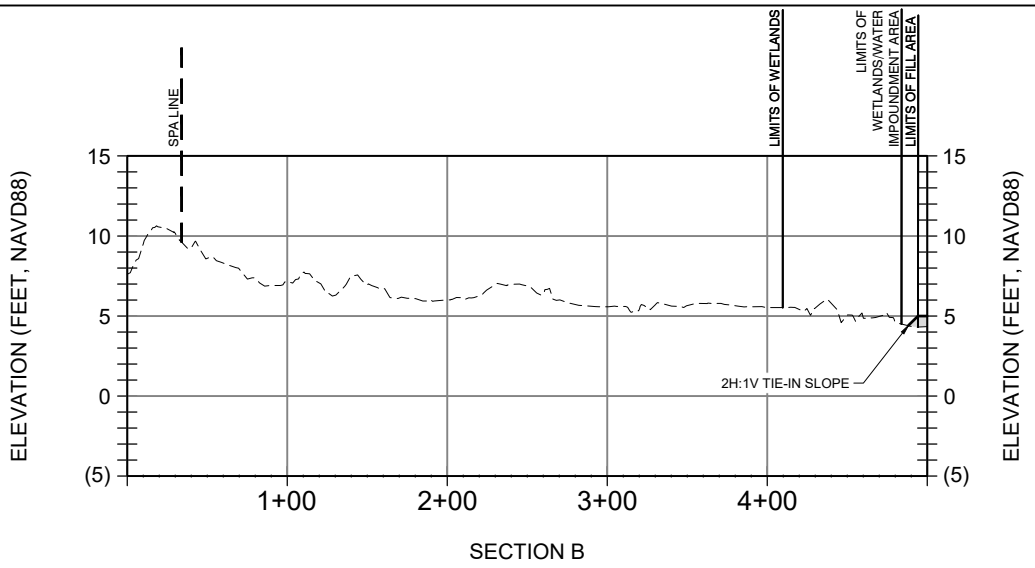
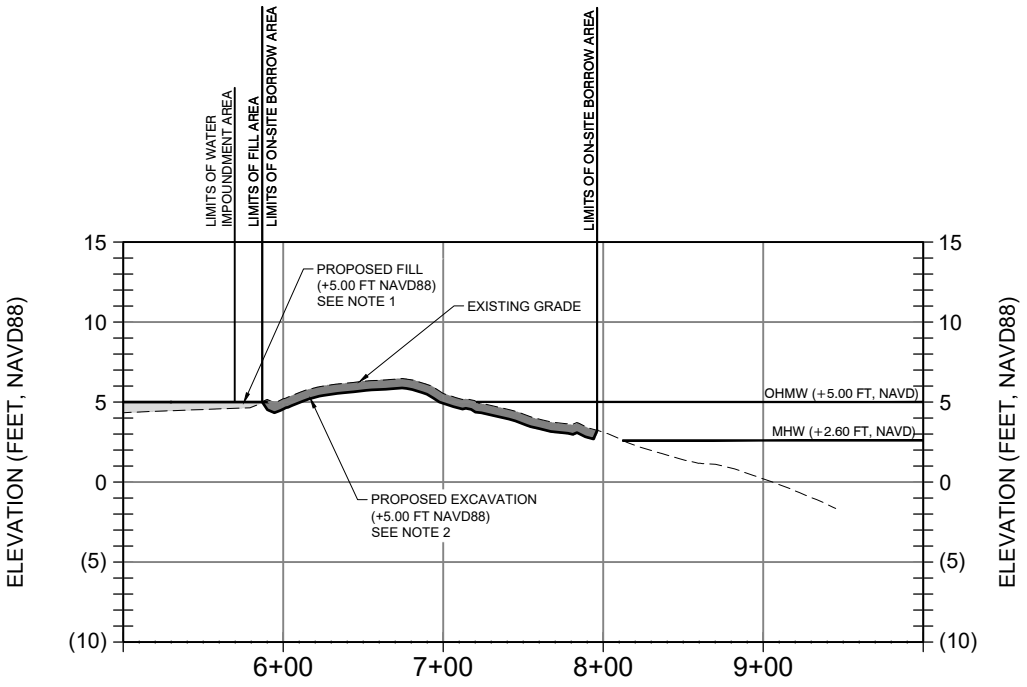


SECTION B



SECTION B

LEGEND

- EXISTING GRADE
- PROPOSED FILL
- ON-SITE-BORROW AREA
- FILL AREA

ANTICIPATED CONSTRUCTION SEQUENCE

1. CONTACT GEORGIA 811 AT LEAST 3 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION/DIGGING.
2. INSTALL TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES.
3. DEWATER PROPOSED FILL AREA. CONSTRUCTION EQUIPMENT TO TRAVERSE SITE ONLY WHEN SUFFICIENTLY DEWATERED.
4. EXCAVATE AND GRADE EXISTING SAND FROM THE ON-SITE BORROW AREA INTO THE FILL AREA.
5. PERFORM FINAL GRADING, ENSURING FINISHED GRADE SLOPES SEAWARD AND MATCHES EXISTING BEACH SLOPE.
6. REMOVE TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES.

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FIGURE 3 ALTERNATIVE 1
CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

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PROJECT NUMBER: 240281-06
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QUANITITIES		
Area of Property	N/A - This project site is located on the open beach on public land	
Proposed Project Footprint	18.67 Acres	813,316 SQ. FT.
Jurisdictional Footprint	18.67 Acres	813,316 SQ. FT.
Proposed Project Footprint within Jurisdiction	18.67 Acres	813,316 SQ. FT.
Open Water	3.83 Acres	166,560 SQ. FT.
Fill	5.38 Acres	234,325 SQ. FT.
Upper Beach Borrow	12.41 Acres	540,715 SQ. ST
Fill Volume	10,420 CU Yards	

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FIGURE 4 ALTERNATIVE 1
QUANTITIES

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

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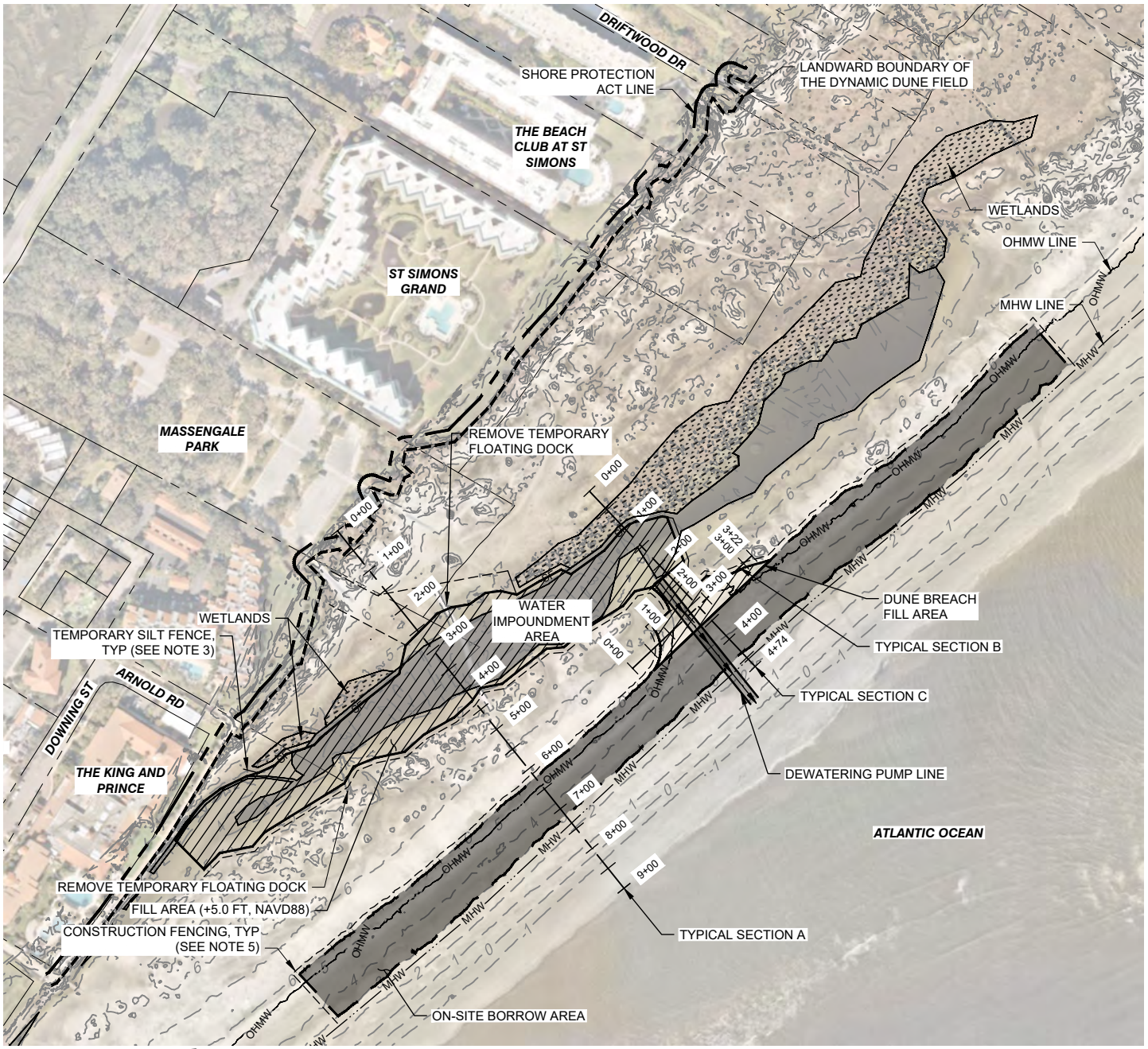

LEGEND

2	CONTOURS
MHW	MEAN HIGH WATER
	LANDWARD BOUNDARY OF THE DYNAMIC DUNE FIELD
	SPA LINE
OHWM	ORDINARY HIGH WATER MARK
	PARCEL LINES
SF	SILT FENCE
	CONSTRUCTION FENCE
	DEWATERING PUMP LINE
	WETLANDS
	EXISTING WATER IMPOUNDMENT AREA
	ON-SITE BORROW AREA
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6. SHORE PROTECTION ACT LINE IS 25 FT, AS MEASURED AT RIGHT ANGLES, FROM THE LANDWARD BOUNDARY OF THE DYNAMIC DUNE FIELD.

0 300'

SCALE 1" = 300'

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FIGURE 5 ALTERNATIVE 2
SCHEMATIC DESIGN PLAN

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

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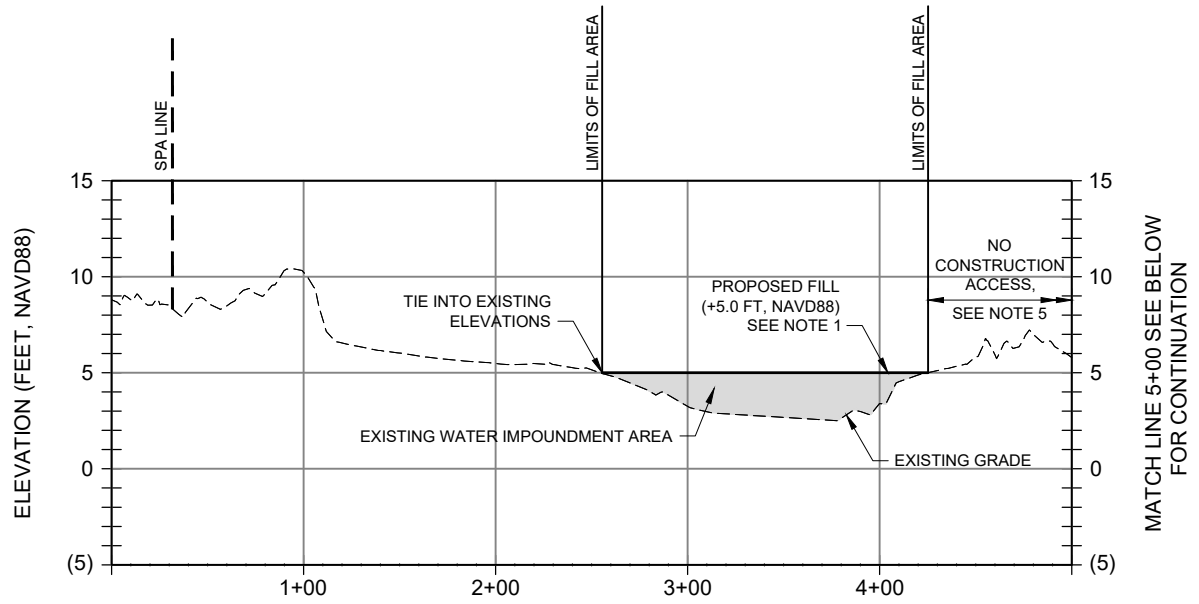

SECTION A

LEGEND

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- ON-SITE-BORROW AREA
- FILL AREA

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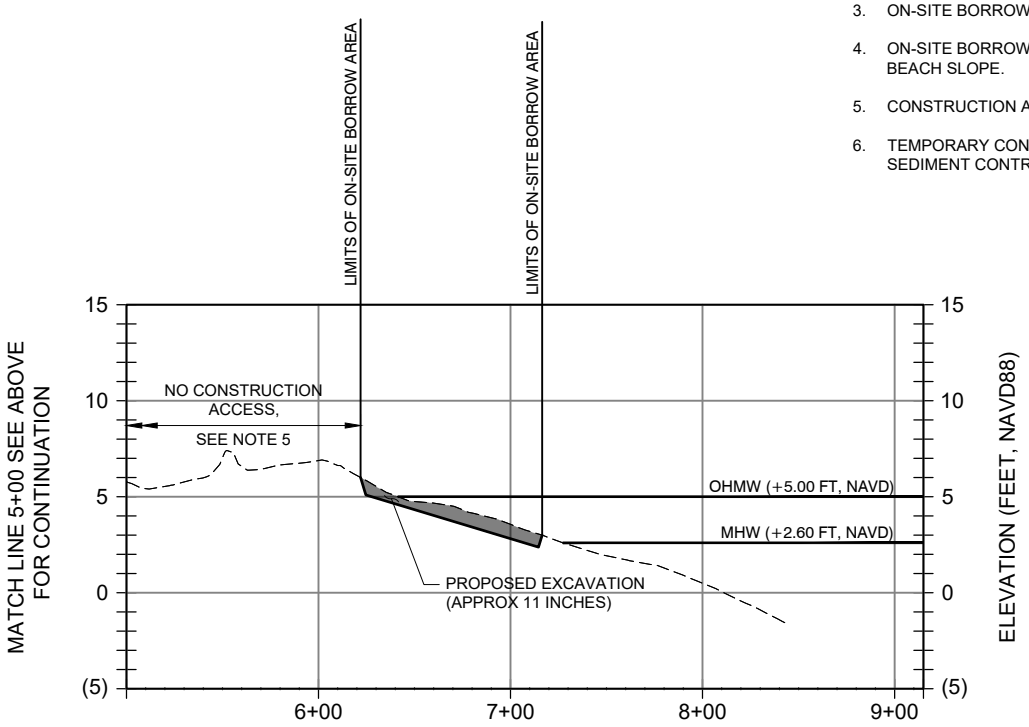
3. ON-SITE BORROW TO OCCUR LANDWARD OF +3.00 FT NAVD.
4. ON-SITE BORROW AREA TO BE GRADED TO MATCH EXISTING BEACH SLOPE.
5. CONSTRUCTION ACCESS TO BE THROUGH ACCESS CORRIDOR.
6. TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES NOT SHOWN FOR CLARITY.



SECTION A

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FIGURE 6 ALTERNATIVE 2
CROSS SECTIONS & DETAILS

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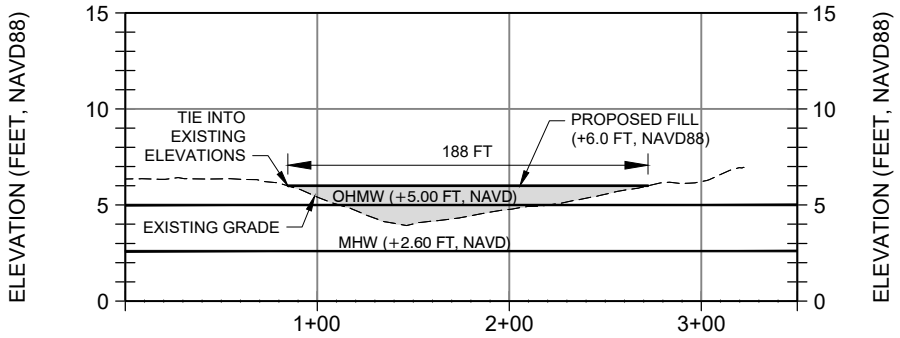
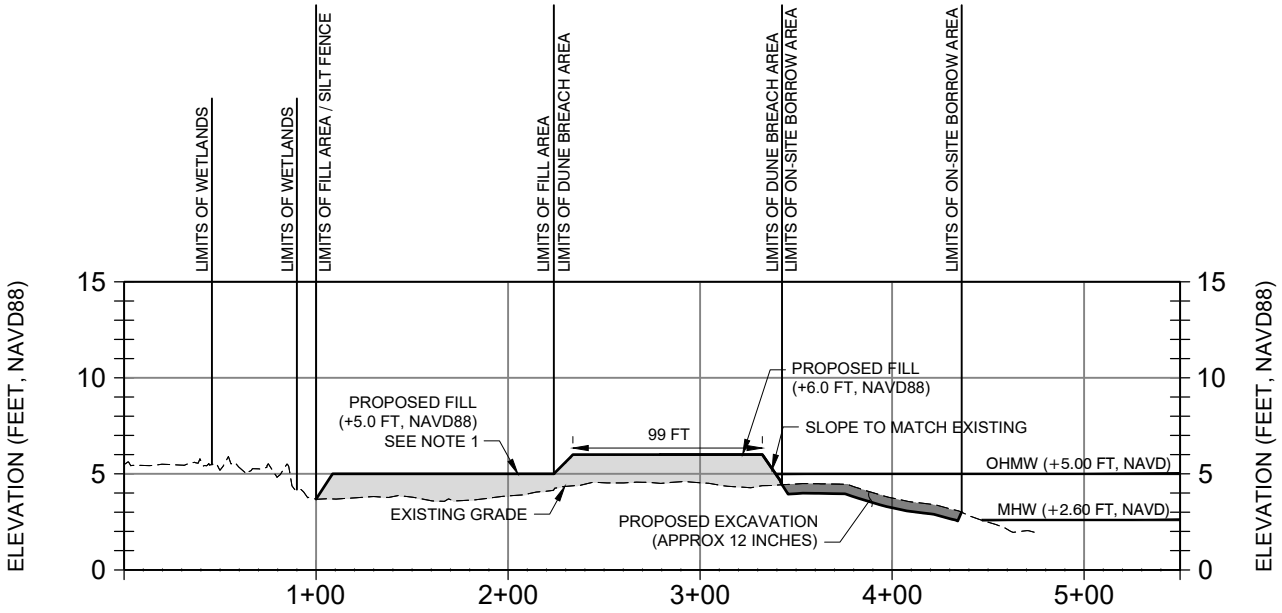


SECTION B



SECTION C

LEGEND

- EXISTING GRADE
- PROPOSED FILL
- ON-SITE-BORROW AREA
- FILL AREA

ANTICIPATED CONSTRUCTION SEQUENCE

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FIGURE 7 ALTERNATIVE 2
CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

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SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025

QUANITITIES		
Area of Property	N/A - This project site is located on the open beach on public land	
Proposed Project Footprint	9.74 Acres	424,285 SQ. FT.
Jurisdictional Footprint	9.74 Acres	424,285 SQ. FT.
Proposed Project Footprint within Jurisdiction	9.74 Acres	424,285 SQ. FT.
Open Water	2.07 Acres	90,049 SQ. FT.
Upper Beach Fill	1.91 Acres	83,696 SQ. FT.
Upper Beach Borrow	4.87 Acres	212,265 SQ. ST
Fill Volume	8,940 CU Yards	

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FIGURE 8 ALTERNATIVE 2
QUANTITIES

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
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PROJECT NUMBER: 240281-06
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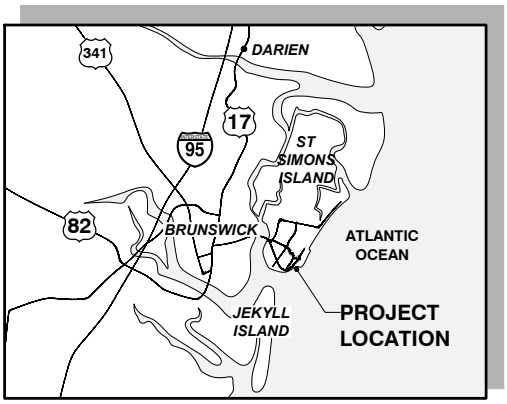
GLYNN COUNTY

EAST BEACH WATER IMPOUNDMENT

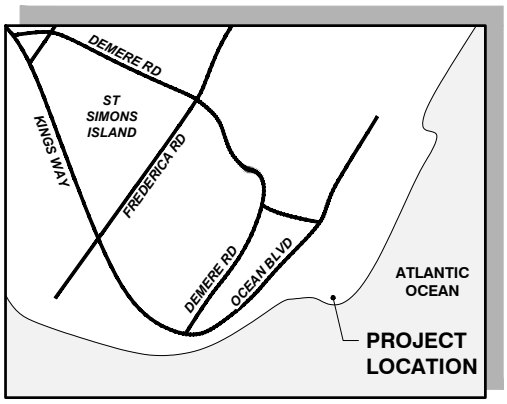
ST. SIMONS ISLAND, GEORGIA

M&N JOB #: 240281-06



VICINITY MAP

SCALE: NTS



LOCATION MAP

SCALE: NTS

DRAWING INDEX	
SHEET NUMBER	SHEET TITLE
G-001	COVER SHEET
G-002	NOTES, ABBREVIATIONS & LEGENDS
G-003	NOTES, ABBREVIATIONS & LEGENDS
V-101	EXISTING CONDITIONS / CONSTRUCTION ACCESS
CS101	SCHEMATIC DESIGN PLAN
CS301	CROSS-SECTIONS & DETAILS
CS302	CROSS-SECTIONS & DETAILS
C-601	QUANTITIES

GOVERNING STANDARDS AND SPECIFICATIONS:
DESIGN STANDARDS AND APPLICABLE CODES USE GA DNR, GEORGIA CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTARTION (OSHA) REGULATIONS.

GEORGIA811 Contact 811 before you dig.

300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
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COVER SHEET

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

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SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. G-001

GENERAL NOTES

1. ALL CONSTRUCTION ASSOCIATED WITH THIS PROJECT MUST BE IN ACCORDANCE WITH APPLICABLE CODES & AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO OWNER, LOCAL, AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. ANY DISCREPANCY MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER & ENGINEER OF RECORD.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF/HERSELF WITH THE PROJECT SITE & TO DETERMINE TOPOGRAPHIC OR UNDERGROUND FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. THE CONTRACTOR MUST INCLUDE IN HIS BID PRICE, THE COST OF RELOCATING OR REPLACING IN KIND ANY FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED BY THE OWNER IN THE EVENT THE CONTRACTOR NEGLECTS TO ACCOUNT FOR THIS WORK IN HIS BID PRICE.
3. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING TREES, STRUCTURES, & UTILITIES WHICH MAY OR MAY NOT BE SHOWN ON THE PLANS. ANY EXISTING STRUCTURE, PAVEMENT, TREES OR OTHER EXISTING UTILITIES NOT SPECIFIED FOR REMOVAL WHICH ARE DAMAGED, EXPOSED OR IN ANY WAY DISTURBED BY CONSTRUCTION PERFORMED, SHALL BE REPAIRED, PATCHED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER .
4. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF/HERSELF WITH CURRENT SITE CONDITIONS & SHALL REPORT ANY DISCREPANCIES TO THE OWNER & EOR PRIOR TO STARTING WORK.
5. THE CONTRACTOR SHALL KEEP THE SITE REASONABLY FREE FROM DEBRIS, TRASH, & CONSTRUCTION WASTE. BUILDING MATERIAL AND/OR CONSTRUCTION DEBRIS STORED ADJACENT TO OR UPON THE ROADWAY SHALL BE ADEQUATELY MARKED AT ALL TIMES FOR PEDESTRIAN & TRAFFIC SAFETY.
6. CONTRACTOR SHALL CONTACT GEORGIA 811 AT LEAST 3 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION/DIGGING TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES.
7. CONTRACTOR TO ADHERE TO APPLICABLE NOISE ORDINANCES THAT PROHIBIT ANY PLAIN AUDIBLE SOUND IN CONNECTION WITH CONSTRUCTION ACTIVITIES OUTSIDE OF PERMITTED HOURS.
8. ALL ENVIRONMENTAL REGULATORY PERMITS MUST BE OBTAINED. CONTRACTOR IS REQUIRED TO OBTAIN ALL OTHER NECESSARY PERMITS AND/OR APPROVALS PRIOR TO THE START OF CONSTRUCTION. COST OF ALL OTHER NECESSARY PERMITS IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL LANDSCAPED/OPEN AREAS, SIDEWALKS, PAVEMENTS & OTHER IMPROVEMENTS IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.
10. THE TRAFFIC CONTROL PLAN FOR THE PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST PRODUCE HIS/HER OWN TRAFFIC CONTROL PLAN & MUST HAVE SAID PLAN APPROVED BY THE OWNER AND CITY PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE GRANTED BY THE OWNER FOR TRAFFIC CONTROL COSTS ASSOCIATED WITH THIS PROJECT AFTER PROJECT AWARD. TRAFFIC CONTROL PLAN SHALL INCLUDE BUT NOT LIMITED TO MESSAGE BOARDS TO INFORM EMERGENCY SERVICES WITHIN THE VICINITY OF THE PROJECT LIMITS ABOUT THE CONSTRUCTION SCHEDULE.
11. SURVEY MONUMENTS WITHIN THE LIMITS OF THE PROJECT ARE TO BE PROTECTED.
12. NO DEVIATIONS FROM APPROVED PLANS SHALL BE PERMITTED WITHOUT THE WRITTEN CONSENT THE OWNER AND GA DNR.
13. WORK PERFORMED UNDER THIS PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL THE NECESSARY DOCUMENTS ARE RECEIVED BY THE OWNER.
14. ALL DEFECTIVE WORK NOT ACCEPTED BY THE OWNER, EOR OR BY ANY GOVERNMENT PERMITTING AGENCY SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
15. ALL EXISTING GRASSED OR LANDSCAPED AREAS, ALL DECORATIVE FEATURES (INCLUDING PAVERS) AND PAVED GROUND CONDITIONS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED COMPLETELY AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
16. DAMAGED ITEMS SHALL BE RESTORED TO THEIR ORIGINAL DESIGN AND FUNCTION AT THE CONTRACTOR'S EXPENSE.
17. A PRE-CONSTRUCTION MEETING WILL BE HELD ON SITE TO VERIFY DETAILS AND METHODS OF CONSTRUCTION.
18. THESE PLANS ARE INCOMPLETE WITHOUT THE TECHNICAL SPECIFICATIONS.
19. CONTRACTOR SHALL NOT BLOCK OR OBSTRUCT PUBLIC BEACH ACCESS PARKING WITHOUT WRITTEN APPROVAL FROM THE OWNER.
20. CONTRACTOR WILL COORDINATE DAILY WITH THE OWNER'S ENVIRONMENTAL MONITOR AND WILL FOLLOW ALL REQUIRED ENVIRONMENTAL PERMIT CONDITIONS AND MANAGEMENT PRACTICES.
21. CONTRACTOR SHALL DESIGN, INSTALL, AND MAINTAIN EFFECTIVE EROSION AND SEDIMENT CONTROL MEASURES (BMPs) IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
22. CONTRACTOR SHALL AVOID IMPACTS TO EXISTING DUNES AND DUNE HABITAT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY DUNE HABITAT LOCATIONS AND ERECT AND MAINTAIN CONSTRUCTION FENCING OR SIMILAR TO PREVENT IMPACTS.

SURVEY NOTES

1. THE ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). THE CONVERSION BETWEEN NATIONAL GEODETIC VERTICAL DATUM (NGVD 29) AND THE NAVD 88 FOR THE PROJECT SITE IS APPROXIMATELY 0.97 FEET (EXAMPLE: 0.0 FEET NGVD = -0.97 FEET NAVD).
2. WETLAND SURVEY DATA PERFORMED BY LONGLEAF ENVIRONMENTAL CONSULTING DATED FEBRUARY 2025.
3. TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA PERFORMED BY ARC SURVEYING & MAPPING DATED FEBRUARY 2025.

300 BULL ST., SUITE 200
SAVANNAH, GA, 31401
MOFFATT NICHOL.COM

moffatt & nichol

NOTES, ABBREVIATIONS & LEGENDS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. G-002

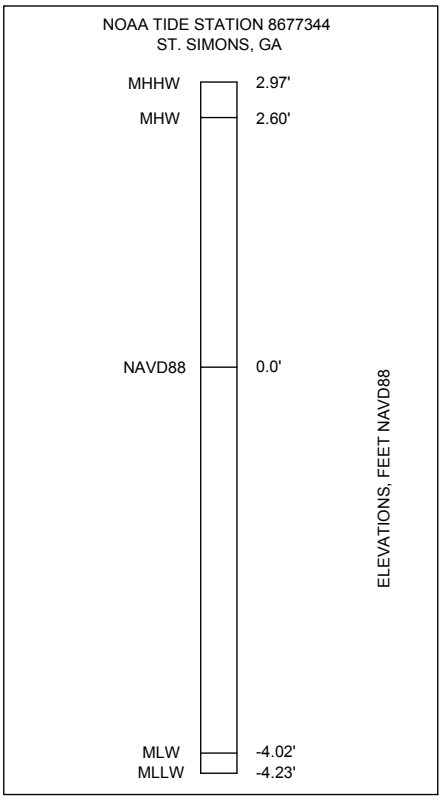
4. THE FOLLOWING TIDAL DATUM RELATIONSHIP IS BASED ON NOAA TIDE STATION 8677344 - ST. SIMONS, GA.

TIDAL DATA

MEAN HIGHER HIGH WATER (MHHW)	2.97' NAVD
MEAN HIGH WATER (MHW)	2.60' NAVD
NORTH AMERICAN VERTICAL DATUM	0.00 NAVD
MEAN LOW WATER (MLW)	-4.02' NAVD
MEAN LOWER LOW WATER (MLLW)	-4.23' NAVD

5. HORIZONTAL CONTROL REFERENCED TO NORTH AMERICAN DATUM OF 1983, STATE PLANE COORDINATE SYSTEM, GEORGIA EAST ZONE, IN FEET.

6. PARCELS BOUNDARIES BASED GIS FILES RECEIVED FROM GLYNN COUNTY GEOGRAPHIC INFORMATION SYSTEM DEPARTMENT.

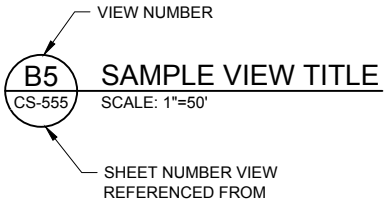


AERIAL IMAGERY

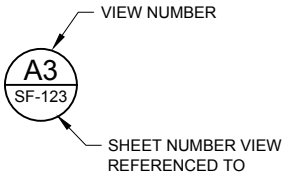
1. AERIAL IMAGERY OBTAINED FROM NEARMAP DATED OCTOBER 2024.

BEACH FILL NOTES

1. FILL MATERIAL TO BE EXCAVATED MATERIAL FROM THE ON-SITE BORROW AREA.
2. PLACE FILL TO THE GRADES SHOWN.
3. THE VERTICAL TOLERANCE FOR EACH FILL TEMPLATE IS ±0.25 FEET.
4. THE INTENT OF THE PROJECT IS TO PLACE THE REQUIRED VOLUME OF BEACH FILL WITHIN THE DESIGN TEMPLATE IN ACCORDANCE WITH ALL REQUIREMENTS.



VIEW TITLE



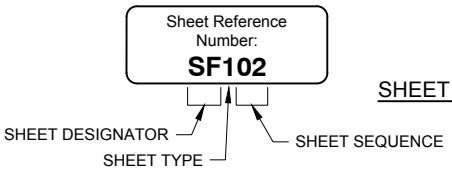
DETAIL CALLOUT

DISCIPLINE DESIGNATORS	
DISCIPLINE	DESIGNATOR
GENERAL	G
SURVEY/MAPPING	V
CIVIL	C

SECONDARY DESIGNATORS	
SITE	S

REVISION NUMBERING	
A00, A01...	PRE-BID SUBMITTALS
B00, B01...	BID SUBMITTALS
000, 001...	CONSTRUCTION SUBMITTALS

SHEET TYPE DESIGNATORS	
0	GENERAL (COVER SHEET, LEGEND, NOTES)
1	PLANS (HORIZONTAL VIEWS)
3	SECTIONS (OVERALL VIEWS)
5	DETAILS (MAY BE PLAN, SECT. OR ELEV. VIEWS)
6	SCHEDULES / TABLES



SHEET NUMBERING

ABBREVIATIONS

CRD	COASTAL RESOURCE DIVISION
CY	CUBIC YARD
EOR	ENGINEER OF RECORD
FT(')	FEET
GA DNR	GEORGIA DEPARTMENT OF NATURAL RESOURCES
HORZ	HORIZONTAL
HTL	HIGH TIDE LINE
IN(")	INCHES
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
N	NORTH
NAD	NORTH AMERICAN DATUM OF 1983
NAVD	NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NTS	NOT TO SCALE
OHWM	ORDINARY HIGH WATER MARK
OLWM	ORDINARY LOW WATER MARK
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
SPA	SHORE PROTECTION ACT
TYP	TYPICAL
USACE	US ARMY CORPS OF ENGINEERS
VERT	VERTICAL

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NOTES, ABBREVIATIONS & LEGENDS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. G-003

LEGEND

- CONTOURS
- MEAN HIGH WATER (MHW)
- LANDWARD BOUNDARY OF DYNAMIC DUNE FIELD
- SPA LINE
- PARCEL LINES
- WETLANDS
- EXISTING WATER IMPOUNDMENT AREA
- CONSTRUCTION CORRIDOR
- ORDINARY HIGH WATER MARK (OHWM)
- ORDINARY LOW WATER MARK (OLWM)

NOTES

1. AERIAL IMAGERY OBTAINED FROM NEARMAP DATED OCTOBER 2024.
2. WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONGLEAF ENVIRONMENTAL CONSULTING. ADDITIONAL WETLANDS ARE ANTICIPATED TO OCCUR BEYOND THE EXTENTS SHOWN.
3. ALL EQUIPMENT AND IMPORTED FILL TO ACCESS THE SITE THROUGH MASSENGALE PARK. EXACT LOCATION TO BE DETERMINED BY THE OWNER.
4. SHORE PROTECTION ACT LINE IS 25 FT, AS MEASURED AT RIGHT ANGLES, FROM THE LANDWARD BOUNDARY OF THE DYNAMIC DUNE FIELD

0 300' 600'

SCALE 1" = 300'

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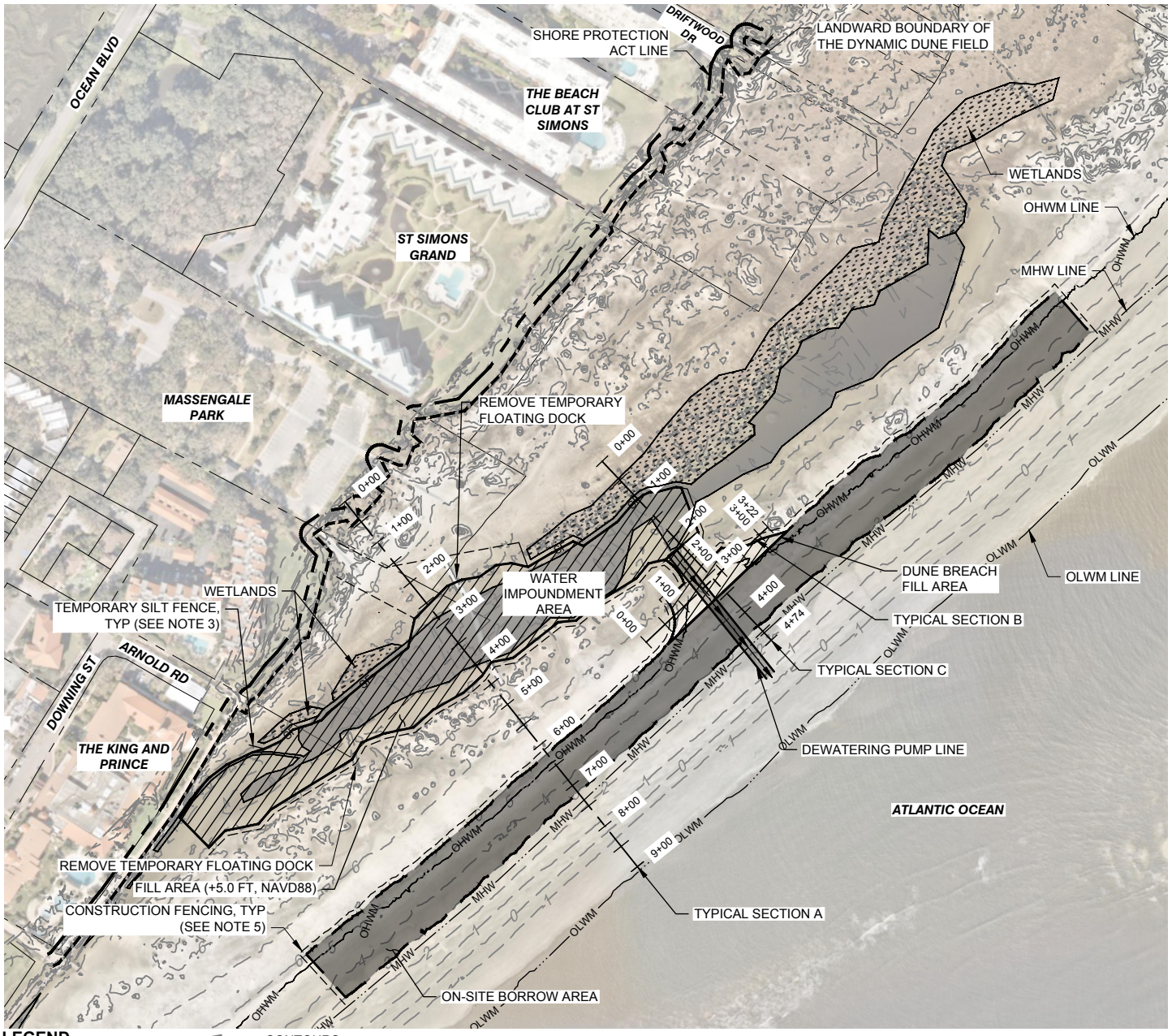
EXISTING CONDITIONS / CONSTRUCTION ACCESS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. V-101



LEGEND

- CONTOURS
- MEAN HIGH WATER
- LANDWARD BOUNDARY OF THE DYNAMIC FIELD
- SPA LINE
- PARCEL LINES
- SILT FENCE
- CONSTRUCTION FENCE
- DEWATERING PUMP LINE
- WETLANDS
- EXISTING WATER IMPOUNDMENT AREA
- ON-SITE BORROW AREA
- FILL AREA
- ORDINARY HIGH WATER MARK
- ORDINARY LOW WATER MARK

NOTES

1. AERIAL IMAGERY OBTAINED FROM NEARMAP DATED OCTOBER 2024.
2. CONTRACTOR TO PROVIDE MIN, 10' OFFSET BETWEEN WETLAND AREA AND FILL AREA.
3. TEMPORARY SILT FENCE POSITIONING TO BE DETERMINED IN FIELD. AT A MINIMUM, TEMPORARY SILT FENCES SHALL DELINEATE THE 10' OFFSET AND EXTEND BEYOND THE FILL AREA TO PREVENT FILL MATERIAL FROM SPREADING INTO ADJACENT WETLAND AREA. SILT FENCE TO BE ERECTED PRIOR TO CONSTRUCTION AND REMOVED PROMPTLY AFTER CONSTRUCTION.
4. ON-SITE BORROW AREA LOCATED IMMEDIATELY SEAWARD OF FILL AREA. ALL ON-SITE BORROW SHALL OCCUR LANDWARD OF MHW LINE.
5. CONSTRUCTION FENCE POSITIONING TO BE DETERMINED IN FIELD. AT A MINIMUM, CONSTRUCTION FENCE SHALL DELINEATE DUNE VEGETATION OR OTHER SENSITIVE HABITATS THAT ARE TO BE AVOIDED DURING CONSTRUCTION. CONSTRUCTION FENCE TO BE ERECTED PRIOR TO CONSTRUCTION AND REMOVED PROMPTLY AFTER CONSTRUCTION.

0 300' 600'

SCALE 1" = 300'

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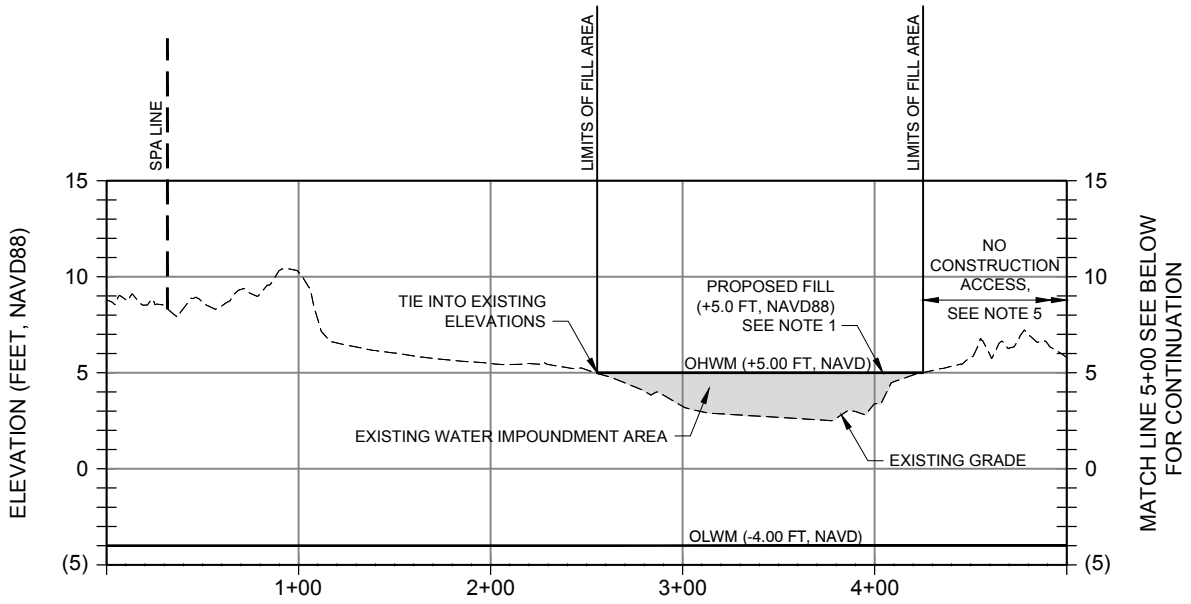
SCHEMATIC DESIGN PLAN

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. CS101



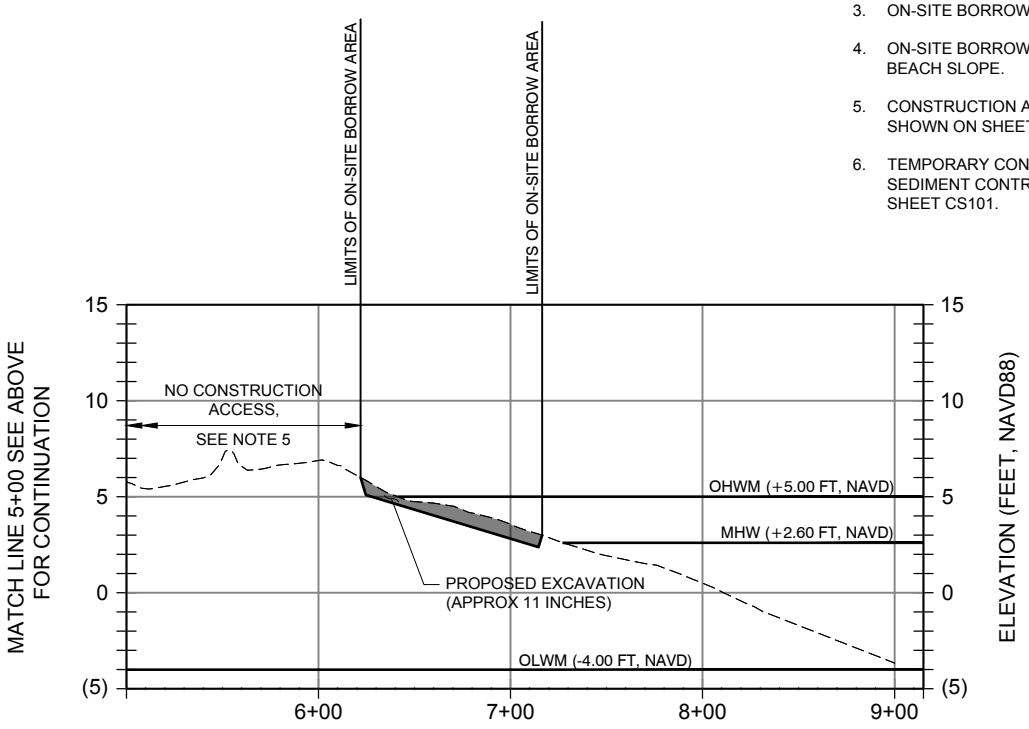
SECTION A

LEGEND

- EXISTING GRADE
- PROPOSED FILL
- ON-SITE-BORROW AREA
- FILL AREA

NOTES

1. FILL MATERIAL TO BE EXCAVATED MATERIAL FROM THE ON-SITE BORROW AREA.
2. PROPOSED EXCAVATION SHALL BE LIMITED TO THE MINIMUM PRACTICABLE TO FILL IN EXISTING WATER IMPOUNDMENT AREA AND DUNE BREACH AREA.
3. ON-SITE BORROW TO OCCUR LANDWARD OF +3.00 FT NAVD.
4. ON-SITE BORROW AREA TO BE GRADED TO MATCH EXISTING BEACH SLOPE.
5. CONSTRUCTION ACCESS TO BE THROUGH ACCESS CORRIDOR SHOWN ON SHEET V-101.
6. TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES NOT SHOWN FOR CLARITY. SEE SHEET CS101.



SECTION A

0 10' VERT. SCALE 1" = 10'

0 100' HORIZONTALSCALE 1" = 100'

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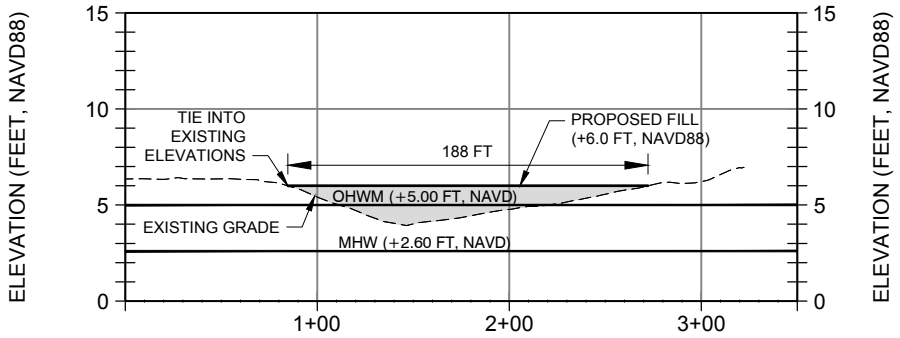
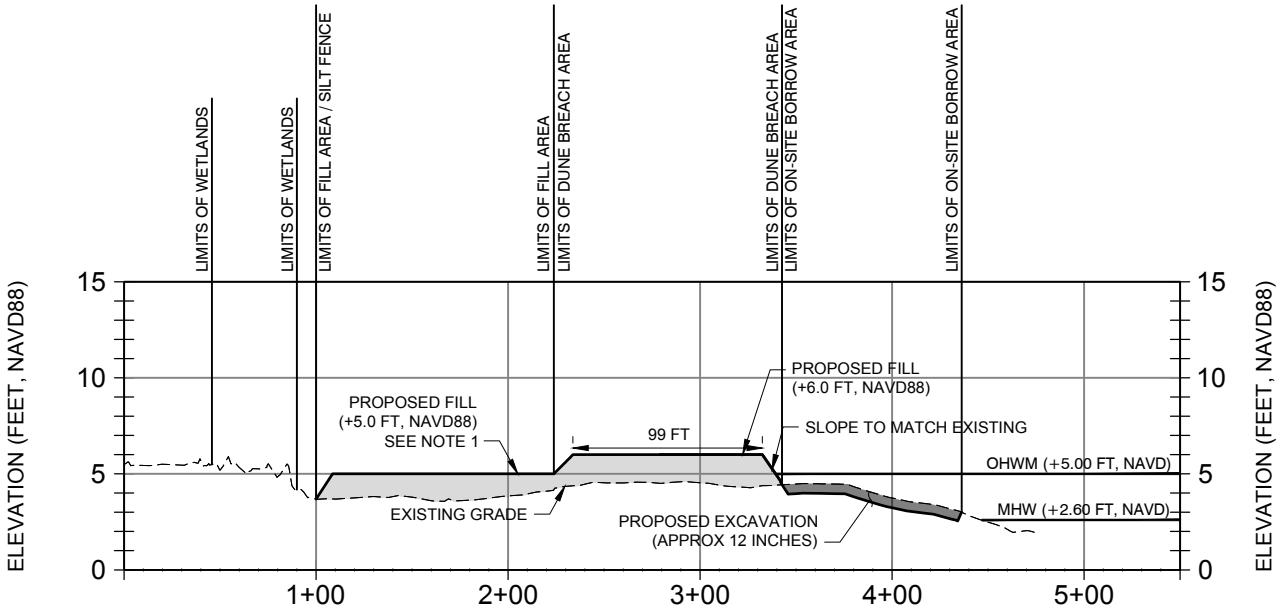
CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. CS301



SECTION B



SECTION C

LEGEND

- EXISTING GRADE
- PROPOSED FILL
- ON-SITE-BORROW AREA
- FILL AREA

ANTICIPATED CONSTRUCTION SEQUENCE

1. CONTACT GEORGIA 811 AT LEAST 3 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION/DIGGING.
2. INSTALL TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES.
3. DEWATER PROPOSED FILL AREA. CONSTRUCTION EQUIPMENT TO TRAVERSE SITE ONLY WHEN SUFFICIENTLY DEWATERED.
4. EXCAVATE AND GRADE EXISTING SAND FROM THE ON-SITE BORROW AREA INTO THE FILL AREA.
5. PERFORM FINAL GRADING, ENSURING FINISHED GRADE SLOPES SEAWARD AND MATCHES EXISTING BEACH SLOPE.
6. REMOVE TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES.

0 10' VERT. SCALE 1" = 10'
0 100' HORIZONTALSCALE 1" = 100'

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CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. CS302

GA DNR QUANITITIES		
Area of Property	N/A - This project site is located on the open beach	
Proposed Project Footprint	9.74 Acres	424,285 SQ. FT.
Jurisdictional Footprint	9.74 Acres	424,285 SQ. FT.
Proposed Project Footprint within Jurisdiction	9.74 Acres	424,285 SQ. FT.
Open Water	2.07 Acres	90,049 SQ. FT.
Upper Beach Fill	1.91 Acres	83,696 SQ. FT.
Upper Beach Borrow	4.87 Acres	212,265 SQ. FT
Total Fill Volume	8,940 CU Yards	

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QUANTITIES

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 09/26/2025
SHEET REF NO. C-601

Monitoring and Maintenance Plan
Project Location: East Beach, St Simons Island, Georgia

Site Description

Location: East Beach beach/dune system

Fill type: 100% of fill volume from onsite borrow area. All sand to be in accordance with GA DNR Requirements for Beach Nourishment Projects

- Sediment free of construction debris, rocks, or other foreign matter and shall not contain, on average, greater than 10% fines and shall not contain, on average, greater than 5% coarse gravel.
- Shell content should be below 15% of total weight
- Sediment color should be between 10YR 6.5/1 and 10YR 7.0/1 on Munsell soil color chart

Vegetation: three vegetative communities along landward fringe of proposed project.

Proposed Activity

The proposed Project includes on-site excavation and grading of existing sand from the on-site borrow area, and filling of an existing water impoundment located on East Beach. The proposed templates will avoid impacts to existing wetland areas, with a minimum 10-foot setback from the surveyed wetland boundary marked by temporary silt fences. The fill template will have a typical elevation of +5.00 feet (+1.52 meters) NAVD and tie into the existing beach grade on the landward side. The proposed fill will feature a 2H:1V landward slope in the areas adjacent to wetland habitat and a construction foreshore slope that matches the existing beach grade. All construction activity is proposed landward of the Mean High Water line. Contractor access to the Project area is anticipated to be through the public beach access at Massengale Park.

Construction Timing and Duration

Construction is proposed to occur outside of marine turtle nesting season (May 1 to October 31). Pending regulatory approvals, construction is anticipated to begin as early as November 1, 2025 and conclude prior to April 30, 2026.

Anticipated Construction Sequence

1. Contact Georgia 811 at least 3 business days prior to construction.
2. Install temporary silt fence and other sediment control measures.
3. Drain water from the impoundment.
4. Excavate and grade existing sand from the on-site borrow area in the fill area.
5. Perform final grading, ensuring finished grade slopes seaward and matches existing beach slope.
6. Remove temporary silt fence and other sediment control measures.

Monitoring Program

- Vegetation
  - Method: visual inspection and photographic documentation from fixed locations
  - Tools: Camera, plant identification guide, logbook
- Erosion and sedimentation
  - Method: visual inspection of fill and borrow areas, inspecting slopes, drainage paths, and beach/dune interface
  - Indicators: rills, gullies, sediment plumes, washouts
  - Tools: Camera, tape reel, logbook
- Stormwater management
  - Method: observe during/after rain
  - Indicators: ponding, runoff channels, washouts
  - Tools: Camera, logbook

Monitoring Schedule

Year	Monitoring Frequency	Monitoring Action
1	Quarterly (4x/year)	Visual site inspection. Photographic documentation of site to determine if a new tidal pool is forming as well as adjacent wetlands. Summarize findings in a brief technical memorandum.
2	Semiannually (2x/year)	Visual site inspection. Photographic documentation of site to determine if a new tidal pool is forming as well as adjacent wetlands. Summarize findings in a brief technical memorandum.
3	Annually (1x/year)	Visual site inspection. Photographic documentation of site to determine if a new tidal pool is forming as well as adjacent wetlands. Summarize findings in a brief technical memorandum.
4	Annually (1x/year)	Visual site inspection. Photographic documentation of site to determine if a new tidal pool is forming as well as adjacent wetlands. Summarize findings in a brief technical memorandum.
5	Annually (1x/year)	Visual site inspection. Photographic documentation of site to determine if a new tidal pool is forming as well as adjacent wetlands. Summarize findings in a brief technical memorandum.

Management Techniques

If a tidal pool is discovered during any monitoring event that has become impounded above the Mean High Water line, perform follow up monitoring event no more than 60 days later. If, after 60 days, a tidal pool remains impounded, implement a maintenance filling event. Maintenance events may only occur outside of marine turtle nesting season (May 1 to October 31).

A Golden Past.
A Shining Future.

PLANNING & ZONING DEPARTMENT
1725 Reynolds Street, Suite 200, Brunswick, GA 31520
Phone: 912-554-7428/E-mail: planningzoning@glynncounty-ga.gov

September 15, 2025

Josh Noble
Marsh and Shore Management Program Manager
Georgia DNR, Coastal Resources Division
One Conservation Way
Brunswick, GA 31520

RE: East Beach Water Impoundment
Glynn County

Dear Mr. Noble:

The above referenced project has been submitted by Glynn County to CRD for authorization under the requirements of the Shore Protection Act (SPA). The County proposes to conduct activities within SPA jurisdictional areas on East Beach, St. Simons Island. The project area is located on the beach and extends from the King and Prince hotel to the Driftwood Drive beach access.

All of the proposed activities are allowed under Glynn County Ordinances and do not conflict with any Zoning regulations. Attached is a copy of the signed and initialed concept plan that has been reviewed and approved by Glynn County staff.

Should you have any additional questions, please feel free to contact me at mpostal@glynncounty-ga.gov, (912) 554-7487.

Sincerely,

Maurice Postal

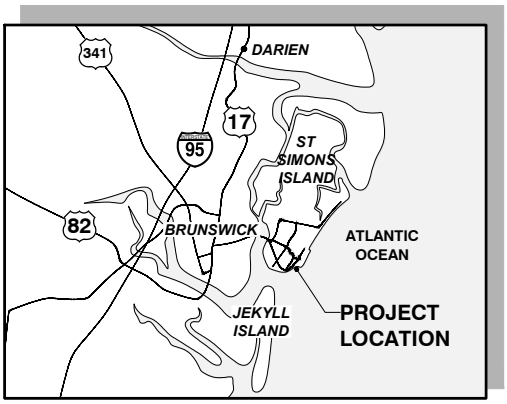
Maurice Postal, AICP
Development Review Manager

GLYNN COUNTY

EAST BEACH WATER IMPOUNDMENT

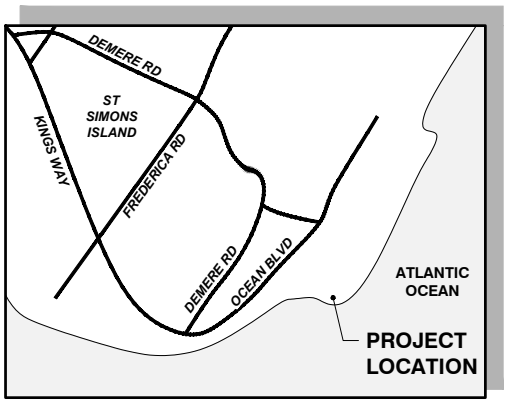
ST. SIMONS ISLAND, GEORGIA

M&N JOB #: 240281-06



VICINITY MAP

SCALE: NTS



LOCATION MAP

SCALE: NTS

The construction project, as depicted in the attached plans, does not conflict with current Glynn County zoning laws.

Preliminary review of the proposed plans does not constitute approval of the project itself. All necessary permits and approvals for activities associated with this proposal will need to be obtained prior to project commencement.

Reviewed by Maurice Postal, Development Review Manager

Maurice Postal

Glynn County Planning & Zoning Department
September 12, 2025

DRAWING INDEX	
SHEET NUMBER	SHEET TITLE
G-001	COVER SHEET
G-002	NOTES, ABBREVIATIONS & LEGENDS
G-003	NOTES, ABBREVIATIONS & LEGENDS
V-101	EXISTING CONDITIONS / CONSTRUCTION ACCESS
CS101	SCHEMATIC DESIGN PLAN
CS301	CROSS-SECTIONS & DETAILS
CS302	CROSS-SECTIONS & DETAILS
C-601	QUANTITIES

GOVERNING STANDARDS AND SPECIFICATIONS:
DESIGN STANDARDS AND APPLICABLE CODES USE GA DNR, GEORGIA CODE, OCCUPATIONAL SAFETY AND HEALTH ADMINISTARTION (OSHA) REGULATIONS.

GEORGIA811 Contact 811 before you dig.

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COVER SHEET

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. G-001

MP

GENERAL NOTES

1. ALL CONSTRUCTION ASSOCIATED WITH THIS PROJECT MUST BE IN ACCORDANCE WITH APPLICABLE CODES & AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO OWNER, LOCAL, AND OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS. ANY DISCREPANCY MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER & ENGINEER OF RECORD.
2. IT IS THE CONTRACTORS RESPONSIBILITY TO FAMILIARIZE HIMSELF/HERSELF WITH THE PROJECT SITE & TO DETERMINE TOPOGRAPHIC OR UNDERGROUND FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. THE CONTRACTOR MUST INCLUDE IN HIS BID PRICE, THE COST OF RELOCATING OR REPLACING IN KIND ANY FEATURES THAT WILL BE IMPACTED DUE TO HIS/HER PROPOSED METHOD OF CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE CONSIDERED BY THE OWNER IN THE EVENT THE CONTRACTOR NEGLECTS TO ACCOUNT FOR THIS WORK IN HIS BID PRICE.
3. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING TREES, STRUCTURES, & UTILITIES WHICH MAY OR MAY NOT BE SHOWN ON THE PLANS. ANY EXISTING STRUCTURE, PAVEMENT, TREES OR OTHER EXISTING UTILITIES NOT SPECIFIED FOR REMOVAL WHICH ARE DAMAGED, EXPOSED OR IN ANY WAY DISTURBED BY CONSTRUCTION PERFORMED, SHALL BE REPAIRED, PATCHED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER .
4. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIMSELF/HERSELF WITH CURRENT SITE CONDITIONS & SHALL REPORT ANY DISCREPANCIES TO THE OWNER & EOR PRIOR TO STARTING WORK.
5. THE CONTRACTOR SHALL KEEP THE SITE REASONABLY FREE FROM DEBRIS, TRASH, & CONSTRUCTION WASTE. BUILDING MATERIAL AND/OR CONSTRUCTION DEBRIS STORED ADJACENT TO OR UPON THE ROADWAY SHALL BE ADEQUATELY MARKED AT ALL TIMES FOR PEDESTRIAN & TRAFFIC SAFETY.
6. CONTRACTOR SHALL CONTACT GEORGIA 811 AT LEAST 3 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION/DIGGING TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES.
7. CONTRACTOR TO ADHERE TO APPLICABLE NOISE ORDINANCES THAT PROHIBIT ANY PLAIN AUDIBLE SOUND IN CONNECTION WITH CONSTRUCTION ACTIVITIES OUTSIDE OF PERMITTED HOURS.
8. ALL ENVIRONMENTAL REGULATORY PERMITS MUST BE OBTAINED. CONTRACTOR IS REQUIRED TO OBTAIN ALL OTHER NECESSARY PERMITS AND/OR APPROVALS PRIOR TO THE START OF CONSTRUCTION. COST OF ALL OTHER NECESSARY PERMITS IS TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
9. ALL LANDSCAPED/OPEN AREAS, SIDEWALKS, PAVEMENTS & OTHER IMPROVEMENTS IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER.
10. THE TRAFFIC CONTROL PLAN FOR THE PROJECT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR MUST PRODUCE HIS/HER OWN TRAFFIC CONTROL PLAN & MUST HAVE SAID PLAN APPROVED BY THE OWNER AND CITY PRIOR TO CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE GRANTED BY THE OWNER FOR TRAFFIC CONTROL COSTS ASSOCIATED WITH THIS PROJECT AFTER PROJECT AWARD. TRAFFIC CONTROL PLAN SHALL INCLUDE BUT NOT LIMITED TO MESSAGE BOARDS TO INFORM EMERGENCY SERVICES WITHIN THE VICINITY OF THE PROJECT LIMITS ABOUT THE CONSTRUCTION SCHEDULE.
11. SURVEY MONUMENTS WITHIN THE LIMITS OF THE PROJECT ARE TO BE PROTECTED.
12. NO DEVIATIONS FROM APPROVED PLANS SHALL BE PERMITTED WITHOUT THE WRITTEN CONSENT THE OWNER AND GA DNR.
13. WORK PERFORMED UNDER THIS PROJECT WILL NOT BE CONSIDERED COMPLETE UNTIL THE NECESSARY DOCUMENTS ARE RECEIVED BY THE OWNER.
14. ALL DEFECTIVE WORK NOT ACCEPTED BY THE OWNER, EOR OR BY ANY GOVERNMENT PERMITTING AGENCY SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
15. ALL EXISTING GRASSED OR LANDSCAPED AREAS, ALL DECORATIVE FEATURES (INCLUDING PAVERS) AND PAVED GROUND CONDITIONS DAMAGED AS RESULT OF CONSTRUCTION ACTIVITIES SHALL BE RESTORED COMPLETELY AS DIRECTED BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
16. DAMAGED ITEMS SHALL BE RESTORED TO THEIR ORIGINAL DESIGN AND FUNCTION AT THE CONTRACTOR'S EXPENSE.
17. A PRE-CONSTRUCTION MEETING WILL BE HELD ON SITE TO VERIFY DETAILS AND METHODS OF CONSTRUCTION.
18. THESE PLANS ARE INCOMPLETE WITHOUT THE TECHNICAL SPECIFICATIONS.
19. CONTRACTOR SHALL NOT BLOCK OR OBSTRUCT PUBLIC BEACH ACCESS PARKING WITHOUT WRITTEN APPROVAL FROM THE OWNER.
20. CONTRACTOR WILL COORDINATE DAILY WITH THE OWNER'S ENVIRONMENTAL MONITOR AND WILL FOLLOW ALL REQUIRED ENVIRONMENTAL PERMIT CONDITIONS AND MANAGEMENT PRACTICES.
21. CONTRACTOR SHALL DESIGN, INSTALL, AND MAINTAIN EFFECTIVE EROSION AND SEDIMENT CONTROL MEASURES (BMPs) IN ACCORDANCE WITH THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
22. CONTRACTOR SHALL AVOID IMPACTS TO EXISTING DUNES AND DUNE HABITAT. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY DUNE HABITAT LOCATIONS AND ERECT AND MAINTAIN CONSTRUCTION FENCING OR SIMILAR TO PREVENT IMPACTS.

SURVEY NOTES

1. THE ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88). THE CONVERSION BETWEEN NATIONAL GEODETIC VERTICAL DATUM (NGVD 29) AND THE NAVD 88 FOR THE PROJECT SITE IS APPROXIMATELY 0.97 FEET (EXAMPLE: 0.0 FEET NGVD = -0.97 FEET NAVD).
2. WETLAND SURVEY DATA PERFORMED BY LONGLEAF ENVIRONMENTAL CONSULTING DATED FEBRUARY 2025.
3. TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA PERFORMED BY ARC SURVEYING & MAPPING DATED FEBRUARY 2025.

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NOTES, ABBREVIATIONS & LEGENDS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. G-002

MP

4. THE FOLLOWING TIDAL DATUM RELATIONSHIP IS BASED ON NOAA TIDE STATION 8677344 - ST. SIMONS, GA.

TIDAL DATA

MEAN HIGHER HIGH WATER (MHHW)	2.97' NAVD
MEAN HIGH WATER (MHW)	2.60' NAVD
NORTH AMERICAN VERTICAL DATUM	0.00 NAVD
MEAN LOW WATER (MLW)	-4.02' NAVD
MEAN LOWER LOW WATER (MLLW)	-4.23' NAVD

5. HORIZONTAL CONTROL REFERENCED TO NORTH AMERICAN DATUM OF 1983, STATE PLANE COORDINATE SYSTEM, GEORGIA EAST ZONE, IN FEET.

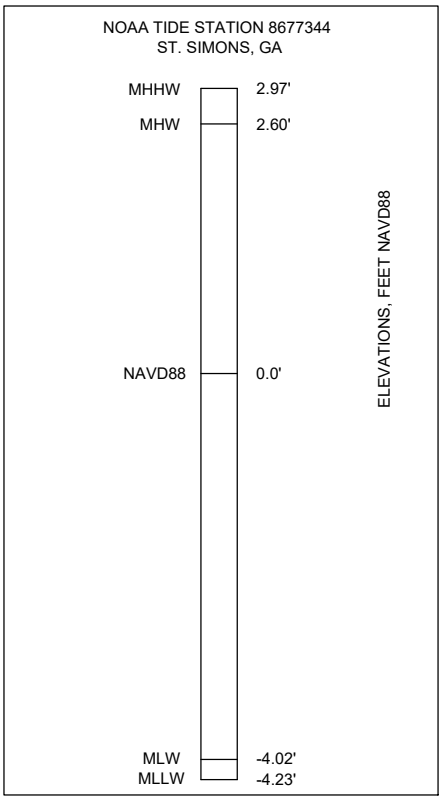
6. PARCELS BOUNDARIES BASED GIS FILES RECEIVED FROM GLYNN COUNTY GEOGRAPHIC INFORMATION SYSTEM DEPARTMENT.

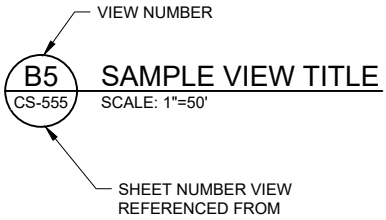
AERIAL IMAGERY

1. AERIAL IMAGERY OBTAINED FROM NEARMAP DATED OCTOBER 2024.

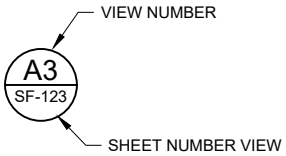
BEACH FILL NOTES

1. FILL MATERIAL TO BE EXCAVATED MATERIAL FROM THE ON-SITE BORROW AREA.
2. PLACE FILL TO THE GRADES SHOWN.
3. THE VERTICAL TOLERANCE FOR EACH FILL TEMPLATE IS ±0.25 FEET.
4. THE INTENT OF THE PROJECT IS TO PLACE THE REQUIRED VOLUME OF BEACH FILL WITHIN THE DESIGN TEMPLATE IN ACCORDANCE WITH ALL REQUIREMENTS.





VIEW TITLE



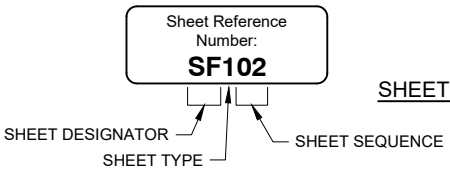
DETAIL CALLOUT

DISCIPLINE DESIGNATORS	
DISCIPLINE	DESIGNATOR
GENERAL	G
SURVEY/MAPPING	V
CIVIL	C

SECONDARY DESIGNATORS	
SITE	S

REVISION NUMBERING	
A00, A01...	PRE-BID SUBMITTALS
B00, B01...	BID SUBMITTALS
000, 001...	CONSTRUCTION SUBMITTALS

SHEET TYPE DESIGNATORS	
0	GENERAL (COVER SHEET, LEGEND, NOTES)
1	PLANS (HORIZONTAL VIEWS)
3	SECTIONS (OVERALL VIEWS)
5	DETAILS (MAY BE PLAN, SECT. OR ELEV. VIEWS)
6	SCHEDULES / TABLES



SHEET NUMBERING

ABBREVIATIONS

CRD	COASTAL RESOURCES DIVISION
CY	CUBIC YARD
EOR	ENGINEER OF RECORD
FT(')	FEET
GA DNR	GEORGIA DEPARTMENT OF NATURAL RESOURCES
HORZ	HORIZONTAL
IN(")	INCHES
MAX	MAXIMUM
MHW	MEAN HIGH WATER
MHHW	MEAN HIGHER HIGH WATER
MLW	MEAN LOW WATER
MLLW	MEAN LOWER LOW WATER
N	NORTH
NAD	NORTH AMERICAN DATUM OF 1983
NAVD	NORTH AMERICAN VERTICAL DATUM OF 1988
NGVD	NATIONAL GEODETIC VERTICAL DATUM OF 1929
NTS	NOT TO SCALE
OSHA	OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION
TYP	TYPICAL
VERT	VERTICAL

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NOTES, ABBREVIATIONS & LEGENDS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. G-003

MP

LEGEND

- CONTOURS
- MEAN HIGH WATER
- COASTAL RESOURCES DIVISION LINE
- PARCEL LINES
- WETLANDS
- EXISTING WATER IMPOUNDMENT AREA
- CONSTRUCTION CORRIDOR

NOTES

1. AERIAL IMAGERY OBTAINED FROM NEARMAP DATED OCTOBER 2024.
2. WETLANDS WERE DELINEATED IN THE IMMEDIATE PROJECT VICINITY BY LONGLEAF ENVIRONMENTAL CONSULTING. ADDITIONAL WETLANDS ARE ANTICIPATED TO OCCUR BEYOND THE EXTENTS SHOWN.
3. ALL EQUIPMENT AND IMPORTED FILL TO ACCESS THE SITE THROUGH MASSENGALE PARK. EXACT LOCATION TO BE DETERMINED BY THE OWNER.

0 300'

SCALE 1" = 300'

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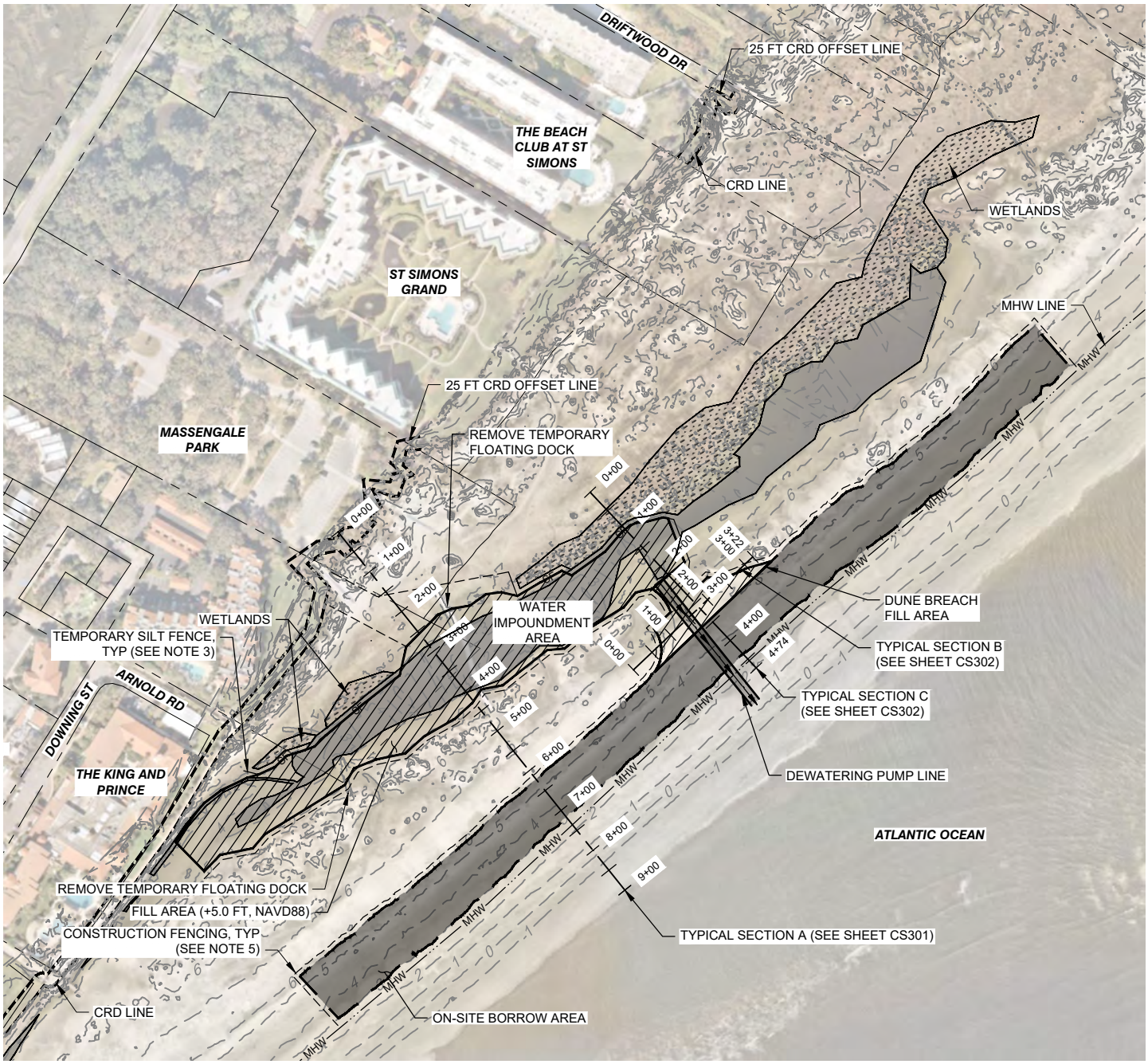
EXISTING CONDITIONS / CONSTRUCTION ACCESS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. V-101

MP



LEGEND

- CONTOURS
- MEAN HIGH WATER
- COASTAL RESOURCES DIVISION LINE
- PARCEL LINES
- SILT FENCE
- CONSTRUCTION FENCE
- DEWATERING PUMP LINE
- WETLANDS
- EXISTING WATER IMPOUNDMENT AREA
- ON-SITE BORROW AREA
- FILL AREA

NOTES

1. AERIAL IMAGERY OBTAINED FROM NEARMAP DATED OCTOBER 2024.
2. CONTRACTOR TO PROVIDE MIN, 10' OFFSET BETWEEN WETLAND AREA AND FILL AREA.
3. TEMPORARY SILT FENCE POSITIONING TO BE DETERMINED IN FIELD. AT A MINIMUM, TEMPORARY SILT FENCES SHALL DELINEATE THE 10' OFFSET AND EXTEND BEYOND THE FILL AREA TO PREVENT FILL MATERIAL FROM SPREADING INTO ADJACENT WETLAND AREA. SILT FENCE TO BE ERECTED PRIOR TO CONSTRUCTION AND REMOVED PROMPTLY AFTER CONSTRUCTION.
4. ON-SITE BORROW AREA LOCATED IMMEDIATELY SEAWARD OF FILL AREA. ALL ON-SITE BORROW SHALL OCCUR LANDWARD OF MHW LINE.
5. CONSTRUCTION FENCE POSITIONING TO BE DETERMINED IN FIELD. AT A MINIMUM, CONSTRUCTION FENCE SHALL DELINEATE DUNE VEGETATION OR OTHER SENSITIVE HABITATS THAT ARE TO BE AVOIDED DURING CONSTRUCTION. CONSTRUCTION FENCE TO BE ERECTED PRIOR TO CONSTRUCTION AND REMOVED PROMPTLY AFTER CONSTRUCTION.

0 300'

SCALE 1" = 300'

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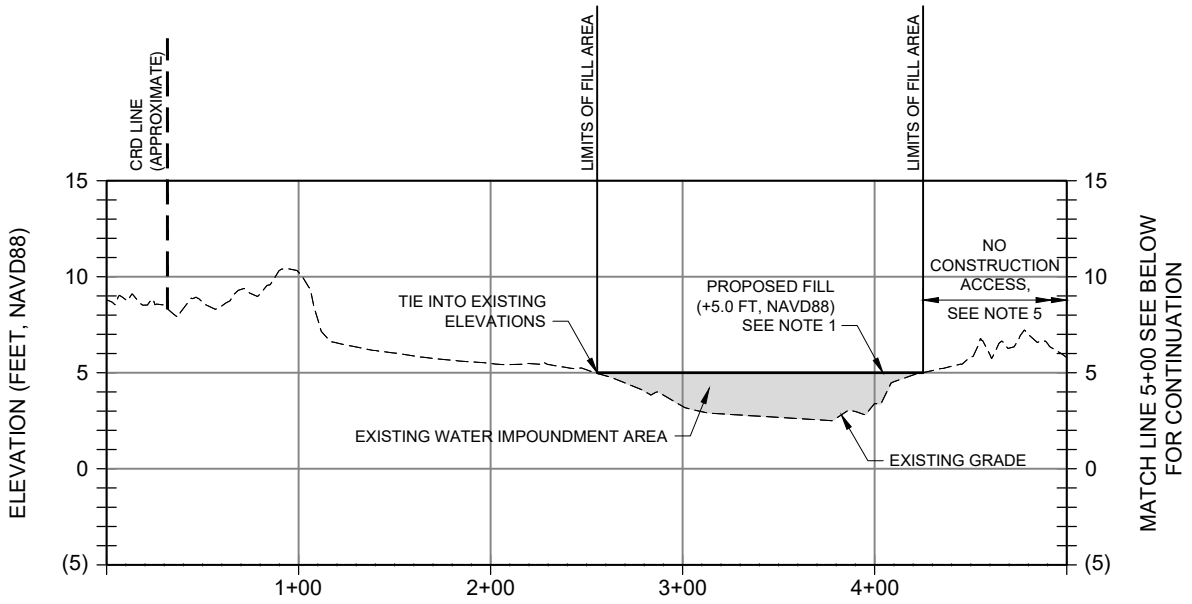
SCHEMATIC DESIGN PLAN

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. CS101

MP



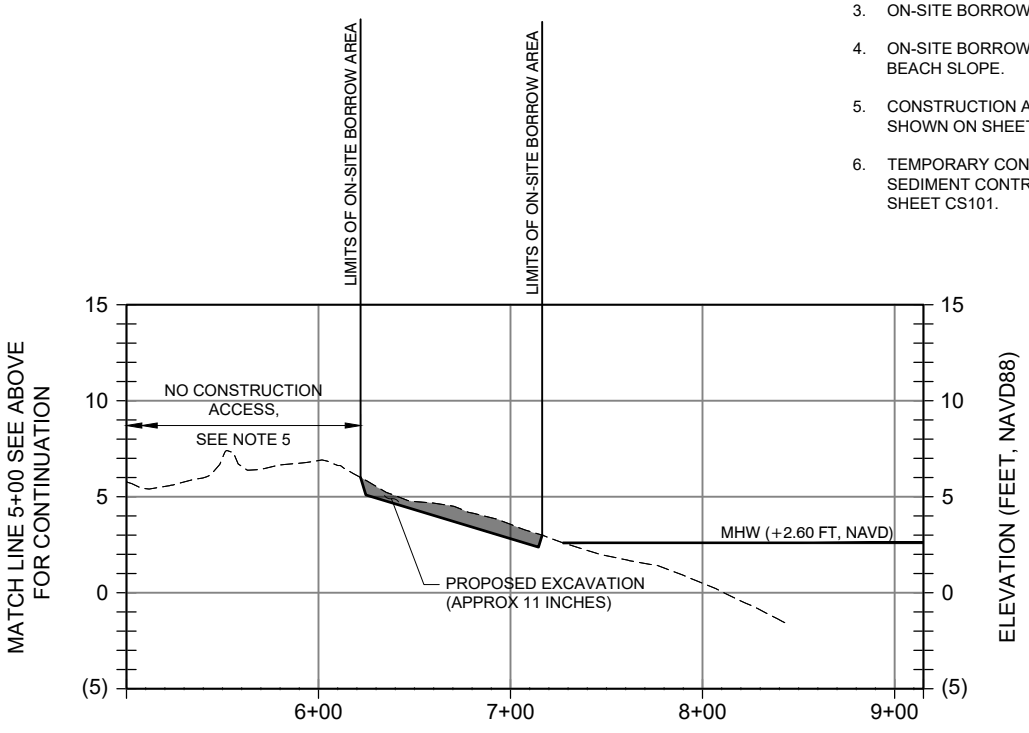
SECTION A

LEGEND

- EXISTING GRADE
- PROPOSED FILL
- ON-SITE-BORROW AREA
- FILL AREA

NOTES

1. FILL MATERIAL TO BE EXCAVATED MATERIAL FROM THE ON-SITE BORROW AREA.
2. PROPOSED EXCAVATION SHALL BE LIMITED TO THE MINIMUM PRACTICABLE TO FILL IN EXISTING WATER IMPOUNDMENT AREA AND DUNE BREACH AREA.
3. ON-SITE BORROW TO OCCUR LANDWARD OF +3.00 FT NAVD.
4. ON-SITE BORROW AREA TO BE GRADED TO MATCH EXISTING BEACH SLOPE.
5. CONSTRUCTION ACCESS TO BE THROUGH ACCESS CORRIDOR SHOWN ON SHEET V-101.
6. TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES NOT SHOWN FOR CLARITY. SEE SHEET CS101.



SECTION A

0 10' VERT. SCALE 1" = 10'

0 100' HORIZONTALSCALE 1" = 100'

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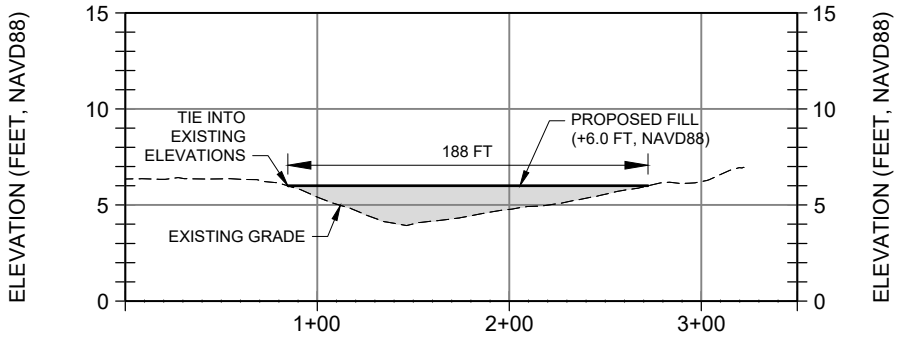
CROSS SECTIONS & DETAILS

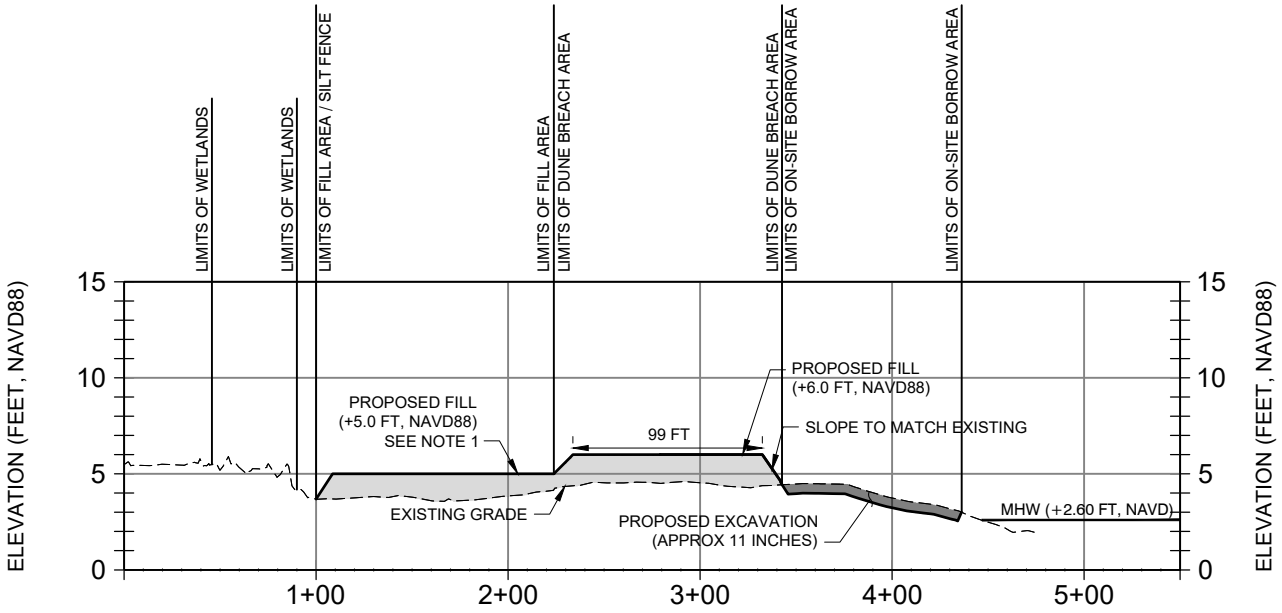
GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. CS301

MP



SECTION B



SECTION C

LEGEND

- EXISTING GRADE
- PROPOSED FILL
- ON-SITE-BORROW AREA
- FILL AREA

ANTICIPATED CONSTRUCTION SEQUENCE

1. CONTACT GEORGIA 811 AT LEAST 3 BUSINESS DAYS PRIOR TO PERFORMING ANY EXCAVATION/DIGGING.
2. INSTALL TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES.
3. DEWATER PROPOSED FILL AREA. CONSTRUCTION EQUIPMENT TO TRAVERSE SITE ONLY WHEN SUFFICIENTLY DEWATERED.
4. EXCAVATE AND GRADE EXISTING SAND FROM THE ON-SITE BORROW AREA INTO THE FILL AREA.
5. PERFORM FINAL GRADING, ENSURING FINISHED GRADE SLOPES SEAWARD AND MATCHES EXISTING BEACH SLOPE.
6. REMOVE TEMPORARY CONSTRUCTION FENCE, SILT FENCE, AND OTHER SEDIMENT CONTROL MEASURES.

0 10' VERT. SCALE 1" = 10'
0 100' HORIZONTALSCALE 1" = 100'

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CROSS SECTIONS & DETAILS

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. CS302

MP

QUANITITIES		
Area of Property	N/A - This project site is located on the open beach on public land	
Proposed Project Footprint	9.74 Acres	424,285 SQ. FT.
Jurisdictional Footprint	9.74 Acres	424,285 SQ. FT.
Proposed Project Footprint within Jurisdiction	9.74 Acres	424,285 SQ. FT.
Open Water	2.07 Acres	90,049 SQ. FT.
Upper Beach Fill	1.91 Acres	83,696 SQ. FT.
Upper Beach Borrow	4.87 Acres	212,265 SQ. ST
Fill Volume	8,940 CU Yards	

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QUANTITIES

GLYNN COUNTY
EAST BEACH WATER IMPOUNDMENT
ST. SIMONS ISLAND, GEORGIA

DRAWN BY: CLC
CHECKED BY: ZRV
REVIEWED BY: CLC
SUBMITTED BY: CASEY CONNOR
MOFFATT NICHOL
PROJECT NUMBER: 240281-06
DATE: 07/09/2025
SHEET REF NO. C-601

MP

The King and Prince
CONDOMINIUM ASSOCIATION

August 26, 2025

To whom it may concern:

The King and Prince Board of Directors has reviewed the plan as attached and is in agreement to allow Glynn County to construct the project as designed.

Best,

John Paul Wade
President
King and Prince Condominium Association

September 25, 2025

Josh Noble
Marsh and Shore Management Program Manager
Coastal Resources Division

RE: Additional project information provided in response to the GADNR-CRD Response Letter for a Shore Protection Act Permit – East Beach Water Impoundment Project

On behalf of the applicant, Glynn County Engineering Services, we are submitting the below additional information in response to the 2025.9.12 GADNR-CRD Response Letter to the application for a Shore Protection Act (SPA) permit to authorize the East Beach Water Impoundment Project. Please responses to each RFI item below:

5. Project Description, Alternative Site Description and Justification

a. Please provide description of why an upland sand source cannot be utilized to fill the project area thereby avoiding disturbance to sea turtle nesting habitat, migratory bird habitat, and intertidal beach which is known to be a vitally important foraging area for marine species.

- Construction would be outside of sea turtle nesting season and the borrow site will avoid all dry dune or similar areas that could be nesting habitat.
- Massengale Park would have to be closed to the public.
- Heavy loaded dump trucks are a safety hazard on the narrow and congested residential roads on St. Simons, especially the south end and beach area.
- Importing sand would take approximately 440-550 dump truck loads, each weighing over 10-18 tons, which could cause pavement failure at Massengale Park.
- Importing sand will impact the upper beach more as a stabilized haul road to the open water area would have to be constructed which will require widening of the beach access and impacts to vegetation.
- Recent dune development landward of the tidal impoundment would make dune impacts potentially unavoidable for imported sand and having to cross the upper beach for each truck load.
- The Massengale park boardwalk access to the beach is not designed for heavy equipment and would require reinforcement and reconstruction.
- The proposed use of the on-site borrow area uses native beach sand as fill material. This concept keeps native sediment within the local system, avoiding the introduction of fines or foreign materials that might increase turbidity, alter beach permeability, or negatively impact sea turtle habitat or dune vegetation habitats.

- Importing sand will cause unnecessary windblown dust within Massengale Park and the adjacent properties.

b. What impacts will the proposed borrow area have on the existing terrace of the beach, sand dunes, sand bars, and near shore shoals? Is erosion expected to occur, if so, to what extent?

- Impacts will be minor and temporary. The proposed borrow area is located between +3 ft (approximately MHW) and +6 ft NAVD88 and is limited to approximately 11 inches in depth. The tide range at the project site is approximately 7.2 ft (+2.97 ft to -4.2 ft NAVD), with two high tides and two low tides per day. During very high tides and/or appreciably high wave energy regimes, wave runup will transport and spread sediment-laden water across the proposed borrow area which will tend to infill and smooth the relatively thin excavation depth. This infilling and smoothening will occur most notably during full and new moons where the highest tide ranges (spring tide) are reached. Since the proposed borrow area is shallow (approximately 11 inches) and limited in areal extent, it is not expected to alter longshore transport or coastal processes in any measurable way.
- Any localized scarping or micro-depressions created by the excavation will be flattened by routine wave runup, returning the immediate project vicinity to natural elevations and slopes. This process of natural deposition and flattening of the borrow area is likely to occur within a few tidal cycles to weeks (depending on lunar cycle and wave climate).
- Due to the natural dune formation landward of the proposed borrow area, the relatively thin excavation is unlikely to impact wave runup characteristics including final runup elevation and frequency. Additionally, the proposed borrow area will provide much-needed sediment to fill the existing dune breach, improving the coastal resiliency of the project site as well as adding sea turtle habitat and dune vegetation.
- Given the shallow depth, limited extents of the proposed borrow area, and resulting volume proposed for borrow, the long-term beach profile and alongshore sediment transport regime are not expected to change measurably.
- Each day's excavation is expected to rapidly fill in during routine wave runup which is likely to minimize the footprint of the material excavated from the borrow area on any given day. Better put, the areal extents of the proposed borrow area were determined after assuming no infilling or smoothing during wave runup. Do note that the proposed borrow area may not be filled in on every single day – especially during neap tides (1st and 3rd quarter moons) or periods of low wave regimes.
- The *Feasibility Study of Glynn County, Georgia, Beach Restoration* (Olsen Associates, 1988) (https://georgiawildlife.com/sites/default/files/crd/MarshandShore/PublicNotice/JIAPhase2/JIA-ErosionandSedimentTransport.pdf) studied potential sediment transport rates along Jekyll Island. This study concluded that potential annual net

sediment transport rates along the island were estimated to range from 219,000 to 459,800 cy/yr. Shoreline erosion rates at Jekyll Island are similar in magnitude to those observed along St Simons Island. Additionally, nearshore slopes along Jekyll Island are similar to those at St Simons Island, suggesting similar net transport rates at the proposed project site. The proposed total borrow area (8,940 CY) is quite small relative to this net transport rate, demonstrating that the borrow volume's impact on coastal processes in the area are negligible and will not be detrimental to adjacent areas. Additionally, the proposed project is not removing the proposed 8,940 CY from the project site, but rather relocating it landward, resulting in a net 0 change in terms of sediment availability.

- Similar projects to the proposed project have been studied throughout the world where intertidal zones have been used as a borrow area for beach management. Notable excerpts include the following from https://burleighphysio.com.au/wp-content/uploads/2018/09/Paper-Beach-Scraping.pdf :
    - The intertidal zone is an area of high wave and tidal action. This high energy environment is less likely to be in a stable equilibrium assemblage structure under natural conditions, and it is believed species habituating this area recover from disturbance swiftly (Bolam and Rees, 2003 in Batton, 2007). Fast recovery is associated with sandy beach species as these species have adapted to a highly variable and dynamic environment which is often subject to large physical disturbances such as storms, wave action, tides, sediment transport and turbidity (Batton, 2007).
    - Bruun (1983) recommended responsible beach scraping with depths of 0.2 to 0.5 meters (0.7 to 1.6 feet) for coastal protection. Bruun noted that beach scraping is not always harmful and can be beneficial in certain applications.
    - McNinch and Wells (1992) reported on a project that utilized beach scraping at Topsail Beach, NC. The scraping rates were small, averaging 0.21 m^3/m per day, using only a single piece of machinery to shallow scrape. The borrow area was below the high water mark. The report concluded that under certain conditions, beach scraping can be beneficial in coastal environments where scraping was recommended to be limited and only performed on the beach inundated by tidal activity. The proposed project would have a similar scraping rate, with an approximate average rate of 0.07 to 0.10 CY/ft per day.
    - Conaway and Wells (2005) reported on aeolian (wind-blown) dynamics on scraped shorelines in North Carolina. Their study notes beach scraping may encourage sand drying and subsequent movement due to aeolian processes. Wind directions at the project site are relatively consistent on-shore, which may result in the proposed project encouraging dune growth.

- Summary: Since excavation at the proposed borrow area is shallow (≤ 12 in), confined to a non-vegetated upper-beach zone between +3 ft NAVD (MHW) and +6 ft NAVD, and located in an area routinely reworked by wave runup and tidal activity (tide range ≈ 8 ft), coastal processes at the site will rapidly redistribute and smooth

the borrow area footprint. The work will not appreciably alter nearshore wave or longshore transport processes, nor is it expected to cause increased erosion of adjacent beach areas.

c. Please describe why the project cannot be accomplished with the construction of crosswalks such as the pending application for the Driftwood Beach Access which appears to cross the northern extent of the project area.

- The purpose and need of public safety would not be accomplished including drowning and water contact risk reduction.
- The Driftwood Beach Access boardwalk mentioned is being designed to accommodate standard Gator/UTV or similar loads.
- A boardwalk designed to accommodate the full range of emergency response vehicles over the tidal pool would require a substantial structure that would exceed standard timber boardwalk structural limitations. This structure would require large diameter, deeply embedded piles, structural concrete and steel members, and be designed to withstand hurricane conditions including storm surge and wave uplift. A structure of this magnitude would be cost prohibitive and may encourage development within the coastal zone.
- Permanent, above ground structures will impact the viewshed for the King and Prince hotel, a National Register of Historic Places listed resource (NRHP#04001465).

d. Please verify how the construction will be accomplished: equipment, access, etc.

- Access to the site is anticipated to occur through the southeast corner of Massengale Park, which has an approximate 10 ft wide corridor free of vegetation.
- The proposed project would be constructed using the lightest possible touch. The proposed construction duration of 45 to 70 days was developed using lightweight, smaller capacity equipment. Equipment would be parked and staged overnight in the Massengale Park parking lot, encompassed with fencing to protect the public. All fueling and maintenance operations needed would occur in the Massengale Park parking lot or other upland facility.
- The following construction sequence is anticipated:
    - Contact Georgia 811 at least 3 business days prior to performing any excavation/digging.
    - Install temporary construction fence, silt fence, and other sediment control measures.
    - Dewater proposed fill area. Construction equipment to traverse site only when sufficiently dewatered. Dewatering is anticipated to be performed using a submersible dewatering pump. Maintenance dewatering is likely to be performed routinely throughout construction. Wildlife (e.g. fish)

within the fill area will be relocated to the maximum extent practicable to the other tidal pool by environmental specialists.

- Excavate and grade existing sand from the on-site borrow area into the fill area. Material may be excavated, transported, and placed with a variety of scenarios. The most likely scenarios include using a bulldozer to push the material to the fill area, stockpiling as needed within the project footprint for efficiency. In this scenario, 2 or 3 bulldozers are likely. Another scenario includes using a front end loader, skid steer, or excavator to scoop material from the borrow area into an offroad truck or material carrier to transport the material to the fill area where a bulldozer would spread to final grade. In this scenario, one front end loader, skid steer, or excavator, 1 or 2 offroad trucks or material carriers, and 1 bulldozer are likely. Excavation operations would only occur when the tide and wave runup was sufficiently low enough to allow access. Construction operations would need to be staged and planned to allow at least 4 continuous hours of construction. Work would halt as soon as the tides and wave runup encroached on the active work area. This may require borrow operations to limit excavation to the highest elevations of the borrow area. Excavation will be limited to 11 inches (as shown on the plans). As mentioned above, each day's excavation is anticipated to rapidly fill in during routine wave runup which is likely to minimize the footprint of the material excavated from the borrow area on any given day. At the fill location, material will be placed and graded in a uniform manner, facilitating dewatering and wildlife removal. All equipment shall stay within the footprint of the proposed project. As such, any incidental spillage during excavation and movement operations will be contained within the proposed borrow and fill areas. Construction surveys will be performed regularly throughout construction to confirm excavation and placement limits and elevations.
- Perform final grading, ensuring finished grade slopes seaward and matches existing beach slope. Perform any final construction surveys to confirm excavation and placement limits and elevations.
- Remove temporary construction fence, silt fence, and other sediment control measures.
- Perform final cleanup and demobilization.

Glynn County appreciates your review of the enclosed information. Please review and contact me if you have any questions or need any additional information.

Stephen M. Bailey, PWS
Principal|Owner
Longleaf Consulting
www.longleafconsulting.com

Appendix A
Erosion and Sediment Transport on Jekyll Island

Jekyll Island Phase 2 Shoreline Rehabilitation

Jekyll Island has a long history of erosion, particularly along the northern portion of the island. Exhibit 1 shows a graphic which illustrates the geologic makeup of this Pleistocene Barrier Island and how it has changed over more recent history due to sea level rise and erosion, noting net regional littoral transport. Historic erosion changes to the island shorelines between 1855 and 2004 are provided in a PhD Thesis by Jackson (2010), with a summary shown on Exhibit 2. The project area has undergone net erosion which triggered the placement of the revetment in the 1960s-1970s, following impacts of Hurricane Dora (1964). Since that time, the revetment has fixed the shoreline position along its length. The Driftwood Beach area has undergone erosion north of the revetment but overall been relatively stable in the long-term. The south tip of Jekyll Island has been largely accretional. Estimated erosion rates from Jackson for the oceanfront averages -1.5 ft/yr (1855-2004), while the north inlet (St Simons Sound) facing shoreline erosion averages -5 ft/yr.

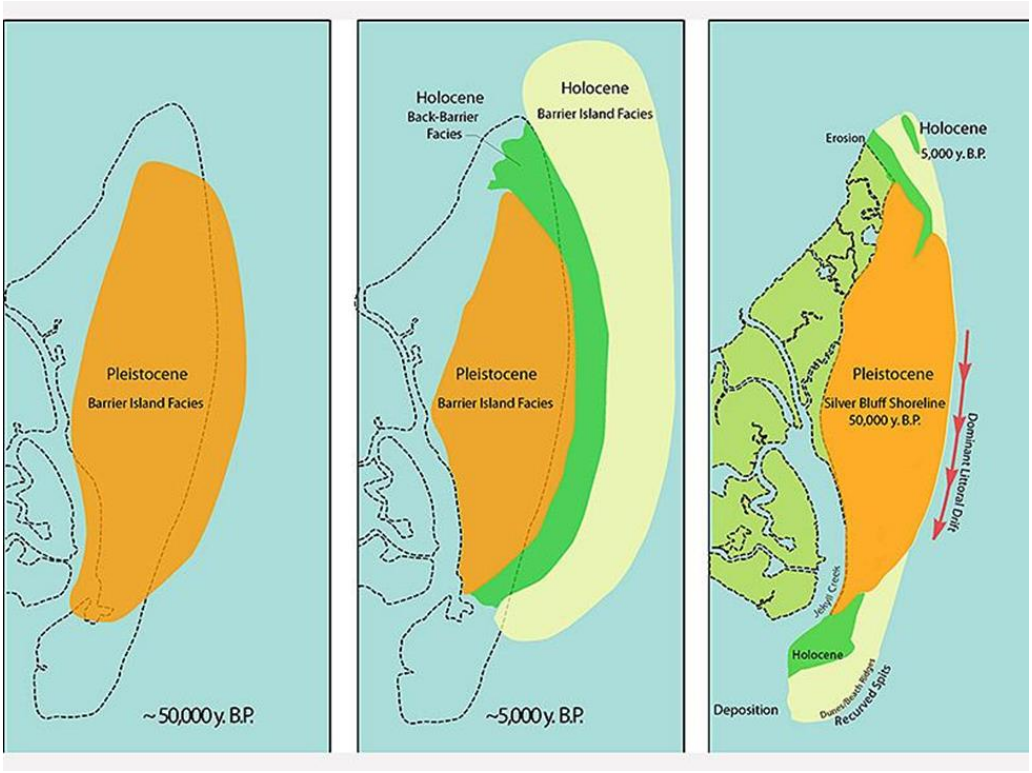


Exhibit 1. Geological Map of Jekyll Island over time
(source: https://www.georgiaencyclopedia.org/articles/science-medicine/geology-georgia-coast)

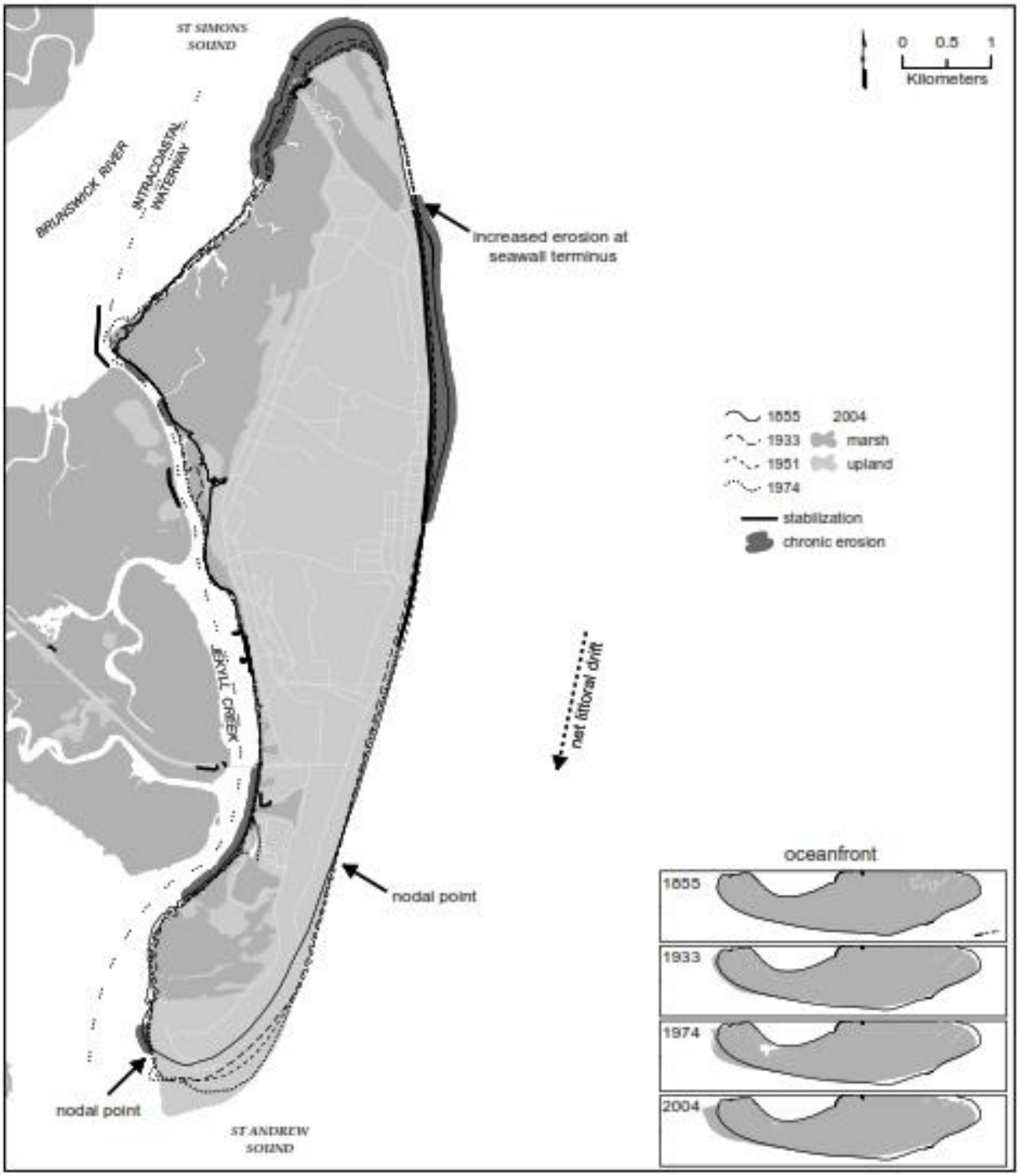


Exhibit 2. Long-term shoreline positions and erosion trends (source: Jackson, 2010)

The north tip of the island has undergone significant erosion and currently high-water conditions cut into the maritime forest in the Driftwood Beach area and north thereof (Exhibit 3). The northernmost approx. 9,800 LF of the revetment has undergone long-term general degradation due to settlement, beach erosion (profile deflation and erosion of fines) and overtopping and more direct damage during storm events.

Exhibit 3. Eroded conditions north of existing revetment limits at Driftwood Beach during King tide conditions

The *Feasibility Study of Glynn County, Georgia, Beach Restoration* (Olsen Associates, 1988) included a summary of erosion rates and numerical model studies which addressed potential sediment transport along Jekyll Island. Reported erosion rates for the project area ranged from -2.7 to -5.7 ft/yr with reduced erosion north of the Driftwood Beach area (until again reaching a peak of -6 to -10 ft/yr at the north tip facing St Simons Sound) and stability near the center of the island. Exhibit 4 shows the general littoral transport patterns along the island, based on numerical wave refraction modeling, which suggests a diverging transport along the center of the project area, with erosion potential increasing toward the north tip of the island and decreasing to a stable zone near the south limit below Capt Wylly Rd (near the center of the island, and the south limit of the proposed Phase 2 project). This means that there is no natural sand supply to the project area (other than erosion of the shoreline itself) and that any sand placed in the Driftwood section of the project will naturally spread north from the placement area to adjacent areas over time. Potential annual net sediment transport rates along the island were estimated to range from 219,000-459,800 cy/yr. These values may be considered conservative based on the modeling conducted.

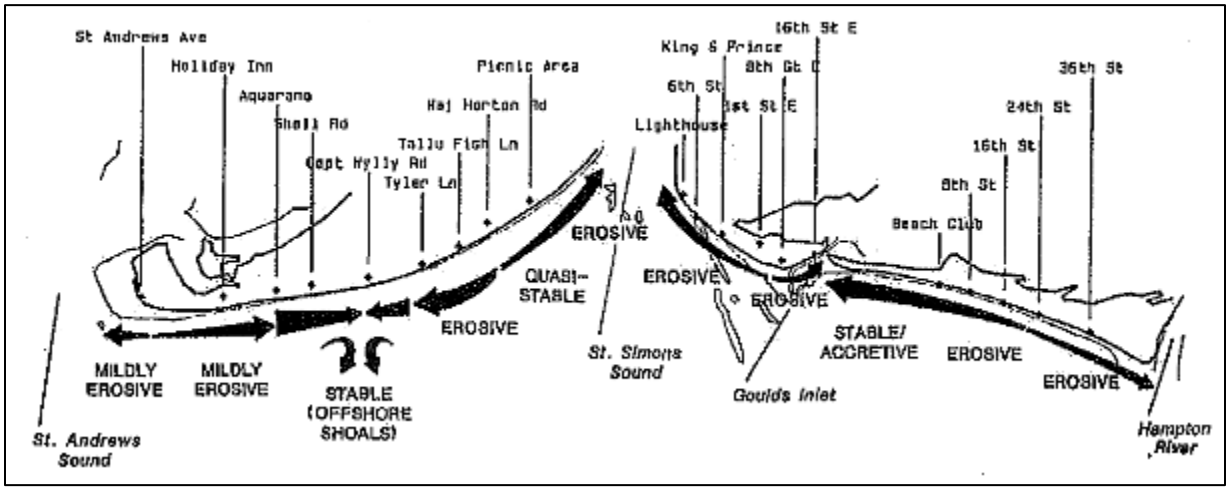


Exhibit 4. Sediment Transport along Glynn County Beaches (source: Olsen Associates, 1988)

Appendix B
Sand Source Supplementary Information

Jekyll Island Phase 2 Shoreline Rehabilitation

Overview

The primary preferred sand source for the proposed project is a USACE confined disposal facility (CDF) called the Jones-Oysterbed Island Disposal Area (herein referred to as Jones Island). The Jones Island sand source is located on the northern bank of the Savannah River, approximately 8.5 miles downriver of the city of Savannah. The Jones Island site has historically been used as a dredge disposal site for maintenance dredging of the federal channel along the Savannah River. Due to the proximity of the area to the inlet and open ocean/sand system, significant amounts of sandy beach quality material have been disposed of at the site during historic and recent dredging events. Ownership of the Jones Island site material is generally divided between two entities: Georgia Department of Transportation (GADOT) owning the northern part of the island and Dept. of Interior – Fish and Wildlife Service owning the southern portion. The proposed source material will be taken from the GADOT area. The JIA has completed initial coordination efforts with GADOT and USACE, including a kickoff coordination meeting on July 9, 2018 with Mr. R.B. "Trey" Daniel III, P.E. (GADOT's Waterways Program Manager), Burton Moore (Chief of the USACE Dredging Section in Savannah District), and USACE regulatory staff. Following the kickoff meeting, ATM and USACE representatives conducted a field visit to the site to view existing conditions, estimate viable material areas/volumes, discuss logistics, and collect field samples of the preferred sand source material.

Sampling and Volume Estimates

The most recent Savannah River Channel dredging project disposed of quality sand material in two areas along the north/west end of Jones Island. ATM, accompanied by USACE representatives, visited Jones Island on July 18, 2018 to collect samples and estimate volumes of beach quality material available. The approximate locations and areas of quality sand material was estimated as shown in Figure 1 below. Numerous samples of the material were taken from both areas and three representative samples were sent for testing. Grab samples were taken 18 inches below the surface and tested samples were taken from approximate locations shown in Figure 1.

There is not a current detailed site topographic survey of the Jones Island site. However, ATM has estimated that approximately 175,000 CY of beach compatible material is available within the proposed two areas indicated on the Drawings. ATM's volume estimate is based on site photographs, field GPS data, volume estimates from the recent dredge disposal operations, aerial imagery, and sediment sampling and testing. Height of sand material was determined by visual estimation of the existing surface elevation of the sand deposits and the USACE field representative's description of elevations of the disposal area prior to the recent dredging operations. Representative observed sand material within the proposed borrow areas are illustrated in Photos 1-3.

Figure 1. Jones Island Sand Material Areas and Test Sampling Locations

Photo 1 – Typical sediment sampling observations, Jones Island.

Photo 2 – Representative view of Jones Island borrow area.

Photo 3 – Representative view of Jones Island borrow area.

Sediment Characteristics

GA DNR provides guideline sediment characteristics for "*beach nourishment"* projects. The purpose of these guidelines is to minimize the effects of beach nourishment projects on sea turtle reproduction and to ensure nourished beaches are compatible with native beaches. Table B.1 compares GA DNR sediment guidelines to the Jones Island and Jekyll Island native project area sediment sample test results.

ATM collected 5 representative sand samples (surface grabs) from the Jekyll Island beach within the limits of the proposed Phase 2 project sand fill for comparison purposes with proposed borrow site samples. Samples were collected landward of the rock revetment (in the proposed terrace berm and dune fill area), as well as samples from the south end of Driftwood Beach. The native beach sample locations are shown as GPS waypoints (WP-xx) on Figures 2 and 3. Sediment grain size distribution curves for both the borrow site and native beach samples, including Munsell Color characterization, are provided as an attachment.

Table B.1 – Sediment Characteristics Guidelines and Testing Results

Sediment Characteristics		**GA DNR Guideline Language**	**Jones Island Sand Samples**	**Jekyll Island Native Project Area Samples**
Grain Size	General	Fill material shall be free of construction debris, rocks, or other foreign matter	Within Guidelines	Generally, within guidelines but scattered rock present along revetment and Driftwood Beach
		Sand grain size on Georgia beaches is generally between 0.15 and 0.3 mm.	D_{50} Range: 0.39mm - 0.46mm Average D_{50} = 0.42mm	D_{50} Range: 0.17mm - .20mm Average D_{50} = 0.19mm
	Fines	Fill material…shall not contain, on average, greater than 10% fines (i.e. silt and clay; passing through a #200 sieve; approx. 0.075 mm)	Within Guidelines % fines range: 0.2% - 1.8% Average: 0.8%	Within Guidelines % fines range: 0.6% - 12.1% Average 3.2%
	Coarse Gravel	Fill material...shall not contain, on average, greater than 5% coarse gravel or cobbles (retained by #4 sieve; approx. 4.5 mm)	Within Guidelines 0.5 - 0.6% retained by #4 sieve	Within Guidelines 0 – 1.7% retained by #4 sieve
Composition	General	The sediment composition of Georgia beaches is generally fine-grained silica sand (>90%) with very little fragmented shell	Within Guidelines	Within Guidelines
	Shell Content	Shell content should remain below 15% of total volume.	Within Guidelines	Within Guidelines
Color		Sediment color should be between 10YR 6.5/1 and 10YR 7.0/1 on the Munsell soil color chart.	10YR 6/2 - 10YR 6/3	2.5YR 6/2 – 2.5YR 7/2 to 10YR 7/1 – 10YR 7/2

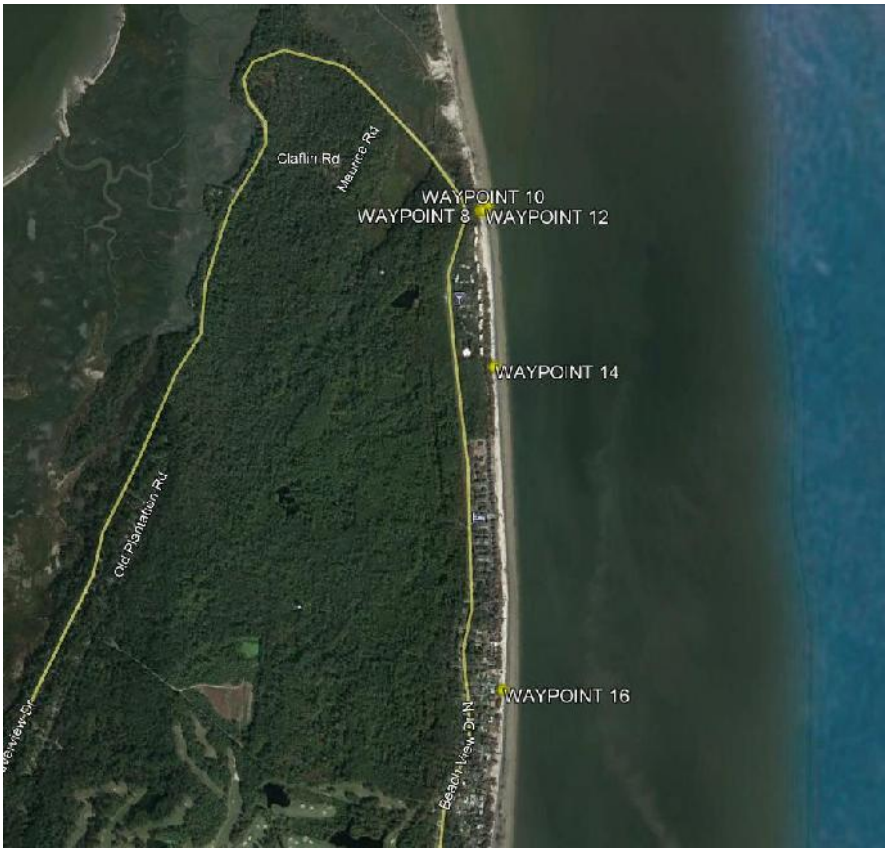


Figure 2. Jekyll Island Native Beach Sand Material Sample Locations

Figure 3. Jekyll Island Native Beach Sand Material Sample Locations – Driftwood Beach Large Scale

Table B.1 indicates that the proposed borrow area provides compatible material of suitable quality for beach and dune placement. All primary parameters are within the GA DNR guidelines, with the following minor deviations:

- Borrow sand grain size: the borrow area median grain size is slightly coarser than the native beach and typical GA beaches, averaging 0.42mm versus 0.19mm. The sand in the borrow source was previously dredged, therefore a portion of the finer materials (including the undesirable fines passing the #200 sieve) have already been washed out of the material, which results in a coarser mean grain size. From an engineering perspective, a larger mean grain size for the borrow material is preferable and typically a goal when performing sand searches. This material will be more stable and accept a somewhat steeper slope than the existing beach.
- Sand color: both the borrow and native beach sands fall slightly outside the very narrow color range indicated by the GA DNR guidelines, with the widest variation observed for the native beach materials. It is noted that color gradations per the Munsell color chart are somewhat subjective. Based on visual review of the sediment samples, it is ATM's opinion that the proposed borrow material is well within suitable ranges for the purposes of beach and dune placement.

In many cases, searching for upland and offshore sand sources is difficult due to finer grain sizes than the existing beach, high percentage fines (>10% passing the #200 sieve), and either large shell/gravel fractions and/or incompatible colors (often much darker than the existing beach). None of these are the case presented herein, and the borrow source represents an excellent source of sand for the intended purpose.

Proposed Project Sediment Use-Fate Details

Sand for the proposed project will generally be used for two major purposes:

1) as backfill to restore the terrace berm and dune areas landward of the rehabilitated rock revetment, and
2) to be placed along the northern shoreline (beyond the rehabilitated revetment), generally covering existing scattered granite rocks, to create a softer transition to the natural Driftwood Beach shoreline to the north.

While the above two uses differ from a traditional beach nourishment project, the ultimate purpose of the material is similar – to restore berm and dune features where long term and storm erosion has impacted environmental and historical resources, threatened infrastructure, and adversely affected recreational use. The samples collected and observations indicate that the Jones Island sand is considered quality, beach compatible material for the proposed Jekyll Island Phase 2 project. Additional considerations for the primary preferred Jones Island sand source include:

- From a coastal engineering perspective, slightly coarser beach sand provides a more resilient beach, less susceptible to erosive forces of wind, waves, and flowing water. The use of the proposed material would result in an overfill ratio greater than 1.0.

- Over ~75% of the total volume of fill placement is, from an engineering perspective, backfill landward of a retaining structure (the revetment).
    - This material will be retained (contained) by the rehabilitated revetment and filter layer designed for this exact purpose. While some material landward of the revetment can be expected to be lost during elevated water levels and/or extreme storm conditions, it is still considered quality beach sand and the diluted effects when mixed with existing material in the sand sharing system will be negligible. Other material sources introduced into the sand sharing system during extreme events (e.g. erosion of upland non-sandy soils and storm water runoff) would have greater impacts to the sediment characteristics of the overall sand sharing system and potential environmental quality.
- Sand fill placed on the transitional shoreline (~25% of the total project volume) is a vast improvement over existing native beach characteristic, which mainly consists of scattered granite rocks and an eroding maritime forest escarpment.
    - The proposed quantity of sand for this area (37,000 cy) is small relative to historically estimated annual potential net longshore transport rates for Jekyll Island (ranging from 219,000-460,000 cy/yr as described in Appendix A). Losses from natural erosion and spreading of the placed quality sand from this area to the surrounding shorelines/sand sharing system will not be detrimental to adjacent areas. Addition of this sand will be a "net positive" to the total volume of available sand in the local sand-sharing system (8-16% of the estimated annual potential longshore transport). The sand will blend with the existing sand materials in adjacent areas (primarily to the north along Driftwood Beach). Thus, the physical impacts on overall system sediment characteristics will be negligible.

Sand Delivery and Transport

Proposed sand transport from the borrow site to Jekyll Island is as follows. Sand will be excavated at the borrow site using typical earth moving equipment and conveyors, loaded onto the barge via temporary staging barges at the northwest access to Jones Island (refer to Drawings). These barges will be temporarily spudded down to minimize potential impacts to the riverbed. The filled barges will sail south along the Intracoastal Waterway to arrive at Jekyll Island. Similar temporary offloading operations will occur on the north end of Jekyll Island as indicated in the Drawings, at the Clam Creek parking area. Based on the locations of the temporary loading facilities, no impact to navigation or any Federal project is anticipated. The materials will be hauled via dump trucks from the offloading site to the project area for placement and grading, utilizing the access points indicated on the Drawings.

Borrow site operations for mining sand will be constantly monitored for strict control of sediment quality. If any unsuitable material is observed, operations will adjust to avoid unsuitable material. It is noted that since the proposed preferred borrow area is an upland source, all the sand excavated and loaded from the borrow site can be monitored. This is a large advantage over an offshore submerged borrow area, where the quality of the sediments cannot be observed until the material arrives via pipeline to the beach

placement area. A sediment quality monitoring plan is provided in Appendix D, which would be incorporated into the project Plans and Specifications for construction.

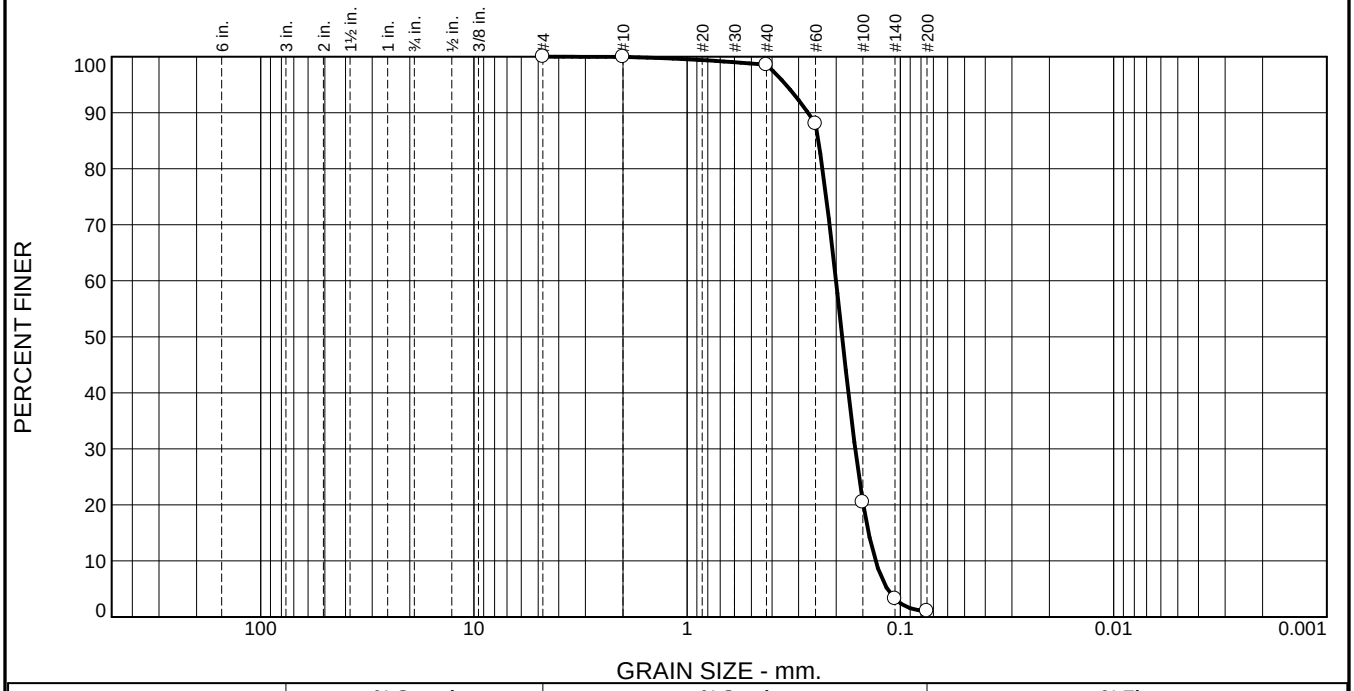
Supplementary Sand Sources

At present time, a screening of potential sand sources in the region has been conducted. The Jones Island site is the preferred primary sand source and is anticipated to contain enough quality material for the project. Several additional upland sources have been investigated and initial sediment data indicates good potential for quality material. An alternate source could be requested if (1) additional compatible material is required for any reason, or (2) if alternate upland source(s) become more advantageous during bidding and contracting of the Phase 2 project. If any alternate source to the proposed Jones Island site is anticipated, sediment testing data to document compliance with the GA DNR guidelines would be submitted for approval prior to use.

Jekyll Island Native Samples

Sediment Testing Data

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	1.4	97.5	1.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#4	100.0		
#10	100.0		
#40	98.6		
#60	88.0		
#100	20.5		
#140	3.3		
#200	1.1		

* (no specification provided)

Material Description

Tan Fine Sand

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 0.2713 D_{85}= 0.2425 D_{60}= 0.2006
D_{50}= 0.1876 D_{30}= 0.1629 D_{15}= 0.1411
D_{10}= 0.1307 C_u= 1.53 C_c= 1.01

Remarks

Date Received: 07.27.2018 **Date Tested:** 07.31.2018

Tested By: HBN

Checked By: HBN

Title:

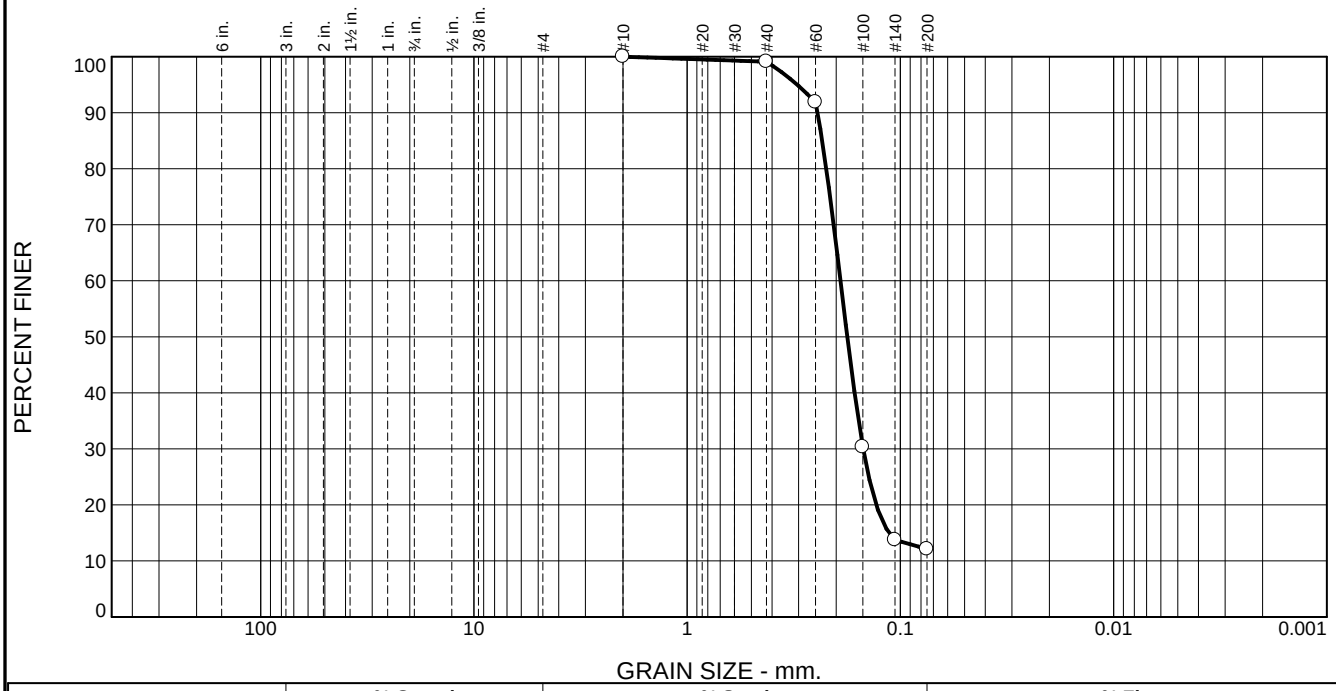
Source of Sample: West Driftwood **Depth:** 0.00-0.10 **Date Sampled:**
Sample Number: WP-8

ECS FLORIDA, LLC
7064 Davis Creek Road
Jacksonville, Florida 32256
Phone: (904) 880-0960
Fax: (904) 880-0970

Client: ATM Inc.
Project: Jekyll Island Revetment Rehabilitation

Project No: 27243 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.9	87.0	12.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#10	100.0		
#40	99.1		
#60	91.9		
#100	30.3		
#140	13.7		
#200	12.1		

* (no specification provided)

Material Description

Gray Fine Sand

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= **AASHTO (M 145)=**

Coefficients

D_{90}= 0.2447 D_{85}= 0.2326 D_{60}= 0.1910
D_{50}= 0.1774 D_{30}= 0.1494 D_{15}= 0.1130
D_{10}= C_u= C_c=

Remarks

Date Received: 07.27.2018 **Date Tested:** 07.31.2018

Tested By: HBN

Checked By: HBN

Title:

Source of Sample: East Driftwood **Depth:** 0.00-0.10 **Date Sampled:**
Sample Number: WP-10

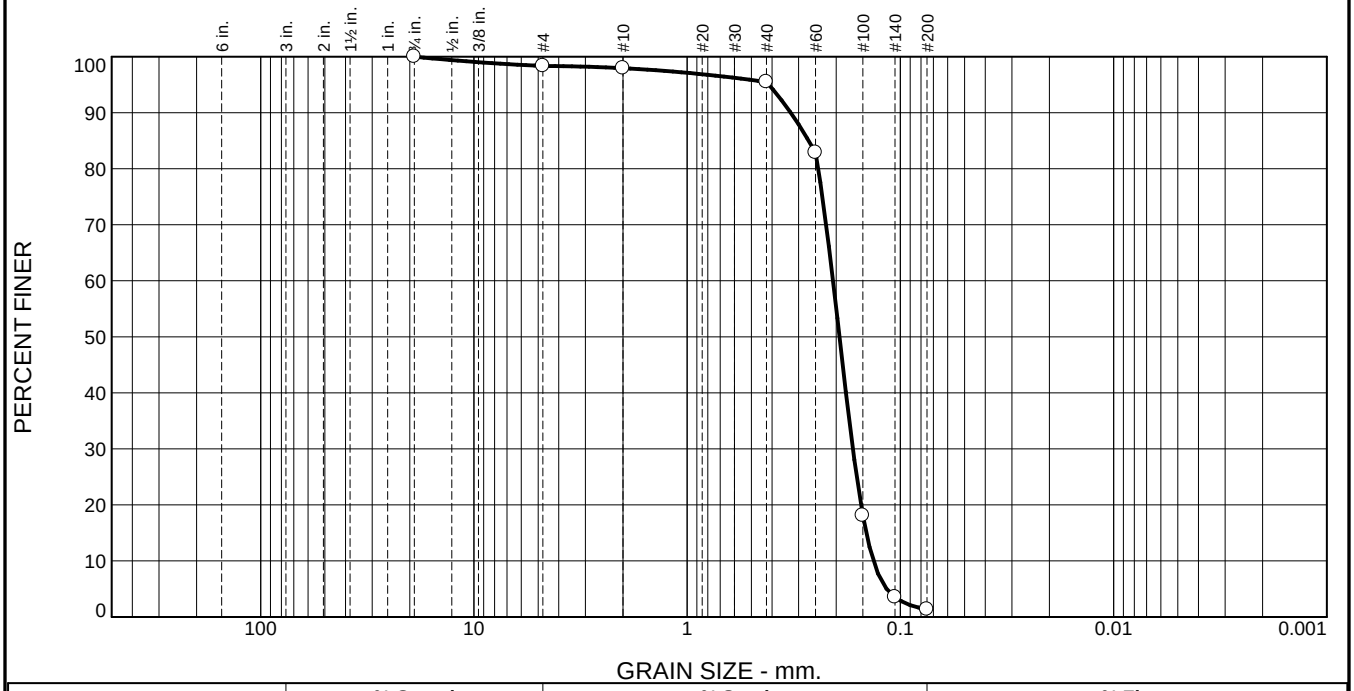
ECS FLORIDA, LLC
7064 Davis Creek Road
Jacksonville, Florida 32256
Phone: (904) 880-0960
Fax: (904) 880-0970

Client: ATM Inc.

Project: Jekyll Island Revetment Rehabilitation

Project No: 27243 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.7	0.4	2.4	94.1	1.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3/4"	100.0		
#4	98.3		
#10	97.9		
#40	95.5		
#60	82.9		
#100	18.1		
#140	3.5		
#200	1.4		

* (no specification provided)

Material Description

Tan Fine Sand

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 0.3270 D_{85}= 0.2693 D_{60}= 0.2071
D_{50}= 0.1931 D_{30}= 0.1670 D_{15}= 0.1446
D_{10}= 0.1338 C_u= 1.55 C_c= 1.01

Remarks

Date Received: 07.31.2018 **Date Tested:** 07.31.2018

Tested By: HBN

Checked By: HBN

Title:

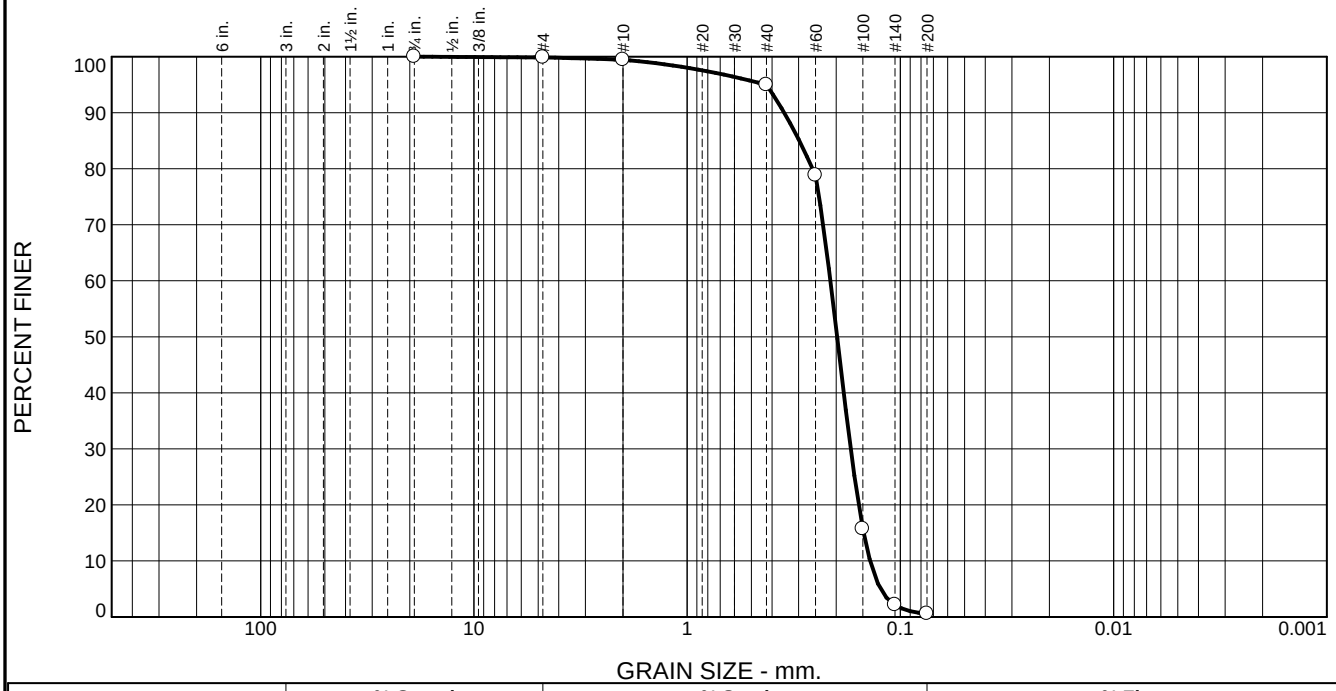
Source of Sample: Mid Driftwood **Depth:** 0.00-0.10 **Date Sampled:**
Sample Number: WP-12

ECS FLORIDA, LLC
7064 Davis Creek Road
Jacksonville, Florida 32256
Phone: (904) 880-0960
Fax: (904) 880-0970

Client: ATM Inc.
Project: Jekyll Island Revetment Rehabilitation

Project No: 27243 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.1	0.5	4.4	94.4	0.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3/4"	100.0		
#4	99.9		
#10	99.4		
#40	95.0		
#60	78.8		
#100	15.7		
#140	2.2		
#200	0.6		

* (no specification provided)

Material Description

Tan Fine Sand

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 0.3509 D_{85}= 0.2981 D_{60}= 0.2130
D_{50}= 0.1981 D_{30}= 0.1709 D_{15}= 0.1487
D_{10}= 0.1387 C_u= 1.54 C_c= 0.99

Remarks

Date Received: 07.27.2018 **Date Tested:** 07.31.2018

Tested By: HBN

Checked By: HBN

Title:

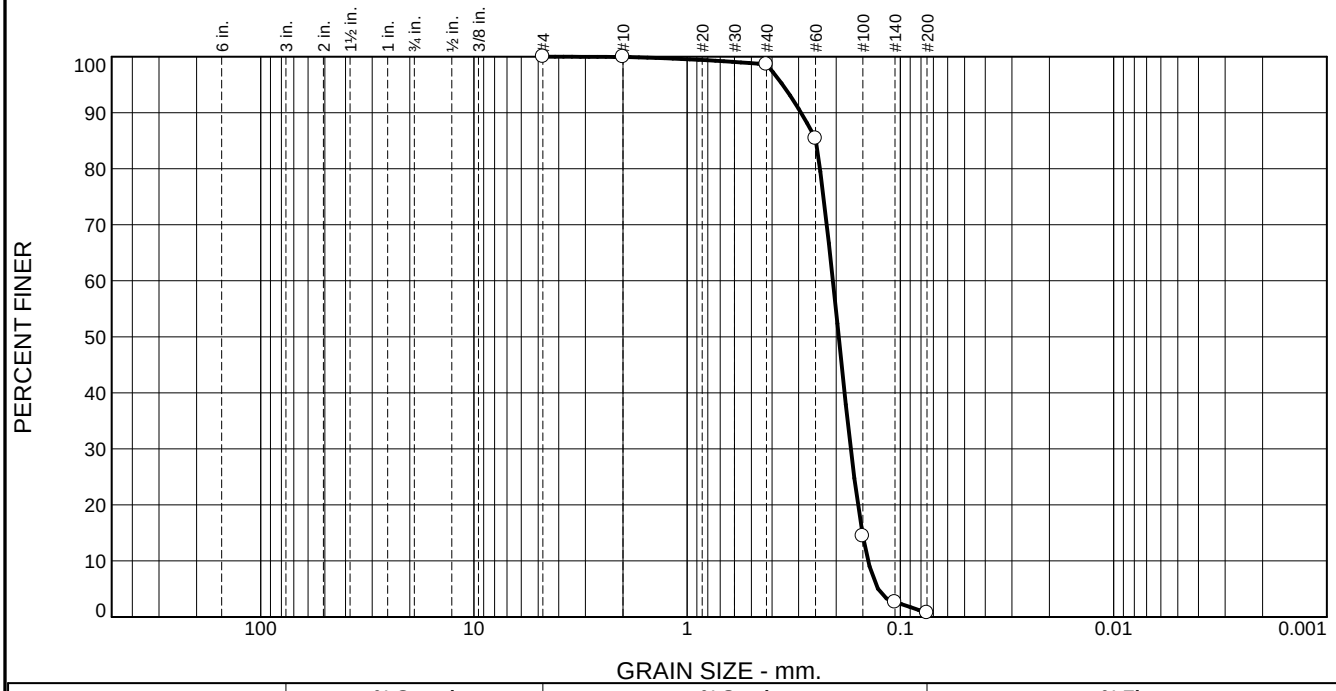
Source of Sample: East of Const Access Mid Upper Beach **Depth:** 0.00-0.10 **Date Sampled:**
Sample Number: WP-14

ECS FLORIDA, LLC
7064 Davis Creek Road
Jacksonville, Florida 32256
Phone: (904) 880-0960
Fax: (904) 880-0970

Client: ATM Inc.
Project: Jekyll Island Revetment Rehabilitation

Project No: 27243 **Figure**

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.1	1.3	97.9	0.7	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
#4	100.0		
#10	99.9		
#40	98.6		
#60	85.4		
#100	14.4		
#140	2.6		
#200	0.7		

* (no specification provided)

Material Description

Gray to Tan Fine Sand

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SP **AASHTO (M 145)=**

Coefficients

D_{90}= 0.2926 D_{85}= 0.2490 D_{60}= 0.2073
D_{50}= 0.1947 D_{30}= 0.1709 D_{15}= 0.1509
D_{10}= 0.1418 C_u= 1.46 C_c= 0.99

Remarks

Date Received: 07.27.2018 **Date Tested:** 07.31.2018

Tested By: HBN

Checked By: HBN

Title:

Source of Sample: North Albright Mid Upper Beach **Depth:** 0.00-0.10 **Date Sampled:**

Sample Number: WP-16

ECS FLORIDA, LLC
7064 Davis Creek Road
Jacksonville, Florida 32256
Phone: (904) 880-0960
Fax: (904) 880-0970

Client: ATM Inc.

Project: Jekyll Island Revetment Rehabilitation

Project No: 27243 **Figure**

ECS Florida, LLC
7064 Davis Creek Road
Jacksonville, FL 32097
Telephone: (904) 880 0960

Soil Descriptions and Munsell Color

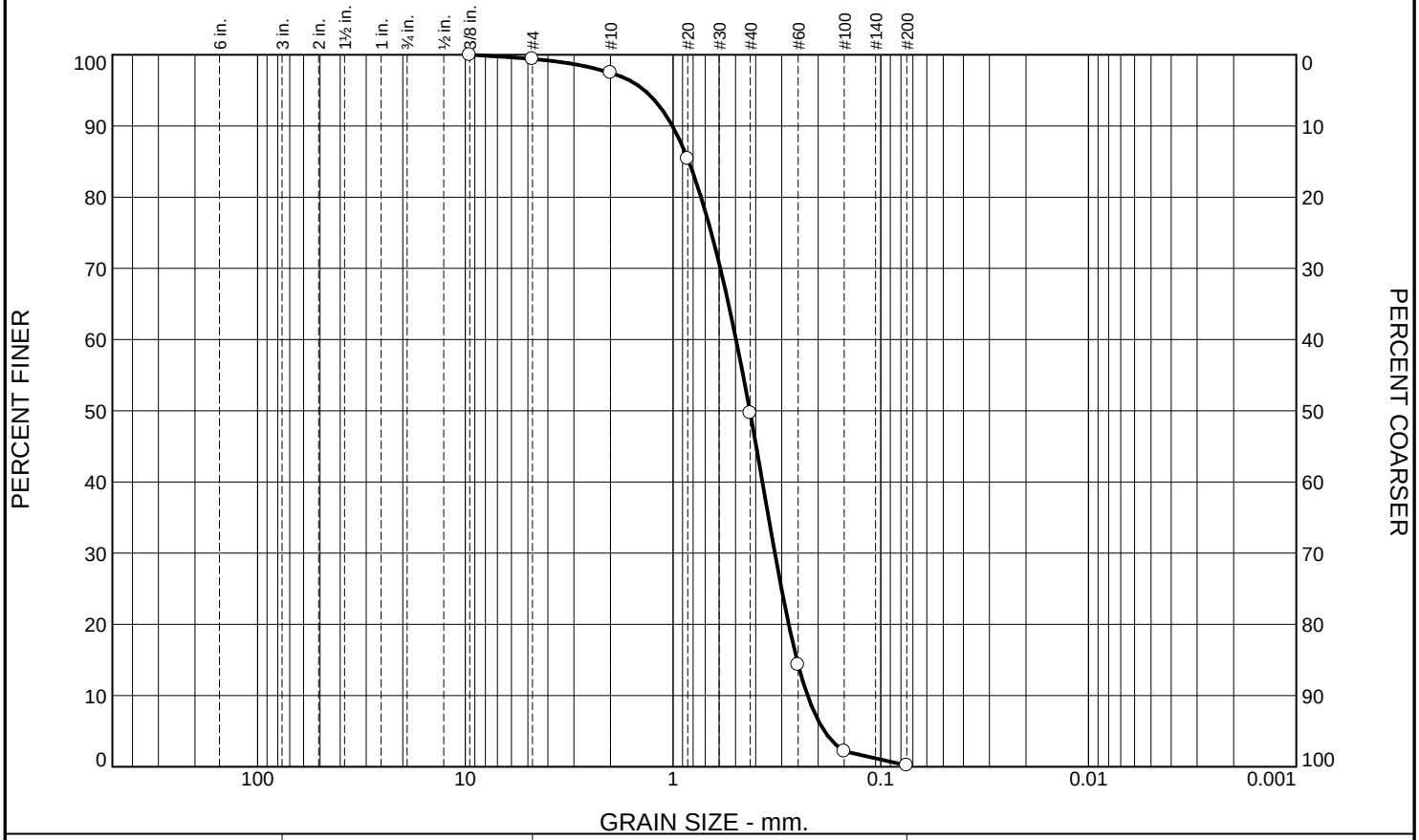
Date: **07.31.2018**
Project Name: **Jeckyll Island Revetment Rehabilitation**
Project Number: **27243**

Sample	Description	Munsell Color
WP8	Tan Fine Sand	2.5 YR 7/2
WP16	Gray-Tan Fine Sand	10 YR 7/1
WP10	Gray Fine Sand	2.5 YR 6/2
WP14	Tan Fine Sand	10 YR 7/2
WP12	Tan Fine Sand	5 YR 6/2
24+00-39+00	Gray Fine Sand	5 YR 4/1

Jones Oysterbed Island

Sediment Testing Data

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.6	1.9	47.8	49.5	0.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8	100.0		
#4	99.4		
#10	97.5		
#20	85.4		
#40	49.7		
#60	14.3		
#100	2.2		
#200	0.2		

* (no specification provided)

Soil Description

Light Brownish Gray to Pale Brown, Poorly Graded SAND, Trace Shell Fragments

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 1.0061 D_{85}= 0.8395 D_{60}= 0.4971
D_{50}= 0.4268 D_{30}= 0.3232 D_{15}= 0.2534
D_{10}= 0.2252 C_u= 2.21 C_c= 0.93

Classification

USCS= SP AASHTO=

Remarks

Visual Estimate of Shell Content < 5%
F.M.=2.12

Location: WPLA 11
Sample Number: S-1

Date: 7/25/18

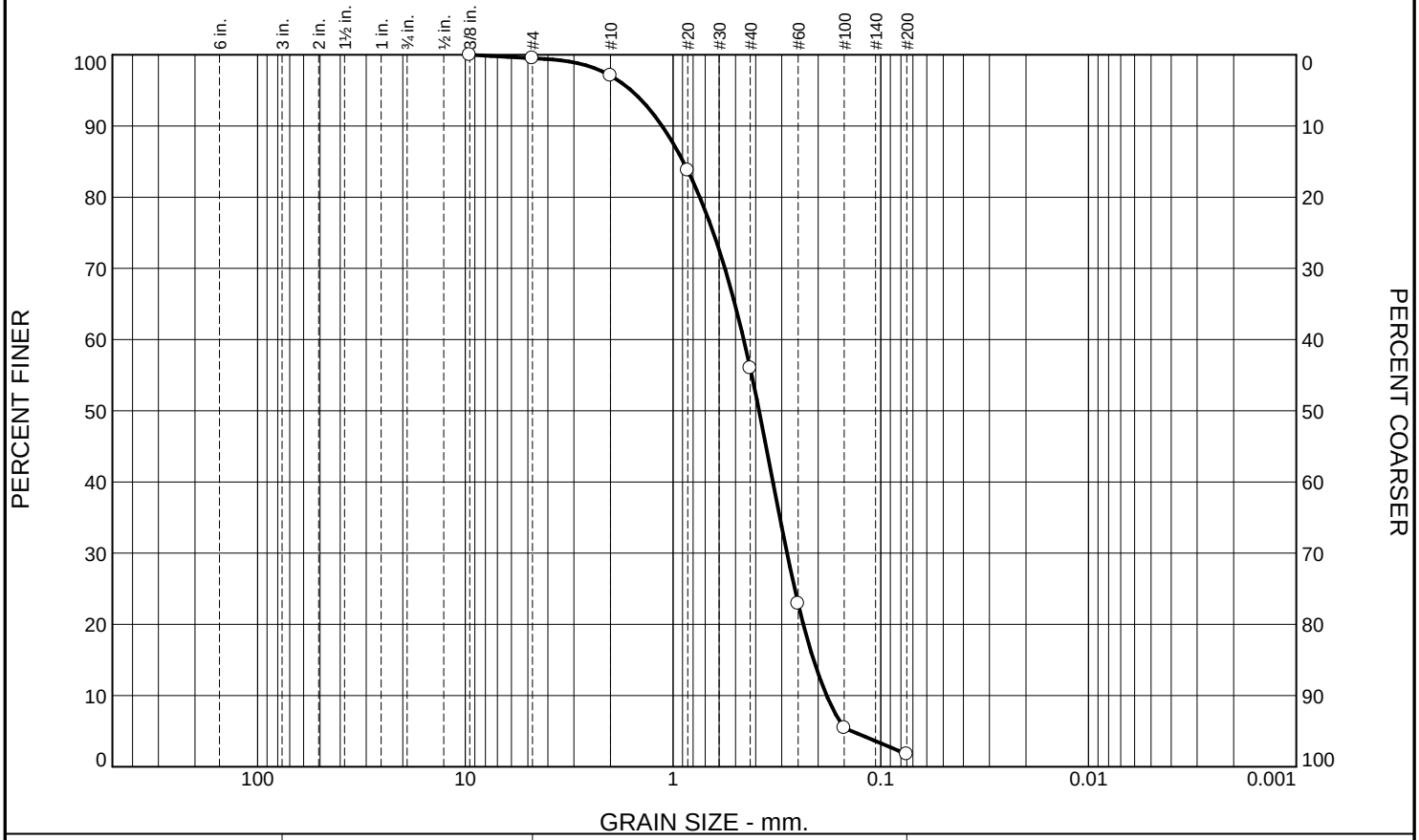
ECS SOUTHEAST, LLP
6714 Netherlands Drive
Wilmington, NC 28405
Phone: (910) 686-9114
Fax: (910) 686-9666

Client: Applied Technology & Management
Project: Jeckyll Island Revetment Rehabilitation - Jones Oyster Bed

Project No: 26966 **Figure**

Tested By: EG **Checked By:** KEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.5	2.4	41.1	54.2	1.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8	100.0		
#4	99.5		
#10	97.1		
#20	83.8		
#40	56.0		
#60	22.9		
#100	5.4		
#200	1.8		

* (no specification provided)

Soil Description

Light Brownish Gray to Pale Brown, Poorly Graded SAND, trace Shell Fragments

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 1.1279 D_{85}= 0.8930 D_{60}= 0.4565
D_{50}= 0.3852 D_{30}= 0.2827 D_{15}= 0.2106
D_{10}= 0.1822 C_u= 2.51 C_c= 0.96

Classification

USCS= SP AASHTO=

Remarks

Visual Estimate of Shell Content < 5%
F.M.=2.00

Location: WPLA 16
Sample Number: S-2

Date: 7/25/18

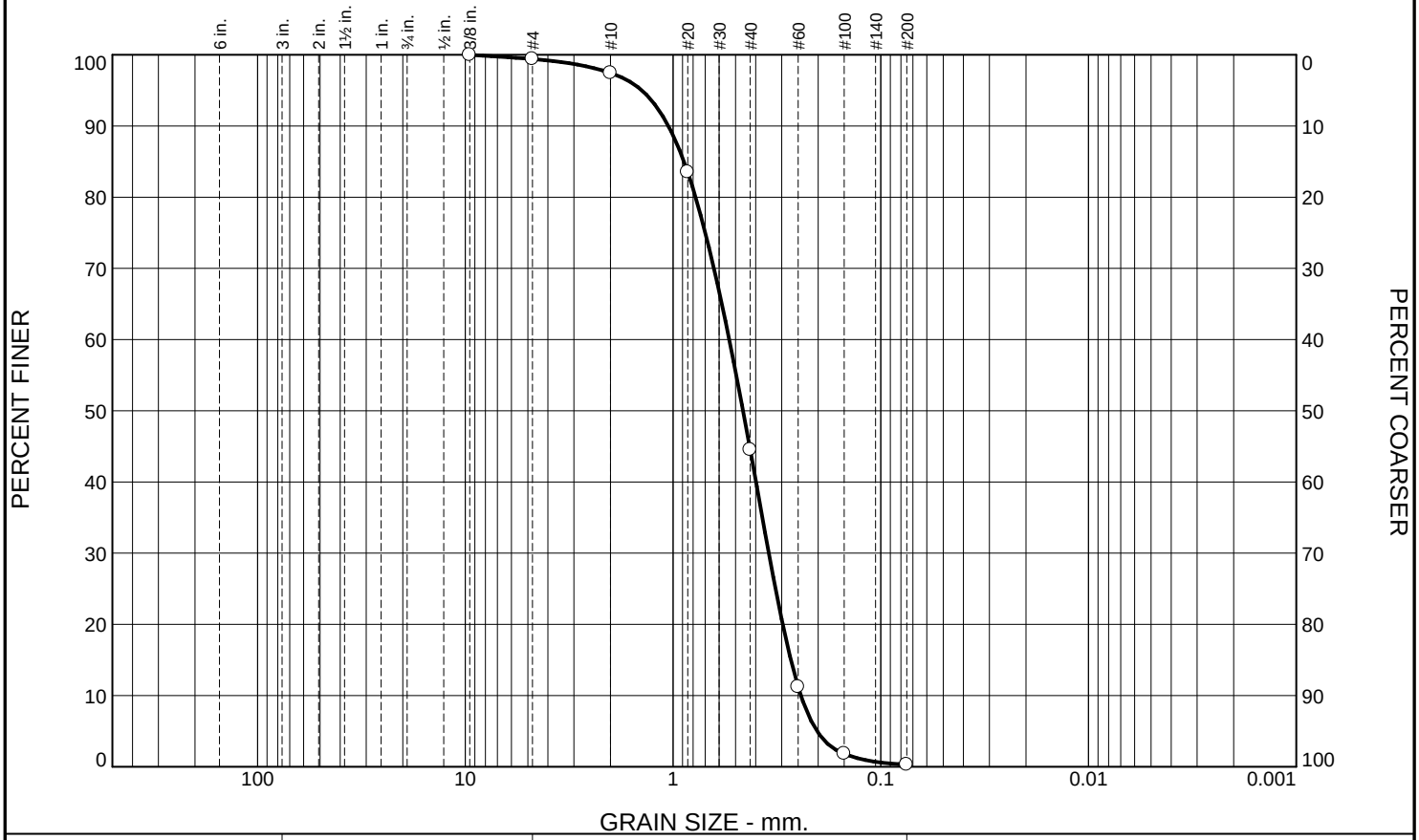
ECS SOUTHEAST, LLP
6714 Netherlands Drive
Wilmington, NC 28405
Phone: (910) 686-9114
Fax: (910) 686-9666

Client: Applied Technology & Management
Project: Jeckyll Island Revetment Rehabilitation - Jones Oyster Bed

Project No: 26966 **Figure**

Tested By: EG **Checked By:** KEL

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.6	2.0	52.9	44.2	0.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/8	100.0		
#4	99.4		
#10	97.4		
#20	83.5		
#40	44.5		
#60	11.2		
#100	1.8		
#200	0.3		

* (no specification provided)

Soil Description

Light Brownish Gray to Pale Brown, Poorly Graded SAND, trace Shell Fragments

Atterberg Limits

PL= LL= PI=

Coefficients

D_{90}= 1.0523 D_{85}= 0.8857 D_{60}= 0.5362
D_{50}= 0.4601 D_{30}= 0.3458 D_{15}= 0.2711
D_{10}= 0.2424 C_u= 2.21 C_c= 0.92

Classification

USCS= SP AASHTO=

Remarks

Visual Estimate of Shell Content < 5%
F.M.=2.21

Location: WPLA 17
Sample Number: S-3

Date: 7/25/18

ECS SOUTHEAST, LLP
6714 Netherlands Drive
Wilmington, NC 28405
Phone: (910) 686-9114
Fax: (910) 686-9666

Client: Applied Technology & Management
Project: Jeckyll Island Revetment Rehabilitation - Jones Oyster Bed

Project No: 26966 **Figure**

Tested By: EG **Checked By:** KEL

ECS Southeast, LLP
6714 Netherlands Dr.
Wilmington, NC 28405
Telephone: (910) 686-9114 Fax (910) 686-9666

Soil Descriptions and Munsell Color

Date: **7/25/2018**
Project Name: **Jeckyll Island Revetment Rehabilitation - Jones Oyster Bed**
Project Number: **26966**

Sample	Description	Munsell Color
S-1	Light Brownish Gray to Pale Brown, Poorly Graded SAND	10YR 6/2 to 10YR 6/3
S-2	Light Brownish Gray to Pale Brown, Poorly Graded SAND	10YR 6/2 to 10YR 6/3
S-3	Light Brownish Gray to Pale Brown, Poorly Graded SAND	10YR 6/2 to 10YR 6/3

Appendix C
Monitoring and Potential Maintenance Plan

Jekyll Island Phase 2 Shoreline Rehabilitation

A physical monitoring plan is proposed to be implemented for the Jekyll Island transitional shoreline area of the Jekyll Island Phase 2 Shoreline Rehabilitation Project. Due to the unique nature of the existing transitional shoreline area (scattered revetment rock) and proposed sand placement combined with the lack of available historic data, physical monitoring will help observe and assess the performance of the placed sand for use in any future decision making. The goal of the physical monitoring plan is to observe the behavior of placed sand, including accretion and erosion patterns, along the transitional shoreline and areas north and south of this sand placement. No triggers or threshold requirements are incorporated into the monitoring since no baseline data exists.

Topographic & Wading Depth Surveys (Beach Profile Surveys)

Topographic profile surveys of the transitional shoreline area will be conducted within 60 days after completion of the project (post construction survey). Thereafter, surveys will be conducted annually for the next 3 years, unless the area is eroded to pre-project conditions before the third year. Monitoring surveys will be conducted during the summer months and repeated as close as practicable during the same month of the year.

The surveys will include the 8 transects shown on Figure 1 starting with station 96+00 and ending with station 110+00 at 200 ft spacing. The survey transects will begin at the landward edge of existing vegetation and extend waterward out to wading depth. Surveys will be conducted at low tide.

Engineering Monitoring Report

An engineering report will be generated within 90 days after survey completion to discuss the survey data, performance of the fill area, and identify erosion and accretion patterns. The report will include reference to pre-project conditions. The report shall specifically include:

- Survey profiles showing all monitoring surveys to date superimposed.
- Mean High Water Line position changes relative to pre-construction survey.
- Total measured remaining volume in project template relative to pre-construction survey.

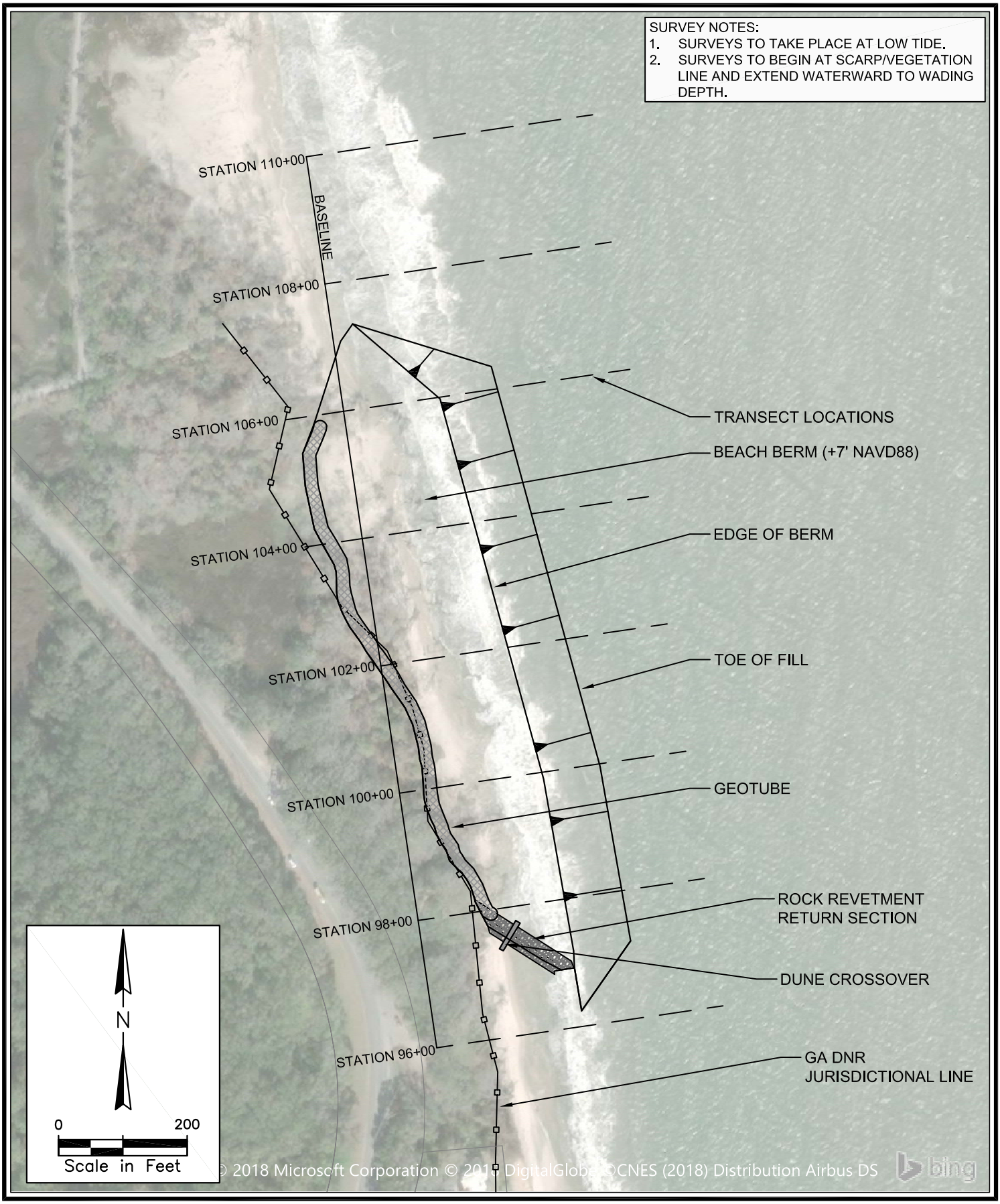
Table 1: Monitoring Survey Schedule.

MONITORING EVENT	TOPOGRAPHIC SURVEY
Pre-Construction Survey	November 2017
Post-Construction Survey	60 days after project completion
Year 1	1 yr following post-con (2020)
Year 2	2 yr following post-con (2021)
Year 3	3 yr following post-con (2022)

Note: Additional surveys may be collected following extreme storm events

Potential Maintenance

As desired by JIA and pending funding and material availability, after normal or extreme erosional events, potential maintenance of the project is proposed to restore any deficient areas to permitted conditions. Potential maintenance activities would generally be similar in nature, with volume placement requirements dictated by the results of the monitoring data.



North Beach Monitoring Plan
Jekyll Island Phase 2 - Shoreline Rehabilitation
August 8, 2018
Figure 1

ATM DESIGN ENGINEERING CONSULTING

Appendix D

Sediment Quality Control/Quality Assurance Plan

For Beach or Dune Restoration Using an Upland Sand Source

Jekyll Island Phase 2 Shoreline Rehabilitation

A. INTRODUCTION

This plan outlines the responsibilities of each stakeholder in the project as they relate to the placement of beach compatible material in the terrace berm, dune, and/or on the beach. These responsibilities are in response to the possibility that non-beach compatible sediments may exist within the upland sand source(s) and could be unintentionally placed on the beach. The QC Plan specifies the minimum proposed construction management, inspection and reporting requirements to be placed on the Contractor and enforced by the JIA, to ensure that the sediment from the upland sand source(s) to be used in the project meet the compliance specifications. The QA Plan specifies the minimum construction inspection and reporting requirements to be undertaken by the JIA or the JIA's On-Site Representative to observe, sample, and test the placed sediments to verify the sediments are in compliance.

B. SEDIMENT QUALITY SPECIFICATIONS

The sediment from the upland sand source(s) has similar characteristics to the existing coastal system at the beach placement site but is slightly coarser in median grain size. As with all sand borrow sites, it is acknowledged that it is possible that discrete occurrences of non- beach compatible sediments may exist within upland sand source(s) that do not comply with the project sediment compliance requirements as indicated in Table 1.

The compliance specifications consider the variability of sediment on the native or existing beach and are values which may reasonably be attained given what is known about the upland sand source(s). Beach fill material which falls outside of these limits will be considered unacceptable and subject to remediation.

Table 1. Sediment Compliance Specifications

Sediment Parameter	**Parameter Definition**	**Compliance Value***
Max. Silt Content	passing #200 sieve	10%
Max. Fine Gravel/Coarse Content	retained on #4 sieve	5%
Sediment Median Grain Size	D_{50}	0.15 – 0.46 mm
Max. Carbonate (Shell) Content	Visual; confirm with lab test if required	15% by volume
Munsell Color Value	moist Value (chroma = 1)	10YR6/1 to 10YR7/1
The beach fill material shall not contain construction debris, toxic material, other foreign matter, coarse gravel, or rocks.		

* The above values are taken to be "on average" for materials considered.

C. QUALITY CONTROL PLAN

The Contractor selected for the project will be required to establish a Quality Control Plan and submit it for review and acceptance by the JIA. This Plan will address sediment quality assurance by including: (1) the specific sampling frequency and testing methodology to be provided by the Contractor, (2) the name, address and point of contact for the required collection of samples and Licensed Testing Laboratory to be used for the grain size analysis, and (3) how the Contractor intends to assess compliance with the Sediment Compliance Specifications as shown in Table 1 above.

1. **Assessment at Borrow Source.** The Contractor will have qualified personnel observing the material being loaded into the barges and/or trucks for transport to Jekyll Island, at all times that loading is occurring. The selected individual shall have training or experience in construction inspection and testing and be knowledgeable of these specifications for dune/beach sand. The Contractor will perform daily visual observation of the fill material with personnel who can identify obvious changes in borrow material quality and has the authority to reject material that does not visually match the acceptable quality requirements.

The Contractor will provide at least one benchmark sample labeled "Benchmark Sample", date collected, site name, and information on where the sample was attained. The Contractor shall also retain a portion of the benchmark sample for his personnel's reference on site. If any material appears to be non-compliant, it shall be set aside for testing and/or further processing and not transported from the borrow area.

The Contractor shall collect 3 representative samples from approximately every 5,000 cubic yards of stockpiled material to visually assess grain size, Munsell color, shell content, and silt content against the benchmark sample. The sample shall be a minimum of 1 U.S. pint (approximately 200 grams). This assessment will consist of handling the fill material to ensure that it is predominantly sand to note the physical characteristics and assure the material meets the sediment compliance parameters specified herein. If deemed necessary, quantitative assessments of the sand shall be conducted for grain size, silt content, visual shell content and Munsell color using the methods outlined in Section D.6.b. Each sample shall be archived with the date, time, and location of the sample. The results of these daily inspections, regardless of the quality of the sediment, shall be appended to or notated on the Contractor's Daily Report. All samples shall be stored until at least 30 days beyond project completion.

If a sample does not meet the Sediment Compliance Specifications in Table 1, then the 5,000 cubic yards of material represented by that sample shall not be transported to the Jekyll Island placement area or any interim storage and staging area(s). The material may undergo further processing to meet the Sediment Compliance Specifications with additional testing to verify the additional processing produce material that meets the Sediment Compliance Specifications, or the material shall be set aside and not used.

2. **Beach Observation.** The Contractor will continuously visually monitor the sediment being placed on the beach. An assessment will be made during placement at a minimum of once every day. This assessment will consist of handling the fill material to ensure that it is predominantly sand and to note the physical characteristics, and assure the material meets the Sediment Compliance Specifications in Table 1. If noncompliant sediment is placed on the beach, the Contractor will immediately cease placement until any stockpiled material at the beach construction staging area can be verified as beach compatible and verbally notify the JIA's On-site Representative, providing the time, location, and description of the noncompliant sediment. The Contractor will take the appropriate remediation actions as directed by the JIA or JIA's Engineer.

D. QUALITY ASSURANCE PLAN

1. **Construction Observation.** Construction observation by the JIA's On-Site Representative will be performed on a daily basis during periods of active construction. The JIA's On-Site Representative will visually assess grain size, color, shell content, and silt content against the benchmark sample. The observation will include handling the fill material to ensure that it is predominantly sand to note the physical characteristics and assure the material meets the sediment compliance parameter specified in this Plan. If deemed necessary, quantitative assessments of the sand will be conducted for grain size, silt content, shell content and Munsell color using the methods outlined in D.6.b.

2. **On-Site Representative.** The project Engineer will actively coordinate with the JIA's On-Site Representative. Communications will take place between the Engineer and the JIA's On-Site Representative on a weekly basis.

3. **Pre-Construction Meeting.** The project QC/QA Plan will be discussed as a matter of importance at the pre-construction meeting. The Contractor will be required to acknowledge the goals and intent of the above described QC/QA Plan, in writing, prior to commencement of construction.

4. **Contractor's Daily Reports.** The JIA's On-Site Representative will review the Contractor's Daily Reports which will characterize the nature of the sediments encountered at the upland sand source and placed along the project shoreline with specific reference to moist sand color and the occurrence of rock, rubble, shell, silt or debris.

5. **Addendums.** Any addendum or change order to the Contract between the JIA and the Contractor will be evaluated to determine whether or not the change in scope will potentially affect the QC\QA Plan.

6. **Post-Construction Sampling for Laboratory Testing.** To assure that the fill material placed on the beach was adequately assessed by the borrow area investigation and design, JIA will conduct assessments of the sediment as follows:

a. Post-construction sampling of each acceptance section and testing of the fill material will be conducted to verify that the sediment placed on the beach meets the expected criteria/characteristics. Upon completion of an acceptance section of constructed berm and/or dune, the JIA or project Engineer will collect two representative sand samples at approximately 1,000 ft intervals along the completed fill, to quantitatively assess the grain size distribution, moist Munsell color, shell content, and silt content for compliance. The Project Engineer will visually assess grain size, Munsell color, shell content, and silt content of the material by handling the fill material to ensure that it is predominantly sand, and further to note the physical characteristics. One sample will be sent for laboratory analysis while the other sample will be archived by the JIA.

b. The collected samples will be visually analyzed by a certified laboratory for carbonate/shell content and Munsell color and a sieve analysis performed to determine grain size distribution and percent fines. Gradation analysis shall be performed according to applicable sections of ASTM D422, ASTM D1140, and ASTM D2487. U.S. Standard sieve sizes shall include numbers 4, 10, 40, 60, 100, 140, and 200, at a minimum.

c. A summary table of the sediment samples and test results for the sediment compliance parameters will be prepared and indicate whether each sample MET or FAILED the compliance values found in Table 1. The sediment testing results will be certified by a P.E. or P.G. registered in the State of

Georgia. A statement of how the placed fill material compares to the sediment analysis and volume calculations from the project design shall be included. The JIA will submit a sediment testing results and analysis report to the GA DNR and USACE within 90 days following completion of beach fill construction.

d. In the event that a section of fill contains material that is not in compliance with the sediment compliance specifications, then the GA DNR and USACE will be notified. Notification will indicate the volume, aerial extent and location of any unacceptable fill areas and remediation planned.

7. **Remediation Actions.** The JIA or JIA's Engineer shall have the authority to determine whether the material placed on the beach is compliant or noncompliant. If placement of noncompliant material occurs, the Contractor will be directed by the JIA or JIA's Engineer on the necessary corrective actions. Should a situation arise during construction that cannot be corrected by the remediation methods described within this QC/QA Plan, the GA DNR and USACE will be notified. The remediation actions for each sediment parameter are as follows:

a. Silt: blending the noncompliant fill material with compliant fill material within the adjacent construction berm or dune sufficiently to meet the compliance value or removing the noncompliant fill material and replacing it with compliant fill material.

b. Shell: blending the noncompliant fill material with compliant fill material within the adjacent construction berm or dune sufficiently to meet the compliance value or removing the noncompliant fill material and replacing it with compliant fill material.

c. Munsell color: blending the noncompliant fill material with compliant fill material within the adjacent construction berm or dune sufficiently to meet the compliance value or removing the noncompliant fill material and replacing it with compliant fill material.

d. Coarse gravel: screening and removing the noncompliant fill material and replacing it with compliant fill material.

e. Construction debris, toxic material, or other foreign matter: removing the noncompliant fill material and replacing it with compliant fill material.

All noncompliant fill material removed from the beach will be transported to an appropriate upland disposal facility located landward of the GA DNR SPA line. Re-testing of any remediated sections will be conducted as outlined in Section D.6 above.

Beach scraping as a coastal management option

James T Carley[1], Thomas D Shand[1], Ian R Coghlan[1], Matthew J Blacka[1], Ronald J Cox[1], Adam Littman[2], Ben Fitzgibbon[3], Grant McLean[3], Phil Watson[4]

[1]Water Research Laboratory, School of Civil and Environmental Engineering, University of New South Wales
[2]Parsons Brinckerhoff, Sydney NSW
[3]Byron Shire Council, NSW
[4]Clarence City Council, TAS.

Abstract

This paper examines the feasibility of beach scraping as a coastal management option. Beach scraping has been and continues to be widely undertaken, but there is little published literature on it. Conversely, it has been discontinued in some locations due to environmental concerns.

Beach scraping is defined as the movement of sand from the intertidal zone to the dune or upper beach by mechanical means. It has also been called beach skimming, beach panning, nature assisted beach enhancement and assisted beach recovery. Beach scraping mimics natural beach recovery processes, but increases the recovery rate compared with natural processes. In combination with revegetation schemes, beach scraping has commonly been used for dune building.

The paper details case studies from two locations and addresses the following aspects of beach scraping:

- Literature review;
- International best practice;
- Design methodology;
- Target dune profile;
- Impacts of climate change;
- Seasonal factors;
- Approximate costs;
- Preliminary environmental effects;
- Precautions.

.
.
Beach scraping differs from beach nourishment in that nourishment involves sand being imported from outside the active littoral compartment, whereas with beach scraping, sand is redistributed within the littoral system. This redistribution used in scraping means that natural forces may do some of the work, potentially resulting in lower costs than nourishment.

Clearly, beach scraping is not a universal panacea for coastal management. This paper identifies the most suitable locations, criteria for suitability and the limitations of beach scraping.

Introduction

Beach scraping refers to the anthropogenic movement of small to medium quantities of sand from the lower part of the littoral beach system to the upper beach/dune system, thus mimicking the natural beach recovery processes (Figure 1), but at a greatly increased recovery rate. Beach scraping has been widely practised (Figure 2) but there is relatively little published literature on its application. Most work has been done without detailed environmental approvals or studies.

Other definitions include:

- "the removal of material from the lower part of the beach for deposition on the higher part of the beach or at the dune toe" (Bruun, 1983).
- "the transfer of sand from the lower beach to the upper beach (within the beach system), usually by mechanical equipment, to re-distribute the sand to parts of the beach above tide level" (BSC, undated).
- "the process of mechanically removing a layer of sand from the foreshore and transferring it to the backshore" (Clark, 2005).

Beach scaping has also been called:

- Beach skimming;
- Beach panning;
- Nature assisted beach enhancement (NABE);
- Assisted beach recovery;
- Beach recycling and re-profiling.

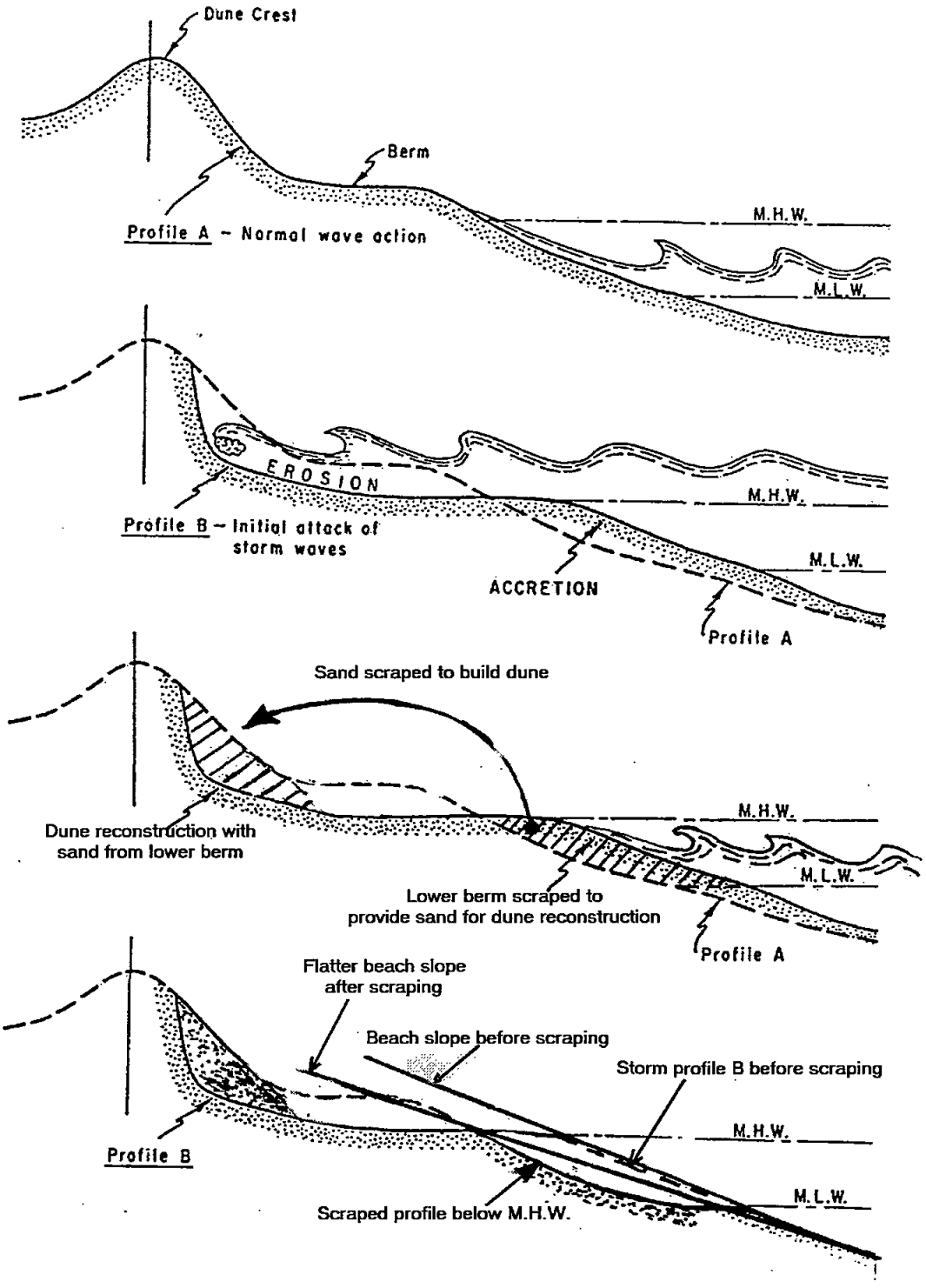


Figure 1: Beach scraping concept (Source: Lex Nielsen)

Gold Coast 1967

Sydney 2008

Figure 2: Photos of beach scraping

Literature Review

Physical Factors and Effects

Smutz, Griffith and Wang (1980)

Smutz et al. (1980) reasoned that by removing a small amount of sand from the lower beach and placing it above the wave run-up limit, accretion of the lower beach is accelerated because a flatter nearshore profile prevails. Flatter profiles promote accretion, whereas steeper profiles are more prone to erosion. Smutz et al. reported on physical model studies of this and also presented theoretical wave steepness calculations.

They acknowledged that their work was not based on field studies, but argued that beach scraping was more efficient than conventional nourishment because nature provides most of the energy (in accreting the lower beachface).

Bruun (1983)

Bruun (1983) commented on scraping practice in Denmark and the USA. He recommended "responsible scraping", with scraping depths of 0.2 to 0.5 m and that placing material into the dune provided the best coastal protection. "Responsible scraping" did not have adverse effects on neighbouring beaches. He argued from his extensive observations that if material is removed from a seaward berm during accretionary conditions, another berm will form. Bruun concluded:

1. "Beach scraping .... is not harmful, but rather is beneficial as coastal protection of eroding dunes...

2. Undertaken in a technically responsible way, it also has beneficial rather than adverse effects on adjacent beaches.

3. Beach scraping is a way of organizing available beach material in a more sensible way – on a short term basis. But it is a temporary measure only. It does not replace artificial nourishment,..."

Tye (1983)

Tye (1983) examined the seasonal effects, post storm recovery and the response of an eroded beach to scraping and artificial dune construction at Folly Beach, South Carolina, USA following a major hurricane. The analysis involved six beach profile transects at 1.6 km intervals along the beach. The scraping volumes averaged 28 m^3/m (cubic metres of sand per metre of beach/coast). Tye found that this scraping rate was excessive on profiles which did not recover naturally, and resulted in additional erosion in subsequent storms .

Tye stated that a "well organized and prudently monitored beach scraping program can prove beneficial to dune and beach restoration." He concluded that "By working in conjunction with the natural beach recovery cycle, beach recovery can be accelerated with minimal environmental damage." This was predicated on scraping rates not exceeding natural recovery rates.

McNinch and Wells (1992)

McNinch and Wells (1992) reported on a scraping project at Topsail Beach, North Carolina, USA. The scraping rates in their project were small, averaging 0.21 m^3/m per day over 3.5 weeks, scraping to a depth of 0.15 to 0.2 m, and using only a single piece of machinery. Their borrow area was below the high water mark. They cautioned that unsuccessful scraping projects involved scaping more sand than natural recovery rates, and that such excessive scraping may involve oversteepening of beaches and additional erosion. They quoted a project at Folly Beach, South Carolina, USA which used scraping rates of 5.2 $m^3/m/day$ which was considered unsuccessful, in that the lower beach borrow area had not recovered 5 weeks after scraping.

McNinch and Wells (1992) concluded that "under certain conditions, beach scraping can be beneficial in preventing overwash and preventing damage to backshore features..... we recommend limited scraping, only on that part of the beach inundated daily by tides...."

NSW Department of Land and Water Conservation (2001)

The NSW Coastal Dune Management Manual provides management and rehabilitation techniques for coastal dunes in NSW. The manual provides some guidance on dune reforming including suggested dune profiles, materials and position geometries. The manual states that "reconstructed dunes should vary in slope, size and shape just as natural dunes do. However unnatural protruding hummocks or steep-sided undulations that may interrupt or concentrate wind flow should be avoided." The manual further states that "the height and width of a reconstructed dune depends on a number of factors including:

- the height and width of existing dune remnants
- the availability of sand
- available space
- the degree of landward protection required.

It may be desirable to reconstruct the dune to a height that will prevent wave overtopping during storms."

Queensland BPA (2003)

The Queensland BPA (2003) suggested that dune heights on open coasts should be 5 to 7 m AHD. Dunes will ultimately develop their own profile, but they suggested a seaward design slope of 1V:5H for sand dune design.

Dare (2003)

Dare (2003) stated that a lack of research on beach scraping has led to differing opinions on its impact to the beach and its success in erosion control and prevention. A listing of the benefits and problems of beach scraping as a form of coastal erosion protection was compiled by Dare and is presented below with additional comments.

Positives:

- Widening of the beachfront enhances recreational use and tourism.
- Temporary coastal protection of infrastructure and housing is provided by increased beach (and dune) width.
- Scraping is aesthetically unobtrusive following the initial works period.
- An emergency response option which can be implemented rapidly without permanence.
- It utilises a natural and compatible sediment supply which is beneficial to beach flora and fauna rehabilitation and natural dune formation.

- There is minimal impact to the natural cycles of the coast.
- Temporarily increased defence without the need to expensively import volumes of sand.

Negatives:

- The temporary nature of beach scraping works for protection from coastal erosion may need to be repeated frequently in the future.
- Sediment supply is temporarily interrupted and has the potential to result in down-drift erosion.
- Modification and destruction of habitat and flora and fauna is inevitable.
- Disturbance of flora and fauna has a follow on effect to foraging patterns on species who feed on those organisms.
- Alteration to foraging, nesting and breeding patterns of avifauna and turtles.
- Erosion rates may initially be increased in the 'borrow' area.
- Beach profile has the potential to become adversely steepened depending on the size of the borrow area.

Conaway and Wells (2005)

Conaway and Wells (2005) reported on aeolian dynamics on scraped shorelines in North Carolina. Their study noted that as beach scraping increases the dry sediment volume above the high tide and increases the foredune surface area with loose, unconsolidated material, sand movement due to aeolian (wind-induced) processes is increased. This increased aeolian transport may result in in-situ dune growth but may also be lost from the active beach system completely if blown onshore. Mitigation of wind erosion was therefore suggested desirable, with wind fencing recommended as the most effective means.

Govarets (2009)

The work of Govarets was primarily focussed on ecological impacts, but also provided comments on physical impacts. Govarets (2009) stated that "soft" coastal erosion responses (such as beach nourishment and scraping) have less impact on the natural environment as they allow for the processes of sediment erosion, deposition and transportation to continue. As with any form of beach nourishment, beach scraping derives various environmental (physical) and ecological effects. However, if undertaken in accordance with appropriate site specific management techniques (e.g. scrape depth and sand placement technique) the severity of any detrimental impacts may be reduced. Reducing the severity of impacts may allow for more rapid recolonisation of beach macrofauna and provide for improved fauna and flora habitat.

Ecological Factors and Effects

Numerous studies have been undertaken on the ecological effects of beach nourishment (defined as importing sand into the littoral system), but few specifically address beach scraping.

Committee on Beach Nourishment and Protection (1995)

An improvement to the subaerial beach following scraping works can supply indigenous biota and other biota with appropriate foraging and nesting sites. In the longer term beach scraping can modify, enhance and provide new habitats in the form of enhanced dunes for beach flora and fauna.

Grain (1995)

Alterations to the natural beach system as resulting from beach nourishment, which can negatively affect sea turtles, include compaction, density, shear resistance, colour and gas exchange (Grain, 1995). Compaction and changes in density is thought to decrease nesting success, alter nest changing geometry and alter nest concealment (Grain, 1995). Gas exchange of the beach sands can influence the incubating environment of a nest which could in turn affect hatchling success and sex ratios (Nelson and Dickerson, 1988 in Speybroek et al. 2006).

Various other studies deduced no significant difference in hatching and emergence success of turtles on nourished as opposed to non-nourished beaches occurred (Raymond 1984, Nelson et al. 1987, Ryder 1992 in Committee on Beach Nourishment and Protection, National Research Council, 1995). The studies discussed above focused on the immediate impacts of beach nourishment practices during turtle nesting periods.

Henry (1999)

Henry (1999) undertook a B.Sc. thesis on the biological effects of beach scraping at Wooli, northern NSW, where beach scraping has been used primarily to improve pedestrian beach access. The following species of macrofauna were identified:

- *Crustacea* (crustaceans);
- *Ocypode cordimana* (ghost crab);
- *Gastrosaccus sp*.
- *Excirolana sp*.
- *Polychaeta* (beach worms)
- *Polychaeta sp*. A (cf. Lumbrinereis sp.)
- *Polychaeta sp*. B (cf. Glycera sp.)
- *Nephtys* sp.
- *Mollusca* (molluscs)
- *Donax deltoids* (pipi)
- *Insecta* (insects)
- *Bledius sp.*(shore beetle)
- *Coelopidae sp*. (kelp fly).

From a limited sampling scope and duration, Henry found that species abundance was less for the scraped sites than the unscraped, but there was no significant difference in

species diversity between sites. Henry found highly significant differences in populations of *Donax deltoids* (pipi) and significant differences in populations of *Ocypode cordimana* (ghost crab).

Though not mentioned by Henry, it may be that the scraped sites were subject to increased pedestrian traffic (since the scraping was undertaken to improve pedestrian access). This may be an alternative explanation for the observed differences between scraped and unscraped sites.

Erskine and Thompson (2003)

Erskine and Thompson (2003) suggested that pipis are migratory species; therefore timing beach scraping works to occur when pipis are absent will reduce the negative impacts to pipi populations.

Speybroek et al. (2006)

Speybroek et al. (2006) determined that re-colonisation processes and rates of recovery are species specific and can be determined by the duration and intensity of works. Research on sand nourished beaches (different to beach scraping) suggests that nourishment is a 'short-term pulse' disturbance and hence provokes a 'short-term pulse' response.

Batton (2007)

Benthic invertebrate community recovery is dependent on the size and arrangement of the disturbed zone (Batton, 2007). Invertebrate abundance is greatest in the top 30cm of sediment, therefore deeper areas of impact with a smaller surface area are preferred.

While it is generally considered that that the impacts are greatest where material is sourced (Batton, 2007), the impact to benthic invertebrate communities adjacent to the extraction site and at the replenishment site are generally perceived as short term (Van Dolah, 1996 in Batton, 2007).

The intertidal zone is an area of high wave and tidal action. This high energy environment is less likely to be in a stable equilibrium assemblage structure under natural conditions and it is believed species habituating this area recover from disturbance swiftly (Bolam and Rees, 2003 in Batton, 2007). Fast recovery is associated with sandy beach species as these species have adapted to a highly variable and dynamic environment which is often subject to large physical disturbances such as storms, wave action, tides, sediment transport and turbidity (Batton, 2007).

Defeo et al (2009)

Defeo et al stated that recovery of ecosystems is assumed to occur in matter of months as opposed to years. It is recognised that direct crushing of intertidal invertebrates occurs as a result of human trampling (Defeo et al. 2009, Moffett et al., 1998 in Defeo et al. 2009)

and the presence of humans has a negative effect on macrobenthic populations and communities (Veloso et al., 2006 in Defeo et al. 2009).

Defeo et al listed potential impacts on birds which include;

- Changes to foraging behaviour resulting in less feeding time, shifts in feeding times and decreased food intake;
- Decreased parental care when disturbed birds spend less time attending the nest, thus increasing exposure and vulnerability of eggs and chicks to predators;
- Decreased nesting densities in disturbed areas and population shifts to less impacted sites.

Parsons Brinckerhoff (PB, 2009)

PB undertook an extensive *Review of Environmental Factors* for proposed beach scraping at New Brighton in Byron Shire. Both Green and Loggerhead turtles have been recorded at New Brighton Beach (NPWS Wildlife Atlas) and generally nest between November and January (PB, 2009 in Carley et al. 2009). Limiting a trial scraping episode to extend no later than 30 September ensures that potential impact to nesting turtles is limited. Allowing time for natural beach profile accretion (approximately 4 weeks before the start of turtle nesting season) will further enhance the natural state of the beach allowing turtles to nest in relatively natural conditions.

Fitzgerald (2010)

Removal of sand by mechanical means is likely to cause direct mortality of benthic macrofauna, and deposits of sand on the foredune may smother fauna within this zone. Beach fauna such as ghost crabs, invertebrates, pipis, polychaete worms, crustaceans and molluscs are expected to be affected by beach scraping works.

Threatened species having the potential to be effected by a trial beach scraping episode at New Brighton Beach were identified in Fitzgerald (2010). “They include two littoral zone plant species: Sand Spurge (*Chamaesyce psammogeton*) and Dwarf Heath Casuarina (*Allocasuarina defungens*); Green Turtle (*Chelonia mydas*) and Loggerhead Turtle (*Caretta Caretta*). The latter species is known to nest at New Brighton Beach. Eight shorebirds are the remaining threatened species of concern. These are Beach Stone-curlew (*Esacus magnirostris*), Sooty and Pied Oystercatchers (*Haematopus fuliginosus* and *Haematopus longirostris*), Lesser Sand Plover (*Charadrius mongolus*), Terek Sandpiper (*Xenus cinereus*), Sanderling (*Calidris alba*), Great Knot (*Calidris tenuirostris*) and Little Tern (*Sternula albifrons*).

As with the sites identified in the Henry (1999) study, heavy pedestrian traffic and domesticated dog walking currently occurs throughout the proposed New Brighton Beach scraping site. For New Brighton, high levels of disturbance (by people and dogs), during both day night were identified by Fitzgerald, which could reduce the number of flora and fauna species present in the proposed works area. Undertaking a beach scraping episode within a high human use area has the potential for a relatively lower environmental impact than what may be observed in an undisturbed system.

Fitzgerald (2010) identified that food resource for littoral (seashore) birds may be temporarily diminished via temporary loss of intertidal benthic macrofauna. Disturbance to foraging, nesting and breeding shorebirds may occur during beach scraping works, however the construction phase can also attract species such as gulls through the supply of sediment, should it contain food (Govarets, 2009). Fitzgerald (2010) suggested that given the high use of New Brighton Beach, impacts to threatened avifauna as resulting from any beach scraping works (if undertaken before October) are not expected to be significant.

Aim and Scope of Beach Scraping

There are several possible aims and scopes of beach scraping, which could be attained either singly or as a combination. These are:

1. Restore and maintain pedestrian beach access following storm erosion.
2. Build a dune to a design profile by:
    a. Raising low points of the dune to a design level.
    b. Increasing the dune volume over the long term to meet storm demand.
3. Accelerating beach recovery following storm erosion.
4. Increase the dune volume to offset recession due to sea level rise (as a medium term measure).

Designing a beach scraping project

Coastal processes

Coastal processes which need to be considered in the design of a beach scraping project include:

- Water levels;
- Sea level rise;
- Wave climate;
- Wave setup;
- Wave runup;
- Littoral drift (net and gross);
- Beach erosion ;
- Beach recovery;
- Beach recession;
- Wind blown sand;
- Beach rotation;
- Seasonality.

Project design

Factors which need to be considered include:

- Aim and scope of beach scraping;
- Sand borrow area;
- Design sand dune profiles;
- Existing representative profiles;
- Preferred profiles of deposited sand;
- Required sand volume;
- Quantity of sand gained per episode;
- Machinery to be used to scrape and transport sand;
- Estimates of machinery hours/days per scraping episode;
- Number of scraping episodes for present day hazards;
- Economics.

Some examples of coastal processes and project design are provided below, however, the scope exceeds the limitations of this paper. More detail is provided in Carley et al (2009).

An example of typical water levels for the NSW coast is shown in Table 1. These indicate a typical borrow area should extend between about -0.4 m AHD and 1 m AHD.

For a typical NSW site and a range of scraping depths between 0.1 and 0.5 m, the volume of material obtained per scraping episode is shown in Table 2. Indicative costs for beach scraping range from \$2/m^3 to \$10/m^3 (ex GST), with a value of \$7/m^3 ex GST adopted. Costs are shown in Table 2. This compares with typical costs for beach nourishment of \$5/m^3 to \$50/m^3 (ex GST).

Design erosion volumes for the open NSW coast from Gordon (1987) are shown in Table 3. When erosion volumes from a major storm are compared with the volumes obtainable from a single scraping episode, it can be seen that the scraping volumes are small.

Table 1: Design water levels for operational scraping conditions

Parameter	Low Tide	High Tide
Spring Tide (MLWS & MHWS)	-0.6 m AHD	+0.7 m AHD
Wave Setup for Hs = 1.6 m	0.2 m	0.2 m
2 % Wave Run-up for Hs = 1.6 m, Tp = 10 s	0.7 m	0.7 m
Typical Nearshore Water Level	- 0.4 m AHD	+ 0.9 m AHD
Typical Nearshore Runup Level	+0.1 m AHD	+1.4 m AHD

Table 2: Typical scraping volumes per episode and costs

Scrape depth (m)	m^3/m	$/m @ $7/m^3$
0.1	4	28
0.2	8	56
0.3	12	84
0.4	16	112
0.5	20	140

Table 3: Design erosion volumes for NSW coast (Gordon, 1987)

ARI (years)	Erosion volume (m_3/m above AHD)	
	Low demand open coast	High demand rip heads
1	5	40
2	26	68
5	53	104
10	74	132
20	95	160
50	122	197
100	143	224

An example of dune crest levels relative to design wave runup (indicated as "target dune crest level") is shown in Figure 3. Beach scraping may be feasible for raising the crest of dune areas with a crest below the runup level, to prevent dune overwash.

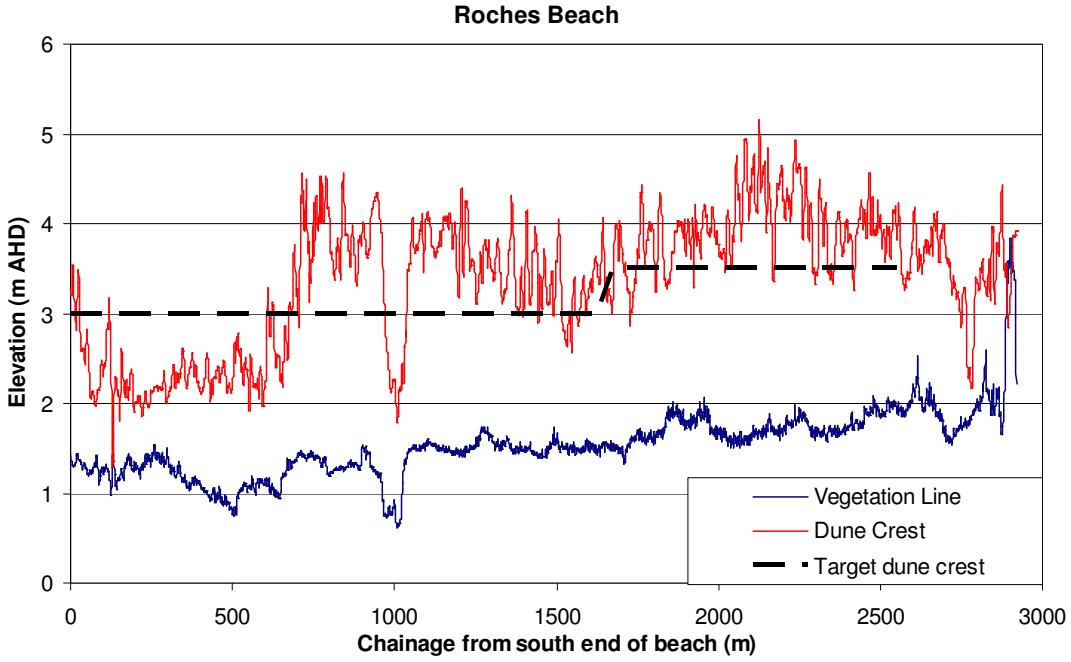


Figure 3: Dune crest level versus design wave runup level

An example of quasi-seasonal changes in beach width is shown in Figure 4. This figure (from Blacka et al, 2007) shows beach width on the northern Gold Coast. The beach width generally increased in spring and decreased during the first half of the year. Similar patterns are likely to occur in northern NSW.

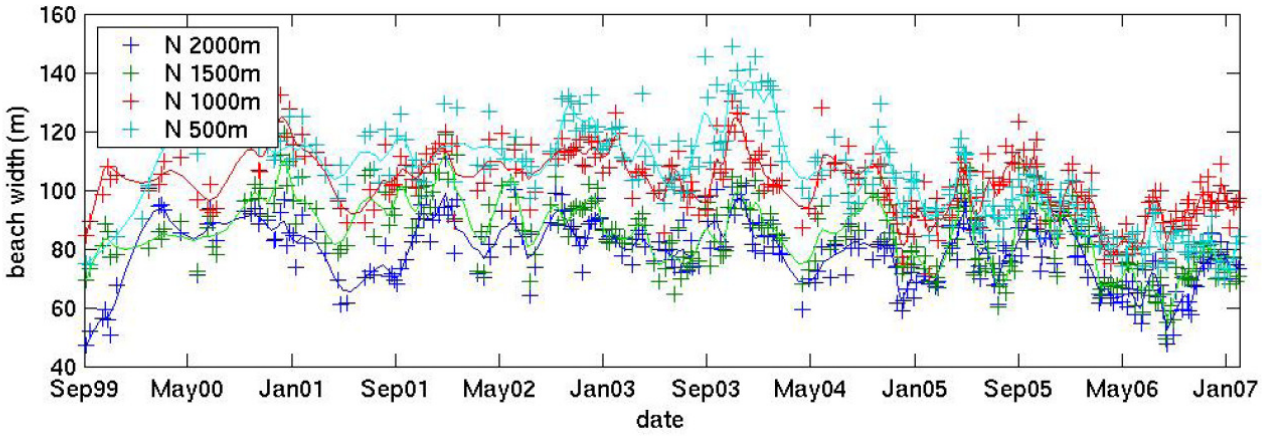


Figure 4: Seasonal change in beach width on northern Gold Coast (Blacka et al 2007)

Natural dune building occurs when the wind is onshore and exceeds a critical threshold to mobilise a given sand grain size. The threshold of motion for 0.22 mm beach sand due to wind has been calculated from the methods of CEM (2002), which yield:

- Dry sand: 6.8 m/s (13 knots, 25 km/hour);
- Wet sand: 11.9 m/s (23 knots, 43 km/hour).

The large difference in motion threshold between wet and dry sand shows the sensitivity to location on the beach face and tidal water level, as well as changes in rainfall, which may be due to natural variability, seasonality, cyclic patterns (el niño-southern oscillation and inter-decadal Pacific oscillation) and climate change. A plot (from Cape Byron) of the seasonal occurrence of winds at 3 PM which are favourable for dune building is shown in Figure 5. This plot shows that dune building through wind is least prevalent from May to August.

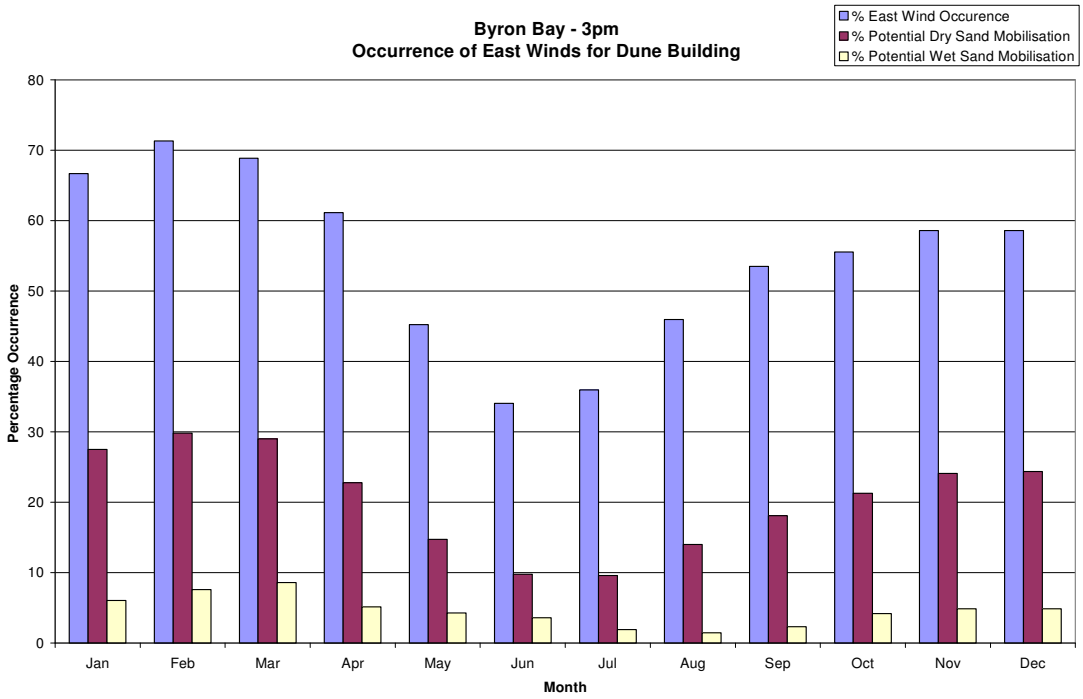


Figure 5: Seasonal winds (3 PM) favourable to dune building (Cape Byron data)

Economics

WBM (2003) estimated the cost of beach erosion on gross tourism receipts using limited data for Byron Shire. This was predominantly based on work undertaken by Raybould and Mules (1998) for the Gold Coast. It should be noted that the assumed revenue losses due to beach erosion are a small proportion of total tourism revenue. WBM (2003) presented four scenarios for tourism effects:

Scenario 1: revenue grows at 2% per annum, revenue losses with major erosion are 2%.

Scenario 2: revenue grows at 2% per annum, revenue losses with major erosion are 10%.

Scenario 3: revenue grows at 4% per annum, revenue losses with major erosion are 2%.

Scenario 4: revenue grows at 4% per annum, revenue losses with major erosion are 10%.

Rawlinsons (2007) provided the following quotation on Life Cycle Costing or Net Present Value Analysis: “Life Cycle Costing is best used in a comparative situation to provide an approximate answer to a precise question rather than a precise answer to an approximate question.”

For Scenario 1 above, a discount rate of 7%, and combining the work of WBM (2003) and numerous assumptions presented in Carley et al (2009), the following benefit to cost ratios were estimated for beach scraping:

- Preserve/restore beach access following storm erosion (tourism only): 444
- Build a dune to a design profile to reduce erosion hazard (property benefits): 1.0

Site and project specific costing is needed. Furthermore, the economics is affected by the storm events and long term beach change. For the example cited, the benefit to cost ratio for restoring beach access is high, and justify beach scraping on economic grounds. This is predominantly because beach scraping is a potentially cheaper form of beach nourishment, whereby much of the work is performed by nature.

As discussed previously, beach scraping has higher uncertainty as a protection measure than other coastal management options, so should only be undertaken in conjunction with a comprehensive monitoring program. The monitoring program should encompass both physical and ecological surveys.

Summary

This paper examines the feasibility of beach scraping as a coastal management option. Beach scraping has been widely undertaken, but there is little practical guidance and published literature on its physical and ecological effects. Conversely, it has been discontinued in some locations due to environmental concerns.

Beach scraping is defined as the movement of sand from the intertidal zone to the dune or upper beach by mechanical means. Beach scraping mimics natural beach recovery processes, but increases the recovery rate compared with natural processes. In combination with revegetation schemes, beach scraping has commonly been used for dune building.

Beach scraping differs from beach nourishment in that nourishment involves sand being imported from outside the active littoral compartment, whereas with beach scraping, sand is redistributed within the littoral system. This redistribution used in scraping means that natural forces may do some of the work, potentially resulting in lower costs than nourishment.

Clearly, beach scraping is not a universal panacea for coastal management. Beach scraping is most feasible for improving or restoring beach access, and for raising low points in dunes. It is unlikely to be feasible as a primary coastal management option to offset sea level rise of 0.9 m.

The ecological impacts of minor scraping on beaches subject to high pedestrian and/or dog traffic are low. Ecological studies are needed before undertaking major scraping works. Appropriate timing of scraping can avoid or reduce impacts on seasonal nesting species. If scraping is undertaken, a comprehensive monitoring program encompassing both physical and ecological surveys is needed.

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WBM (2003), "Byron Shire Coastline Management Study", WBM Oceanics Australia, Brisbane.

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GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912-264-7218

WALTER RABON
COMMISSIONER

DOUG HAYMANS
DIRECTOR

September 17, 2025

The Beach Club at St. Simons Island COA
520 Ocean Blvd.
St. Simons Island, GA 31522

RE: Shore Protection Act (SPA), Jurisdiction Determination Re-Verification, 1440 Ocean Boulevard, St. Simons Island, Glynn County, Georgia

Dear Beach Club at St. Simons COA:

Our office has received the survey plat dated November 8, 2024, prepared by Shupe Surveying Company, P.C., No. 3081 entitled "*A Shore Protection Act Jurisdiction Line Survey of: The Beach Club at St. Simons Island Condominium 25th G.M.D. St. Simons Island Glynn County, Georgia*" prepared for St. Simons Beach Club. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on July 2, 2025.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on July 2, 2026 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any questions, please contact me at (912) 264-7218.

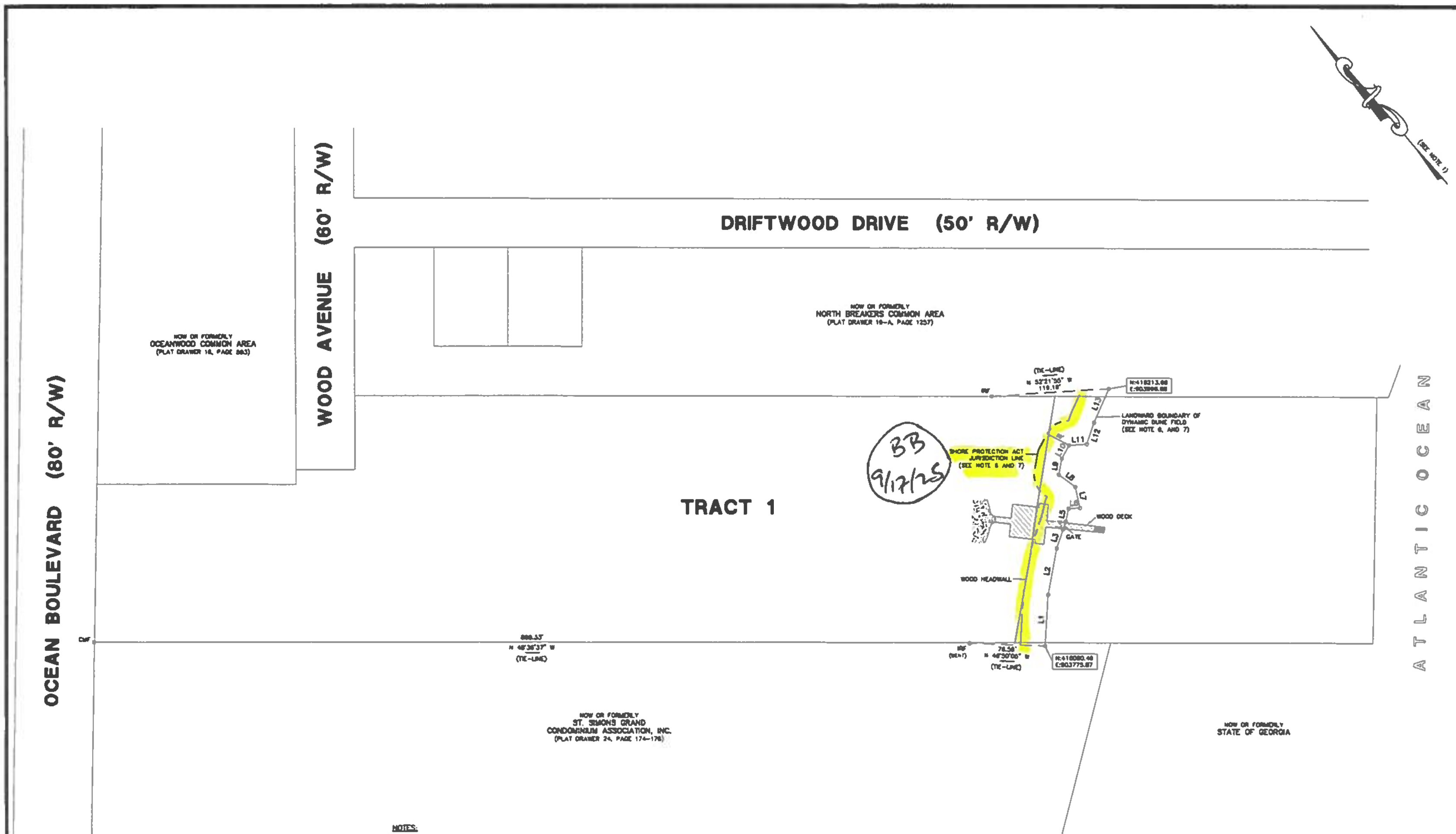
Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

Enclosure: *A Shore Protection Act Jurisdiction Line Survey of: The Beach Club at St. Simons Island Condominium 25th G.M.D. St. Simons Island Glynn County, Georgia*

Cc: Stephen Bailey, Longleaf Consulting, Stephen.bailey@longleafconsulting.com
Jason Hartman, Glynn County, jhartman@glynncounty-ga.gov

Filename: JDS20250286



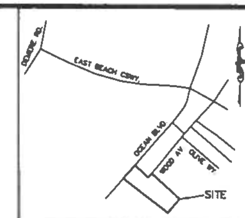
NOTES:

1. BOUNDARY INFORMATION SHOWN ON THIS SURVEY PERFORMED BY THIS FIRM. THIS IS NOT A BOUNDARY SURVEY AND IS NOT TO BE RECORDED OR USED FOR REAL PROPERTY TRANSFER.
2. FIELD EQUIPMENT USED FOR THIS SURVEY: CARLSON BRX7 RTK GPS WITH VRS NETWORK (eGPS SOLUTIONS)
3. THE ADJOINING PROPERTY INFORMATION SHOWN ON THIS SURVEY WAS TAKEN FROM THE GLYNN COUNTY GIS WEBSITE (GLYNNCOUNTY.ORG) AND COURTHOUSE RESEARCH.
4. THIS SURVEY AND ALL SUBSEQUENT REVISIONS ARE BASED SOLELY ON FIELD WORK THAT WAS COMPLETED ON 10/31/2024 (UNLESS OTHERWISE NOTED). SHUPE SURVEYING COMPANY, P.C. IS NOT RESPONSIBLE FOR ANY CHANGES TO SITE CONDITIONS AFTER THIS DATE.
5. FRESHWATER WETLANDS AND BEACH SHORELINES MAY BE UNDER THE JURISDICTION OF THE CORPS OF ENGINEERS AND/OR THE DEPARTMENT OF NATURAL RESOURCES. LOT OWNERS AND THE DEVELOPER MAY BE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE TO THESE PROTECTED AREAS WITHOUT PROPER PERMIT APPLICATIONS AND APPROVAL. FRESHWATER WETLANDS WERE NOT SURVEYED AS PART OF THIS PROJECT.
6. THE LANDWARD BOUNDARY OF THE DYNAMIC DUNE FIELD WAS DELINEATED BY THE GEORGIA DEPARTMENT OF NATURAL RESOURCES. THE LINE IS MARKED WITH PVC PIPE. THE SHORE PROTECTION ACT (SPA) JURISDICTION LINE IS 25' LANDWARD OF THE DELINEATED BOUNDARY OF THE DYNAMIC DUNE FIELD.
7. THIS PROPERTY MAY BE SUBJECT TO THE GLYNN COUNTY BEACH AND DUNE PROTECTION DEVELOPMENT SETBACK.
8. THE TERM "CERTIFICATION" AS USED IN BOARD RULE 180-6-.09(2) AND (3) AND RELATING TO PROFESSIONAL SURVEYING SERVICES AS DEFINED IN O.C.G.A. 43-15-2(6) AND (11) SHALL MEAN A SIGNED STATEMENT BASED UPON FACTS AND KNOWLEDGE KNOWN TO THE REGISTRANT AND IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.

REFERENCES:

1. PLAT DRAWER 4-B, PAGE 747

LINE	BEARING	DISTANCE
L1	N 44°53'50" E	51.34'
L2	N 51°46'25" E	48.00'
L3	N 56°28'32" E	20.14'
L4	N 81°00'25" E	8.60'
L5	N 34°07'18" E	13.66'
L6	S 81°29'00" E	11.46'
L7	N 29°36'45" E	21.87'
L8	N 17°18'31" W	20.66'
L9	N 81°41'10" E	16.87'
L10	N 69°09'46" E	15.56'
L11	S 82°39'29" E	18.32'
L12	N 29°21'31" E	23.14'
L13	N 63°05'14" E	37.06'



VICINITY MAP (NOT TO SCALE)

LEGEND:

- CMF CONCRETE MONUMENT FOUND
- IRF 1/2" IRON REBAR FOUND
- CONCRETE
- WOOD

GEORGIA PROFESSIONAL LAND SURVEYOR No. 3081 C. TEEPLE HILL

C. TEEPLE HILL, GA PLS #3081

NO.	REVISION	BY	DATE

A SHORE PROTECTION ACT JURISDICTION LINE SURVEY OF:

THE BEACH CLUB AT ST. SIMONS ISLAND CONDOMINIUM

25TH G.M.D.
ST. SIMONS ISLAND
GLYNN COUNTY, GEORGIA

PREPARED FOR:
ST. SIMONS BEACH CLUB

SHUPE SURVEYING COMPANY, P.C.
3637 DARIEN HIGHWAY
BRUNSWICK, GA 31525
912-265-0562
CERTIFICATE OF AUTHORIZATION: LSF317

30' 0 25' 50' 100'

SCALE	1" = 50'	DRAWING DATE	11/8/2024
FILE	01206	DRAWN BY	AJ
DRAWING	01206-SPA	CREW CHIEF	RQ

SHEET 1 OF 1

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912-264-7218

WALTER RABON
COMMISSIONER

DOUG HAYMANS
DIRECTOR

September 19, 2025

Glynn County
c/o Jason Hartman
1725 Reynolds Street
Brunswick, GA 31520

RE: Shore Protection Act (SPA), Jurisdiction Determination Verification, Driftwood Beach Access, St. Simons Island, Glynn County, Georgia

Dear Glynn County:

Our office has received the survey plat dated September 17, 2025, prepared by Jackson Surveying, Inc., No. 2804 entitled "*Map to Specific Purpose Survey of SPA Line at Driftwood Drive 25th G.M.D., Glynn County, Georgia*" prepared for Longleaf Consulting. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on June 11, 2025.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on June 11, 2026 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any questions, please contact me at (912) 264-7218.

Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

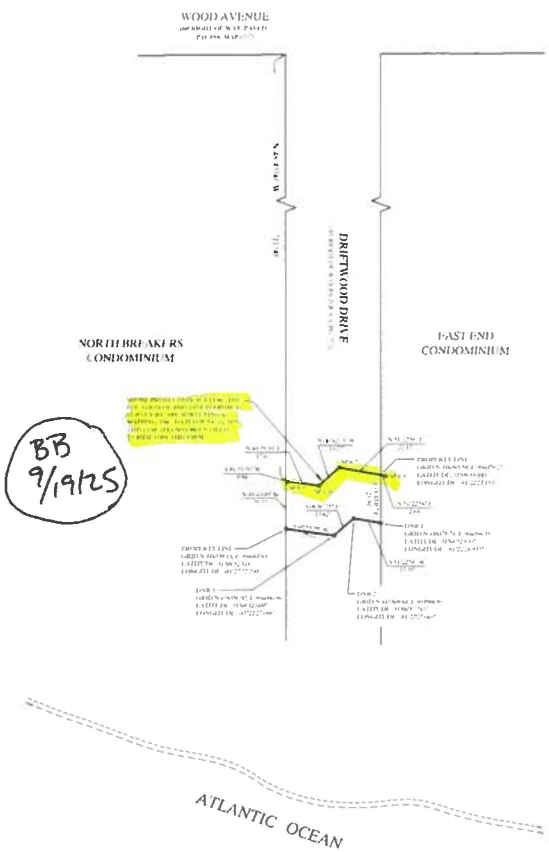
Enclosure: *Map to Specific Purpose Survey of SPA Line at Driftwood Drive 25th G.M.D., Glynn County, Georgia*

Cc: Stephen Bailey, Longleaf Consulting, Stephen.bailey@longleafconsulting.com

Filename: JDS20250182

MAP TO SPECIFIC PURPOSE SURVEY OF
SPA LINE AT DRIFTWOOD DRIVE
25th G.M.D., GLYNN COUNTY, GEORGIA

FOR LONGLEAF CONSULTING



NOTES:

DATE OF PLAT: SEPTEMBER 12, 2025

GRAPHIC SCALE: 1" = 30'

PHILLIP JACKSON

JACKSON SURVEYING, INC.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912-264-7218

WALTER RABON
COMMISSIONER

DOUG HAYMANS
DIRECTOR

September 19, 2025

Glynn County
c/o Jason Hartman
1725 Reynolds Street
Brunswick, GA 31520

RE: Shore Protection Act (SPA), Jurisdiction Determination Verification, 201 Arnold Road, King and Prince Beach and Golf Resort, St. Simons Island, Glynn County, Georgia

Dear Glynn County:

Our office has received the survey plat dated September 17, 2025, prepared by Jackson Surveying, Inc., No. 2804 entitled "*Map to Specific Purpose Survey of SPA Line at the King & Prince Hotel 25th G.M.D., Glynn County, Georgia*" prepared for Longleaf Consulting. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on May 21, 2025.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on May 21, 2026 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any questions, please contact me at (912) 264-7218.

Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

Enclosure: *Map to Specific Purpose Survey of SPA Line at the King & Prince Hotel 25th G.M.D., Glynn County, Georgia*

Cc: Stephen Bailey, Longleaf Consulting, Stephen.bailey@longleafconsulting.com

Filename: JDS20250152

MAP TO SPECIFIC PURPOSE SURVEY OF

SPA LINE AT THE KING & PRINCE HOTEL
25th G.M.D., GLYNN COUNTY, GEORGIA

FOR LONGLEAF CONSULTING

NOTES:

DATE OF PLAT: SEPTEMBER 17, 2025
DATE OF FIELD SURVEY: AUGUST 26, 2025

30' 15' 0' 15' 30' 60'
GRAPHIC SCALE: 1" = 30'

GEORGIA REGISTERED LAND SURVEYOR PHILLIP JACKSON

PHILLIP JACKSON

JACKSON SURVEYING, INC.
Surveyors and Land Planners

BRUNSWICK, GEORGIA

DWN BY: CHD. BY:
DWG NO.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912.264.7218
COASTALGADNR.ORG

MARK WILLIAMS
COMMISSIONER

DOUG HAYMANS
DIRECTOR

July 11, 2022

King & Prince Villa Condo. Assoc.
c/o Kimbo McMinn
201 Arnold Road
St. Simons Island, GA 31522

RE: Shore Protection Act (SPA), Jurisdiction Determination Verification, 1300 Downing St. #10000, King and Prince North Common, St. Simons Island, Glynn County, Georgia

Dear Mr. McMinn:

Our office has received the survey plat dated January 11, 2021 and revised July 5, 2022, prepared by Shupe Surveying Company, P.C., No. 2401 entitled "*SPA Jurisdiction Line Survey Of: King and Prince Villas North Condominium 25th G.M.D., St. Simons Island, Glynn County, Georgia*" prepared for King and Prince Villas North Property Owners Association. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on June 28, 2022.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on June 28, 2023 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any question, please contact me at (912) 264-7218.

Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

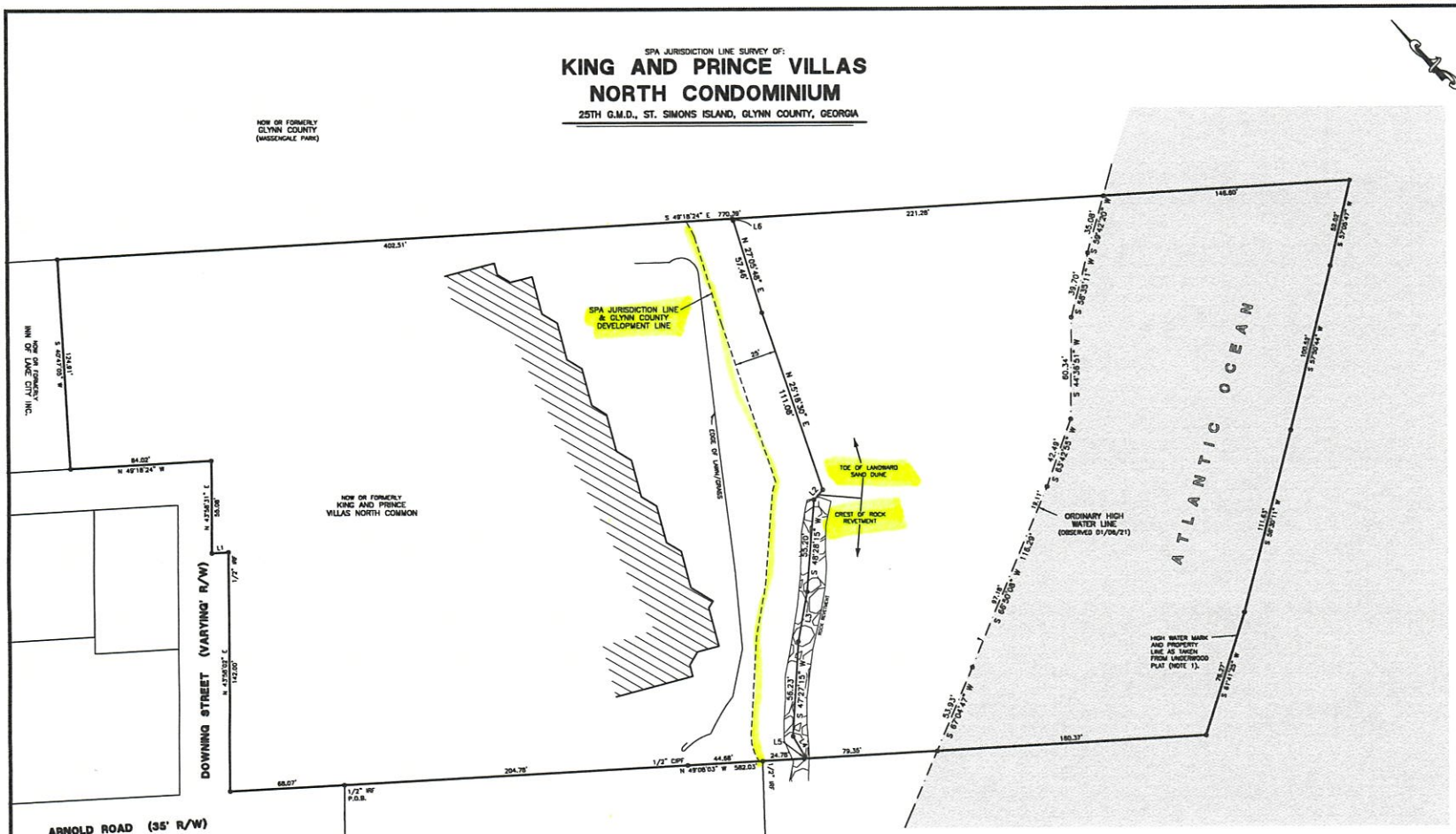
Enclosure: *SPA Jurisdiction Line Survey Of: King and Prince Villas North Condominium 25th G.M.D., St. Simons Island, Glynn County, Georgia*

cc: JDS20220140

SPA JURISDICTION LINE SURVEY OF:

KING AND PRINCE VILLAS NORTH CONDOMINIUM

25TH G.M.D., ST. SIMONS ISLAND, GLYNN COUNTY, GEORGIA



LINE	BEARING	DISTANCE
L1	N 49°08'03" W	9.99'
L2	S 86°01'56" W	7.94'
L3	S 54°37'06" W	29.81'
L4	S 13°49'33" W	13.74'
L5	S 50°35'03" W	1.50'
L6	S 18°23'35" W	1.13'

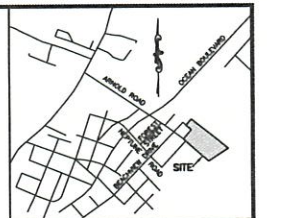
NOTES:

1. REFERENCE: PLAT BY C. P. UNDERWOOD, JR., GA. P.L.S. # 1927, TITLED "KING AND PRINCE VILLAS CONDOMINIUM", DATED 03/12/87, RECORDED IN CONDOMINIUM BOOK 4, PAGES 1115-1119.
2. BEARINGS SHOWN ON THIS SURVEY ARE BASED ON THE RECORDED PLAT IN REFERENCE NOTE 1.
3. FIELD EQUIPMENT USED FOR THIS SURVEY: GEOMAX ZOOM 90.
4. THE FIELD DATA UPON WHICH THIS MAP OR PLAT IS BASED WAS OBTAINED USING EQUIPMENT AND PROCEDURES CONSISTENT WITH BOARD RULE 180-07-.03. THE CALCULATED POSITIONAL TOLERANCE WAS 0.05 FEET.
5. THIS SURVEY AND ALL SUBSEQUENT REVISIONS ARE BASED SOLELY ON FIELD WORK THAT WAS COMPLETED ON 01/08/21 (UNLESS OTHERWISE NOTED). SHUPE SURVEYING COMPANY, P.C. IS NOT RESPONSIBLE FOR ANY CHANGES TO SITE CONDITIONS AFTER THIS DATE.
6. THE ADJOINING PROPERTY INFORMATION AND CURRENT OWNERSHIP OF THE SUBJECT PROPERTY SHOWN ON THIS SURVEY WERE TAKEN FROM THE GLYNN COUNTY GIS WEBSITE (WWW.GLYNNCOUNTY.ORG) AND COURTHOUSE RESEARCH. THE CURRENT OWNER IS KING & PRINCE NORTH CONDOMINIUM.
7. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A FULL TITLE EXAMINATION.
8. ACCORDING TO F.I.R.M. MAP NO. 13127C, PANEL 0244H, DATED 01/05/18, IT IS MY OPINION THAT THE PROPERTY SHOWN ON THIS PLAT LIES WITHIN ZONES AO, AE & VE WHICH ARE IN A SPECIAL FLOOD HAZARD AREA.

   ZONE AO - 1% ANNUAL CHANCE SHALLOW FLOODING (USUALLY SHEET FLOW ON SLOPING TERRAIN) WERE AVERAGE DEPTHS ARE BETWEEN 1 AND 3 FEET. AVERAGE WHOLE-FOOT DEPTHS DETERMINED.

   ZONE AE (EL = 9 & 10) - 1% ANNUAL CHANCE FLOOD HAZARDS. BASE FLOOD ELEVATIONS DETERMINED.

   ZONE VE - 1% ANNUAL CHANCE COASTAL FLOOD HAZARDS THAT HAVE ADDITIONAL HAZARDS ASSOCIATED WITH STORM WAVES. BASE FLOOD ELEVATIONS DETERMINED.
9. FRESHWATER WETLANDS AND SALT MARSHES AND BEACH SHORELINES ARE UNDER THE JURISDICTION OF THE CORPS OF ENGINEERS AND/OR THE DEPARTMENT OF NATURAL RESOURCES. LOT OWNERS AND THE DEVELOPER MAY BE SUBJECT TO PENALTY BY LAW FOR DISTURBANCE TO THESE PROTECTED AREAS WITHOUT PROPER PERMIT APPLICATIONS AND APPROVAL. FRESHWATER WETLANDS & SALT MARSHES WERE NOT LOCATED AS PART OF THIS SURVEY. SHORE PROTECTION JURISDICTION LINE (SPA) SHOWN HEREON WAS DELINEATED BY THE DEPARTMENT OF NATURAL RESOURCES ON 6/28/2022.



VICINITY MAP (NOT TO SCALE)

LEGEND

IRF	IRON REBAR FOUND
CIPF	CAPPED IRON PIPE FOUND (UNREADABLE)
P.O.B.	POINT OF BEGINNING
	BUILDING

GEORGIA REGISTERED No. 3401 LAND SURVEYOR GARY R. NEVILL

GARY R. NEVILL, GA PLS 3401

NO.	REVISION	BY	DATE
2	REVISED PER DNR RE-INSPECTION ON 6/28/22	JCH	07/05/22
1	REVISED PER GLYNN COUNTY COMMENTS	JCH	05/16/21

SPA JURISDICTION LINE SURVEY OF:

KING AND PRINCE VILLAS NORTH CONDOMINIUM

25TH G.M.D., ST. SIMONS ISLAND, GLYNN COUNTY, GEORGIA

PREPARED FOR:

KING AND PRINCE VILLAS NORTH PROPERTY OWNERS ASSOCIATION

SHUPE SURVEYING COMPANY, P.C.
3837 DARIEN HIGHWAY
BRUNSWICK, GA 31525
912-265-0562
CERTIFICATE OF AUTHORIZATION: LSF317

30' 0 15' 30' 60'

SCALE	1" = 30'	DRAWING DATE	01/11/2021
FILE	21002	DRAWN BY	JCH
DRAWING	21002-2.DWG	CREW CHIEF	RPG

SHEET 1 OF 1

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912-264-7218

WALTER RABON
COMMISSIONER

DOUG HAYMANS
DIRECTOR

September 17, 2025

Glynn County
c/o Jason Hartman
1725 Reynolds Street
Brunswick, GA 31520

RE: Shore Protection Act (SPA), Jurisdiction Determination Verification, Massengale Park, St. Simons Island, Glynn County, Georgia

Dear Glynn County:

Our office has received the survey plat dated August 5, 2025, prepared by ARC Surveying & Mapping, Inc., No. 3011 entitled "*Map to Show Sketch of Massengale Park, Shore Protection Act Line, Glynn County, Georgia*" prepared for Moffatt & Nichol. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on May 20, 2025.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on May 20, 2026 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any questions, please contact me at (912) 264-7218.

Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

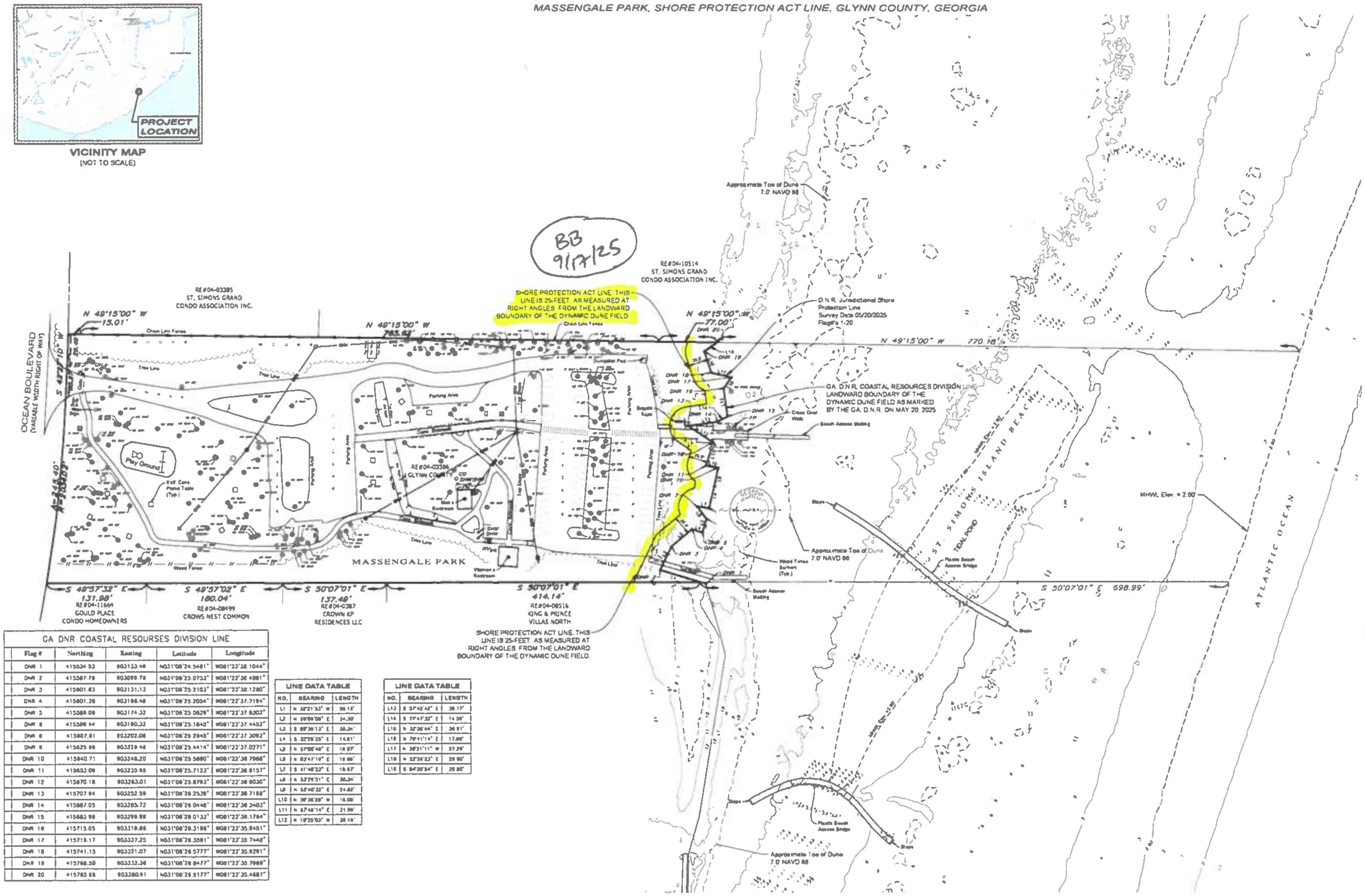
Enclosure: *Map to Show Sketch of Massengale Park, Shore Protection Act Line, Glynn County, Georgia*

Cc: Stephen Bailey, Longleaf Consulting, Stephen.bailey@longleafconsulting.com

Filename: JDS202400297

MAP TO SHOW SKETCH OF

MASSENGALE PARK, SHORE PROTECTION ACT LINE, GLYNN COUNTY, GEORGIA



GA DNR COASTAL RESOURSES DIVISION LINE				
Flag #	Northing	Easting	Latitude	Longitude
DNR 1	415534.53	903133.40	N031°08'24.5481"	W081°22'38.1044"
DNR 2	415587.76	903099.78	N031°08'25.0753"	W081°22'38.4881"
DNR 3	415601.83	903131.13	N031°08'25.2103"	W081°22'38.1280"
DNR 4	415601.38	903166.46	N031°08'25.2054"	W081°22'37.7194"
DNR 5	415589.08	903174.32	N031°08'25.0829"	W081°22'37.6303"
DNR 6	415599.44	903180.32	N031°08'25.1845"	W081°22'37.4452"
DNR 8	415607.81	903202.08	N031°08'25.2845"	W081°22'37.3092"
DNR 9	415625.88	903220.46	N031°08'25.4414"	W081°22'37.0271"
DNR 10	415640.71	903246.20	N031°08'25.5890"	W081°22'36.7968"
DNR 11	415653.09	903235.93	N031°08'25.7123"	W081°22'36.9157"
DNR 12	415670.18	903263.01	N031°08'25.8783"	W081°22'36.6030"
DNR 13	415707.94	903252.58	N031°08'26.2539"	W081°22'36.7188"
DNR 14	415687.05	903285.72	N031°08'26.0448"	W081°22'36.3403"
DNR 15	415683.98	903298.98	N031°08'26.0133"	W081°22'36.1764"
DNR 16	415715.05	903318.86	N031°08'26.3196"	W081°22'35.9451"
DNR 17	415718.17	903337.25	N031°08'26.3581"	W081°22'35.7448"
DNR 18	415741.15	903321.07	N031°08'26.5777"	W081°22'35.9291"
DNR 19	415768.50	903332.36	N031°08'26.8477"	W081°22'35.7988"
DNR 20	415765.68	903360.91	N031°08'26.8177"	W081°22'35.4687"

LINE DATA TABLE		
NO.	BEARING	LENGTH
L1	N 32°21'33" W	30.12'
L2	N 89°00'09" E	34.30'
L3	S 89°30'13" E	38.34'
L4	S 32°29'25" E	14.81'
L5	N 57°00'48" E	18.07'
L6	N 03°47'19" E	18.08'
L7	S 41°48'23" E	18.67'
L8	N 33°29'31" E	30.34'
L9	N 32°40'32" E	24.43'
L10	N 30°36'29" W	16.00'
L11	N 57°48'14" E	31.99'
L12	N 18°25'03" W	38.18'

LINE DATA TABLE		
NO.	BEARING	LENGTH
L13	S 37°43'42" E	38.17'
L14	S 77°47'32" E	14.36'
L15	N 32°38'44" E	38.91'
L16	N 79°41'14" E	17.89'
L17	N 38°21'11" W	27.29'
L18	N 23°38'23" E	29.90'
L19	S 84°28'84" E	28.90'

LEGEND

TREE NOTE

Trees by nature are irregular in size and shape. Every effort is made to accurately locate trees. The tree size is determined at diameter breast height. The tree location is the center of the tree. This location may be different if located from a different direction. All tree locations should be field checked if critical to design.

TREE LEGEND

SURVEYOR'S NOTES:

1. This map does not represent a boundary survey. Boundary information shown hereon has been provided by Glynn County labeled Massengale Park.

2. Bearings shown hereon are based on the Easterly Right-of-Way of Ocean Boulevard Glynn County, Georgia, having a Grid bearing of South 42°37'10" West.

3. This survey was done without the benefit of a title abstract.

4. There may exist additional restrictions affecting the subject property that are not known.

5. The adjoining property information and the current ownership of the subject property shown on this survey were taken from the Glynn County GIS website ([illegible]).

6. Freshwater wetlands and salt marshes are under the jurisdiction of the corps of engineers and/or the department of natural resources.

7. Shore Protection Act (SPA) jurisdiction line was delineated by the Georgia Department of Natural Resources on May 20, 2025.

8. This property may be subject to the 25'CMPA buffer.

9. Elevations shown hereon are based on the North American Vertical Datum of 1988 (NAVD88), being derived utilizing a Trimble RTK base station referenced to a NGS Brass Disk stamped "P118 ACOE", having an elevation of 5.99 feet (NAVD88).

10. Horizontal Datum is reference to Georgia State Plane Coordinate System, East Zone, North American Datum of 1983 (NAD83), being derived utilizing a Trimble RTK base station referenced to a NGS Brass Disk stamped "P118 ACOE", having coordinates of N: 416216.032, E: 902571.678.

11. The mapping of the MHW line and the MLW line based on NAVD88 Vertical Datum, as defined by NOAA Station 8677344, St. Simons Island, GA, MHWL having an elevation of +2.60 and MLWL having an elevation of -4.02.

12. Lines and points shown on this map are for 2D visual purposes only, as points and lines will be altered/deleted for aesthetic reasons.

13. Points may be frozen on this drawing for un-cluttering purposes, please unfreeze all points to find any points in question.

14. Use of this survey for purposes other than intended, without written verification, will be at the user's sole risk and without liability to the surveyor. Nothing hereon shall be construed to give any rights or benefits to anyone other than those certified to.

JOB#: 25-062 | F.CHIEF: N/A | F.BOOK: N/A
DRAWN: OCO | DATE: 08/05/25 | CHECKED BY: RJS
FILE NAME: 25-062_Glynn-county-east-beach - TOPO.dwg
DATA FILE: N/A

REVISIONS

DATE	DESCRIPTION	DRAWN BY

PROJECT
EAST BEACH TIDAL POOL SURVEY
LOCATED IN
GLYNN COUNTY, GEORGIA

PREPARED FOR
MOFFATT & NICHOL

DATE OF LAST FIELD SURVEY
May 20, 2025

NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A GEORGIA LICENSED SURVEYOR AND MAPPER

SURVEYOR'S CERTIFICATION

Matthew M. Jordan
GEORGIA REGISTERED LAND SURVEYOR NO.
R.L.S. 3011

ARC SURVEYING & MAPPING, INC.
5202 SAN JUAN AVENUE, JACKSONVILLE, FLORIDA 32210 PHONE: 904-384-8377

SHEET NUMBER 1 of 1

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912-264-7218

WALTER RABON
COMMISSIONER

DOUG HAYMANS
DIRECTOR

September 17, 2025

North Breakers Condominiums
520 Ocean Blvd.
St. Simons Island, GA 31522

RE: Shore Protection Act (SPA), Jurisdiction Determination Re-Verification, 1470 Wood Avenue, St. Simons Island, Glynn County, Georgia

Dear North Breakers Condominiums:

Our office has received the survey plat dated December 29, 2015, and revised on October 21, 2024 prepared by Jackson Surveying, Inc., No. 2804 entitled "*Map to Show Sketch of North Breakers Condominium, SPA Line 25th G.M.D., Glynn County, Georgia (According to Plat Recorded in P.D. 19A, Map 1257 of the Public Records)*" prepared for Hodnett Cooper. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on July 2, 2025.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on July 2, 2026 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any questions, please contact me at (912) 264-7218.

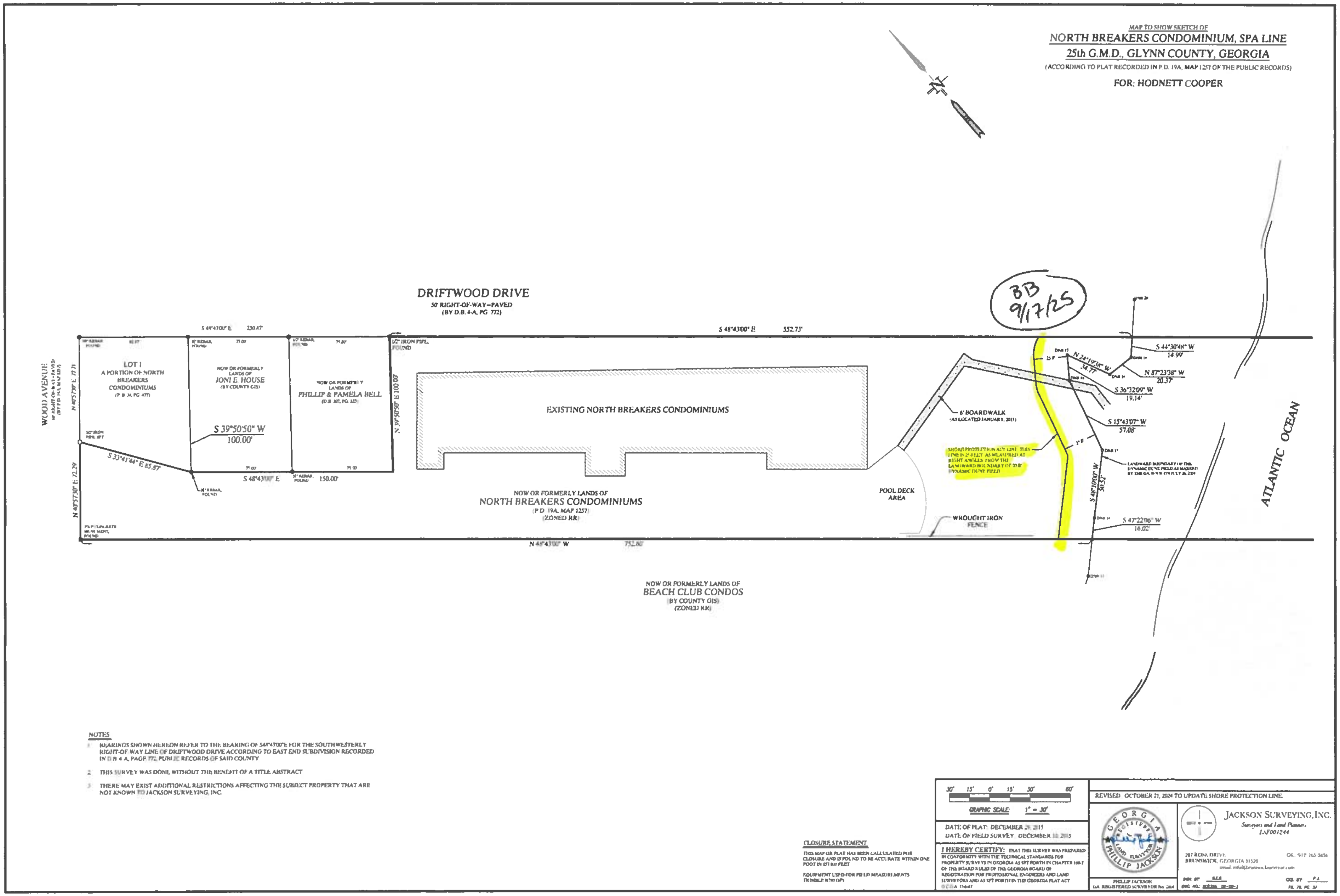
Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

Enclosure: *Map to Show Sketch of North Breakers Condominium, SPA Line 25th G.M.D., Glynn County, Georgia (According to Plat Recorded in P.D. 19A, Map 1257 of the Public Records)*

Cc: Stephen Bailey, Longleaf Consulting, Stephen.bailey@longleafconsulting.com
Jason Hartman, Glynn County, jhartman@glynncounty-ga.gov

Filename: JDS20250287



MAP TO SHOW SKETCH OF
NORTH BREAKERS CONDOMINIUM, SPA LINE
25th G.M.D., GLYNN COUNTY, GEORGIA
(ACCORDING TO PLAT RECORDED IN P.D. 19A, MAP 1257 OF THE PUBLIC RECORDS)
FOR: HODNETT COOPER
DRIFTWOOD DRIVE
50' RIGHT-OF-WAY—PAVED
(BY D.B. 4-A, PG 772)
ATLANTIC OCEAN
WOOD AVENUE
S 48°43'00" E 552.73'
S 48°43'00" E 230.87'
N 39°50'50" E 100.00'
LOT 1
A PORTION OF NORTH BREAKERS CONDOMINIUMS
NOW OR FORMERLY LANDS OF JONI E. HOUSE
NOW OR FORMERLY LANDS OF PHILLIP & PAMELA BELL
S 39°50'50" W 100.00'
S 33°41'44" E 85.87'
S 48°43'00" E 150.00'
EXISTING NORTH BREAKERS CONDOMINIUMS
6' BOARDWALK
S 44°30'48" W 14.99'
N 87°23'38" W 20.37'
S 36°32'09" W 19.14'
S 15°43'07" W 57.08'
S 48°10'00" W 50.52'
S 47°22'06" W 16.02'
POOL DECK AREA
WROUGHT IRON FENCE
NOW OR FORMERLY LANDS OF NORTH BREAKERS CONDOMINIUMS
(P.D. 19A, MAP 1257)
(ZONED RR)
N 48°43'00" W 752.80'
NOW OR FORMERLY LANDS OF BEACH CLUB CONDOS
(BY COUNTY GIS)
(ZONED RR)
BB 9/17/25
NOTES
1. BEARINGS SHOWN HEREON REFER TO THE BEARING OF S48°43'00"E FOR THE SOUTHWESTERLY RIGHT-OF WAY LINE OF DRIFTWOOD DRIVE ACCORDING TO EAST END SUBDIVISION RECORDED IN D.B. 4-A, PAGE 772, PUBLIC RECORDS OF SAID COUNTY
2. THIS SURVEY WAS DONE WITHOUT THE BENEFIT OF A TITLE ABSTRACT
3. THERE MAY EXIST ADDITIONAL RESTRICTIONS AFFECTING THE SUBJECT PROPERTY THAT ARE NOT KNOWN TO JACKSON SURVEYING, INC.
GRAPHIC SCALE 1" = 30'
DATE OF PLAT: DECEMBER 29, 2015
DATE OF FIELD SURVEY: DECEMBER 18, 2015
REVISED OCTOBER 21, 2024 TO UPDATE SHORE PROTECTION LINE.
JACKSON SURVEYING, INC.
Surveyors and Land Planners
LSF001244
207 ROSS DRIVE
BRUNSWICK, GEORGIA 31520
PHILLIP JACKSON

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
COASTAL RESOURCES DIVISION
ONE CONSERVATION WAY · BRUNSWICK, GA 31520 · 912-264-7218

WALTER RABON
COMMISSIONER

DOUG HAYMANS
DIRECTOR

September 19, 2025

Glynn County
c/o Jason Hartman
1725 Reynolds Street
Brunswick, GA 31520

RE: Shore Protection Act (SPA), Jurisdiction Determination Verification, 1400 Ocean Boulevard, St. Simons Grand, St. Simons Island, Glynn County, Georgia

Dear Glynn County:

Our office has received the survey plat dated September 17, 2025, prepared by Jackson Surveying, Inc., No. 2804 entitled "*Map to Specific Purpose Survey of SPA Line at the St. Simons Grand Condominium 25th G.M.D., Glynn County, Georgia*" prepared for Longleaf Consulting. This plat and survey generally depicts the Jurisdiction Line under the authority of the Shore Protection Act O.C.G.A. 12-5-230 et seq. as verified by the Department on August 13, 2025.

The Shore Protection Act O.C.G.A. 12-5-230 et seq. delineation of this parcel is subject to change due to environmental conditions and legislative enactments. This jurisdiction line is valid for one year from date of the delineation. It will normally expire on August 13, 2026 but may be voided should legal and/or environmental conditions change.

This letter does not relieve you of the responsibility of obtaining other state, local, or federal permission relative to the site. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area. We appreciate you providing us with this information for our records. If you have any questions, please contact me at (912) 264-7218.

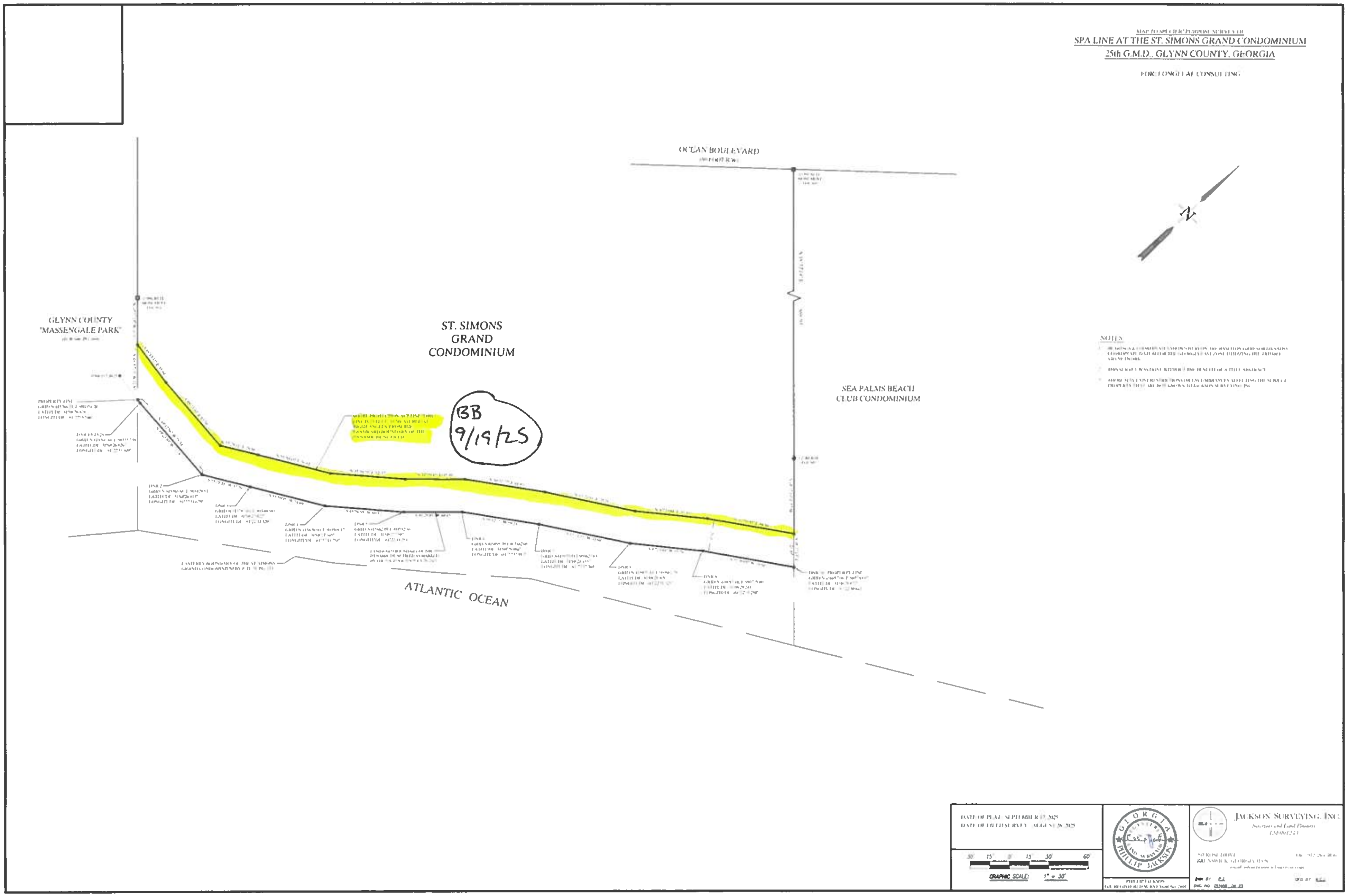
Sincerely,

Beth Byrnes
Coastal Permit Coordinator
Marsh and Shore Management Program

Enclosure: *Map to Specific Purpose Survey of SPA Line at the St. Simons Grand Condominium 25th G.M.D., Glynn County, Georgia*

Cc: Stephen Bailey, Longleaf Consulting, Stephen.bailey@longleafconsulting.com

Filename: JDS20250242



SPA LINE AT THE ST. SIMONS GRAND CONDOMINIUM
25th G.M.D., GLYNN COUNTY, GEORGIA
OCEAN BOULEVARD
N
GLYNN COUNTY
"MASSENGALE PARK"
ST. SIMONS
GRAND
CONDOMINIUM
SEA PALMS BEACH
CLUB CONDOMINIUM
ATLANTIC OCEAN
NOTES
BB
9/19/25
GRAPHIC SCALE
1" = 30'
GEORGIA
PHILLIP JACKSON
JACKSON SURVEYING, INC.