



# SHORE PROTECTION ACT PERMIT APPLICATION

VILLAGE DRAINAGE  
IMPROVEMENTS PHASE II

PREPARED FOR:



4145 NORWICH STREET  
BRUNSWICK, GA 31520

PREPARED BY:



1510 NEWCASTLE STREET, SUITE 204  
BRUNSWICK, GA 31520

PROJECT NO.: 065.02.3.18

1st SUBMISSION: JANUARY 31, 2019  
2nd SUBMISSION: JUNE 21, 2019

## PROJECT DESCRIPTION

### 1. Project Details

The proposed project is the second phase of drainage improvements within the Village Community (Village) and is located along Georgia Street, St. Simons Island in Glynn County, Georgia. Georgia Street is a residential street with public beach access. The proposed project includes replacement of the existing Georgia Street Outfall (12" Polyvinyl Chloride (PVC) pipe) with adequate infrastructure to convey stormwater from the Village into the St. Simons Sound. The project will begin at the Georgia Street Outfall heading north to the intersection of Butler, at which, it will turn east heading toward Mallory Lane, and will connect to an existing drop inlet adjacent to an existing retention pond. Adequate infrastructure includes approximately 491 linear feet (LF) of 48" ADS HP Storm Pipe having a custom 7' x 8' cast-in-place concrete headwall with a 48" Tideflex check valve (or similar device), 312 LF of 30" ADS HP Storm Pipe, 11 LF of 24" ADS HP Storm Pipe, 240 LF of 24" x 38" Reinforced Concrete Elliptical Pipe (RCEP), and 4 pre-cast concrete GDOT standard drop inlets. Each proposed drop inlet will have a sump 1 vertical foot below the invert of the entering/exiting pipes, which will act as a water quality filter for undesirable materials to settle in the structure before reaching the St. Simons Sound. The Georgia Street Outfall is located at the end of the right-of-way. Glynn County owns property up to the right-of-way while the state owns the rest. The proposed project will not impact private property or parcels. The proposed project occupies the landward area of the parcel and sand dunes. At least one third of the parcel will be retained in its naturally vegetated and topographic condition. The proposed project is designed to meet applicable hurricane-resistant standards. Refer to Appendix D for certification. The proposed project will have minimal effects to the sand-sharing system. No reasonable or viable alternative exists. Shoreline stabilization is not necessary for the proposed project. Please refer to Figure 1 for the proposed Phase II project route.



Figure 1: Proposed Phase II Route

## 2. History of Project Area

The project area for the Village drainage basin evaluation includes approximately 106 acres of commercial and residential properties. Its boundaries are defined by the Atlantic Ocean to the south, Demere Road to the east, Demere Way, Park Avenue, and Kings Way to the north, and Fairway Drive and Virginia Street to the west. The Lord Avenue, Mallory Street, and Beachview Drive drainage system within the Village will be the specific basin of interest with known deficiencies and anticipated rehabilitation and improvements.

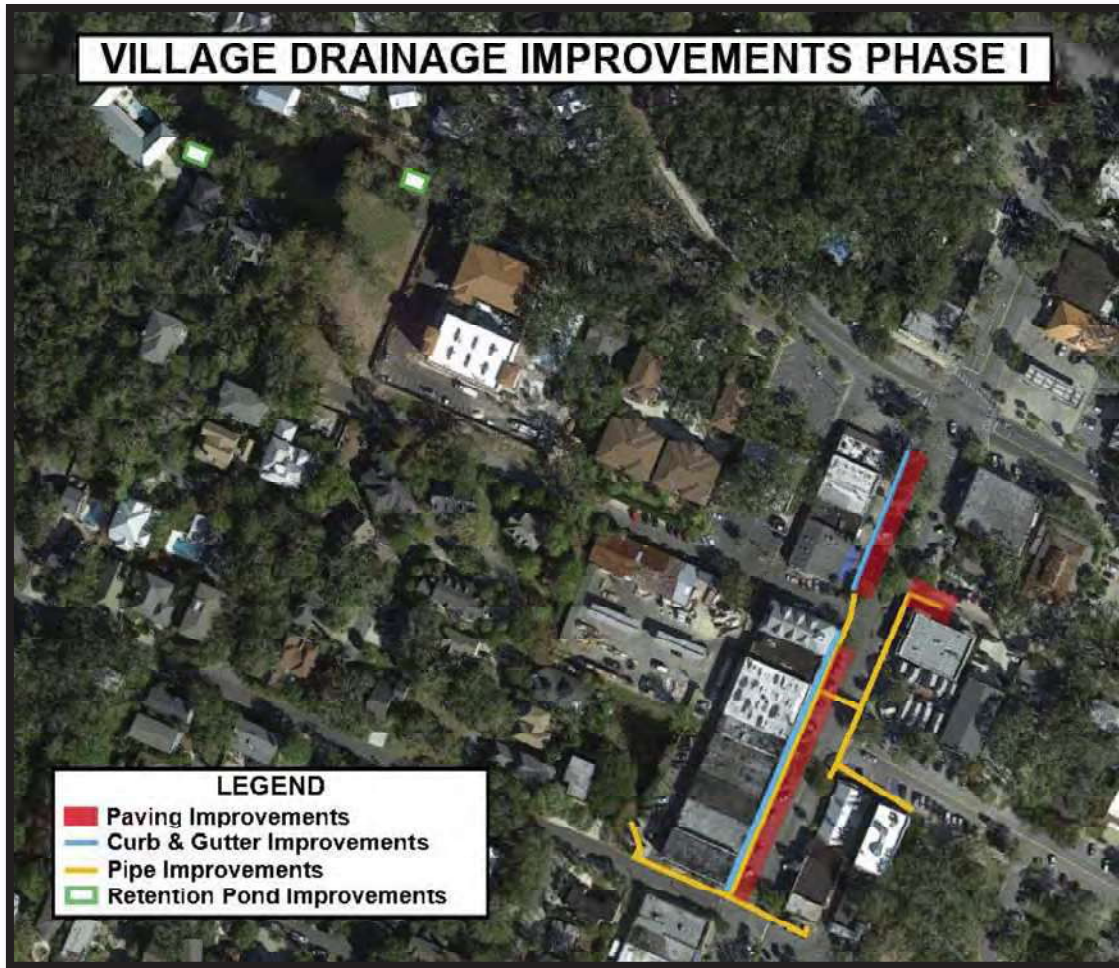
From preliminary field work and engineering survey, the Village drainage system consists of curb and gutter, catch basins, drop inlets, two retention ponds, and associated piping within the rights-of-way and on drainage easements. Due to historical flooding issues and recent hurricane events, it is apparent that the Village drainage system has succumb to maintenance and capacity issues.

The purpose of Phase I was to evaluate stormwater drainage issues within the Village residential and commercial community and to determine reasonable solutions for potential improvements based upon hydrologic and hydraulic conditions that fall within an approximate construction budget of \$600,000. Based on engineering calculations and coordination with Glynn County staff, it was determined that the majority of existing

infrastructure in the Village was inadequate to properly convey stormwater according to Glynn County Standards. The existing infrastructure issues included undersized pipes, larger pipes flowing into smaller pipes, erosion of the existing curb and gutter from resurfacing, an insufficient amount of storm structures to capture storm drainage runoff, and storage capacity issues at the Grove Retention Pond.

Based on technical analysis and discussions with Glynn County Staff, the improvements for Phase I are shown in Figure 2 below and include the following:

- Replacing curb and gutter from Butler Avenue to King's Way, and from Beachview Drive to Oglethorpe Avenue
- Removing and replacing asphalt from Butler Avenue to King's Way, and from Beachview Drive to Oglethorpe Avenue
- Upgrading pipe sizes along Butler Avenue to the small retention pond, along Mallery Street from Butler Avenue to Lord Avenue (interconnecting the system), along Beachview Drive, crossing Beachview Drive and eventually Mallery Street, along Mallery Street from Beachview Drive to Oglethorpe Avenue (interconnecting the system and adding drainage infrastructure to Oglethorpe Avenue)
- Modifying Outlet Control Structure at Grove Retention Pond and installing influent overflow weir with headwalls
- Installing new inlets and upgrading existing stormwater infrastructure



**Figure 2: Village Drainage Improvements Phase I**

Construction commenced for Phase I on January 7<sup>th</sup>, 2019 and is expected to be completed within 60 days on March 7<sup>th</sup>, 2019.

While Phase I is designed to address a majority of those issues listed above, Phase II will be necessary to address the remaining capacity issues with the Grove Retention Pond and subsequent Virginia Street Outfall. The combined expected impact for the Village Drainage Improvements Phase I and Phase II projects is for the Total System Capacity to meet Glynn County Standards through interconnection of the systems, upgrading the pipe capacities, and diverting existing flows to a new outfall.

### 3. Village Watershed Existing Conditions

The purpose of the proposed the Phase II portion of this project is to provide adequate capacity of infrastructure taking into account water quality enhancements to relieve the amount of stormwater flowing from critical points in the Village that otherwise incapacitate existing infrastructure causing flooding issues. Along with sumps, Phase II infrastructure will be constructed at a higher elevation than Phase I at the connection

point. The higher invert elevation of Phase II infrastructure will allow for the first 1.2" of rainfall to be conveyed into the retention pond adjacent to Mallory Lane at its intersection with Butler Avenue, which follows the *Georgia Stormwater Management Manual* for water quality standards. The first 1.2" of rainfall will flow into the retention pond to be treated for water quality. Due to the nature of the project, complete avoidance of the dynamic dune field is unavoidable. The proposed project will encroach on the dynamic dune field, but due to the nature of the project, will be temporary. The total encroachment in the dynamic dune field for the Georgia Street Outfall is determined to be 2,107.47 ft<sup>2</sup> (0.048 acres). The proposed project will adhere to the Georgia Erosion Sedimentation Act in regards to best management practices (BMPs) for erosion, sedimentation, and pollution control.

A site investigation of the project area was performed on November 9, 2017 by GWES, LLC (GWES) to determine the presence of jurisdictional waters within the project limits. GWES staff performed a jurisdictional waters delineation within the 106-acre watershed and collected environmental information specific to potential local, state, and federal permitting requirements. Stormwater generated within the overall Village watershed was calculated at six (6) study points or sub-basins to analyze existing hydrologic and hydraulic conditions. Stormwater runoff in Sub-basin No. 1 primarily flows in a northwesterly direction along Beachview Drive, Mallery Street, and Lord Avenue toward an approximately 0.75-acre retention pond, subsequently named the Grove Retention Pond. Within Sub-basin No. 1, there is also stormwater runoff that flows from Butler Avenue into a small retention pond just north of the intersection of Butler Avenue and Mallery Lane. Eventually, this stormwater is conveyed to Lord Avenue. Stormwater runoff from Sub-basin No. 2 flows primarily west-northwest along Ocean Boulevard to the retention pond. Stormwater runoff from Sub-basin No. 3 flows primarily south to the retention pond. Sub-Basin No. 4 stormwater runoff is collected into an existing twin pipe system and is conveyed to the west away from the Grove Retention Pond. Additionally, the Sub-Basin No. 4 drainage system acts as an overflow for the Grove Retention Pond. Sub-basin No. 6 stormwater runoff flows north-northeast and connects with Sub-basin No. 1's system just south of the retention pond. Stormwater runoff from Sub-basin No. 5, as noted previously, flows primarily in a southeast direction from the retention pond to an outfall on at the end of Virginia Street into the Atlantic Ocean. The Village drainage basin contains stormwater infrastructure that appears to have been installed in pieces as drainage issues increased over time. The Grove Retention Pond receives stormwater from all sub-basins excluding Sub-Basins No. 4 and 5. Refer to Figure 3 and 4 for visual representation.

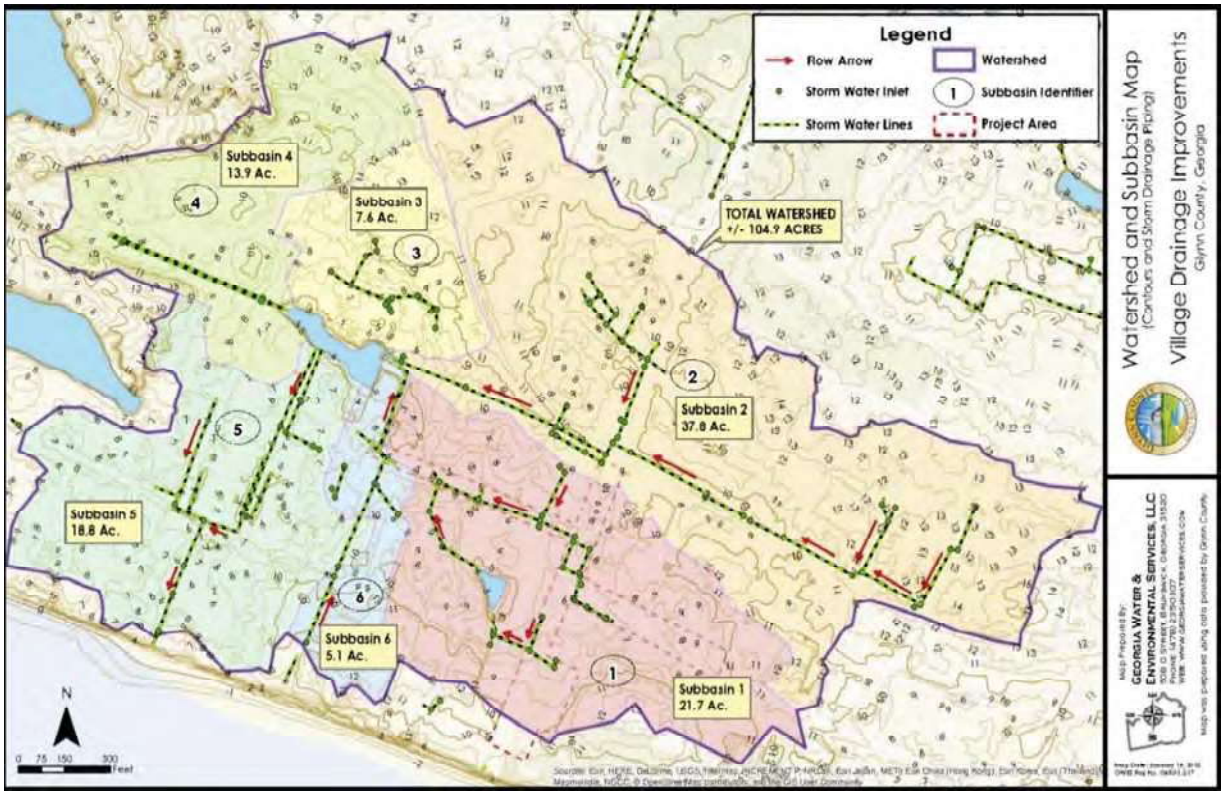


Figure 3: Sub-Basins with Acres



Figure 4: Sub-Basins with Critical Points

The proposed project is located in the Cumberland-St. Simons River Basin (USGS Hydrologic Unit 03070205). The National Wetlands Inventory (NWI) indicate the presence of estuarine and marine wetlands (Atlantic Ocean) within the project area. There were no streams or wetlands identified within the project limits during investigation. The proposed project has a watershed of approximately 106 acres consisting of residential and commercial development and is fed mainly by stormwater. The only encroachment will be temporary in nature in the dynamic dune field. The total encroachment of the dynamic dune field was determined to be 2,107.47 ft<sup>2</sup> (0.048 acres). It is apparent that flooding has and will continue to occur in the Village area unless improvements are made to stormwater infrastructure.

The dynamic dune field was determined in the field by Department of Natural Resources – Coastal Resources Division (CRD) personnel on June 1, 2018. The dynamic dune field is the dynamic area of beach and sand dunes, varying in height and width, the ocean boundary of which extends to the ordinary high-water mark (OHWM) and the landward boundary of which the first occurrence either of live native trees 20' in height or greater or of a structure existing on July 1, 1979. The topography is flat to mildly sloping towards the Atlantic Ocean.

According to the USDA Natural Resources Conservation Service, soils in the proposed project area consist of Cainhoy fine sand (CaB).

#### 4. Alternative Analysis

Numerous alternatives were considered for enhancement to the Village drainage system. Refer to Figure 5 for visual representation of alternatives.

##### *Alternative 1: Virginia Street Outfall Expansion*

The first alternative considered was expansion of the Virginia Street Outfall and upgrading the upstream infrastructure that conveys from the Grove Retention Pond to the existing outfall. The existing infrastructure consists of twin 36" X 60" Reinforced Concrete Elliptical Pipes (RCEP) that flow from the Grove Retention Pond to a 7' X 3' culvert on Butler Avenue. The culvert then flows along Butler Avenue to Virginia Street, eventually conveying water to the Virginia Street Outfall that consists of a custom outfall structure with twin 36" outlets each having a rubberized, tidal valve. The existing Virginia Street Outfall System is currently handling stormwater beyond its' capacity and is part of the cause for local flooding issues in the Village Pier area. Increasing capacity for this section of the drainage system will require upgrading the existing conveyance system from the Grove Retention Pond to the existing outfall, as well as, expanding the size of the existing Virginia Street Outfall. Increasing the capacity for this section of the drainage system will cause visual and shoreline impacts, will require additional permitting, and will be cost prohibitive.



#### *Alternative 2: Connecting Mews Court Drainage System*

The second alternative considered was to connect a proposed Mews Court drainage system to the existing Lord Avenue drainage system. This alternative will require construction activities on residential lots, the removal of trees, and temporary removal of a privately-owned concrete privacy wall. Mews Court is also a private residential neighborhood. The issue with this alternative was contributing stormwater flow into an inadequate drainage system that ultimately conveys flow to the Virginia Street Outfall. Therefore, this alternative requires expansion of the outfall.

#### *Alternative 3: Reverse flow on Georgia Street*

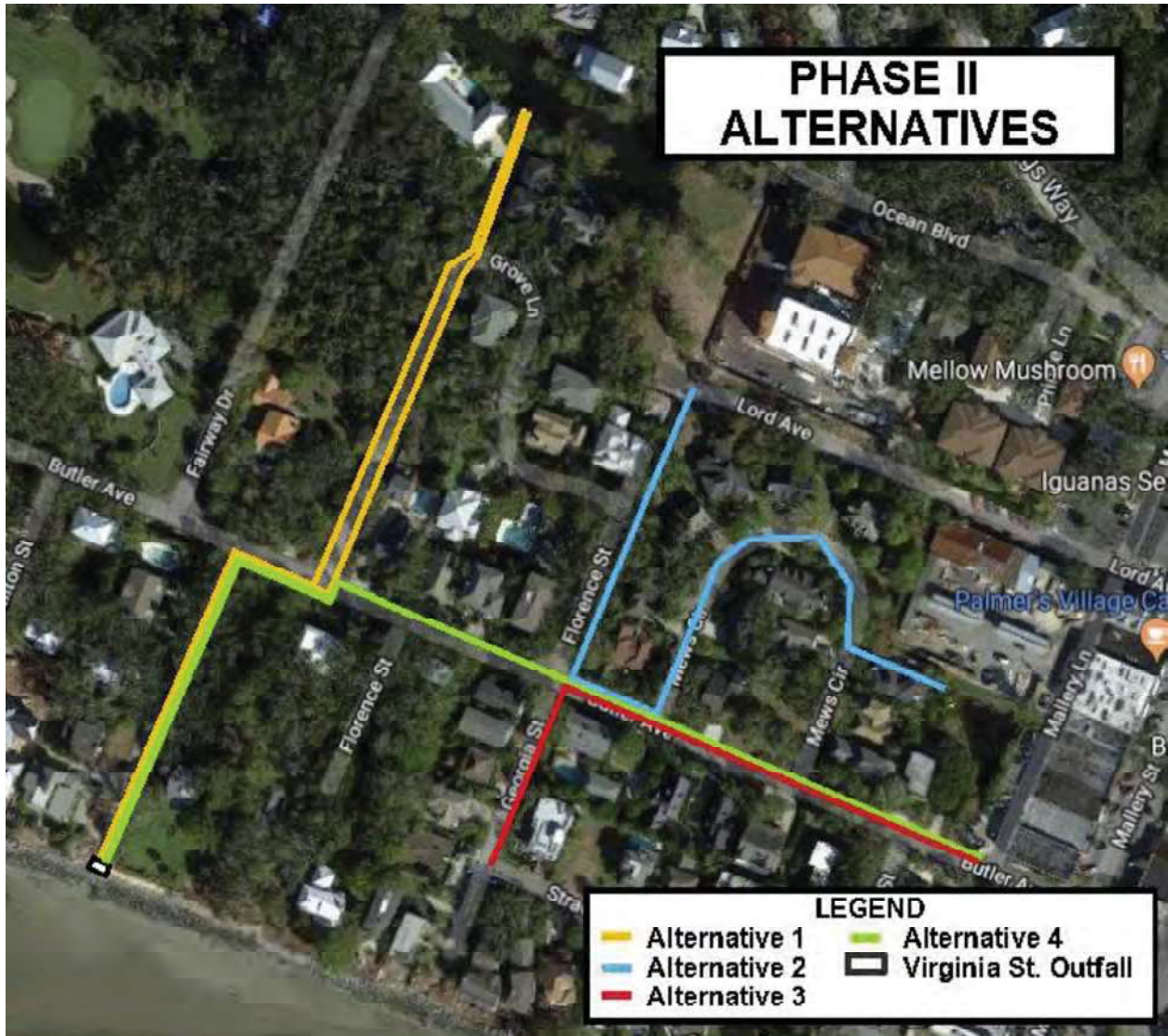
The third alternative would be to reverse flow of the Georgia Street drainage basin to existing infrastructure at Butler Avenue. This would result in sending additional stormwater to the Village Pier area, which is already experiencing drainage system capacity issues. Similar to Alternative 2, this alternative ultimately requires expansion of the Virginia Street Outfall.

#### *Alternative 4: Connect Butler Avenue System to Virginia Street Outfall*

The fourth alternative considered was to connect the Butler Avenue System to the Virginia Street Outfall. Currently, there is no infrastructure that connects the two (2) systems directly except what is currently in place that is conveyed through the Grove Retention Pond and eventually to the Virginia Street Outfall. This alternative would consist of installing pipe all the way down Butler Avenue until it intersects the 36" X 60" RCEP system running out of Grove Lane. As stated earlier, the Virginia Street Outfall is already handling stormwater beyond its' capacity so this alternative would also require the Virginia Street System to be upgraded, similar to what was discussed in Alternative 1. Along with the cost prohibitive reality of installing new pipe from Butler Avenue to Grove Lane and upgrading the existing Virginia Street System, this alternative will also require additional permitting and will cause visual and shoreline impacts as the footprint of the outfall will require expansion.

#### *Alternative 5: No Action Alternative*

The fifth alternative considered was to leave the drainage system as-is. No modifications will be made. The Village Pier area would continue to experience major flooding issues, which disrupts business operations and residential access and safety.



**Figure 5: Phase II Alternatives**

5. Landfill/Hazardous Waste Statement

According to the State Hazardous Sites Response Program and Georgia Department of Natural Resources Hazardous Sites website, there are no known landfills or hazardous sites on or near the location of this project.

6. Public Interest Statement

The proposed project will not create unreasonably harmful, increased alteration of the dynamic dune field or submerged lands, or function of the sand-sharing system; and will not interfere with the conservation of marine life, wildlife, or other resources. The proposed project will temporarily interfere with access, recreational use, and enjoyment of public properties. Georgia Street has a small public beach access point that will be temporarily closed due to construction purposes.

7. Deed or other instrument of title or permission and property plat

The Glynn County Tax Assessor ([www.qpublic.net](http://www.qpublic.net)) website was accessed to retrieve information regarding Georgia Street as a parcel. qPublic does not recognize Georgia Street as a parcel. It is assumed the property is owned by the Glynn County Board of Commissioners and the State of Georgia.



COASTAL RESOURCES DIVISION  
ONE CONSERVATION WAY • BRUNSWICK, GA 31520 • 912.264.7218  
COASTALGADNR.ORG

MARK WILLIAMS  
COMMISSIONER

DOUG HAYMANS  
DIRECTOR

July 12, 2019

Mr. Barrett Neal  
GWES, LLC  
1510 Newcastle Street, Suite 204  
Brunswick, GA 31520  
(912) 237-8460

**RE: Shore Protection Act Jurisdictional Determination Line for Georgia Street, St. Simons Island, Glynn County, Georgia (GPS: 31.13491 -81.39893)**

Dear Mr. Neal:

Our office has received the survey plat revised on May 06, 2019, from a Department site inspection made April 17, 2019, performed by Shupe Surveying Company, P.C. No. 2401 entitled "*Drainage Study of St. Simons Island Village Area (A Portion of Butler Mews, The Grove & King City), G.M.D. 25, St. Simons Island, Glynn County, Georgia*", prepared for Georgia Water & Environmental Services, LLC. This survey accurately depicts the Ordinary High-Water Mark and Jurisdiction Line under the authority of the Shore Protection Act O.C.G. A. 12-5-230 et seq. as delineated by the Department on June 15, 2018.

The delineation of the 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 April 17, 2020 but may be voided should legal and/or environmental conditions change. Authorization by the Shore Protection Committee or the Department is required prior to any construction or alteration in the shore jurisdictional area.

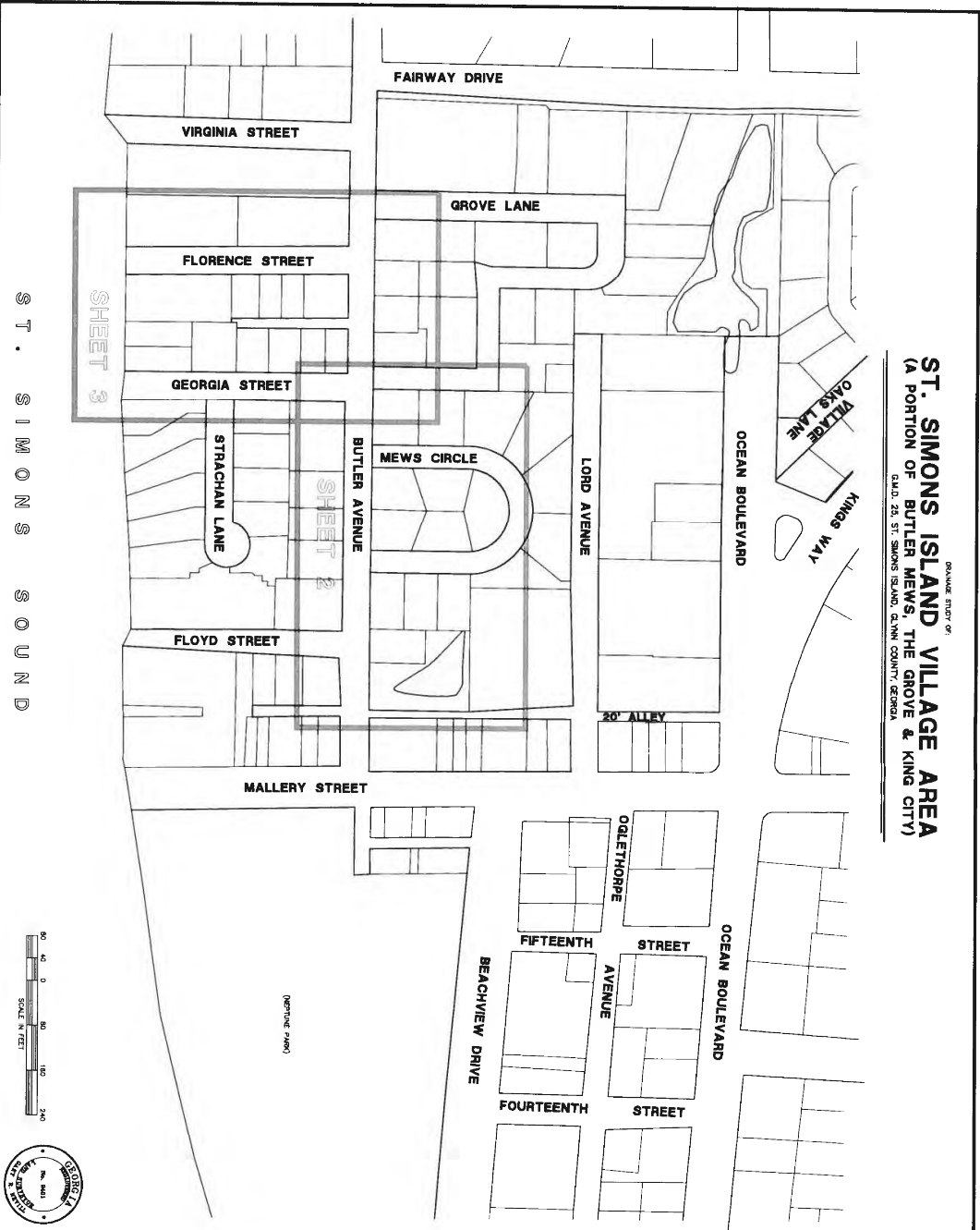
I appreciate you providing us with this information for our records. Please contact me at (912) 262-3109 if I can be of further assistance.

Sincerely,

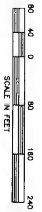
Amy Flowers  
Coastal Permit Coordinator  
GADNR-Coastal Resources Division

File: JDS20180149  
Cc: Ben Pierce- Glynn County Public Works  
4145 Norwich Street  
Brunswick, GA 31520

PORTION OF ST. SIMONS ISLAND VILLAGE AREA  
 (A PORTION OF BUTLER MEWS, THE GROVE & KING CITY)  
 C.M.D. 25, ST. SIMONS ISLAND, GAVIN COUNTY, GEORGIA



S T . S I M O N S   S O U N D



- NOTES:**
1. ALL DIMENSIONS SHOWN ON THIS PLAN ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.
  2. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
  3. ALL DIMENSIONS ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
  4. ALL DIMENSIONS ARE TO THE CENTERLINE OF THE ROAD UNLESS OTHERWISE NOTED.
  5. ALL DIMENSIONS ARE TO THE CENTERLINE OF THE ALLEY UNLESS OTHERWISE NOTED.
  6. ALL DIMENSIONS ARE TO THE CENTERLINE OF THE DRIVE UNLESS OTHERWISE NOTED.
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**CONTROL POINTS**

POINT NO.	EASTING	NORTHING	DESCRIPTION
1	1000.00	1000.00	Corner of Virginia Street & Grove Lane
2	1000.00	1000.00	Corner of Virginia Street & Grove Lane
3	1000.00	1000.00	Corner of Virginia Street & Grove Lane
4	1000.00	1000.00	Corner of Virginia Street & Grove Lane
5	1000.00	1000.00	Corner of Virginia Street & Grove Lane
6	1000.00	1000.00	Corner of Virginia Street & Grove Lane
7	1000.00	1000.00	Corner of Virginia Street & Grove Lane
8	1000.00	1000.00	Corner of Virginia Street & Grove Lane
9	1000.00	1000.00	Corner of Virginia Street & Grove Lane
10	1000.00	1000.00	Corner of Virginia Street & Grove Lane
11	1000.00	1000.00	Corner of Virginia Street & Grove Lane
12	1000.00	1000.00	Corner of Virginia Street & Grove Lane
13	1000.00	1000.00	Corner of Virginia Street & Grove Lane
14	1000.00	1000.00	Corner of Virginia Street & Grove Lane
15	1000.00	1000.00	Corner of Virginia Street & Grove Lane
16	1000.00	1000.00	Corner of Virginia Street & Grove Lane
17	1000.00	1000.00	Corner of Virginia Street & Grove Lane
18	1000.00	1000.00	Corner of Virginia Street & Grove Lane
19	1000.00	1000.00	Corner of Virginia Street & Grove Lane
20	1000.00	1000.00	Corner of Virginia Street & Grove Lane

**SHEET 1 OF 3**

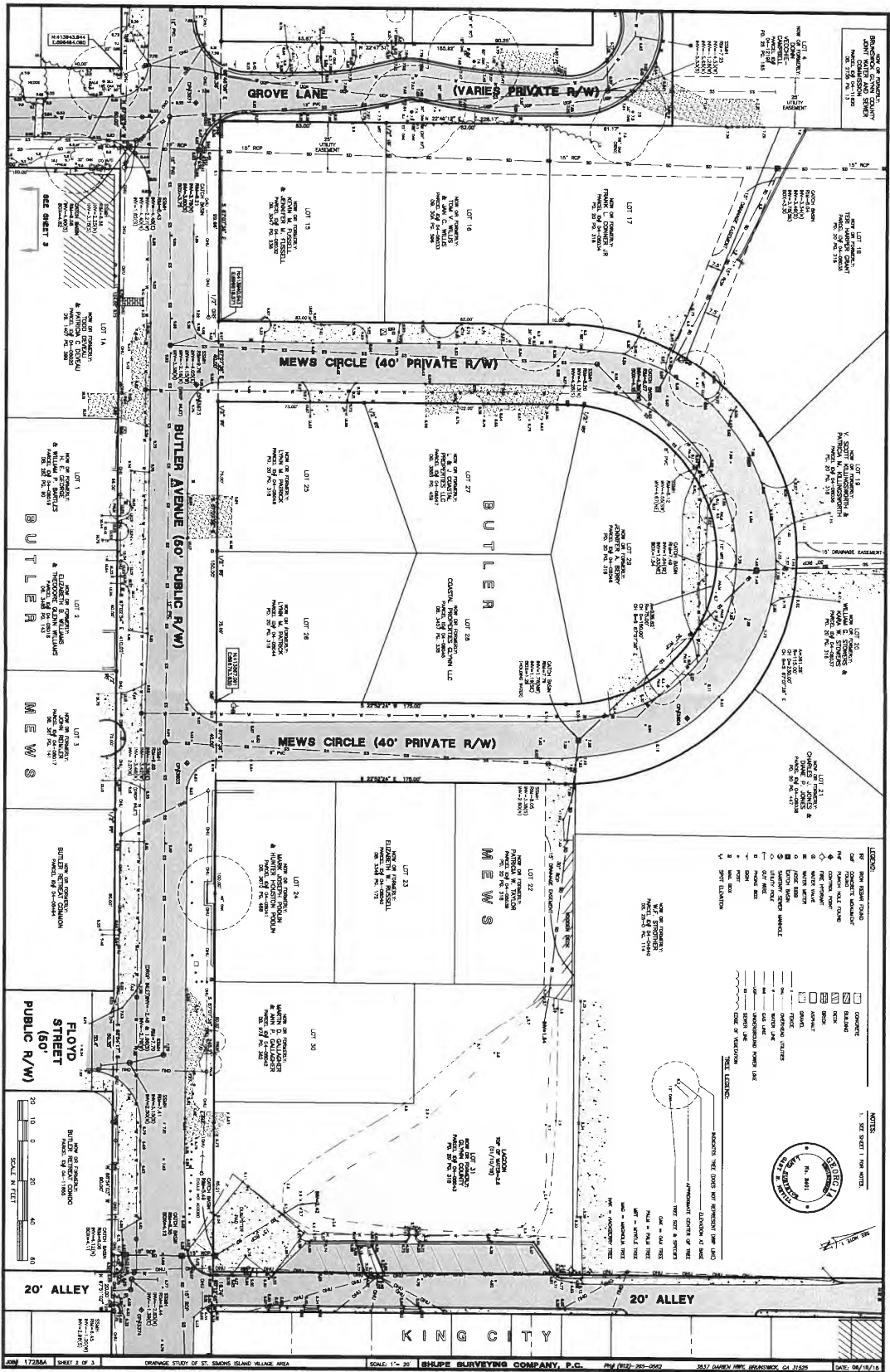
GEORGIA WATER & ENVIRONMENTAL SERVICES, LLC  
 1000 W. BROADWAY, SUITE 1000, ATLANTA, GA 30333  
 (404) 525-1000

SHUDE SURVEYING COMPANY, P.C.  
 1000 W. BROADWAY, SUITE 1000, ATLANTA, GA 30333  
 (404) 525-1000

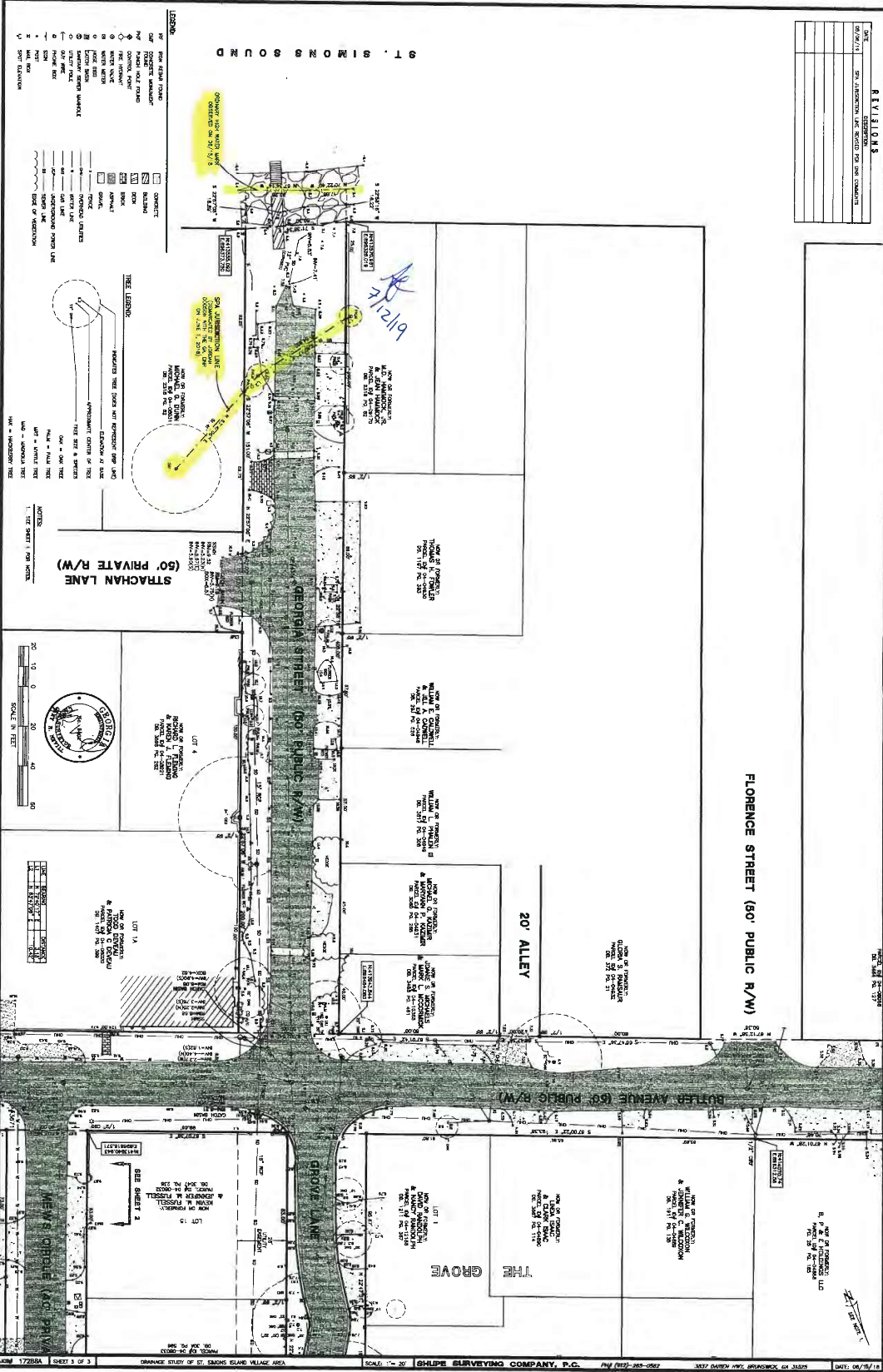
DATE: 11/20/2011  
 TIME: 10:00 AM  
 SCALE: 1" = 40'

PROJECT: BUTLER MEWS, THE GROVE & KING CITY  
 SHEET: SHEET 1 OF 3

DESIGNED BY: J. SHUDE  
 CHECKED BY: J. SHUDE  
 DATE: 11/20/2011



REVISIONS	
NO.	DESCRIPTION



## CERTIFICATION THAT PROJECT MEETS HURRICANE DESIGN STANDARDS

Burke Murph, GWES, is the Project Manager/Engineer submitting a Shore Protection Act Permit Application for the Village Drainage Improvements Phase II Project. Contact information is as follows:

Burke B. Murph III, PE, MBA  
Principal  
1510 Newcastle St., Suite 204, Brunswick, GA 31520  
478.235.0307  
[bmurph@gwesllc.com](mailto:bmurph@gwesllc.com)

### Hurricane Design Standards Certification

I, Burke Murph, certify that the project has been designed to meet applicable hurricane-resistant building standards



Burke B Murph III, PE, MBA  
Principal

December 31, 2018  
Date







PUBLIC WORKS  
& ENGINEERING

COMMUNITY DEVELOPMENT DEPARTMENT  
1725 Reynolds Street, Second Floor, Brunswick, GA 31520

February 6, 2019

Ms. Jordan Dodson  
GA DNR/Coastal Resources Division  
1 Conservation Way  
Brunswick, GA 31520

Zoning Certification for the Georgia Street Outfall Project

Dear Ms. Dodson,

The Georgia Street Outfall project is located on St. Simons Island in the Pier Village Community. The project includes storm drainage improvements within County rights-of-way and does not violate County Zoning Ordinances.

If you have any questions please call 912-554-7428.

Sincerely,

Pamela Thompson  
Director of Community Development

## ADDITIONAL INFORMATION REQUESTED

1. Scaled drawings
  - a. Close-up of the proposed project within SPA jurisdictional area
    - A zoomed in detail of the proposed plan, profile, and detail has been provided in Appendix H
  - b. Cross-sectional drawing that shows placement of pipe, outfall, and terminal end within the existing rock revetment
    - The storm drainage profile of Georgia Street Outfall "GS1", the storm drainage plan, and the outfall structure detail in Appendix H shows the placement of pipe, outfall, and terminal end within the existing rock revetment
2. A description of the proposed project
  - a. Describe activities that will be causing temporary impacts and what temporary changes to the dynamic dune field will be occurring. Describe construction activities that will be occurring in the dynamic dune field and within SPA jurisdiction.
    - Construction activities will be causing temporary impacts to the dynamic dune field and within SPA jurisdiction. This will include removing part of the existing revetment in order to construct/install the Georgia Street Outfall Structure shown in Appendix H. Once this structure has been installed, the revetment will be restored around this structure and the dynamic dune field will no longer be impacted. This construction activity should be completed first in the project with an estimated construction time of three (3) weeks. Additional work within SPA jurisdiction includes installing 48" storm drainage pipe and one (1) drainage structure. All construction activities are expected to be completed on the landward side of the revetment and restored to pre-construction condition. Construction activities may include removal/replacement of revetment, excavation, pipe installation, stormwater drainage structure installation, temporary barriers set up within limits of disturbance to block tides during construction, removal/replacement of asphalt, erosion and sedimentation control. Construction activities within SPA jurisdiction should be completed within one (1) month. Once they have been completed, public beach access should be restored.
  - b. Quantify and describe further "At least one third of the parcel will be retained in its naturally vegetated and topographic condition."

- The Glynn County Right-of-Way (area within SPA jurisdictional line) consists of 3,191 S.F. The Disturbed Area for this project during construction consists of 2,317 S.F. The Impervious Footprint of the Georgia Street Outfall will be 443 S.F. once completed. Based on these quantities, over one third of the parcel will be retained in its naturally vegetated and topographic condition. All disturbed areas (excluding the impervious footprint) will be returned to their naturally vegetated and topographic condition.
- c. Is the pipe, outfall, and/or tideflex check valve seaward of the revetment?
- As shown in the plan, profile, and detail in Appendix H the Georgia Street Outfall is located within the revetment, similar to the existing Virginia Street Outfall shown below.



- d. Please provide an explanation of how the rock revetment, if at all, will be affected in the construction activities.
- Rock revetment construction activities have been described in 2a. Revetment within area of disturbance will be removed during construction and replaced around Georgia Street Outfall once it has been installed. This area will be completed prior to moving up Georgia Street.
- e. Please provide a detailed description of how the work will be completed, including description of where materials will be staged and what equipment will be used within SPA jurisdiction. If staging occurs within jurisdiction, please provide the temporary staging area dimensions.
- As mentioned in 2a., construction activities will include removing part of the existing revetment within the limits of disturbance while the Georgia Street Outfall structure is constructed. A temporary barrier will be set-up within the limits of disturbance to block tides during construction. An excavator will be used to remove/replace the revetment and to install the outfall structure. It is expected that the construction equipment will stay on the landward side of the revetment due to potential issues with high tide. Once the structure has been completed, the revetment will be restored around the structure prior to moving forward with the rest of the project. An excavator will likely be used for pipe installation on the landward side of the revetment. Once installation has been completed, an excavator, a bobcat, and paving equipment will be used to return the area to pre-construction conditions. The exact location where the materials will be staged during construction will be determined closer to project commencement. Due to the limited area located within SPA jurisdiction, the staging area would not occur within jurisdiction. The staging area will most likely be within a County right-of-way or at Mallery Park, the location of Phase I's staging area.
- f. What is the expected duration that public access to the Georgia Street Crossover will be hindered?
- As mentioned in 2a., it is expected that public access to the Georgia Street Crossover would only be hindered for one (1) month while construction within the SPA jurisdiction is being completed. Additionally, it is assumed that this project will be

completed during the off-season for the area (estimated November to March). Based on that timeline, the public beach access would only be hindered during the first month of the entire project.

- g. Within SPA jurisdiction, are there plans to restore the project site to its natural vegetated state once all on-site construction is completed? Please explain.
  - Yes, the County will require the Contractor to restore the project site to its natural vegetated state once all on-site construction is completed. The County retains a % of the contract until all areas have been restored.
3. A verified jurisdictional determination
  - a. To date, the JD has not been verified. Please provide a survey in compliance with the Georgia Plat Act, with the SPA line as marked on June 1, 2018.
    - A signed and sealed survey has been included in Appendix I with a verified jurisdictional determination and SPA line marked on June 1, 2018.
4. Application fee of \$100
  - a. To be submitted by Glynn County Finance Dept.

## ADDITIONAL INFORMATION REQUEST #2

1. Will the 12" PVC exposed pipe shown on page 58 remain in place or will it be removed?
  - a. The 12" PVC exposed pipe will be removed, and the exposed area will be covered back up to match grade of surrounding area following construction
2. On page 60, what does the black bar "proposed GDOT 1019A type C" signify?
  - a. The "proposed GDOT 1019A Type C" is a storm drainage structure known as a drop inlet used to capture stormwater runoff. The only part of the structure visible will be the grate on top that will be flush with the pavement. The structure itself will be underground with the 48" RCP pipes connected on both sides. The Georgia Dept. of Transportation Detail has been attached for reference.
3. What are the dimensions of the cast-in place concrete/ outfall structure?
  - a. The dimensions of the cast-in place concrete outfall structure are shown in Detail 1 – Georgia Street Outfall Structure. As shown, the structure is 7'8" tall, 7'4" wide, and measures 8'0" from front to back. There will also be a subsurface turndown that measures approximately 5'0" deep that is designed to provide anchor support to the structure itself. A significant portion of the structure will be within the revetment.
4. What is the construction/disturbance area, given these dimensions?
  - a. The disturbance area is identified in the Storm Drainage Plan – Georgia Street Outfall as a dashed line. This will include any area that may be impacted during construction but will be returned to its' existing condition following construction.
5. How was the "total encroachment in the dynamic dune field", calculated to be 2107.47 sq ft? In the "Additional information requested, it was written to be 2,317 sq. ft. Please clarify and provide the calculations & dimensions.
  - a. The updated disturbed area is 2,317 SF. The decision to mill and overlay the width of Georgia Street following construction accounts for the additional square footage. This decision was made to provide a more aesthetically pleasing look (other than patches of asphalt). The area was calculated using the site design software AutoCAD Civil3D. The approximate calculations and dimensions for each area have been included for reference.
6. The terminal end of the outfall is estimated to be landward of the seaward most point of the outfall by what length?
  - a. As shown in the photo of the existing outfall at Virginia Street and in the details, the terminal end of the outfall is expected to be a few feet landward of the seaward most point of the outfall. This will be approximately 3-5 feet depending upon the re-placement of the rocks in the revetment.

7. What length of 48" RCP is within jurisdiction?
  - a. There is approximately 82 LF of 48" RCP within jurisdiction
8. Please provide me with high quality images of page 58-60, and of the drop inlet drawings.
  - a. Included separately as images