PROJECT SUMMARY

COASTAL MARSHLANDS PROTECTION PERMIT APPLICATION

BOATHOUSE AND HOIST IMPROVEMENTS

SAPELO ISLAND, GEORGIA

The project consists of the following project elements to improve the boathouse and hoist on Sapelo Island:

Removal of the existing boathouse and hoist system.

Improvements to the Boathouse as follows:

- a 6' by 30' aluminum fixed dock
- a 4' by 32' aluminum gangway
- an 8' by 22' aluminum floating dock
- a 4' by 72' aluminum floating dock with three 4' by 16' aluminum finger docks and a 4 square foot corner fillet
- a 26' by 74' roof with wood trusses and metal panels
- All of the piles will be timber

Improvements to the Hoist System as follows:

- a 16' by 40' concrete deck slab structure with concrete piles and a concrete pile bent and a 4' by 6' concrete cap extension on both sides
- a 4' by 38' aluminum gangway and 10' by 18' floating aluminum dock on each side of the structure
- a steel boat hoist and related structure including a 22’ by 28’ steel truss/metal roof
- 40 cubic yards of rip-rap along 40 linear feet.
- All piles to be concrete.

The distance of the project into the waterway from MLW is 32.1 feet for the boathouse and 40 feet for the hoist.

The distance of the project from the navigable channel is 1.03 miles to the Duplin River measured along Barn Creek and an additional 2.23 miles to Doboy Sound measured along the Duplin River.

The depth of the waterway at MLW is 4.0 feet for the boathouse and 4.0 feet for the hoist.

The total width of waterway from MLW to MLW is 66 feet.

The distance to the next structure on either side of the proposed project is 1,800 feet to the south and 7,340 feet to the north.

This permit should be granted. The proposed project will benefit the residents of Sapelo Island as well as the Georgia Department of Natural Resources and the University of Georgia. The boathouse and hoist are critical to Sapelo Island. Since the island is only accessible by boat it is imperative that the DNR be

able to store and maintain their boats in proper operating condition. The proposed improvements will ensure the boathouse and hoist can function as needed for many years to come. There is minimal impact to the upland areas or marshlands. The proposed project is consistent with the intent and requirements of the Coastal Marshlands Protection Act and issuance of the permit is recommended.

SITE PLANS AND RELATED INFORMATION

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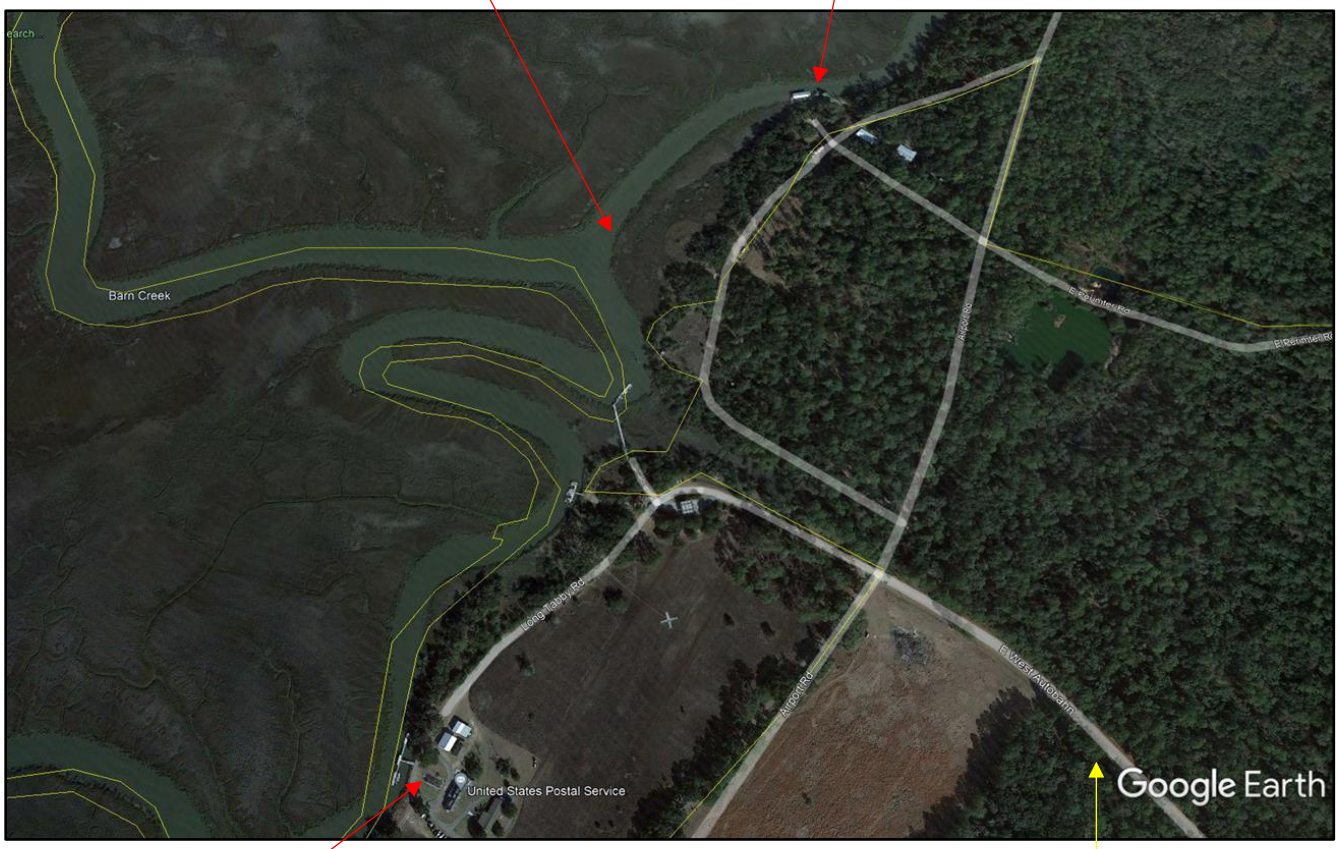
BOATHOUSE AND HOIST IMPROVEMENTS

SAPELO ISLAND, GEORGIA

The vicinity maps are below.

PROJECT LOCATION
31.439198, -81.278343

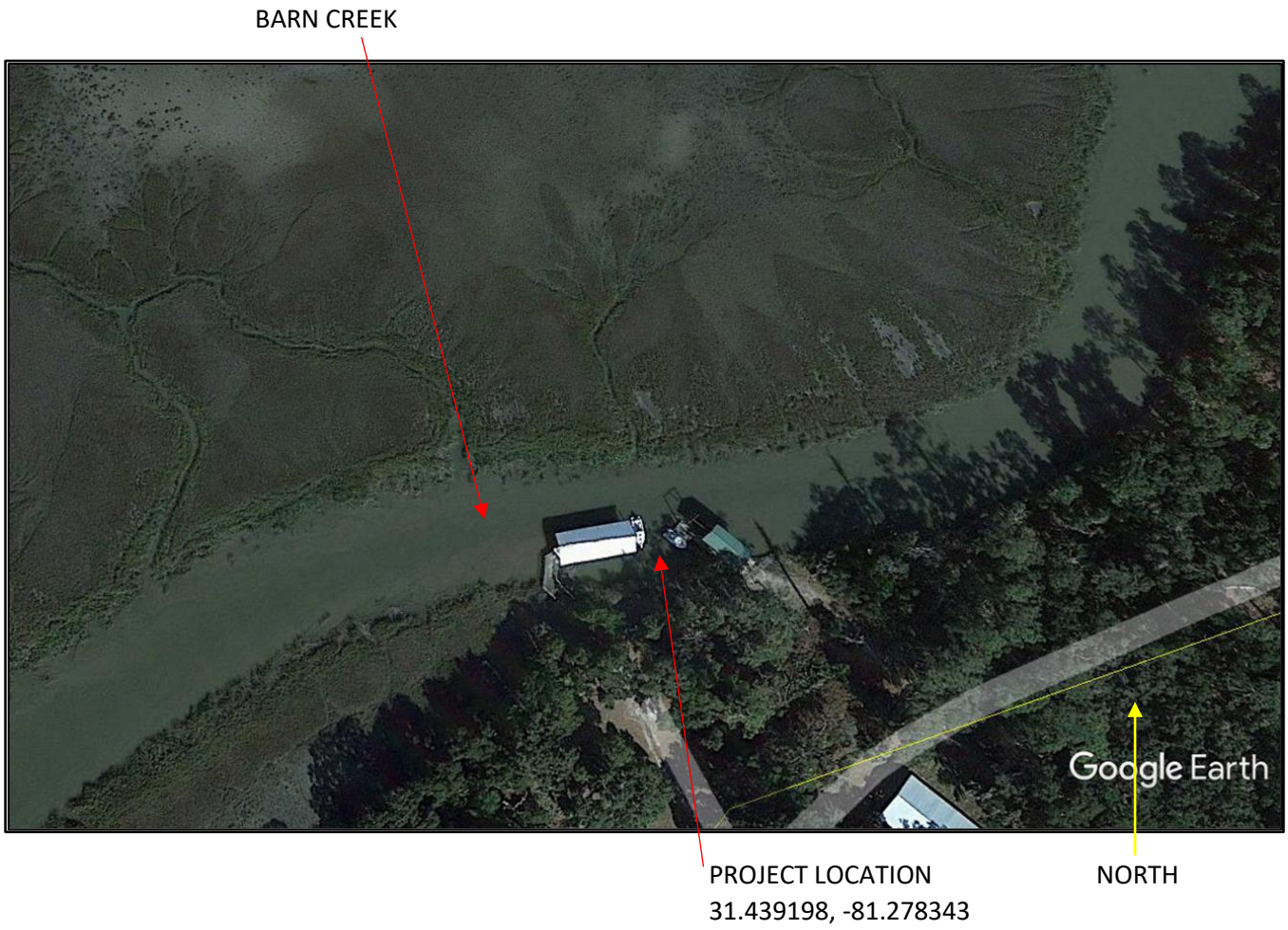
BARN CREEK



NORTH

LONG TABBY

BARN CREEK



Marshland Component of Project:

The DNR Marsh Jurisdiction Line is shown on the drawings and was determined by a field survey. Contour elevation 5.1 feet, NAVD88, was delineated as a conversion of CMPA 5.6 feet MTL in NOAA's VDATUM transformation. This approach was approved by the Coastal Resources Division.

There is a significant number of features in the jurisdictional area that will be removed and replaced. At the Boathouse site there is an existing wood fixed pier, an existing aluminum gangway, an existing wood floating dock, and an existing wood pile and roof structure.

At the hoist site there is an existing concrete slab, an existing wood deck, an existing aluminum gangway, and an existing hoist beam and structure.

The proposed features within the jurisdictional area include the new Boathouse and hoist system. Details of each component are provided below.

The Boathouse components are as follows:

Proposed 6’ by 30’ aluminum fixed dock. The portion of the fixed dock in the marshland is 136 square feet.

Proposed 4’ by 32’ aluminum gangway = 128 square feet. It should be noted that fifteen (15) square feet of the gangway sits on top of the floating dock so this area was not included in the marshland component tabulations. The total area in the marshland is 113 square feet.

Proposed 8' by 22' aluminum floating dock = 176 square feet.

Proposed 4' by 72' aluminum floating dock with three 4' by 16' aluminum finger docks and 4 square feet corner fillet = 484 square feet.

The Boathouse has a 26’ by 74’ roof with wood trusses and metal roof panels = 1,924 square feet. The roof structure was not included in the tabulation of components in the jurisdictional area.

The Boathouse will be supported by fourteen (14), 14-inch diameter wood piles that are external to the dock system. These have a combined area of 15 square feet.

The total of the Boathouse components in the jurisdictional area is 136 ft^2 + 113 ft^2 + 176 ft^2 + 484 ft^2 + 15 ft^2= 924 square feet.

The Hoist System components are as follows:

Proposed 16' by 40' concrete deck slab structure with concrete piles and a concrete pile bent and a 4' by 6' concrete cap extension on both sides. The portion of the concrete deck in the jurisdictional area is 516 square feet plus the two concrete cap extensions (48 square feet) = 564 square feet.

Proposed 4' by 38' aluminum gangway (304 square feet) and 10' by 18' floating aluminum dock (360 square feet) on each side of the structure totaling 664 square feet. It should be noted that 36 square feet (18 square feet on each side) of the gangway sits on top of the floating dock so this area was not included in the marshland component tabulations. The total area in the marshland is 628 square feet.

Proposed 40 cubic yards of rip-rap along 40 linear feet. The rip-rap will cover an area of 640 square feet.

The hoist system has a 22’ by 28’ roof with steel trusses and a metal roof = 616 square feet. The roof structure was not included in the tabulation of components in the jurisdictional area.

The hoist system will be supported by eight (8) fourteen (14) square inch concrete piles, six of which are external to the dock system (two are within the rip-rap area). The six piles have a combined area of 8.2 square feet.

The total of the hoist system components in the jurisdictional area is 564 ft^2 + 628 ft^2 + 640 ft^2 + 8.2 ft^2= 1,840.2 square feet.

The total area of features in the jurisdictional area is 924 square feet + 1,840.2 square feet = 2,764.2 square feet.

The area of features over vegetated marshlands is the rip area of 640 square feet.

The depth of water at the water-ward face of the proposed project ranges from 8 to 10 feet for the Boathouse and 9 to 10 feet for the hoist system.

Upland Component of Project:

The existing facilities within the upland component of the project are the edge of the existing wood deck (30 square feet) and an existing concrete slab (44 square feet) totaling 74 square feet at the hoist site. There are no existing features in the upland area at the Boathouse site.

Portions of all of the proposed facilities are within the 50-foot marshland buffer and are discussed in detail in the following section.

Marshlands Buffers for Upland Component:

The 50-foot marshland buffer is shown on the plans. The existing conditions within the buffer include the items mentioned above and minimal vegetation. Best Management Practices will be implemented during construction to minimize adverse impacts to the buffer. These include silt fence that will be removed after construction. The existing wood deck and concrete slab will be removed.

Permanent structures in the buffer include the following:

Boathouse – aluminum fixed dock - 44 square feet

Hoist System – concrete deck slab structure – 128 square feet and 24 square feet of the concrete pile bent (16 ft by 1.5 feet) = 152

Total permanent structures/surfaces in the buffer = 196 square feet

During construction there will be a 5 feet wide disturbance area on three sides of the new fixed dock at the Boathouse (23 linear feet, 115 square feet) and at the new concrete deck slab structure at the hoist system (33 linear feet, 165 square feet) for silt fence and other construction activities. This represents a total of 280 square feet.

Total land disturbance in the buffer, both the 25 and 50-foot buffer is 44 square feet plus 152 square feet plus 280 square feet equals 476 square feet. Since the buffer disturbance is less than 500 square feet the project qualifies for the Coastal Marshland Buffer Variance by Rule.

Stormwater Management Plan of the Upland Component:

Since the majority of the work will occur at or near the water's edge it is not possible to capture stormwater runoff. Considering the small increase in impervious surface the proposed project will have no adverse impact on stormwater quantity or quality.

Impervious Surface Calculations of the Upland Component:

Runoff coefficients for the upland component before and after construction were calculated as follows. The disturbed area of 476 square feet was used for the calculations.

Pre-construction

Concrete: Area (A) = 44 square feet, C = 0.95, CA = 41.8

Wood Deck: Area (A) = 30 square feet, C = 0.95, CA = 28.5

Minimal Vegetation: Area (A) = 402 square feet, C = 0.10, CA = 40.2

Total Area = 44 + 30 + 402 = 476 square feet

Composite C (Runoff Coefficient) = (41.8 + 28.5 + 40.2)/476 = 0.23

Post-construction

Concrete: Area (A) = 152 square feet, C = 0.95, CA = 144.4

Aluminum Dock: Area (A) = 44 square feet, C = 0.95, CA = 41.8

Minimal Vegetation: Area (A) = 280 square feet, C = 0.10, CA = 28.0

Total Area = 152 + 44 + 280 = 476 square feet

Composite C (Runoff Coefficient) = (144.4 + 41.8 + 28.0)/476 = 0.45

As a result of this project the runoff coefficient in the 50-foot buffer increases from 0.23 to 0.45.