

**DRAFT ENVIRONMENTAL ASSESSMENT (EA)  
AND FINDING OF NO SIGNIFICANT IMPACT (FONSI)  
FOR THE  
OPERATION AND MAINTENANCE WORK  
ON THE  
ATLANTIC INTRACOASTAL WATERWAY (AIWW)  
DISPOSAL SITE 1006/1027S W-C  
ADJACENT TO THE ISLE OF PALMS CONNECTOR  
IN  
CHARLESTON COUNTY, SOUTH CAROLINA**

**DRAFT**

**U.S. Army Corps of Engineers  
Charleston District  
JULY 2006**

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July 2006

**1. BACKGROUND**

The River and Harbor Act of 1937 (River and Harbors Committee Document No. 6, 75<sup>th</sup> Congress, 1<sup>st</sup> Session) authorized enlargement of the Atlantic Intracoastal Waterway (AIWW) to its present dimensions of 12 feet deep and not less than 90 feet wide. Project construction was completed in 1940. The existing project provides this depth at Mean Low Water (MLW) from Little River to and including Port Royal Sound (with a branch channel of the same dimensions to McClellanville, a total distance of 210 miles (see Figures 1 through 3). Controlling depths of the channel vary, depending on normal weather related erosion as well as boat wake erosion and re-distribution, but adequate disposal sites are necessary for maintenance.

Disposal area 1006/1027S W-C is located along the AIWW in Charleston County bounded on the northeast by Route 517 (Isle of Palms Connector), to the southwest by an unnamed tributary to Swinton Creek, to the northwest by saltmarsh, and to the southeast by the AIWW and the Isle of Palms (see Figure 4). It is experiencing significant erosion on the face of the dike adjacent to the AIWW and this progressive erosion along the waterway has resulted in loss of the outside slope of the containment dike. In the past this resulted in the retreat of the dike centerline away from the waterway during periodic dike-repairs, with a subsequent loss of disposal area acreage. Current erosion is placing the structural integrity of the dike in jeopardy again, and, in an effort to construct a more permanent repair the construction of an off-shore sill is being proposed.

The authority used to perform the work will be the current River and Harbor Act PL 14, dated 2 March 1945 (House Document 327, 76<sup>th</sup> Congress, 1<sup>st</sup> Session), which governs and directs operation and maintenance work of the AIWW. We expect this work to be performed around the October 2006 to April 2007 time frame. The current estimate of the rock to be placed will be in range of 10,000 cubic yards.

From a practical standpoint, this planned Operation and Maintenance work is essentially a small maintenance effort that will not adversely impact human health or the environment.

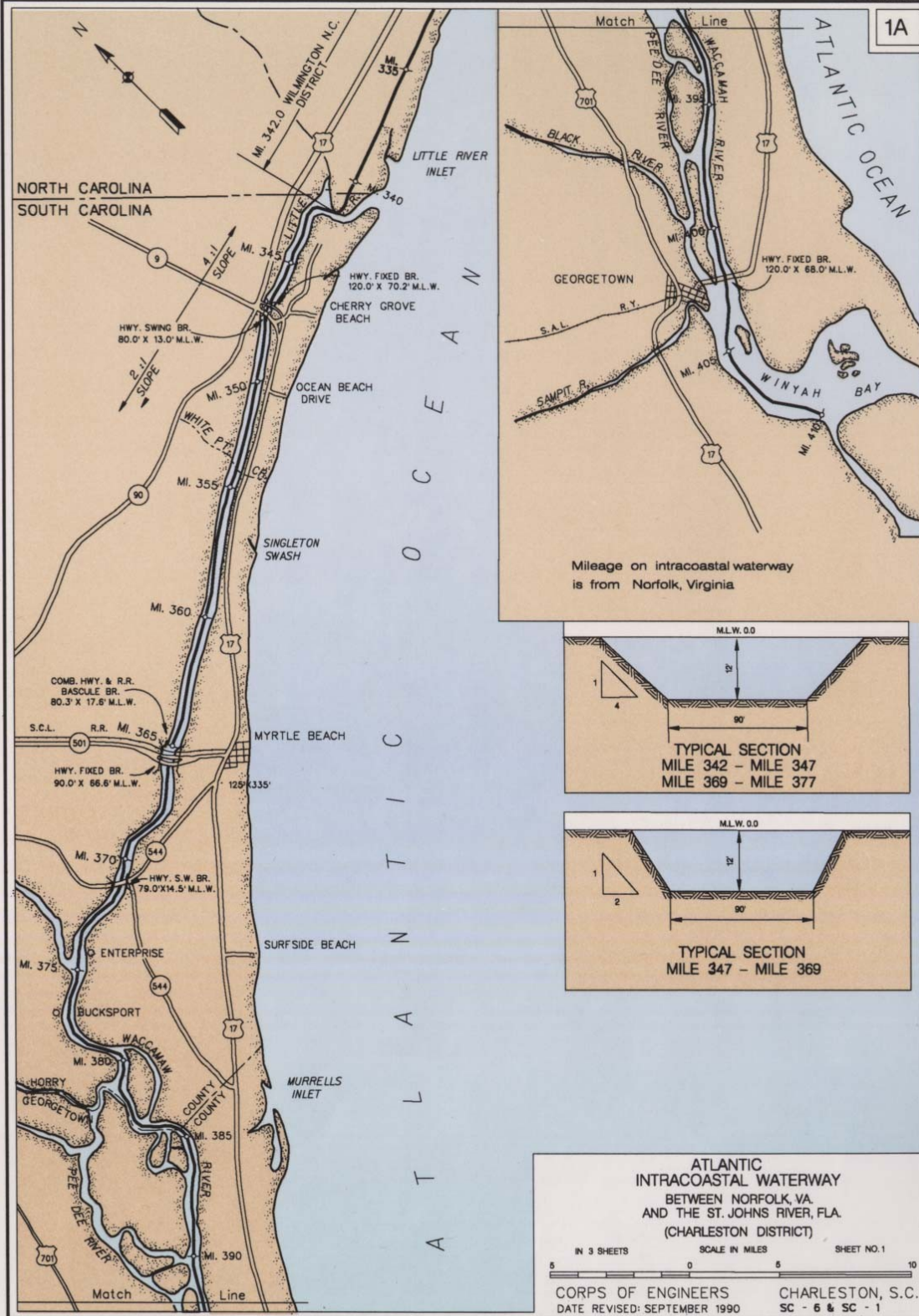


FIGURE 1 – AIWW (Northern Reach)



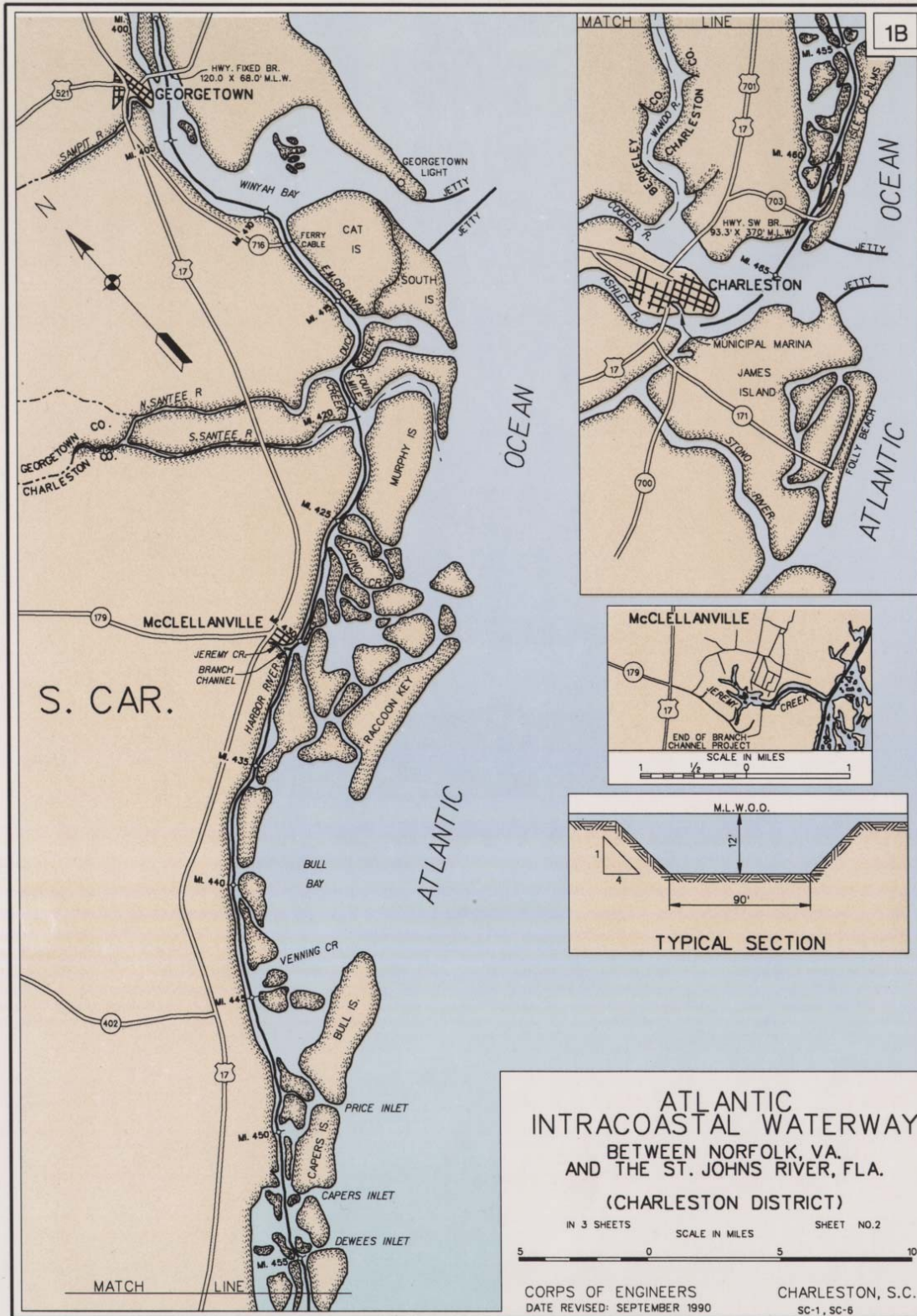


FIGURE 2 - AIWW (Central Reach)



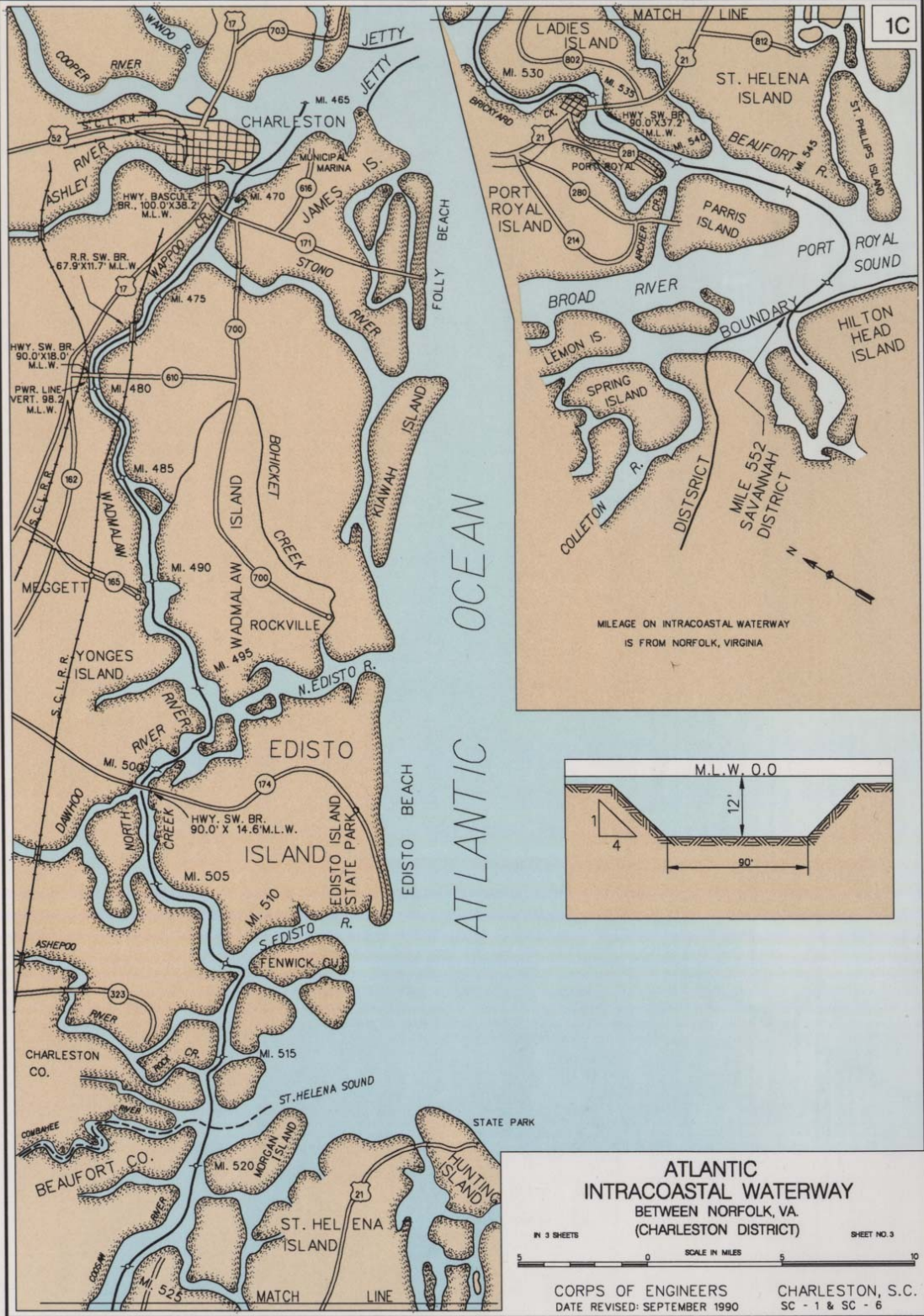


FIGURE 3 - AIWW (Southern Reach)



**FIGURE 4 – Project Location Map**

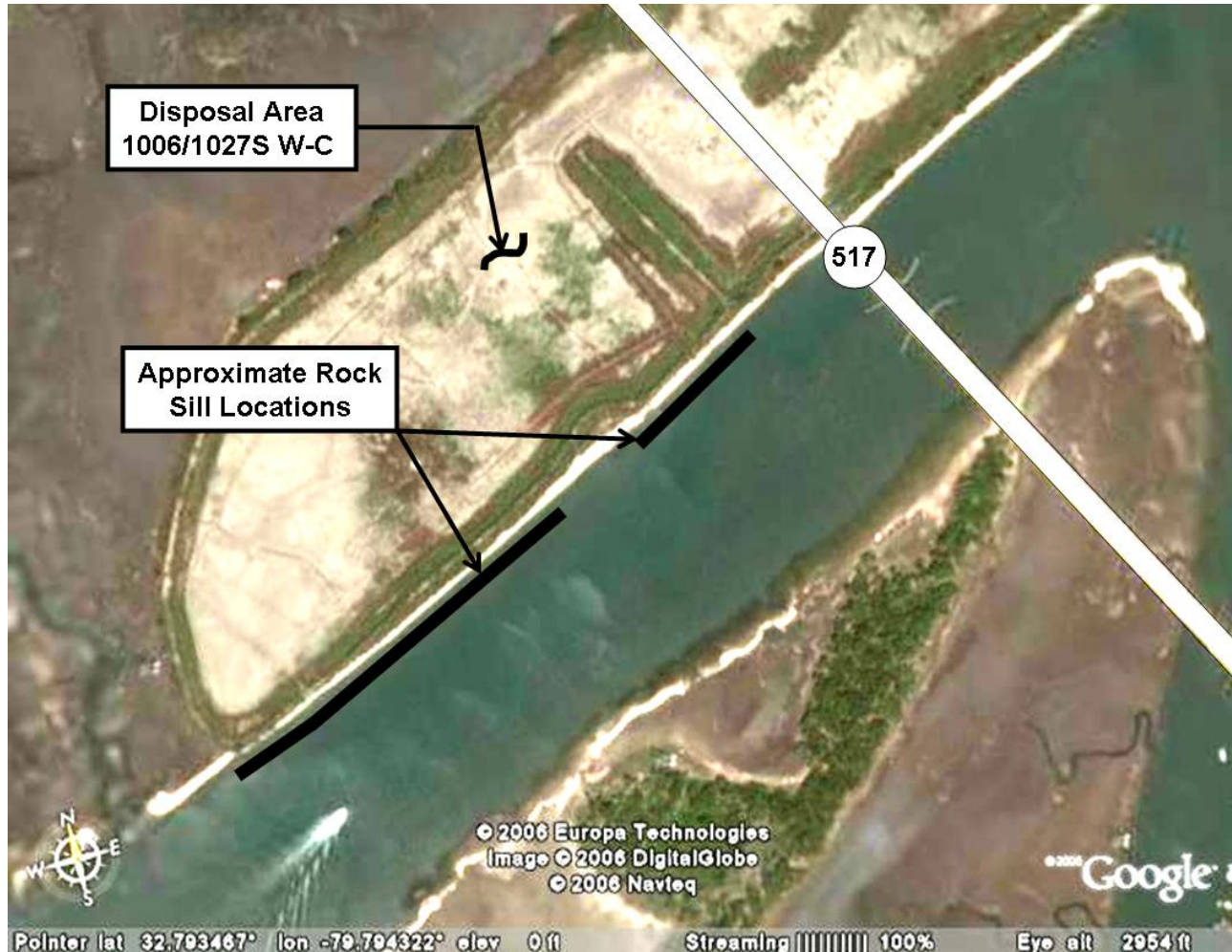
Fiscal year 06 operation and maintenance funds are being utilized for mosquito abatement, real estate activities, condition surveys, and disposal area work; the later of which covers this project work.

## **2. DESCRIPTION OF THE PROPOSED PROJECT**

This current project (or plan of protection) calls for, in addition to the routine replacement of two corroded spillway pipes, the installation of a rock sill (similar to a breakwater) in a line parallel to and approximately 70 feet offshore of the toe of the dike slope. There are two erosional areas at disposal area 1006/1027S W-C that will be protected by rock sills (see Figure 5). The rock sills will use quarry-run granite rock and will be constructed to an elevation of 7 feet above MLW, with a top width of 5 feet and front slope of 1 foot Vertical on 2.5 feet Horizontal and a back slope of 1 foot Vertical on 1.5 feet Horizontal (see example profile in Figure 6). The southern rock sill will be approximately 1,130 feet in length and the northern rock sill will be approximately 430 feet in length. The total footprint of the two sill segments would be approximately 51,500 square feet and would protect approximately 1,560 feet of dike. Two drain pipes will be replaced within this protected area (see Figure 7a for the plan view and 7b for the profile) and their bedding material will cover approximately 15,000 square feet of area.



Access to the construction site is by way of water only and challenges consist of shallow water, boat wave wash, tidal currents and the usual safety issues with placement of 10,000 cubic yards

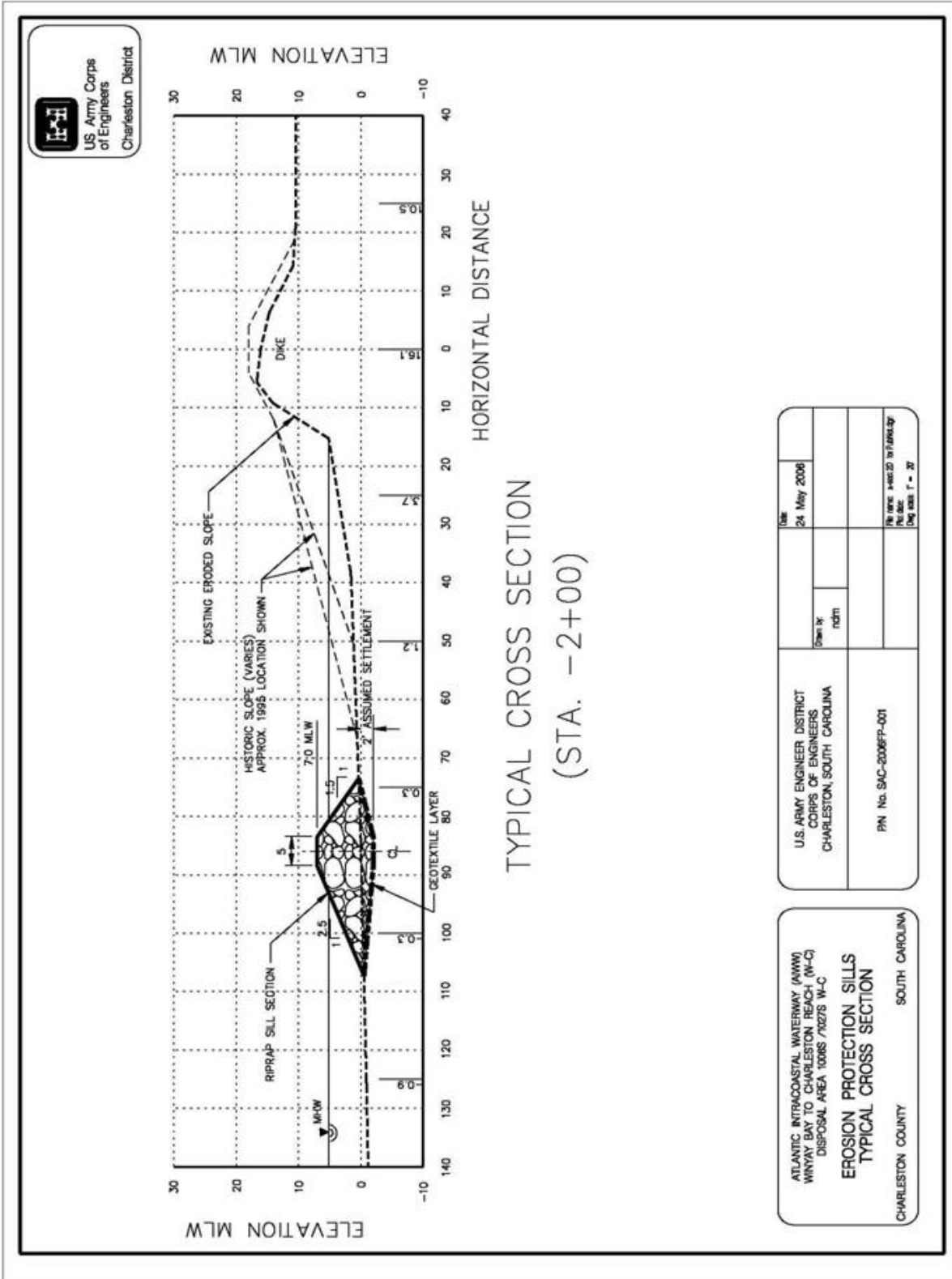


**FIGURE 5 – Rock Sill Locations**

(15,000 tons) of rock and pipe bedding material. The effected area will consist of the sill footprint of 51,500 square feet plus the distance between the sill and the toe of slope, or another possible 89,000 square feet where sediments can accumulate sufficient to allow the reestablishment and maintenance of the tidal marsh similar to that which existed in the past; a total of 140,500 square feet. Following sill construction, dredge material from the disposal area may be placed into this 89,000 square foot space (which includes the pipe bedding area) to provide a better substrate for marsh to regenerate in. Following completion of construction, it is expected that the dike erosion rate will be significantly reduced through the remaining project life.

### **3. NONSTRUCTURAL ALTERNATIVES**

No Action. This alternative was ruled out because “no action” would result in the destruction of the dike and loss of dredge disposal space adjacent to the Isle of Palms.




 US Army Corps  
 of Engineers  
 Charleston District

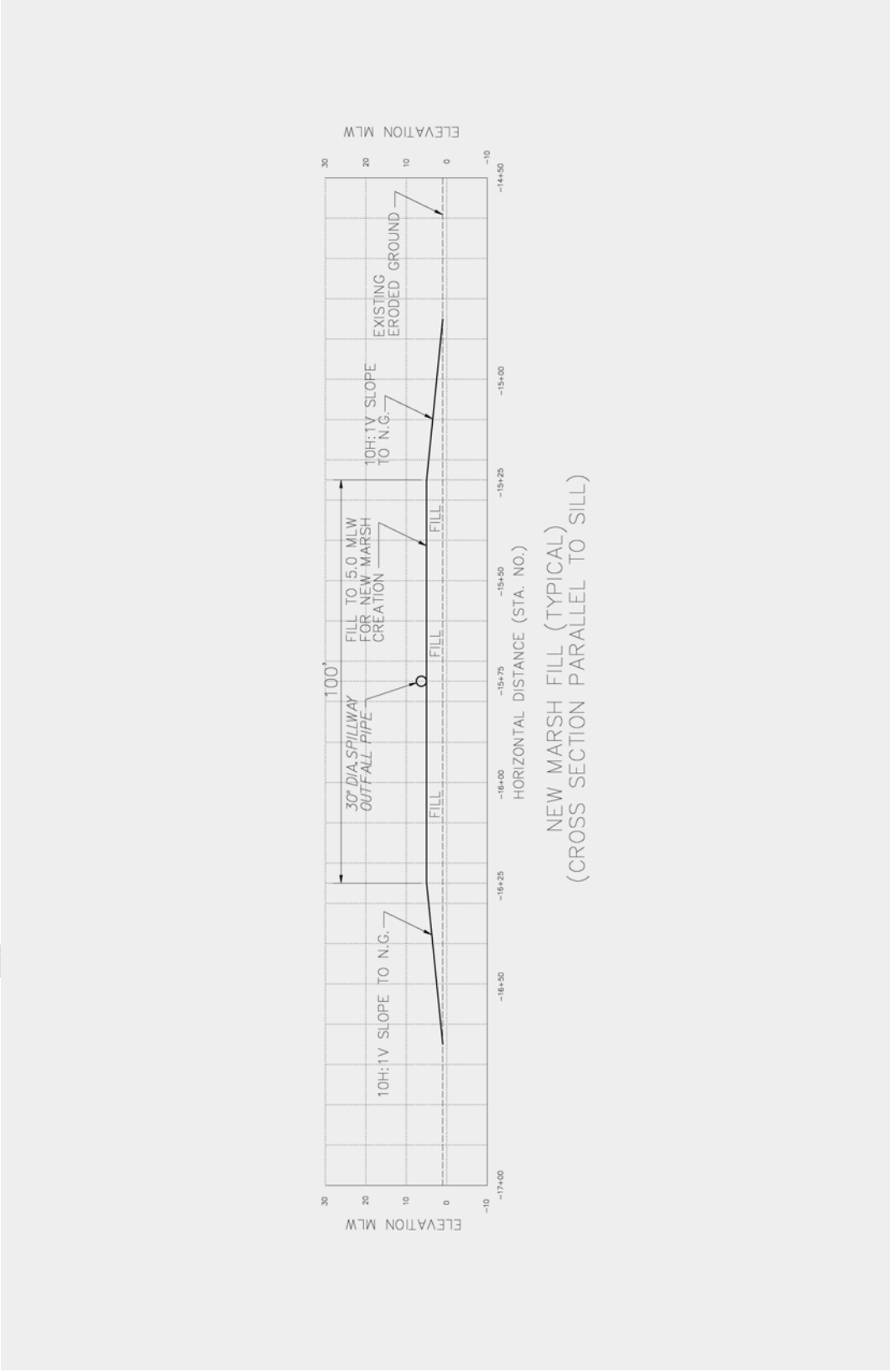
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS CHARLESTON, SOUTH CAROLINA		Date	24 May 2008
Drawn by	rdm	File name	4-000-20 1974061.gpr
IPM No. SAC-2008FP-001		Number	
		Proj. Code	1 - 20

ATLANTIC INTRACOASTAL WATERWAY (AIWW)  
 WINYAW BAY TO CHARLESTON BEACH (W-C)  
 DISPOSAL AREA 1006S / 1027S W-C  
**EROSION PROTECTION SILLS  
 TYPICAL CROSS SECTION**  
 CHARLESTON COUNTY SOUTH CAROLINA

**FIGURE 6 – Typical Sill Cross Section**



**FIGURE 7a – Drain Pipe Locations (Plain View)**



**FIGURE 7b - Drain Pipe Locations (Profile)**



#### **4. STRUCTURAL ALTERNATIVES**

The existing earthen dike can be set back and re-built with the appropriate volume of material and side slopes; however, expensive maintenance will continue to be necessary over the years and disposal volume will be reduced at each occurrence.

The existing earthen dike can be rebuilt/reshaped at its present location and protected with a riprap revetment. This alternative would result in the destruction of all existing vegetation on the dike with minimal re-growth because of the rock revetment. This alternative would also not allow for the natural re-growth of saltmarsh. For these reasons, this alternative was not selected.

The construction of the above described sill would protect the disposal site dike, reduce maintenance, preserve the existing disposal area volume, while allowing for the restoration of saltmarsh in the area between the sill and dike.

#### **5. AFFECTED ENVIRONMENT**

The area that would be affected is a 1,560-foot reach of rock sill that will bury approximately 51,500 square feet of tidal mud flats, while creating a 89,000 square foot protected environment where saltmarsh can re-establish itself. In addition, two drainpipes will be replaced within this protected area (see Figures 7a & 7b) and their bedding material will cover approximately 15,000 square feet of area. There are no significant environmental resources remaining within the project area.

#### **6. ENVIRONMENTAL CONSEQUENCES OF THE PROPOSED PROJECT**

Delivery and placement of the rock will have minimal negative impact. Hauling and placement activities would temporarily increase noise levels along this reach of the AIWW and the Isle of Palms Connector (Route 517) and 51,500 square feet of tidal mud flats would be buried. Benthic organisms within this area would be permanently destroyed, but the rock would provide substrate for other organisms to adhere to and shelter for smaller motile life forms. The two drainpipes being replaced within the protected area and their bedding material will cover approximately 15,000 square feet of area that will also bury benthic organisms; however, the area will gradually revert back to a productive saltmarsh that existed in the past. No threatened or endangered species, cultural resources, floodplains, or other significant resources would be affected during the construction activity. The proposed project will likely cause an increase in fishery habitat value in the rock placement area (see ESSENTIAL FISH HABITAT discussion in paragraph 11). Terrestrial habitat will be positively affected by stabilizing the existing dike. The potential for existence of hazardous, toxic, or radiological waste (HTRW) in the study area is minimal due to existing and past land uses. A site inspection was conducted on April 17, 2006. No evidence of potential HTRW was discovered. The proposed project is the least damaging alternative that will protect the dike and the interior disposal area and volume. Benefits exceed the costs.

#### **7. LIST OF AGENCIES BEING CONSULTED**

- a. The U.S. Fish and Wildlife Service (USFWS)
- b. The National Marine Fisheries Service (NMFS)
- c. The South Carolina Department of Health and Environmental Control (SCDHEC)
- d. The Office of Ocean and Coastal Resource Management (OCRM)
- e. The South Carolina Department of Archives and History, State Historic Preservation Officer (SHPO)
- f. The South Carolina Department of Natural Resources (SCDNR)

Tribal correspondence and agency letters providing concurrence or comments with regard to the originally proposed Federal action will be found in Appendices 1 & 2. Not all agencies responded to our original round of phone calls and emails or concurred with the original plan to place a rock sill in front of the dike in order to protect it; however, upon receipt of this draft EA they will be afforded another opportunity to do so. There was, however, concern expressed by the South Carolina Department of Natural Resources that the rock could present a liability issue and that fish might get trapped behind the rock during periods of low tide. They also stated that the process is likely to be self-mitigating and that natural accumulation of sediments would be preferred. The US Fish and Wildlife Service requested that stone placement construction should be outside the existing marsh, where it exists, and that where land modifications are needed bird nesting season should be avoided unless all vegetation is eroded away. The National Marine Fisheries Service wished to see a more formal study proposal and they will receive that with the previously issued Public Notice as well as through the review of this document. No other comments have been received thus far.

A site examination conducted on April 17, 2006 showed a significant pattern of shoreline and marsh erosion along this reach. Existing escarpments will preclude any bird nesting under current conditions. Also, left to itself, the dike will erode and breach and eliminate the use and function of this disposal site. The construction of the rock sill would, however, protect the dike while providing an opportunity for marsh restoration as well as the re-establishment of vegetation on the disposal area dike.

## **8. PRIOR APPROVALS/CERTIFICATION**

A draft 404(b)(1) Assessment has been prepared (see Appendix 3), for the purpose of building a rock sill in front of AIWW disposal area 1006/1027S W-C. Water quality certification was requested through issuance of Joint Public Notice SAC-2006FP-001 on June 02, 2006. (see Appendix 4)

Coastal Consistency has not been issued yet.

## **9. ARCHAEOLOGICAL AND HISTORICAL RESOURCES**

Past investigations into the National Register of Historic Places have shown that there are no properties listed within the area of project influence. However, the State Historic Preservation Officer (SHPO) and the South Carolina Institute of Archaeology and Anthropology (SCIAA) will have an opportunity to provide additional information upon receipt of the Joint Public Notice as well as the review of this document. Our preliminary position is that it has been determined that there are no sites of historical importance that will be adversely affected by the project. This document will also be coordinated with the Federally recognized Tribes having an historical association with the State of South Carolina. If cultural resources are discovered during construction of this project, SHPO and the Federally recognized tribes will be notified and appropriate protective measures will be taken.

## **10. ENVIRONMENTAL JUSTICE**

Executive Order 12898 requires Federal agencies to develop a strategy for its programs, policies, and activities to avoid disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment. The U.S. Army Corps of Engineers is committed to the principles of environmental justice. Due to the remote location of the construction site from any residential areas, there will be no impacts to the above-stated populations.

## **11. ESSENTIAL FISH HABITAT**

The provision of the draft Environmental Assessment to the National Marine Fisheries Service (NMFS) initiated the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Our current determination is that the proposed action would not have a substantial individual or cumulative adverse impact on EFH or fisheries managed by the South Atlantic Fishery Management Council and the NMFS.

### ***EFH Assessment***

- a. A description of the proposed action is located in paragraph 2 above.
- b. Analysis of individual and cumulative effects on EFH: The proposed project is located in an area identified as Essential Fish Habitat for larval, juvenile, and/or adult red drum (*Sciaenops ocellata*), summer flounder (*Paralichthys dentatus*), black sea bass (*Centropristis striata*), white shrimp (*Litopenaeus setiferus*), and brown shrimp (*Farfantepenaeus aztecus*). Categories of EFH that would be impacted by this work include marine and estuarine water column and sand/mud bottom. These fishery resources and associated EFH are discussed in detail in documents prepared by the South Atlantic Fishery Management Council (SAFMC). Species under jurisdiction of the Mid-Atlantic Fishery Management Council also occur in the project area. These species and their associated EFH include juvenile and adult summer flounder, which occur on marine and estuarine bottoms and in the water column, and juvenile and adult bluefish (*Pomatomus saltatrix*), which occur in the water column.

The project area also provides nursery and forage habitat for other commercially and recreationally important species including black drum (*Pogonias cromis*), Atlantic croaker (*Micropogonias undulatus*), spot (*Leiostomus xanthurus*), Florida pompano (*Trachinotus*

*carolinus*), spotted seatrout (*Cynoscion nebulosus*), Gulf kingfish (*Menticirrhus littoralis*), Atlantic menhaden (*Brevoortia tyrannus*), striped mullet (*Mugil cephalus*), and blue crab (*Callinectes sapidus*). Several of these species serve as prey for other species (e.g., mackerels, snappers, and groupers) that are managed by the SAFMC and for highly migratory species (e.g., billfishes and sharks) that are managed by the NMFS. Detailed information on Federally managed fisheries and their EFH is provided in the 1998 amendments of the Fishery Management Plans of the South and Mid-Atlantic Regions prepared by the SAFMC and the Mid-Atlantic Fishery Management Council. The amendments were prepared as required by the MSFCMA (P.L. 94-265). Macro invertebrate inhabitants of the near shore coastal zone are important food items for a number of transitory and resident fishes. Characteristic fauna of southeastern beaches may include haustoriid amphipods, polychaete worms, isopods, and ghost crab (*Ocypode quadrata*). Near shore coastal waters are also inhabited by sea turtles, and beachfront nesting by the threatened loggerhead sea turtle (*Caretta caretta*) occurs during the summer.

- c. Charleston District's views regarding effects: Based on information gleaned from previous studies as well as a site inspection, it appears that this project would not result in significant long-term harm to the ecologically diverse aquatic habitats, such as "live rock" and other stable bottoms. Most impacts are believed to be limited to relatively sparse benthic epifauna and infauna, which includes mollusks, crustaceans, and polychaete worms. Some of these organisms would be at least temporarily eliminated through excavation and dike reconstruction (in the vicinity of the replacement pipes and other areas as needed) in the zone between the proposed sill and the disposal area, while burial under the sill would result in an inter-tidal zone being converted to a rock environment. Rock placement will destroy the existing benthic communities; however, no hard bottoms or vegetated wetlands will be negatively affected. Other potential impacts include localized turbidity elevation and possible reduction of dissolved oxygen in the surrounding water column. Elevated turbidity can reduce photosynthesis activity of pelagic and benthic algae. Suspended sediments can cause physical damage to respiratory structures of early life history stages of fishes and invertebrates.

The rock sill will provide a stable structure for colonization by diverse invertebrate communities that demonstrates considerable functional value very similar to oyster reef habitat, both natural and artificial.

- d. It is expected that a total of 51,500 square feet of inter-tidal bottom will be buried under 10,000 cubic yards of quarry run rock, and the two drainpipes being replaced within the protected area and their bedding material will cover approximately 15,000 square feet of area; however, the protected area between the rock sill and the toe of the dike will have an opportunity to rebuild a salt marsh environment. The eroded habitats that were damaged by wind generated waves and boat wakes were formerly salt marsh and the placement of the proposed rock sill is expected to result in long term restoration of significant areas (approximately 2.5 acres) of regularly flooded emergent salt marsh behind the sill. It is expected that the sill will, in the short term, reduce the rate of erosion and loss of emergent salt marsh, but, in the long term, the salt marsh can regenerate and provide positive benefits to the local fishery.



e. Monitoring of the construction site will not be required for this effort.

f. Proposed mitigation, if applicable: Not applicable in this case.

**12a. THREATENED AND ENDANGERED SPECIES**

**South Carolina Distribution Records of  
Endangered, Threatened, Candidate and Species of Concern  
For Charleston County  
March, 2006**

E Federally endangered

T Federally threatened

P Proposed in the Federal Register

CH Critical Habitat

SC Federal Species of concern. These species are rare or limited in distribution but are not currently legally protected under the Endangered Species Act.

\* Contact the National Marine Fisheries Service for more information on this species

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Occurrence</u>
West Indian manatee	<i>Trichechus manatus</i>	E	Known
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
Bachman's warbler	<i>Vermivora bachmanii</i>	E	Known
Kirtland's Warbler	<i>Dendroica kirtlandii</i>	E	Known
Wood stork	<i>Mycteria americana</i>	E	Known
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
Piping plover	<i>Charadrius melodus</i>	T, CH	Known
Kemp's ridley sea turtle	<i>Lepidochelys kempi</i> *	E	Known
Leatherback sea turtle	<i>Dermochelys coriacea</i> *	E	Known
Loggerhead sea turtle	<i>Caretta caretta</i>	T	Known
Green sea turtle	<i>Chelonia mydas</i> *	T	Known
Flatwoods salamander	<i>Ambystoma cingulatum</i>	T	Known
Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E	Known
Sea-beach amaranth	<i>Amaranthus pumilus</i>	T	Possible
Pondberry	<i>Lindera melissifolia</i>	E	Known
Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
Chaff-seed	<i>Schwalbea americana</i>	E	Known
Southern Dusky Salamander	<i>Desmognathus auriculatus</i>	SC	Known
Gopher frog	<i>Rana capito</i>	SC	Known
Incised groovebur	<i>Agrimonia incisa</i>	SC	Known
Venus' fly-trap	<i>Dionaea muscipula</i>	SC	Known
Angiosperm (no common name)	<i>Elytraria caroliniensis</i>	SC	Known
Godfrey's privet	<i>Forestiera godfreyi</i>	SC	Known
Creeping St. John's wort	<i>Hypericum adpressum</i>	SC	Known
Pondspice	<i>Litsea aestivalis</i>	SC	Known
Boykin's lobelia	<i>Lobelia boykinii</i>	SC	Known
Sweet pinesap	<i>Monotropsis odorata</i>	SC	Known
Savannah or Piedmont cowbane	<i>Oxypolis ternate</i>	SC	Known
Pineland plantain	<i>Plantago sparsiflora</i>	SC	Known
False coco	<i>Pteroglossaspis ecristata</i>	SC	Known

Awned meadowbeauty	<i>Rhexia aristosa</i>	SC	Known
Bachman's sparrow	<i>Aimophila aestivalis</i>	SC	Known
Henslow's sparrow	<i>Ammodramus henslowii</i>	SC	Possible
Red knot	<i>Calidris canutus</i>	SC	Possible
Black-throated green warbler	<i>Dendroica virens</i>	SC	Known
Swallow-tailed kite	<i>Elanoides forficatus forficatus</i>	SC	Known
American kestrel	<i>Falco sparverius</i>	SC	Known
American oystercatcher	<i>Haematopus palliatus</i>	SC	Known
Loggerhead shrike	<i>Lanius ludovicianus</i>	SC	Possible
Black rail	<i>Laterallus jamaicensis</i>	SC	Known
Swainson's warbler	<i>Limnothlypis swainsonii</i>	SC	Known
Painted bunting	<i>Passerina ciris ciris</i>	SC	Known
Gull-billed tern	<i>Sterna nilotica</i>	SC	Known
Rafinesque's big-eared bat	<i>Corynorhinus rafinesquii</i>	SC	Known
Bull's Island white-tail deer	<i>Odocoileus virginianus taurinsulae</i>	SC	Known
Southeastern myotis	<i>Myotis austroriparius</i>	SC	Known
Southern hognose snake	<i>Heterodon simus</i>	SC	Known
Island glass lizard	<i>Ophisaurus compressus</i>	SC	Known

**12b. BIOLOGICAL ASSESSMENT OF THE EFFECT ON THREATENED AND ENDANGERED SPECIES**

The placement of a rock sill in front of and along 1,560 feet of dike of disposal site 1006/1027S W-C has almost no potential to affect sea turtles, piping plovers, and the short nosed sturgeon. The only sea turtle likely to nest in South Carolina is the loggerhead sea turtle but they would nest on the front beach of the Isle of Palms, rather than along the waterway. If, however, construction of the sill occurs during the period between April 1 and November 30, there is a greater possibility that sea turtles could be passing through or feeding in the area, but it is not very likely since they tend to focus on the open ocean and inlet areas. Care would need to be taken to avoid contact if they are spotted when stone is being placed so to ensure the protection of any Loggerheads that may be present, personnel associated with the project will be instructed about the possible presence of sea turtles and the need to avoid them with vessels and other equipment. In addition to a possibility of the sea turtles physical presence, the contractor would need to be prohibited from working at night with artificial lighting during the nesting season. Even though the construction is behind the Isle of Palms the lighting would be strong enough to confuse hatchlings.

Adherence to the above precautions should minimize the effects to loggerhead sea turtles, therefore, the Corps of Engineers has concluded that the upcoming sill construction project is not likely to adversely affect the loggerhead sea turtle.

Other threatened or endangered species listed for Charleston County that could be expected to occur in the project area include the West Indian manatee, Piping plover, Kemp's ridley sea turtle, Leatherback sea turtle, Green sea turtle, and Shortnose sturgeon.

There are no reported sightings of Piping plover on the disposal site and there is no designated Piping plover critical habitat within the impacted area. Therefore, the Corps of Engineers has determined that the proposed project is not likely to adversely affect the Piping plover.

Since the project is not likely to affect the loggerhead sea turtle, given the lighting restrictions, the proposed project is also not likely to adversely affect the Kemp's ridley sea turtle, Leatherback sea turtle, or Green sea turtle since they rarely approach the coast for nesting purposes.

The West Indian manatee is an uncommon summer resident of the South Carolina coast. To ensure the protection of any manatees that may be present, personnel associated with the project will be instructed about the possible presence of manatees and the need to avoid them with vessels and other equipment. For these reasons, it has been determined that the proposed project is not likely to adversely affect the West Indian manatee.

Because of the shallow waters associated with the construction site for this project, it is unlikely that Shortnose sturgeon occur in the immediate project area. For this reason, it has been determined that the proposed project is not likely to adversely affect the Shortnose sturgeon.

### **13. CONCLUSIONS**

The proposed action, placement of 10,000 cubic yards (15,000 tons) of rock 70 feet offshore of disposal area 1006/1027S W-C for a length of 1,560 feet, is needed to avoid destruction of the disposal area dike facing the AIWW with the subsequent loss of the disposal area. The "no action" alternative would not be acceptable, since it would not eliminate the threat of the loss of the containment dike. The proposed action would protect the project and allow it to be restored to the designed lifetime with minimal future maintenance while it contains dredge material. All reasonably foreseeable impacts, which could result from the proposed action, have been considered, and no significant adverse impacts were identified. Therefore, the proposed action does not constitute a major Federal action significantly affecting the quality of the human environment, and the preparation of an Environmental Impact Statement (EIS) provided for under Section 102(c) of the National Environmental Policy Act of 1969 is not required.

**APPENDICES**

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**APPENDIX 1**

**Native American Coordination & Comments**

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**APPENDIX 2**

**Agency Coordination & Comments**

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# United States Department of the Interior

**FISH AND WILDLIFE SERVICE**  
176 Croghan Spur Road, Suite 200  
Charleston, South Carolina 29407

June 28, 2006

Lt. Colonel Edward R. Fleming  
District Engineer  
U.S. Army Corps of Engineers  
69A Hagood Avenue  
Charleston, S.C. 29403-5107

Attn: Joseph A. Jones

Re: P/N SAC-2006-FP-001, Charleston District Corps of Engineers

Dear Colonel Fleming:

The U.S. Fish and Wildlife Service (Service) has reviewed the above-referenced public notice dated June 2, 2006. The applicant has requested a Department of the Army permit pursuant to sections 401 and 404 of the Clean Water Act (33 U.S.C. 1341) and the South Carolina Coastal Zone Management Act (48-39-10 et seq.) to place fill material in the Atlantic Intracoastal Waterway (AIWW), Charleston County, South Carolina. This report is submitted in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et. seq.) and Section 7 of the Endangered Species Act, as amended (16 U.S.C. 1531-1543). This report is also to serve as official comments to the South Carolina Department of Health and Environmental Control's Office of Coastal Resource Management in their certification processes pursuant to the Coastal Zone Management Act and Sections 401 and 404 of the Clean Water Act.

The purpose of the work is to construct erosion protection measures for a dredge material disposal area along the AIWW. The current plan of protection is to install a rock sill in a line parallel to and approximately 70 ft. offshore of the toe of the dike slope. There are two erosional areas at disposal area 1006/1027S W-C that will be protected by rock sills. The sills will use quarry-run granite rock and will be constructed to an elevation of 7 ft. above mean low water (MLW), with a top width of 5 ft. and front slope of 2.5:1 and a back slope of 1.5:1. The southern rock sill will be approximately 1,130 ft. in length and the northern rock sill will be approximately 430 ft. in length. The total footprint of the two sill segments would be approximately 51,000 square feet and would protect 1,560 square feet of dike.

A Service biologist discussed the project via telephone with Mr. Alan Shirey of the Charleston district Corps of Engineers on June 26, 2006, regarding the determination of effect on

threatened/endangered species. Mr. Shirey stated that a draft environmental assessment was forthcoming and would be sent out shortly. The Service therefore requests that the permit be held in abeyance until such time that we receive and are able to review the supplemental information. If you should need further assistance please contact Mark Leao of my staff at (843) 727-4707 ext. 205.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy N. Hall". The signature is written in a cursive style with a large initial "T".

Timothy N. Hall  
Field Supervisor

TNH/MCL/km

**APPENDIX 3**

**DRAFT 404(b)(1) ASSESSMENT**

DRAFT

## 404(b)(1) Evaluation

### O&M Erosion Control Through Use of a Sill/Breakwater Disposal Area 1006/1027S W-C Charleston County South Carolina

#### I. PROJECT DESCRIPTION

**a. Location and General Description.** Disposal Area 1006/1027S W-C is located along the Atlantic Intracoastal Waterway (AIWW) in Charleston County and is bounded on the northeast by Route 517 (Isle of Palms Connector), to the southwest by an unnamed tributary to Swinton Creek, to the northwest by saltmarsh, and to the southeast by the AIWW and the Isle of Palms (see Figure 1). The disposal area was originally constructed in the late 1960's on a designated disposal easement area. Progressive boat wake and wave erosion along the face of the dike facing the AIWW has resulted in a need for regular maintenance to restore the integrity of the dike. This usually consists of setting the dike back to re-build on a firm base with the subsequent loss of disposal area. Maintenance work is again required since the dike is still subject to wake, wave, and tidal currents. Access to the disposal site is restricted to shallow draft vessels only due to the shallow conditions next to the project area.

The disposal area dikes were originally built in the late 1960's on disposal easement marsh and require regular maintenance to compensate for normal weather generated erosion and settlement. In addition, wind and boat generated waves are causing significant damage to the waterway side of the dike, requiring intervention.

The current plan of protection is to install a rock sill (or breakwater) on top of geotextile fabric in the intertidal zone along a line parallel to and approximately 70 feet offshore of the toe of the dike slope, and it is broken into two segments or reaches (see Figure 2). This sill would use quarry-run granite rock and would be constructed to an elevation of 7 feet MLW, with a top width of 5 feet and front slope of 1V on 2.5H and a back slope of 1V on 1.5H (see sample profile in Figure 3). A crane barge and a materials barge will be used to place the sill materials. The southernmost reach would be approximately 1,130 feet in length and the adjacent northernmost reach would be 430 feet in length. The total footprint of the two sill segments would be approximately 51,500 square feet and would protect approximately 1,560 feet of dike.

Access to the construction site is by way of water only and challenges consist of shallow water, boat wave wash, tidal currents and the usual safety issues with placement of 10,000 cubic yards (15,000 tons) of rock. The area of potential impacts will consist of the sill footprint of 51,500 square feet plus the distance between the sill and the toe of slope, or another possible 89,000 square feet where sediments can accumulate sufficient to allow the reestablishment and maintenance of the tidal marsh similar to that which existed in the past; a total of 140,500 square feet. Following sill construction, dredge material may be placed into this 89,000 square foot space to provide a better substrate for marsh to regenerate in. All of the work will occur inside this area of potential impacts. The benthic impact will consist of approximately 3.25 acres within the intertidal zone.

**b. Authority and Purpose.** The AIWW was initially begun under the authority of the River and Harbor Act of September 19, 1890 and improved through subsequent re-



authorizations, with the latest being the River and Harbor Act of March 2, 1945. This proposed Operation and Maintenance construction would provide protection for Disposal Area 1006/1027S W-C on the portion of the waterway in Charleston County.

**c. General Description and Quantities of the Dredged or Fill Material.** The area proposed for stone placement is in the intertidal zone and runs parallel to and approximately 70 feet offshore of the eroding toe of the dike. No dredging will be done. After placement of the filter fabric, quarry run granite rock will be placed 7 feet high at the 5 foot wide center with a 1 to 2.5 foot front slope and a 1 to 1.5 back slope. An additional 2 feet of rock will also be placed at the base to compensate for settlement. The total volume of rock to be used will be approximately 10,000 cubic yards. The only additional fill work which will be done is to place bedding material over approximately 15,000 square feet of area to support two refurbished disposal area drain pipes (see Figures 4a & 4b); and possibly move some soil from the disposal area and place it into the 70 foot zone to create an environment favorable for saltmarsh restoration.

**d. Description of the Proposed Discharge Site(s).** There are no plans to discharge any material during this construction effort, but there will likely be some material temporarily brought into suspension, until construction is complete.

**e. Description of Disposal Method.** The geotextile material and quarry run granite rock will be placed on top of the substrate utilizing a crane barge and a materials barge. No dredging or other excavation activities will be performed during the construction operations.

## **II. FACTUAL DETERMINATIONS.**

### **a. Physical Substrate Determinations.**

**(1) Substrate Elevation and Slope.** The bottom elevation at the centerline of the sill is 0 feet Mean Low Water (MLW). The slope in the area is very flat.

**(2) Sediment Type.** This area is highly dynamic and the predominant sediment type for this area is sandy silts.

**(3) Dredged/Fill Material Movement.** The filter fabric and quarry run granite rock will be moved by a shallow water crane barge and materials barge. The material will be directly placed at the construction site by the crane barge.

**(4) Physical Effects on Benthos.** Benthic organisms in the vicinity of the construction, will be impacted by the placement of the filter fabric and rock. However, the construction activity is temporary, and it is expected that organisms will recolonize the area between the sill and toe of slope disturbed by the construction activities. Organisms beneath the rock placement will probably be smothered. The two drain pipes and their bedding material will cover approximately 15,000 square feet of area and benthic organisms in this area will also likely be smothered. Following construction this area can gradually restore to a saltmarsh environment and the benthic organisms along with that process.

**(5) Actions Taken to Minimize Impacts.** The amount of the area of rock placement will only be that quantity and area necessary to accomplish the project, thereby minimizing impacts to the greatest extent possible. Construction design and implementation parameters are incorporated to avoid existing shell rakes, emergent marsh, live bottom areas, potential historic features, and dredging and excavation activities. Additionally, shallow water crane and materials barges will be utilized during construction activities to avoid area substrate disturbances.

**b. Water Circulation, Fluctuation and Salinity Determinations.**

**(1) Water.** Very minimal temporary impacts related to the operation of the construction barges in a shallow water area and from the placement of the granite stone would be expected; however, permanent impacts to the aquatic ecosystem are not anticipated or expected since the placement of rock will provide a substrate on which organisms can colonize.

**(a) Salinity.** This activity will occur in the AIWW, which is nearly the consistency of the open ocean. Construction will have no impact on salinity.

**(b) Water Chemistry.** Temporary changes in water chemistry related to increased turbidity levels at the construction site may occur. Impacts would be temporary and minimal in nature.

**(c) Clarity and Color.** The water may become temporarily cloudy at the construction site during construction activity due to increased turbidity levels associated with disturbance of sediments and placement of fill material behind the sill at the outfall pipes. This is expected to return to normal levels shortly after construction ends.

**(e) Odor.** Not applicable.

**(f) Taste.** Not applicable.

**(g) Dissolved Gas Levels.** There may be minor impacts to dissolved oxygen levels as a result of increased turbidity levels. These would be similar to any construction project, and the impacts will be localized and temporary.

**(h) Nutrients.** Nutrient levels may temporarily increase at the sill construction site due to potential temporary increase in turbidity which may result in a release of nutrients from the disturbed sediments. Increased levels would be temporary in nature, returning to normal following the construction activities.

**(i) Eutrophication.** Not applicable.

**(2) Current Patterns and Circulation.**

**(a) Current Patterns and Flow.** Localized current patterns may be altered with the proposed construction. However, it should be noted that the goal of the sill is to

attenuate the existing erosive wave energy upon the immediate shoreline of the disposal site dike, but these changes will not have an extended effect on the surrounding areas.

**(b) Velocity.** The sill/breakwater and drain pipe bedding material should only effect current velocity in the narrow zone between it and the shoreline it is designed to protect. Current velocity reduction in this zone is considered to be a beneficial effect.

**(c) Stratification.** No changes are anticipated.

**(d) Hydrologic Regime.** This project will only have an effect on the project hydrologic regime through diffusion and dispersion of wave energy before it washes up on the dike.

**(3) Normal Water Level Fluctuations.** Water level fluctuations will not change as a result of this project.

**(4) Salinity Gradients.** Salinity gradients will not change.

**(5) Actions That Will Be Taken to Minimize Impacts.** Same as section II.a.(5).

**c. Suspended Particulate/Turbidity Determinations.**

**(1) Expected Changes in Suspended Particulates and Turbidity Levels in the Vicinity of the Disposal Site.** A temporary, minor increase in turbidity levels in the area where fill will be placed and in the immediate vicinity of the sill site may occur during construction activities. No permanent increases in turbidity levels are expected, and normal levels should return immediately after completion of the construction activities.

**(2) Effects (degree and duration) on Chemical and Physical Properties of the Water Column.**

**(a) Light Penetration.** During construction, light penetration at the construction site will diminish slightly due to a temporary increase in turbidity levels. Other than within the “footprint” of the sill where there will be no light penetration, no permanent impact on light penetration is expected in the vicinity of the project site. Light penetration will return to normal levels following construction.

**(b) Dissolved Oxygen.** Dissolved oxygen (DO) levels may decrease during work at the construction site as a result of increased turbidity. However, this decrease will be minimal due to the dynamic characteristics of the tidally influenced waterway, and DO levels should return to normal conditions immediately following construction.

**(c) Toxic Metals and Organics.** Not applicable.

**(d) Pathogens.** Not applicable.

**(e) Aesthetics.** During construction, there would be an increase in the ambient noise levels, which will return to normal levels following construction. In addition, construction activity may obstruct the visual aesthetics of the waterway and marsh, but this too, is a temporary effect, which will be reduced to just the sill being visible at high tide immediately following construction. The entire sill/breakwater and pipe bedding will be visible at low tide. At high tide approximately the top one to two feet of the sill will be visible. The sill will not obstruct views of the marsh or waterway. Although granite is not indigenous to the area, the placement of this breakwater within the intertidal zone should relatively quickly allow for the rock to become more “natural” in appearance due to plant and animal growth on the rock and staining from the water column.

### **(3) Effects on Biota.**

**(a) Primary Production & Photosynthesis.** Although there will be some turbidity at the construction site, it is not expected that measurable impacts to primary production and photosynthesis will occur since the area of impact is so small and nothing is known to be growing there at present. In addition, impacts to primary production and photosynthesis should be limited to the “footprints” of the sill and the drain pipe bedding material. However, the increased surface area provided by the breakwater should mitigate “footprint” losses as moss and algae adhere to the rock.

**(b) Suspension/Filter Feeders.** Temporary impacts would include increased turbidity, which may reduce oxygen levels and impact food intake to organisms at the construction site. However, water clarity and dissolved oxygen concentrations will improve following construction. Although organisms within the footprints of the sill and the drain pipe bedding material will be impacted, the hard surfaces of the sill should provide habitat to be colonized by filter feeding organisms.

**(c) Sight Feeders.** A minimal, temporary disruption due to construction disturbances is possible. A rapid recovery is expected since most sight feeders are transient and can relocate until construction activities are complete.

**(4) Actions taken to Minimize Impacts.** The above noted impacts are temporary and conditions should improve following construction. It is unlikely that further minimization in these areas is possible.

**d. Contaminant Determinations.** No sediment testing has been conducted. However, because of the sandy substrate and tidal currents, unacceptable levels of fine-grained material and associated contaminants are not expected to be found in this area. In addition, the sill will be constructed from synthetic geotextile material and clean quarry run granite stone. Construction procedures are designed to avoid existing substrate disturbances (i.e., no dredging or excavation activities); therefore, the proposed project should not involve concerns over contaminants.

**e. Aquatic Ecosystem and Organism Determinations.**

**(1) Effects on Plankton.** Effects on plankton would be related to turbidity associated with the construction activity. Effects would be minor and temporary in duration.

**(2) Effects on Benthos.** Benthic activity at the construction site would be impacted as rock is placed off shore of the disposal area. These disturbances will be temporary and recolonization at the construction site will occur following construction except for the sill and pipe bedding footprints where the benthic organisms will be smothered.

**(3) Effects on Nekton.** Effects on nekton are not expected. Free swimming organisms that do not rely on currents for their movement can avoid the construction zone during operations. The completed project will provide additional habitat for nekton species and will likely result in increased populations.

**(4) Effects on Aquatic Food Web.** Temporary, localized effects may occur in the vicinity of the sill and areas of fill placement during construction activities. Effects would be related to sedimentation/turbidity and physical disturbance during construction activities and would rapidly return to normal following completion of the construction activity.

**(5) Effects on Special Aquatic Sites.**

**(a) Sanctuaries and Refuges.** Not applicable.

**(b) Wetlands.** Following construction of the sill, there could be an increase in salt marsh growth in the protected area between the sill and the toe of the dike slope.

**(c) Mud Flats.** Benthic organisms located within in the sill footprint and areas of fill placement will be smothered, however, the protected area between the sill and the toe of the dike slope will rapidly return to normal.

**(d) Vegetated Shallows.** Not applicable.

**(e) Coral Reefs.** Not applicable.

**(f) Riffle and Pool Complexes.** Not applicable.

**(6) Threatened and Endangered Species.** Although there are known threatened or endangered species within the project area, the potential impacts are being addressed in the environmental assessment and coordinated with pertinent state and federal agencies. Subsequently, unacceptable adverse impacts to threatened or endangered species are not anticipated or expected.

**(7) Other Wildlife.** Other wildlife utilizing the project area includes a wide variety of fish species and benthic organisms. This project will have no long-term unacceptable adverse impacts on wildlife in the project area.

(8) **Actions to Minimize Impacts.** Plans and specs for the project will specify requirements to ensure impacts to the environment are minimized or avoided.

**f. Proposed Disposal Site Determinations.**

(1) **Mixing Zone Determination.** Not applicable. The State of South Carolina Department of Health and Environmental Control (SCDHEC) does not recognize mixing zones.

(2) **Determination of Compliance with Applicable Water Quality Standards.** A joint public notice for Section 401 Water Quality Certification was published on June 2, 2006. It is not anticipated that any aspects of this project would result in denial of the water quality certification.

(3) **Potential Effects on Human Use Characteristics.**

(a) **Municipal and Private Water Supply.** Not applicable.

(b) **Recreational and Commercial Fisheries.** This project occurs in the mud flats adjacent to the disposal area dike, where little fishing occurs. Construction activities will temporarily interrupt fishing in the immediate project vicinity. Fishing opportunity and success should return to normal, or likely be enhanced (see effects on nekton above), upon project completion.

(c) **Water Related Recreation.** The close proximity of the proposed project to the shoreline should minimize any effects upon water related recreational activities.

(d) **Aesthetics.** See section II.c.(2)(e). above.

(e) **Parks, National and Historical Monuments, National Seashores, Wilderness Areas, Research Sites, and Similar Preserves.** Not applicable.

**g. Determination of Secondary and Cumulative Effects on the Aquatic Ecosystem.**

Negative effects of the proposed project should be minimal and be limited to the substrate under the “footprint” of the sill and areas of fill placement. Potential beneficial effects of the project upon the aquatic ecosystem include the stabilization of the highly erodable littoral zone (shoreline) in the area and the creation of hard substrate habitat for marine organisms. The rock crevasses provide habitat for crabs, barnacles, fish and shrimp while providing long term protection for the disposal area dike. In addition, the sheltered area protected by the rock sill will allow for the natural regeneration of saltmarsh that previously existed here. The beneficial permanent effects outweigh the negative temporary effects associated with the construction activity.

**III. FINDINGS OF COMPLIANCE OR NON-COMPLIANCE WITH THE RESTRICTIONS ON DISCHARGE.**

a. No significant adaptations of the guidelines were made relative to this evaluation.



**b.** Alternative engineering solutions were explored that would provide comparable shoreline and structural protection of the dike, and none were found to be environmentally or economically more beneficial. Other alternatives, such as shoreline riprap and dike setback with reconstruction, typically were found to be more expensive or shorter-lived. The proposed project was selected because it provided sufficient protection with a minimum of environmental impacts. The no action alternative would result in the continued deterioration of the disposal area dike through further shoreline erosion.

**c.** The proposed construction described in this evaluation would not cause or contribute to violations of any known applicable state water quality standards, which would result in permanent damage to the ecosystem.

**d.** The proposed project will not violate the Endangered Species Act of 1973.

**e.** The proposed project will not violate any specified protection measures for marine sanctuaries designated by the Marine Protection, Research, and Sanctuaries Act of 1972.

**f.** The proposed project placement of granite rock and drain pipe bedding material will not result in significant adverse affects on human health and welfare in regard to municipal and private water supplies, recreation and commercial fishing, plankton, fish, shellfish, wildlife, and special aquatic sites. The life states of aquatic life and other wildlife will not be adversely affected. Significant adverse affects on aquatic ecosystem diversity, productivity and stability, and recreational, aesthetic and economic values will not occur.

**g.** Steps taken to minimize potential adverse impacts of the construction on aquatic ecosystems include limiting construction to the minimum alternative needed to provide the required protection. Plans and specs will provide guidance and requirements to avoid/minimize impacts to threatened and endangered species and other aquatic and terrestrial life.

**h.** The proposed project will not cause unacceptable adverse impacts to any known, significant historic sites.

**i.** On the basis of the guidelines, the proposed construction is specified as complying with the requirement of these guidelines, with the inclusion of appropriate and practical conditions to minimize pollution or adverse effects on the aquatic ecosystem.

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DATE

EDWARD H. FLEMING  
Lieutenant Colonel, EN  
Commanding

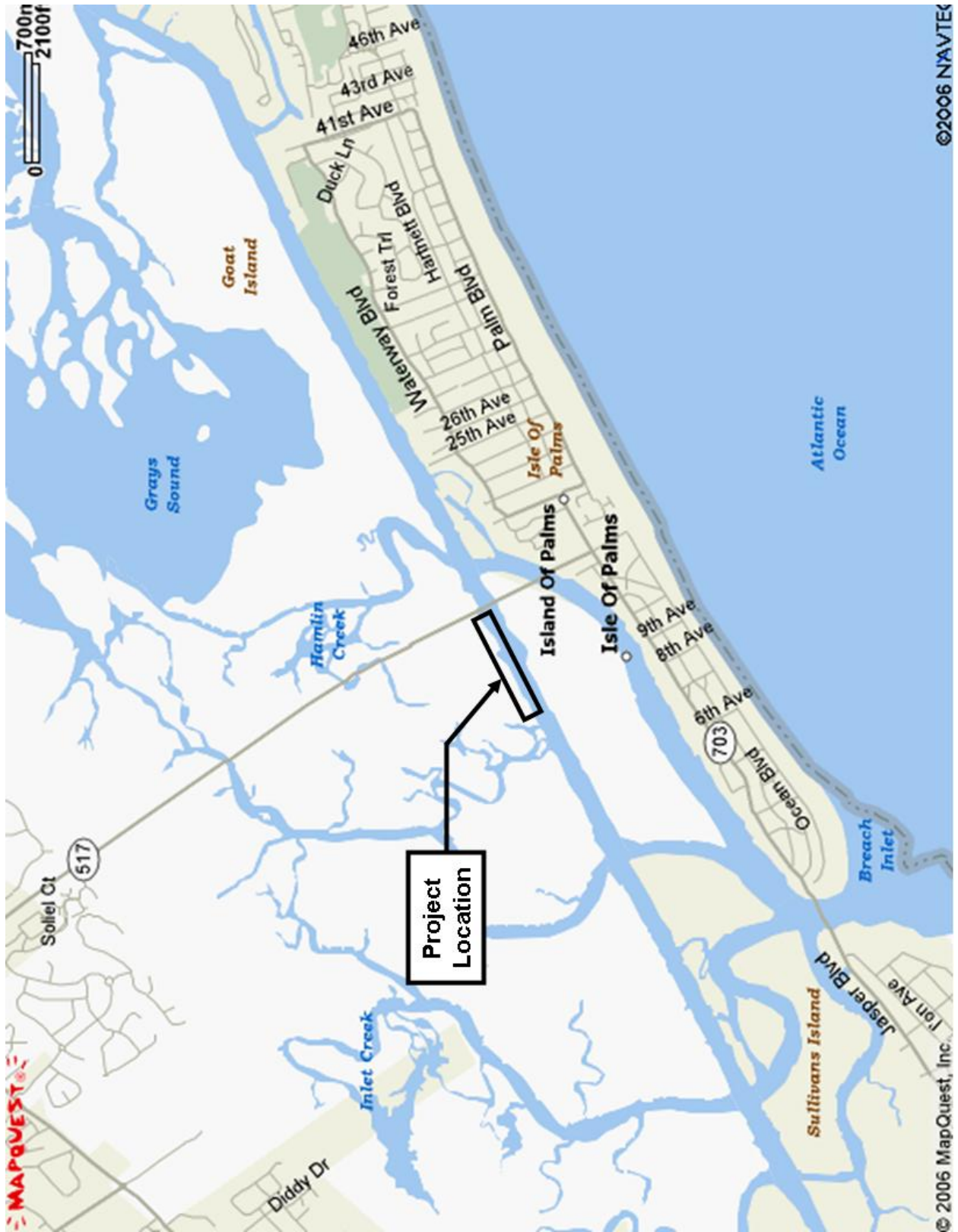
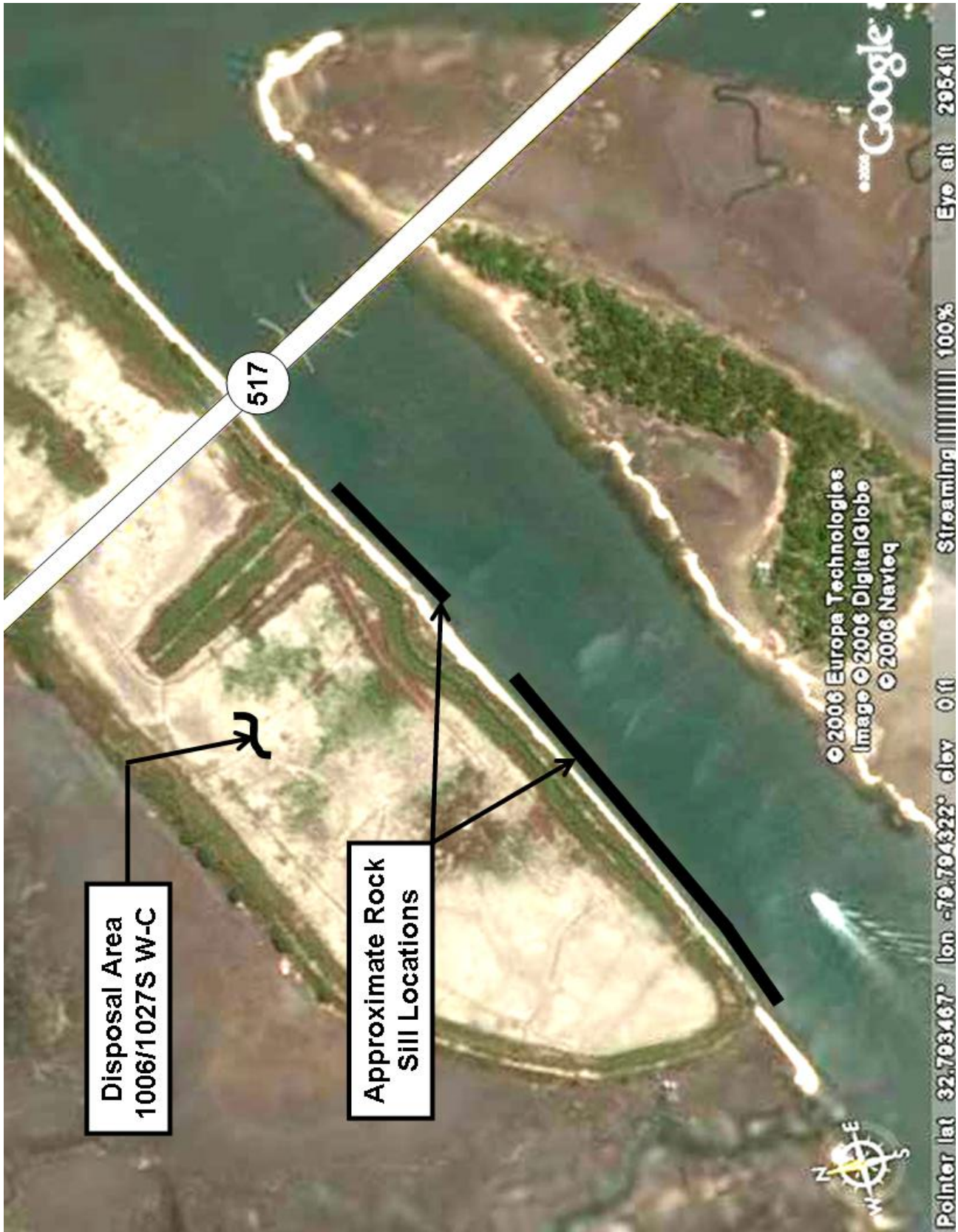
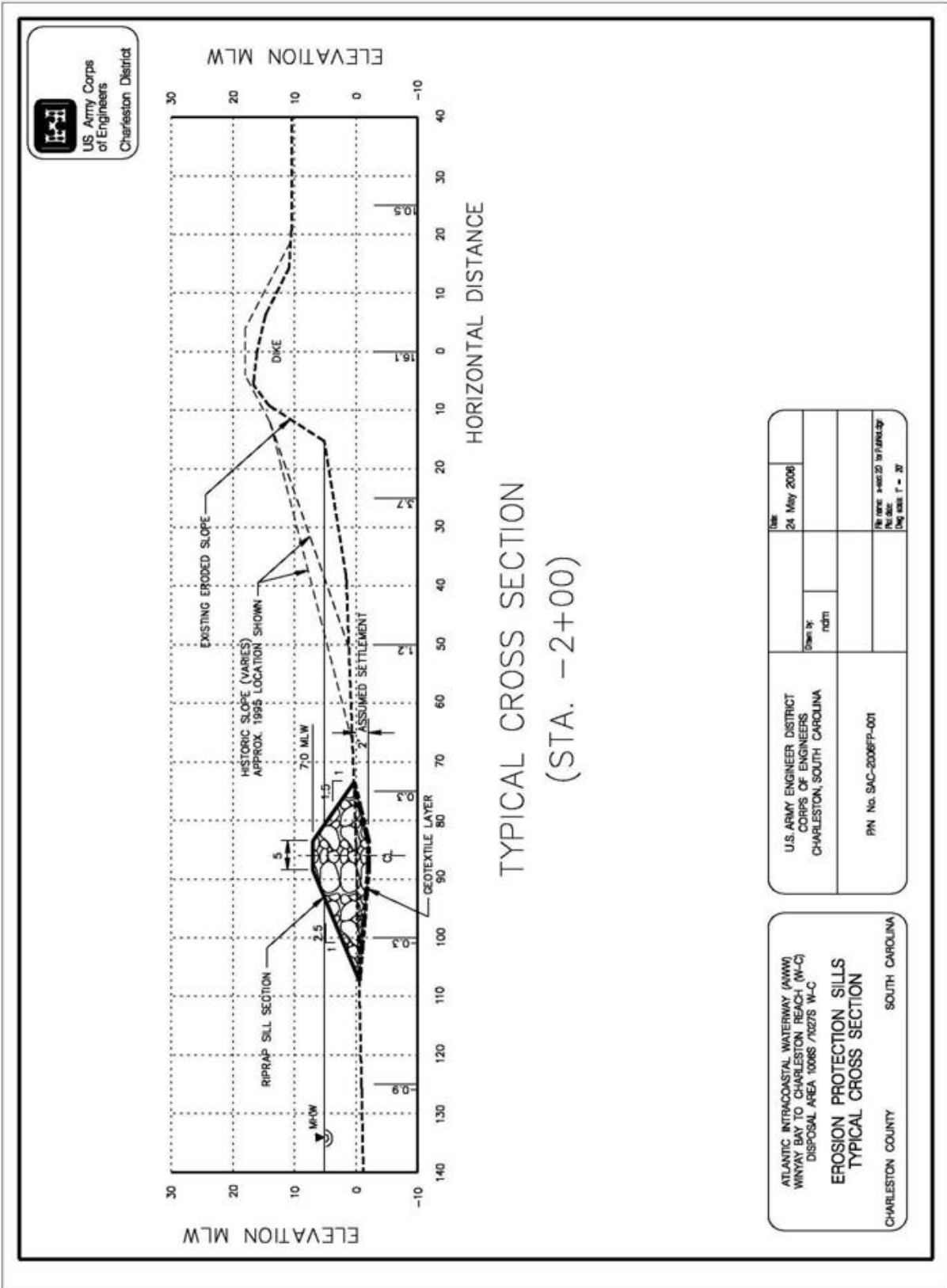


FIGURE 1: PROJECT LOCATION MAP



**FIGURE 2: AREA OF POTENTIAL IMPACTS**

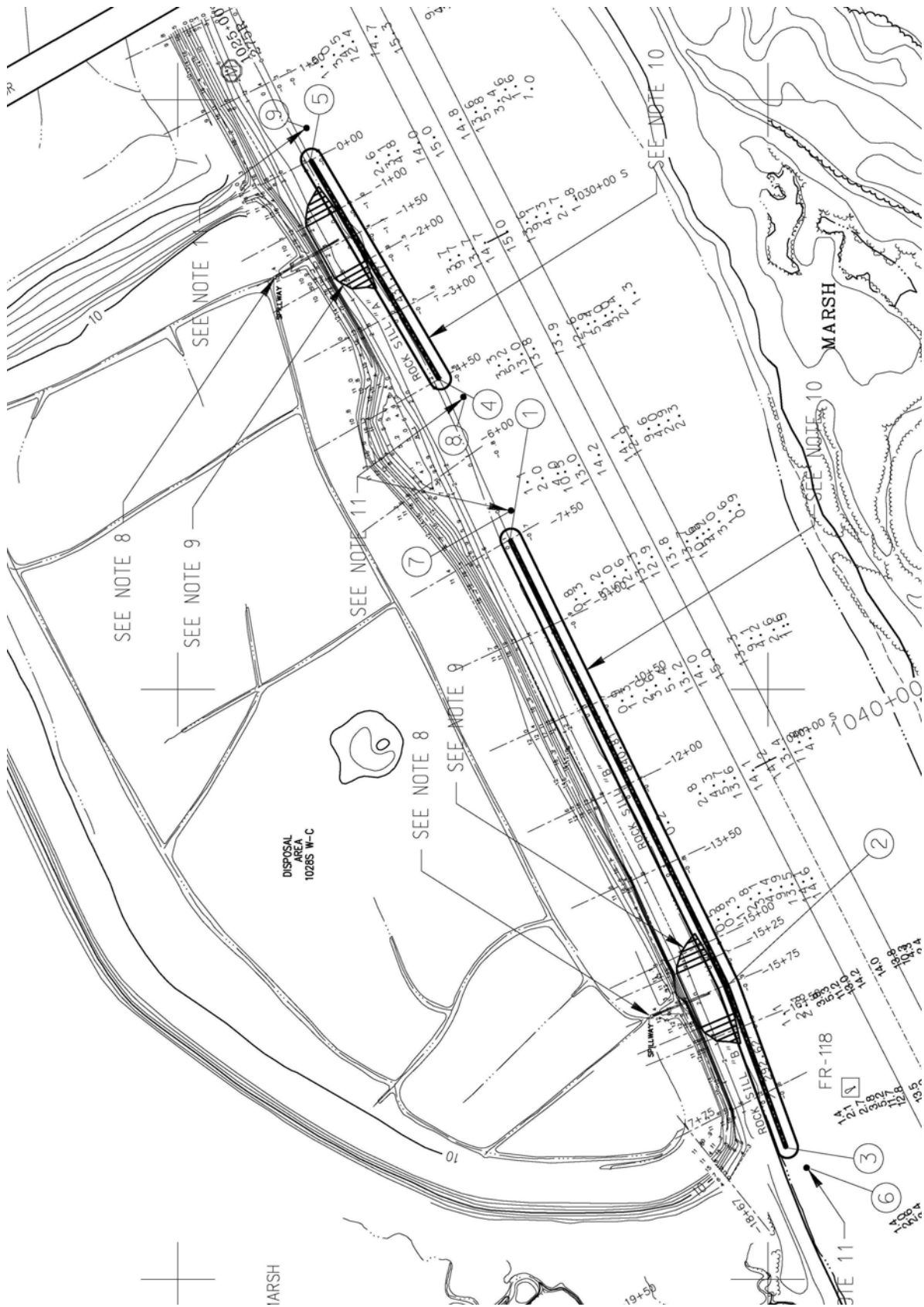




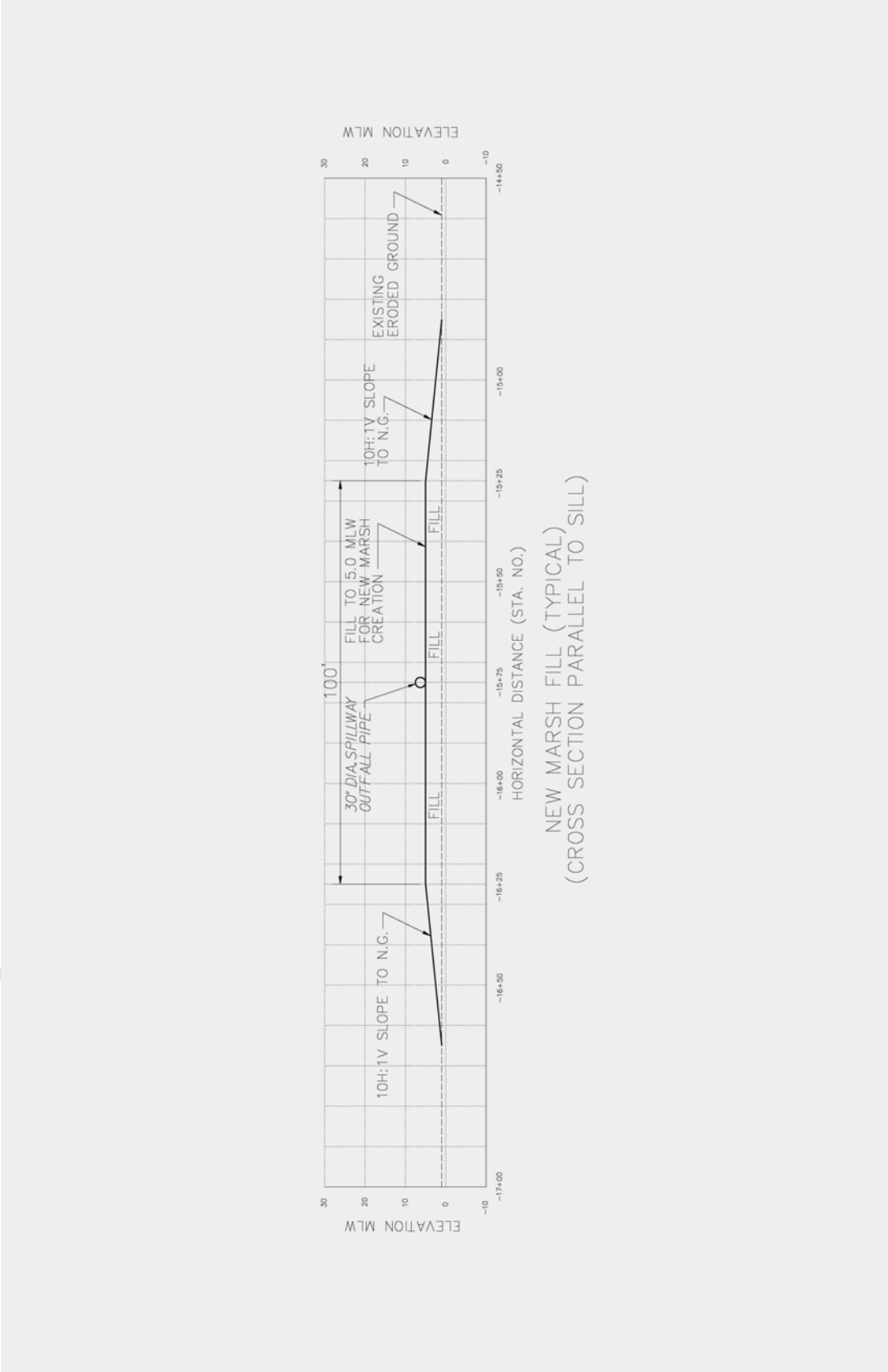
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS CHARLESTON, SOUTH CAROLINA		Date	24 May 2006
Drawn by		rdm	
PIN No. SAC-2006FP-001		File name	20060520 10 17 00 00.dwg
		Plot date	11 - 20
		Plot scale	1" = 20'

ATLANTIC INTRACOASTAL WATERWAY (AIWW) WINNAY BAY TO CHARLESTON REACH (W-C) DISPOSAL AREA 1006S / 1027S W-C	SOUTH CAROLINA
<b>EROSION PROTECTION SILLS TYPICAL CROSS SECTION</b>	
CHARLESTON COUNTY	

**FIGURE 3: TYPICAL PLAN CROSS-SECTION**



**FIGURE 4a – DRAIN PIPE LOCATIONS (PLAIN VIEW)**



**FIGURE 4b – DRAIN PIPE LOCATIONS (PROFILE)**



**APPENDIX 4**

**JOINT PUBLIC NOTICE SAC-2006FP-001 (June 02, 2006)**

DRAFT

# **JOINT** **PUBLIC NOTICE**

**CHARLESTON DISTRICT, CORPS OF ENGINEERS**  
**69A HAGOOD AVENUE**  
**CHARLESTON, SOUTH CAROLINA 29403-5107**  
**and**  
**THE S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**  
**Office of Environmental Quality Control**  
**Water Quality Certification and Wetlands Programs Section**  
**2600 Bull Street**  
**Columbia, South Carolina 29201**

**NOTE: THIS IS A CORPS OF ENGINEERS**  
**CIVIL WORKS PROJECT**

CESAW-TS-PE  
Refer to: P/N # SAC-2006FP-001

June 02, 2006

**Disposal Area 1006/1027S W-C O&M Erosion Control Work**  
**Crossed by Isle of Palms Connector (Route 517)**  
**Charleston County, South Carolina**

The Charleston District, Corps of Engineers, Charleston, South Carolina, proposes to perform the work described herein with due consideration and review given to the relevant provisions of the following laws and others as applicable:

1. The Clean Water Act (33 U.S.C. 1251, et. seq.).
2. The Endangered Species Act of 1973, as amended (16 U.S.C. 1531, et. seq.).
3. The National Historic Preservation Act of 1966 (U.S.C. 470, et. seq.) and the Preservation of Historical Archeological Data Act of 1974 (16 U.S.C. 469, et. seq.).
4. The National Environmental Policy Act of 1969, (42 U.S.C. 4321).
5. Coastal Zone Management Act of 1972, as amended (16 U.S.C. 1531, et. seq.).
6. Magnuson-Stevens Fishery Conservation and Management Act, as amended (16 U.S.C. 1801, et. seq.), Public Law 94-265.
7. Coastal Barrier Resources Act, as amended (U.S.C. 3501-3510).

The purpose of this notice is to advise all interested parties of proposed construction for protection of Atlantic Intracoastal Waterway (AIWW) Disposal Area 1006/1027S W-C, which is bounded on the northeast by Route 517 (Isle of Palms Connector), to the southwest by an unnamed tributary to Swinton Creek, to the northwest by saltmarsh, and to the southeast by the AIWW and the Isle of Palms (see Figure 1).

In order to give all interested parties an opportunity to express their views

## **NOTICE**

is hereby given that written statements regarding the proposed work will be received at this office until

**12 O'CLOCK NOON, MONDAY, JULY 03, 2006**

from those interested in the activity and whose interests may be affected by the proposed work.

### **PROJECT INFORMATION**

Although used as an unconfined disposal area for many years, the above referenced disposal site (1006/1027S W-C) dikes were originally constructed in the late 1960's (the exact date is unknown). Progressive erosion along the waterway has resulted in loss of the outside slopes of the containment dike, resulting in a retreat of the dike centerline away from the waterway during periodic dike-raising (approximately every 10 years or so) and subsequent loss of disposal area acreage.

The dike is basically an earthen structure with drainpipes for de-watering of the dredge material placed there. Reasonable assumptions indicate that the erosion will continue as it has in the past and necessitate continuous maintenance until something is done to attenuate the boat wakes causing the damage. Subsequently, it is concluded that the dike is in jeopardy, over the long term, due to continued erosion of the dike outside slope.

The current plan of protection is to install a rock sill (or breakwater) in a line parallel to and approximately 70 feet offshore of the toe of the dike slope, and it is broken into two segments or reaches (see Figure 2). This sill would use quarry-run granite rock and would be constructed to an elevation of 7 feet MLW, with a top width of 5 feet and front slope of 1V on 2.5H and a back slope of 1V on 1.5H (see sample profile in Figure 3). The southernmost reach would be approximately 1,130 feet in length and

the adjacent northernmost reach would be 430 feet in length. The total footprint of the two sill segments would be approximately 51,500 square feet and would protect approximately 1,560 feet of dike.

Access to the construction site is by way of water only and challenges consist of shallow water, boat wave wash, tidal currents and the usual safety issues with placement of 10,000 cubic yards (15,000 tons) of rock. The Area of Potential Effects will consist of the sill footprint of 51,500 square feet plus the distance between the sill and the toe of slope, or another possible 89,000 square feet where sediments can accumulate sufficient to allow the reestablishment and maintenance of the tidal marsh similar to that which existed in the past; a total of 140,500 square feet. Following sill construction, dredge material may be placed into this 89,000 square foot space to provide a better substrate for marsh to regenerate in. All of the work will occur inside this Area of Potential Effects.

### **ADDITIONAL CONSIDERATIONS**

This document serves as a public notice on behalf of the SCDHEC for water quality certification. A certification is required from DHEC stating that the proposed construction will be conducted in a manner consistent with the Clean Water Act. By this notice, the Charleston District requests DHEC to issue that certification. Persons wishing to comment on State Certification are invited to submit same in writing to SCDHEC, 2600 Bull Street, Columbia, South Carolina 29201, within 30 days of the date of this notice.

This project is consistent to the maximum extent practicable with the South Carolina Coastal Zone Management Program. By this notice, the Charleston District requests concurrence from the South Carolina Department of Health and Environmental Control (SCDHEC), Office of Ocean and Coastal Resource Management (OCRM) that the proposed activity is consistent with the State's Coastal Zone Management Program. Concurrence is conclusively presumed if no state action is received within 45 days of receipt of this notice.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), this public notice also constitutes a request to Indian Tribes to notify the District Engineer of any historic properties of religious and cultural significance to them that may be affected by the proposed undertaking.

The District Engineer has consulted the latest published version of the National Register of Historic Places for the presence or absence of registered properties, or properties listed as being eligible for inclusion therein, and this worksite is not included as a registered property or property listed as being eligible for inclusion in the Register.. This public notice, however, serves as a request to the State Historic Preservation

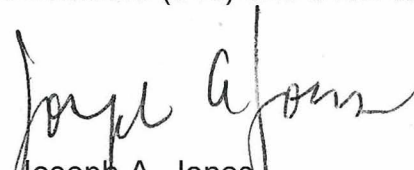
This public notice, however, serves as a request to the State Historic Preservation Office and the South Carolina Institute of Archaeology and Anthropology to review their records and determine if there are additional properties that should be considered.

Section 7 Coordination has been initiated with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service regarding threatened and endangered species. This public notice serves as a request to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for any additional information they may have on whether any listed or proposed endangered or threatened species or designated or proposed critical habitat may be present in the area which would be affected by the proposed activity, pursuant to Section 7(c) of the Endangered Species Act of 1973 (as amended). Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act have been initiated. Preliminary findings, however, are that the improvement in estuarine substrates and emergent wetlands could then be utilized by various life stages of species comprising the red drum, shrimp, and snapper-grouper management complexes. Coordination with NMFS is on-going.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this proposed project. Requests for a public hearing shall state, with particularity, the reasons for holding a public hearing. These requests should be made to DHEC at the address listed above.

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to proceed with the project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, Tribal cultural or religious effects, and other public interest factors listed above. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Questions or comments concerning this notice should be directed to Mr. Bob Chappell or Mr. Alan Shirey at telephone numbers (843) 329-8162 or (843) 329-8166, respectively.

  
Joseph A. Jones  
Chief, Planning Branch

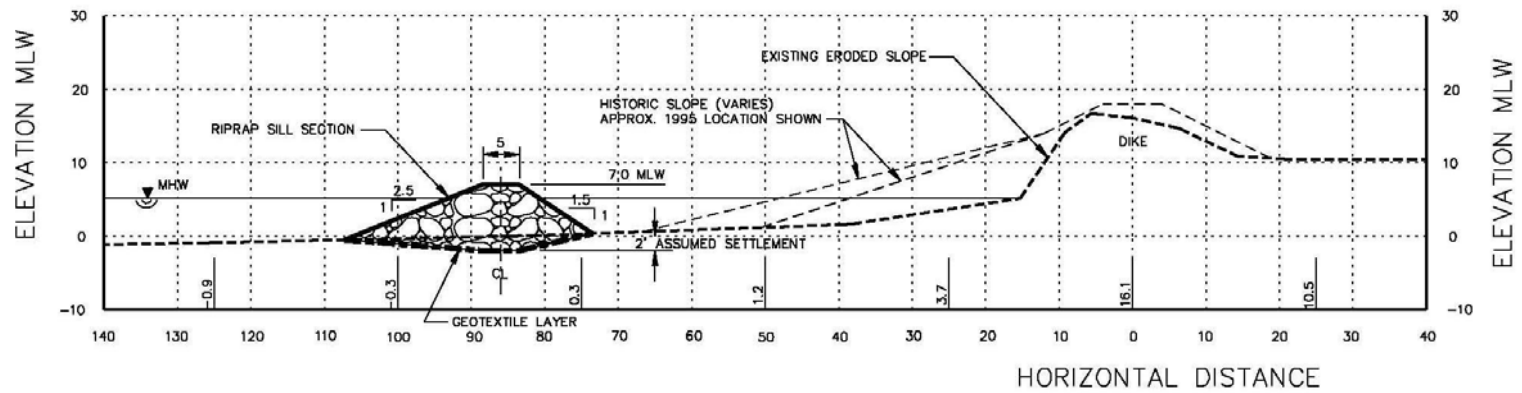


**FIGURE 1: PROJECT LOCATION MAP**





**FIGURE 2: AREA OF POTENTIAL EFFECTS**



TYPICAL CROSS SECTION  
(STA. -2+00)

ATLANTIC INTRACOASTAL WATERWAY (AIWW)  
WINYAY BAY TO CHARLESTON REACH (W-C)  
DISPOSAL AREA 1006S /1027S W-C

**EROSION PROTECTION SILLS  
TYPICAL CROSS SECTION**

CHARLESTON COUNTY                      SOUTH CAROLINA

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS CHARLESTON, SOUTH CAROLINA		Date: 24 May 2008
Drawn by: ndm		
P/N No. SAC-2006FP-001		File name: s-sec 2D by Public.dgn Plot date: Dig scale: 1" = 20'

FIGURE 3

**FIGURE 3: TYPICAL PLAN CROSS-SECTION**