

**DANIEL ISLAND MARINE CARGO TERMINAL
MOVEABLE RAIL BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

SUBMITTED BY

SOUTH CAROLINA STATE PORTS AUTHORITY

SEPTEMBER, 1999

July 30, 1999

Commander
Seventh Coast Guard District
909 SE First Ave
Brickell Plaza Federal Bldg.
Miami, FL 33131-3050

Dear Sir:

The South Carolina State Ports Authority is hereby requesting approval by the Commandant, U.S. Coast Guard, of the locations and designs of a railroad bridge to be constructed across Beresford Creek near Charleston, South Carolina. This bridge will be located approximately 0.2 mile above the confluence of Beresford Creek and Clouter Creek as shown on the attached plans. Currently, there are no existing bridge structures at this location.

No federal funding will be used for the design, permitting, or construction of the project. Other federal agencies which must grant approvals or easements for this project include the U.S. Army Corps of Engineers, Department of Transportation (U.S. Coast Guard), and U.S. Department of Interior (National Marine Fisheries Service, National Forest Service and U.S. Fish and Wildlife Service).

Legal authority for the bridge is found in the General Bridge Act of 1946. The laws of the State of South Carolina require us to obtain a state permit for this work.

The enclosed attachments provide detailed information as requested in Commandant Publication P16591.3, Bridge Permit Application Guide. Please contact me at the above address or call me at (843) 577-8611 if you have any questions, require additional information, or would like to discuss the proposed project.

Sincerely,
South Carolina State Ports Authority

Joe Bryant
Director of Terminal Development

TABLE OF CONTENTS

ATTACHMENT A – BRIDGE PROJECT QUESTIONNAIRE
ATTACHMENT B – PROJECT DESCRIPTION AND ENVIRONMENTAL ANALYSIS
ATTACHMENT C – SITE PHOTOGRAPHS
ATTACHMENT D – NAVIGATION SURVEY QUESTIONNAIRE

LIST OF FIGURES

| | |
|---------|---|
| Sheet 1 | Proposed Project Location |
| Sheet 2 | Location of Proposed Access Road and Rail |
| Sheet 3 | Plan View of Railroad Bridge |
| Sheet 4 | Elevation View of Railroad Bridge |
| Sheet 5 | Railroad Bridge Section |
| Sheet 6 | Locations of Proposed and Existing Bridges and Boat Ramps |

**DANIEL ISLAND MARINE CARGO TERMINAL
MOVEABLE RAIL BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT A

BRIDGE PROJECT QUESTIONNAIRE

RAILROAD BRIDGE

DEPARTMENT OF TRANSPORTATION
U. S. COAST GUARD
Form D7-1103 (Rev. 9-85)

Commander(oan)
Seventh Coast Guard District
Bridge Section
Brickell Plaza Federal Building
909 SE. 1st Avenue
Miami, FL 33131-3050

BRIDGE PROJECT QUESTIONNAIRE

Please provide the following information:

A. NAVIGATION DATA:

1. Name of Waterway: Beresford Creek

1a. Mileage along waterway measured from mouth or confluence 0.3 nm

1b. Tributary of Clouter Creek at mile 0.2.

2. Geographical Location: Southern Terminus of Clements Ferry Road
Berkeley, CO., South Carolina
(Road Number City County State)

3. Township, section and range, if applicable N/A

4. Tidally influenced at proposed bridge site? Yes
Range of tide 5.3 feet

5. Depth and width of waterway at proposed bridge site:

| | Depths | Widths |
|-------------------|----------------|-----------------|
| At Mean High Tide | <u>11 feet</u> | <u>115 feet</u> |
| At Mean Low Tide | <u>6 feet</u> | <u>115 feet</u> |

6. Character of present vessel traffic on waterway. If none so state:
Canoe _____ Rowboat _____ Small Motorboat X
Cabin Cruiser _____ Houseboat _____ Pontoon Boat _____
Sailboat _____ None _____

6a. Provide vertical clearance requirement for largest vessel using the waterway 7 feet

6b. Provide photograph of each type vessel using the waterway Not Available

7. Are these waters used to transport interstate or foreign commerce?
Yes _____ No X

7a. Are these waters susceptible to use in their natural condition or by reasonable improvement as a means to support interstate or foreign commerce? Yes _____ No X

7b. Any planned waterway improvements to permit larger vessels to navigate (to your knowledge)? No If so what are they? _____

8. Any natural or manmade obstructions, bridges, dams, wiers, etc. downstream or upstream? Yes X No _____

RAILROAD BRIDGE (Continued)

A. NAVIGATION DATA (contd)

- 8a. If yes provide upstream/downstream location with relation to the proposed bridge. See Attachment B
- 8b. If bridges, provide vertical clearance at mean high water and mean low water and horizontal clearance normal to axis of waterway. See Attachment B
- 8c. Provide a photograph of the bridge from the waterway showing channel spans. N/A
9. Will the structure replace an existing bridge? No
- 9a. Provide permit number and issuing agencies of permits for bridge(s) to be replaced. N/A
- 9b. Provide vertical clearance above mean high water and mean low water and horizontal clearance normal to axis of waterway. N/A
- 9c. Provide a photograph of the bridge from the waterway showing channel span(s) N/A
10. List names and addresses of persons whose property adjoins bridge right-of-way. The South Carolina State Ports Authority
owns all property adjoining the bridge right-of-way.

11. List names and addresses/location of marinas, marine repair facilities, public boat ramps, private piers/docks along waterway within 1/2 mile of site. See discussion of existing waterway use in
Attachment B.

12. Attach location map and plans for the proposed bridge; include vertical clearances above mean high water and mean low water and horizontal clearance normal to axis of the waterway. See Attachment B
13. Attach three (3) photographs taken at the proposed bridge site: one looking upstream, one looking downstream, and one looking along the alignment centerline across the bridge site. See Attachment C

DATE: _____

SIGNATURE: _____
Proposed Bridge Owner or Agent

ATTACHMENTS: Location Map
Bridge Plans
Photographs

**DANIEL ISLAND MARINE CARGO TERMINAL
MOVEABLE RAIL BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT B

**PROJECT DESCRIPTION AND
ENVIRONMENTAL ANALYSIS**

1.0 PROJECT DESCRIPTION

The South Carolina State Ports Authority (SCSPA) is proposing to construct a marine cargo terminal on Daniel Island near Charleston, South Carolina (Sheet 1). The Proposed Project includes the development of 7,000 feet of wharf structure on the Cooper River and 5,000 feet of wharf structure on the Wando River. The SCSPA proposes to develop approximately 660 acres of lighted paved area for container processing and storage behind the wharves on the Wando and Cooper Rivers. In addition, the SCSPA proposes to develop approximately 182 acres of paved area and buildings for support operations and facilities.

An intermodal rail yard will be constructed on approximately 30 acres of property near the center of the southern portion of Daniel Island. This rail yard will be connected to existing rail lines by a new line extending approximately 12.9 miles to the existing East Cooper and Berkeley Railroad (EC&B) rail line now serving the Amoco Chemical and Nucor Steel facilities. The EC&B Railroad is operated by the State Public Utilities Commission. The proposed rail line extends along the west side of the SCSPA property on Daniel Island, crosses Beresford Creek, and continues north on Thomas Island. The rail line will cross under Interstate 526 on a trestle as that highway rises to cross Clouter Creek. From this point, the proposed rail extends northeastward between Clements Ferry Road and Clouter Creek, crossing Cainhoy Road between Cainhoy Village and the Amoco Chemical facility. The proposed line then follows the north side of Cainhoy Road until joining the existing EC&B rail line close to the point where the existing line crosses Cainhoy Road.

The proposed project also includes construction of 2.4 miles of a four-lane access road from the proposed terminal facilities to the existing I-526 interchange at Clements Ferry Road. The proposed roadway extends along the western side of the SCSPA property on Daniel Island, crosses Beresford Creek, and continues on an elevated trestle south along the SCSPA property to the terminal site.

The road and rail lines described above will be the routes over which all overland cargo shipments associated with the proposed facility will travel. The proposed bridges over Beresford Creek will be part of the road and rail access serving the facility (Sheet 2). This USCG bridge application addresses the proposed moveable rail bridge. The proposed road bridge is addressed in a separate application. The rail bridge will be located approximately 0.2 nautical miles from the confluence with Clouter Creek. Details of the proposed bridge, including dimensions and clearances, are presented below.

Moveable Railroad Bridge Over Beresford Creek

The rail bridge will be a vertical lift bridge over the open water portions of Beresford Creek with elevated trestle over adjacent tidal wetlands. The proposed railroad bridge will provide a horizontal clearance of 40 feet. In the open position, the bridge will provide 20 feet of vertical clearance over mean high water. In the closed position, the bridge will provide 4 to 6 feet of clearance over mean

high water. Design details of the proposed rail bridge over Beresford Creek are provided in Sheets 3 through 5.

The moveable rail bridge will be kept in the open position except when closure is required to allow train passage. It is projected that after construction the required closures will range from once per day up to four times per day, assuming that 25 percent of the total container traffic moving through the terminals is transported by rail. If the portion of container traffic were to increase to 40 percent, up to seven closures per day will be required. Frequently asked questions regarding the operation of the moveable rail bridge and their answers are presented below.

- Q. What will be the average length and speed of the train crossing the bridge?
- A. The average train serving the Daniel Island terminal facility will be approximately 6,500 feet long. The maximum train speed through the corridor will be 25 mph.
- Q. What will be the average time that navigation will be disrupted by train passage (total cycle time)?
- A. The total cycle time (i.e., the total time the bridge will disrupt navigation traffic) for a typical operation is estimated at 16 minutes. This permits sufficient time for the lift span to be unlocked and lowered ahead of the train so that the train can maintain speed through the corridor. This also permits time for the train to travel through and clear the block and to raise and lock the bridge.
- Q. Where will the switch be that triggers bridge closure from both directions?
- A. Signals to the bridge operator will be tied into an automatic-block signal system, however, bridge operation is initiated by the bridge operator. When the train enters the third block preceding the block with the lift span, a signal will automatically be given to the bridge operator located at the Port. The bridge operator will check the lift span via closed circuit television to see that the waterway is clear of marine traffic and that the lift span is clear of unauthorized persons or obstructions. Once he has determined that all is clear, he will initiate the lowering sequence for the bridge. Once the bridge is lowered and locked in the closed position, the track will become clear and the signals will change to "green" indicating the train may continue at normal speed. If the train enters the second block preceding the block with the lift span before the lift span is lowered and locked, the signals in that block will be displayed "yellow" indicating that only two blocks ahead are clear and that the train should slow. If the train enters the block preceding the block with the lift span before the lift span is lowered and locked, the signals in that block will be displayed as "red" indicating only one block ahead is clear and that the train should stop. Once the train clears the block with the lift span, a remote signal is sent to the bridge operator to raise the bridge. The bridge operator will then raise the bridge to the full open position and lock it in place.

- Q. Is the bridge going to have a tender or observer? Where will they be stationed? How will they access the moveable bridge structure?
- A. As described above, a bridge operator will be stationed at the Port (i.e., the bridge will be operated remotely). The bridge will also have the capability of local operation at the bridge for maintenance purposes via override control from the bridge operator at the Port. Maintenance personnel will have access to the lift span via maintenance walkways along the bridge.
- Q. Will there be override capability while a train is in the block which activates the bridge (i.e., if a train stops close to the bridge, can the bridge be made to stay up for navigation?)
- A. The bridge operator can maintain the bridge in an open position while a stopped train is in the same block as the block with the lift span.
- Q. What kind of warning system will alert boaters that the bridge is going to close? How will this work?
- A. Per U. S. Coast Guard requirements, a horn will be sounded before the bridge is raised or lowered. A public address system will also be provided in the event the bridge operator needs to alert marine traffic, maintenance personnel, or other unauthorized personnel of any special situation. The bridge operator will also have a VHF radio to monitor marine channels. A posted placard on each side of the bridge will list the frequency and telephone number at which the bridge operator can be reached.
- Q. If a train is forced to stop on the bridge, what will be the procedure for splitting the train so the bridge can be raised for navigation?
- A. The rail yard at the Port will be designed to accommodate the longest trains without splitting the trains onto separate tracks. This should prevent the trains from having to stop on the lift span.
- Q. Will the bridge be operated as part of the rail yard? Will trains be parked over the bridge as part of the switching operations?
- A. The lift span will be operated in conjunction with the Port rail yard. The bridge operator will likely be located in the control room with the train yard personnel. It is possible that a train may be backed across the lift span depending on rail yard capacity and the number of trains in and/or entering the yard at a given time; however, as stated above, no trains should be stopped on the bridge as part of the normal rail yard operations. The bridge operator will be required to coordinate with train yard personnel and the automatic-block signal system will alert the bridge operator of the presence of a train in the blocks preceding the lift span.

- Q. What will be the maintenance schedule for the bridge? How will this affect navigation?
- A. General maintenance of the lift span (i.e., lubrication of cylinder bearings, replacement of hydraulic power unit filters or fluid, etc.) will be periodic and can be scheduled with no interruption to rail service. Operation of the lift span for maintenance purposes (i.e., to check operation of system components) may be required but will be infrequent. Major rehabilitation or repair to the drive system should be possible without restriction to navigation traffic. The drive system design incorporates redundancy such that components can be removed from service for repair or replacement while the bridge remains in service. As such, any disruptions to marine traffic due to lift span maintenance should be minimal.
- Q. Will temporary bridges be needed during construction? What will be their duration and clearances?
- A. A temporary bridge will not be required for construction of the moveable rail bridge. All work can be performed either from barges located in the creek or from temporary work platforms constructed adjacent to the lift span piers at the embankments.

2.0 ENVIRONMENTAL ANALYSIS

A Draft EIS (DEIS) for the Daniel Island marine cargo terminal has been prepared and submitted for public review. The DEIS addresses all aspects of the proposed project including the terminal facilities, road and rail access routes, and alternatives to the proposed project. Findings of the DEIS relevant to the rail bridge are presented herein.

Agency Considerations

The lead agency for the project's NEPA document (i.e., EIS) is the U.S. Army Corps of Engineers. Cooperating agencies include the Department of Interior (U.S. Forest Service), Department of Transportation (U.S. Coast Guard), U.S. Environmental Protection Agency, and National Transportation Board.

Water Quality Certification

A 401 Water Quality Certification (WQC) will be issued by the South Carolina Department of Health and Environmental Control prior to the issuance of the Section 9 Bridge Permit by the U.S. Coast Guard.

Coastal Zone Management

The proposed bridge is located within the state's coastal zone management boundaries. As part of their permit, the South Carolina Office of Ocean and Coastal Resource Management (OCRM) will provide written certification that the proposed bridge is consistent with the federal approved state coastal zone management plan. The OCRM permit is not complete at this time.

Floodplains

The proposed bridge location is within the base floodplain of Beresford Creek. Details are presented in Section 4.16 of the DEIS.

Historic Properties

No properties listed in or eligible for inclusion in the *National Register of Historic Places* are located in the vicinity of the proposed bridge.

Section 4(f) Properties

The proposed bridge is not located within ½-mile of any existing or proposed Section 4(f) properties, including public parks, wildlife or waterfowl refuges, cultural sites, or resources of national, state, or local significance.

Wild and Scenic Rivers

No designated or proposed wild, scenic or recreational rivers are located within ½-mile of the proposed bridge.

Wetlands

The proposed bridge is located in an area of tidal marshes and maritime shrub wetlands. The rail bridge trestle will be elevated above these wetlands, thereby minimizing impacts. Except for the areas occupied by the piling support structures, no wetland dredge or fill will be required for construction or operation of the bridges. Bridge construction is to be accomplished using wooden mats in the marsh areas and barges in the open water areas. Direct impacts to the marshes during construction include a flattening of the vegetation and possible increased turbidity during high tides. Turbidity will be controlled using Best Management Practices such as floating or staked turbidity barriers, etc. Following construction, the marsh vegetation will be restored by reestablishing original marsh grades and planting as needed.

Threatened and Endangered Species

Construction and operation of the proposed bridge should have no impact on any state and federal listed threatened and endangered species. The shortnose sturgeon (*Acipenser brevirostrum*) and manatee (*Trichechus manatus*), both federal listed endangered species, are known to occur in the Cooper River and may occur in the area of the bridge; however, they are not expected to be impacted by the proposed bridges. Although bald eagles may forage over the tidal marshes and open water areas in the vicinity of the bridge, no nests are known within 2 miles of the proposed bridge. Biological Assessments (BA) detailing the effects of the entire project, including the proposed marine terminal, road and rail bridges, rail lines, shipping traffic, etc., on federal listed species are being prepared for submittal to the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

Air

The proposed bridge is located in the Charleston Interstate Air Quality Control Region (AQCR), which includes Charleston, Berkeley, and Dorchester counties. This entire AQCR is currently designated as an "attainment" area by the U.S. Environmental Protection Agency (EPA) for all six "criteria" air pollutants for which there are Ambient Air Quality Standards. Therefore, the requirements of a State Implementation Plan (SIP) do not apply to this bridge project.

Prime or Unique Farmlands

The proposed bridge will not require the taking of any designated prime or unique farmlands.

Residential or Business Displacement

The proposed bridge will not result in the displacement of any existing residential or business establishments.

Existing Waterway Use

No commercial boating traffic is known to use Beresford Creek. No public boat ramps or marinas are located on Beresford Creek; however, the Daniel Island residential community owns a neighborhood boat ramp on Beresford Creek approximately 0.3 nautical miles south of the Mark Clark Expressway. In July of 1998, a boat and navigation survey was sent to all property owners with direct water access to Beresford Creek. This survey requested information pertaining to boat height, type, usage, dock or ramp facilities, and overall navigational usage of Beresford Creek. Of the 40 surveys sent out, 10 were returned. Copies of the returned surveys are included in this application and summarized below.

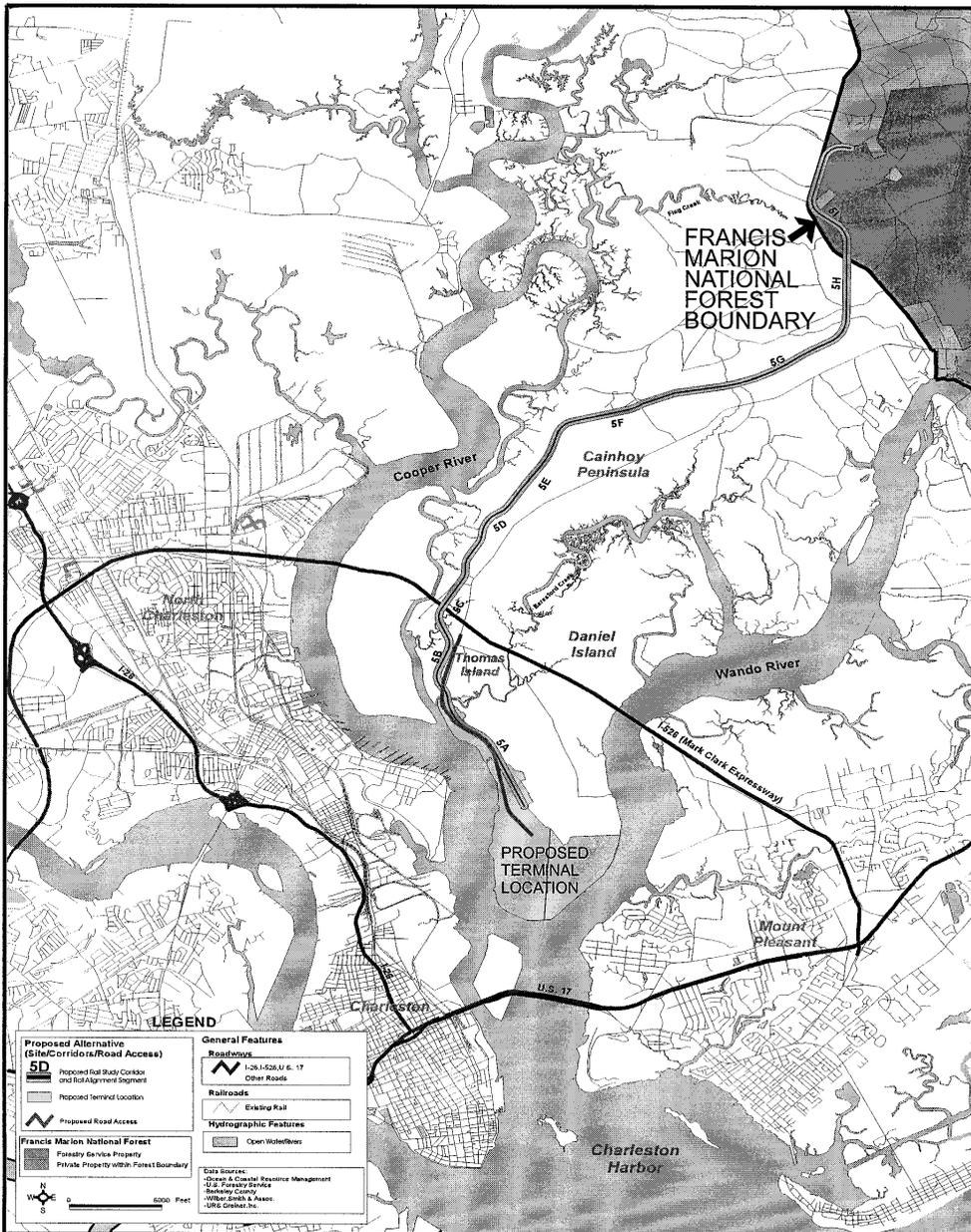
DANIEL ISLAND MARINE CARGO TERMINAL
U.S. COAST GUARD PERMIT APPLICATION
MOVEABLE RAILROAD BRIDGE
SEPTEMBER, 1999
 Page 7 of 7

| Survey Item | North of I-526 | South of I-526 | Total |
|---------------------------|------------------|----------------|------------------|
| Registered vessels | 17 | 0 | 17 |
| Power boats | 12 | 0 | 12 |
| Sail boats | 4 | 0 | 4 |
| Boat height, max (ft) | 27 | N/A | 27 |
| Average days of use/month | 12 days/response | N/A | 12 days/response |
| Peak month | Year round use | N/A | Year round use |

All responses received were from property owners north of I-526; however, developers for the proposed Beresford Pointe development submitted a subdivision plat for a development south of I-526. The proposed Beresford Pointe development is 13.75 acres with a community boat ramp and dock approximately 0.8 nautical miles from the confluence with Clouter Creek. The subdivision plat indicates that the ramp and dock will be the property of the home owner's association and privately controlled. Locations of the Daniel Island community boat ramp and the proposed Beresford Pointe boat ramp are shown on Sheet 6.

Navigation Restrictions

Navigation on Beresford Creek is restricted north of the Daniel Island community by shallow water (1 to 2 feet deep) at mean low water and a fixed bridge leading to the Daniel Island community with a vertical clearance of seven feet above mean high water and a horizontal clearance of 20 feet. This bridge is located on St. Thomas Island Road approximately 1.6 nautical miles upstream of the confluence with Clouter Creek. The I-526 bridge is located approximately 1.8 nautical miles upstream of the confluence with Clouter Creek and provides a vertical clearance of 20 feet above mean high water and a horizontal clearance of 40 feet. Locations of these bridges are shown on Sheet 6.



B. DOUGLAS
R:\DANIELIS\PERMITS\PRJ\LOCUC.CDR 7/28/99

DATUM: HORIZ: NAD83
VERT: CHARLESTON LOW WATER
(ASSUMED MEAN LOW WATER ADOPTED
1929 = 2.64' BELOW NGVD29)

PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
AT: DANIEL ISLAND/CAINHOY PENINSULA
COUNTY OF: BERKELEY & CHARLESTON STATE: S.C.
APPLICATION BY: SOUTH CAROLINA STATE
PORTS AUTHORITY

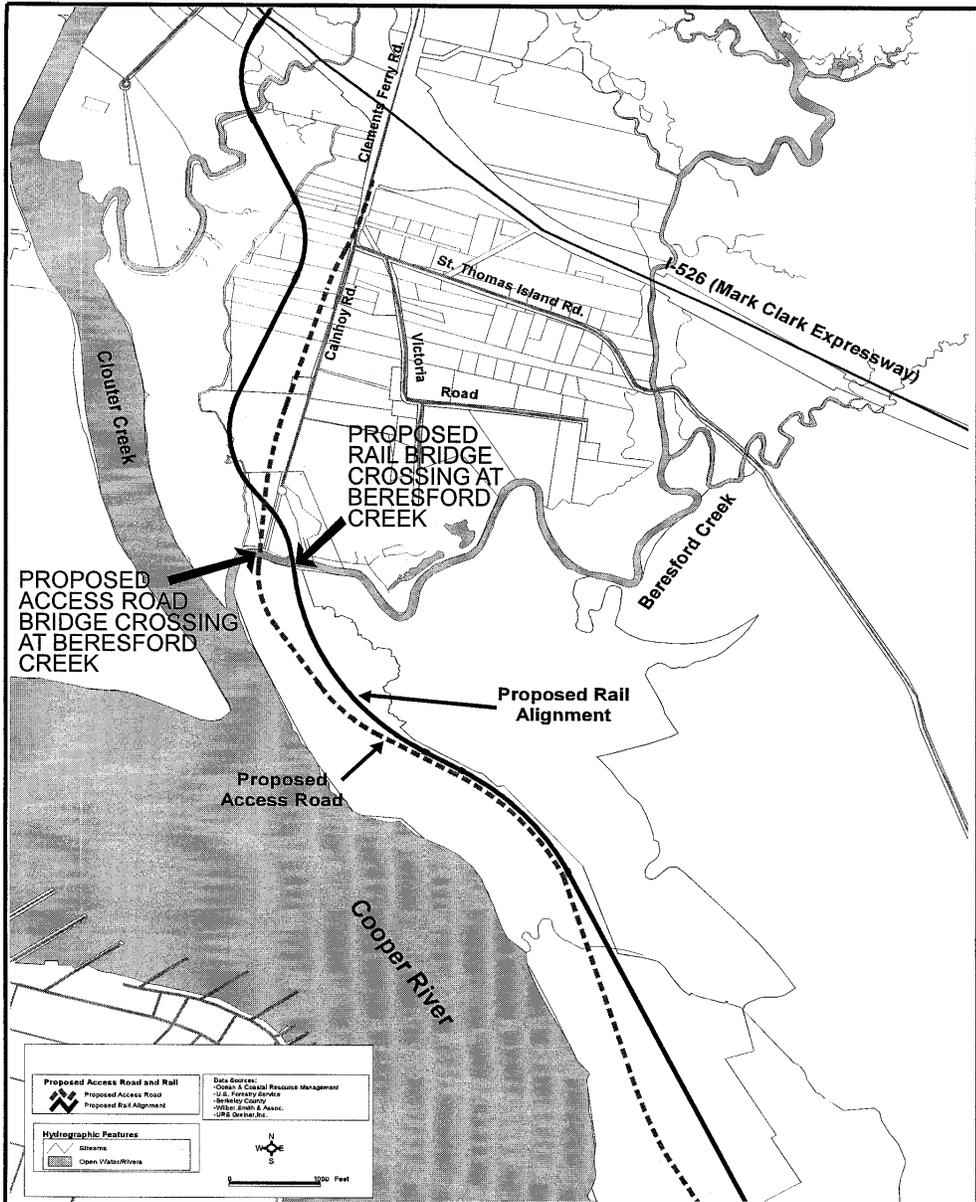
PROPOSED PROJECT LOCATION

SHEET 1 OF 6

DATE: JULY 1999

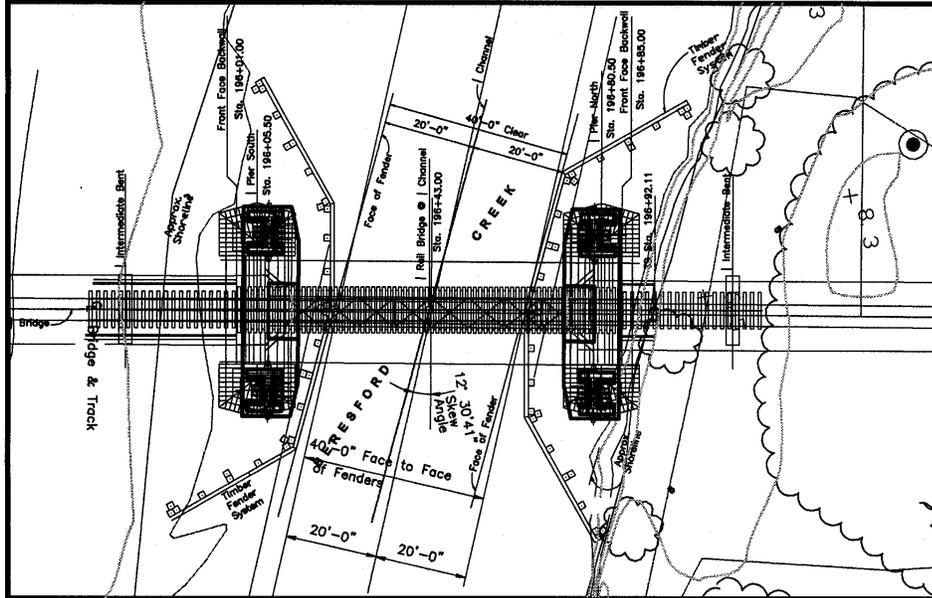
FOR PERMIT PURPOSES ONLY

USCG RAIL BRIDGE PERMIT

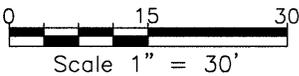


DGCDR 7/29/99

| | |
|---|--|
| <p>Proposed Access Road and Rail</p> <ul style="list-style-type: none"> Proposed Access Road Proposed Rail Alignment | <p>Data Sources:</p> <ul style="list-style-type: none"> Ohio's Coastal Resource Management U.S. Army Corps of Engineers Western County Public Works & Assoc. URS Group, Inc. |
| <p>Hydrographic Features</p> <ul style="list-style-type: none"> Streams Open Water/Rivers | <p>N W E S</p> <p>0 2000 Feet</p> |



**PLAN VIEW
BRIDGE CROSSING AT BERESFORD CREEK**



B. DOUGLAS
R. DANIELS\WSMITH\BRIDGDTL.DWG 7/29/99

DATUM: HORIZ: NAD83
 VERT: CHARLESTON LOW WATER
 (ASSUMED MEAN LOW WATER ADOPTED
 1929 = 2.64' BELOW NGVD29)

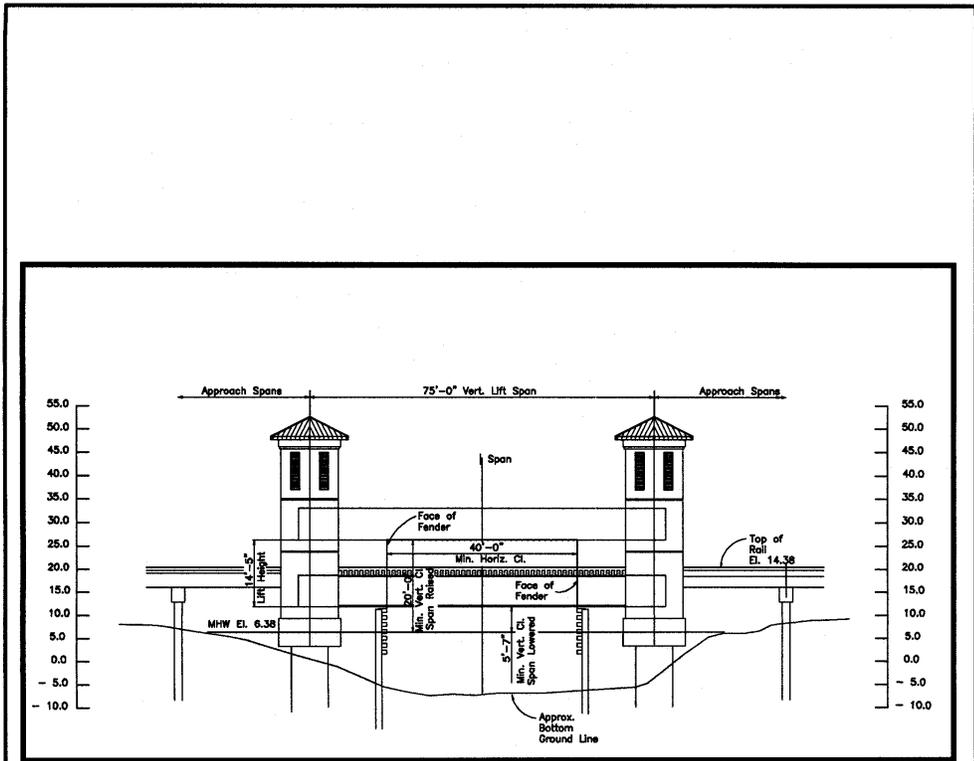
PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
 IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
 AT: DANIEL ISLAND/CAINHOY PENINSULA
 COUNTY OF: BERKELEY STATE: S.C.
 APPLICATION BY: SOUTH CAROLINA
 STATE PORTS AUTHORITY

**PLAN VIEW OF
RAILROAD BRIDGE**

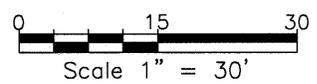
SHEET 3 OF 6 DATE: JULY 1999

FOR PERMIT PURPOSES ONLY

USCG RAIL BRIDGE PERMIT



ELEVATION



R:\DANIELIS\WSMITH\BRIDCDTL.DWG 7/29/99

DATUM: HORIZ: NAD83
 VERT: CHARLESTON LOW WATER
 (ASSUMED MEAN LOW WATER ADOPTED
 1929 = 2.64' BELOW NGVD29)

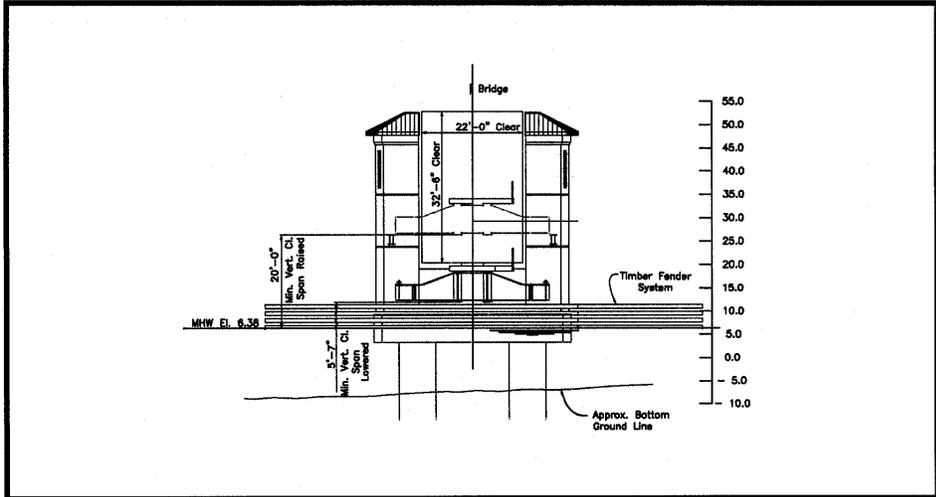
PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
 IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
 AT: DANIEL ISLAND/CAINHOY PENINSULA
 COUNTY OF: BERKELEY STATE: S.C.
 APPLICATION BY: SOUTH CAROLINA
 STATE PORTS AUTHORITY

**ELEVATION VIEW OF
 RAILROAD BRIDGE**

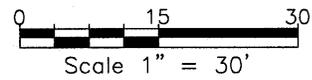
SHEET 4 OF 6 DATE: JULY 1999

FOR PERMIT PURPOSES ONLY

USCG RAIL BRIDGE PERMIT



SECTION



B. DOUGLAS
R. DANIELUS\WSMITH\BRIDGCDTL.DWG 7/29/99

DATUM: HORIZ: NAD83
VERT: CHARLESTON LOW WATER
(ASSUMED MEAN LOW WATER ADOPTED
1929 = 2.64' BELOW NGVD29)

PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
AT: DANIEL ISLAND/CAINHOY PENINSULA
COUNTY OF: BERKELEY STATE: S.C.
APPLICATION BY: SOUTH CAROLINA
STATE PORTS AUTHORITY

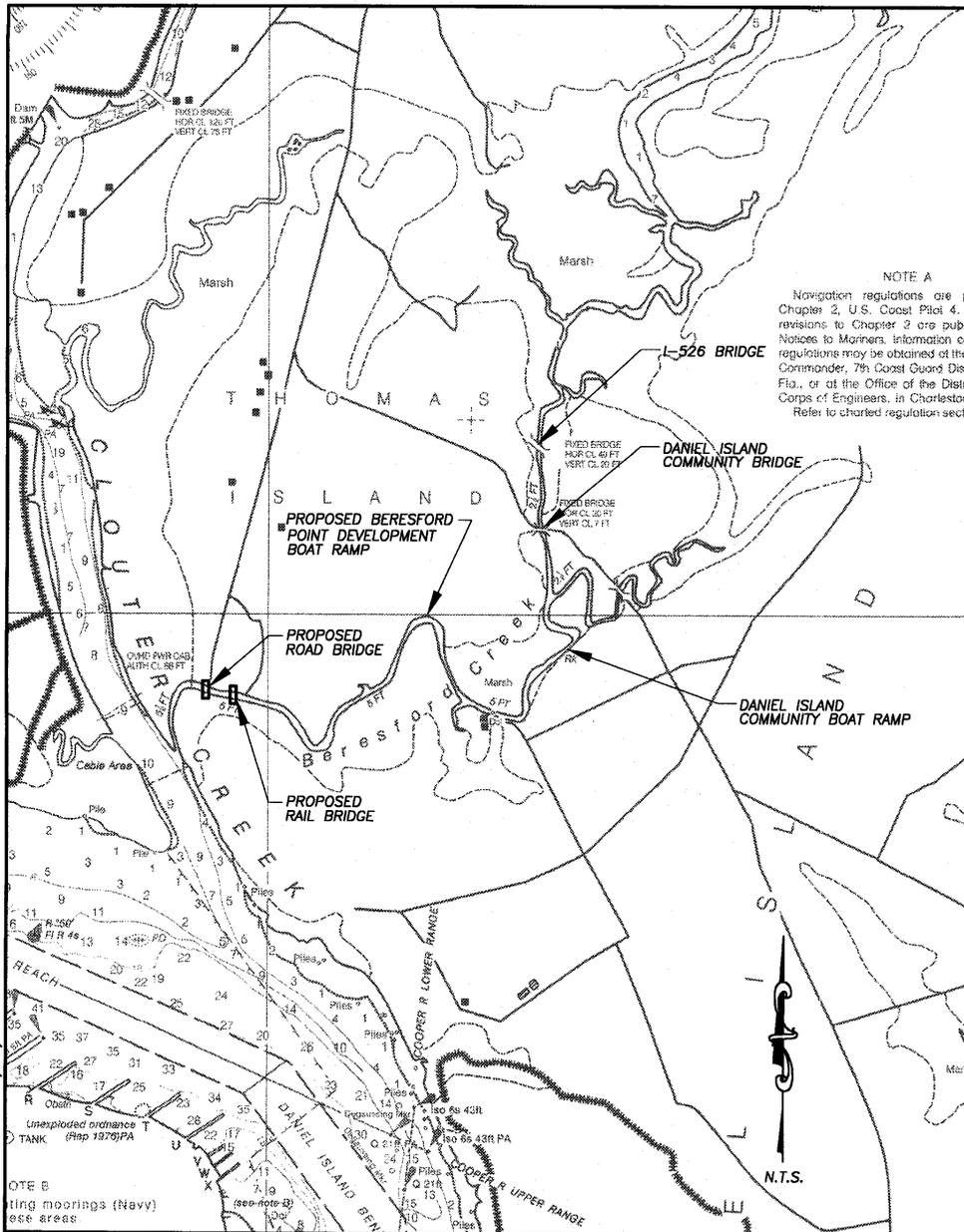
RAILROAD BRIDGE SECTION

SHEET 5 OF 6

DATE: JULY 1999

FOR PERMIT PURPOSES ONLY

USCG RAIL BRIDGE PERMIT



NOTE A
 Navigation regulations are in Chapter 2, U.S. Coast Pilot 4. Revisions to Chapter 2 are published in Notices to Mariners. Information on regulations may be obtained at the Commander, 7th Coast Guard District, Ft. M., or at the Office of the District Engineer, in Charleston. Refer to charted regulation sections.

B. DOUGLAS
 R. DANIELS \ PERMITS \ LOC \ BGRM.DWG 07/29/99 09:49

DATUM: HORIZ: NAD83
 VERT: CHARLESTON LOW WATER
 (ASSUMED MEAN LOW WATER ADOPTED
 1929 = 2.64' BELOW NGVD29)

PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
 IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
 AT: DANIEL ISLAND/CAINHOY PENINSULA
 COUNTY OF: BERKELEY STATE: S.C.
 APPLICATION BY: SOUTH CAROLINA
 STATE PORTS AUTHORITY

LOCATIONS OF PROPOSED AND EXISTING BRIDGES AND BOAT RAMPS

SHEET 6 OF 6 DATE: JULY 1999

FOR PERMIT PURPOSES ONLY USCG RAIL BRIDGE PERMIT

**DANIEL ISLAND MARINE CARGO TERMINAL
MOVEABLE RAIL BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT C

SITE PHOTOGRAPHS



View east (away from Cooper River) from proposed rail bridge location.



View west (toward Cooper River) from proposed rail bridge location.



View south (across Beresford Creek) from proposed rail bridge location.

**DANIEL ISLAND MARINE CARGO TERMINAL
MOVEABLE RAIL BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT D

NAVIGATION SURVEY QUESTIONNAIRE

Norm of F. 22

URS Greiner

C103353.00/C12
July 28, 1998

Beresford Pointe LLC
C/O Ford Development Company
14755 Preston Road
Suite 830
Dallas, TX 75240

**RE: Daniel Island Marine Cargo Terminal Environmental Impact Statement
Proposed Beresford Creek Bridges**

URS Greiner, Inc. is assisting the U.S. Army Corps of Engineers, the U.S. Coast Guard, and other Federal Agencies in the preparation of an Environmental Impact Statement regarding the South Carolina States Port Authority's proposed marine cargo terminal development located on Daniel Island. As part of this study, URS Greiner is investigating the current navigational use of Beresford Creek. The proposed project includes a roadway bridge and a railroad bridge (possibly moveable) crossing near the mouth of Beresford Creek where it joins Clouter Creek on the west side of Daniel Island. An alternative rail alignment under study for the EIS includes a rail crossing of Beresford Creek between I-526 and the Wando River near the northwest corner of Daniel Island.

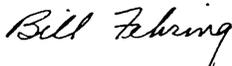
Enclosed is a questionnaire concerning the number and types of boats you may own, and your present usage of Beresford Creek. Please assist us in this process by completing the questionnaire and mailing it to us by August 17 at the following address:

URS Greiner, Inc.
215 E. Bay Street Suite 201-H
Charleston, SC 29401

A copy of the newsletter for the EIS is enclosed for your information. A Public Information Workshop is scheduled for September 1, 1998 from 5:00 p.m. to 9:00 p.m. at the Omar Temple in Mt. Pleasant. You may wish to attend in order to gain additional information regarding the proposed project and the EIS process.

Sincerely,

URS Greiner, Inc.



William K. Fehring, Ph.D., C.E.P.
Project Manager

Enclosure: Beresford Creek Navigation Survey
Daniel Island EIS Newsletter No. 1

URS Greiner, Inc.
P.O. Box 31646 (33631-3416)
7650 W. Courtney Campbell Causeway
Tampa, Florida 33607-1462
Telephone: (813) 286-1711
Facsimile: (813) 287-8591
Offices in Principal Cities Nationwide

FLORIDA #AA C000901
FLORIDA #LC C000234

154
Rebellion Law

**Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey**

1. Do you own a boat registered in South Carolina? If so, how many?
TWO
2. What type of boat do you own (sailboat, powerboat, or other)?
POWER BOAT
3. What is the length and draft of your boat?
(1) 16'-5-6" 2) 20'-8-10" DRAFT
4. What is the height of your boat above the waterline?
#2) - 4'1/2" #1 3'1/2"
5. Do you currently have a dock or boat ramp?
YES
6. Do you currently have plans for the construction of a dock or boat ramp?
YES
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
NO
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
2-5 Depending on time of year to Clouter
10-15 " " " " " " WANDO
9. During what months do you normally use your boat?
ALL 12
10. How often do you navigate Beresford Creek at night?
WONT AVERAGE 3 times per month

170
Rebellion Lane

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many?
ONE
2. What type of boat do you own (sailboat, powerboat, or other)?
Power
3. What is the length and draft of your boat?
20' 8"-10" Draft
4. What is the height of your boat above the waterline?
4 1/2'
5. Do you currently have a dock or boat ramp?
yes
6. Do you currently have plans for the construction of a dock or boat ramp?
NO
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
NO
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
Clouter - 1 to 2 times per month
WANDO - 4-6 times per month
9. During what months do you normally use your boat?
ALL months
10. How often do you navigate Beresford Creek at night?
1 to 2 times per month

ALL NORTH OF 526
ON NORTH SIDE
OF CREEK

Parcel Numbers
271 000 2054
271 000 2062
271 000 2061

271 000 2058

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many?
(2) Two
2. What type of boat do you own (sailboat, powerboat, or other)?
Power
3. What is the length and draft of your boat?
6 - 8 inches
4. What is the height of your boat above the waterline?
2 ft.
5. Do you currently have a dock or boat ramp?
dock
6. Do you currently have plans for the construction of a dock or boat ramp?
no!
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
No!
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
1 time a month (more often in winter)
9. During what months do you normally use your boat?
all yrs.
10. How often do you navigate Beresford Creek at night?
seldom

NORTH OF 526
NORTH SIDE OF CREEK

Parcel Number
271 000 2088

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many? **2**

2. What type of boat do you own (sailboat, powerboat, or other)?
PONTON BOAT = BOAT A
JOHN BOAT = BOAT B
3. What is the length and draft of your boat?
A - 28' 2.5' DRAFT
B - 16' 1.5' DRAFT
4. What is the height of your boat above the waterline?
A - 8.5'
B - 3.5'
5. Do you currently have a dock or boat ramp?
DOCK ON BERESFORD CREEK
6. Do you currently have plans for the construction of a dock or boat ramp?
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River? **10 Times PER MONTH ON AVERAGE**
9. During what months do you normally use your boat?
ALL YEAR
10. How often do you navigate Beresford Creek at night?
4 OR 5 TIMES A MONTH EXCEPT
IN DEC. - FEB

Parcel Number NORTH OF 526
271 000 2144 NORTH SIDE OF CREEK

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many? *No*
2. What type of boat do you own (sailboat, powerboat, or other)? *None*
3. What is the length and draft of your boat? *N.A.*
4. What is the height of your boat above the waterline? *N.A.*
5. Do you currently have a dock or boat ramp? *No*
6. Do you currently have plans for the construction of a dock or boat ramp? *No*
7. Do you currently have all necessary permits for the construction of a dock or boat ramp? *No*
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River? *None*
9. During what months do you normally use your boat? *N.A.*
10. How often do you navigate Beresford Creek at night? *None*

North side of
North side of creek

Boat Number
2710002117

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many?
Yes, two boats
2. What type of boat do you own (sailboat, powerboat, or other)?
Two powerboats
3. What is the length and draft of your boat?
① 17 feet, 14" draft
② 12 feet, 9" draft
4. What is the height of your boat above the waterline?
① 7 ft.
5. Do you currently have a dock or boat ramp?
No
6. Do you currently have plans for the construction of a dock or boat ramp?
Yes
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
Yes
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
15 times / month
9. During what months do you normally use your boat?
All
10. How often do you navigate Beresford Creek at night?
3-5 times / month

Parcel Number
272000 0002

**Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey**

1. Do you own a boat registered in South Carolina? If so, how many?
No
2. What type of boat do you own (sailboat, powerboat, or other)?
N/A
3. What is the length and draft of your boat?
N/A
4. What is the height of your boat above the waterline?
N/A
5. Do you currently have a dock or boat ramp?
~~yes but not on Cooper River~~ NO
6. Do you currently have plans for the construction of a dock or boat ramp?
Yes - many docks on Harper Terrace
YES - LIKE TO BUILD BOAT RAMP.
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
NO
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
3 times/year
9. During what months do you normally use your boat?
VARIES
10. How often do you navigate Beresford Creek at night?
No + after

JOHN S. SANDERS, III

1071 FOGARTY LANE
WANDO, S. C. 29492
BERKELEY

Phone 843 884 0090
Fax 843 884 4436

August 17, 1998

TO WHOM IT MAY CONCERN;

I AM OPPOSED TO THE CONSTRUCTION OF THE PROPOSED VEHICULAR BRIDGE OVER BERESFORD CREEK. I DO NOT SEE HOW IT CAN BE LEGALLY PERMITTED BECAUSE THERE IS A HIGHLAND ROUTE AVAILABLE.

WHEN I WAS GETTING A PERMIT TO BUILD A BRIDGE I WAS SENT A LETTER BY OCRM TELLING ME THAT, IF THERE WAS A HIGHLAND ROUTE THAT I WOULD NOT BE GIVEN A PERMIT TO BUILD A BRIDGE.

IF THE PERMIT FOR THE VEHICULAR BRIDGE OVER BERESFORD CREEK IS GRANTED, THERE HAS TO BE A PROVISION TO REMOVE OR PROVIDE THE LEGALLY REQUIRED HEIGHT ON THE CURRENT DANIEL ISLAND ACCESS BRIDGE.



J. S. SANDERS, III

NORTH OF 526
NORTH SIDE
OF CREEK

Parcel Number
271 000 2117

**Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey**

1. Do you own a boat registered in South Carolina? If so, how many?
yes three boats
2. What type of boat do you own (sailboat, powerboat, or other)?
one sailboat & two motor boats
3. What is the length and draft of your boat?
longest is 30' and 5' draft
4. What is the height of your boat above the waterline?
Tallest is 27'
5. Do you currently have a dock or boat ramp?
I am currently part owner of a dock have access to 3 nearby private boat ramp
6. Do you currently have plans for the construction of a dock or boat ramp?
I currently have definite plans to construct a personal dock and a community boat ramp
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
I have contacted OCRM to get critical line delineated in preparation for ~~boating~~ permitting of my personal dock & have talked to OCRM in prep for Ramp permit
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
at times more than once a month I use Beresford creek for access to the cooper river from the wando river
9. During what months do you normally use your boat?
all during the year
10. How often do you navigate Beresford Creek at night?
during shrimp baiting season and at other times several times a ~~week~~ month

**DANIEL ISLAND MARINE CARGO TERMINAL
ACCESS ROAD BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

**SUBMITTED BY
SOUTH CAROLINA STATE PORTS AUTHORITY**

SEPTEMBER, 1999

July 30, 1999

Commander
Seventh Coast Guard District
909 SE First Ave
Brickell Plaza Federal Bldg.
Miami, FL 33131-3050

Dear Sir:

The South Carolina State Ports Authority is hereby requesting approval by the Commandant, U.S. Coast Guard, of the locations and designs of a roadway bridge to be constructed across Beresford Creek near Charleston, South Carolina. This bridge will be located approximately 0.2 mile above the confluence of Beresford Creek and Clouter Creek as shown on the attached plans. Currently, there are no existing bridge structures at this location.

No federal funding will be used for the design, permitting, or construction of the project. Other federal agencies which must grant approvals or easements for this project include the U.S. Army Corps of Engineers, Department of Transportation (U.S. Coast Guard), and U.S. Department of Interior (National Marine Fisheries Service, National Forest Service and U.S. Fish and Wildlife Service).

Legal authority for the bridge is found in the General Bridge Act of 1946. The laws of the State of South Carolina require us to obtain a state permit for this work.

The enclosed attachments provide detailed information as requested in Commandant Publication P16591.3, Bridge Permit Application Guide. Please contact me at the above address or call me at (843) 577-8611 if you have any questions, require additional information, or would like to discuss the proposed project.

Sincerely,
South Carolina State Ports Authority

Joe Bryant
Director of Terminal Development

TABLE OF CONTENTS

ATTACHMENT A – BRIDGE PROJECT QUESTIONNAIRE
**ATTACHMENT B – PROJECT DESCRIPTION AND ENVIRONMENTAL
ANALYSIS**
ATTACHMENT C – SITE PHOTOGRAPHS
ATTACHMENT D – NAVIGATION SURVEY QUESTIONNAIRE

LIST OF FIGURES

| | |
|---------|---|
| Sheet 1 | Proposed Project Location |
| Sheet 2 | Location of Proposed Access Road and Rail |
| Sheet 3 | Typical Access Road Bridge Section |
| Sheet 4 | Proposed Road Bridge Profile |
| Sheet 5 | Locations of Proposed and Existing Bridges and Boat Ramps |

**DANIEL ISLAND MARINE CARGO TERMINAL
ACCESS ROAD BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT A

BRIDGE PROJECT QUESTIONNAIRE

ACCESS ROAD BRIDGE

DEPARTMENT OF TRANSPORTATION
U. S. COAST GUARD
Form D7-1103 (Rev. 9-85)

Commander(oan)
Seventh Coast Guard District
Bridge Section
Brickell Plaza Federal Building
909 SE. 1st Avenue
Miami, FL 33131-3050

BRIDGE PROJECT QUESTIONNAIRE

Please provide the following information:

A. NAVIGATION DATA:

1. Name of Waterway: Beresford Creek
- 1a. Mileage along waterway measured from mouth or confluence 0.2 nm
- 1b. Tributary of Clouter Creek at mile 0.2.
2. Geographical Location: Southern Terminus of Clements Ferry Road
Berkeley, CO., South Carolina
(Road Number City County State)
3. Township, section and range, if applicable N/A
4. Tidally influenced at proposed bridge site? Yes
Range of tide 5.3 feet
5. Depth and width of waterway at proposed bridge site:

| | Depths | Widths |
|-------------------|----------------|-----------------|
| At Mean High Tide | <u>11 feet</u> | <u>115 feet</u> |
| At Mean Low Tide | <u>6 feet</u> | <u>115 feet</u> |
6. Character of present vessel traffic on waterway. If none so state:
Canoe _____ Rowboat _____ Small Motorboat X
Cabin Cruiser _____ Houseboat _____ Pontoon Boat _____
Sailboat _____ None _____
- 6a. Provide vertical clearance requirement for largest vessel using the waterway 7 feet
- 6b. Provide photograph of each type vessel using the waterway Not Available
7. Are these waters used to transport interstate or foreign commerce?
Yes _____ No X
- 7a. Are these waters susceptible to use in their natural condition or by reasonable improvement as a means to support interstate or foreign commerce? Yes _____ No X
- 7b. Any planned waterway improvements to permit larger vessels to navigate (to your knowledge)? No If so what are they? _____
8. Any natural or manmade obstructions, bridges, dams, wiers, etc. downstream or upstream? Yes X No _____

ACCESS ROAD BRIDGE (Continued)

A. NAVIGATION DATA (contd)

- 8a. If yes provide upstream/downstream location with relation to the proposed bridge. See Attachment B
- 8b. If bridges, provide vertical clearance at mean high water and mean low water and horizontal clearance normal to axis of waterway. See Attachment B
- 8c. Provide a photograph of the bridge from the waterway showing channel spans. N/A
9. Will the structure replace an existing bridge? No
- 9a. Provide permit number and issuing agencies of permits for bridge(s) to be replaced. N/A
- 9b. Provide vertical clearance above mean high water and mean low water and horizontal clearance normal to axis of waterway. N/A
- 9c. Provide a photograph of the bridge from the waterway showing channel span(s) N/A
10. List names and addresses of persons whose property adjoins bridge right-of-way. The South Carolina State Ports Authority owns all property adjoining the bridge right-of-way.

11. List names and addresses/location of marinas, marine repair facilities, public boat ramps, private piers/docks along waterway within 1/2 mile of site. See discussion of existing waterway use in Attachment B.

12. Attach location map and plans for the proposed bridge; include vertical clearances above mean high water and mean low water and horizontal clearance normal to axis of the waterway. See Attachment B
13. Attach three (3) photographs taken at the proposed bridge site: one looking upstream, one looking downstream, and one looking along the alignment centerline across the bridge site. See Attachment C

DATE: _____

SIGNATURE: _____
Proposed Bridge Owner or Agent

ATTACHMENTS: Location Map
Bridge Plans
Photographs

**DANIEL ISLAND MARINE CARGO TERMINAL
ACCESS ROAD BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT B

**PROJECT DESCRIPTION AND
ENVIRONMENTAL ANALYSIS**

1.0 PROJECT DESCRIPTION

The South Carolina State Ports Authority (SCSPA) is proposing to construct a marine cargo terminal on Daniel Island near Charleston, South Carolina (Sheet 1). The Proposed Project includes the development of 7,000 feet of wharf structure on the Cooper River and 5,000 feet of wharf structure on the Wando River. The SCSPA proposes to develop approximately 660 acres of lighted paved area for container processing and storage behind the wharves on the Wando and Cooper Rivers. In addition, the SCSPA proposes to develop approximately 182 acres of paved area and buildings for support operations and facilities.

An intermodal rail yard will be constructed on approximately 30 acres of property near the center of the southern portion of Daniel Island. This rail yard will be connected to existing rail lines by a new line extending approximately 12.9 miles to the existing East Cooper and Berkeley Railroad (EC&B) rail line now serving the Amoco Chemical and Nucor Steel facilities. The EC&B Railroad is operated by the State Public Utilities Commission. The proposed rail line extends along the west side of the SCSPA property on Daniel Island, crosses Beresford Creek, and continues north on Thomas Island. The rail line will cross under Interstate 526 on a trestle as that highway rises to cross Clouter Creek. From this point, the proposed rail extends northeastward between Clements Ferry Road and Clouter Creek, crossing Cainhoy Road between Cainhoy Village and the Amoco Chemical facility. The proposed line then follows the north side of Cainhoy Road until joining the existing EC&B rail line close to the point where the existing line crosses Cainhoy Road.

The proposed project also includes construction of 2.4 miles of a four-lane access road from the proposed terminal facilities to the existing I-526 interchange at Clements Ferry Road. The proposed roadway extends along the western side of the SCSPA property on Daniel Island, crosses Beresford Creek, and continues as a pile-supported structure south along the SCSPA property to the terminal site.

The road and rail lines described above will be the routes over which all overland cargo shipments associated with the proposed facility will travel. The proposed bridges over Beresford Creek will be part of the road and rail access serving the facility (Sheet 2). This USCG bridge application addresses the proposed access road bridge. The proposed rail bridge is addressed in a separate application. The road bridge will be a fixed structure over the open water portions of Beresford Creek and associated tidal wetlands approximately 0.3 nautical miles from the confluence with Clouter Creek. Details of the bridge, including dimensions and clearances, are presented below.

Roadway Bridge Over Beresford Creek and Wetlands

The proposed road bridge over Beresford Creek will have four 12-foot traffic lanes, two 7.5-foot internal shoulders, and 10-foot outside shoulders with 1.5-foot concrete barriers for an overall width of

86 feet. Minimum elevation of the bridge will be approximately 18.5 feet Charleston Low Water (CLW). The bridge will provide a vertical clearance of approximately 50 feet at mean higher high water over the open water portion of the span. Total length of the structure will be 9,200 feet with the open water portion of the bridge providing a horizontal clearance of 162 feet. Design details of the proposed road bridge over Beresford Creek are provided in Sheets 3 and 4.

2.0 ENVIRONMENTAL ANALYSIS

A Draft EIS (DEIS) for the Daniel Island marine cargo terminal has been prepared and submitted for public review. The DEIS addresses all aspects of the proposed project including the terminal facilities, road and rail access routes, and alternatives to the proposed project. Findings of the DEIS relevant to the road bridge are presented herein.

Agency Considerations

The lead agency for the project's NEPA document (i.e., EIS) is the U.S. Army Corps of Engineers. Cooperating agencies include the Department of Interior (U.S. Forest Service), Department of Transportation (U.S. Coast Guard), U.S. Environmental Protection Agency, and National Transportation Board.

Water Quality Certification

A 401 Water Quality Certification (WQC) will be issued by the South Carolina Department of Health and Environmental Control prior to the issuance of the Section 9 Bridge Permit by the U.S. Coast Guard.

Coastal Zone Management

The proposed bridge is located within the state's coastal zone management boundaries. The South Carolina Office of Ocean and Coastal Resource Management (OCRM) will provide written certification that the proposed bridge is consistent with the federal approved state coastal zone management plan as part of their permit. The OCRM permit is not complete at this time.

Floodplains

The proposed bridge location is within the base floodplain of Beresford Creek. Details are presented in Section 4.16 of the DEIS.

Historic Properties

No properties listed in or eligible for inclusion in the *National Register of Historic Places* are located in the vicinity of the proposed bridge.

Section 4(f) Properties

The proposed bridge is not located within ½-mile of any existing or proposed Section 4(f) properties, including public parks, wildlife or waterfowl refuges, cultural sites, or resources of national, state, or local significance.

Wild and Scenic Rivers

No designated or proposed wild, scenic or recreational rivers are located within ½-mile of the proposed bridge.

Wetlands

The proposed bridge is located in an area of tidal marshes and maritime shrub wetlands. The road bridge will be elevated above these wetlands, thereby minimizing impacts. Except for areas occupied by the piling support structures, no wetland dredge or fill will be required for construction or operation of the bridge. Bridge construction is to be accomplished using wooden mats in the marsh areas and barges in the open water areas. Direct impacts to the marshes during construction include a flattening of the vegetation and possible increased turbidity during high tides. Turbidity will be controlled using Best Management Practices such as floating or staked turbidity barriers, etc. Following construction, the marsh vegetation will be restored by reestablishing original marsh grades and planting as needed. Long-term impacts should be limited to shading of the marsh beneath the bridge.

Threatened and Endangered Species

Construction and operation of the proposed bridge should have no impact on any state and federal listed threatened and endangered species. The shortnose sturgeon (*Acipenser brevirostrum*) and manatee (*Trichechus manatus*), both federal listed endangered species, are known to occur in the Cooper River and may occur in the area of the bridge; however, they are not expected to be impacted by the proposed bridge. Although bald eagles may forage over the tidal marshes and open water areas in the vicinity of the bridge, no nests are known within 2 miles of the proposed bridge. Biological Assessments (BA) detailing the effects of the entire project, including the proposed marine

terminal, road and rail bridges, rail lines, shipping traffic, etc., on federal listed species are being prepared for submittal to the U.S. Fish and Wildlife Service and National Marine Fisheries Service.

Air

The proposed bridge is located in the Charleston Interstate Air Quality Control Region (AQCR), which includes Charleston, Berkeley, and Dorchester counties. This entire AQCR is currently designated as an "attainment" area by the U.S. Environmental Protection Agency (EPA) for all six "criteria" air pollutants for which there are Ambient Air Quality Standards. Therefore, the requirements of a State Implementation Plan (SIP) do not apply to this bridge project.

Prime or Unique Farmlands

The proposed bridge will not require the taking of any designated prime or unique farmlands.

Residential or Business Displacement

The proposed bridge will not result in the displacement of any existing residential or business establishments.

Existing Waterway Use

No commercial boating traffic is known to use Beresford Creek. No public boat ramps or marinas are located on Beresford Creek; however, the Daniel Island residential community owns a neighborhood boat ramp on Beresford Creek approximately 0.3 nautical miles south of the Mark Clark Expressway. In July of 1998, a boat and navigation survey was sent to all property owners with direct water access to Beresford Creek. This survey requested information pertaining to boat height, type, usage, dock or ramp facilities, and overall navigational usage of Beresford Creek. Of the 40 surveys sent out, 10 were returned. Copies of the returned surveys are included in this application and summarized below.

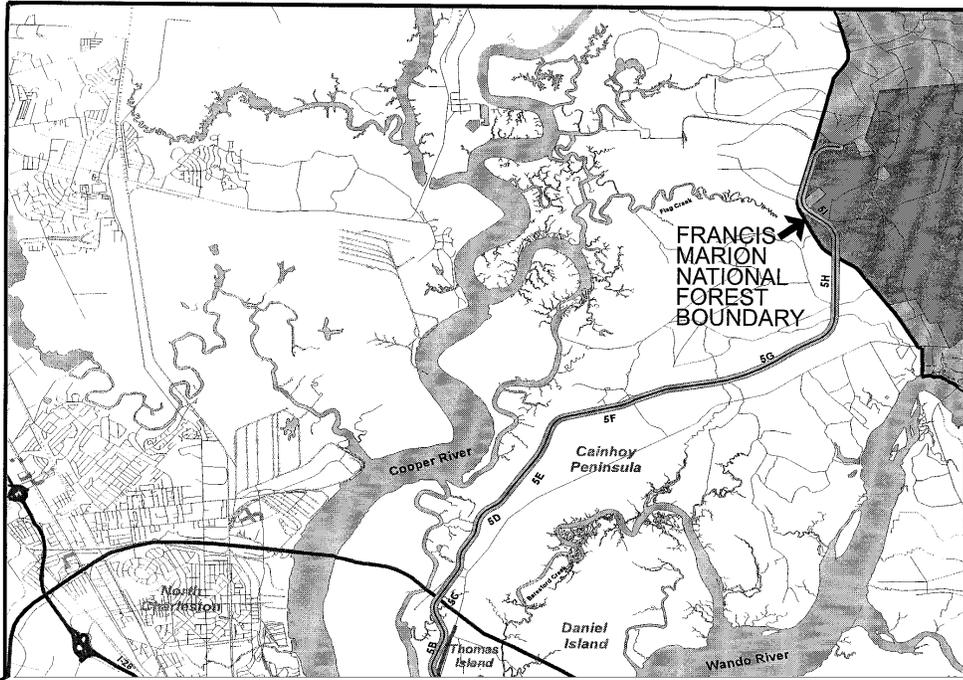
| Survey Item | North of I-526 | South of I-526 | Total |
|---------------------------|------------------|----------------|------------------|
| Registered vessels | 17 | 0 | 17 |
| Power boats | 12 | 0 | 12 |
| Sail boats | 4 | 0 | 4 |
| Boat height, max (ft) | 27 | N/A | 27 |
| Average days of use/month | 12 days/response | N/A | 12 days/response |
| Peak month | Year round use | N/A | Year round use |

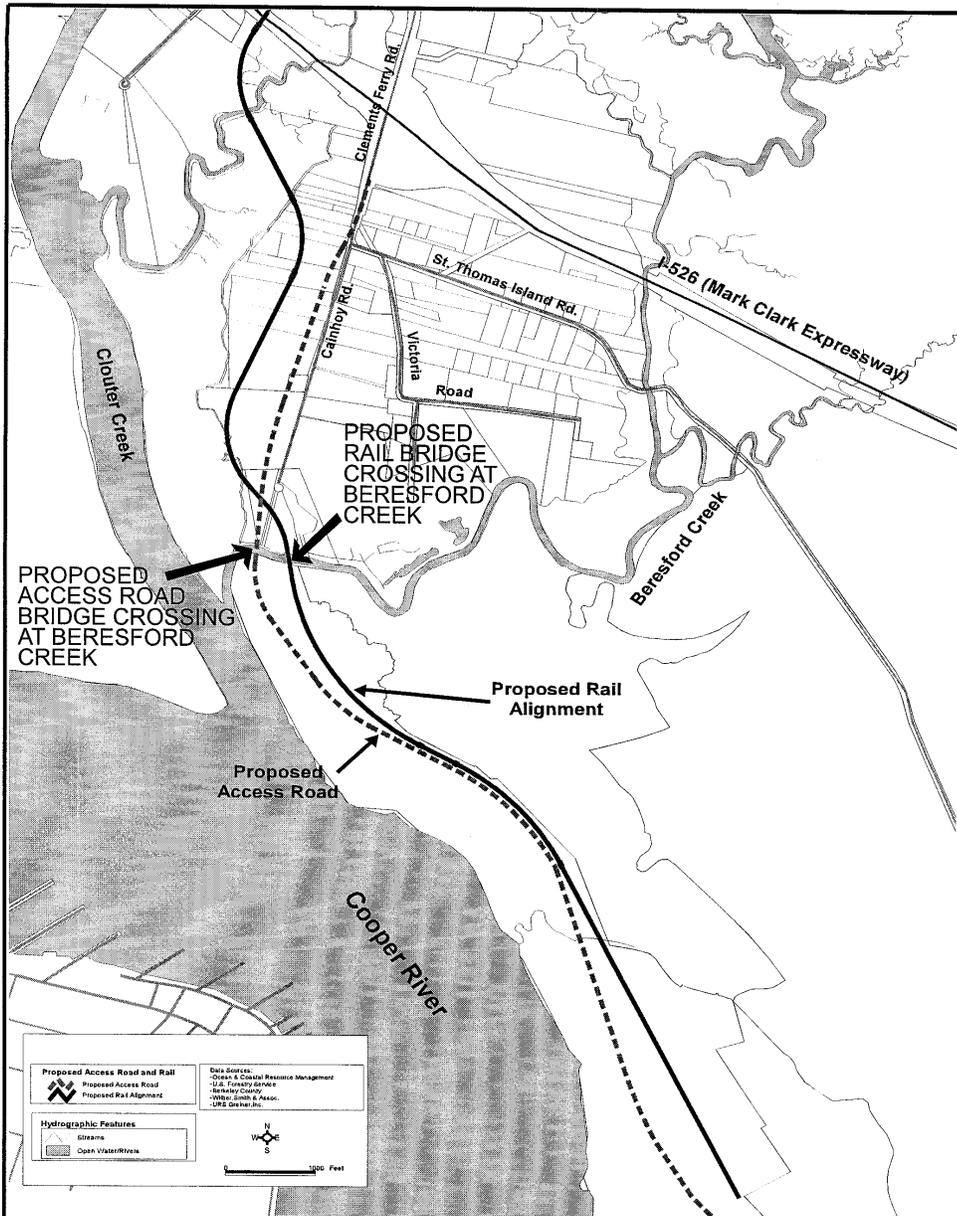
All responses received were from property owners north of I-526; however, developers for the proposed Beresford Pointe development submitted a subdivision plat for a development south of I-526. The proposed Beresford Pointe development is 13.75 acres with a community boat ramp and dock approximately 0.8 nautical miles from the confluence with Clouter Creek. The subdivision plat indicates that the ramp and dock will be the property of the home owner's association and privately controlled. Locations of the Daniel Island community boat ramp and the proposed Beresford Pointe boat ramp are shown on Sheet 5.

As seen on the attached photos, two private docks are located in the immediate vicinity of the proposed bridge crossing. These docks are now owned by the South Carolina State Ports Authority and will likely be demolished during bridge construction.

Navigation Restrictions

Navigation on Beresford Creek is restricted north of the Daniel Island community by shallow water (1 to 2 feet deep) at mean low water and a fixed bridge leading to the Daniel Island community with a vertical clearance of seven feet above mean high water and a horizontal clearance of 20 feet. This bridge is located on St. Thomas Island Road approximately 1.6 nautical miles upstream of the confluence with Clouter Creek. The I-526 bridge is located approximately 1.8 nautical miles upstream of the confluence with Clouter Creek and provides a vertical clearance of 20 feet above mean high water and a horizontal clearance of 40 feet. Locations of these bridges are shown on Sheet 5.





| | |
|--|---|
| <p>Proposed Access Road and Rail</p> <p>Proposed Access Road</p> <p>Proposed Rail Alignment</p> | <p>Data Sources:</p> <ul style="list-style-type: none"> -DNR & Coastal Resource Management -L.R. Forestry Services -Berkeley County -Wilbur Smith & Assoc. -JPE Geotech, Inc. |
| <p>Hydrographic Features</p> <p>Creeks</p> <p>Open Water/Water</p> | <p>N</p> <p>W E</p> <p>S</p> <p>0 100 200 Feet</p> |

DATUM: HORIZ: NAD83
 VERT: CHARLESTON LOW WATER
 (ASSUMED MEAN LOW WATER ADOPTED
 1929 = 2.64' BELOW NGVD29)

PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
 IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
 AT: DANIEL ISLAND/CAINHOY PENINSULA
 COUNTY OF: BERKELEY STATE: S.C.
 APPLICATION BY: SOUTH CAROLINA STATE
 PORTS AUTHORITY

**LOCATION OF PROPOSED
 ACCESS ROAD AND RAIL**

SHEET 2 OF 5 DATE: JULY 1999

B. DOUGLAS
 R:\DANIELIS\PERMITS\SRDRBRDC.CDR 7/29/99

FOR PERMIT PURPOSES ONLY

USCG ROAD BRIDGE PERMIT

TYPICAL ACCESS ROAD SECTION

FOR PERMIT PURPOSES ONLY

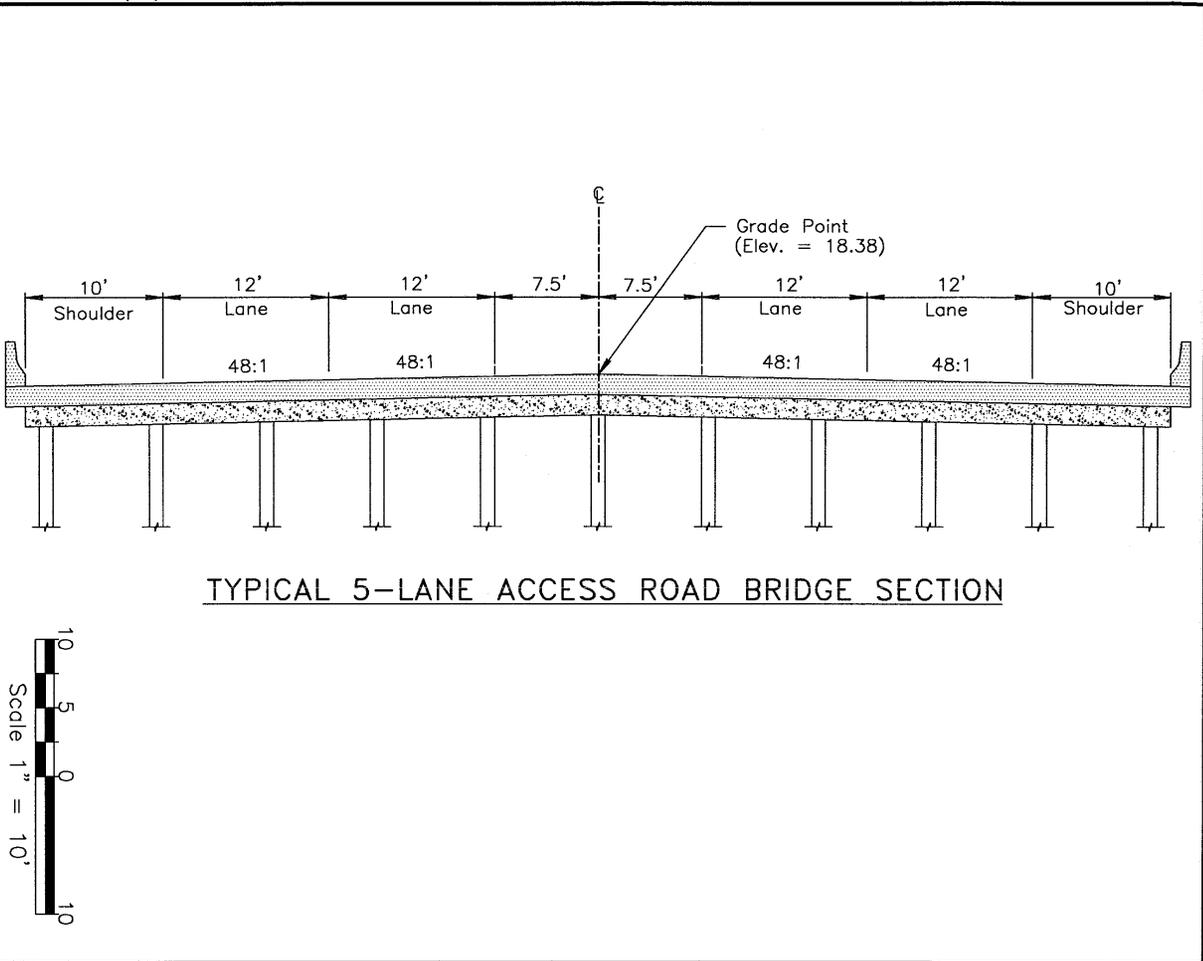
DATUM: HORIZ: NAD83
 VERT: CHARLESTON LOW WATER
 (ASSUMED MEAN LOW WATER ADOPTED
 1929 = 2.64' BELOW NGVD29)

PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
 IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
 AT: DANIEL ISLAND/CAINHON PENINSULA
 COUNTY OF: BERKELEY STATE: S.C.
 APPLICATION BY: SOUTH CAROLINA
 STATE PORTS AUTHORITY

SHEET 3 OF 5

DATE: JULY 1999

USCG ROAD BRIDGE PERMIT



**PROPOSED ROAD
 BRIDGE PROFILE**

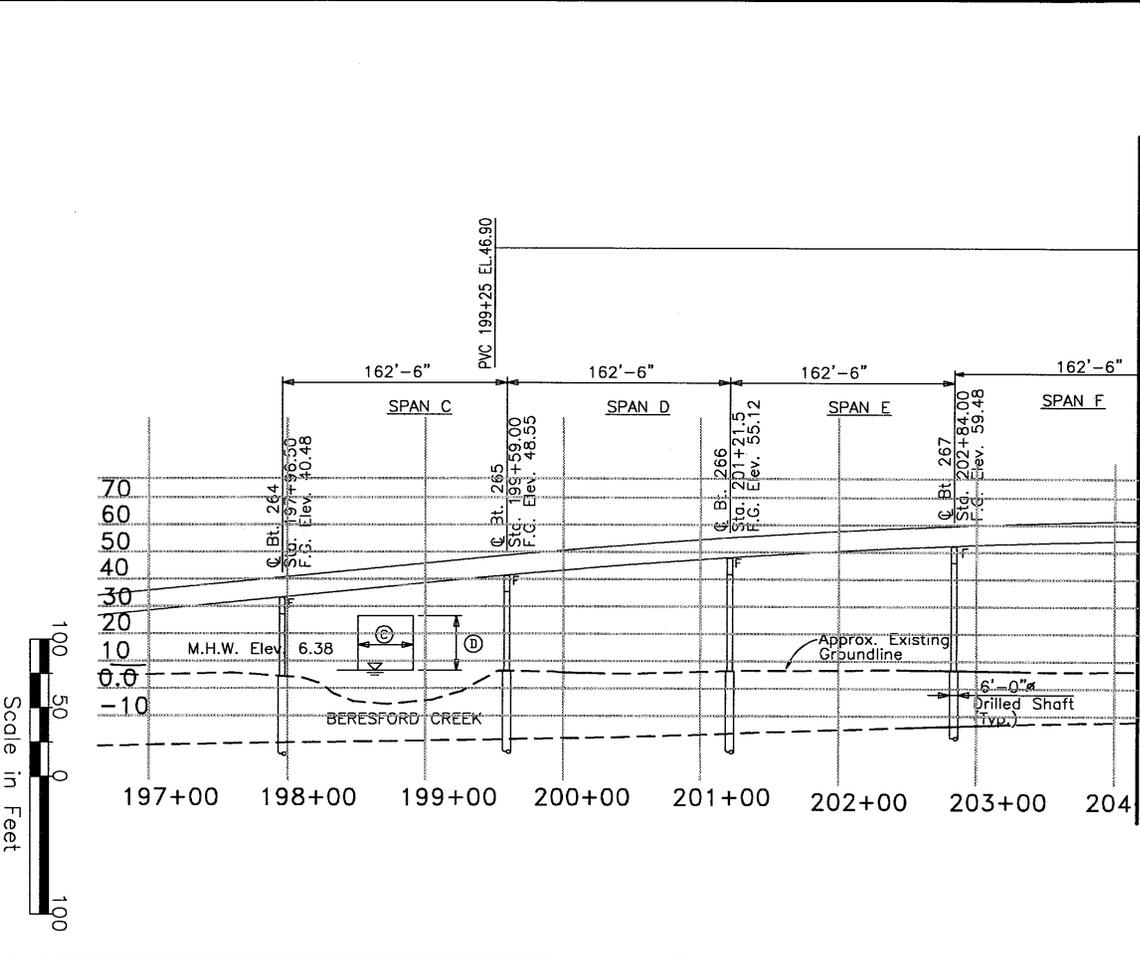
FOR PERMIT PURPOSES ONLY

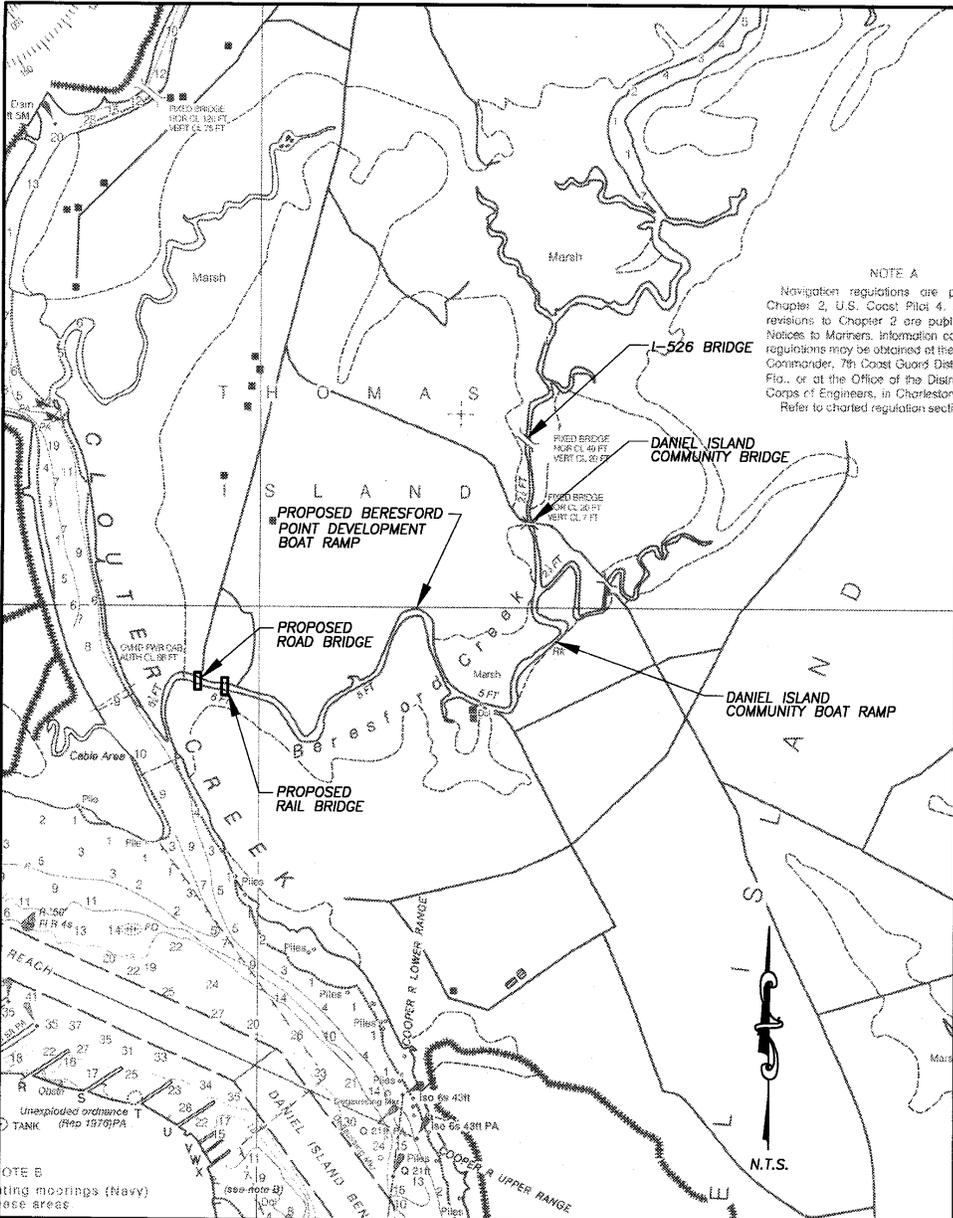
USCG ROAD BRIDGE PERMIT

DATUM: HORIZ: MAD83
 VERT: CHARLESTON LOW WATER
 (ASSUMED MEAN LOW WATER ADOPTED
 1929 = 2.84' BELOW NGVD29)

PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
 IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
 AT: DANIEL ISLAND/CANNOY PENINSULA STATE: S.C.
 COUNTY OF: BERKELEY
 APPLICATION BY: SOUTH CAROLINA
 STATE PORTS AUTHORITY

SHEET 4A OF 5 DATE: JULY 1999





NOTE A
 Navigation regulations are in Chapter 2, U.S. Coast Pilot 4. Revisions to Chapter 2 are published in Notices to Mariners. Information on regulations may be obtained at the Commander, 7th Coast Guard District, or at the Office of the District Corps of Engineers, in Charleston. Refer to charted regulation sections.

B. DOUGLAS
 R. DANIELIS\PERMITS\LOCBRGRM.DWG 07/29/99 09:17

DATUM: HORIZ: NAD83
 VERT: CHARLESTON LOW WATER
 (ASSUMED MEAN LOW WATER ADOPTED
 1929 = 2.64' BELOW NGVD29)

PURPOSE: PROPOSED DANIEL ISLAND TERMINAL
IN: COOPER RIVER/WANDO RIVER DRAINAGE BASINS
AT: DANIEL ISLAND/CAINHOY PENINSULA
COUNTY OF: BERKELEY **STATE:** S.C.
APPLICATION BY: SOUTH CAROLINA
 STATE PORTS AUTHORITY

LOCATIONS OF PROPOSED AND EXISTING BRIDGES AND BOAT RAMPS

SHEET 5 OF 5 DATE: JULY 1999

FOR PERMIT PURPOSES ONLY

USCG ROAD BRIDGE PERMIT

**DANIEL ISLAND MARINE CARGO TERMINAL
ACCESS ROAD BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT C

SITE PHOTOGRAPHS



View east (away from Cooper River) from proposed road bridge location.



View west (toward Cooper River) from proposed road bridge location.



View south (across Beresford Creek) from proposed road bridge location.

**DANIEL ISLAND MARINE CARGO TERMINAL
ACCESS ROAD BRIDGE**

**U.S. COAST GUARD BRIDGE
PERMIT APPLICATION**

ATTACHMENT D

NAVIGATION SURVEY QUESTIONNAIRE

Number of EIS

URS Greiner

C103353.00/C12
July 28, 1998

Beresford Pointe LLC
C/O Ford Development Company
14755 Preston Road
Suite 830
Dallas, TX 75240

**RE: Daniel Island Marine Cargo Terminal Environmental Impact Statement
Proposed Beresford Creek Bridges**

URS Greiner, Inc. is assisting the U.S. Army Corps of Engineers, the U.S. Coast Guard, and other Federal Agencies in the preparation of an Environmental Impact Statement regarding the South Carolina States Port Authority's proposed marine cargo terminal development located on Daniel Island. As part of this study, URS Greiner is investigating the current navigational use of Beresford Creek. The proposed project includes a roadway bridge and a railroad bridge (possibly moveable) crossing near the mouth of Beresford Creek where it joins Clouter Creek on the west side of Daniel Island. An alternative rail alignment under study for the EIS includes a rail crossing of Beresford Creek between I-526 and the Wando River near the northwest corner of Daniel Island.

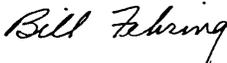
Enclosed is a questionnaire concerning the number and types of boats you may own, and your present usage of Beresford Creek. Please assist us in this process by completing the questionnaire and mailing it to us by August 17 at the following address:

URS Greiner, Inc.
215 E. Bay Street Suite 201-H
Charleston, SC 29401

A copy of the newsletter for the EIS is enclosed for your information. A Public Information Workshop is scheduled for September 1, 1998 from 5:00 p.m. to 9:00 p.m. at the Omar Temple in Mt. Pleasant. You may wish to attend in order to gain additional information regarding the proposed project and the EIS process.

Sincerely,

URS Greiner, Inc.



William K. Fehring, Ph.D., C.E.P.
Project Manager

Enclosure: Beresford Creek Navigation Survey
Daniel Island EIS Newsletter No. 1

URS Greiner, Inc.
P.O. Box 31646 (33631-3416)
7650 W. Courtney Campbell Causeway
Tampa, Florida 33607-1462
Telephone: (813) 286-1711
Facsimile: (813) 287-8591
Offices in Principal Cities Nationwide

FLORIDA #AA C000901
FLORIDA #LC C000234

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many? *FIVE IN FAMILY*
2. What type of boat do you own (sailboat, powerboat, or other)? *POWER AND SAILBOAT*
3. What is the length and draft of your boat? *SIX FEET TO TWENTY FIVE FEET
NOW, BUT PLANNING FOR
BIG BOATS IN FUTURE.*
4. What is the height of your boat above the waterline? *7 TO 8' ±*
5. Do you currently have a dock or boat ramp? *Both*
6. Do you currently have plans for the construction of a dock or boat ramp? *Yes*
7. Do you currently have all necessary permits for the construction of a dock or boat ramp? *No*
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River? *NO RECORD BUT VERY OFTEN.*
9. During what months do you normally use your boat? *Year Round*
10. How often do you navigate Beresford Creek at night? *seldom*

154
Rebellion Lane

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many?
TWO
2. What type of boat do you own (sailboat, powerboat, or other)?
POWER BOAT
3. What is the length and draft of your boat?
(1) 16'-5-6" 2) 20'-8-10" DRAFT
4. What is the height of your boat above the waterline?
#2) - 4'1/2" #1 3'1/2"
5. Do you currently have a dock or boat ramp?
YES-
6. Do you currently have plans for the construction of a dock or boat ramp?
YES
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
NO
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
2-5 Depending on time of year to Clouter
10-15 " " " " " " WANDO
9. During what months do you normally use your boat?
ALL 12
10. How often do you navigate Beresford Creek at night?
WONT AVERAGE 3 times per month-

ALL NORTH OF 526
ON NORTH SIDE
OF CREEK

Parcel Numbers
271 000 2054
271 000 2062
271 000 2061

271 000 2058

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many?
(2) Two
2. What type of boat do you own (sailboat, powerboat, or other)?
Power
3. What is the length and draft of your boat?
6 - 8 inches
4. What is the height of your boat above the waterline?
2 ft.
5. Do you currently have a dock or boat ramp?
dock
6. Do you currently have plans for the construction of a dock or boat ramp?
no!
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
No!
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
1 time a month (more often in winter)
9. During what months do you normally use your boat?
all yr.
10. How often do you navigate Beresford Creek at night?
seldom

NORTH OF 506
NORTH SIDE OF CREEK

Parcel Number
271 000 2088

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many? **2**
2. What type of boat do you own (sailboat, powerboat, or other)?
POUNTOON BOAT = BOAT A
JOHN BOAT = BOAT B
3. What is the length and draft of your boat?
A - 28' 2.5' DRAFT
B - 16' 1.5' DRAFT
4. What is the height of your boat above the waterline?
A - 8.5'
B - 3.5'
5. Do you currently have a dock or boat ramp?
DOCK ON BERESFORD CREEK
6. Do you currently have plans for the construction of a dock or boat ramp?
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River? **10 Times PER MONTH ON AVERAGE**
9. During what months do you normally use your boat?
ALL YEAR
10. How often do you navigate Beresford Creek at night?
4 OR 5 TIMES A MONTH EXCEPT
IN DEC - FEB

NORTH OF 300
NORTH SIDE OF CREEK

Parcel Number
271 000 2059

**Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey**

1. Do you own a boat registered in South Carolina? If so, how many?

No

2. What type of boat do you own (sailboat, powerboat, or other)?

—

3. What is the length and draft of your boat?

—

4. What is the height of your boat above the waterline?

—

5. Do you currently have a dock or boat ramp?

yes

6. Do you currently have plans for the construction of a dock or boat ramp?

—

7. Do you currently have all necessary permits for the construction of a dock or boat ramp?

—

8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?

—

9. During what months do you normally use your boat?

—

10. How often do you navigate Beresford Creek at night?

Z:\DANIEL\TEKNICAL\NAVIGATE\ISURVEY4\WPD7\28\98

*I do not want a bridge over
Beresford Creek for any
reason. B. H. H. H. H.*

Parcel Number NORTH OF 926
271 000 2144 NORTH SIDE OF CREEK

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many? *No*
2. What type of boat do you own (sailboat, powerboat, or other)? *None*
3. What is the length and draft of your boat? *N.A.*
4. What is the height of your boat above the waterline? *N.A.*
5. Do you currently have a dock or boat ramp? *No*
6. Do you currently have plans for the construction of a dock or boat ramp? *No*
7. Do you currently have all necessary permits for the construction of a dock or boat ramp? *No*
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River? *None*
9. During what months do you normally use your boat? *N.A.*
10. How often do you navigate Beresford Creek at night? *None*

Parcel Number NORTH OF 526
271 000 2144 NORTH SIDE OF CREEK

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many? *No*
2. What type of boat do you own (sailboat, powerboat, or other)? *None*
3. What is the length and draft of your boat? *N.A.*
4. What is the height of your boat above the waterline? *N.A.*
5. Do you currently have a dock or boat ramp? *No*
6. Do you currently have plans for the construction of a dock or boat ramp? *No*
7. Do you currently have all necessary permits for the construction of a dock or boat ramp? *No*
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River? *None*
9. During what months do you normally use your boat? *N.A.*
10. How often do you navigate Beresford Creek at night? *None*

North or South
North side of creek

Parcel Number
271 080 2117

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many?
Yes, two boats
2. What type of boat do you own (sailboat, powerboat, or other)?
Two powerboats
3. What is the length and draft of your boat?
① 17 feet, 14" draft
② 12 feet, 9" draft
4. What is the height of your boat above the waterline?
① 7 ft.
5. Do you currently have a dock or boat ramp?
No
6. Do you currently have plans for the construction of a dock or boat ramp?
Yes
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
Yes
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
15 times / month
9. During what months do you normally use your boat?
All
10. How often do you navigate Beresford Creek at night?
3-5 times / month

Parcel Number
272000 0002

Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey

1. Do you own a boat registered in South Carolina? If so, how many?
No
2. What type of boat do you own (sailboat, powerboat, or other)?
N/A
3. What is the length and draft of your boat?
N/A
4. What is the height of your boat above the waterline?
N/A
5. Do you currently have a dock or boat ramp?
~~yes but not on Cooper River~~ NO
6. Do you currently have plans for the construction of a dock or boat ramp?
YES - many docks on Harpe Tract
YES - LIKE TO BUILD BOAT RAMP.
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
NO
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
3 times/year
9. During what months do you normally use your boat?
varies
10. How often do you navigate Beresford Creek at night?
not after

JOHN S. SANDERS, III

1071 FOGARTY LANE
WANDO, S. C. 29492
BERKELEY

Phone 843 884 0090
Fax 843 884 4436

August 17, 1998

TO WHOM IT MAY CONCERN;

I AM OPPOSED TO THE CONSTRUCTION OF THE PROPOSED VEHICULAR BRIDGE OVER BERESFORD CREEK. I DO NOT SEE HOW IT CAN BE LEGALLY PERMITTED BECAUSE THERE IS A HIGHLAND ROUTE AVAILABLE.

WHEN I WAS GETTING A PERMIT TO BUILD A BRIDGE I WAS SENT A LETTER BY OCRM TELLING ME THAT, IF THERE WAS A HIGHLAND ROUTE THAT I WOULD NOT BE GIVEN A PERMIT TO BUILD A BRIDGE.

IF THE PERMIT FOR THE VEHICULAR BRIDGE OVER BERESFORD CREEK IS GRANTED, THERE HAS TO BE A PROVISION TO REMOVE OR PROVIDE THE LEGALLY REQUIRED HEIGHT ON THE CURRENT DANIEL ISLAND ACCESS BRIDGE.



J. S. SANDERS, III

NORTH OF S16
NORTH S10E
OF CREEK

Parcel Number
271 000 2117

**Daniel Island Terminal Environmental Impact Statement
Beresford Creek Navigation Survey**

1. Do you own a boat registered in South Carolina? If so, how many?
yes three boats
2. What type of boat do you own (sailboat, powerboat, or other)?
one sailboat & two motor boats
3. What is the length and draft of your boat?
longest is 30' and 5' draft
4. What is the height of your boat above the waterline?
Tallest is 27'
5. Do you currently have a dock or boat ramp?
I am currently part owner of a dock have access to 3 nearby private boat ramp
6. Do you currently have plans for the construction of a dock or boat ramp?
I currently have definite plans to construct a personal dock and a community boat ramp
7. Do you currently have all necessary permits for the construction of a dock or boat ramp?
I have contacted OCRM to get critical time delineated in preparation for ~~getting~~ permitting of my personal dock + have talked to OCRM in prep for Ramp permit
8. On a monthly basis how often do you use Beresford Creek for access to Clouter Creek and the Cooper River or to the Wando River?
at times more than once a month I use Beresford creek for access to the cooper river from the wando river
9. During what months do you normally use your boat?
all during the year
10. How often do you navigate Beresford Creek at night?
during shrimp baiting season and at other times several times a ~~week~~ month