



US Army Corps
Of Engineers
Wilmington District

PUBLIC NOTICE

Issue Date: March 8, 2007
Comment Deadline: April 9, 2007
Corps Action ID #: 199303077

All interested parties are hereby advised that the Wilmington District, Corps of Engineers (Corps) has received an application for work within jurisdictional waters of the United States. Specific plans and location information are described below and shown on the attached plans. This Public Notice and all attached plans are also available on the Wilmington District Web Site at www.saw.usace.army.mil/wetlands

Applicant:

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Project Development & Environmental Analysis
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Authority

The Corps will evaluate this application and decide whether to issue, conditionally issue, or deny the proposed work pursuant to applicable procedures of Section 404 of the Clean Water Act and Section 10 of the River and Harbor Act of 1899.

Location

The proposed project involves the replacement of the Herbert C. Bonner Bridge (T.I.P. B-2500) across Oregon Inlet in Dare County, which links NC 12 on Hatteras and Bodie islands and provides the only roadway link for travelers driving a vehicle to Hatteras Island. Two replacement bridge corridors (alternatives) are being considered, the Pamlico Sound Bridge Corridor and the Parallel Bridge Corridor with NC 12 maintenance. The Pamlico Sound Bridge Corridor contains a proposed Pamlico Sound bridge that would be approximately 17.5 miles in length (total project length 18 miles including the bridge and approach fills) and extend into the Pamlico Sound approximately 5 miles west of Hatteras Island. The bridge would start at the northern terminus of the Bonner Bridge on Bodie Island and end in Rodanthe. The Parallel Bridge Corridor contains a proposed Oregon Inlet bridge that would be approximately 2.7 miles in length with a NC 12 maintenance component that would keep NC 12 open from the Oregon Inlet Bridge's southern terminus to the community of Rodanthe, a distance of

12.5 miles. The proposed project is located in the Roanoke River Basin and Pamlico Sound, Hydrologic Units 03010205 and 03020105. The northern starting point is located at approximately Latitude 35.7933058N, Longitude 75.5469448. The southern ending point of the project is located at Latitude 35.5965467N, Longitude 75.4674767 W.

Existing Site Conditions

The project area is in Dare County, in eastern North Carolina. The project area encompasses northern Hatteras Island, the southern end of Bodie Island, and regions of the Pamlico Sound. NC 12 is the only major road traversing the region. It runs north south through the entire project area. The project area encompasses the southern tip of Bodie Island at the northern terminus of Bonner Bridge and the northern portion of Hatteras Island as far south as the community of Rodanthe. Bodie Island forms the northern shoulder of the Oregon Inlet and is part of the Cape Hatteras National Seashore. The Seashore is administered by the National Park Service (NPS). The southern end of Bodie Island is used for recreation, which includes the Oregon Inlet campground and the Oregon Inlet Marina and Fishing Center. The active Oregon Inlet US Coast Guard Station is also in this area. South of Bonner Bridge are Hatteras Island and the Pea Island National Wildlife Refuge. The Refuge lies within the boundaries of the Seashore and is administered by the US Fish and Wildlife Service (USFWS). Refuge facilities include wildlife trails, visitor center, a boat ramp, and headquarters buildings. There are catwalks used by fisherman on the south end of Bonner Bridge. A NPS parking lot is also near the south end of the bridge. The USFWS is responsible for wildlife management within the Refuge. The NPS is responsible for Seashore visitors and visitor facilities. The Refuge consists primarily of natural features with expansive wetlands to the west towards the Pamlico Sound and of vegetated dunes to the east towards the Atlantic Ocean. Man-made features include three freshwater ponds, the dunes between NC 12 and the ocean, and the visitor and Refuge facilities. A former US Coast Guard Station building, listed on the National Register of Historic Places is also at the northern end of Hatteras Island. The community of Rodanthe is at the southern end of the project area. Development has occurred such that there is no clear distinction between Rodanthe and the adjoining communities of Waves and Salvo. Commercial development in Rodanthe exists along NC 12. Residential development focuses on the oceanfront on the east and Pamlico Sound on the west. Commercial development consists mostly of small service stations that also serve as general stores, realty agencies, restaurants, and businesses for recreational activities. An automobile junkyard, which is part of an automobile parts business, is a feature west of NC 12 in Rodanthe. Residential development primarily consists of large multiple-story; multiple-bedroom rental vacation home neighborhoods but there are also scattered neighborhoods of smaller, often one-story, permanent homes. A desalinization plant run by Dare County is located in Rodanthe. The Chicamacomico Life Saving Station, a museum listed on the National Register of Historic Places, is in Rodanthe on the east side of NC 12. The Rodanthe-Wave-Salvo Community Center is located on the west side of NC 12.

The topography in the study area is characterized as nearly level and gently sloping land draining into the Pamlico Sound and Atlantic Ocean. The study area is located in the lower Atlantic Coastal Plain physiographic region of North Carolina.

The primary water bodies in the project area are the Pamlico Sound and Oregon Inlet. Also present within the project area are tidal creeks along the sound side of the Outer Banks. The Pamlico Sound drains several water bodies, but those closest to the project are the Albemarle Sound and the Roanoke Sound, both north of Oregon Inlet. Surface waters within the Refuge portion of the project area include four manmade ditches, a manmade pond, three manmade impoundments (North Pond, New Field Pond, and South Pond), and estuarine waters directly associated with the Pamlico Sound.

Ten wetland communities occur within the project area: wetland man-dominated, wetland salt shrub/grasslands, wetland maritime grassland, wetland overwash, wetland maritime shrub thicket, reed stand, salt flat brackish marsh, smooth Cordgrass stands, and black needlerush. Classification of jurisdictional wetlands and the open water areas in the study area are based on Classifications of Wetlands and Deepwater Habitats of the United States (Cowardin *et al.* 1979). Additionally, four open water classifications occur in the project area: Near-shore ocean, submerged aquatic vegetation, inlet and sound, and impoundments.

Based on the US Natural Resource Conservation Service (NRCS) survey of Dare County, the soils found on the Atlantic Ocean side of the Outer banks are mostly well-drained sand beaches with sparse vegetation, while soils found on the Pamlico Sound side are sandy but poorly drained and heavily vegetated. Two soil associations are present in the project area, the Newhan-Duckston-Corolla and Hobonny-Carteret-Currituck associations. Descriptions of these soil series associations can be found in the Dare County Soil Survey or page 3-45 of the Supplemental Draft Environmental Impact Statement for NC 12 replacement of Herbert C. Bonner Bridge dated September 12, 2005.

Applicant's Stated Purpose

The purposes of the proposed project are to: A) Prior to the end of the service life of Bonner Bridge, provide a new means of access from Bodie Island to Hatteras Island for its residents, businesses, services, and tourists. B) Provide a replacement crossing that takes into account natural channel migration expected through year 2050 and provides the flexibility to let the channel move. C) Provide a replacement crossing that will not be endangered by shoreline movement through year 2050 and is placed so it can continue to serve NC 12 easily, even if that road must be shifted because of shoreline erosion and overwash.

Background

A *Draft Environmental Impact Statement* (DEIS) for the replacement of Bonner Bridge was approved in November 1993. Public hearings were held on February 23 and 24, 1994. A preferred alternative was selected and a preliminary *Final Environmental Impact Statement* (FEIS) was prepared. Coordination with the USFWS related to Section 7 of the Endangered Species Act was not completed and the FEIS was never finalized or approved. Recent trends in shoreline erosion and overwash of NC 12 and other changes in the setting of the project resulted in the decision to prepare a Supplemental Draft Environmental Impact Statement (SDEIS) and assess additional alternatives for the bridge project. An expanded project area that encompasses potential alternative southern termini for the proposed project has been added since the original DEIS. In 2002 the project was put in the integration process for merging the National Environmental Policy Act and Section 404 of the Clean Water Act. The Merger Team members signed concurrence Point 1, Purpose and Need on July 31, 2002. Concurrence Point 2, alternatives to be studied in detail in the NEPA document was signed by the Merger Team members on February 12, 2003. This concurrence point stated that additional environmental analysis will be conducted on Corridor one (Canal Area Endpoint) and Corridor four (Rodanthe Area Endpoint 2) to determine a preferred alternative for the proposed Bonner Bridge replacement. After this date, a decision was made that due to compatibility issues with the National Wildlife Refuge that corridor one be dropped as alternative to be studied in detail. A revised Concurrence Point 2 was signed by the Merger Team members on July 23, 2003 which stated that additional environmental analysis will be conducted on corridor alternative four (Rodanthe Area Endpoint 2) for the proposed Bonner Bridge replacement. After this date, Concurrence Point 2 was revisited again and in September 2004, the Merger Team members signed a revised Concurrence Point 2 that stated additional environmental analysis will be conducted on the Parallel Bridge Alternative in addition to the Long Bridge Alternative (formerly known as Corridor 4, Rodanthe area endpoint 2) for the proposed Bonner Bridge replacement. The project study limits for both alternatives will extend south to Rodanthe. The Supplemental Draft Environmental Impact Statement (SDEIS) was prepared and signed on September 12, 2005. The document was circulated on September 23, 2005. A previous Corps of Engineers public notice was issued on November 7, 2005, to solicit comments regarding the selection of the least environmentally damaging alternative (LEDPA). Since that time, at the request of NCDOT and FHWA, two additional alternatives (parallel bridge corridor with phased approach/Rodanthe Bridge and parallel bridge corridor with phased approach/Rodanthe nourishment) were agreed to be studied in detail by the Merger Team. A supplement to the SDEIS was prepared and signed February 14, 2007 and is being distributed for comment. This public notice is an update to the previously issued public notice dated November 7, 2005 and includes updated information and the inclusion of the two new study alternatives.

Project Description

The following description of work is taken from data provided by the applicant. The two proposed build alternatives and the no-action alternative are described below. The alternatives associated with the Pamlico Sound Bridge Corridor include: a) with curved Rodanthe terminus b) with intersection Rodanthe terminus. The alternatives associated with the Parallel Bridge Corridor include: a) with nourishment b) with road north/bridge south c) with all bridge d) with phased approach/Rodanthe bridge e) with phased approach/Rodanthe nourishment. A map showing the location of the alternatives for this project are included with this public notice.

Project Alternatives

a. No-Action Alternative: The No-Action Alternative assumes that Bonner Bridge would be demolished at the end of its practical service life and not replaced. A small-scale ferry service adequate to meet the fundamental travel needs of Hatteras Island residents would be provided across Oregon Inlet. Access to the mainland also would remain via existing ferry routes from the mainland (i.e., Cedar Island and Swan Quarter) to Ocracoke Island and then the existing ferry route from Ocracoke Island to Hatteras Island. The current ferry service between Hatteras Island and the mainland via Ocracoke Island offers space for approximately 400 to 450 automobile crossings per day during the summer. The ferry across the Hatteras Inlet from Hatteras Island to Ocracoke Island carries as many as 3,500 vehicles per day in the summer. The sailing time for these services is three hours and five minutes from Hatteras Island to the mainland via either ferry route, not including time to change ferries on Ocracoke Island. Specifics related to a new small-scale ferry service from Bodie Island to Hatteras Island would be developed if, following public review of the SDEIS, this alternative were to be selected as the preferred alternative. The level of service of the small-scale ferry service implemented under a No-Action Alternative likely would be similar to the service between Hatteras Island and the mainland via Ocracoke Island described above. The emergency ferry service across Oregon Inlet provided from November 1990 to February 1991 after the Bonner Bridge was damaged by a dredge and temporarily closed had a maximum transport capacity of approximately 6,000 vehicles per week or 900 vehicles per day. The sailing time for that service was 80 minutes, including loading and unloading. Nine hundred vehicles per day is far less than the existing travel demand and the expected 2025 travel demand, which shows an average annual daily traffic of 9,600 vehicles per day and peak traffic of 25,200 vehicles per day in 2025.

b. Pamlico Sound Bridge Corridor: The Pamlico Sound Bridge Corridor (see Figure 2) contains a proposed Pamlico Sound bridge that would be approximately 17.5 miles (28.2 kilometers) in length. The total project length would be 18 miles (29.0 kilometers), including the bridge and the approach roads at the northern and southern ends. The southern terminus of the project would be in the community of Rodanthe on Hatteras

Island. The bridge would extend north in Pamlico Sound up to approximately 5.0 miles (8.0 kilometers) west of Hatteras Island. The project would end at the northern terminus of the Bonner Bridge on Bodie Island within the Cape Hatteras National Seashore (Seashore). Two possible termini design options are being evaluated in Rodanthe. With the Curved Rodanthe Terminus, the proposed bridge would end in a curve that connects the bridge directly to NC 12. With the Intersection Rodanthe Terminus, the proposed bridge would end with a signalized intersection at NC 12. (See Figure 3.)

c. Parallel Bridge Corridor: The Parallel Bridge Corridor contains a proposed Oregon Inlet bridge that would be approximately 2.7 miles (4.3 kilometers) in length. The NC 12 maintenance component would keep NC 12 open from the community of Rodanthe to the Oregon Inlet Bridge's southern terminus, a distance of approximately 12.5 miles (20.1 kilometers). The NC 12 maintenance component would pass through the Refuge, which has shared jurisdiction with the Seashore. Five NC 12 maintenance alternatives are evaluated:

1. The Nourishment Alternative assumes that NC 12 would remain in its current location and beach nourishment plus dune enhancement would be used to maintain a minimally adequate beach and dune system. The total length of beach requiring regular nourishment would be approximately 6.3 miles (10.1 kilometers). Nourishment would occur in four locations. (See Figure 4.)
2. With the Road North/Bridge South Alternative, NC 12 would be placed on a bridge west of Hatteras Island beginning at a new intersection in Rodanthe and continuing to a point approximately 2 miles (3.2 kilometers) north of the Refuge's southern boundary where the project would meet existing NC 12. NC 12 would then remain unchanged for 2.6 miles (4.2 kilometers). Beginning at a point approximately 1.3 miles (2.1 kilometers) south of the Refuge's freshwater ponds, NC 12 would be relocated to a point 230 feet (70.1 meters) west of the forecast worst-case 2060 shoreline. This relocation would continue 7.1 miles (11.4 kilometers) north until the relocated NC 12 would meet a replacement Oregon Inlet Bridge. Three 10-foot-high dunes, totaling 2,100 feet (640 meters) in length would be built, but not immediately. They would be built as needed as the shoreline erodes towards the relocated road. The first one would not be built until 2030. (See Figure 5.)
3. The All Bridge Alternative would include the same bridge in the Rodanthe area as the Road North/Bridge South Alternative. In the central and northern part of the Refuge, NC 12 would be constructed on a bridge to the west of the existing road. Two road segments would be included in this relocation, one near Oregon Inlet and one just north of the Refuge's freshwater ponds where access from NC 12 to the Refuge would be provided. Access to the Refuge also would be available in a 1.8-mile (2.9 kilometer) section of NC 12 that would be left unchanged between the Rodanthe area bridge and the beginning of the next bridge section south of the ponds. The bridges associated with this alternative would span the five potential storm-related island breach locations. (See Figure 6.)

4. The Phased Approach/Rodanthe Bridge Alternative assumes a modified Oregon Inlet bridge and elevating portions of NC 12 through the Refuge and northern Rodanthe on new bridges within the existing NC 12 easement. The alternative would be built in four phases, with the first phase being the bridge across Oregon Inlet. Additional phases would be built as necessitated by shoreline erosion. The project in the existing NC 12 right-of-way would begin in Rodanthe approximately 1.1 miles (1.8 kilometers) south of the Refuge boundary (at a point that is south and west of where the projected 2060 worst-case shoreline crosses NC 12). Once all four phases are completed, the NC 12 bridge would extend from this point north to Oregon Inlet except for the 2.1 mile (3.4-kilometer) length of NC 12 in the southern half of the Refuge that would not be threatened by erosion prior to 2060. Access to properties adjacent to the bridge in Rodanthe would be provided by a one-lane, one-way frontage road on each side of the NC 12 bridge. Crossovers to provide access between the two frontage roads underneath the NC 12 bridge would be provided in three locations (see Figure 7).
5. The Phased Approach/Rodanthe Nourishment Alternative would be similar to the Phased Approach/Rodanthe Bridge Alternative except the southern end of the project in the existing NC 12 right-of-way would begin 0.3 mile (0.5 kilometer) south of the Refuge boundary. South of the bridge, NC 12 in Rodanthe would be protected through 2060 by beach nourishment (repeated every four years) for a total distance of approximately 6,000 feet (1,829 meters) at the southern end of the Refuge and in northern Rodanthe. One crossover between the one-way frontage roads would be provided immediately south of the Refuge boundary (see Figure 7).

Impacts to Waters of the United States

Impacts to water resources will be unavoidable due to the nature of the project study area. The jurisdictional impacts of each alternative based on preliminary design are provided in Table 1 & 2 below. Wetlands are so pervasive in the project area that it is impossible to completely avoid impacts with the build alternatives. Two most notable avoidance measures were the decision to move the Pamlico Sound Bridge corridor to a location west of the extensive SAV beds found behind Hatteras Island, and the decision to move its location outside the Refuge. The five Parallel Bridge Corridor alternatives are being evaluated in detail in the SDEIS and supplemental SDEIS because of the differences in their avoidance of wetland impacts in contrast to their differences in other types of impacts and benefits. Opportunities for mitigation appear to exist in the project area. Five areas have been identified for possible wetland mitigation in the project area. In consultation with other agencies, NCDOT has determined that there are circumstances where in-lieu-fee, fee mitigation, or other similar arrangement would serve as appropriate mitigation sources. The Ecosystem Enhancement Program (EEP) also could serve as a potential in-lie-fee source for compensatory mitigation. Appropriate compensatory mitigation for wetland and stream impacts from the Preferred Alternative would be determined in consultation with the appropriate Federal and State environmental resource and regulatory agencies. A conceptual mitigation plan would be developed for the

Preferred Alternative and presented in the Final Environmental Impact Statement. A final mitigation plan would be completed prior to issuance of a Section 404 permit and Section 401 Water Quality Certification, CAMA, USCG, or NPS Special use Permits. Additional information such as NCDOT's cover letter with application and a copy of the Supplemental Draft EIS and Supplement to the SDEIS are available for review at the U.S. Army Corps of Engineers Washington Regulatory Field Office at 107 Union Drive, Suite 202, Washington, North Carolina 27889, or at the offices of the North Carolina Division of Water Quality at the address shown below. The Corps is soliciting public comment on the merits of the proposal and on the alternatives evaluated in the Supplemental Draft EIS and Supplemental to the SDEIS. At the close of the comment period, the District Engineer will evaluate and consider the comments received as well as the expected adverse and beneficial impacts of the proposed road construction to select the least environmentally damaging, practicable alternative (LEDPA).

**TABLE 1. SHADING, FILL, AND PILE PLACEMENT IMPACTS TO WETLANDS AND WATERS
WITH THE PAMLICO SOUND BRIDGE CORRIDOR**

Biotic Community	Pamlico Sound Bridge Corridor with Curved Rodanthe Terminus in Acres (hectares)		Pamlico Sound Bridge Corridor with Intersection Rodanthe Terminus in Acres (hectares)	
	Shading	Fill and Pile	Shading	Fill and Pile
Open water				
• Aquatic bottom	73.80 (29.88)	2.69 (1.09)	74.80 (30.28)	2.70 (1.09)
• SAV	9.20 (3.72)	0.31 (0.13)	8.90 (3.60)	0.30 (0.12)
Wetland man-dominated	0.04 (0.02)	1.19 (0.48)	0.06 (0.02)	0.40 (0.16)
Wetland maritime grassland	0.00 (0.00)	0.52 (0.21)	0.00 (0.00)	0.46 (0.19)
Salt shrub/grasslands	<0.01 (<0.01)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Wetland maritime shrub thicket	0.51 (0.21)	0.11(0.04)	0.50 (0.20)	0.30 (0.12)
Reed stand	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Brackish marsh ¹	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Smooth cordgrass ¹	0.50 (0.20)	<0.01 (<0.01)	0.49 (0.20)	<0.01 (<0.01)
Black needlerush ¹	0.14 (0.06)	<0.01 (<0.01)	0.14 (0.06)	<0.01 (<0.01)
TOTAL IMPACT	84.20 (34.09)	4.84 (1.96)	84.89 (34.37)	4.18 (1.69)

¹CAMA coastal wetlands.

NOTE: Hectares were calculated from acres, thus minor rounding error exists when adding the individual hectare numbers.

**TABLE 2. SHADING, FILL, AND PILE PLACEMENT IMPACTS TO WETLANDS AND WATERS
WITH THE PARALLEL BRIDGE CORRIDOR**

Biotic Community	Parallel Bridge Corridor with Nourishment Alternative in Acres (hectares)		Parallel Bridge Corridor with Road North/Bridge South Alternative in Acres (hectares)		Parallel Bridge Corridor with All Bridge Alternative in Acres (hectares)		Parallel Bridge Corridor with Phased Approach/Rodanthe Bridge Alternative in Acres (hectares)		Parallel Bridge Corridor with Phased Approach/Rodanthe Nourishment Alternative in Acres (hectares)	
	Shad- ing	Fill and Pile	Shad- ing	Fill and Pile	Shad- ing	Fill and Pile	Shad- ing	Fill and Pile	Shad- ing	Fill and Pile
Open water										
• Aquatic bottom	7.62 (3.08)	2.40 (0.96)	8.24 (3.33)	3.90 (1.58)	8.64 (3.50)	3.82 (1.55)	5.37 (2.18)	2.44 (0.99)	5.37 (2.18)	2.44 (0.99)
• SAV	1.01 (0.40)	0.20 (0.08)	7.32 (2.93)	1.40 (0.56)	7.32 (2.93)	1.40 (0.56)	1.01 (0.40)	0.20 (0.08)	1.01 (0.40)	0.20 (0.08)
• Impound- ments	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	22.11 (8.95)	11.54 (4.67)	0.43 (0.17)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Wetland man- dominated	0.00 (0.00)	0.15 (0.06)	0.00 (0.00)	0.18 (0.07)	0.00 (0.00)	0.15 (0.06)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Salt shrub/ grasslands	0.00 (0.00)	0.00 (0.00)	0.05 (0.02)	29.39 (11.76)	9.38 (3.75)	2.64 (1.06)	0.44 (0.18)	0.01 (0.00)	0.45 (0.18)	0.01 (0.00)
Wetland maritime grassland	0.00 (0.00)	0.10 (0.04)	0.00 (0.00)	0.27 (0.11)	0.00 (0.00)	0.15 (0.06)	2.08 (0.84)	0.08 (0.03)	2.07 (0.84)	0.05 (0.02)
Wetland overwash	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	1.49 (0.60)	0.00 (0.00)	0.20 (0.08)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Wetland maritime shrub thicket	0.40 (0.19)	0.90 (0.36)	0.67 (0.27)	6.67 (2.67)	1.69 (0.68)	1.33 (0.53)	0.56 (0.23)	0.05 (0.02)	0.56 (0.23)	0.05 (0.02)
Reed stand	0.00 (0.00)	0.20 (0.08)	0.30 (0.12)	0.94 (0.38)	0.31 (0.12)	0.03 (0.01)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Salt flat ¹	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Brackish marsh ¹	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Smooth cordgrass ¹	0.59 (0.28)	0.20 (0.08)	0.80 (0.32)	0.22 (0.09)	0.81 (0.32)	0.22 (0.09)	0.39 (0.16)	0.20 (0.08)	0.39 (0.16)	0.20 (0.08)
Black needlerush ¹	0.50 (0.24)	0.13 (0.05)	1.35 (0.54)	11.58 (4.63)	4.81 (1.92)	1.96 (0.78)	0.50 (0.20)	0.13 (0.08)	0.37 (0.15)	0.13 (0.08)
TOTAL IMPACT	10.12 (4.10)	4.28 (1.73)	18.73 (7.60)	78.15 (31.63)	44.50 (18.01)	12.33 (4.99)	10.35 (4.19)	3.11 (1.26)	10.22 (4.14)	3.08 (1.25)

¹CAMA coastal wetlands.

NOTE: Hectares were calculated from acres, thus minor rounding error exists when adding the individual hectare numbers.

Bonner Bridge Demolition and Removal

Wetland impacts associated with demolition and removal of Bonner Bridge would depend on which technique is used to access the bridge. Separate contracts would be issued for construction of the proposed replacement bridge corridor alternatives and demolition and removal of Bonner Bridge with the Pamlico Sound Bridge Corridor. With an Oregon Inlet bridge, demolition could be within the same contract as construction. Three access scenarios for demolition would be considered: temporary haul road, dredged work channel, and temporary work bridge. A top-down approach probably would not be possible because the piles that make up Bonner Bridge's foundation cannot simply be broken off just below the existing ground line but must be removed to at least 25.0 feet (7.6 meters) below the mean low water elevation or possibly deeper, as requested by the US Army Corps of Engineers (USACE) in a letter dated January 16, 2001. NCDOT will coordinate with environmental resource and regulatory agencies prior to demolition and removal to determine the most practicable construction access methodology for the demolition of Bonner Bridge. Impacts for construction access would be determined and mitigated in full consultation with permitting agencies. A work bridge likely would be used over wetlands on Bodie Island for bridge demolition. Use of a temporary haul road could be requested if it is demonstrated that such access would not result in permanent impacts to marsh communities because these communities do not have underlying organic subsoil or if the cost of constructing and dismantling a temporary work bridge is so high that it would not be practicable to employ that methodology. Dredged work channels should be restricted to the open water or nearby unvegetated shallow water areas, where practicable.

Schedule and Costs

The estimated construction cost range of each detailed study alternative is shown in Table 3. The estimated costs reflect highway construction costs as they are known at this time; however, a cost range is given to take into account items that are unknown or for which only partial knowledge exists during the planning process (e.g., geotechnical conditions, construction material costs and availability, variations in contractor design approach, etc.). Right-of-way costs include acquisition, relocations, utilities, and land. The construction costs include mobilization, clearing and grubbing, construction access dredging and fill, earthwork, drainage, pavement removal, subgrade, stabilization, pavement, guardrail, erosion control, pavement marking, signing, and bridges. Given that with the Parallel Bridge Corridor alternatives, construction costs associated with dunes and nourishment would continue through 2060 (with the exception that nourishment costs would only continue through 2015 for the Phased Approach/Rodanthe Bridge Alternative), road and bridge maintenance cost estimates also are included for roads and bridges through 2060. These costs are estimates and are subject to change. As shown in Table 3, the total highway cost estimates (in 2006 dollars) range from \$602.2 to \$740.2 million with the Parallel Bridge Corridor with Road North/Bridge South; to \$671.8 to \$970.4 million with the Parallel Bridge Corridor with Nourishment;

to \$1.1 to \$1.4 billion with the Parallel Bridge Corridor with All Bridge; to \$1.1 to \$1.6 billion with the Parallel Bridge Corridor with Phased Approach alternatives; to \$1.3 to \$1.8 billion with the Pamlico Sound Bridge Corridor alternatives. As noted in the footnote to Table 3, the costs in the table do not include potential costs by the US Fish and Wildlife Service (USFWS), the National Park Service (NPS), or some other public body to fund an alternative access program for the Refuge. The USFWS and the NPS have indicated that they would provide an alternate access program with the Pamlico Sound Bridge Corridor. Because the current bridge is reaching the end of its service life, a design-build contract for construction of the bridge is expected to be let in 2009.

TABLE 3. HIGHWAY COST ESTIMATE RANGES¹

	Pamlico Sound Bridge Corridor ¹		Parallel Bridge Corridor including Oregon Inlet Bridge				
	With Curved Rodanthe Terminus	With Intersection Rodanthe Terminus	With Nourishment	With Road North/ Bridge South	With All Bridge	With Phased Approach/ Rodanthe Bridge	With Phased Approach/ Rodanthe Nourishment
Replacement Bridge Construction Cost	\$933,500,000 - \$1,425,500,000	\$929,100,000 - \$1,418,100,000	\$260,000,000 - \$309,000,000	\$260,000,000 - \$309,000,000	\$260,000,000 - \$309,000,000	\$294,000,000 - \$347,000,000	\$294,000,000 - \$347,000,000
NC 12 Maintenance Construction Cost							
<i>New Road</i>	\$0	\$0	\$0	\$35,000,000	\$14,600,000	\$0	\$0
<i>New Bridge</i>	\$0	\$0	\$0	\$151,000,000 - \$240,000,000	\$547,800,000 - \$826,400,000	\$514,900,000 - \$774,900,000	\$479,030,000 - \$719,030,000
<i>Nourishment to 2060²</i>	\$0	\$0	\$317,550,000 - \$567,065,000	\$0	\$0	\$23,694,000 - \$36,348,000	\$107,416,000 - \$189,668,000
<i>Dunes to 2060</i>	\$0	\$0	\$8,267,000	\$1,556,000	\$0	\$533,000	\$3,378,000
TOTAL Construction Cost	\$933,500,000 - \$1,425,500,000	\$929,100,000 - \$1,418,100,000	\$585,817,000 - \$884,332,000	\$447,556,000 - \$585,556,000	\$822,400,000 - \$1,150,000,000	\$833,127,000 - \$1,158,781,000	\$883,824,000 - \$1,259,076,000
Right-of-Way in Rodanthe	\$6,890,000	\$5,245,000	\$750,000	\$1,725,000	\$1,650,000	\$15,500,000	\$73,575,000
Bonner Bridge Demolition	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000
Wetland Mitigation	\$512,000	\$329,000	\$468,000	\$14,130,000	\$1,860,000	\$468,000	\$468,000
NC 12 Pavement Removal	\$4,255,000	\$4,255,000	\$90,000	\$3,600,000	\$3,600,000	Included in construction cost	Included in construction cost
Road and Bridge Operation and Maintenance Costs to 2060	\$356,407,000	\$356,137,000	\$80,710,000	\$131,197,000	\$274,173,000	\$260,289,000	\$245,306,000
TOTAL Highway Cost to 2060	\$1,305,564,000 - \$1,797,564,000	\$1,299,066,000 - \$1,788,066,000	\$671,835,000 - \$970,350,000	\$602,208,000 - \$740,208,000	\$1,107,683,000 - \$1,435,283,000	\$1,113,384,000 - \$1,439,038,000	\$1,207,173,000 - \$1,582,425,000

¹Highway cost estimate ranges do not include the potential cost of funding Refuge access.

²The cost for nourishment included in the Phased Approach/Rodanthe Bridge Alternative is representative of the implementation of an interim NC 12 maintenance solution at the 'S' Curves Hot Spot just north of Rodanthe as an outcome of interim NC 12 maintenance studies being conducted by the Outer Banks Task Force and currently designated as NCDOT TIP Project No. R-3116D.

Other Required Authorizations

This notice and all applicable application materials are being forwarded to the appropriate State agencies for review. The Corps will generally not make a final permit decision until the North Carolina Division of Water Quality (NCDWQ) issues, denies, or waives State certification required by Section 401 of the Clean Water Act (PL 92-500). The application for a Section 401 certification will be submitted to the NCDWQ after the LEDPA has been chosen and the final design plans are available. Additional information regarding the Clean Water Act certification process may be obtained from the NCDWQ Central Office, Transportation Permitting Wetlands Unit, 2321 Crabtree Blvd, Parkview Building, Raleigh, North Carolina 27604, Attn: Mr. John Hennessy

The applicant has not provided to the Corps, a certification statement that his/her proposed activity complies with and will be conducted in a manner that is consistent with the approved North Carolina Coastal Zone Management Program. Pursuant to 33 CFR 325.2(b)(2), the Corps can not issue a permit for the proposed work until the applicant submits such a certification to the Corps and the North Carolina Division of Coastal Management (NCDCM), and the NCDCM notifies the Corps that it concurs with the applicant's consistency certification.

Essential Fish Habitat

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. The Corps' initial determination is that the proposed project may adversely impact EFH or associated fisheries managed by the South Atlantic or Mid Atlantic Fishery Management Councils or the National Marine Fisheries Service. Both replacement bridge corridor alternatives would produce turbidity, noise, and siltation resulting from construction, which in turn would create localized, short-term impacts to essential fish habitat (EFH) including estuarine wetlands, oyster reef and shell bank, SAV beds, intertidal flats, and marine and estuarine water column. Permanent loss or alteration of estuarine emergent habitat, seagrass, oyster reef and shell bank, and intertidal flats would result directly from shading and pile placement.

Cultural Resources

The Corps has consulted the latest published version of the National Register of Historic Places and has determined that registered properties, or properties listed as being eligible for inclusion therein are located within the project area and/or will be affected by the proposed work. Four properties within the Area of Potential Effect (APE) are listed on or eligible for inclusion in the National Register of Historic Places (NR): the Pea Island Wildlife Refuge, the (former) Oregon Inlet US Coast Guard Station, the Chicamacomico

Life Saving Station, and the Rodanthe Historic District. Table 4 presents the determination of effects for the historic resources in the APE. These determinations of effect were made at meetings between representatives of the NCDOT, the Federal Highway Administration (FHWA), and representatives of the SHPO on November 25, 2003 for the Pamlico Sound Bridge Corridor, and June 28, 2005 and November 28, 2006 for the Parallel Bridge Corridor. Details on the determinations of effects are presented in Section 4.4.1 of Chapter 4 of the SDEIS and Section 4.4.1 of the Supplement.

TABLE 4. DETERMINATIONS OF EFFECTS TO HISTORIC RESOURCES

Resource	Pamlico Sound Bridge Corridor		Parallel Bridge Corridor				
	With Curved Rodanthe Terminus	With Intersection Rodanthe Terminus	With Nourishment	With Road North/Bridge South	With All Bridge	With Phased Approach/Rodanthe Bridge	With Phased Approach/Rodanthe Nourishment
Pea Island National Wildlife Refuge	No Effect	No Effect	No Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
(Former) Oregon Inlet US Coast Guard Station	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect	Adverse Effect
Chicamacomico Life Saving Station	No Adverse Effect	No Adverse Effect	No Effect	Adverse Effect	Adverse Effect	Adverse Effect	No Effect
Rodanthe Historic District	No Adverse Effect	No Adverse Effect	No Effect	Adverse Effect	Adverse Effect	Adverse Effect	No Effect

Endangered Species

The Corps has reviewed the project area, examined all information provided by the applicant and consulted the latest North Carolina Natural Heritage Database. Based on available information, the Corps has determined pursuant to the Endangered Species Act of 1973 (ESA), that the proposed project may affect federally listed endangered or threatened species or their formally designated critical habitat. See Table 5 below for a description of the Federal Listed Endangered or Threatened Species and their anticipated impacts. Consultation under Section 7 of the ESA will be initiated and no permit will be issued until the consultation process is complete.

**TABLE 5. FEDERAL LISTED ENDANGERED (E) OR THREATENED (T) SPECIES
(FROM APRIL 27, 2006 USFWS LISTING)**

Common Name	Scientific Name	Status		Potential Habitat Present	Biological Conclusion	
		Federal	State		Parallel Bridge Corridor	Pamlico Sound Bridge Corridor
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	E	No	No Effect	
Roseate tern	<i>Sterna dougallii</i>	E	E	Yes	May Affect—Not Likely to Adversely Affect	
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T	T	Yes	May Affect—Not Likely to Adversely Affect	
Piping plover	<i>Charadrius melodus</i>	T	T	Yes	Unresolved	May Affect—Not Likely to Adversely Affect
Hawksbill sea turtle	<i>Eretmochelys imbricate</i>	E	E	Yes ¹	May Affect—Not Likely to Adversely Affect	
Kemp's ridley sea turtle	<i>Lepidochelys kempii</i>	E	E	Yes ¹	May Affect—Not Likely to Adversely Affect	
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E	E	Yes ¹	May Affect—Not Likely to Adversely Affect	
Green sea turtle	<i>Chelonia mydas</i>	T	T	Yes	Unresolved	May Affect—Not Likely to Adversely Affect
Loggerhead sea turtle	<i>Caretta caretta</i>	T	T	Yes	May Affect—Not Likely to Adversely Affect	
American Alligator	<i>Alligator mississippiensis</i>	T ²	T	No	No Effect	
West Indian manatee	<i>Trichechus manatus</i>	E	E	Yes	May Affect—Not Likely to Adversely Affect	
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E	E	Yes ¹	May Affect—Not Likely to Adversely Affect	
Red wolf	<i>Canis rufus</i>	EXP	SR	No	No Effect	
Seabeach amaranth	<i>Amaranthus pumilus</i>	T	T	No records, but habitat present ³	May Affect—Not Likely to Adversely Affect	

¹ Record from Pamlico Sound, Dare County in 2006 (personal communication, November 30, 2006, David Rabon, USFWS).

² Listed because of similarity of appearance to American crocodile.

³ The NCNHP has no records of the species within the project area, however, the NPS located a single amaranthus on the Bodie Island flats (Latitude: 35° 46.790', Longitude: 75° 32.162') on July 6, 2004. (Personal communication, November 19, 2004, Marcia Lyons, Cape Hatteras National Seashore.)

Evaluation

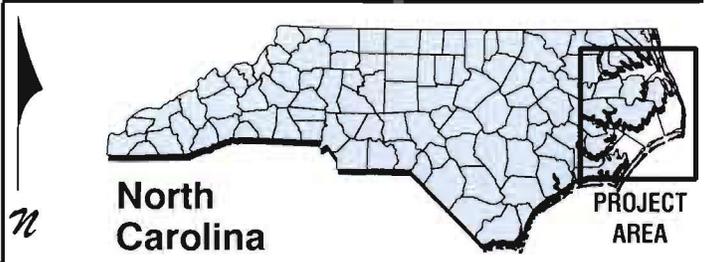
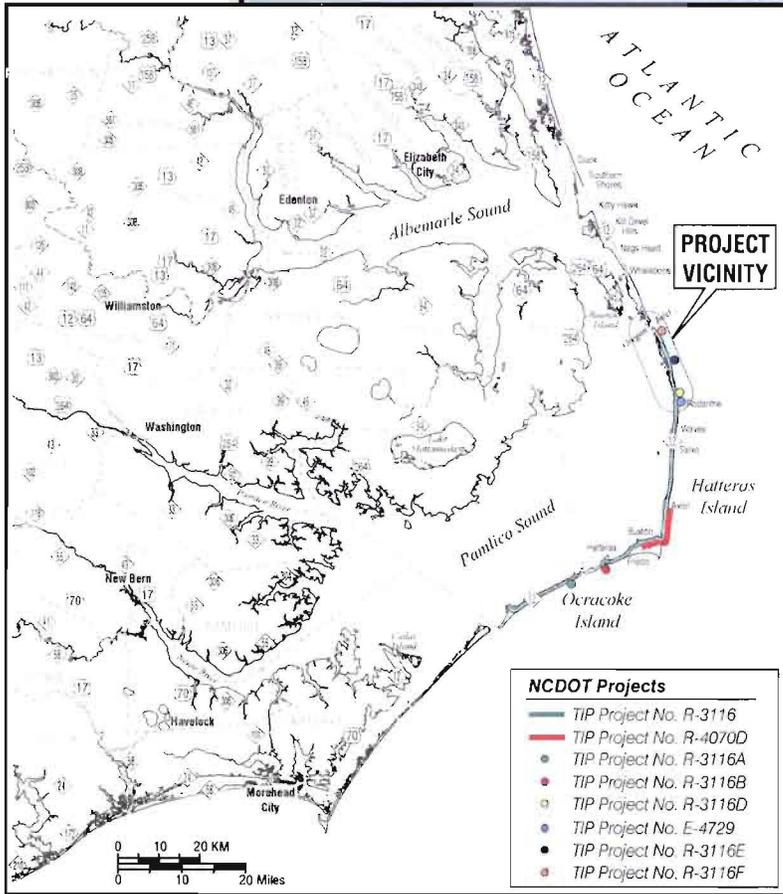
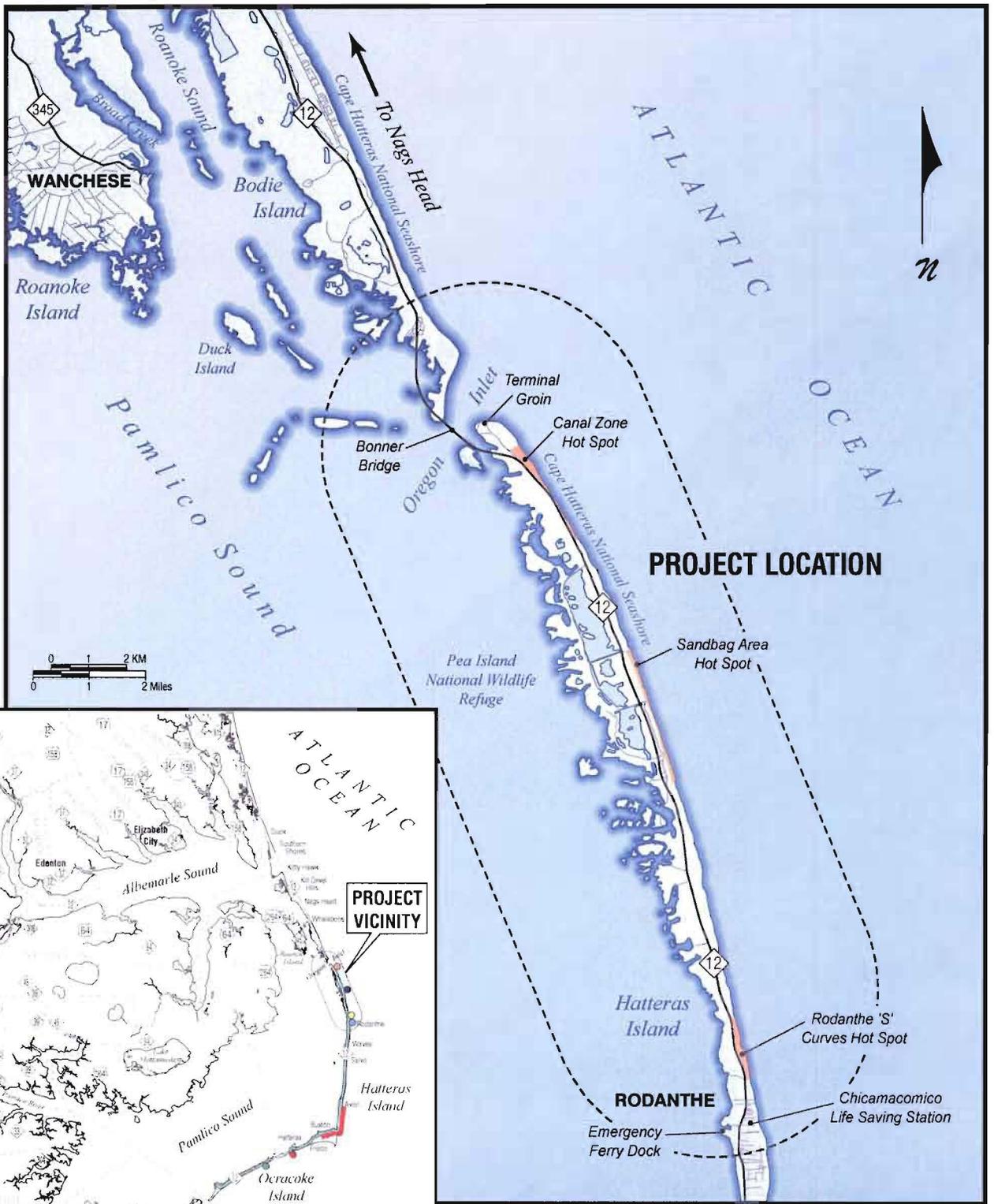
The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values (in accordance with Executive Order 11988), land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. For activities involving the discharge of dredged or fill materials in waters of the United States, the evaluation of the impact of the activity on the public interest will include application of the Environmental Protection Agency's 404(b)(1) guidelines.

Commenting Information

In order to more fully integrate Section 404 permit requirements with the National Environmental Policy Act of 1969, and to give careful consideration to our required public interest review and 404 (b)(1) compliance determination, the Corps of Engineers is soliciting public comment on the merits of the proposal and on the alternatives evaluated in the SDEIS and the supplement to the SDEIS. At the close of this comment period, the District Engineer will evaluate and consider the comments received as well as the expected adverse and beneficial impacts of the proposed bridge and road construction to select the least environmentally damaging, practicable alternative (LEDPA). The District Engineer is not authorizing construction of TIP # B- 2500 at this time. A final department of the Army permit could be issued, if at all, only after our review process is complete, impacts to the aquatic environment have been minimized to the maximum extent practicable, and a compensatory mitigation plan has been approved.

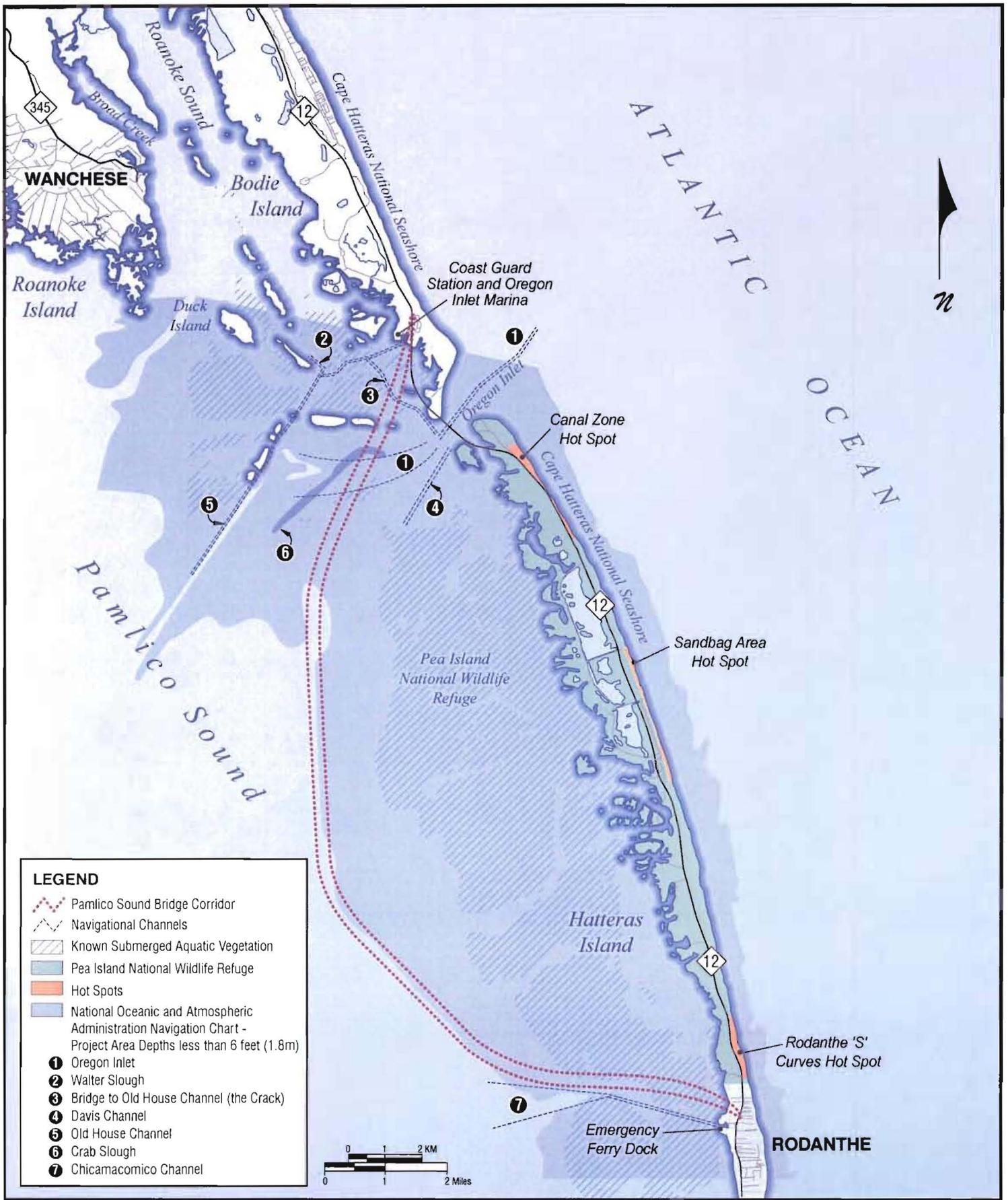
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing. Requests for a public hearing shall be granted, unless the District Engineer determines that the issues raised are insubstantial or there is otherwise no valid interest to be served by a hearing.

Written comments pertinent to the proposed work, as outlined above, will be received by the Corps of Engineers, Wilmington District, until 5pm, April 9, 2007. Comments should be submitted to William Biddlecome, Washington Regulatory Field Office, Post Office Box 1000, Washington, North Carolina 27889.



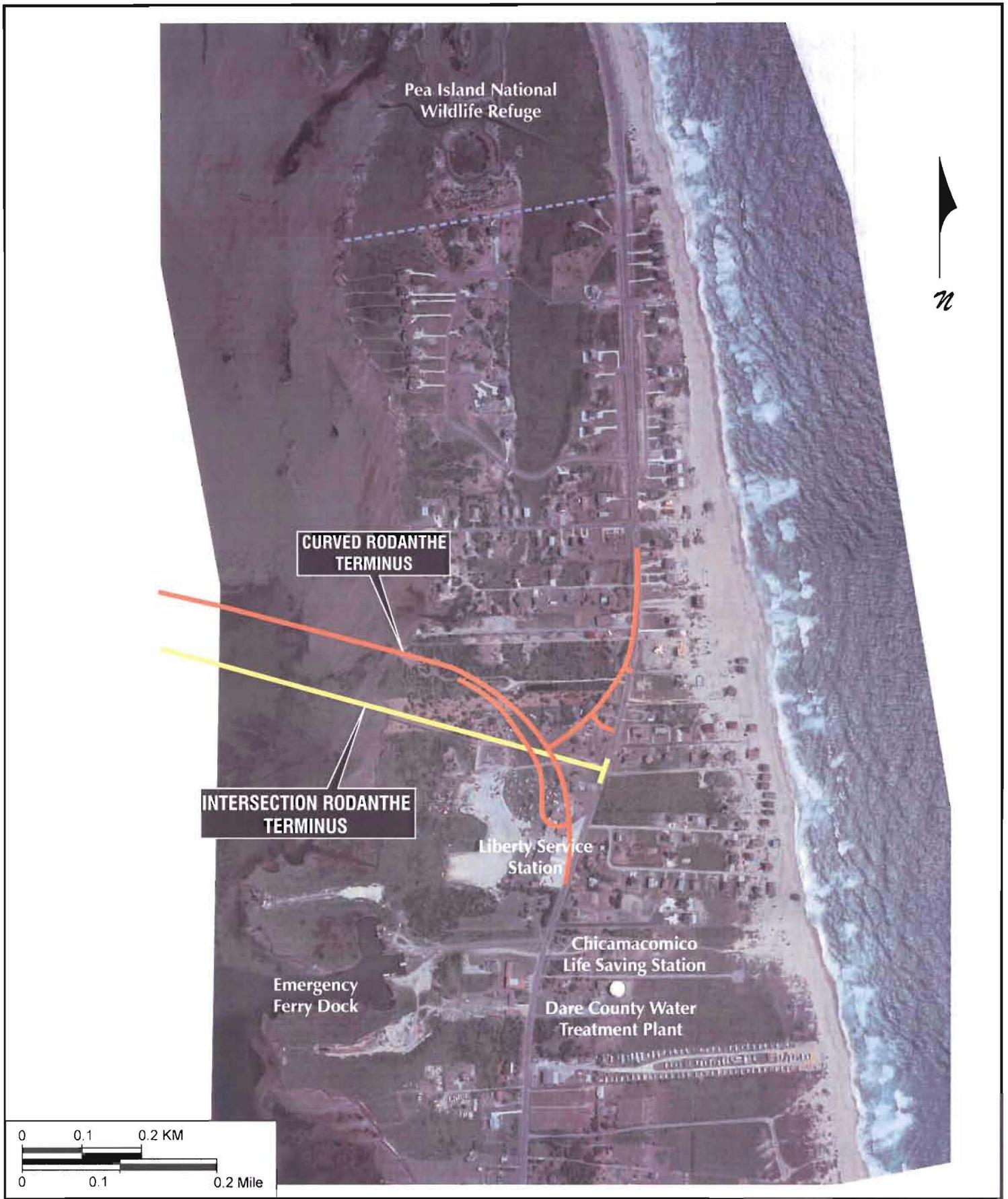
PROJECT LOCATION MAP

Figure
1



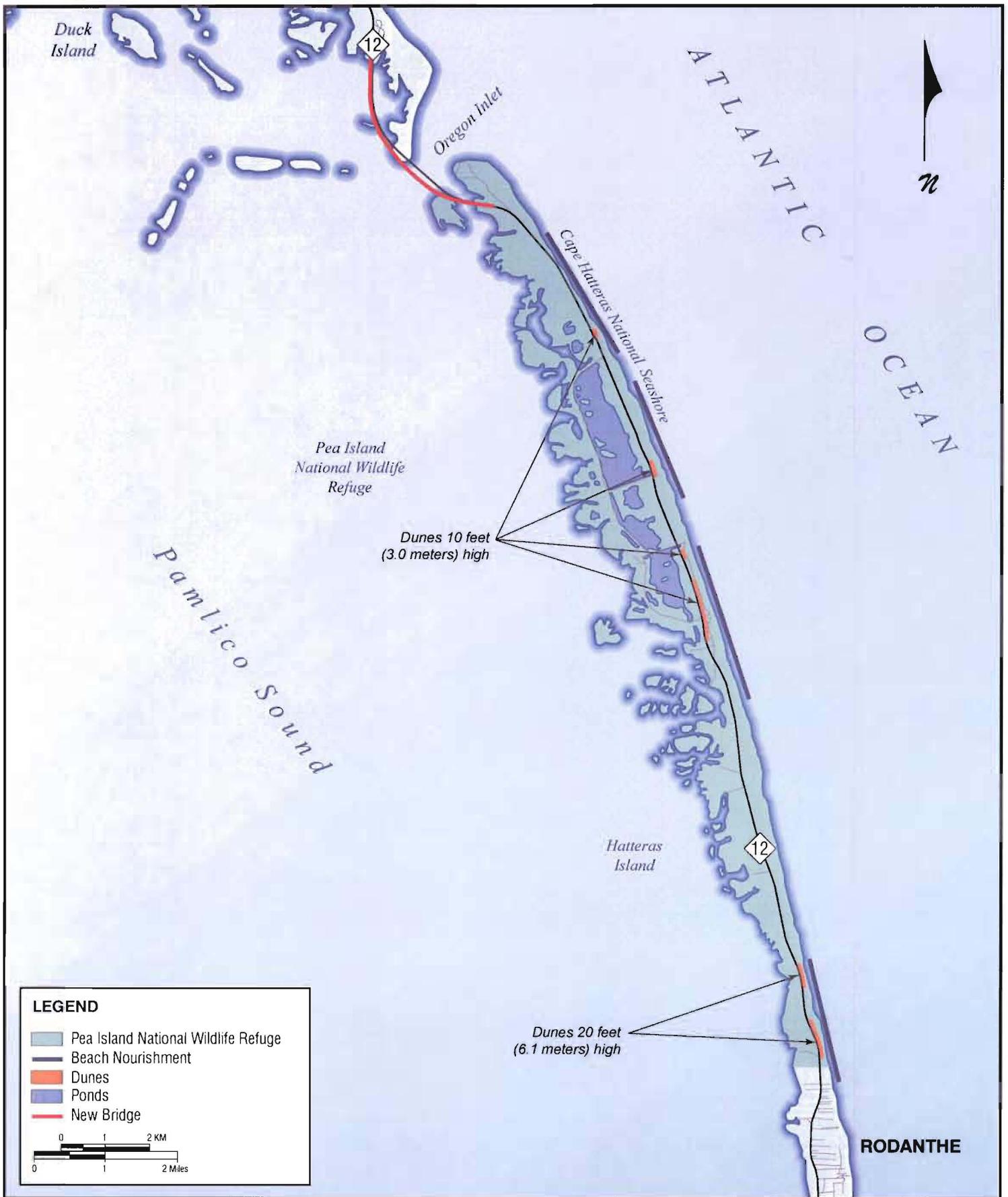
PAMLICO SOUND BRIDGE CORRIDOR

Figure
2



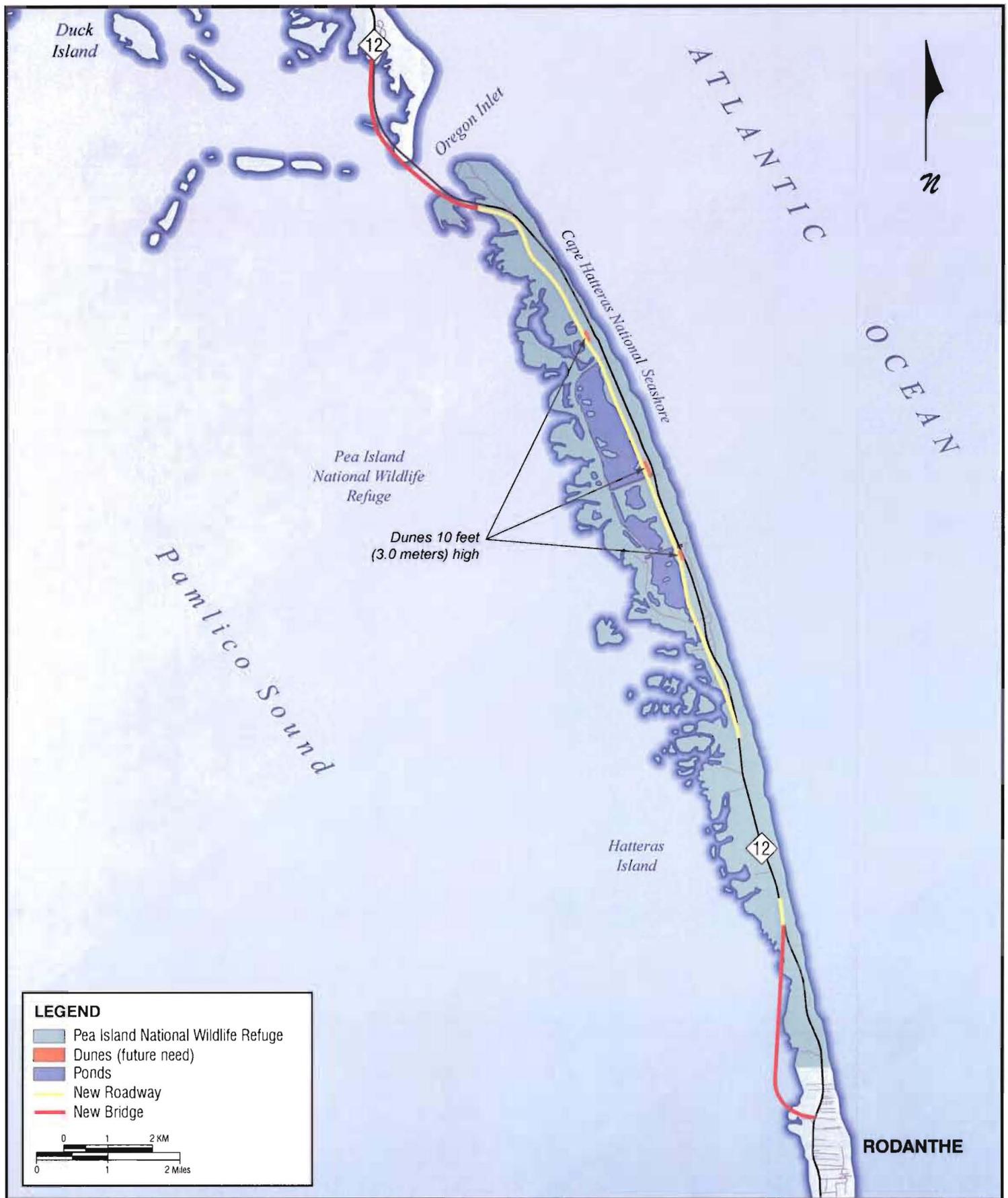
PAMLICO SOUND BRIDGE CORRIDOR - RODANTHE CURVED AND INTERSECTION TERMINUS OPTIONS

Figure
3



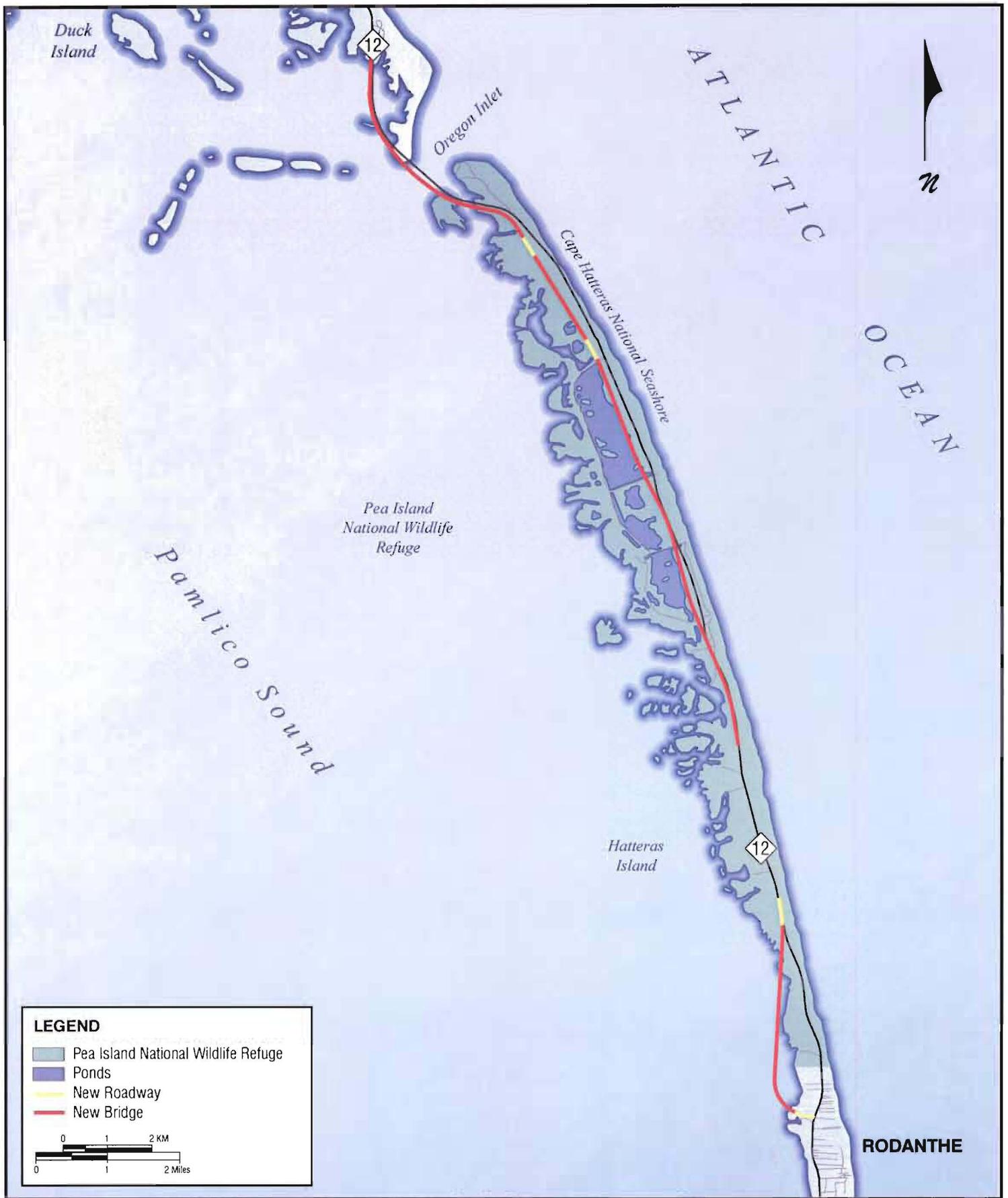
PARALLEL BRIDGE CORRIDOR WITH NOURISHMENT

Figure
4



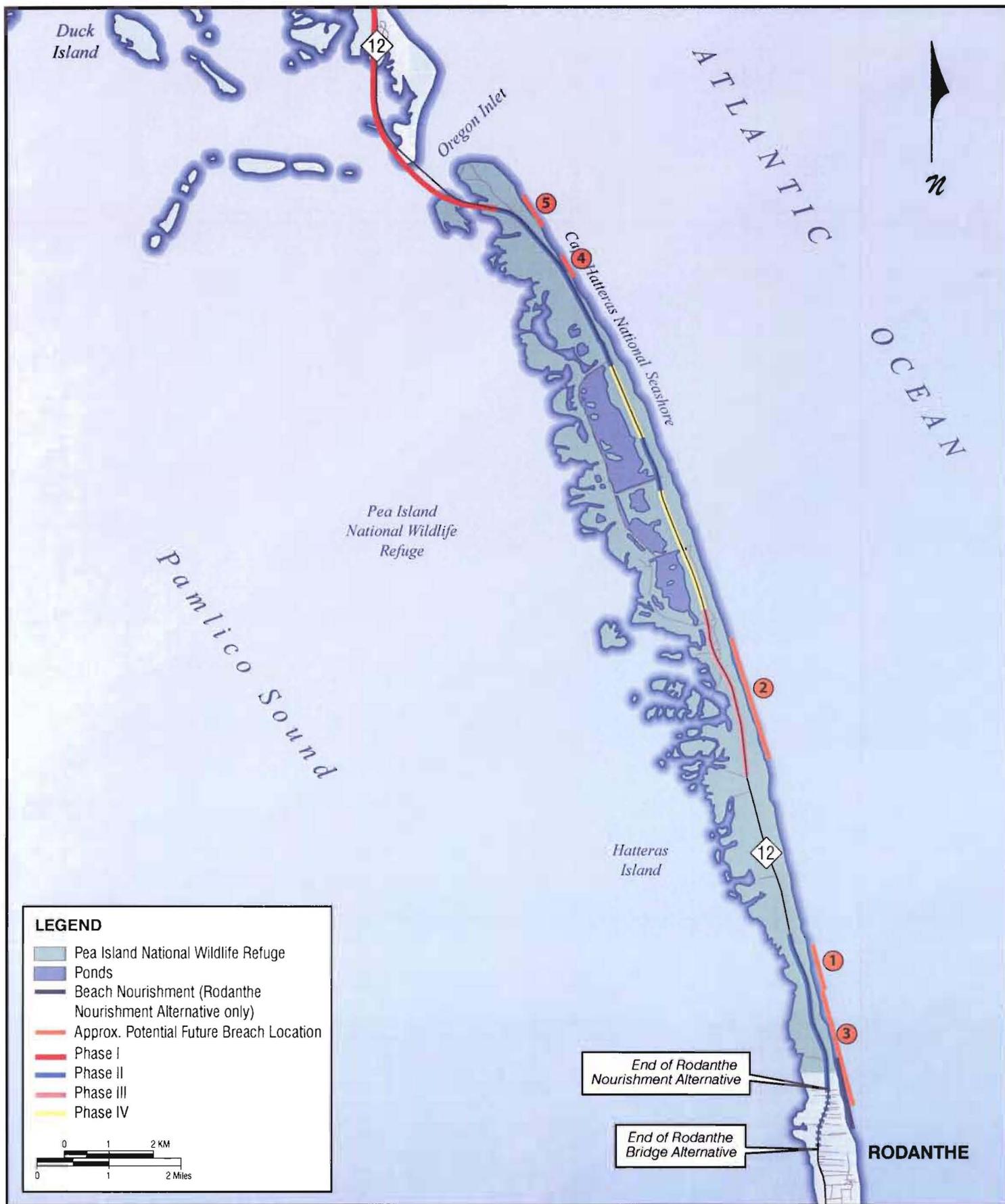
**PARALLEL BRIDGE CORRIDOR WITH NC 12 RELOCATION
ON ROAD NORTH/BRIDGE SOUTH**

Figure
5



**PARALLEL BRIDGE CORRIDOR WITH NC 12 RELOCATION
ON ALL BRIDGE**

Figure
6



**PARALLEL BRIDGE CORRIDOR WITH
PHASED APPROACH**

Figure
7