



SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

Environmental Reference Document

Acknowledgement

This reference document was prepared for the South Carolina Department of Transportation by Civil Engineering Consulting Services, Inc. in collaboration with the SCDOT Environmental Management Office and the Federal Highway Administration.

September 2006

revised Feb 2008

PREFACE

The purpose of this document is to provide general information about environmental laws and regulations that pertain to project development at the South Carolina Department of Transportation. It is intended to serve as a technical resource for the environmental review and permitting process as required by the National Environmental Policy Act (NEPA). In addition to technical guidance, this document provides background information on environmental laws and interagency agreements. Understanding a law's history and intent may aid the user in properly interpreting its application. The document also lists resources for further information and assistance in complying with the technical requirements. One such resource for in-depth guidance on a variety of environmental topics related to transportation is the American Association of State Highway and Transportation Officials (AASHTO) Center for Environmental Excellence web site located at: <http://environment.transportation.org>

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1. LEGAL AND POLICY BACKGROUND

A significant portion of SCDOT's project funding comes from federal funds. As a requirement for receiving and spending these funds SCDOT must comply with various federal laws.

1.1 Federal Laws and Regulations

1.1.1 National Environmental Policy Act of 1969 (NEPA)

The United States Congress enacted the National Environmental Policy Act of 1969 (NEPA) to establish a national policy to protect the environment. The act is codified in Title 42 of the United States Code, Sections 4321 through 4347 (abbreviated as 42 USC 4321-4347). "The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality." The statute assures that proper technical, economic, and environmental analysis are performed. NEPA directs federal agencies to use a systematic, interdisciplinary approach while evaluating environmental factors during the planning process of a federal action. It involves widespread coordination, review, and disclosure with other agencies and the public and documents the environmental analysis process in plain language for the decision-maker and the public.

1.1.2 The Council on Environmental Quality (CEQ)

The CEQ was created under NEPA to take charge of the federal implementation of NEPA, by interpreting the law and developing regulations and guidance. The CEQ exists as an office within the Executive Office of the President and has four main functions:

- Develop environmental policies for the nation;
- Monitor environmental quality;
- Prepare an annual environmental quality report; and
- Monitor federal actions relative to NEPA.

To assist federal agencies in effectively implementing the environmental policies of NEPA, the CEQ issued guidance through the Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act. The regulations state that NEPA procedures must ensure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The regulations also spell out documentation requirements and format, the commenting process and public involvement requirements, and document filing requirements. Lastly, CEQ regulations require each federal agency to develop their own regulations for agency compliance with NEPA.

In 1980, CEQ also issued the guidance document, Forty Questions and Answers on the CEQ Regulations. CEQ has since issued additional guidance and information covering a variety of issues relevant to the NEPA process. The [CEQ regulations](http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm) for implementing NEPA can be found on the CEQ website at: http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm

There are also a number of guidance documents located on the CEQ web site at: <http://ceq.eh.doe.gov/nepa/regs/guidance.html>

1.1.3 Federal Highway Administration (FHWA)

[Title 23 of The Code of Federal Regulations](#) (CFR) contains the FHWA regulations. To address the NEPA responsibilities established by CEQ, the U.S. Department of Transportation (USDOT) agencies, Federal Highway Administration (FHWA) and the Urban Mass Transportation Administration (now the Federal Transit Administration [FTA]) developed detailed guidance for applying NEPA to highway and transit projects.

The regulations require federally funded transportation activities to:

- Comply with all applicable environmental requirements, including NEPA and Section 4(f) of the Department of Transportation Act of 1966;
- Prepare documentation of compliance to a level appropriate to the undertaking's potential to cause significant harm to the environment;
- Evaluate alternatives (including a No Action Alternative) and make decisions that balance the need for the project with the social, economic and environmental impacts of the project;
- Inform governmental entities and the public and provide them an opportunity to be involved in decision-making; and
- Implement measures to avoid, minimize or mitigate environmental impacts.

On October 30, 1987, the FHWA issued a guidance document, [Technical Advisory \(T 6640.8A\), Guidance for Preparing and Processing Environmental and Section 4\(f\) Documents](#). Additional environmental requirements can be found on FHWA's website in the [Environmental Guidebook](#).

1.1.4 Summary of Environmental Legislation Affecting Transportation

(December 1998) (from FHWA Website at http://www.fhwa.dot.gov/environment/env_sum.htm)

General Environmental Statutes

- National Environmental Policy Act
- Section 4(f), DOT Act
- Economic, Social and Environmental Effects, 23USC109h
- Uniform Act (Acquisition and Relocation)
- Title VI, Civil Rights
- Executive Order - Environmental Justice
- Public Hearings, 23 USC128
- Historic Bridges
- Wildflowers
- Highway Beautification

Health

- Safe Drinking Water Act
- Solid Waste Disposal Act
- Federal Insecticide, Fungicide and Rodenticide Act

Historical and Archeological Preservation

- Section 106, National Historic Preservation Act
- Section 110, National Historic Preservation Act
- Archeological and Historic Preservation Act(Moss-Bennett)
- Archeological Resources Protection Act
- Preservation of American Antiquities
- American Indian Religious Freedom Act
- Native American Grave Protection and Repatriation Act

Land and Water Usage

- Wilderness Act
- Wild and Scenic Rivers

- Land and Water Conservation Fund Act (Sec 6(f))
- Executive Order 11990 Protection of Wetlands
- Wetland Mitigation Banking (ISTEA)
- Emergency Wetlands Resources Act of 1986
- National Trails Systems Act
- National Recreation Trails (ISTEA)
- Rivers and Harbors Act (Sec. 9 and Sec. 10)
- Federal Water Pollution Control Act (Sec. 404)
- Executive Order 11988 - Floodplain Management
- National Flood Insurance
- Marine Protection Research and Sanctuaries Act
- Water Bank Act
- Coastal Zone Management Act
- Coastal Barrier Resources Act
- Farmland Protection Policy Act
- Resource Conservation & Recovery Act (Hazardous Waste)
- Superfund(CERCLA)
- Endangered Species Act
- Fish and Wildlife Coordination Act
- Migratory Bird Treaty Act
- Transportation Enhancements Activities (ISTEA)
- Recycled Paving Material (ISTEA)
- Scenic Byways Program (ISTEA)

Noise

- Standards 23USC109

Air Quality

- Clean Air Act (Conformity)
- Clean Air Act (Sanctions)
- Congestion Mitigation & Air Quality Improvement (CMAQ)

General Environmental Statutes

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
National Environmental Policy Act: 42 U.S.C. 4321-4335 (P.L. 91-190) (P.L. 94-83)	23 CFR 771-772 40 CFR 1500-1508 Executive Order 11514 as amended by Executive Order 11991 on NEPA responsibilities	Consider environmental factors through systemic interdisciplinary approach before committing to a course of action.	All FHWA actions	Procedures set forth in CEQ Regulations and 23 CFR 771	Appropriate Federal, State, and local agencies
Section 4(f) of The Department of Transportation Act: 23 U.S.C. 138 49 U.S.C. 303 (P.L. 100-17) (P.L. 97-449) (P.L. 86-670)	23 CFR 771.135	Preserve publicly owned public parklands, waterfowl and wildlife refuges, and significant historic sites.	Significant publicly owned public parklands, recreation areas, wildlife and waterfowl refuges, and all significant historic sites "used" for a highway project.	Specific finding required: 1. Selected alternative must avoid protected areas, unless not feasible or prudent; and 2. Includes all possible planning to minimize harm.	DOI, DOA, HUD, State, or local agencies having jurisdiction and State historic preservation officer (for historic sites)
Economic, social, and environmental effects: 23 U.S.C. 109(h) (P.L. 91-605) 23 U.S.C. 128	23 CFR 771-772	To assure that possible adverse, economic, social, and environmental effects of proposed highway projects and project locations are fully considered and that final decisions on highway projects are made in the best overall public interest.	Applicable to the planning and development of proposed projects on any Federal-Aid system for which the FHWA approves the plans, specifications, and estimates, or has the responsibility for approving a program.	Identification of economic, social, and environmental effects; consideration of alternative courses of action; involvement of other agencies and the public; systematic interdisciplinary approach. The report required by Section 128 on the consideration given to SEE impacts, may be the NEPA compliance document.	Appropriate Federal, State and local agencies.
Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (42 U.S.C. 4601 et seq., P.L. 91-646) as amended by the Uniform Relocation Act Amendments of 1987 (P.L. 100-17)	49 CFR 24	To implement the Uniform Act as amended in an efficient manner; to ensure property owners of real property acquired for and persons displaced by Federal-Aid projects are treated fairly, consistently, and equitably; and so they will not suffer disproportionate injuries.	All projects involving Federal-aid funds.	Procedures set forth in 49 CFR 24	DOT/FHWA has lead responsibility. Appropriate Federal, State, and local agencies.
Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) 23 U.S.C. 324; Americans with Disabilities Act (42 U.S.C. 12101) and related statutes.	49 CFR 21 AND 23 CFR 200	To ensure that no person shall, on the grounds of race, color, national origin, age, sex, or disability be subjected to discrimination under any program or activity receiving federal financial assistance.	All Federal programs and projects.	Procedures set forth in 49 CFR 21 and 23 CFR 200.	FHWA headquarters and field offices.
Executive Order 12898: Environmental Justice	59 CFR 7629, 62 CFR 18377, 60 CFR 33896	Avoid Federal actions which cause disproportionately high and adverse impacts on minority and low income populations with respect to human health and the environment.	All Federal programs and projects.	Procedures set forth in DOT Final Environmental Justice Strategy and DOT order dated April 15,1997.	FHWA headquarters and field offices.

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Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Public hearings: 23 U.S.C. 128	23 CFR 771.111(h)	To ensure adequate opportunity for public hearings on the effects of alternative project locations and major design features; as well as the consistency of the project with local planning goals and objectives.	Public hearings or hearing opportunities are required for projects described in each State's FHWA-approved public involvement procedures.	Public hearings or opportunity for hearings during the consideration of highway location and design proposals are conducted as described in the State's FHWA-approved, public involvement procedures. States must certify to FHWA that such hearings or the opportunity for them have been held and must submit a hearing transcript to FHWA.	Appropriate Federal, State, and local agencies.
Surface Transportation and Uniform Relocation Assistance Act of 1987:Section 123(F) Historic Bridges 23 U.S.C. 144(o) (P.L. 100-17)		Complete an inventory of on and off system bridges to determine their historic significance. Encourage the rehabilitation, reuse, and preservation of historic bridges.	Any bridge that is listed on, or eligible for listing on, the National Register of Historic Places.	1. Identify historic bridges on and off system. 2. Attempt to donate bridge to public or responsible private entity prior to demolition. Preservation costs up to demolition cost available to donee.	State Historic Preservation Officer, Advisory Council on Historic Preservation.
Wildflowers 23 U.S.C. 319(B) (P.L. 100-17)	23 CFR 752	To encourage the use of native wildflowers in highway landscaping.	Native wildflowers are to be planted on any landscaping project undertaken on the Federal-aid highway system.	At least 1/4 of 1% of funds expended on a landscaping project must be used to plant native wildflowers on that project.	FHWA State, Division, Regional contacts.
Highway Beautification Act of 1965 23 U.S.C. 131 23 U.S.C. 136 23 U.S.C. 319 (P.L. 89-285)	23 CFR 750 23 CFR 751 23 CFR 752	To provide effective control of outdoor advertising and junkyards, to protect the public investment, to promote the safety and recreational value of public travel and preserve natural beauty, and to provide landscapes and roadside development reasonably necessary to accommodate the traveling public.	Interstate and primary systems (as primary system existed on June 1, 1991) and NHS.	Procedures set forth in 23 CFR 750, 751, and 752	DOT/FHWA, State, and local agencies.

Health

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Safe Drinking Water Act: 42 U.S.C. 300F-300J-6 (P.L. 93-523) (P.L. 99-339)	FAPG Subpart E	Ensure public health and welfare through safe drinking water.	1. All public drinking water systems and reservoirs (including rest area facilities). 2. Actions which may have a significant impact on an aquifer or wellhead protection area which is the sole or principal drinking water.	1. Compliance with national primary drinking water regulations. 2. Compliance with wellhead protection plans. 3. Compliance with MOAs between EPA and FHWA covering specific sole source aquifers.	EPA Appropriate State agency

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976: 42 U.S.C. 6901, et seq., especially 42 U.S.C. 6961-6964 (P.L. 89-272) (P.L. 91-512) (P.L. 94-580)	40 CFR 256-300	Provide for the recovery, recycling, and environmentally safe disposal of solid wastes.	All projects which involve the recycling or disposal of solid wastes.	Solid wastes will be disposed of according to the rules for specific waste involved.	EPA
Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA): 7 U.S.C. 136-136Y (P.L. 92-516)	40 CFR 152-171	Control the application of pesticides to provide greater protection to man and the environment.	All activities which necessitate use of restricted pesticides.	Using or supervising "restricted use" pesticides will require certification.	EPA

Historical and Archeological Preservation

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Section 106 of the National Historic Preservation Act, as amended: 16 U.S.C. 470f (P.L. 89-665) (P.L. 91-243) (P.L. 93-54) (P.L. 94-422) (P.L. 94-458) (P.L. 96-199) (P.L. 96-244) (P.L. 96-515) (P.L. 102-575)	Executive Order 11593 23 CFR 771 36 CFR 60 36 CFR 63 36 CFR 800	Protect, rehabilitate, restore, and reuse districts, sites, buildings, structures, and objects significant in American architecture, archeology, and culture.	All properties on or eligible for inclusion on the National Register of Historic Places.	1. Identify and determine the effects of project on subject properties. 2. Afford Advisory Council an early opportunity to comment, in accordance with 36 CFR 800. 3. Avoid or mitigate damages to greatest extent possible.	State Historic Preservation Officer Advisory Council on Historic Preservation DOI (NPS)
Section 110 of the National Historic Preservation Act, as amended: 16 U.S.C.470H-2 (P.L. 96-515)	36 CFR 65 36 CFR 78	Protect National historic landmarks. Record historic properties prior to demolition.	All properties designated as National historic landmarks. All properties on or eligible for inclusion on the National Register of Historic Places.	1. Identify and determine the effects of project on subject properties. 2. Afford Advisory Council an early opportunity to comment, in accordance with 36 CFR 800.	State Historic Preservation Officer Advisory Council on Historic Preservation DOI (NPS)
Archeological and Historic Preservation Act: 16 U.S.C. 469-469C (P.L. 93-291) (Moss-Bennett Act)	36 CFR 66 (Draft)	Preserving significant historical and archeological data from loss or destruction.	Any unexpected archeological resources discovered as a result of a Federal construction project or Federally licensed activity or program.	1. Notify DOI (NPS) when a Federal project may result in the loss or destruction of a historic or archeological property. 2. DOI and/or the Federal agency may undertake survey or data recovery.	DOI (NPS) Departmental consulting archeologist State Historic Preservation Officer

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Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Archeological Resources Protection Act: 16 U.S.C. 470aa-11 (P.L. 96-95)	18 CFR 1312 32 CFR 229 36 CFR 79 36 CFR 296 43 CFR 7	Preserve and protect paleontological resources, historic monuments, memorials, and antiquities from loss or destruction.	Archeological resources on Federally or Native American-owned property.	1. Ensure contractor obtains permit, and identifies and evaluates resource. 2. Mitigate or avoid resource in consultation with appropriate officials in the State. 3. If necessary, apply for permission to examine, remove, or excavate such objects.	Department or agency having jurisdiction over land on which resources may be situated (BIA, BLM, DOA, DOD, NPS, TVA, USFS, State Historic Preservation Officer, Recognized Indian Tribe, if appropriate)
Act for the Preservation of American Antiquities 16 U.S.C. 431-433 (P.L. 59-209)	36 CFR 251.50-.64 43 CFR 3			1. Notify DOI (NPS) when a Federal project may result in the loss or destruction of a historic or archeological property. 2. DOI and/or the Federal agency may undertake survey or data recovery.	DOI (NPS) Departmental consulting archeologist State Historic Preservation Officer
American Indian Religious Freedom Act: 42 U.S.C. 1996 (P.L. 95-341)	Executive Order No. 13007	Protect places of religious importance to American Indians, Eskimos, and Native Hawaiians.	All projects which affect places of religious importance to Native Americans.	Consult with knowledgeable sources to identify and determine any effects on places of religious importance. Comply with Section 106 procedures if the property is historic.	BIA State Historic Preservation Officer State Indian Liaison Advisory Council on Historic Preservation if appropriate.
Native American Grave Protection and Repatriation Act: (P.L. 101-601) 25 U.S.C. 3001 et seq.	43 CFR 10	Protect human remains and cultural material of Native American and Hawaiian groups.	Federal lands and Tribal lands.	Consult with Native American group.	DOI (NPS) BIA State Historic Preservation Officer.

Land and Water Usage

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Wilderness Act: 16 U.S.C. 1131-1136	36 CFR 293 43 CFR 19, 8560 50 CFR 35	Preserve and protect wilderness areas in their natural condition for use and enjoyment by present and future generations.	All lands designated as part of the wilderness system by congress.	Apply for modification or adjustment of wilderness boundary by either Secretary of the Interior or Agriculture, as appropriate.	AGRICULTURE (USFS), DOI (FWS, NPS, BLM), AND State agencies
Wild and Scenic Rivers Act: 16 U.S.C. 1271-1287	36 CFR 297	Preserve and protect wild and scenic rivers and immediate environments for benefit of present and future generations.	All projects which affect designated and potential wild, scenic, and recreational rivers, and/or immediate environments.	Coordinate project proposals and reports with appropriate Federal Agency.	DOI (NPS) and/or AGRICULTURE (USFS) State agencies.

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Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Land and Water Conservation Fund Act (Section 6(f)): 16 U.S.C. 460 -4 TO -11 (P.L. 88-578)		Preserve, develop, and assure the quality and quantity of outdoor recreation resources for present and future generations.	All projects which impact recreational lands purchased or improved with land and water conservation funds.	The Secretary of the Interior must approve any conversion of property acquired or developed with assistance under this act to other than public, outdoor recreation use.	DOI State agencies
Executive Order 11990: Protection of Wetlands	DOT Order 5660.1A 23 CFR 777	To avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.	Federally undertaken, financed, or assisted construction, and improvements in or with significant impacts on wetlands.	Evaluate and mitigate impacts on wetlands. Specific finding required in final environmental document.	DOI (FWS), EPA, USCE, NMFS, NRCS, State agencies
Intermodal Surface Transportation Efficiency Act of 1991. Wetlands Mitigation Banks: Sec. 1006-1007 (P.L. 102-240,105 STAT 1914) 23 U.S.C. 103(i)(13) 23 U.S.C. 133(b)(11)	23 CFR 771; 777	To mitigate wetlands impacts directly associated with projects funded through NHS and STP, by participating in wetland mitigation banks, restoration, enhancement and creation of wetlands authorized under the Water Resources Dev. Act, and through contributions to statewide and regional efforts.	Federally undertaken, financed, or assisted construction, and improvements, or with impacts on wetlands.	Evaluate and mitigate impacts on wetlands. Specific finding required in final environmental document.	DOI (FWS), EPA, USCE, NMFS, NRCS, State agencies
Emergency Wetlands Resources Act of 1986: 16 U.S.C. 3921; 3931. (P.L. 99-645)		To promote the conservation of wetlands in the U.S. in order to maintain the public benefits they provide.	All projects which may impact wetlands.	1. Preparation of a national wetlands priority conservation plan which provides priority with respect to Federal and State acquisition. 2. Provide direction for the national wetlands inventory.	FWS
National Trails System Act: 16 U.S.C. 1241-1249	36 CFR 251 43 CFR 8350	Provide for outdoor recreation needs and encourage outdoor recreation.	Projects affecting National scenic or historic trails designated by Congress and lands through which such trails pass. National recreation trails and side and connecting trails are proposed by local sponsors and approved by DOI and DOA	1. Apply for right-of-way easement from the Secretary of Interior or Agriculture, as appropriate. 2. Ensure that potential trail properties are made available for use as recreational and scenic trails.	DOI (NPS) Agriculture (USFS) Other Federal land management agencies may apply for designation
National Recreational Trails Fund Act of the Intermodal Surface Transportation Efficiency Act of 1991: 16 U.S.C. 1261 (P.L. 102-240)		To establish a program to allocate funds to the States to provide and maintain recreational trail and trail-related projects.	Trails and trail- related projects which are identified in, or which further a specific goal of, a trail plan included or referenced in a Statewide comprehensive outdoor recreation plan, as required by the Land and Water Conservation Fund Act	Project-sponsor applies to the State, and FHWA approves spending for project. The State may be a project sponsor. Assured access to funds is given for motorized, non-motorized, and discretionary recreation uses. States shall give preference to projects with diversified uses.	FHWA
Rivers and Harbors Act of 1899: 33 U.S.C. 401, et seq., as amended and supplemented.	23 CFR 650, Subparts D & H 33 CFR 114-115	Protection of navigable waters in the U.S.	Any construction affecting navigable waters and any obstruction, excavation, or filling.	Must obtain approval of plans for construction, dumping, and dredging permits (Sec. 10) And bridge permits(Sec. 9)	USCE USCG EPA State agencies.

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Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Federal Water Pollution Control Act (1972), as amended by the Clean Water Act (1977 & 1987): 33 U.S.C. 1251-1376 (P.L. 92-500) (P.L. 95-217) (P.L. 100-4)	DOT Order 5660.1A 23 CFR 650 Subpart B, 771 33 CFR 209, 320-323, 325, 328, 329-40 CFR 121-125, 129-131, 133, 135-136, 230-231	Restore and maintain chemical, physical, and biological integrity of the Nation's waters through prevention, reduction, and elimination of pollution.	Any discharge of a pollutant into waters of the U.S.	1. Obtain permit for dredge or fill material from USCE or State agency, as appropriate. (Section 404) 2. Permits for all other discharges are to be acquired from EPA or appropriate State agency (Section 402) Phase 1-NPDES-Issued for municipal separate storm sewers serving large (over 250,000) populations or medium (over 100,000). Storm water discharges assoc. with industrial waste. Activities including construction sites > 5 acres. 3. Water quality certification is required from State Water Resource Agency. (Section 401) 4. All projects shall be consistent with the State Non-Point Source Pollution Management Program. (Section 319)	USCE, EPA, designated State Water Quality Control Agency, designated State Non-Point Source Pollution Agency
Executive Order 11988, Floodplain Management, as amended by Executive Order 12148	DOT Order 5650.2 23 CFR 650, Subpart A, 23 CFR 771	To avoid the long- and short-term adverse impacts associated with the occupancy and modification of floodplains, and to restore and preserve the natural and beneficial values served by floodplains.	All construction of Federal or Federally-aided buildings, structures, roads, or facilities which encroach upon or affect the base floodplain.	1. Assessment of floodplain hazards. 2. Specific finding required in final environmental document for significant encroachments.	FEMA State and local agencies
National Flood Insurance Act: (P.L. 90-448) Flood Disaster Protection Act: (P.L. 93-234) 42 U.S.C. 4001-4128	DOT Order 5650.2 23 CFR 650, Subpart A, 7 23 CFR 771, 44 CFR 59-62, 64-68, 70-71, 75-77	A. Identify flood-prone areas and provide insurance. B. Requires purchase of insurance for buildings in special flood-hazard areas.	Any Federally assisted acquisition or construction project in an area identified as having special flood hazards.	Avoid construction in, or design to be consistent with, FEMA-identified flood-hazard areas.	FEMA State and local agencies
Marine Protection Research and Sanctuaries Act of 1972, as amended: 33 U.S.C. 1401-1445 (P.L. 92-532) (P.L. 93-254) (P.L. 96-572)	33 CFR 320, 330 40 CFR 220-225, 227-228, 230-231	Regulate dumping of material into U.S. ocean waters	Any transportation to and dumping into the open sea.	Apply for permit in accordance with procedures.	EPA USCE, if dredge material
Water Bank Act: 16 U.S.C. 1301-1311 (P.L. 91-559) (P.L. 96-182)	7 CFR 752	Preserve, restore, and improve wetlands of the nation.	Any agreements with landowners and operators in important migratory waterfowl nesting and breeding areas.	Apply procedures established for implementing Executive Order 11990.	Secretary of Agriculture Secretary of Interior

LEGAL AND POLICY BACKGROUND

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Coastal Zone Management Act of 1972: 16 U.S.C. 145 et seq. (P.L. 92-583) (P.L. 94-310) (P.L. 96-464)	15 CFR 923, 926, 930 23 CFR 771	Preserve, protect, develop, and (where possible) restore and enhance resources of the coastal zone.	All projects significantly affecting areas under the control of the State Coastal Zone Management Agency for which a plan is approved by the Dept. Of Commerce.	Ensure that projects comply with Federal consistency regulations, management measures, and the appropriate approved State plan for Coastal Zone Management Programs.	State Coastal Zone Management Agency and the Dept. of Commerce (OCZM) (NOAA), and EPA
Coastal Zone Management Act Reauthorization Amendments of 1990: 6217(g)	23 CFR 650.211	Manage non-point source pollution of activities located in coastal zones.	All developmental activities located in coastal zone areas will be subject to non-point source control measures developed by the State Coastal Zone Agency.	Ensure projects comply with State CZM Plans for controlling non-point sources.	State CZM Agency, OCZM (NOAA), EPA
Coastal Barrier Resources Act, as amended: 16 U.S.C. 3501-3510 42 U.S.C. 4028 (P.L. 97-348) Great Lakes Coastal Barrier Act of 1988: (P.L. 100-707)	13 CFR 116 Subparts D, E 44 CFR 71, 205 Subpart N	Minimize the loss of human life, wasteful expenditures of Federal revenues, and the damage to fish, wildlife, and other natural resources.	Any project that may occur within the boundaries of a designated coastal barrier unit. Exemptions for certain actions are possible.	Coordinate early with the FWS regional director. Consult maps that depict the boundaries of each coastal barrier resources system unit.	FEMA DOI (FWS)
Farmland Protection Policy Act of 1981: 7 U.S.C. 4201-4209 (P.L. 97-98) (P.L. 99-198)	7 CFR 658	Minimize impacts on farmland and maximize compatibility with state and local farmland programs and policies.	All projects that take right-of-way in farmland, as defined by the regulation.	1. Early coordination with the NRCS. 2. Land evaluation and site assessment. 3. Determination of whether or not to proceed with farmland conversion, based on severity of impacts and other environmental considerations.	NRCS
Resource Conservation and Recovery Act of 1976 (RCRA), as amended: 42 U.S.C. 6901, et seq. (P.L. 94-580) (P.L. 98-616)	40 CFR 260-271	Protect human health and the environment. Prohibit open dumping. Manage solid wastes. Regulate treatment, storage, transportation, and disposal of hazardous waste.	Any project that takes right-of-way containing a hazardous waste.	Coordinate with EPA or State agency on remedial action.	EPA or State agency approved by EPA, if any.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended: 42 U.S.C. 9601-9657 (P.L. 96-510) Superfund Amendments and Reauthorization Act of 1986: (SARA) (P.L. 99-499)	40 CFR 300 43 CFR 11	Provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites.	Any project that might take right-of-way containing a hazardous substance.	1. Avoid hazardous waste sites, if possible. 2. Check EPA lists of hazardous waste sites. 3. Field surveys and reviews of past and present land use. 4. Contact appropriate officials if uncertainty exists. 5. If hazardous waste is present or suspected, coordinate with appropriate officials. 6. If hazardous waste encountered during construction, stop project and develop remedial action.	EPA or State agency approved by EPA, if any.

LEGAL AND POLICY BACKGROUND

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Endangered Species Act of 1973, as amended: 16 U.S.C.1531-1543 (P.L. 93-205) (P.L. 94-359) (P.L. 95-632) (P.L. 96-159) (P.L. 97-304)	7 CFR 355 50 CFR 17, 23, 81, 222, 225-227, 402, 424, 450-453	Conserve species of fish, wildlife and plants facing extinction.	Any action that is likely to jeopardize continued existence of such endangered/threatened species or result in destruction or modification of critical habitat.	Consult with the Secretary of the Interior or Commerce, as appropriate.	DOI (FWS) COMMERCE (NMFS)
Fish and Wildlife Coordination Act: 16 U.S.C. 661-666(C) (P.L. 85-624) (P.L. 89-72) (P.L. 95-616)		Conservation, maintenance, and management of wildlife resources.	1. Any project which involves impoundment (surface area of 10 acres or more), diversion, channel deepening, or other modification of a stream or other body of water. 2. Transfer of property by Federal agencies to State agencies for wildlife conservation purposes.	Coordinate early in project development with FWS and State Fish and Wildlife Agency	DOI (FWS) State Fish and Wildlife Agencies
Migratory Bird Treaty Act 16 U.S.C. 760c-760g		To protect most common wild birds found in the United States.	Makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird. Indirect killing of birds by destroying their nests and eggs, is covered by the act, so construction in nesting areas can constitute a taking.	The FWS is to review and comment on the effects of a proposal that could kill birds, even indirectly.	DOI (FWS), State Fish and Wildlife Agencies
Intermodal Surface Transportation Efficiency Act of 1991. Transportation Enhancement Activities: Sec. 1007 (P.L. 102-240) 23 U.S.C. 101(g); 133(b)(c)		To provide funds for Transportation Enhancement activities, such as landscaping and beautification, rehabilitation and operation of historic transportation facilities.	Funds are to be used in all areas except roads classified as local or rural minor collectors, unless such roads are on a Federal-Aid highway system	10% of STP funds annually apportioned to each State are for Transportation Enhancement activities.	FHWA
Intermodal Surface Transportation Efficiency Act of 1991 Sec. 1038 Recycled Paving Material: (P.L. 102-240)		To reduce the use of virgin materials used for paving our nations highways.	Each State shall certify that it has satisfied the minimum utilization requirement for asphalt pavement containing recycled rubber.	20% of asphalt funded with Federal-Aid in each State is required to include recycled rubber by 1997.	FHWA
Intermodal Surface Transportation Efficiency Act of 1991. Sec. 1047 Scenic Byways Program: (P.L. 102-240)		To identify and develop those special scenic byways that offer outstanding scenic, historic, natural, cultural, recreational, or archaeological values.	Any public road or highway which meets the criteria for inclusion as a Scenic Byway or an All-American Road.	Nominations may originate from any local government, private group or individual, but must come through the States. Final designations are made by the Secretary of Transportation.	FHWA

Noise

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Standards: 23 U.S.C. 109(f) (P.L. 91-605) (P.L. 93-87)	23 CFR 772	Promulgate noise standards for highway traffic.	All Federally funded projects for the construction of a highway on new location, or the physical alteration of an existing highway which significantly changes either the vertical or horizontal alignment or increases the number of through-traffic lanes.	1. Noise impact analysis. 2. Analysis of mitigation measures. 3. Incorporate reasonable and feasible noise abatement measures to reduce or eliminate noise impact.	

Air Quality

Legislative Reference	Regulations Reference	Purpose	Applicability	General Procedures	Agency for Coordination and Consultation
Clean Air Act (as amended), Transportation Conformity Rule: 23 U.S.C. 109(f) 42 U.S.C. 7521 (a) (P.L. 101-549)	23 CFR 771 40 CFR 51 and 93	To insure that transportation plans, programs and projects conform to the State's air quality implementation plans.	Non-attainment and maintenance areas.	1. Transportation plans, programs, and projects must conform with State Implementation Plan (SIPs) that provide for attainment of the national ambient air quality standards.	FTA, EPA, MPOs, State Departments of Transportation and State and local Air Quality Control Agencies.
Clean Air Act (as amended), Sanctions: 42 U.S.C. 7509, sec.179 (b) sec. 110 (m) (P.L. 101-549)	40 CFR 52	To restrict federal funding and approvals for highway projects in States that fail to submit or implement an adequate State Implementation Plan (SIP).	In non-attainment areas 24 months after EPA has identified a SIP deficiency. May be applied Statewide under separate rulemaking.	1. After EPA finds that a State failed to submit or implement a SIP, that the SIP is incomplete, or disapproves a SIP, an 18 month time clock begins. 2. Unless deficiencies are corrected within 18 months, 2:1 offset sanctions are applied. Six months later highway sanctions are applied.	EPA
Intermodal Surface Transportation Efficiency Act of 1991. Congestion Mitigation and Air Quality Improvement Program (CMAQ): Sec 1008 23 U.S.C. 149		To assist non-attainment and maintenance areas reduce transportation related emissions.	Transportation programs or projects in non-attainment areas and areas redesignated to maintenance that are likely to contribute to the attainment or maintenance of the NAAQS.	1. Project sponsor (transit operator, municipal office, etc.) develops formal proposal to improve air quality. 2. Submit to the MPO, State for evaluation, and approval. 3. Included in the TIP and approved as eligible by FTA and FHWA in consultation with EPA.	

Acronyms

BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
DOA	Department of the Army
DOD	Department of Defense
DOI	Department of the Interior
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAPG	Federal Aid Program Guide
FEMA	Federal Emergency Management Agency
FHPM	Federal-Aid Highway Program Manual
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FTA	Federal Transit Authority
FWPCA	Federal Water Pollution Control Act
FWS	Fish and Wildlife Service
HUD	Housing and Urban Development
ISTEA	Intermodal Surface Transportation Act of 1991
MPO	Metropolitan Planning Organizations
NMFS	National Marine Fisheries Service
NPDES	National Pollution Discharge Elimination System
NPS	National Park Service
NRCS	National Resources Conservation Service
OCZM	Office of Coastal Zone Management
P.L.	Public Law
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SEE	Social, economic, and environmental
SHPO	State Historic Preservation Act
SIP	State Implementation Plan
STAT.	Statute
STP	Surface Transportation Program
TVA	Tennessee Valley Authority
U.S.C.	United States Code
USCE	U.S. Corps of Engineers
USCG	U.S. Coast Guard
USFS	U.S. Forest Service

In addition to the regulations shown in the table above, Congress recently passed The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) which was enacted August 10, 2005, as Public Law 109-59. FHWA has established a [web site for SAFETEA-LU](#) . SAFETEA-LU also established [rules for de minimis impacts to 4\(f\) properties](#).

1.2 South Carolina Laws and Regulations

1.2.1 Eminent Domain

South Carolina Law (Section 28-2-70 (C)) states that representatives of the SCDOT, after reasonable notice to the landowner, can enter any property for purposes of surveying, environmental studies, archaeological investigations, etc. The consultant would compile this notice and forward it by in writing to the Environmental Management Office, who would then advertise the notice in local newspapers. Studies and entrance to the property can take place the day the notice is published. However, it is recommended to directly inform a property owner that a representative of SCDOT is on their property.

1.2.2 SC Navigable Waters

Any activity, such as construction, dredging, filling or other alterations, below the mean high water line (tidal waters) or the ordinary high water mark (nontidal waters) in a navigable waterway of South Carolina must first receive a Construction in Navigable Waters Permit. The only navigable waterways in South Carolina where this permit is not required is in tidal areas (also know as critical areas) that are under the direct permitting jurisdiction of DHEC's Office of Ocean and Coastal Resources Management. This regulation can be found on the web at: <http://www.scdhec.net/environment/water/regs/r19-450.pdf> and a guidance document can be found on the web at: <http://www.scdhec.net/environment/water/docs/gdnavwt.pdf>

1.2.3 401 Water Quality Certification

The SC Department of Health and Environmental Control administers the Water Quality Certification program pursuant to Section 401 of the Federal Clean Water Act. Section 401 requires that the State issue certification for any activity which requires a Federal permit and may result in a discharge to State waters. This certification must state that applicable effluent limits and water quality standards will not be violated. This regulation can be found on the web at: <http://www.scdhec.net/environment/water/regs/r61-101.pdf>

2. TRANSPORTATION PLANNING

Why is transportation planning important in South Carolina? Transportation planners identify the transportation infrastructure needs of today and project the needs of tomorrow. Planners model how shifts in population and commerce along with local and regional goals affect the multiple modes of transportation from roads to rail lines and forecast where improvements are needed. Maintaining an efficient and reliable transportation network provides numerous benefits to the state such as a healthy and vibrant economy as well as improvements in the livelihood of its citizens.

The largest two groups of planning entities within the state are the COGs and MPOs:

There are ten Council of Governments (COG) within the state. Each COG is made up of a regional coalition of county and local governments, elected officials, and citizens addressing their region's infrastructure, economic development and community needs. In 1997, the SCDOT began working with COGs to plan and coordinate rural roadway improvements in each of their regions within the state. Today, in addition to their many functions, they also develop the region's long range (20+ years) transportation plan with input from the citizens within the region. (See the [list of COGs](#) on page 212 in [Appendix D](#))

The ten [Metropolitan Planning Organizations \(MPO\)](#) encompass the state's larger cities and more densely populated areas. Similar to the COGs they are made up of representatives of local governments, elected officials, and transportation authorities. The focus of the MPO is on transportation planning and policy making within its designated area. In addition to creating its own long range transportation plan like the COG, the MPO is also responsible for developing a short range (3 year) plan known as a Transportation Improvement Plan (TIP).

The federal transportation planning process is a cooperative effort between the SCDOT the state's COGs, MPOs, and local/regional transit providers. Each of these organizations plays a key role in the development of the overall statewide plan known as the STIP (State Transportation Improvement Plan). The seven-member SCDOT Commission is responsible for approving the State Transportation Improvement Plan (STIP). The SCDOT is responsible for overseeing the STIP planning process, executing the planned projects, and distributing the state and federal transportation funds.

Under the new guidance of the transportation bill, SAFETEA-LU, the STIP is now a six-year transportation plan for the state. The STIP must be updated at a minimum of every four years;

however, SCDOT has chosen to update the STIP every three years. In addition, the SCDOT revises the STIP throughout the year to reflect the most current project status and information. For more information on transportation planning please visit:

SCDOT's website (below) and select any of the topics under the "Planning" heading
<http://www.scdot.org/inside/default.shtml>

or the Federal Highway Administrations planning website (below).
<http://www.fhwa.dot.gov/planning/index.htm>

3. PROJECT SCOPING

The purpose of scoping activities is to identify issues early in the NEPA process that will need to be considered throughout project development. Scoping helps to determine:

- Study boundaries,
- Roles and expectations of agencies,
- Project schedule and review timeframes,
- Sensitive environmental factors to be considered for analyses, and
- Technical studies that may be required, including appropriate methodological approaches.

Each of these issues may lead to conflict or disputes and often involve questions concerning:

- Appropriate time requirements,
- Each agency's level of effort and how it will be accomplished,
- Environmental resources or evaluation of impacts that will be important factors in the decision-making,
- The extent or methodology for data collection or environmental analyses, and
- The appropriate classification level of documentation [Environmental Impact Statement (EIS), Environmental Assessment (EA) or Categorical Exclusion (CE)] for the proposed action.

(from FHWA's website:

<http://www.environment.fhwa.dot.gov/strmlng/adrguide/adr4.asp>)

Defining the [purpose and need](#) of a project is an important step in project scoping. Project Managers have an obligation, when identifying and evaluating alternative solutions, to address the project purpose and need and to identify the proposed solution that results in the most cost-effective and environmentally acceptable solution.

4. EARLY COORDINATION

The early coordination process is a valuable tool in determining the scope of issues to be addressed and focusing on the proposed project's areas of concern. This process involves the exchange of information with appropriate Federal, State and local agencies, as well as special interest groups from the inception of the proposed project.

4.1 Interagency Coordination

Early interagency coordination is an essential part of the environmental document and permitting process. Early coordination helps identify issues of concern and provides the means for addressing those issues. Benefits of early coordination include good transportation decision making, reduced time and costs, more efficient and cooperative working relationships between partners, and broad based, ongoing support throughout the project development process.

Field reviews involving the SCDOT, USACE, SHPO, DHEC, USFWS, and FHWA are completed on many projects prior to the preparation of an environmental document. Personnel from various disciplines within these agencies complete a preliminary assessment of the project corridor to identify potential areas of concern. These issues are discussed and a course of action is prepared to address problem areas during project development.

In an effort to streamline reviews and strengthen interagency coordination, SCDOT currently funds liaison positions at the USACE, SHPO, DHEC, and USFWS. SCDOT and FHWA also meet regularly with resource agencies under the Liaison and Interagency Coordination Effort (LICE). LICE members attend the annual partnering meeting in December each year, and meet at least quarterly. The annual meeting allows agencies to look at their overall processes, past successes and future goals. LICE meetings are more project-specific than the annual meeting. Through greater understanding of each other's needs and constraints, each agency can make better decisions and resolve problems earlier in project development (from FHWA's website, http://www.environment.fhwa.dot.gov/integ/workshop_fy06q2_3.asp)

Interagency coordination with resource and regulatory agencies on permitting issues may also consist of up to three presentations before the Interagency Team: initial, progress and pre-application presentation. The initial presentation is an informational meeting to describe and briefly highlight the project corridor or proposed preliminary design. This presentation is

generally reserved for projects where there will be significant or controversial environmental impacts. The progress presentation describes the project once viable alternatives or a preferred alternative have been identified and the impacts have been preliminarily assessed. The pre-application meeting outlines the preferred alternative and is held just prior to submitting the permit. All issues should be resolved by this time and the permit should be processed in an expeditious manner by the agencies.

Input from early coordination is used during the project development process to aid SCDOT in designing or modifying projects that minimize environmental impacts. This coordination reduces or eliminates many of the problems that can occur at the end of the project development process, thereby, ensuring minimal delays in project schedules.

4.2 Letter of Intent

A letter will be drafted describing the project's location and the proposed improvements with an attached map of the area indicating the project's limits. The letter will be signed by the Environmental Manager and distributed on SCDOT letterhead. The letter will request input within 30 days of receipt. To expedite the process, it is requested that the letter be forwarded to the Environmental Management Office by e-mail. Early coordination involves other agencies such as US Army Corps of Engineers, US Fish and Wildlife Service, and SCDHEC. A copy of a [Letter of Intent](#) can be found on page 52 in [Appendix B](#). A list of environmental contacts is included as [Appendix A](#).

5. PUBLIC INVOLVEMENT PLAN

5.1 Public Involvement Plan

Once a project has been defined, the surveys begun and a footprint established, a public involvement plan should be developed. Public meetings are generally held as the main portion of a public involvement plan, however, some projects may require additional means of involving the public, which can include survey flags with the Program Manager's phone number, web sites, newsletters, toll free hotlines and additional public meetings. Early public involvement results in timely project completion because of community participation and early conflict resolution. A [SCDOT Public Involvement document](#) can be found on page **213** in [Appendix D](#).

5.2 Public Information Meeting

A public information meeting should be scheduled early to inform area residents of the project and involve them in the project development process. Notices of the meeting are published in the newspaper local to the project location and/or posted in visible locations in the vicinity of the meeting. The meeting time and location should be selected to accommodate the majority of citizens in the area. Solicitation of community input results in a positive partnership with the citizens and can expedite project development. The MPO's and COG's should also be involved in the public involvement process and can assist in finding a suitable location for meetings.

SCDOT uses an informal open house format for most public meetings. The meeting generally lasts two to three hours. SCDOT personnel should be available to discuss the project and answer questions. Handouts are prepared with a project summary and request and instructions for comments. Displays showing the proposed project or proposed alternatives are available at the meeting for the public to review. An example of a [public information meeting handout](#) can be found on page **56** in [Appendix B](#).

5.3 Public Hearings

In accordance with 23 CFR 771.111(h), each state must have procedures approved by FHWA to carry out a public involvement and public hearing process. Most SCDOT public hearings will be a combination location and design hearings, utilizing the “open house” format. A sample [Location and Design Public Hearing Notice](#) can be found on page 57 in [Appendix B](#). If several alternatives are being considered and no preferred alternative has been identified, a location hearing would be held.

In June 2007, the General Assembly passed new regulations (Section 57-1-370 (G) affecting the Department’s public involvement procedures. Under the new regulations, the Department shall:

- 1.) Conduct a public hearing in each county in which a public hearing is required by federal regulations for the purposes of sharing project information with the public and address their concerns on the project.
- 2.) Projects that require little or no new right of way such as resurfacing, routine bridge replacements, signal system, routine safety improvements, and smaller intersection improvements would not require a public hearing. Larger intersections or any other project type that requires a level of environmental documentation of a Categorical Exclusion Type C would require an advertisement of opportunity for requesting a public hearing for the proposed improvement.
- 3.) Hold at least one public hearing for projects whose environmental documentation requires an Environmental Impact Statements (EIS) or an Environmental Assessment.
- 4.) The hearing will include a segment at some point during the scheduled meeting time to allow department officials to make a formal presentation to the attendee’s on the project purpose and need, schedule, and potential natural and human impacts to the community.
- 5.) The public will be will be given a period of time to formally address the hearing officer with questions/concerns regarding the proposed project.
- 6.) The time limit for the formal session, as well as the specific criteria for handling the request for formal comments, will be made available at the time the public notice is advertised for the hearing.

SCDOT public hearing procedures provide recommendations for the hearing facility, time, and preparation. The facility should be convenient to the project and easily accessible to the elderly, handicapped and minorities. The preferred facility has no fixed seating and ample space for displays, chairs and several tables to accommodate handouts, a tape recorder for verbal comments and citizens writing comments. The hearing should last for two hours and be held when members of the public are likely to attend (e.g. from 5:00 to 7:00 pm). Two to three weeks before the hearing, the Environmental Management Office will review all displays, handouts, and information prepared by the consultant; hearing participants and their duties should be assigned at this time. Handout information should include: a welcome letter by the Program Manager explaining the hearing process and where displays and transcripts will be available after the hearing, a project description and map, background data and the need for the project, a summary of environmental studies, a description of the State/Federal relationship in the federal-aid highway program, a relocation assistance and right of way statement (including the Highways and You booklet), a statement on how and where to send written comments, and a name and address comment form. Consultants will respond to public hearing comments and submit to SCDOT for review. A [sample public hearing handout](#) is provided on page 58 in [Appendix B](#).

5.4 Opportunity for Public Hearing

The requirements for holding a public hearing may be satisfied by publishing a notice of an opportunity for a public hearing in a newspaper published in the vicinity of the proposed project. If there are no requests for a public hearing, the public hearing requirement is satisfied. If there are requests for a public hearing, then one should be scheduled. An example “[Opportunity Ad](#)” is provided on page 65 in [Appendix B](#).

5.5 Determining the Level of Public Involvement

Public information meetings are not generally held for projects that are not controversial and require the lowest level of environmental documentation, Categorical Exclusions.

Environmental Assessments (EA) are prepared when the significance of environmental and social impacts are unknown. Public information meetings should be held for projects requiring an EA. A public information meeting should be held during the preparation of the EA, and a public hearing must be held after approval of the EA.

If an Environmental Impact Statement (EIS) is required, public meetings should be conducted during the preparation of the EIS and a public hearing must be held following approval of the Draft EIS.

6. ENVIRONMENTAL DOCUMENTS

There are three levels of environmental documentation, Categorical Exclusions, Environmental Assessments and Environmental Impact Statements. This section will discuss Categorical Exclusions and Environmental Assessments. Chapter 7 will discuss Environmental Impact Statements.

6.1 Categorical Exclusion

Categorical exclusion means a category of actions which do not individually or cumulatively have a significant effect on the human environment ... and ... for which, therefore, neither an environmental assessment nor an environmental impact statement is required ([40 CFR 1508.4](#))

Categorical exclusions (CEs) are actions which meet the definition contained in 40 CFR 1508.4, and, based on past experience with similar actions, do not involve significant environmental impacts. They are actions which: do not induce significant impacts to planned growth or land use for the area, do not require the relocation of significant numbers of people; do not have a significant impact on any natural, cultural, recreational, historic or other resource; do not involve significant air, noise, or water quality impacts; do not have significant impacts on travel patterns; and do not otherwise, either individually or cumulatively, have any significant environmental impacts ([23 CFR 771.117\(a\)](#)).

SCDOT and FHWA have developed a programmatic agreement to approve and process CEs. This approach allows SCDOT to proceed on certain types of projects without FHWA review and approval and has proven beneficial in streamlining project development. Three types of CEs are included in the programmatic agreement:

6.1.1 CE(A)

Examples of activities where CE(A)s can be used, provided that are no significant impacts to the natural or human environment, are:

- a. Activities which do not involve or lead directly to construction
- b. Approval of utility installations along or across transportation facilities
- c. Construction of bicycle and pedestrian lanes, paths and facilities

- d. Activities included in the State’s “highway safety plan”
- e. Installation of noise barriers or alterations to existing publicly owned buildings to provide for noise reduction
- f. Landscaping
- g. Installation of fencing, signs, pavement markings, small passenger shelters, traffic signals and railroad warning devices

(Note this list is not all inclusive. Refer to [23 CFR 771.117](#) for additional information.) An [example CE\(A\)](#) can be found on page 73 in [Appendix B](#).

6.1.2 CE(B)

Type B Categorical Exclusions do not automatically fall under the same programmatic clearance as Type A CE’s. Type B Categorical Exclusions require the signature of the Environmental Project Manager. The CE(B) should include supporting information to show there are no significant impacts to the human or natural environment. In addition to the general condition of no significant impact on the human or natural environment, the following conditions must be met for a project to be processed as a CE(B).

- a. Not require acquisition of more than minor amounts of temporary or permanent strips of right-of-way and acquisition will not require any residential or business displacements.
- b. No use of Section 4(f) properties
- c. No adverse effect under Section 106 of the National Historic Preservation Act
- d. No individual Coast Guard Permits required
- e. No Individual Corps of Engineer Permits or a General Permit with greater than three acres of wetland impacts.
- f. No impacts to planned growth or land use, or significant impacts on travel patterns.
- g. No work encroaching in a regulatory floodway, adversely affecting the base floodplain, or potentially adversely affecting a National Wild and Scenic River.
- h. No changes in access control.
- i. No known or potential major hazardous waste sites within the right-of-way

Typical projects that can be processed under a CE(B) include:

- a. Safety projects including but not limited to: placement of traffic barrier; energy attenuators; grading of slopes or gore areas to eliminate the need for guardrail, improve the clear zone, improve curves, or improve sight distance; removal of fixed objects such as boulders or trees; lighting glare screens; delineators; and safety modification of drainage structures.
- b. Pavement resurfacing, restoration, rehabilitation, and reconstruction projects including related shoulder and ditch work.
- c. Traffic operation type projects including but not limited to: freeway surveillance and control systems; intersection channelization; turn lanes, acceleration or deceleration

- lanes; construction, modification or elimination of curbs, raised median dividers or sidewalks; and widening less than a single lane width.
- d. Bridge and culvert rehabilitation work, and bridge replacement at same location.

An [example CE\(B\)](#) can be found on page 67 in [Appendix B](#).

6.1.3 CE(C)

Type C Categorical Exclusions are processed on a project by project basis. Type C Categorical Exclusions require the signature of FHWA as well as the Environmental Project Manager. Projects that do not meet the criteria given for a CE (A) or (B), but where studies show the project meets the criteria for CE's of no significant human or environmental impact, may be processed as a Type C Categorical Exclusion. The CE (C) must include supporting information to demonstrate compliance with the no significant impact criteria. In addition, a concurrence from the State Historic Preservation Officer (SHPO) must be attached in support of the information contained in the Archeological/Historical section of the CE(C). A [Farmland Conversion Impact Rating form](#) must be filled out and attached in support of the Farmlands section of the CE(C). An [example CE\(C\)](#) is provided on page 73 in [Appendix B](#).

6.2 Environmental Assessment

When the significance of impacts of a transportation project proposal is uncertain, an environmental assessment (EA) is prepared to assist in making this determination. If it is found that significant impacts will result, the preparation of an environmental impact statement (EIS) (from FHWA's website: <http://www.environment.fhwa.dot.gov/projdev/docuea.asp>)

Environmental assessment

Means a concise public document for which a Federal agency is responsible that serves to:

1. Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.
2. Aid an agency's compliance with the Act when no environmental impact statement is necessary.
3. Facilitate preparation of a statement when one is necessary.

Shall include brief discussions of the need for the proposal, of alternatives as required by section 102(2)(E), of the environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted.

-- [40 CFR 1508.9](#)

FHWA must approve an EA before it is made available to the public. EAs do not need to be circulated but they must be made available to the public through notices of availability in local, state, or regional clearinghouses, newspapers and other means. As of 2007, a formal public hearing is required for all transportation projects developed for the state of South Carolina where an EA is prepared. A 30-day review period is required.

After public comments are received and considered, a determination of the significance of the impacts is made:

If at any point in the process of preparing an EA it is discovered that the project would result in significant impacts an environmental impact statement (EIS) must be prepared.

If, after completing the EA, it is evident that there are no significant impacts associated with the project, a finding of no significant impact (FONSI) may be prepared (from FHWA's website: <http://www.environment.fhwa.dot.gov/projdev/docuea.asp>).

An [example Environmental Assessment](#) is provided on page 81 in [Appendix B](#) and an [EA template](#) is provided on page 277 in [Appendix G](#).

The following paragraphs include an overview of topics that will be addressed in the Environmental Assessment. Each section provides information regarding regulations, forms and procedures that may be helpful in the preparation of documents. However, this summary does not supersede applicable federal and state environmental regulations.

6.2.1 Purpose and Need

This section should identify and describe the proposed project and provide justification as to why it should be implemented. Existing transportation problems or other community needs that the project is intended to correct should be comprehensively and specifically addressed. The transportation planning process, which includes metropolitan, regional, subarea, and corridor planning, serves as the foundation for establishing purpose and need, as well as evaluating alternatives for most major projects.

Planning organizations determine which transportation projects are selected for implementation. In rural areas, these projects are ranked by the COGs utilizing a “formula” containing several criteria. Each urbanized area (MPO) has developed their own project ranking criteria in addition to analyzing projects in transportation planning models. The urban planner for the area should be able to provide essential information regarding the need for the project.

The Purpose and Need section should demonstrate clearly that a “need” exists in terms understandable to the general public. FHWA Technical Advisory T6640.8A contains a list of elements that may assist in the explanation of the need for the proposed project. All relevant elements should be used and supported with specific data to compare the present, future no-build, and future build conditions. The statement “the project is needed to provide increased capacity and improved safety” is not a sufficient explanation without further elaboration. The explanation should clearly state how the project will meet its intended need. The use of charts, tables, maps, and other illustrations are encouraged as useful techniques for demonstrating the need for the project.

If the Purpose and Need section states that the proposed project is necessary to correct an existing or potential safety problem, or if safety is included as a major element of the project’s purpose and need, then the EA should explain how the project will improve those safety concerns. The EA should provide accident data including the number of accidents that have occurred during the last three years and the resulting injuries or fatalities. The EA should also discuss accident rates present at roadway sections and intersections and how these accident rates compare to similar roadways. The types of accidents occurring should be discussed as well as why this type of accident typically occurs and how the proposed project will improve the situation. A table or matrix that summarizes accident numbers, types of accidents, accident rates, and potential reductions (if known) in accidents for all sections of the project corridor and related intersections is helpful.

6.2.2 Project Description

The project description section should include:

- project type (i.e. widening, interchange, improvement, new location)
- project termini, length, city, and county.
- initial planning organization (i.e. MPO or COG project, STP, interstate or National Highway)
- a brief summary of the justification or ranking by the MPO or COG

6.2.3 Location Map

A map of the project corridor in relationship to the city, county and the state, should be included utilizing any helpful inserts.

6.2.4 Existing Facility

A description of the existing facility should be included highlighting any deficiencies of the existing facility.

6.2.5 Proposed Facility

A description of the proposed facility should be included highlighting how the proposed facility will correct the deficiencies of the existing facility.

6.2.6 Alternatives

Projects may have several equally acceptable alternatives, or a preferred alternative, all of which should be evaluated in the document. The preferred project alignment should have reasonable justification for being the preference. Alternatives must be discussed in the document even when the only other option is a “no build” alternative.

6.2.7 Probable Impacts on the Environment

a. Endangered Species Assessment

The purpose of the [Endangered Species Act of 1973](#) is to protect endangered plant and animal species and their habitat. Any “major construction activity” must be evaluated to determine its impacts, if any, on plant or animal species included on the United States Fish and Wildlife Service (USFWS) List of Threatened and Endangered Species. Basic procedures for conducting biological assessments include:

- Review of the USFWS [List of Endangered and Threatened Species for each South Carolina county](#) that will be impacted by the project to identify species that may potentially occur in the project area; (A copy of this list is provided on page 217 in [Appendix D](#))

- Obtain and review the Heritage Trust List of rare and endangered species sightings throughout the state from the Department of Natural Resources. This list also includes rare state species; however, only those on the federal list of endangered and threatened species need to be addressed in the biological assessment. Note: If a project requires a permit, the impacts to state-listed species need to be addressed through a Biological Assessment.
- Reconnaissance survey of new right of way in the project corridor to check for potential habitat and specimens of endangered *I* threatened species. Field surveys for plants should always be done during the species' flowering season.
- It is suggested that the list of all highway projects should be examined and field surveys for plant species be planned in advance to ensure these studies fall within the flowering season for species that may be present.

Advanced scheduling may eliminate the possibility of project delays in waiting for a particular flowering season. If fieldwork indicates the presence of threatened or endangered species, a plan should be developed that addresses actions to be taken to mitigate impacts to the species. A letter should be sent to USFWS requesting concurrence with the findings and mitigation plan.

A [sample Biological Assessment](#) is included on page 126 in [Appendix B](#) and a [Biological Assessment Template](#) is provided on page 295 in [Appendix G](#).

b. Wetlands and Floodplains

The [Clean Water Act](#) was legislated to protect wetlands because of their importance to our environment. Wetlands function as flood retention areas during periods of high rainfall, an economical method of filtering water-borne pollutants, and a unique habitat for plants and animals adapted to survive in predominantly damp conditions. These unusual ecosystems provide outstanding opportunities for man's recreational activities, such as canoeing and wildlife observation. For these reasons highway projects should be designed and constructed with minimal impacts to wetlands. Field surveys are necessary to determine the presence of wetlands in or adjacent to the project corridor and the extent of impacts caused by the project's construction. A detailed wetlands site map should be included in the document. Further information regarding wetlands delineation and mitigation follows in the permitting section. Executive Orders [11990](#) – Protection of Wetlands and [11988](#) – Floodplain Management were issued by President Jimmy Carter on May 24, 1977.

c. Water Quality

Water quality standards establish appropriate classified water uses to be achieved and protected, establish general rules and specific water quality criteria to protect classified and existing water uses, establish procedures to classify waters of the State, protect the public health and welfare, and maintain and enhance water quality.

The document should discuss any water bodies traversed, the classification of these waters, and the definition of the classification. A statement detailing design features that

will reduce runoff and sedimentation should also be included. The documents “Water Classifications & Standards” (R.61-68) and “Classified Waters” are published by SCDHEC and can be acquired from the SCDHEC Bureau of Water or found on the internet at:

<http://www.scdhec.net/eqc/water/regs/r61-68.doc> and
<http://www.scdhec.net/eqc/water/regs/r61-69.doc> respectively.

d. Farmland Assessment

A site assessment must be conducted for all projects to ensure compliance with the [Farmland Protection Policy Act](#) (FPPA) of 1981 (7 CFR 658, 7 USC 4201 through 4209, and FHWA’s [Guidelines for Implementing the Final Rule of the Farmland Protection Policy Act](#) for Highway Projects). These regulations explain the criteria used to determine if impacted lands are eligible for protection under the FPPA. The United States Department of Agriculture’s Natural Resources Conservation Service (NRCS) Soil Survey Maps can be used to determine the types of soils present in the proposed project corridor and their relative values. A summary of the study including identification of land uses at and surrounding the project site or corridor, the point total for the site assessment criteria, and the steps taken to comply with FPPA should be included in the document.

The US Department of Agriculture form [NRCS-CPA-106](#) “Farmland Conversion Impact Rating for Corridor Type Projects” should be completed. Items 1 through 6 in Part I, Items A through C in Part III, Items 1 through 10 in Part VI and Part VII should be completed. If it is determined that the site assessment criteria (Part VI of NRCS-CPA-106) score is less than 60 points, an additional assessment by the district office of the NRCS would be unnecessary (assuming the maximum possible soil value assigned by the NRCS is 100, the total score would always be less than 160 and therefore, the site ineligible for protection under the FPPA). Documentation of the completed survey (Parts I, III, V (assign 100 points), and VI) should be included in the appendix of the environmental document. If the site assessment point total is equal to or greater than 60 for Part VI, further coordination with the NRCS will be required.

The [SCDOT Farmland Assessment Criteria](#) is included on page 230 in [Appendix D](#).

e. Hazardous Waste / Underground Storage Tanks

Prior to right of way acquisition, the project corridor must be assessed for potential environmental liabilities from the presence of soil or groundwater contamination and/or the presence of hazardous wastes/hazardous materials. A Phase I Environmental Site Assessment (ESA) of the proposed new right of way should be performed according to ASTM E1 527, or a modified equivalent.

The Phase I ESA should encompass all properties bordering the project corridor and should identify the location(s) of any property with which liabilities are associated. Liabilities can include underground storage tanks (USTs), aboveground storage tanks (ASTs) or associated product piping and dispensers. Given the fact that right of way

acquisition often requires only a fraction of each parcel situated along a project corridor, knowledge of the exact locations of USTs or ASTs and associated dispensers is essential in minimizing or avoiding potential liabilities.

In a Phase I ESA report, each of the properties noted to include potential liabilities should be evaluated for its liability potential, the feasibility of avoiding or minimizing the potential liability, and the need for additional information about the site. If additional information is deemed necessary, then a Phase II ESA should be performed to test for the presence of any contaminants and/or to quantify any existing contaminant levels in the soil or groundwater.

f. Air Quality

All regionally significant projects or any project that adds capacity must be evaluated for their impacts on the state's air quality. With the exception of Richland, Lexington, Greenville, Spartanburg and Anderson Counties and the Rock Hill/Fort Mill Area, all other counties in S.C. meet the National Ambient Air Quality Standards for automotive related pollutants, as defined in the Clean Air Act Amendments of 1990 ([40 CFR 51](#)). In these cases, no project level analysis would be required. The statement, "This project would be consistent with the [South Carolina State Air Quality Implementation Plan \(SIP\)](#) regarding the attainment of the [National Ambient Air Quality Standards](#). Presently, _____ County meets all air quality standards for automobile related pollutants. SCDHEC has determined that transportation control measures (TCMs) are not required to maintain the area's air quality" could be used.

Richland, Lexington, Greenville, Spartanburg and Anderson Counties have been designated nonattainment for ozone but the effective date has been deferred due to participation in the [Early Action Compact \(EAC\)](#). Because of the EAC and deferral of designation, no conformity analysis is required for projects in these counties.

The Rock Hill/Fort Mill Area has been grouped with the Charlotte/Mecklenburg County area and was not eligible for the EAC. Therefore, this area has completed a Transportation Conformity Analysis. The MPO representing this area has completed a transportation conformity analysis for its plan and Transportation Improvement Program (TIP). If a project comes from a conforming TIP or plan, a conformity analysis need not be done for the environmental assessment. However, if the project comes from a nonconforming plan or TIP, then a project level conformity analysis will be required. A conformity determination is a lengthy process and must be made before the environmental assessment will be approved. A guidance document "Manual for Air Quality Considerations in Environmental Documents" can be on the internet at: [http://knowledge.fhwa.dot.gov/cops/hcx.nsf/All+Documents/8D5ED1390AD0193485256A81005C1E20/\\$FILE/envdocs.doc](http://knowledge.fhwa.dot.gov/cops/hcx.nsf/All+Documents/8D5ED1390AD0193485256A81005C1E20/$FILE/envdocs.doc)

g. Noise Analysis

The noise study should be conducted in accordance with [23 CFR 772](#) and [SCDOT's Traffic Noise Policy \(Appendix D\)](#), page 236 When alternatives are evaluated in the

Environmental Assessment, an evaluation of noise impacts, including especially the total number of impacts associated with each alternative should be included such that a comparison of each alternative can be made. Where applicable, the noise study should also include the specifications of any barrier that is likely to be incorporated into the project design. Generally, barriers are not feasible on non-controlled access facilities; therefore, it is not necessary to document a barrier analysis for this type of project. When more than one location within the project corridor warrants detailed study for barrier analysis, a map should be included showing these areas. Refer to the Environmental Scope of Services for the SCDOT specifications regarding noise study data to be provided by consultants.

h. Cultural Resources

Cultural resources consist primarily of archaeological sites and historical buildings and structures but can also consist of battlefields, earthworks, and other historic sites. SCDOT must consult with the State Historic Preservation Officer and federally-recognized tribes regarding the impacts of federally funded or permitted transportation projects. Archaeological and architectural surveys are conducted to identify significant sites and assess their eligibility for listing in the National Register of Historic Places (NRHP), as required by Section 106 of the National Historic Preservation Act. If eligible or listed properties are identified within a project's Area of Potential Effects, the Criteria of Adverse Effect ([36 CFR Part 800.5](#)) must be applied in order to assess the impacts of the project on historic properties. If a project's impact on historic properties cannot be avoided, then SCDOT and FHWA must consult with the SHPO and other consulting parties (e.g. federally-recognized tribes) to resolve adverse effects. Once the conditions for resolving adverse effects are agreed upon, they become formalized in a Memorandum of Agreement (MOA). An example MOA for resolving adverse effects to archaeological sites is included in the Appendix.

6.2.8 Section 4(f) 6(f) Evaluation (Public Recreation Areas)

A federal project that involves the use of land from a publicly owned recreation facility must be evaluated under Section 4(f). The consultant will initially evaluate the use under criteria contained in the Federal Highway Administration's "[Final Nationwide Section 4\(f\) Evaluation and Approval for Federally Aided Highway Projects with Minor Involvements with Public Parks, Recreation Lands, and Wildlife Refuges.](#)" Projects that do not meet these criteria will require individual 4(f) statements and legal sufficiency review by FHWA in Atlanta. Section 4(f) evaluations should include the following:

- A detailed description of the recreation area(s)
- A description of the project
- Known impacts to the recreation area
- Alternatives to using the recreation area
- Efforts to avoid the recreation area

- Measures to minimize harm

In August 2005 Section 6009(a) of the [Safe, Accountable, Flexible, Efficient Transportation Equity Act](#) (SAFETEA-LU) amended existing Section 4(f) legislation to simplify the processing and approval of projects that have only de minimis impacts on Section 4(f) properties. “Under SAFETEA-LU, the Secretary has some flexibility to allow an exemption from 4(f) requirements if a program or project will have a “de minimis” impact on the area – i.e., there are no adverse effects of the project and the relevant State Historic Preservation Officer or other official with jurisdiction over a property concurs.” This revision provides that when the U.S. Department of Transportation determines that a transportation use of Section 4(f) property, after consideration of any impact avoidance, minimization, and mitigation or enhancement measures, results in a de minimis impact on that property, an analysis of avoidance alternatives is not required and the Section 4(f) evaluation process is complete. Note that de minimis impact findings satisfy only Section 4(f) requirements and have no bearing on Section 6(f) requirements. A guidance document for determining de minimis impacts can be found on the FHWA web site at <http://www.fhwa.dot.gov/hep/guidedeminimis.htm>

When federal or state outdoor recreation funds (i.e. Land and Water Conservation Funds, Bureau of Outdoor Recreation, National Park Service Grants) are involved in the recreation area, the requirements of Section 6(f) also apply. The Section 4(f) 6(f) document may be incorporated as part of the environmental assessment or may be a stand-alone document. Appropriate maps and graphics should accompany the evaluation detailing the impacts to the recreation area. The document must show coordination with the persons having jurisdiction over the park, including the National Park Service. A [sample 4\(f\)](#) document is included in [Appendix B](#) on page 128.

6.2.9 Social and Economic Considerations

The social and economic impacts of transportation projects on the surrounding community need to be addressed as part of the overall documentation of highway activities. The following issues should be addressed in the environmental assessment where appropriate:

- Land Use - Discuss the existing and future land use, consistency with land use planning, secondary development and joint land use development.
- Community Cohesion - Discuss the impacts of the project on adjacent neighborhoods and the community at large. Include an evaluation of the effect of each alternative for the proposed action on the cohesiveness of various groups within the neighborhood setting and the community as a whole.
- Relocation - Develop a conceptual relocation plan and discuss issues as needed, such as last resort housing, available financial assistance and compliance with the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, amended July 2005. The relocation plan must be consistent with Title IV of the Civil Rights Act of 1964 and Title VIII of the Civil Rights Act of 1968. The

environmental document must provide reasonable assurance that the selection of a design or route location is not a discriminatory act. The FHWA has a web page devoted to this act at: <http://www.fhwa.dot.gov/realestate/ua/index.htm>

- Community Services - Discuss the proposed action's impact on services such as school districts, recreation areas, churches, medical facilities, and community centers.
- Community Impacts - Evaluate the effects of a transportation action on a community and its quality of life. The assessment should include all items of importance to people, such as mobility, safety, employment effects, relocation, isolation, and other community issues.
- Environmental Justice - Identify and address, as appropriate, disproportionately high and adverse environmental effects, including human health, economic and social effects, of the project on minority and low-income populations, including Native Americans. Additionally, includes mitigation measures in consultation with affected communities, and improvement of accessibility of meetings, crucial documents, and notices. FHWA issued a directive regarding this subject "[FHWA Actions To Address Environmental Justice In Minority Populations And Low-Income Populations.](#)"
- Temporary impacts, such as the potential disruption of the community due to construction practices, should also be addressed.

a. Community Impact Assessment

Consideration of community impacts should be incorporated into the transportation decision-making process and project development. The values and needs of the residents of affected communities must be given equal consideration to that given the natural environment. AASHTO is pursuing "context sensitive design" approaches in their publication "Thinking Beyond the Pavement." The idea is to mainstream sensitive design into the MPO's and COG's decision-making, sensitizing planners and designers to community needs, plans and impacts. In order to accomplish these goals, personal involvement with individuals in the community is essential, as are outreach programs and early public participation. The booklet "Community Impact Assessment - A Quick Reference for Transportation" can be found on the internet at <http://www.ciatrans.net/TABLE.html>

b. Environmental Justice

[Executive Order 12898](#), "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," states that minority and low-income population should be identified and considered by transportation agencies, when determining whether human health effects and environmental effects are disproportionately high or adverse. When these effects occur, agencies should consider these multiple or cumulative effects on the existing population. There is no specific formula for how to identify or address these issues. The identification of such effects should heighten attention to alternatives, mitigation strategies and preferences expressed by the affected communities. Public participation strategies should be utilized to have these communities and their representatives involved in the transportation

process. The FHWA directive associated with this Executive Order can be found on the internet at:

http://www.fhwa.dot.gov/legsregs/directives/orders/6640_23.htm

6.2.10 Relocations

Relocation impacts should summarize the results of the relocation survey and plan. For most projects, the information summarized will consist of numbers of residences and businesses expected to be moved as a result of the project. It is also necessary to indicate the availability of replacement housing and business sites. If particular problems are anticipated relating to a home or business relocation (i.e. no available comparable housing in the area, county no longer allows older mobile homes to be moved, or available business sites will not accommodate the business because of zoning or the nature of the business), these situations should be covered in a general manner that will not jeopardize the privacy of the owner. For projects that have difficult relocation situations, a statement should be included that references the use of last resort housing, if necessary, to provide comparable housing for displaced persons, and that an extended lead time period may be established in order to successfully relocate all displaced.

In estimating numbers of possible relocations, it is important to note to the extent possible, properties that may ultimately be relocations because of loss of parking, inadequate access, loss of septic field, etc. This information should be separated from the properties that are definite relocations because of building involvement.

6.2.11 Airport Clearance

This paragraph is not necessarily included in every environmental document. Airport clearance coordination becomes essential when the proposed facility or facility improvement falls within or adjacent to the final approach path of the runway, or requires right-of-way from or is adjacent to any airport property. In these cases, coordination with the airport's manager or commission is necessary to ensure that the proposed facility or facility improvement will not degrade the safety of air or highway travel. Regulations regarding airports are found in [23 CFR 620](#).

6.2.12 Indirect and Cumulative Impacts

The environmental document should examine the potential environmental impacts or effects (ecological (natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health) of the proposed project. This includes not only the direct impacts but also indirect (secondary) and cumulative impacts. The CEQ Regulations define indirect and cumulative impacts as:

“Cumulative impact - the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person

undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Indirect effects - are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. “

6.2.13 Coordination

The coordination paragraph should be included as the last section of the environmental document. This paragraph should explain steps taken to involve the public in project development including a description of any public information meetings and plans for the public hearing. A summary of any comments received from coordinating agencies in response to the letter of intent should also be incorporated into this section. Finally, this section should provide information regarding the availability of the Environmental Assessment.

6.3 Re-evaluations

If a document is older than three years, a re-evaluation should be completed to update the effects on the environment and any design changes. Within this document, any changes in impacts need to be noted and concurrence requested from the coordinating agency. Updated plan sheets and maps should be attached with an accurate legend, noting design changes. An [example Re-evaluation letter](#) is provided on page 143 in [Appendix B](#).

7. ENVIRONMENTAL IMPACT STATEMENT (EIS)

If a project is likely to have significant impacts on the environment, an EIS must be prepared. The purpose of the EIS is to present an evaluation of environmental issues and alternatives to inform decision-makers and the public of all reasonable alternatives that could avoid or minimize adverse impacts to environment.

SAFETEA-LU establishes a new [environmental review process](#) for transportation projects developed as environmental impact statements (EISs).¹¹ All EISs for which the Notice of Intent was published in the Federal Register after August 10, 2005, must follow SAFETEA-LU's requirements. These requirements are intended to promote efficient project management by lead agencies and enhanced opportunities for coordination with the public and with other Federal, State, local, and tribal government agencies during the project development process (from FHWA's website: <http://www.fhwa.dot.gov/hep/section6002/1.htm>).

As soon as practical after the decision has been made to prepare an EIS, the FHWA or SCDOT will prepare a Notice of Intent (NOI). The NOI is submitted for publication in the *Federal Register*. Guidelines for preparation of the NOI can be found in [Technical Advisory T 6640.8A](#).

When the NOI is published, federal, state and local government agencies with possible interest in the project and organizations and individuals that may be interested should be provided with information regarding the project. The NOI initiates the early agency coordination and public involvement process that will assist in determining alternatives, issues and impacts. This is the scoping process referred to in the CEQ regulations.

An EIS is prepared in two stages, a Draft EIS and a Final EIS. The Draft EIS allows government agencies and the public to review proposed alternatives and their associated environmental consequences. The Final EIS is prepared after comments received during the Draft EIS comment period have been evaluated and a preferred alternative has been selected. The Final EIS is then circulated for review. Following circulation, the FHWA will issue a Record of Decision (ROD) regarding the project. The ROD describes the basis of FHWA's

decision, identifies alternatives that were considered, and confirms the specific mitigation measures that are to be incorporated into the project.

7.1 Environmental Impact Statement Format

[Technical Advisory T6640.8A](#) contains a recommended format for an EIS. This format is applicable to both the Draft and Final EIS and should include the following sections.

7.1.1 Cover Sheet

The cover sheet includes the following:

- EIS number (assigned by FHWA).
- Name of the project to include Route, Termini, City or County and State.
- Identify that it is a Draft Environmental Impact Statement (or Final or Supplemental EIS).
- Statement of Applicable Federal Regulation: 42 U.S.C. 4332 (2) (c).
- Name of Federal Lead Agency (FHWA).
- Name of State Lead Agency (SCDOT).
- Names of Cooperating Agencies.
- Signature line for FHWA and date.
- Names, addresses, and telephone numbers of the FHWA and SCDOT contacts for additional information.
- One paragraph abstract of the statement.
- Due date, name and address for submittal of comments.

7.1.2 Summary

The summary is placed after the document cover sheet and should include the following:

- A brief description of the project
- A description of major actions proposed by other governmental agencies in the same geographic area
- A summary of all reasonable alternatives considered
- A summary of major environmental impacts, beneficial and adverse
- Any areas of controversy
- Any major unresolved issues with other agencies
- A list of other Federal actions likely to be required for the project (such as permits, land transfers, Section 106 MOA, etc.).

7.1.3 Table of Contents

The table of contents follows the summary and should follow the standard format:

- Cover

- Summary
- Table of Contents
- Purpose and Need for Action
- Alternatives
- Affected Environment
- Environmental Consequences
- List of Preparers
- List of Agencies, Organizations and Person to Whom Copies of the Statement are Sent
- Comments and Coordination
- Index
- Appendices

7.1.4 Purpose and Need for Action

The Purpose and Need Chapter is one of the most important elements of the project, and needs to be well documented in the EIS. This section forms the basis of the no build alternative discussed in the Alternatives Chapter and will assist in the identification of reasonable alternatives and the selection of the preferred alternative. Additional information regarding the contents of the Purpose and Need Section can be found in [T 6640.8A](#).

7.1.5 Alternatives

The Alternatives Chapter discusses the alternatives that are under consideration, how they were selected and why other alternatives were eliminated. Additional information regarding the contents of the Alternatives Section can be found in [T 6640.8A](#).

7.1.6 Affected Environment

This chapter should provide a concise description of the existing social, economic and natural environmental character of the project area, to set the stage for the evaluation of impacts. Additional information regarding the contents of the Affected Environment Section can be found in [T 6640.8A](#).

7.1.7 Environmental Consequences

This chapter describes the probable social, economic and environmental impacts and proposed mitigation measures for all of the alternatives under consideration. This chapter should include both beneficial and adverse impacts as well as secondary and cumulative impacts. Additional information regarding the contents of the Environmental Consequences Section can be found in [T 6640.8A](#).

7.1.8 List of Preparers

The following should be listed:

- State (and local agency) personnel, including consultants, who were primarily responsible for preparing the EIS or performing environmental studies, and a brief summary of their qualifications, including educational background and experience.
- The FHWA personnel primarily responsible for preparation or review of the EIS and their qualifications.
- The areas of EIS responsibility for each preparer.

7.1.9 List of Agencies, Organizations and Persons to Whom Copies of the Statement are Sent

For the Draft EIS list all agencies, organizations and individuals from whom comments are being requested. For the Final EIS, list all agencies, organizations and individuals that submitted comments on the Draft EIS and those receiving a copy of the Final EIS.

7.1.10 Comments and Coordination

This chapter summarizes the early coordination including agency and community meetings, and discusses key issues and pertinent information and comments received from agencies and the public through these efforts. Copies of substantive comments from cooperating agencies, other agencies, organizations and the public should be included. Additional information regarding the contents of the Comments and Coordination Section can be found in [T 6640.8A](#).

7.1.11 Index

The index should include important subjects and areas of major impacts to allow the reviewer to find information on a specific subject without reading the entire EIS.

7.1.12 Appendices

The appendix should include material that provides greater detail than that included in the main body of the EIS. T 6640 8A states that the appendices should:

- Consist of material prepared specifically for the EIS;
- Consist of material that substantiates an analysis fundamental to the EIS;
- Be analytical and relevant to the decision to be made; and
- Be circulated with the EIS even if they are bound separately. Other reports and studies referred to in the EIS should be readily available for review or copying at a convenient location.

8. PERMITTING

Any activity that requires dredging, filling, clearing or bridging of navigable waters, or discharging into “Waters of the US” requires state and federal permits unless specifically exempted. “Waters of the US” include essentially all waters such as navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Permit applications must be approved by the appropriate state and federal agencies prior to commencing any construction activities in these areas. A permit determination form, which indicates what permit requirements are anticipated, should be completed early in the project development process. A [sample Permit Determination](#) form is provided in the sample permit package on page 145 in [Appendix B](#) and a [blank Permit Determination](#) form is provided on page 300 in [Appendix G](#). A SCDOT Impact Assessment Form should be included with every Clean Water Act Section 404 permit application, including especially, every Section 404 General Permit authorization request. A [blank Impact Assessment Form](#) is provided on page 301 in [Appendix G](#). A sample complete form is included in the sample [General Permit Application](#) in [Appendix E](#) on page 310. A [permit checklist](#) is used to help ensure that all items required are included in the permit package. A [permit checklist](#) form is provided on page 312 in [Appendix G](#).

Several [permitting flow charts](#) are provided starting on page 241 in [Appendix D](#).

8.1 Types of Navigation and Wetland Impact Permits

8.1.1 U.S. Army Corps of Engineers General Permit

Projects with minor impacts to jurisdictional wetlands can be processed in most circumstances under the General Permit. The General Permit is used when there are less than 3 acres of non-tidal wetland impacts, 0.5 tidal wetland impacts and/or less than 300 linear feet of stream impact. If stream impacts are greater than 100 linear feet, stream mitigation is required. If wetland impacts are less than 0.5 acres and/or stream impacts are less than 100 LF, work can begin without written approval from the US Army Corps of Engineers; however, the

application must still be submitted. A copy of the [General Permit](#) can be found on page 248 in [Appendix E](#).

8.1.2 U.S. Army Corps of Engineers Nationwide Permits

Projects with minor impacts to jurisdictional wetlands can be processed in some circumstances with nationwide permits; however, it is preferable to use the general permit if possible. Copies of the information specific to the more commonly used [Nationwide Permits](#) applicable to SCDOT Projects can be found on page 258 in [Appendix E](#). Additional information regarding Nationwide Permits can be found on the internet at:

http://www.usace.army.mil/inet/functions/cw/cecwo/reg/nationwide_permits.htm

- a. [Nationwide 3](#) – Maintenance – This permit is for “repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill and provided the adverse environmental effects are minimal.”
- b. [Nationwide 7](#) - Outfall Structures and Maintenance – This permit is for activities related to:
 - (i) construction of authorized outfall structures and associated intake structures and maintenance excavation, including dredging, to remove accumulated sediments blocking or restricting outfall and intake structures, accumulated sediments from small impoundments associated with outfall and intake structures, and accumulated sediments from canals associated with outfall and intake structures, provided that the activity meets certain criteria.
- c. [Nationwide 14](#) – Linear Transportation Projects – This permit is for linear transportation projects with the following limitations:
 - a. < ½ acre impact to non-tidal waters
 - b. <1/3 acre impact to tidal waters

8.1.3 Individual Section 404 Permits

These types of permits are required when a project does not qualify for the General Permit or a nationwide permit. Impacts can range from less than one acre in certain instances to over 100 acres. Section 404 permits are extremely complex because of legal advertisements and the environmental resource agency review process. They normally require four to eight months for approval. Controversial projects have been known to exceed two years, some without resolution.

[A copy of a [General Permit Application](#) including permit drawings has been included on page 145 in [Appendix B](#)] and a *ACOE 404* [blank application form](#) is included on page 310 in [Appendix G](#).

8.1.4 U.S. Coast Guard Permits

These permits involve highway bridges built across federally designated navigable waters. These permits normally require 15 months for approval. Particular complexities of these permits are the Coast Guard's total consideration of navigation requirements irrespective of highway transportation. The US Coast Guard has published a guidance document, "[U.S. Coast Guard Bridge Permit Application Guide](#)."

8.1.5 401 Water Quality Certification

Approved by SCDHEC and required of any applicant for a Federal permit or license for an activity that may result in a discharge to navigable waters. The Federal permit or license cannot be issued until the 401 certification is obtained. Regulations are available on-line at: <http://www.scdhec.gov/environment/water/regsr61-101.pdf>.

8.1.6 Construction in Navigable Waters Permits

Approved by SCDHEC, permits are required for dredging, filling, or construction in, on, or over state navigable waters and normally require three to five months for approval. SCDOT has been issued a [General Permit for Navigable Waters](#). A copy of this permit can be found on page 263 in [Appendix E](#). An example [Navigable Waters Permit Application](#) can be found in [Appendix B](#) and [blank application forms](#) are provided in [Appendix G](#). A copy of the SC Navigable Waters Map can be found on the internet at: <http://www.scdhec.gov/eqc/water/pubs/navweb.pdf>

8.1.7 Office of Ocean and Coastal Resource Management Critical Area Permits

These permits are approved by SCDHEC-OCRM and involve impacts in the State's critical areas, which are defined as coastal waters, tidelands, beaches and dunes. These areas are located mainly in Charleston and Beaufort Counties with small areas of Georgetown and Horry Counties also included. These permits normally require three to five months for approval. A map showing the State's Critical Areas can be found on the internet at: <http://www.scdhec.net/environment/ocrm/>

8.1.8 OCRM Coastal Zone Consistency Determination

A [coastal zone consistency certification](#) is required of any project completed in one of the eight coastal counties, which requires any State or Federal permit.

8.1.9 Federal Energy Regulatory Commission Permits

These type permits are required when road and/or bridge projects are involved with bodies of water producing electrical power (Lake Murray, Lake Hartwell, etc.). The permits are secured from the Federal Energy Regulatory Commission and normally require five to six months for approval.

8.1.10 County Permits

Currently only Greenwood County requires a wetland permit for fill in Lake Greenwood.

All permit time frames are affected by opposition to highway projects by public and private environmental agencies and groups. It is generally the last opportunity before construction for these agencies and groups to comment on highway construction projects. Any negative comments received on projects by the regulatory agencies can stop the review process until the SCDOT satisfactorily responds to the comments. Responses to comments and the ensuing negotiations over permit conditions can delay projects for long periods. After all comments have been satisfactorily addressed and the public review process is complete, the permitting agency will make a decision to issue or deny the permit.

8.2 Wetland Delineation Procedures

Infrared aerial photos should be examined first to determine if any probable/potential wetlands occur in the project area. Topographic maps are another useful aid, but infrared photos distinctively show wetlands as blue. Since these tools are not 100% reliable, field surveys are also necessary. Possible areas should be assessed using the standard Army Corps of Engineers wetland definition, which requires the presence of three wetland criteria including hydrophytic vegetation, hydric soils, and wetland hydrology. Corps wetland delineation forms should be submitted to the Corps for approval to provide documentation of accurate delineations. Wetland areas should be demarcated with flagging and, if possible, surveying and delineation should be coordinated to allow inclusion of wetland areas on the plans. The areas of wetlands impacts can be estimated for the purposes of environmental documents, but for permit applications impacted acreage must be defined precisely.

8.3 Mitigation

Development of mitigation plans should begin during early project scoping; the SCDOT Environmental Management Office must review all mitigation plans. Mitigation plans should first consider the topography and land values of the project area. If real estate is excessively

expensive, wetland mitigation on or near the site is not practicable. For projects located in flat areas such as the coastal plain, mitigation will be easier to design. Hilly topography, such as the piedmont, involves more extensive earthwork to create wetland areas. Restoration of the existing, damaged wetlands should be explored first, as this alternative is more likely to succeed than wetland creation. If wetland creation is the only alternative, every effort must be made to ensure that the site will receive adequate hydrology to sustain wetlands, e.g. it should be contiguous to existing wetlands. Any excavated earth suitable for roadway construction can be utilized if economically feasible. If the mitigation plan involves planting, the wetland tree species selected must be indigenous to S.C. and the seedlings must be of southeastern stock. Seedlings must be planted from November to February. In the event of possible animal predation, or in marginal sites, tree shelters to protect the seedlings and enhance growth may be necessary; please consult with SCDOT environmental staff. SCDOT wetland mitigation banks may be utilized, but only after all other mitigation possibilities have been exhausted.

Appendices

APPENDIX A – ENVIRONMENTAL AGENCY CONTACTS

ENVIRONMENTAL AGENCY LIASONS/CONTACTS		
<p>Richard L. Darden Army Corps of Engineers 69-A Hagood Avenue Charleston, SC 29403-5107 843-329-8043 richard.darden@usace.army.mil</p>	<p>David Kelly SC Dept. of Archives and History 8301 Parklane Road Columbia, SC 29223-4905 803-896-6184 kelly@scdab.state.sc.us</p>	<p>Mark Caldwell US Fish and Wildlife Service 176 Croghan Spur Road, Suite 200 Charleston, SC 29407 843-727-4707 ext.215 mark_caldwell@fws.gov</p>
<p>Leo Rose SC Dept. of Natural Resources P.O. Box 167 Columbia, SC 29202 803-734-1280 leor@scdnr.state.sc.us</p>	<p>Stephen A. Brumagin Army Corps of Engineers Strom Thurmond Federal Building 1835 Assembly Street, Room 865B1 Columbia, SC 292901 803-253-3445 stephen.a.brumagin@usace.army.mil</p>	<p>Hop Ridgell SC Dept. of Health and Environmental Control 2600 Bull Street Columbia, SC 29201-1708 803-898-4179 ridgelrh@dhec.sc.gov</p>
ENVIRONMENTAL AGENCY MANAGEMENT/STAFF		
<p>Richard Chinnis Bureau of Ocean and Coastal Resource Management 1362 McMillan Ave., Suite 400 Charleston, SC 29405 843-747-4923 ext.129 chinnira@dhec.sc.gov</p>	<p>Susan Davis SC Dept. of Natural Resources P.O. Box 12559 Charleston, SC 29422-2559 843-953-9003 daviss@mrd.dnr.state.sc.us</p>	<p>Kay Davy Habitat Conservation Division P. O. Box 12559 Charleston, SC 29422 843-953-7202 Kay.Davy@noaa.gov</p>
<p>Ed Duncan SC Dept. of Natural Resources P.O. Box 12559 Charleston, SC 29422-2559 843-953-9054 duncan@mrd.dnr.state.sc.us</p>	<p>Mary Edmonds SC Dept. of Archives and History 8301 Parklane Road Columbia, SC 29223-4905 803-896-6168 edmonds@scdab.state.sc.us</p>	<p>Quinton Epps SC Dept. of Health and Environmental Control 2600 Bull Street Columbia, SC 29201 803-898-4249 eppsbg@dhec.sc.gov</p>
<p>Rheta Geddings SCDHEC Bureau of Water 2600 Bull Street Columbia, SC 29201 803-898-4229 geddinmr@dhec.sc.gov</p>	<p>Timothy N. Hall US Fish and Wildlife Service 176 Croghan Spur Road, Suite 200 Charleston, SC 29407 843-727-4707 ext. 15 tim_hall@fws.gov</p>	<p>Travis Hughes Army Corps of Engineers 69-A Hagood Avenue Charleston, SC 29403-5107 843-329-8046 travis.g.hughes@sac.usace.army.mil</p>
<p>Curtis Joyner OCRM 1362 McMillian Ave., Suite 400 Charleston, SC 29405 843-747-4323, ext. 115 joynercrm@dhec.sc.gov</p>	<p>Robert "Bob" Lord EPA Water & Management Div., Wetlands Section Atlanta Federal Center 61 Forsyth Street Atlanta, GA 30303 404-562-9408 lord.bob@epa.gov</p>	<p>Ramona K. McConney EPA Sam Nunn Atlanta Federal Center 61 Forsyth Street, SW Atlanta, GA 30303 404-562-9615 McConney.Ramona@epa.gov</p>
<p>Barbara Neale OCRM 1362 McMillian Ave., Suite 400 Charleston, SC 29405 843-747-4323, ext. 126</p>	<p>Randall Overton United States Coast Guard 909 SE 1st Avenue Miami, FL 33131 305-415-6749</p>	<p>David Rackley National Marine Fisheries 219 Fort Johnson Road Charleston, SC 29412 843-953-7200</p>

APPENDICES
APPENDIX A

nealeb@dbec.sc.gov	roverton@d17.uscg.mil	david.rackley@noaa.gov
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ENVIRONMENTAL AGENCY MANAGEMENT/STAFF (continued)		
<p>Tina Hadden Army Corps of Engineers 69-A Hagood Avenue Charleston, SC 29403-5107 843-329-8044 tina.hadden@sac.usace.army.mil</p>	<p>Brodie Rich United States Coast Guard Brickell Plaza Federal Building 909 SE First Avenue Miami, FL 33131-3050 305-415-6736 brich@d17.uscg.mil</p>	<p>Prescott Brownell National Marine Fisheries Service P. O. Box 12607 219 Fort Johnson Rd. Charleston, SC 29412 843-953-7204 prescott.brownell@noaa.gov</p>
MPO- METROPOLITAN PLANNING ORGANIZATIONS/STAFF		
<p>ANATS Michael Gay City of Anderson Community Planning & Development 401 South Main St. Anderson, SC 29624 864-231-2222 mgay@cityofandersonsc.com</p>	<p>ARTS Steven Strohming Aiken County Planning & Development 1680 Richland Ave, West, Suite 130 Aiken, SC 29801 803-642-1520 sstrohming@aikencountysc.gov</p>	<p>CHATS Haila Maze Berkeley-Charleston-Dorchester 5900 Rivers Ave, Suite 400 N. Charleston, SC 29406 843-529-0400 hailam@bcdco.gov</p>
<p>COATS Reginald Simmons Central Midlands Council of Governments 236 Stoneridge Dr. Columbia, SC 29210 803-376-5390 rsimmons@centralmidlands.org</p>	<p>FLATS Kelly McCormick Manager of Planning – Florence County 180 N. Irby Street, Drawer MSC-G Florence, SC 29501 843-676-8600 kwilliams@florencoco.org</p>	<p>GPATS John Gardner Greenville County Planning Commission 301 University Ridge, Suite 400 Greenville, SC 29601-3660 864-467-7270 mailto:JOGardner@Greenvillecounty.org</p>
<p>GSATS Mark Hoeweler Waccamaw Regional Planning & Development Council 1230 Highmarket Street Georgetown, SC 29440 843-546-8502 mhoeweler@yahoo.com</p>	<p>RFATS Frances M. Thomas Planning & Development, City of Rock Hill P. O. Box 11706 Rock Hill, SC 29731 803-329-7228 mailto:ftbomas@ci.rock-hill.sc.us</p>	<p>SPATS Jim D'Amato Spartanburg County Planning & Development Commission County Administration Building 366 North Church St. 29303 864-596-3570 jdamato@spartanburgcounty.org</p>
<p>SUATS Charlie Holmes Sumter City-County Planning Commission P. O. Box 1449 Sumter, SC 29151 803-436-2516 cholmes@sumter-sc.com</p>		
COG – COUNCILS OF GOVERNMENT/STAFF		
<p>Appalachin COG Steve Pelissier Drawer 6668 Greenville, SC 29606 864-242-9733 Pelissier@scacog.org</p>	<p>Berkeley-Charleston-Dorchester Haila Maze Berkeley-Charleston-Dorchester 5900 Rivers Ave., Suite 400 N. Charleston, SC 29406 843-529-0400 hailam@bcdco.gov</p>	<p>Catawba Wendy Bell Box 450 Rock Hill, SC 29731 803-327-9041 wbell@catawba.org</p>
<p>Central Midlands Reginald Simmons 236 Stoneridge Dr. Columbia, SC 29210 803-376-5390 rsimmons@centralmidlands.org</p>	<p>Lowcountry Ginnie Kozak Box 98 Yamassee, SC 29945 843-726-5536 gkozak@lowcountrycog.org</p>	<p>Lower Savannah Jennifer Dole Box 850 Aiken, SC 29802 803-649-7981 jdole@lscog.org</p>
COG – COUNCILS OF GOVERNMENT/STAFF (continued)		
<p>Pee Dee Phil Goff</p>	<p>Santee Lynchess Pete Hipps</p>	<p>Upper Savannah Rick Green</p>

APPENDICES
APPENDIX A

Box 5719 Florence, SC 29502 843-669-3138 pcgoff@sc.rr.com	31 West Liberty, Box 1837 Sumter, SC 29150 803-775-7381 SLPlan@slcog.org	Box 1366 Greenwood, SC 29648 864-941-8050 rgreen@uppersavannah.com
Waccamaw Amanda Rutherford 1230 Highmarket Street Georgetown, SC 29440 843-546-8502 AR_wrcog@yahoo.com		
FHWA		
Dan Hinton FHWA Strom Thurmond Federal Bldg. 1835 Assembly St, Suite 1270 Columbia SC 29201 803-253-3887 daniel.hinton@fhwa.dot.gov	Patrick Tyndall FHWA Strom Thurmond Federal Bldg. 1835 Assembly St, Suite 1270 Columbia SC 29201 803-253-5460 patrick.tyndall@fhwa.dot.gov	

Note: The items shown in bold-face type are included in this appendix. The items not shown in bold-face type are available on the internet and may be accessed by using the links published in this manual.

APPENDIX B – SAMPLE DOCUMENTS

[Letter of Intent](#)
[Public Information Meeting Handout](#)
[Location and Design Public Hearing Notice](#)
[Public Hearing Handout](#)
[Opportunity for Public Hearing Notice](#)
[Example CE\(A\)](#)
[Example CE\(B\)](#)
[Example CE\(C\)](#)
[Example Memorandum of Agreement 1](#)
[Example Memorandum of Agreement 2](#)
[Example Environmental Assessment](#)
[Example Biological Assessment](#)
[Example 4\(f\) Document](#)
[Example Public Hearing Certification](#)
[Example FONSI Request](#)
[Example Re-evaluation Letter](#)
[Permit Determination Form](#)
[Example Permit Application](#)
[Example Navigable Waters Permit Application](#)

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Letter of Intent



South Carolina
Department of Transportation

February 26, 1999

Mr. Ron Mitchum
Berkeley-Charleston-Dorchester COG
5290 Rivers Avenue Suite 400
North Charleston, SC 29418-6357

Subject: Environmental Assessment of the Proposed Widening of Ashley Phosphate Road from
Dorchester Road to Rivers Avenue, Charleston and Dorchester Counties

Dear Mr. Mitchum:

The Berkeley-Charleston-Dorchester Council of Governments and the South Carolina Department of Transportation propose to widen Ashley Phosphate Road (S-75/S-62) to a seven-lane facility. The project begins at Dorchester Road (S.C. 642) and proceeds in an easterly direction to Rivers Avenue (U.S. 52), a distance of approximately 4.6 miles (see attached map). The majority of the project length lies within the City of North Charleston. The proposed project consists of widening Ashley Phosphate Road along its existing location to provide a seven-lane roadway, along with reconstruction of the interchange with Interstate Route 26.

This project is proposed to be funded from Federal, State, and bond funds. It is anticipated that right of way acquisition will begin in the year 2000 and letting of construction contracts will be scheduled for 2001.

The purpose of this letter is to solicit comments and to initiate interagency coordination to help identify and evaluate the environmental impacts related to the construction of the project. Environmental documentation will be developed in accordance with regulations of the Federal Highway Administration. This project will be processed in an Environmental Assessment according to the National Environmental Policy Act requirements.

Study alternatives for the widening of Ashley Phosphate Road include symmetrical widening as well as widening along either side of the existing road. Also, alternative layouts for the reconstruction of the interchange with I-26 will be considered. These studies will include the U.S. 52 connector, the U.S. 52 connector bridge over I-26, and the Ashley Phosphate Road bridge over I-26. Proposed right-of-way widths along Ashley Phosphate Road will be approximately 120 feet except where extra turn lanes are required.

Post Office Box 191
Columbia, South Carolina 29202-0191


Phone: (803) 737-2314
TTY: (803) 737-3870

AN EQUAL OPPORTUNITY
AFFIRMATIVE ACTION EMPLOYER

Mr. Ron Mitchum
February 26, 1999
Page 2

In order that we may fully evaluate the impacts of the proposed project, it is requested that you respond in writing by March 15, 1999 concerning any beneficial or adverse impacts of the project relating to the interest of your agency. If additional information is needed, you may contact me by telephone at (803) 737-1395.

Thank you for your assistance.

Sincerely,

BLANCHE S. SPROUL

Blanche S. Sproul
Environmental Manager

BSS:rl

Attachment

bc: Environmental Management (Frierson) *SWT*
Program Manager Lifsey

File: PC/RDL

NOTE: This letter was sent to the attached list of resource agencies.

U.S. Environmental Protection Agency
Region IV
Attn: Director
Environmental Review Section
345 Courtland Street
Atlanta, GA 30365

U.S. Army Corps of Engineers
Attn: Lt. Colonel Robert A. Rowlette, Jr.
District Engineer
P.O. Box 919
Charleston, SC 29402-0919

S.C. Department of Archives and History
Attn: Dr. Rodger E. Stroup, Director
8301 Parklane Road
Columbia, SC 29223-4905

S.C. Department of Parks, Recreation
and Tourism
Attn: Ms. Beth McClure, Director
1205 Pendleton Street
Columbia, SC 29201

U.S. Fish and Wildlife Service
Attn: Mr. Roger Banks
Field Supervisor
P.O. Box 12559
Charleston, SC 29412

National Marine Services
Attn: Mr. David Rackley
P.O. Box 12607
Charleston, SC 29422

S.C. Department of Natural Resources
Attn: Mr. Paul A. Sandifer, Ph.D
P.O. Box 167
Columbia, SC 29202

S.C. Department of Health
and Environmental Control
Attn: Ms. Sally Knowles
Bureau of Water
2600 Bull Street
Columbia, SC 29201

S.C. Department of Health
and Environmental Control
Attn: Mr. James A. Joy, III, PE, Chief
Bureau of Air Quality Control
2600 Bull Street
Columbia, SC 29201

S.C. Department of Natural Resources
Land and Conservation Division
1201 Main Street Suite 1100
Columbia, SC 29201

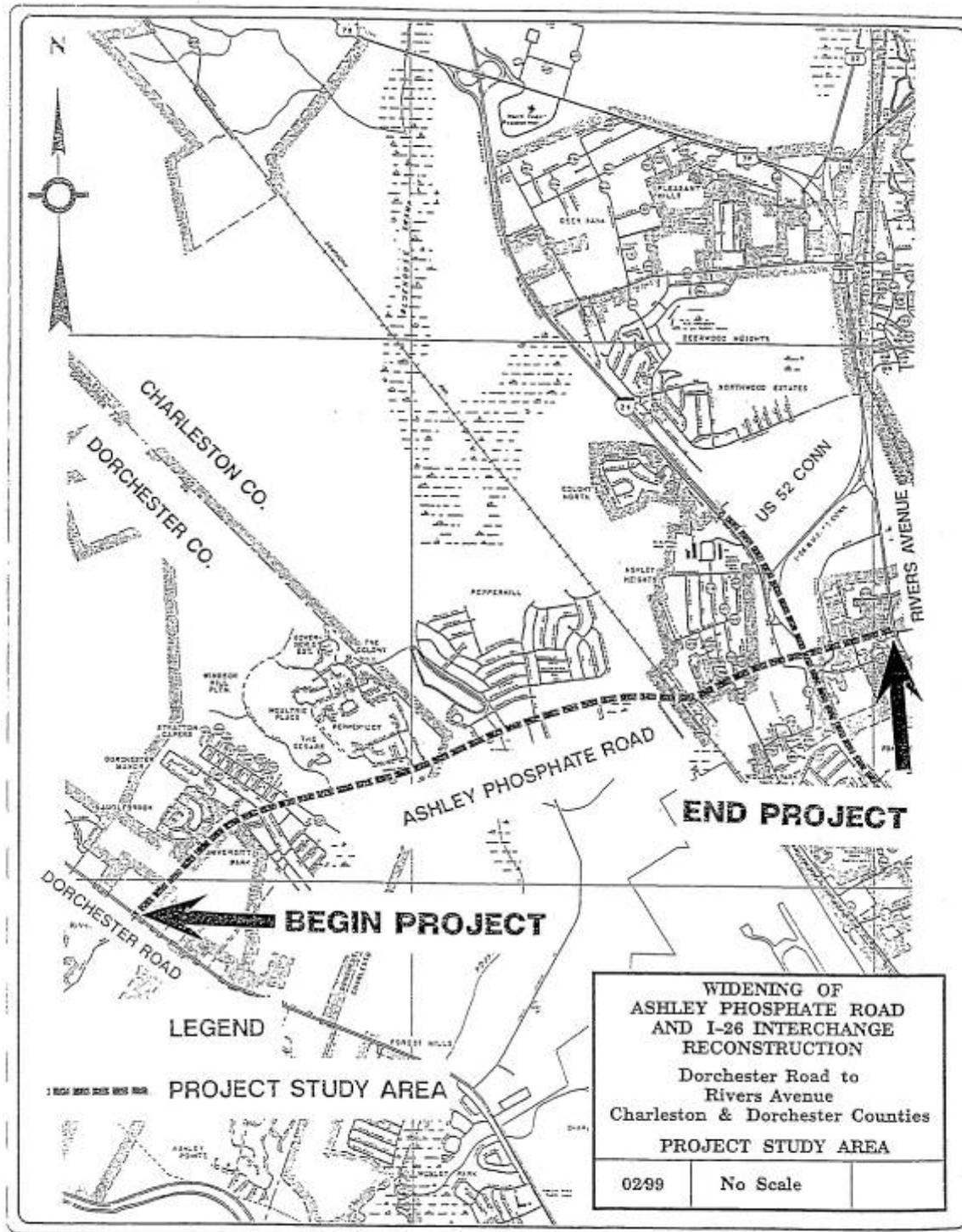
Institute of Archaeology and Anthropology
Attn: Dr. Bruce Rippeteau
Director and State Archaeologist
1321 Pendleton Street
Columbia, SC 29208

Office of the Governor
Inter-Governmental Review
Attn: Ms. Omeagia Burgess
Point of Contact
1122 Lady Street, 12th Floor
State Budget Office BCB
Columbia, SC 29201

Federal Highway Administration
Attn: Mr. Robert L. Lee
Division Administrator
1835 Assembly Street Suite 758
Columbia, SC 29201

Berkeley-Charleston-Dorchester COG
Attn: Mr. Ron Mitchum
5290 Rivers Avenue Suite 400
North Charleston, SC 29418-6357

SCDHEC
Office of Ocean and Coastal Resource Mgmt.
Attn: Mr. Steve Snyder
1362 McMillan Avenue Suite 400
Charleston, SC 29405



Public Information Meeting Handout



SC 162

Proposed Improvements In and Adjacent To

Hollywood, South Carolina

File #: 10.118B

PIN: 25844

Project No.: STP-MODL(018)

The South Carolina Department of Transportation is proposing construction of a new location facility and complimentary improvements to SC 162 in Charleston County.

PROPOSED PROJECT INFORMATION:

The South Carolina Department of Transportation (SCDOT) is currently developing plans to improve traffic movement and safety along existing SC 162 by providing intersection improvements at selected locations. In conjunction with these improvements, the SCDOT is proposing a new location roadway approximately 0.75 miles south of the existing US 17/SC 162 intersection. The new roadway would extend southwesterly approximately 1.8 miles to intersect with SC 162 near Stono Ferry Road. Improvements to existing SC 162 include intersection work at US 17 in addition to Stono Ferry, Towles, Gibson, and Dixie Plantation Roads. Improvements to Britton's curve as well as widening existing SC 162 from two to three lanes from Gibson Road to SC 165 are also proposed.

The new location roadway would extend from US 17 and proceed southwesterly, providing a four lane divided roadway with earth or paved median across the Seaboard Coastline Railway (CSX) before transitioning into a two lane roadway with earth or paved median. Bridge structures for the new location roadway include structures over US 17, the railway, and Log Bridge Creek. Minor amounts of right of way may be needed along the existing SC 162 corridor and approximately 180 to 300 feet of new right of way will be required to construct the new location roadway.

Project Limits.....US 17 southwesterly to SC 165

Project Length.....approximately 7 miles

ANTICIPATED PROJECT SCHEDULE:

Public Informational Meeting... August 4, 2005
Baptist Hill High School
Hollywood, SC

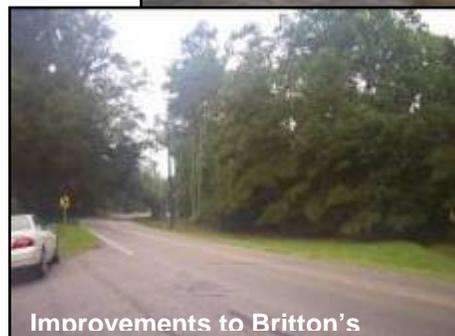
Begin Right-of-Way (Britton's Curve only)..Winter 2005

Begin Construction (Britton's Curve only)..Winter 2005/2006

CONTACT PERSON:

South Carolina Department of Transportation
Ms. Julie Barker, P.E.
Project Manager
955 Park Street
Columbia, SC 29201

Phone: (803) 737-1751
Email: barkerjp@scdot.org



Location and Design Public Hearing Notice

**PROPOSED BRIDGE REPLACEMENTS
ON US ROUTE 17A OVER
THE COMBAHEE RIVER & SWAMP
Colleton and Hampton Counties**

Location and Design Public Hearing

Meeting:

Thursday, January 27, 2005, between 4:00 p.m. and 6:00 p.m. at the Yemassee Town Hall, 101 Town Circle, Yemassee, SC, 29945. The meeting will have an informal drop-in type format with displays for viewing.

Project:

In an effort to maintain safe highways for the citizens of Colleton and Hampton Counties, the South Carolina Department of Transportation is replacing the existing three (3) bridges over the Combahee River and Swamp along US-17A just North of Yemassee. These bridges have been determined by the Department to be structurally deficient and functionally obsolete.

All three existing bridges will be replaced on existing horizontal alignment and the vertical alignment will be raised approximately two feet at the main river bridge and one foot at the overflow bridges. The bridges will be 44 feet wide providing two 12-foot travel lanes and 10-foot shoulders. The roadway approaches will also provide two 12-foot travel lanes with 10-foot shoulders. A canal tying the river to a small lake will be relocated approximately 15 feet in order to maintain water flow.

The road will be closed and all traffic detoured approximately five miles along I-95 during construction. The construction will be sequenced so that access will be maintained to the homes on Rumber Road and boat ramp located between the river bridge and the overflow bridges.

Purpose of the Hearing:

The Public Hearing will provide information concerning the proposed bridge replacement and solicit input from area residents. Engineering personnel from the South Carolina Department of Transportation (SCDOT) will be available to discuss the project with interested citizens on an individual basis. Tentative schedules for construction and right of way acquisition will be discussed. Further project details, including an environmental assessment of the project's effects, will be provided and property owners on or near the project area are requested to attend. Maps and drawings of the proposed improvements will be available and attendees may ask questions and provide comments regarding the possible social, economic and environmental effects of the project.

Review

The environmental document, related maps and displays as well as other pertinent data are available for public review at the SCDOT's Central Office at 955 Park Street in Columbia fifteen days prior to the hearing. Additional information concerning the project may be obtained by contacting Program Manager Wilson Elgin at 803-737-1173 in Columbia. Persons with disabilities who may require special accommodations should contact Mrs. Karen Davis at 803-737-1549.

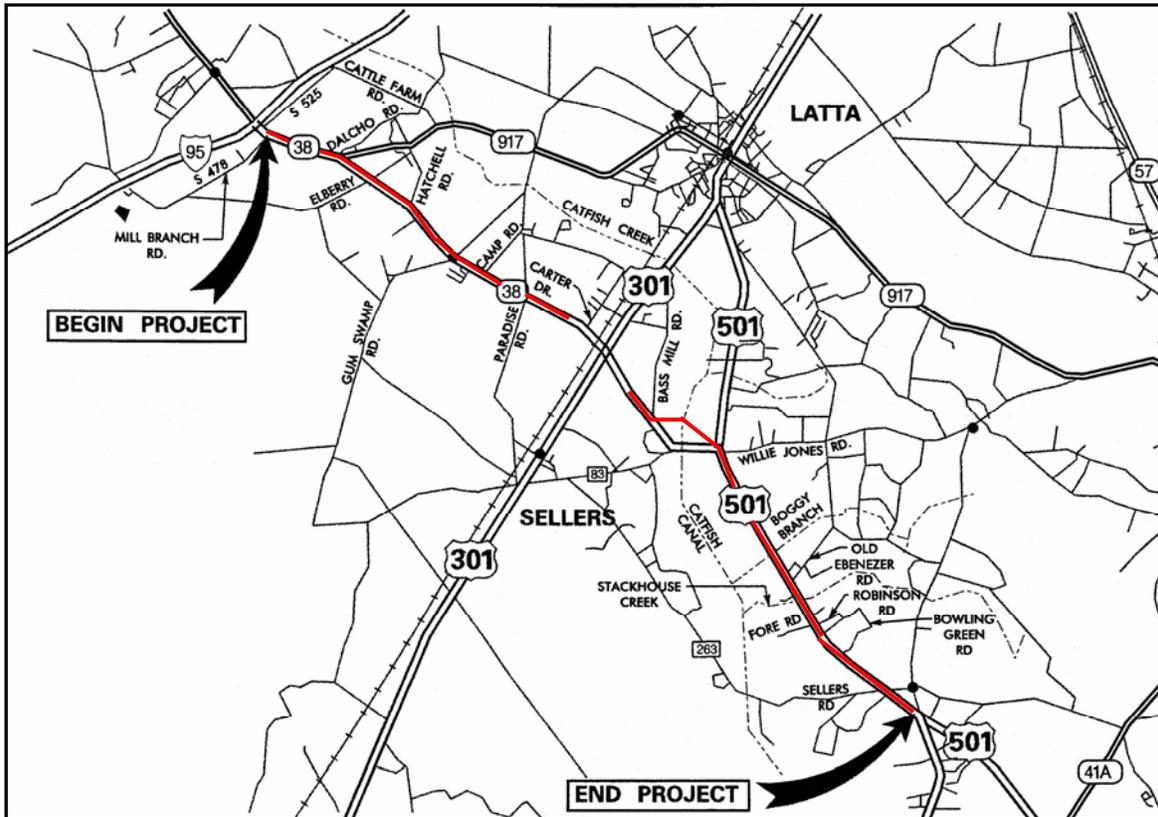
South Carolina Department of Transportation
And Federal Highway Administration

Public Hearing Handout



PUBLIC HEARING

for the proposed
WIDENING OF SC-38 / US-501
Dillon and Marion Counties, South Carolina



November 15, 2001

Date of Public Hearing, 2001

Public Hearing Participant:

The South Carolina Department of Transportation (SCDOT) is pleased to have you attend this public hearing on the proposed widening of SC 38 and US 501 between I-95 and Bypass US 501 in Marion, SC. The hearing format provides an opportunity for discussions on a one-to-one basis relative to your concerns to help you better understand this project while also allowing you a greater opportunity to make comments and suggestions.

Displays are provided representing the proposed project and Department personnel are available to assist you and answer your questions. You have also been given a package containing information, which should help you to understand not only the project itself but also the highway development process. The purpose of this hearing is to review the proposed location and design of the above-described roadway.

If you desire to make comments on this project, you may do so in three ways:

1. Complete the comment form in the packet and deposit it in the box located in the hearing room;
2. Mail your comments by Date, 15 days after date of public hearing, 2001, to the address shown on the last page of the package; or
3. Have your verbal comment recorded.

All comments received will be made a part of the official public hearing transcript, which will be available for review along with the project plans in the SCDOT Program Development Office at 955 Park Street in Columbia.

Your participation will give us an opportunity to evaluate your concerns and ideas.

Thank you.

Sincerely,

Mitchell Metts, P.E.
Assistant Program Manager

PROJECT PLANNING PROCESS

Most roadway improvement projects in South Carolina are selected at the local level. To insure local participation, the state is divided into twenty geographical areas, each with its own local transportation board responsible for selecting and prioritizing the projects within that area. This allows the community to determine the projects that can best serve their particular needs, SCDOT then develops the projects, purchases the necessary rights of way, oversees the construction, and maintains the roads once construction is complete.

In urban areas, the local transportation board is called a Metropolitan Planning Organization (MPO). There are ten MPO's in South Carolina, each representing an urban area with a population greater than 50,000. The local transportation board is comprised of local elected officials, such as the mayor and members of the city and county councils. The areas of the state not served by an MPO are divided into ten regions called Councils of Governments (COG). Each COG is usually composed of several counties and has a similar board of local officials that selects and prioritizes the projects within their given area.

Funding for road improvement projects is divided among the ten MPO's and ten COG's based primarily on the population within a particular MPO or COG area. Each MPO and COG develops a Transportation Improvement Plan (TIP) that indicates how the funds are to be spent within their area. The TIP is a list of the top-priority projects, indicating the funds assigned to each project and a schedule for the main phases of the project – engineering, right of way acquisitions and construction. The total anticipated costs of the projects have to be balanced with the amount of money the MPO and COG expects to receive. As projects are completed and actual costs known, each MPO and COG plan is adjusted to be consistent with available funds.

The goal of these procedures is to make the best use of funds available to South Carolina for road improvements. By allowing local citizens to decide how funds will be spent, the resulting projects should address the needs and desires of the local community.

INTRODUCTION

The South Carolina Department of Transportation (SCDOT) proposes to widen SC-38 from immediately east of I-95 in Dillon County to the intersection of US-301, and from that point to the US-501 bypass north of Marion, in Marion County. The project will not include any further improvements within the four-lane segment of SC-38 at the interchange with US-301. The length of the project is approximately 9.6 miles. It is proposed that SC-38 and US-501 be widened from two lanes to four lanes. This will increase traffic capacity, facilitate traffic flow, and improve safety. An Environmental Assessment has been prepared for this project.

The revised 2001-2005 State Transportation Improvement Program (STIP), has programmed a total of \$50,090,000 for the proposed project, including \$21,090,000 for Section 7 (I-95 to US-301) and \$29,000,000 for Section 8 (US-321 to US-501 Bypass). The programmed costs for Section 7 include \$564,000 for preliminary engineering, \$4,526,000 for right-of-way, and \$16,000,000 for construction. The programmed costs for Section 8 include \$1,000,000 for preliminary engineering, \$6,000,000 for right-of-way, and \$22,000,000 for construction.

The purpose of the proposed project is to improve motorist safety, reduce traffic congestion and travel time, provide improved hurricane evacuation for the Myrtle Beach area, and provide system continuity.

PROJECT DESCRIPTION

The improved roadway will begin immediately east of I-95 as a continuation of the five-lane section of SC-38. East of SR 917, the road will transition from five lanes to four lanes with a 48-foot median. SC-38 will tie into the existing four-lane segment at the interchange with US-301. Between I-95 and S-739, Hatchell Road, the widening will be principally to the north. Beginning east of Hatchell Road the improvements will shift to the south and tie into already improved section at the intersection with US-301.

Three alternatives were considered for an interchange between SC-38 and US-501. The Preferred Alternative, Alternative 2, would be on new alignment, tying into US-501 near the current intersection of SC-38 and US-501.

Land uses along the roadway are not expected to change because of new construction. Some residences and businesses may be displaced because of the proposed improvements, and some residences may experience increased noise levels.

SCHEDULE

The following table shows the anticipated right-of-way acquisition and construction schedule for the project.

Project Segment	ROW Acquisition	Construction
SC 38 (Section 7)	March 2002 – March 2003	January 2004 – June 2005
SC 38 / US 501 (Section 8)	May 2002 – May 2003	January 2004 – December 2005

ALTERNATIVES

SCDOT has considered location and design alternatives in the process of developing the currently proposed “build” alternative. Three build alternatives were evaluated to provide an interchange between SC-38 and US-501. These alternatives were presented at a public information meeting in October, 2000. Input received during the period the EA was made available for public review and comment, the interagency coordination process, and the Public Hearing process, will be carefully considered in further project development, and modifications will be made where appropriate. The “No-Build” option, which consists of SCDOT making no improvements, was considered as a baseline for comparison; however, because of the stated purpose of the proposed widening, the “No-Build” is not considered acceptable.

SUMMARY OF SOCIAL, ECONOMIC, AND ENVIRONMENTAL IMPACTS

SCDOT has conducted an assessment of social, economic and environmental impacts for the proposed project. An Environmental Assessment (EA) was approved by the Federal Highway Administration on October 16, 2001, and is available for your review at this Hearing. This summary includes the potential environmental impacts for the preferred project alternative.

Displacements – The project will result in a total of 34 displacements. Of these, 29 will be single family residences (including two vacant or abandoned homes), one apartment (with three units), and four businesses. SCDOT will assist the property owners and residents with compensation that reflects the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. Relocation Resources are available to all residential and business relocates without discrimination.

Farmlands – The project has been assessed under the provisions of the Farmland Protection Policy Act of 1981. The U. S. Department of Agriculture has developed the Farmland Conversion Impact Rating Form (Form/SCS-CPA-106) to evaluate impacts of the project on protected farmlands. Impact rating scores less than 160 are considered minor and do not require further study or evaluation. The Preferred Alternative had an impact rating score of 148 and 147.3 for Sections 7 and 8 respectively.

Wetlands – Wetland impacts would total 3.3 acres. It was determined that there is no practicable alternative to the proposed construction in wetlands. Because of the lack of practicable on-site mitigation, the SCDOT Black River Mitigation Bank will likely be used to provide the required compensatory mitigation. SCDOT will comply with Executive Order 11990 regarding protection of wetlands.

Threatened and Endangered Species – Pursuant to Section 7 of the Endangered Species Act, a field survey of the proposed new right-of-way was conducted. No habitats for any threatened or endangered species listed by the US Fish and Wildlife Service (USFWS) were identified within the project corridor.

Water Quality – Short and long-term impacts to water quality are expected to be negligible as a result of this project. Sediment and erosion control would be effected by employing best management practices and measures reflecting sedimentation control policies contained in 23 CFR 650B.

Floodplains – The project will involve work within the base floodplain limits of three streams, Deep Creek. The new roadway crossing of this stream would impact 1.4 acres of floodplain. However, the project is not expected to be classified as a significant or longitudinal encroachment as defined in 23 CFR 650A, nor is it expected to have an appreciable environmental impact on the base floodplain.

Historic and Archaeological – In accordance with 36 CFR 800.4, archival research, coordination with the State Historical Preservation Officer (SHPO), and subsequent field studies were performed to identify any significant cultural resources in the project area. Six historic sites along the project corridor were determined to be on or eligible for listing on the National Register of Historic Places. Only one of the sites, the Pineland Grange Hall, would be impacted by the project. Through coordination with SHPO and design modifications, the impacts to the Pineland Grange Hall were minimized and the SHPO determined that the project would have no adverse affect. A Programmatic 4(f) Evaluation for this project is included in the EA.

Noise – Results of the noise analysis indicate that 22 residences would experience increased noise levels approaching or exceeding the established benchmark of 67 decibels (dBA) for the build alternative in the design year 2025. If the project were not built 28 residences would experience increased noise levels approaching or exceeding 67 dBA. The feasibility and reasonableness of noise abatement measures were evaluated for the 22 noise sensitive sites predicted to approach or exceed 67 dBA. The normal design goal of an abatement measure is a minimum reduction of five (5) dBA. If this cannot be achieved, an abatement measure is not considered feasible. SCDOT has considered a range of noise-abatement measures; however, none of them were considered feasible.

Air Quality – This project will be consistent with the South Carolina State Air Quality Implementation Plan (SIP) regarding the attainment of the National Ambient Air Quality Standards. Presently, Marion and Dillon Counties meet all air quality standards for automobile related pollutants. The South Carolina Department of Health and Environmental Control has determined that transportation control measures (TCMs) are not required to maintain the area's air quality.

Hazardous or Toxic Waste Sites – Three sites were identified as having or possibly having underground storage tanks (USTs). One of the sites is an active gasoline station and convenience store (Pantry 3219, doing business as The Food Chief) located at the western end of the project. The other two sites are former gasoline station sites located near the current SC-38/US-501 intersection. One of the sites is the current Pit Stop Grocery & Grill, located at the intersection of SC-38 and US-501. The second site has been converted to three apartment buildings. It has not been determined if the USTs have been removed at either of these sites. Additional sampling will be conducted prior to construction; however, neither of the sites is likely to be contaminated to the extent (if at all) that they would compromise further project actions (final design, right-of-way acquisition, construction) by excessive delays or costs associated with cleanup or redesigning for avoidance.

RIGHT-OF-WAY PROCEDURES

Once the right-of-way plans have been furnished to the SCDOT Right-of-Way Section, an agent will be assigned to the project. The agent's first job is conducting title research to determine the ownership of each parcel of land shown on the plans. The agent will then contact the property owner to verify ownership and to explain how the project will affect the property.

An appraiser will then contact the property owner. The appraiser will determine the fair market value of the property to be acquired. The appraiser will then make a written offer to the property owner.

Details of the right-of-way acquisition procedure can be found in the brochure, "Highways and You." Also included in the brochure is an explanation of relocation assistance benefits and services available if there are improvements located within the new right-of-way. Relocation benefits consist of moving expenses and replacement housing payments. No person who occupies a dwelling, business, or farm will be required to move without at least 90 days written notice of the vacate date.

The following is SCDOT's policy on Replacement Housing:

- (a) The Federal Highway Administration will be given specific written assurance that comparable replacement housing will be available or provided for, before the initial written approval or endorsement of any project is requested.
- (b) Construction authorization will not be requested until comparable replacement housing has been made available to all affected persons.
- (c) SCDOT acknowledges that all housing must be fair housing, and must be offered to all affected persons regardless of their race, color, religion, sex, or national origin.

Right-of-way representatives are available at this hearing to answer individual questions. If additional right-of-way information is needed before an agent is assigned to the project, you may contact Mr. Oscar Rucker, Rights-of-Way Director, at (803) 737-1402. If you have further questions regarding relocation assistance after the hearing, you may contact Mr. Don Liester, Relocation Coordinator, at (803)737-1062 in Columbia. Messrs. Rucker's and Liester's mailing address is SCDOT, P.O. Box 191, Columbia, SC 29202.

TITLE VI COMPLIANCE

The South Carolina Department of Transportation (SCDOT), in response to the non-discrimination requirements set forth in federal regulations issued by the U. S. Department of Transportation in compliance with Title VI of the Civil Rights Act of 1964, complies with all regulations in this regard.

Any person who believes that they have been discriminated against because of race, color, religion, sex, or national origin under a program receiving Federal Aid has the right to file a complaint with the South Carolina Department of Transportation. The complaint shall be filed in writing and forwarded to Mr. Mitchell Metts, Assistant Program Manager, at the address below. The complaint should be submitted no later than 90 days after the date of the alleged act of discrimination. It should outline as completely as possible the facts and circumstances, and should be signed by the person making the complaint.

Comments on the Proposed Project

A P P E N D I C E S
A P P E N D I X B

Written comments may be completed at this Public Hearing and left in the designated box, or they may be mailed to Mitchell Metts at the address shown below. You may also have your comments recorded here at the Public Hearing. Written comments will be accepted until **November 30, 2001**, and they will be included in the transcript.

Send written comments to:

Mr. Mitchell Metts, P.E.
Assistant Program Manager
SCDOT
PO Box 191
Columbia, SC 29202

Thank you for attending!

Opportunity for Public Hearing Notice

NOTICE TO CITIZENS OF WILLIAMSBURG COUNTY: All interested persons are advised that the South Carolina Department of Transportation (SCDOT) proposes to replace the existing deficient S.C. Route 377 bridges over the Black River and Black River Swamp(s), along with intersection improvements at U.S. Route 377 and U.S. Route 521 to enhance safety and traffic operations. New right of way will be needed for the proposed improvements and no displacements are anticipated. Due to the lack of adequate detour, the Department is pursuing a plan that will allow traffic to be maintained on the existing S.C. Route 377 during construction.

Any interested person may request that a public hearing be held on the project with respect to any possible social, economic and environmental effect of the proposal on the community. This request must be submitted in writing to Mr. Bener Amado, P.E., Assistant Bridge Project Engineer, South Carolina Department of Transportation, P.O. Box 191, Columbia, SC, 29202, and received by the Department no later than October 19, 2005. It is requested that your letter contain a telephone number where you may be contacted between 8:30 a.m. and 5:00 p.m. In the event such a request is received and a hearing held, a future notice of the time and place of the hearing will be published.

Related maps, drawings, environmental document, and other pertinent information are available for public review at the SCDOT District Five's Office at 3018 East Palmetto Street in Florence, SC. Additional information regarding this project may also be obtained by calling Assistant Project Engineer Bener Amado in Columbia at telephone number (803) 737-1420.

Example CE(A)



ENVIRONMENTAL MANAGEMENT OFFICE

PROCESSING FORM FOR CATEGORICAL EXCLUSIONS
NON MAJOR FEDERAL ACTIONS

Date: 6/20/05 Project No.: STP-SA12(345) Road/Route: US 2 / S-1

Project Description: Resurfacing of US 2 at Road S-1

County: Darlington Pin(s): 12345

File No. 12.543B

The above described project has been environmentally classified as CE Type A (no individual environmental document required) based on information contained in the engineer's Project Planning Report. It is understood that any additions/deletions to the project may void environmentally processing the project as presently classified; consequently, any engineering changes must be brought to the attention of the Environmental Section immediately. The project's CE Classification should be shown in the remarks section on the Letter of Request for Authorization Form (PS Form 39) for right of way and/or construction for concurrence by FHWA.

PPMS: _____

Example CE(B)



ENVIRONMENTAL MANAGEMENT OFFICE

PROCESSING FORM FOR CATEGORICAL EXCLUSIONS
NON MAJOR FEDERAL ACTIONS

Date: 6/20/05 Project No.: STP-SA16(005) Road/Route: US 15 / S-10

Project Description: Intersection Improvements to US 15 at Road S-10

County: Darlington Pin(s): 32944

File No. 16.153B

The above described project has been environmentally classified as CE Type B (no individual environmental document required) based on information contained in the engineer's Project Planning Report. It is understood that any additions/deletions to the project may void environmentally processing the project as presently classified; consequently, any engineering changes must be brought to the attention of the Environmental Section immediately. The project's CE Classification should be shown in the remarks section on the Letter of Request for Authorization Form (PS Form 39) for right of way and/or construction for concurrence by FHWA.

PPMS: _____

**S.C. DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL MANAGEMENT OFFICE**

SUPPORT FORM – CATEGORICAL EXCLUSION TYPE B

Pin No.: 32944 **File No.:** 16.153B
Road/Route No.: US 15 / S-10 Intersection

Project No.: STP-SA16(005)
County: Darlington

Proposed Action: The project involves modifications to the intersection of US 15 and Road S-10. The existing intersection is an un-signalized four-way stop with two-lane approachways on each leg. Improvements to the intersection will involve relocating the portion of Road S-10 west of US 15 a distance of approximately 200 feet to the south and the portion of Road S-10 east of US 15 approximately 800 feet to the north. Length of the western relocation will be 500 feet in length while the eastern relocation will be approximately 600 feet in length. Left turn lanes will be added from US 15 to S-10 along both approaches and from S-10 onto US 15 along both approaches. Right of way for the relocation roadway will be 100 - 130 feet (50 to 65 feet each side). No new right-of-way (ROW) will be required along US 15. (See attached proposed alignment)

Criteria: To be processed as a Categorical Exclusion Type B (CEB) the following conditions must be met in addition to the General Criteria. The action does not involve:

- The acquisition of more than minor amounts of temporary or permanent strips of right-of-way and the acquisition will not require any residential or business displacements. *
- Use of Section 4(f) properties.
- An adverse effect determination under Section 106 of the National Historic Preservation Act.
- Individual Coast Guard Permits.
- Individual Corps of Engineer Permits, a Corps Nationwide Permit 23, or a Corps General Permit with greater than three acres of wetland impacts.
- Impacts to planned growth or land use, or significant impacts on travel patterns.
- Work encroaching in a regulatory floodway, adversely affecting the base floodplain, or potentially adversely affecting a National Wild and Scenic River.
- Changes in access control.
- Any known or potential major hazardous waste sites within the right-of-way.

* Right of way acquisition requires review of plans by staff archaeologist and / or biologist.

Noise: The project does not represent improvements entirely on new location, the addition of through traffic lanes, or significant change in alignment. Therefore, the requirements for conducting noise studies under 23 CFR 772 do not apply.

Air Quality: A project of this nature would not have an effect on ambient air quality. Darlington County is in attainment for all automotive related air quality standards.

Water/Wetlands: Minor impacts to wetlands adjacent to the project are expected. An US Army Corps of Engineers General Permit will be required for the project. This project is not located within the 100-year floodplain limits.

Archaeological/Historical: No archaeological or historical sites were identified within the boundaries of the project (SHPO concurrence attached).

Endangered Species: The following list of federally protected species within Darlington County was obtained from the US Fish and Wildlife Service (USFWS) (1999) and SC Heritage Trust (2003).

Common Name	Scientific Name	Status*	Habitat Present	Surveys Completed	Biological Conclusion
Red-cockaded woodpecker	Picoides borealis	E	Yes	Yes	No Effect
Shortnose sturgeon	Acipenser brevirostrum	E	No	N/A	No Effect
Rough-leaved loosestrife	Lysimachia asperulaefolia	E	Yes	Yes	No Effect

* Threatened (T) Endangered (E)

The project area was examined for habitat that meets the requirements for each federally protected species. No suitable habitat for shortnose sturgeon occurs within the project area. Marginal red-cockaded woodpecker foraging habitat occurs along the western edge of the project area north of S-10. Optimal foraging habitat for red-cockaded woodpecker consists of pine dominated stands greater than 30 years old (Henry 1989). Habitat present within the project area consists of mixed pine/hardwoods with a presence of greater than 50 percent pine. This habitat is only marginal foraging habitat due to the presence of hardwood species. No nesting/breeding habitat occurs within the project area (pine stands greater than 60 years old). Due to the presence of marginal foraging habitat within the project area, a 0.5-mile radius around the project area was surveyed for colonies/nesting/breeding habitat (Henry 1989). Surveys resulted in the finding of no suitable nesting/breeding habitat for red-cockaded woodpecker within 0.5 mile of the project area.

Suitable habitat for rough-leaved loosestrife is present within the project area in the form of maintained areas containing moist to seasonally saturated soils; therefore, plant-by-plant surveys were completed on May 25, 2005 during the optimal survey window. Surveys resulted in no findings of rough-leaved loosestrife; therefore this project will have no effect on rough-leaved loosestrife and no further investigation under Section 7 of the Endangered Species Act is necessary.

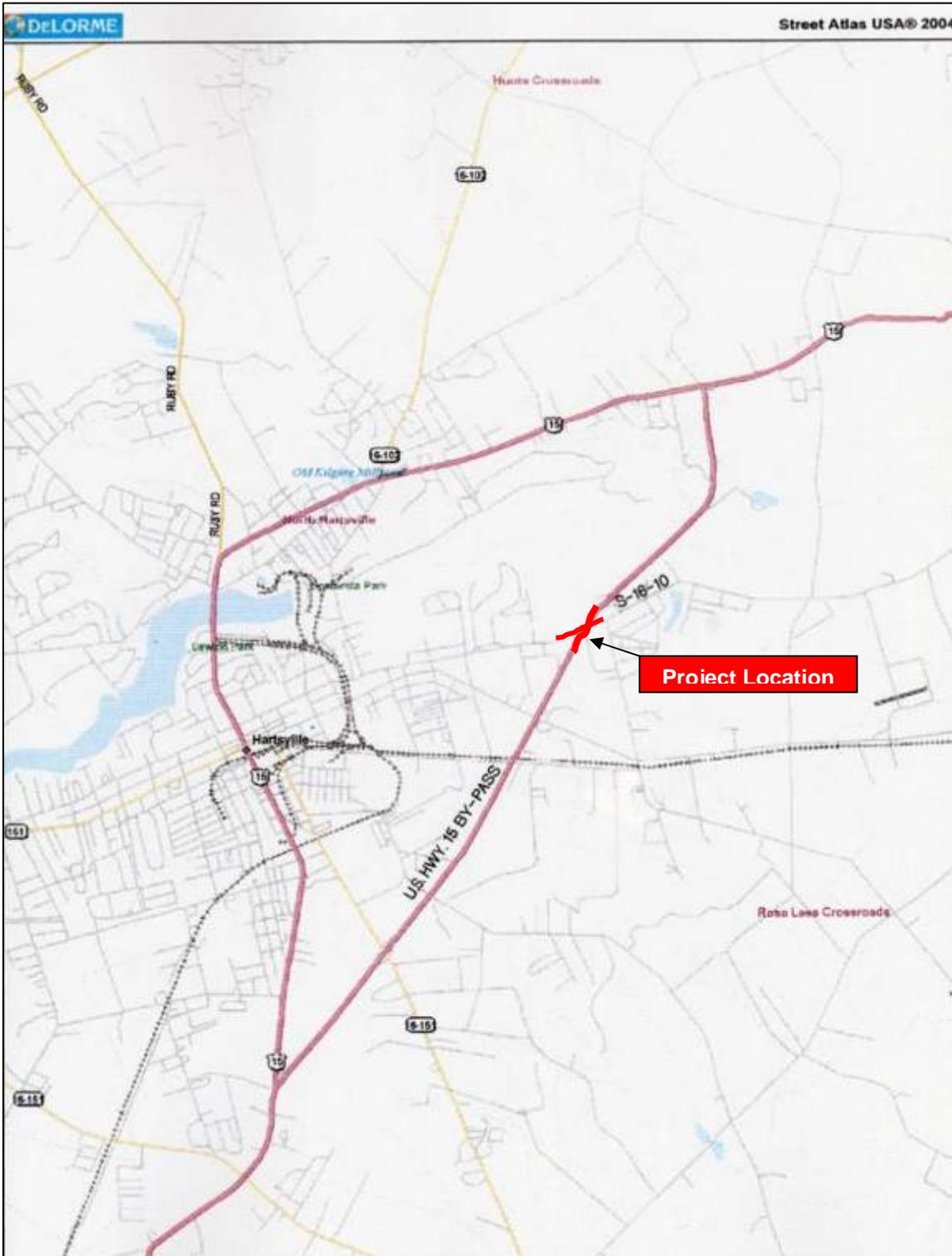
Farmlands: The project was assessed under the Farmland Protection Policy Act of 1981. This site was assessed using the Farmland Conversion Impact Rating Form for a total score of 148 points. Sites receiving a total score of less than 160 need not be given further consideration for protection and no additional sites need to be evaluated.

USTs/Hazardous Waste: No USTs or other hazardous material sites will be encroached upon by the proposed project.

Relocations: No relocations will occur as a result of the project.

Additional Comments: No 4(f) properties will be impacted by the project.

Project Location





1982 Aerial Photograph

Example CE(C)



April 19, 2005

Project No.: STP-SA21(005) **CATEGORICAL EXCLUSION** County: Florence
PIN: 30215 **TYPE C** File No.: 21.174B

To: Federal Highway Administration
From: Environmental Program Administrator
Description: S-26 / S-358 Intersection Improvements

(SEE ATTACHED SUPPORT FORM)

The Department's environmental assessment has determined the effects of this project are as described in the "General Support for Categorical Exclusion Determination" dated April 22, 1985, and is in compliance with the required findings reflected below. The project has been assessed for possible effects on the human and natural environment with a determination that no significant environmental impact will occur. The class of action and impact determination documented by this statement would qualify this project as a categorical exclusion under 23 CFR 771, Section 115(b).

This project will involve encroachment on either wetlands and/or floodplains. Therefore, under Executive Order 11990 and 11988, respectively, it has been determined that no practicable alternative to this involvement is considered and all practicable measures to minimize harm have been incorporated. The Department will obtain the appropriate permits, as applicable, and adhere to any conditions set forth therein. The public will be advised through appropriate notices of this involvement.

A determination has been made that the project will not jeopardize the continued existence of any listed endangered or threatened species or destroy or adversely modify critical habitat. This determination is conditional upon the completion of plant surveys and a subsequent determination of no effect for the American chaffseed and Canby's dropwort prior to construction. Due to the fact that the presence of these plants can only be determined during their blooming seasons, surveys will be completed during the optimal survey window for each plant species. Surveys will be conducted for the American chaffseed between May and August and for the Canby's dropwort between mid-August and September. Should the presence of the Canby's dropwort and/or the American chaffseed be confirmed, formal consultation with the USFWS and mitigation of impacts to the species, as developed in conjunction with USFWS, will be undertaken prior to construction. If no specimens are found, no further investigation under Section 7 of the Endangered Species Act is necessary.

Through appropriate coordination with the SCS and a further site assessment, the project will not adversely affect those types of farmlands defined under FPPA.

In consultation with the SHPO, as appropriate, the project will not affect any properties identified as being on or eligible for inclusion in the National Register of Historic Places under 36 CFR 800.

Date

Environmental Project Manager

Date

Federal Highway Administration

**S.C. DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL MANAGEMENT OFFICE**

SUPPORT FORM – CATEGORICAL EXCLUSION TYPE C

Pin No.: 30215
Road/Route No.: S-26 / S-358 Intersection

Project No.: STP-SA21(005)
County: Florence

Proposed Action: The project involves modifications to the intersection of Road S-26 and Road S-358. The existing intersection is an un-signalized four-way stop with two-lane approachways on each leg. The intersection will be improved by adding a left turn lane to each of the four approachways. In addition, a right turn lane will be added from Road S-358 westbound to Road S-26 northbound and the intersection will be signalized. Existing right of way along S-26 is 37.5 feet from centerline and existing right of way along S-358 is 33 feet from centerline. New right of way along S-26 will vary from 50 feet to 70 feet from centerline except in the area of the proposed outfall ditch. Along the outfall ditch, a new 25-foot wide strip of right of way, running the full length of the outfall ditch, will be obtained. New right of way along S-358 will vary from 45 feet to 60 feet from centerline. (See attached proposed alignment)

Criteria: To be processed as a Categorical Exclusion Type C (CEC) the following conditions must be met in addition to the General Criteria. The action does not involve:

- The acquisition of more than minor amounts of temporary or permanent strips of right-of-way and the acquisition will not require any residential or business displacements. *
- Use of Section 4(f) properties.
- An adverse effect determination under Section 106 of the National Historic Preservation Act.
- Individual Coast Guard Permits.
- Individual Corps of Engineer Permits, a Corps Nationwide Permit 23, or a Corps General Permit with greater than three acres of wetland impacts.
- Impacts to planned growth or land use, or significant impacts on travel patterns.
- Work encroaching in a regulatory floodway, adversely affecting the base floodplain, or potentially adversely affecting a National Wild and Scenic River.
- Changes in access control.
- Any known or potential major hazardous waste sites within the right-of-way.

* Right of way acquisition requires review of plans by staff archaeologist and / or biologist.

Noise: The project does not represent improvements entirely on new location, the addition of through traffic lanes, or significant change in alignment. Therefore, the requirements for conducting noise studies under 23 CFR 772 do not apply.

Air Quality: A project of this nature would not have an effect on ambient air quality. Florence County is in attainment for all automotive related air quality standards.

Water/Wetlands: This project is not located within the 100-year floodplain limits. Minor impacts to wetlands adjacent to the project are expected. Two perennial streams were identified within the limits of the project; however, only one stream will be impacted by the proposed improvements. A Nationwide Permit 14 is anticipated for this project.

Archaeological/Historical: No archaeological or historical sites were identified within the boundaries of the project (SHPO concurrence attached).

Endangered Species: The following list of federally protected species within Florence County was obtained from US Fish and Wildlife Service (USFWS) (1999) and SC Heritage Trust (2003).

Common Name	Scientific Name	Status*	Habitat Present	Surveys Completed	Biological Conclusion
Bald eagle	Haliaeetus leucocephalus	T	No	N/A	No Effect
Red-cockaded woodpecker	Picoides borealis	E	No	N/A	No Effect
Shortnose sturgeon	Acipenser brevirostrum	E	No	N/A	No Effect
American chaffseed	Schwalbea americana	E	Yes	No	Unresolved
Canby's dropwort	Oxypolis Canbyi	E	Yes	No	Unresolved

* Threatened (T) Endangered (E)

The project area was examined for habitat that meets the requirements for each federally protected species. Appropriate habitat was found for the American chaffseed in the form of dry to moist, open, maintained areas; therefore, detailed plant-by-plant surveys will be completed during the optimal survey window for this species between May and August. In addition, appropriate habitat was found for the Canby's dropwort in the form of maintained wetlands and roadside ditches; therefore, detailed plant-by-plant surveys will be completed during the optimal survey window for this species between mid-August and September.

Should the presence of the Canby's dropwort and/or the American chaffseed be confirmed, formal consultation with the USFWS and mitigation of impacts to the species, as developed in conjunction with USFWS, will be undertaken prior to construction. If no specimens are found, no further investigation under Section 7 of the Endangered Species Act is necessary.

Farmlands: The project was assessed under the Farmland Protection Policy Act of 1981. This site was assessed using the Farmland Conversion Impact Rating Form for a total score of 130 points. Sites receiving a total score of less than 160 need not be given further consideration for protection and no additional sites need to be evaluated.

USTs/Hazardous Waste: No USTs or other hazardous material sites will be encroached upon by the proposed project.

Relocations: No relocations will occur as a result of the project.

Additional Comments: No 4(f) properties will be impacted by the project.



Example Memorandum of Agreement 1

MEMORANDUM OF AGREEMENT

Whereas, the Department of Transportation Federal Highway Administration has determined that the proposed replacement of the Road S-569 Bridge over a tributary or the Pacolet River Spartanburg County, South Carolina will have an adverse effect on a property eligible for inclusion in the National Register of Historic Places pursuant to Section 106 (and Section 1 IOF) of the National Historic Preservation Act (16 U. S. C. 470) and its implementing regulations, "Protection of Historic and Cultural Properties" (36 CFR Part 800).

Now therefore, the Department of Transportation Federal Highway Administration (FHWA), the South Carolina Department of Transportation (SCDOT), and The South Carolina Historic Preservation Officer (SHPO) agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the affect of the undertaking on historic properties.

Stipulations

The Federal Highway Administration will ensure that the South Carolina Department of Transportation will undertake the replacement of this bridge in accordance with the following stipulations:

- a) Prior to construction the South Carolina Department of Transportation will record the present pedestrian bridge (former circa 1929 vehicular bridge) according to the standards of the Historic American Engineering Record (HAER).
- b) Documentation completed to HAER standards is to be accomplished by the following means:
 1. Preparation of a historical report describing the structure being documented and explaining its significance within the proposed Pacolet historic district.
 2. Large format archival quality photographs showing the resource as it exists today.
 3. Large format, archival quality photographs or photocopies of the original bridge plans from 1962 and 1929 (if they exist).
- c) A section of a stone masonry wall will be moved back to the edge of existing right of way, allowing for the safer negotiation of the curve.
- d) The sidewalks at the ends of the pedestrian bridge will have stone masonry walls constructed to provide an overlook to the stream and waterfalls below.
- e) Upon completion of this work, the SCDOT will forward to the SHPO and the HAER the appropriate documentation described above for their permanent record of the significant historic value of the bridge structure.

Execution of this Memorandum of Agreement evidences that the FHWA has afforded the SHPO a reasonable opportunity to comment on the proposed replacement of the Road S-569 Bridge over a tributary of the Pacolet River Spartanburg County and its effects on this historic

property and that the FHWA has taken into account the effects if its undertaking on this historic property.

_____ Date: _____
Federal Highway Administration

_____ Date: _____
State Historic Preservation Officer

_____ Date: _____
S. C. Department of Transportation

Example Memorandum of Agreement 2

MEMORANDUM OF AGREEMENT

Whereas, the South Carolina Department of Transportation has for over 20 years utilized a cultural resources short form report for compliance with Section 106 of the National Historic Preservation Act of 1966.

And whereas the South Carolina Department of Transportation has requested extending the use of the cultural resources short form report format to all of its cultural resources consultants and sub-consultants.

Therefore, the South Carolina Department of Transportation, the South Carolina State Historic Preservation Office, and the Federal Highway Administration agree that the undertaking shall be implemented in accordance with the following stipulations.

Stipulations

- a. The use of short form reports will be restricted to archaeological reconnaissance surveys, intensive archaeological surveys, as well as reconnaissance and intensive architectural surveys, where five (5) or fewer archaeological and/or architectural sites are identified.
- b. The short form reports cannot be used when significant sites are identified in the area of potential effect and it is determined that the project will have an adverse effect on the property.
- c. Short form reports may be used on projects involving significant bridges provided that no other significant architectural or archaeological resources are in the area of potential effect. Short form reports will include expanded discussions of any significant bridges to facilitate National Register eligibility determinations. SHPO may request additional information or full reports on projects involving significant bridges when it feels more information is needed to make National Register eligibility decisions.
- d. Short form reports must at a minimum contain the following information:

Title, Archaeologist (or other cultural resource investigator), Date of Research, County, Project Name, Project Description, Location, USGS Quadrangle, Date, Scale, UTM, Zone, Easting, Northing, Environmental Setting, Nearest River/Stream and Distance, Soil Type, Reference for Soils Information, Ground Surface Visibility, Current Vegetation, Investigation Description, Table or List of Previously Identified Resources (Archaeological or Architectural) in Vicinity of Project Area, Description/Discussion of Any Resources Discovered as a Result of Current Survey, and Remarks and Recommendations.

These points of information are currently covered in the short form reports generated in-house by SCDOT. Consultants and sub-consultants should be provided the SCDOT template for short form reports to use as a model for their own short form reports. The minimum information requirements can be added to or modified at a future date upon written agreement between SHPO and SCDOT.

- e. SHPO may request additional information (contextual or otherwise) when it feels a short form report is insufficient for completing the Section 106 review process.
- f. SHPO and SCDOT will review this agreement one year after it takes effect to determine whether this arrangement is effective in conducting Section 106 review and will discuss any changes or modifications to this agreement at that time.

Be it resolved that with the stipulations as outlined above, the cultural resource consultants and sub-consultants will be allowed to utilize the cultural resources short form report format.

_____	_____
State Historic Preservation Officer	Date
_____	_____
S. C. Department of Transportation	Date
_____	_____
Federal Highway Administration	Date

Example Environmental Assessment

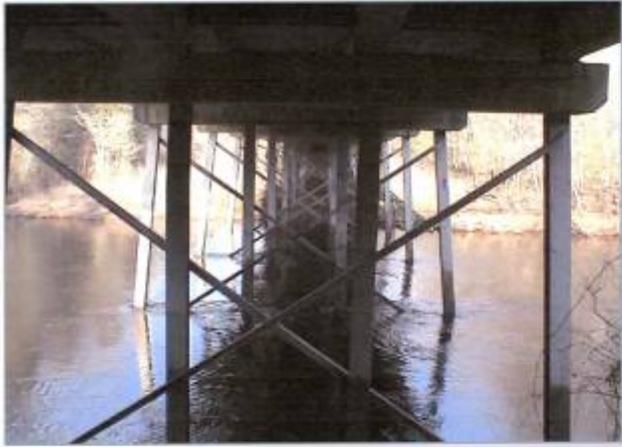
Environmental Assessment

**SC 377 Bridge Replacements
over the Black River and Swamp**



**Williamsburg
County
South Carolina**

August 2005



**SC 377 BRIDGE REPLACEMENTS
OVER THE BLACK RIVER AND SWAMP**

WILLIAMSBURG COUNTY
SOUTH CAROLINA

ARTICLE I. ENVIRONMENTAL ASSESSMENT

Submitted by
U.S. Department of Transportation
Federal Highway Administration
and
S.C. Department of Transportation

Date of Approval

S.C. Department of Transportation

Date of Approval

Federal Highway Administration

The following individuals may be contacted for additional information concerning the project:

Mr. Patrick Tyndall
Environmental Program Manager
Federal Highway Administration
1835 Assembly Street
Suite 1270
Columbia, S.C. 29202
(803) 765-5460

Mr. Benar Amado, P.E.
Program Manager
S.C. Department of Transportation
P.O. Box 191
Columbia, S.C. 29202
(803) 737-0181

Project No. BR-BR45 (002)
File No. 45.131B
PIN 30990

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APPENDIX

Appendix A: Project Coordination

Appendix B: Permit Application and Support Material

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PROJECT COMMITMENTS

The swamp areas within the project may provide suitable spawning habitat for the Shortnose sturgeon. To minimize impact to the sturgeon, SCDOT has agreed to implement a seasonal moratorium for all in-water work between February 1 and April 30. In addition, work will not impede more than 50 percent of the channel during the months of January through April. During construction, the contractor may utilize barges in the river for bent installation and erection of beams except during the moratorium. No other special measures will be employed outside of this moratorium except for normal Best Management Practices (BMPs).

Burrows's Service Station/Cooper's Country Store has been previously determined eligible for inclusion on the National Register of Historic Places. DOT will insure that the current project will not encroach upon the store and as a result will not adversely affect this historic site.

A petroleum leak at Burrows's Service Station/Cooper's Country Store has been ranked as a 2BB. Type and extent of monitoring and/or remediation is, at this time, unknown. However, groundwater beneath the site has been impacted. DOT will insure that no digging, mucking, drilling or any type of activity directly encountering subsurface material will be performed in the area of Cooper's Country Store, therefore no additional testing/monitoring/ remediation of the site is needed for this project.

In the absence of opportunities for on-site mitigation, the Department anticipates debiting the Black River Mitigation Bank at a 1:1 ratio for clearing impacts of 1.4 acres and the prescribed 3:1 ratio for the 3.989 acres of other wetland impacts.

SCDOT is obtaining the following permits for this project.

- Individual Army Corps of Engineers Permit
- Section 404 Permit
- Navigable Waters General Permit
- 401 Water Quality Certification

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1.0 INTRODUCTION

The South Carolina Department of Transportation (SCDOT) proposes the replacement of the four bridges over the Black River and Swamp along SC 377 in Williamsburg County, South Carolina. The project, as proposed, would result in certain modifications to the human and natural environment.

2.0 PURPOSE AND NEED

The project involves roadway and bridge improvements along a section of SC 377 beginning just north of US 521 and continuing towards Kingstree. The total project length is approximately 1.942 miles. (See Figure 2.1: Project Location, page 5.) The project is being advanced to improve safety and efficiency along this section of SC 377 by replacing the structurally deficient and/or functionally obsolete bridges over the Black River and Swamp. Also included in the project are improvements to the US 521/SC 377 intersection.

2.1 Need

A major state highway crossing Williamsburg County, SC 377 serves as one of two main arterials connecting Kingstree to US 521 and providing the most efficient route to the communities of Salters, Lane and Gourdin located south of Kingstree. Development along this section of SC 377 consists of sporadically located residences and one service station located at the intersection of SC 377 and US 521. There is also one clothing store and one day care center located just outside the project area. Present average daily traffic (ADT) is estimated to be 3700 vehicles per day (VPD) with five percent truck volume (based on year 2003 traffic data). Future traffic volumes show an increase to 6000 VPD with 5% truck volume by 2025.

Traffic accident reports were obtained for SC 377 from its intersection with US 521 to just south of S-450 for a period from January 1, 2001 to September 1, 2004. The reports indicate a total of 27 accidents including 11 hit objects, 8 angle collisions, 3 rear ends, 3 hit animals, 1 sideswipe and 1 out of control. The severity of the accidents included 1 fatality, 11 injuries, and 15 with property damage.

The existing bridges were evaluated in terms of their structural and functional integrity as part of the FHWA's Bridge Replacement and Rehabilitation Program (BRRP). The purpose of the BRRP is to replace or rehabilitate public highway bridges determined to be structurally deficient, functionally obsolete, or physically deteriorated. Bridges given a sufficiency rating of 50 or less out of a total score of 100 are eligible for replacement. Generally, the lower the sufficiency rating, the higher the priority the bridge receives.

The main bridge and overflow bridges have been determined structurally deficient and/or functionally obsolete and are unable to accommodate future traffic safely and efficiently. The main bridge received a sufficiency rating of 10.8, and the first and third overflow bridges heading north toward Kingstree both received sufficiency ratings of 44. While the second overflow bridge received a sufficiency rating of 60, it has been considered functionally obsolete. The existing bridges have several issues that affect the structural integrity, including cracks in the decks and beams, rust in the reinforcing caused from moisture, and concrete spalling in the superstructure and substructure. The

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bridges narrow widths and substandard design make them inadequate to safely and efficiently accommodate present and future traffic. By increasing safety and efficiency of the roadway through the proposed project, accident-related property damage and injury will be reduced. By increasing the capacity of the roadway and bridges, traffic delays and the potential for accidents are further reduced.

A highway capacity planning analysis was performed for the intersection of SC 377 and US 521. Results of the study showed a Level of Service (LOS) A or B depending on time of day or location for all years until 2037. The existing spur connecting US 521 to SC 377 is being removed for safety concerns and all traffic will be directed to the intersection of SC 377 and US 521. Removal of the spur will result in a future LOS B. To minimize delays resulting from removal of the spur, left turning lanes will be added to US 521, with a right turn lane from the direction of the spur.



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2.2 Existing Facility

According to the US Census, the county population growth has remained relatively constant growing from 36,756 to 36,800 between 1990 and 2000, an increase of less than 1%. The county remains relatively rural with minimal development along the project corridor. Sparsely spaced residential homes are located on the upland areas adjacent to SC 377 and US 521. One small service station/convenience store, Cooper's Country Store is located in the southwest corner of SC 377 and US 521. A grain storage facility is located on the northeast corner of SC 377 and US 521.

The project involves impacts along a 1.942 mile section of SC 377 starting at the intersection of SC 377 and US 521. The existing facility is a two-lane roadway including one main river bridge extending across the Black River and three overflow bridges extending across the adjacent swamp. A spur located in the southeastern quadrant of the intersection runs behind the existing agricultural grain storage facility and connects US 521 to SC 377.

The main bridge is approximately 342 feet long and 31 feet wide and the three overflow bridges are approximately 390 feet long and 31 feet wide. The bridges consist of two 11-foot travel lanes with 2-foot paved shoulders. The roadway consists of two 11-foot lanes, one in each direction and grass shoulders varying nine to 12 feet wide.

The existing right of way for SC 377 west of the main bridge and east of the third overflow bridge is 33 feet to each side of the centerline. Right of way at each of the bridges is 75 feet to each side of the bridge centerline and 40 feet to each side of the roadway centerline between the bridges. The posted speed limit is 55 miles per hour.

2.3 Proposed Facility (Alternate 4)

The Department proposes to replace the existing bridges with longer and wider bridges that have improved approachways (See Figure 2-3: Proposed Facility and Figure 2-4: Typical Section for Roadway, pages 6-7). The bridge centerlines will be shifted approximately 27 feet to the downstream side and construction will be staged. The new main bridge will be 360 feet long and 44 feet wide; the three overflow bridges will be 420 feet long and 44 feet wide. Upon completion, the bridges will provide two 12-foot lanes, one in each direction. The outside shoulders will be 10 feet wide.

Roadway improvements will include widening the two lanes to 12 feet with 10-foot grassed or combination grass/paved shoulders which includes a 4 foot paved section to accommodate for a future bike lane should this corridor be so designated. The roadway improvements will tie to the existing roadway facility north of the last overflow bridge and extend to the intersection of SC 377 and US 521. Improvements to the intersection will include the addition of left turn lanes to both approaches of US 521 and a right turn lane on the southeastern approach of US 521. A four foot paved median will be added to the US 521 approachways. The spur running behind the grain storage facility will be removed

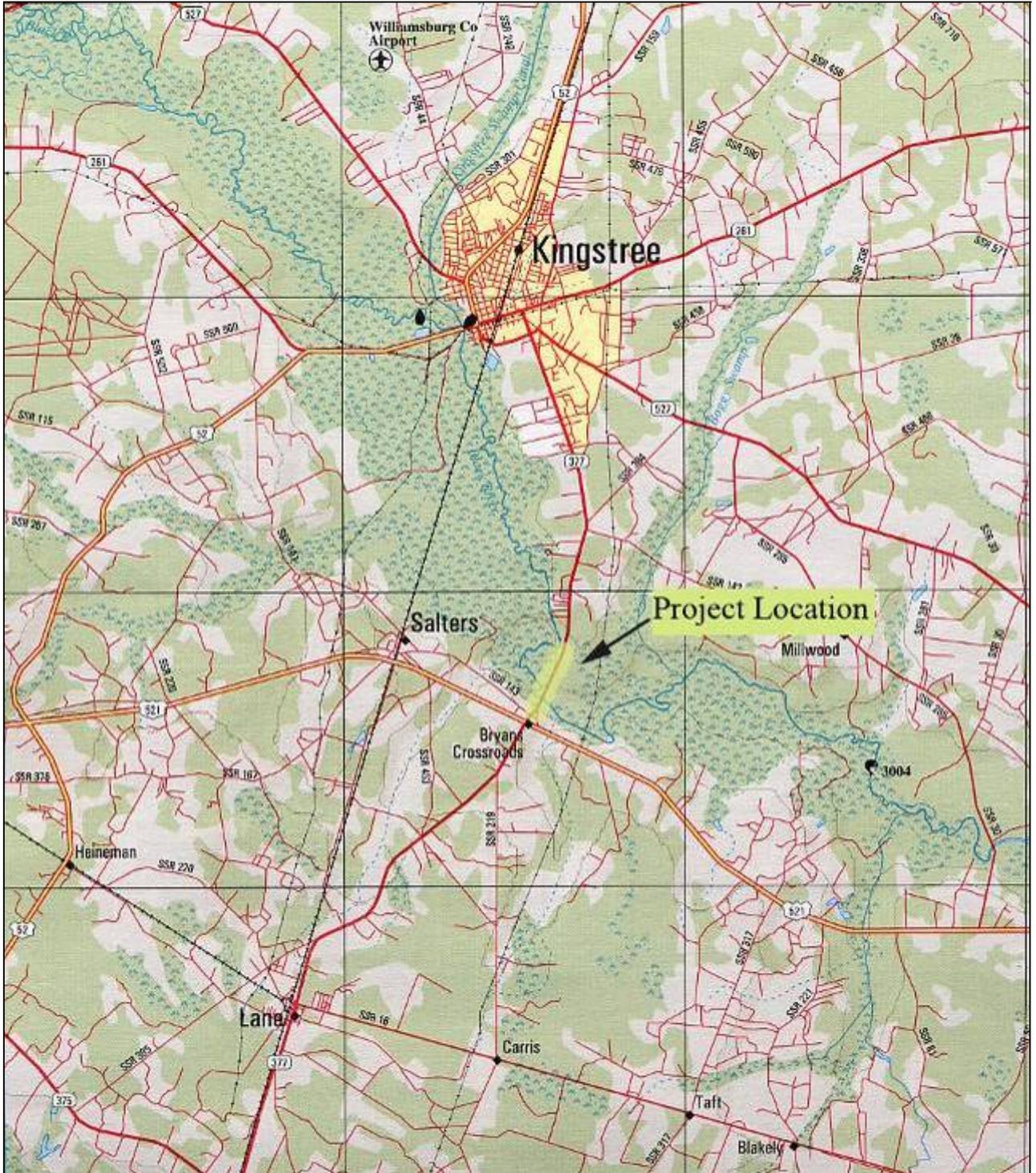
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Construction of the bridges will be staged. During stage one, a portion of the new bridges will be constructed downstream of the existing bridges. Two lanes of traffic will be maintained on the existing bridges during stage 2. The traffic will then be diverted to the new portion of the bridges/road and the existing bridges removed. The remaining portion of the new bridges will then be constructed. The new bridge centerline will be shifted approximately 25 feet downstream from the center of the existing roadway.

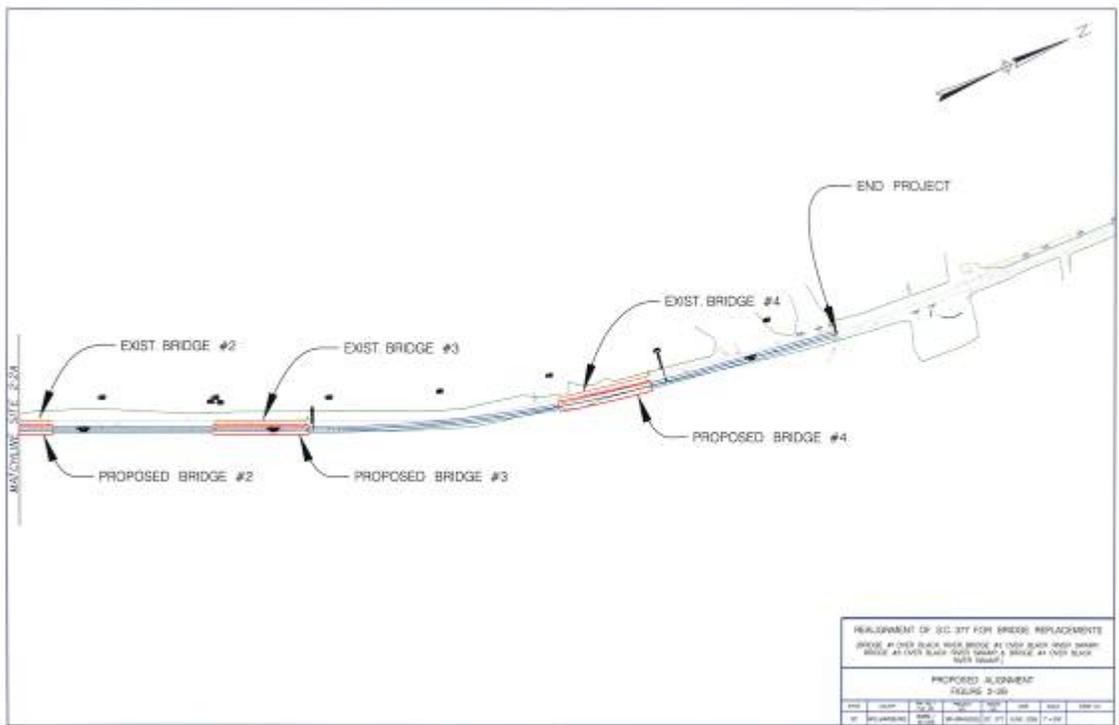
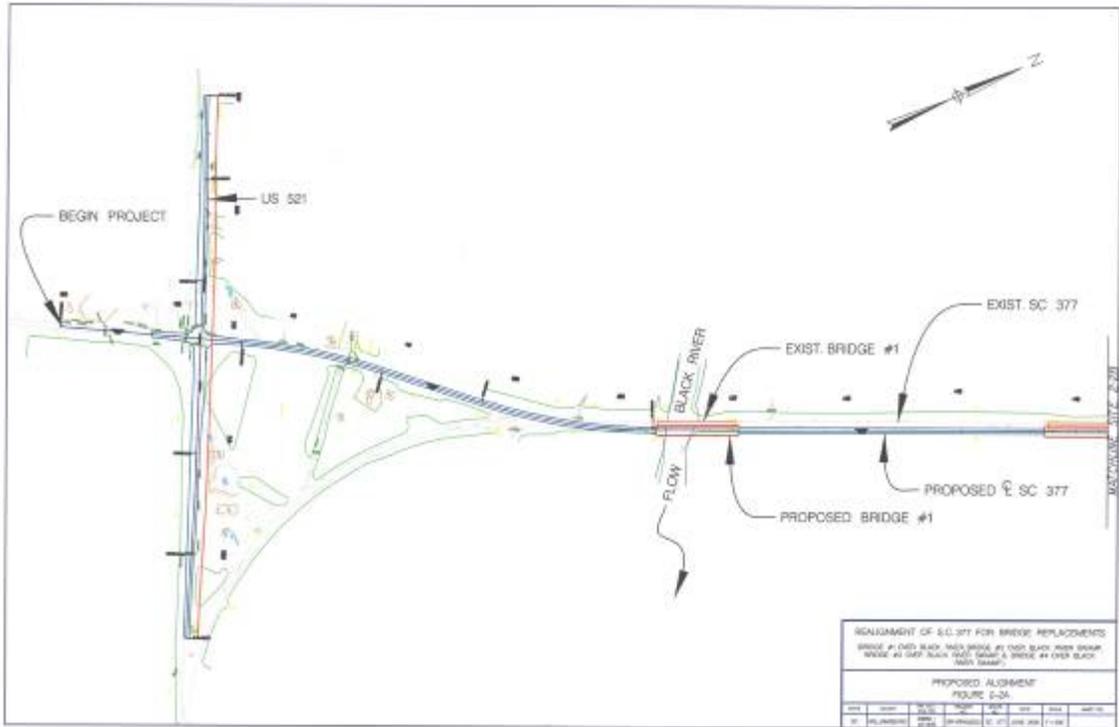
The total cost for this project has been estimated at approximately \$11,300,000.00. If the project proceeds as scheduled, construction would begin in Spring 2006 and require approximately three years to complete.

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**FIGURE 2-1
PROJECT LOCATION**

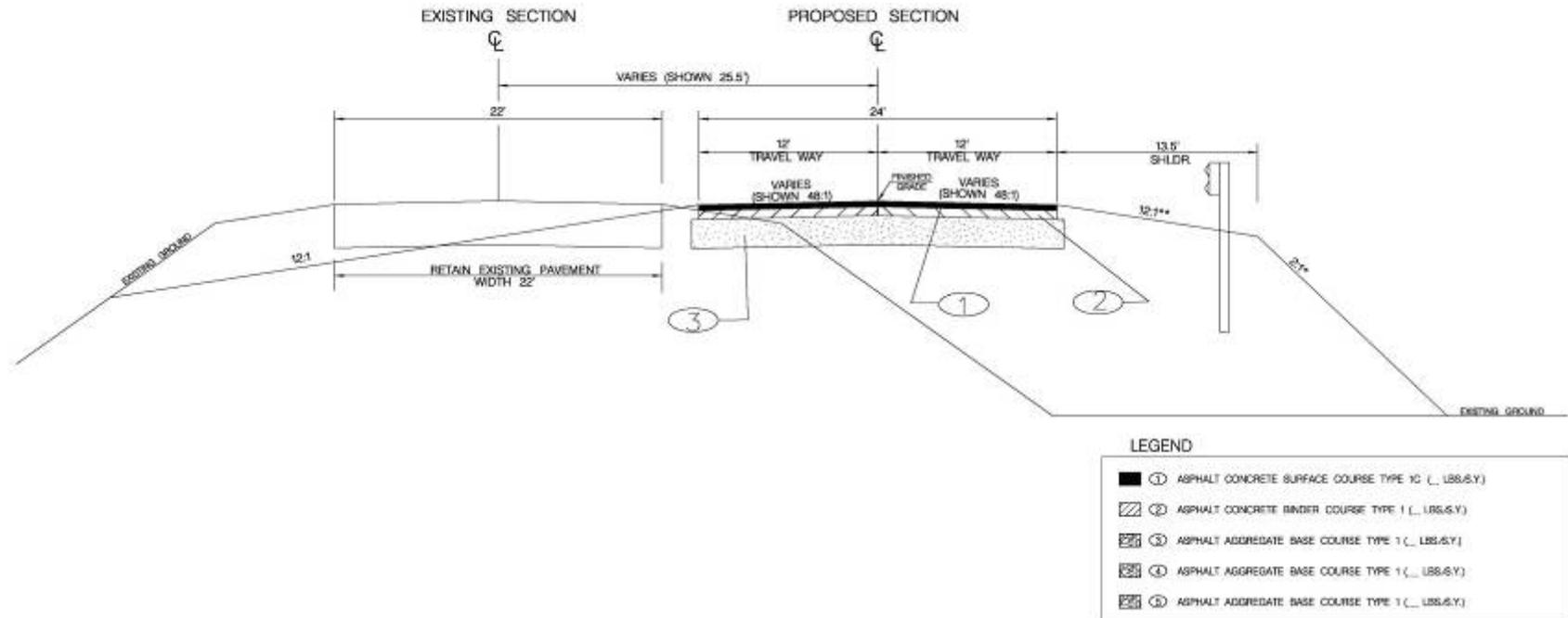


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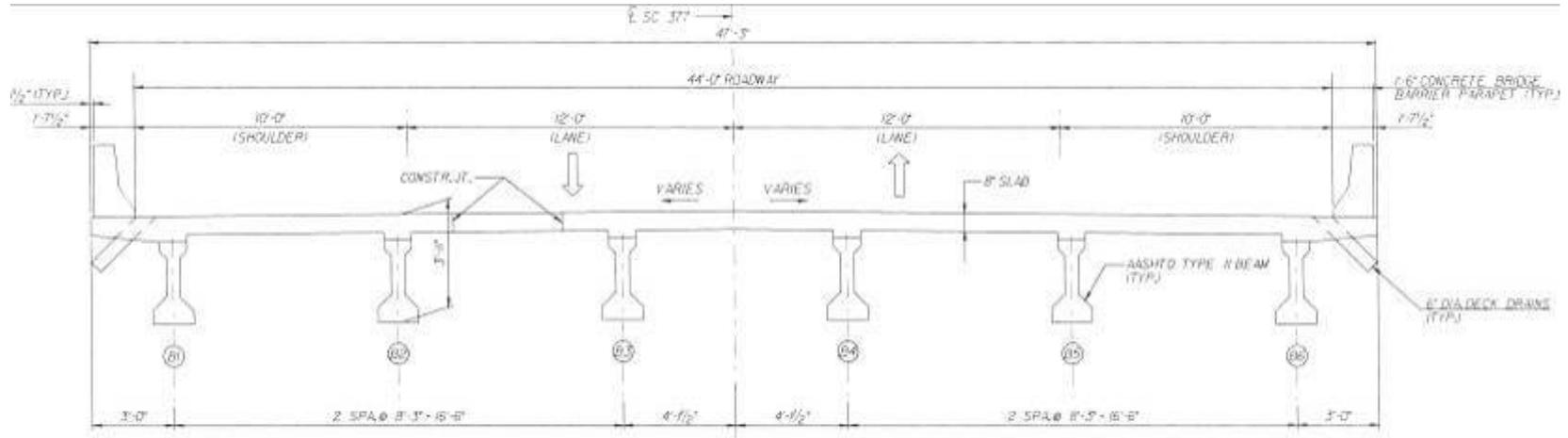
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**FIGURE 2-3
TYPICAL SECTION FOR ROADWAY**

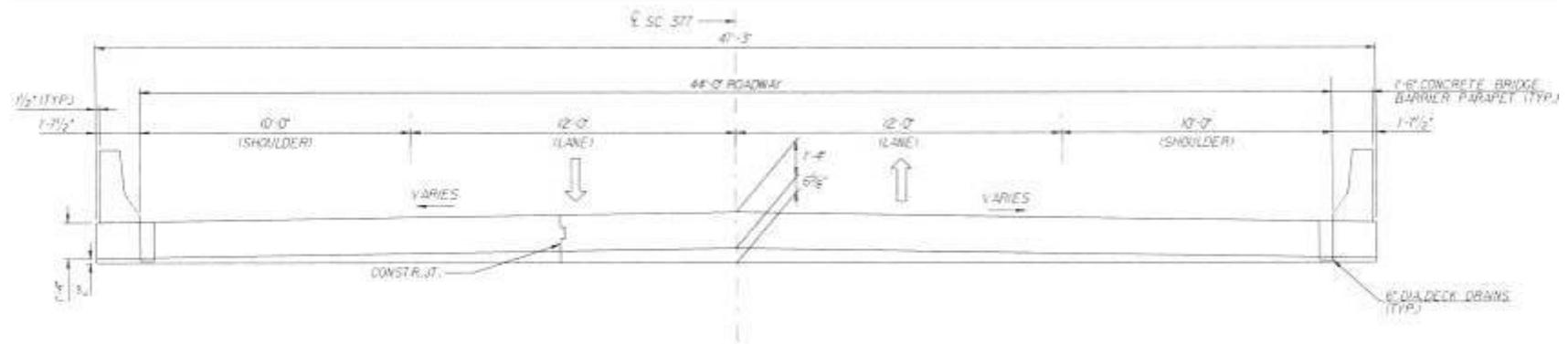


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**FIGURE 2-4
TYPICAL BRIDGE SECTIONS**



TYPICAL SECTION BRIDGE 1



TYPICAL SECTION BRIDGES 2, 3 & 4

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3.0 ALTERNATES

The Department has considered location and design alternates in the process of developing the proposed “build” alternate. The “no-build” alternate was considered as a baseline for comparison. Three design alternates were presented to the public for consideration during a public information meeting held on April 5, 2005; an upstream alignment, downstream alignment, and replacement on existing alignment.

3.1 Alternate 1 – No Build

The No Build Alternate is not being pursued because of the extreme cost of maintaining/rehabilitating the existing posted bridges, the condition of the existing bridges and the on-going inconvenience to the public due to repeated lane closures and detours associated with future maintenance operations.

3.2 Alternate 2 – Existing Alignment

Replacement on existing alignment represents the least environmental impacts; however development of this alternate would require the road to be closed during construction resulting in traffic detours ranging from 12 – 22 miles along US 521. Emergency response time to the area would be greatly increased as emergency vehicles would be forced to use the imposed detour. Further, the majority of the population is older and much needed access to the hospital would be impacted.

3.3 Alternate 3 – Upstream Alignment

There is very little difference between the upstream alignment (Alternate 3) and the preferred downstream alignment (Alternate 4). However, the wetland impacts for Alternate 3 are minimally higher than those for Alternate 4 and increased right-of way costs and utility costs for the upstream alignment would result in an overall increase of total project costs.

3.4 Alternate 4 – Downstream Alignment (Preferred)

To minimize impacts on the citizens of the area resulting from the detour, the downstream alignment has been selected as the preferred alternate. While downstream alignment poses slightly greater impacts to the environment than replacing structures along the existing alignment, it represents the least impact to the citizens and area motorists. In order to reduce impacts to the environment, construction, and right of way costs, construction will be staged. Input received during the public information meeting showed overwhelming desire for the road to remain open.

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The proposed downstream alternate represented the best “build” alternate for:

- meeting travel demands
- minimizing impact to the environment
- less adverse impact to driveways during construction
- minimizing utility impacts
- less public inconvenience because a detour is not required
- reduced right of way costs due to staged construction

The environmental impacts for each alternate are summarized in the table below:

**TABLE 3-1
ENVIRONMENTAL MATRIX**

Impact Category	Impacts by Alternate			
	Alternate 1 No Build	Alternate Existing 2	Alternate 3 Upstream	Alternate 4 Downstream
Residential relocations	0	0	0	0
Commercial relocations	0	0	0	0
Traffic Detour	0	12-22 mi.	0	0
Farmland (site value)	0	145	145	145
Floodplains	Yes	Yes	Yes	Yes
Wetlands	0	0.5	5.4	5.389
Streams	1	1	1	1
Threatened/Endangered Species	1	1	1	1
Noise	None	None	None	None
Cultural Resources				
Historical	0	0	0	0
Archaeological Section 4(F) Resources (parks, etc...)	0	0	0	0
Hazardous Materials	0	0	0	0
Permits	None	GP / State Nav	Individual Corps / State Nav	Individual Corps / State Nav

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4.0 PROBABLE IMPACTS OF THE PROJECT ON THE ENVIRONMENT

Environmental studies conducted by the Department’s consultants indicate the absence of any significant impact on the human and natural environment. The following paragraphs provide an overview of the findings.

4.1 Land Use

Kingstree, with a population of 3,858, serves as the county seat and the business center for over 36,000 residents. An agricultural based community, Kingstree is home to one of the largest cotton gins and tobacco markets in the state. Situated 75 miles from Charleston, Columbia, and Myrtle Beach, Kingstree is accessible by two major highways, US 521 and SC 377.

The project corridor lies within a rural and agricultural area. The Black River and associated swamp are the predominate features. Residents have homes along the river and the area has shown little change over the years. Currently, no land use plan exists for the project area and there should be no adverse impact on future growth or current activity in the area.

4.2 Threatened or Endangered Species

Pursuant to Section 7 of the Endangered Species Act of 1973, the project corridor was surveyed on November 16-19, 2004. A list of federally protected species for Williamsburg County was obtained from the U.S. Fish and Wildlife Service (USFWS). In addition, files maintained by the S.C. Heritage Trust Program (SCHTP) were reviewed for documented sightings of state or federally listed species. Field surveys for protected species were limited to identification of potential habitat. Table 4-1 lists the threatened (T) and endangered (E) species for Williamsburg County.

**Table 4-1
List of Federally Protected Species**

Animals	Status	Habitat	Determination
Bald eagle (<i>Haliaeetus leucocephalus</i>)	T	Absent	No effect
Wood stork (<i>Mycteria americana</i>)	E	Absent	No effect
Red-cockaded woodpecker (<i>Picoides borealis</i>)	E	Absent	No effect
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	E	Possible	May effect, not likely to adversely impact
Canby's dropwort (<i>Oxypolis canbyi</i>)	E	Absent	No effect
American chaff-seed (<i>Schwalbea Americana</i>)	E	Absent	No effect

Field surveys identified potential habitat for the Shortnose sturgeon. No suitable habitat for the Bald eagle, Wood stork, Red-cockaded woodpecker, Canby’s dropwort or American chaff-seed exists within the project study area and there was no evidence of the species’ presence during the field

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studies. Therefore, a determination of No Effect was made for these species. The remaining species for which potential habitat was identified is discussed below.

Shortnose sturgeon - The swamp areas within the project may provide suitable spawning habitat for the Shortnose sturgeon. To minimize impact to the sturgeon, the Department has agreed to implement a seasonal moratorium for all in-water work between February 1 and April 30. In addition, work will not impede more than 50 percent of the channel during the month of January. During construction, the contractor may utilize barges in the river for bent installation and erection of beams except during the moratorium. No other special measures will be employed outside of this moratorium except for normal Best Management Practices (BMPs).

As a result of implementing these measures, the project may affect, but is not likely to adversely affect, the endangered Shortnose sturgeon. Coordination with National Oceanic and Atmospheric Administration (NOAA) regarding impacts to the sturgeon was initiated on May 5, 2005. Concurrence from NOAA on the proposed determination of effect and the Department's proposed measures to minimize impact will be included with the request for a Finding of No Significant Impact (FONSI).

4.3 Farmlands

The Farmland Protection Policy Act of 1981 requires evaluation of farmland conversions to nonagricultural uses. Farmland can be prime farmland, unique farmland, or farmland of statewide or local importance. Prime farmland soils are those that have characteristics favorable for economic production of sustained high yields of crops. These soils may or may not be presently used as cropland. Conversely, land that is presently used as cropland may or may not be prime farmland.

Through the use of county farmland listings provided by the Natural Resources Conservation Service (NRCS), it has been determined that the project area contains farmlands protected under the Act. For purposes of evaluating this project, the Land Evaluation Criterion - Relative Value score was assumed to be the maximum value of 100 points. The Site Assessment Criteria score was then calculated to be 45 points for a total score of 145 points. As the total score is less than 160, there is no requirement to consider alternative sites or conduct additional studies under the Farmland Protection Policy Act.

4.4 Water Quality

The project will involve work within the confines of the Black River and Swamp. During construction, temporary siltation may occur in the river and swamp and erosion will be of a greater degree than presently occurring on existing terrain. Further, pier construction in the river and adjacent wetland areas will occur. The contractor would be required to minimize this impact through implementation of construction best management practices, reflecting policies contained in 23 CFR 650 B and SCDOT's Supplemental Specifications on Seeding and Erosion Control Measures (August 15, 2001).

The Black River runs through the center of the project area. This section of the river is a freshwater community beyond the upstream limits of tidal influence and is classified as Freshwater (FW). Class

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FW are freshwaters suitable for primary and secondary contact recreation and as a source for drinking water supply, after conventional treatment, in accordance with the requirements of SCDHEC. These waters are suitable for fishing and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. This class is also suitable for industrial and agricultural uses.

The reach of the Black River at US 52 in Kingstree has been listed on the SCDHEC (2004) 303(d) list as impaired in fish consumption due to mercury contamination. A water quality monitoring station (PD-044) is located at the US 52 crossing of the Black River.

Impacts to water resources in the project study area may result from activities associated with project construction. Activities that would result in impacts are clearing and grubbing on stream banks, riparian canopy removal, in-stream construction of bridge piers, fertilizers and pesticides used in re-vegetation, and pavement/culvert installation. The following impacts to surface water resources could result from the construction activities mentioned above.

- Increased sedimentation and siltation downstream of road crossings and increased erosion in the project study area.
- Alteration of stream discharge due to silt loading and changes in surface and groundwater drainage patterns.
- Changes in light incidence and water clarity due to increased sedimentation and vegetation removal.
- Changes in and destabilization of water temperature due to vegetation removal.
- Alteration of water levels and flows due to interruptions and/or additions to surface and ground water flow from construction.
- Increased nutrient loading during construction via runoff from exposed areas.
- Increased concentrations of toxic compounds in roadway runoff.
- Increased potential for release of toxic compounds such as fuel and oil from construction equipment and other vehicles.

Long-term impacts to streams will be limited to stream reaches within the road facility footprint only. Due to safety concerns and current design standards, the roadway and bridges will be slightly wider and longer than existing roadway and bridges. However, traffic capacity will not be increased at this location, as SC 377 will remain at two lanes of traffic. The overall bridge widths will increase from 31 feet to 47 feet, due to increased shoulder widths, and the bridges will also increase in length. There will be increased run-off from the bridges due to the increased area, however, with no traffic capacity increase; there should be no increase in contaminants from run-off. Impacts to stream reaches adjacent to the roadway will be temporary and localized during construction. Long-term impacts to adjacent reaches resulting from construction are expected to be negligible. To minimize future degradation to the streams, BMPs including sediment and erosion control measures will be taken.

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4.5 Permits

Permit coordination will be carried out with the U.S. Army Corps of Engineers (USACE), Charleston District, for the design and construction of the bridge and approachway work. The following permitting is anticipated:

- Section 404 of the Clean Water Act requires a permit for the discharge of dredged material or fill in a wetland. An Individual Corps Permit will be required for this project.
- R. 19-450, et seq., Code of Laws of South Carolina, 1976 as amended requires that a State Navigable Waters Permit will be necessary for construction of this project. As such, work to be performed will be processed under SC GP-95-002 (Revised) which has been issued by the SC Department of Health and Environmental Control (SCDHEC) to the SCDOT for minor work within navigable waters of the State.
- SCDHEC's 401 Water Quality Certification, pursuant to Section 401 of the Federal Water Pollution Control Act of 1972 as amended by the Clean Water Act of 1977 and the Water Quality Act of 1987 will be required. Certification is required for activities permitted by the USACE for construction occurring in navigable waters or discharge of dredged or fill material into the State's waters.

4.6 Wetlands and Waters of the U.S.

Wetland habitats are defined as those areas that are inundated by water with sufficient frequency and duration to support vegetation that is tolerant of saturated soil conditions. The USACE utilizes specific hydrologic, soil, and vegetation criteria in establishing the boundary of wetlands within their jurisdiction.

One method of assessing the value and function of wetlands is in terms of wildlife habitat. The USFWS Resource Category criteria are outlined in the USFWS Mitigation Policy, 46 CFR 7644-7663. Resource categories and mitigation planning techniques are assigned based on the following criteria:

- Category 1 - Communities of one-of-a-kind high value to wildlife, unique and irreplaceable on a national or eco-regional basis, habitat is not replaceable in kind based on present-day scientific and engineering skills within a reasonable time frame.
- Category 2 - Communities of high value to wildlife, which are relatively scarce or are becoming scarce on a national or eco-regional basis, habitat can be replaced in kind within a reasonable time frame based on present-day scientific and engineering skills.
- Category 3 - Community types of high to medium wildlife value which are relatively abundant on a national basis, out-of-kind replacement is allowable if a tradeoff analysis demonstrates equivalency of substituted habitat type and/or habitat values. These sites are often in conjunction with a replenishing source.

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- Category 4 - Community types of low to medium wildlife value, generally losses will not have a substantial adverse effect on important fish and wildlife resources. These sites have often been affected by the present roadway or human disturbances and are usually isolated.

A combination of vegetation analysis, hydrological observations, and soil sampling was utilized to determine the locations of wetlands within the proposed 21.21 acre project area. Total wetlands identified within the project study area are approximately 8.63 acres and includes one stream system and four wetland sites. Wetlands impacted by the project are classified as Category 4, according to USFWS category criteria. The proposed project will require a *USACE Individual Permit, a State Navigable Water General Permit 95-002 and SCDHEC's 401 Water Quality Certification*. Relevant portions of the permit application package, including permit drawings depicting wetland impacts and the SCDOT Impact Assessment form are included in Appendix B.

Stream Impacts

One stream system traverses the project study area, the Black River. This river is considered a riverine system. During construction, impacts to the river will be limited to the removal of the existing bents and the placement of bents within the river.

Wetland Impacts

Four wetland areas were identified within the project corridor, four of which will be impacted by the project. These wetlands are considered freshwater systems which occur in low depressions of floodplains adjacent to streams and vary in plant community composition.

**TABLE 4-2
WETLAND LOCATIONS**

System	Acres of Wetland Fill	Acres of Wetland Clearing	Total Acres Impacted by Alternate	Wetland Type
Wetland 1	1.733	0.455	2.188	Freshwater
Wetland 2	0.867	0.298	1.165	Freshwater
Wetland 3	0.947	0.410	1.357	Freshwater
Wetland 4	0.442	0.237	0.679	Freshwater
TOTAL WETLANDS IMPACT	3.989	1.4	5.389	
TOTAL WETLANDS IN PROJECT AREA			8.39	

Although the existing alignment would pose the least disruption to wetlands, the hardship on the surrounding communities eliminated this option as the preferred alignment. Of the remaining two alternates, the downstream alignment is the preferred alignment. Four wetland sites will be impacted resulting in approximately 5.389 acres of impact to wetlands. (See permit drawings, Appendix B.)

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It appears that there is no practicable alternative to the construction in wetland areas and the proposed action will include all practicable measures to minimize harm to wetlands that may result. The project will utilize 2:1 fill slopes to minimize the taking of wetlands throughout the project. Best management practices including implementation of erosion control measures, which include seeding of slopes, silt fences, and sediment basins as appropriate, will be required of the contractor to ensure compliance with policies reflected in 23 CFR 650B. SCDOT will comply with Executive Order 11990 regarding protection of wetlands.

Mitigation

Opportunities for on-site mitigation have been investigated during the project's development. On-site mitigation opportunities are limited due to the steep slopes of the roadway embankments and the developed nature of the project corridor.

The new main bridge over the Black River will have five interior bents within the river where the existing bridge has ten. The three existing overflow bridges each have 12 bents within the wetlands area. The new overflow bridges will be longer and wider than the existing bridges and will each have 13 bents within the wetland areas. The existing bridges will be removed and disposed of properly, including the removal of the existing piers/footings to or below the mudline.

In the absence of opportunities for on-site mitigation, the Department anticipates debiting the Black River Mitigation Bank at a 1:1 ratio for clearing impacts of 1.4 acres and the prescribed 3:1 ratio for the 3.989 acres of other wetland impacts.

4.7 Terrestrial and Aquatic Wildlife

Fragmentation and loss of wildlife habitat is an unavoidable consequence of highway development. However, the proposed project is not expected to result in adverse impacts to wildlife. The new bridge structures will be longer than the existing bridges thereby benefiting wildlife migration by providing additional safe areas for wildlife to move through the project area. The swamp areas within the project may provide suitable spawning habitat for the Shortnose sturgeon. To minimize impact to the sturgeon, SCDOT has agreed to implement a seasonal moratorium for all in-water work between February 1 and April 30. In addition, work will not impede more than 50 percent of the channel during the month of January. Short-term displacement of local wildlife populations will occur during initial construction. Most local species are habituated to highway disturbances and are expected to move back into the area upon completion of the project.

4.8 Floodplains

Based on a study of the Flood Insurance Rate Maps (FIRM), published by the Federal Emergency Management Agency (FEMA), the proposed project would involve construction within the 100-year flood plain. However, the project is not expected to be a significant longitudinal encroachment as defined under 23 CFR 650A, nor is it expected to have an appreciable environmental impact on this base floodplain. The level of risk and consequences attributed to this encroachment is not expected to be any greater than that associated with the present roadway. Also, the project is not expected to

**ENVIRONMENTAL ASSESSMENT
SC 377 BRIDGE REPLACEMENTS OVER THE BLACK RIVER
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have any increased potential for impact on those critical elements that would constitute a significant risk under 23 CFR 650A.

4.9 Air Quality

This project is consistent with the South Carolina State Air Quality Implementation Plan (SIP) regarding the attainment of the National Ambient Air Quality Standards. Presently, Williamsburg County meets all air quality standards for automobile related pollutants. The State Bureau of Air Quality at the South Carolina Department of Health and Environmental Control (SCDHEC) has determined that transportation control measures (TCMs) are not required to maintain the area's air quality.

4.10 Noise

As stated in the 23 CFR 772.5(h), a traffic noise analysis is required for proposed federal-aid highway projects that will construct a highway on new location or physically alter an existing highway, that will significantly change the horizontal or vertical alignment of the road, or will increase the number of through-traffic lanes. As the project does not represent improvements entirely on new location, the addition of through traffic lanes, or significant change in alignment, the requirements for conducting noise studies do not apply and no impact to adjacent receivers will occur under the proposed alternate.

4.11 Hazardous Waste and Underground Storage Tanks (HAZMAT)

Hazardous waste/material sites are regulated by the Resource Conservation and Recovery Act (RCRA), as amended, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, and the Superfund Amendments and Reauthorization Act of 1986 (SARA). In October 2004, a review of the SCDHEC CERCLA site inventory and an initial site assessment (ISA) was conducted to identify potential sites involving hazardous materials within the project corridor. One site, Cooper's Country Store, with the potential for contamination was identified within the vicinity of the project. No other sites with documented contamination, including the presence of above or underground storage tanks, were identified within the project corridor.

Three active underground storage tanks (USTs) for storage of petroleum products (gasoline, diesel, etc.) were observed at the Cooper's Country Store. These tanks vary in size ranging from 4,000 to 6,000 gallons. Based on available information, the tanks are registered with the state and have a UST permit number 10397. No monitoring wells and /or pipelines were observed during the area investigation; however potential for their presence on site exists.

A petroleum leak was confirmed at the Cooper's Country Store on May 20, 1994. At present the site is ranked as a 2BB (relatively high on the priority ranking). Type and extent of monitoring and/or remediation is, at this time, unknown. However, groundwater beneath the site has been impacted.

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No digging, mucking, drilling or any type of activity directly encountering subsurface material is anticipated in the area of Cooper's Country Store, therefore no additional testing/monitoring/remediation of the site is needed for this project.

4.12 Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 as amended requires federal agencies to consider the effects of their actions on historic properties. In accordance with 36 CFR 800.4, archival research and coordination with the State Historic Preservation Officer (SHPO) a survey was performed in October 2004 to identify the locations of significant cultural resources in the vicinity of the project. The archaeological and architectural surveys performed were designed to provide the necessary data needed to evaluate sites and properties for recommendations of eligibility to the National Register of Historic Places (NRHP).

These investigations resulted in the recordation of two new archaeological sites 38WG166 and 38WG167, and one isolated find. One previously recorded site 38WG 121 was also revisited. In addition to the archaeological sites, one historic structure, Burrows's Service Station/Cooper's Country Store, previously determined eligible for the NRHP and four previously unrecorded bridges were investigated. Underwater archaeological investigations identified one anomaly (possibly representing a submerged vessel) with magnetic and acoustic components that should be avoided.

Site 38WG166 and 38WG167 are areas containing lithic debitage, historic bottle glass and/or prehistoric ceramics. Both areas have been disturbed and extensively plowed and are unlikely to provide any significant information beyond what has already been obtained. These sites have been recommended ineligible for the NRHP and no additional cultural resource investigations are recommended at this site.

Site 38WG121 was previously recorded as a multicomponent scatter of Archaic period lithic artifacts, possible Woodland period ceramics and historic artifacts. The site was previously recommended potentially eligible for the NRHP. During the current survey, no intact cultural deposits were encountered in the project area and evidence of extensive plowing was observed. The portion of the site adjacent to US 521 and within the current project area lacks research potential and does not contribute to the NRHP eligibility of the site. The portion of the site outside of the project area has not been reevaluated and should remain potentially eligible for the NRHP.

The Burrows's Service Station/Cooper's Country Store has been previously determined eligible for inclusion on the NRHP. This gas station and general store is significant under Criterion C for its importance in local commerce, architecture and social history. The current project will not encroach upon the store and as a result will not adversely affect this historic site.

The four concrete tee beam bridges over the Black River and Swamp were constructed in 1955. As these bridges are 50 years of age, they were assessed for their NRHP eligibility. None of the bridges were found to possess the characteristics necessary for inclusion on the NRHP and no additional assessment is recommended for these structures.

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Coordination with the SHPO has been undertaken and concurrence with the above findings is documented in Appendix A: Project Coordination.

4.13 Relocations

Article II.

Article III. New right of way is anticipated for this project; however, no relocations of residences or business are anticipated. Right of way and/or NPDES/slope permissions will need to be acquired from 35 property owners.

4.14 Social and Economic

Social impacts identified in this assessment are effects on the residences and subdivisions adjacent to the corridor. In efforts to work with the county and community SCDOT and FHWA representatives met with residents at a public information meeting on April 5, 2005. Possible alignment alternatives were presented and input from residents was obtained. The residents overwhelmingly requested that SC 377 remain open during construction. They felt that a detour would result in a serious hardship and cause a significant delay in emergency services.

It is not anticipated that the proposed action would result in any appreciable change in local population and employment patterns in the area. No relocation of residents are anticipated, however right of way and/or NPDES/slope permissions will be acquired from 35 residents. Right of way acquisitions from residential properties are not expected to cause a change in existing land uses and would be minor in most cases. Property owners would be compensated for the right of way taking and any damages to remaining property, in accordance with SCDOT policy and the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended. Further, the project should not specifically benefit, harm, or disproportionately impact any social group including elderly, handicapped, non-drivers, minority, or ethnic groups.

Traffic services would be maintained throughout project construction with no anticipated adverse effects on emergency services in the area. Minor delays and short durations of traffic being reduced to one lane of travel may occur. After the proposed project's completion, improved traffic service for both public and private uses would be realized.

The project would not adversely affect local government finances. The minor additional right of way required would not result in a significant reduction of property tax assessments. Economic benefits to Williamsburg County should result from the project because of improved access and more efficient movement of tourists, local motorists and goods in the area. Efforts have been made to ensure that the proposed project will not change the general character of the area.

4.15 Indirect and Cumulative Impacts

Indirect Impacts

Indirect impacts are impacts removed in time and distance from the project. Bridges are being replaced on essentially existing alignment. The design and necessity for the project is to provide a roadway that will accommodate future design year traffic. The work associated with this project (bridge replacement and roadway embankment improvements) and its intent will not cause or

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contribute to new growth and/or development in or near the project area. The intent of the undertaking is to accommodate existing and future traffic flow demands within the nearby area. No adverse indirect impacts to the general population should occur.

Cumulative Impacts

Cumulative impacts are impacts resulting from past, present, and reasonably foreseeable future actions. There is no evidence of any recent past actions that have occurred having adverse impacts to the Black River or its adjacent wetlands at this location. The existing roadway embankment and bridges have been in place for a lengthy period of time with no evidence of significant adverse impacts to the aquatic resources in the vicinity. Given the intent of the undertaking it is unlikely that any significant cumulative impacts will result to the Black River and its adjacent wetlands because the long-term impacts, if any, to these resources are expected to be minimal. Any short-term impacts that may occur would result during construction of the new bridges and/or roadway embankments and these potential impacts are believed to be temporary in nature. Because of the nature of the project (highway improvements to meet existing transportation needs), cumulative impacts are not likely to occur. The direct impacts to the Black River and its adjacent wetlands will result from the discharge of fill material into wetlands for embankment improvements or from the removal of existing and placement of new bridge pilings. This action is not likely to cause or contribute to any other actions that would impact aquatic resources or the adjacent upland areas. It should be noted that upon completion of construction, the existing bridges will be removed and the streams and wetland areas will return to their previous conditions. The overall functioning and flow of the Black River floodplain will not be negatively impacted, since fewer bridge pilings will be added for the new bridges than will be removed from the existing bridge structure. In addition, no wetlands or stream channels are proposed for filling or alteration. Sedimentation that may occur during construction will be minimized through utilization of Best Management Practices outlined in FHPM 6-7-3 ([Federal Highway Procedures Manual](#)). FHPM 6-7-3 describes construction methods which will prevent or minimize environmental impacts including impacts to surrounding streams and wetlands during construction.

Therefore, with no "induced growth" resulting from this project, the indirect and cumulative impacts associated with this project are not significant.

**ENVIRONMENTAL ASSESSMENT
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5.0 COMMENTS AND COORDINATION

A Public Information Meeting was held on Tuesday, April 5, 2005 between 4:00 p.m. and 6:00 p.m. at the Kingstree Town Hall located at 401 North Longstreet Street in Kingstree, SC. The meeting had an informal format with displays for viewing and was intended to provide information concerning the proposed project and to solicit input from area residents. Engineering personnel from the SCDOT discussed the project with interested citizens and answered their questions.

Twenty-four citizens were present including three minorities. As a result of the Public Information Meeting, 159 comments were received. Of these comments, 156 comments opposed the detour and requested that the SC 377 remain open to traffic during construction with one comment stating preference for the downstream alternate. Seven of these comments requested temporary bridges be constructed during construction. Closing the road and detouring traffic would have severe economic and social consequences including impacts to businesses, emergency services, and travel time and expenses. In addition, three general comments not related to bridge construction were also received.

Detouring traffic would not only increase travel time for local residents, but it would create substantial delay for emergency vehicles that need to gain access to the area in the event of fire, medical emergency, or violation of the law. In addition to comments of local citizens, comments were received from two local fire department members, a wildlife officer, a forestry department member and a police chief offering objection to the closing of SC 377 for these reasons. Citizens expressed concern that closing the road could add 20 to 30 minutes onto emergency response time which could pose severe consequences in the event of emergencies such as a fire, accident, or heart attack. In addition, several elderly residents live along SC 377 and make several trips to the hospital during the week. The detour will create added time, travel expense and hardship for these individuals to access needed medical attention.

Business owners stated that closing the road would severely impact the economy and area businesses including limiting access to Cooper's Country Store located at Bryan's Crossroads. SC 377 provides a direct route between the communities of Kingstree, Salters and Lane. Many farmers utilize this road several times a week to access their farms and a grain storage facility located in Salters. Closing the road increases travel time and expense for the farmers and could potentially decrease business at the grain storage facility as farmers may decide to take business elsewhere. In addition, the owner of Cooper's Country Store makes several daily trips to Kingstree and closing the road would add a great financial burden and expense to daily store operations. The store supplies not only general grocery needs, but also serves as the base for a large barbecue chicken and ham shipping business.

Many citizens were concerned over the inconvenience, increased travel time and expense that would result from the detour. For most citizens, SC 377 provides a direct travel route to work, home, businesses, relatives' homes, schools and the hospital. Not only will an increase in travel time and inconvenience result, but due to recently increased gas prices, the long detour will cause unplanned financial hardship, especially for those living on a fixed income. Finally, one citizen was concerned with an increase in traffic through Salters that would result in the event of a detour. A detour of traffic through the town is currently in place for another road project and as a result, detoured traffic has not heeded the speed limit creating a hazard to pedestrians and children. There is concern that the same problem would exist if SC 377 was closed and a detour imposed.

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AND SWAMP**

Three other comments not related to the proposed road closure were received. One citizen requested that truck traffic be required to permanently detour along US 521 instead of S-142 which is currently being utilized. In response to the proposed removal of the spur from US 521 onto SC 377, a request was made by the owner the grain facility located in the southwest quadrant of the intersection of SC 377 and US 521 for a small area of asphalt to be left behind the facility. Finally, one commenter noted that the project would affect fishing during fishing season.

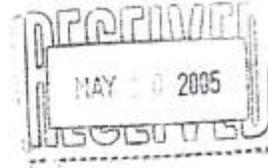
In response to input received, SCDOT selected the downstream alternative which will keep the road open during construction. In an effort to minimize impacts to the environment, construction and right of way costs, construction will be staged. (See Section 2: Proposed Facility.)

Appendix A
Project Coordination



South Carolina
Department of Transportation

May 5, 2005



Dr. David Bernhart
NOAA Fisheries
Southeast Regional Office
9721 Executive Center Drive North
St. Petersburg, Florida 33702

RE: Avoidance of Construction Impacts to the Endangered Shortnose Sturgeon -
Bridge Replacements on S.C. 377 over the Black River and Black River Swamp
in Williamsburg County, File No. 45.131B, PIN 30990

Dear Dr. Bernhart:

This letter is intended to request consultation regarding potential impacts to the shortnose sturgeon (*Acipenser brevirostrum*) for the above referenced project site. The project would involve replacing the existing four bridges over the Black River and Black River Swamp. Improvements also include modifications to the bridge approach ways.

The Department has agreed to implement a seasonal moratorium for all in water work between February 1 and April 30 and work will not impede more than 50 percent of the channel during the months of January through April. No special measures will be employed outside of this moratorium except for normal Best Management Practices.

As a result of implementing these measures, the project may affect, but is not likely to adversely affect, the endangered shortnose sturgeon. Please review the enclosed natural resources report at your earliest convenience and provide the Department with your concurrence on this finding.

Thank you for your assistance in this matter. If you have any questions regarding these measures, you may contact me at (803) 737-1861.

Sincerely,

Edward W. Frierson
Environmental Project Manager

EWF:ewf

Enclosure

cc: Tiffany Keverline, Civil Engineering Consulting Services, Inc.
Bener Amado, SCDOT Bridge Projects Manager
Dr. Stephania Bolden, NOAA Fisheries

File: Env/EWF



Post Office Box 191
Columbia, South Carolina 29202-0191

Phone: (803) 737-2314
TTY: (803) 737-3870

AN EQUAL OPPORTUNITY/
AFFIRMATIVE ACTION EMPLOYER



March 11, 2005

WILL #4566
RECEIVED
APR 26 2005
RECEIVED
MAR 14 2005
Department of

Ms. Mary W. Edmonds
Deputy State Historic Preservation Officer
South Carolina Department of Archives and History
8301 Parklane Road
Columbia, South Carolina 29223-4905

RE: BRT-BR45(002), TRC's Phase I Cultural Resource Investigations of the SC-377
Black River Bridge Replacement Corridor, Williamsburg County, South Carolina.
PIN 30990, File No. 45.131B.

Dear Ms. Edmonds:

The Department's consultant has completed a cultural resources survey for the above referenced project. Three copies of the report are enclosed for your review and comment.

The cultural resources survey consisted of a terrestrial archaeological survey, an underwater archaeological survey, and an architectural survey. The architectural survey resulted in the recordation and assessment of four bridges. These structures are all concrete tee beam bridges constructed in 1955. They contain no special elements, and are recommended not eligible for the National Register of Historic Places. One previously identified architectural site, 0115, was revisited. This site was previously recommended eligible for the NRHP. The service station building is the only element that is being considered eligible for the NRHP. While it is within the project boundaries that were investigated, the exact limits of the new right-of-way have not been determined. Avoidance of the Burrows' Service Station is recommended. If the site cannot be avoided, further correspondence with your office regarding mitigation will be required.

The archaeological survey resulted in the identification of two archaeological sites, 38WG166 and 38WG167, as well as one isolated find. Site 38WG166 is a small scatter of prehistoric lithic debitage and historic artifacts. The site has been disturbed, and is recommended not eligible for the NRHP. Site 38WG167 is a Woodland or Mississippian lithic and ceramic scatter. The site lacks integrity, and is recommended not eligible for the NRHP. The isolated find consisted of one prehistoric ceramic. In addition to the discovery of sites 38WG166 and 38WG167, and the isolated find, one previously identified site was revisited. Site 38WG121 was recorded during 1990 investigations in this area. The site was recommended potentially eligible during the 1990 investigations. During the current field investigations, a portion of the site adjacent to the roadway was investigated. This portion of the site has been disturbed by plowing, and is recommended to be a non-contributing element to site 38WG121. If the site cannot be avoided, it is recommended that the bridge replacement project will have no adverse effect on 38WG121. No further work is recommended at this time.

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Columbia, South Carolina 29202-0191

Phone: (803) 737-2314
TTY: (803) 737-3870

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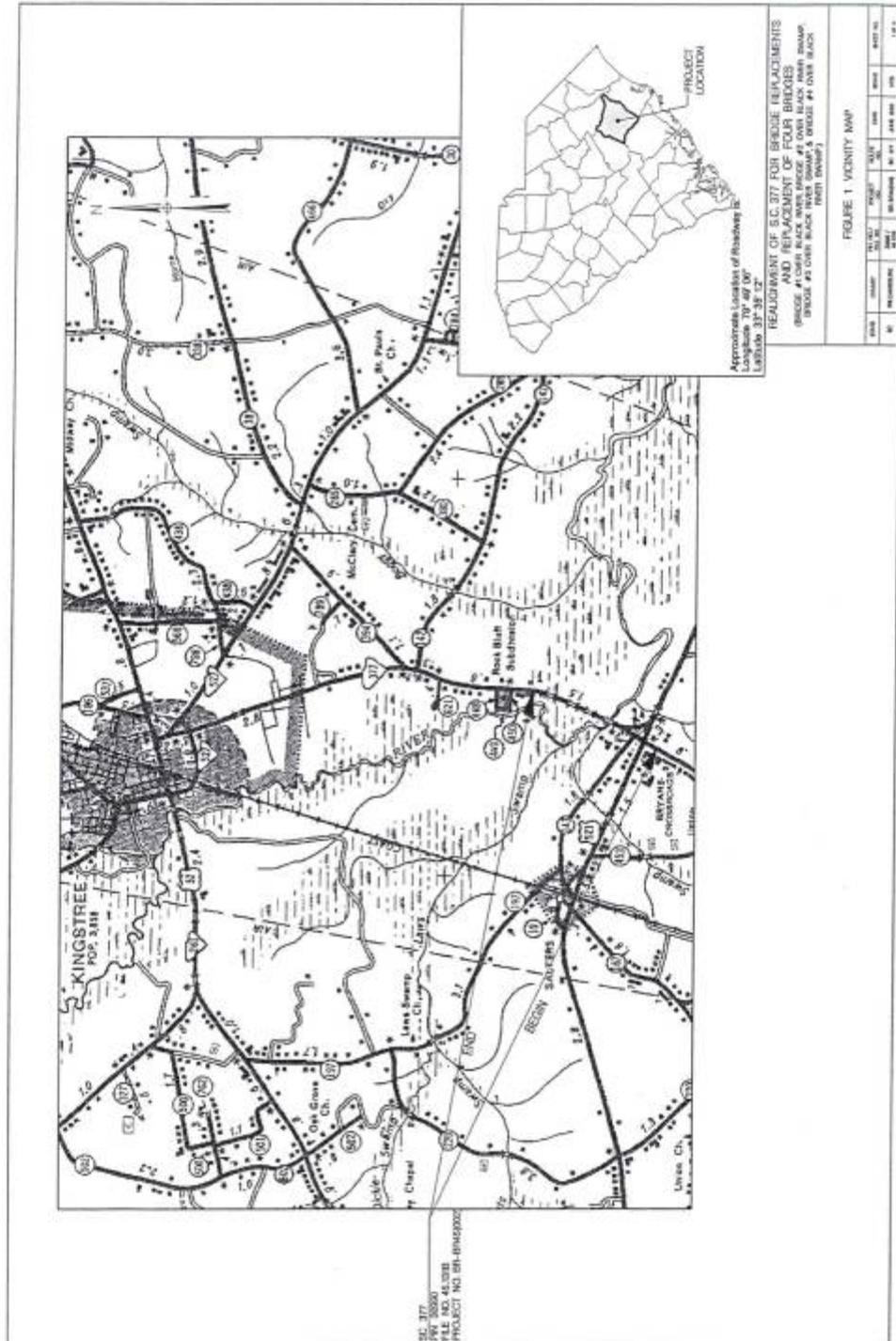
**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

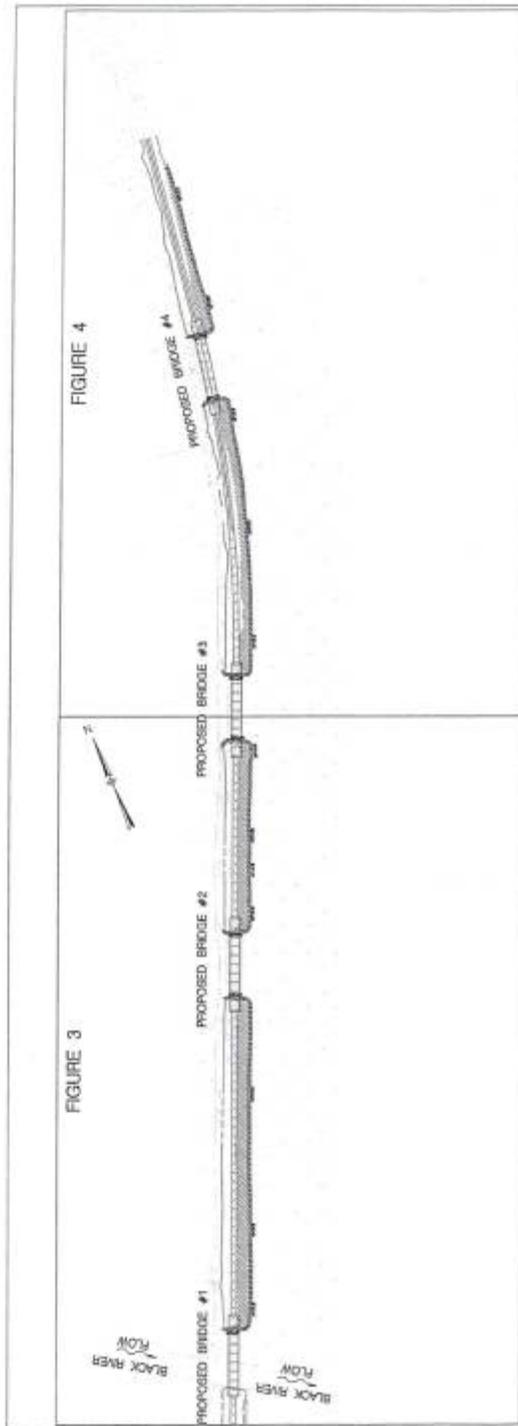
PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request		5/11/05		Sheet 1 of 1	
1. Name of Project		SC 377 Bridge Replacement - Black River		5. Federal Agency Involved		SC DOT & FHWA	
2. Type of Project		Bridge Replacement		6. County and State		Williamsburg, SC	
PART II (To be completed by NRCS)				1. Date Request Received by NRCS		2. Person Completing Form	
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form).				YES <input type="checkbox"/> NO <input type="checkbox"/>		4. Acres Impacted Average Farm Size	
5. Major Crop(s)		6. Farmable Land in Government Jurisdiction		7. Amount of Farmland As Defined in FPPA		Acres: %	
8. Name Of Land Evaluation System Used		9. Name of Local Site Assessment System		10. Date Land Evaluation Returned by NRCS			
PART III (To be completed by Federal Agency)				Alternative Corridor For Segment			
				Corridor A		Corridor B	
				Corridor C		Corridor D	
A. Total Acres To Be Converted Directly							
B. Total Acres To Be Converted Indirectly, Or To Receive Services							
C. Total Acres In Corridor				0		0	
				0		0	
PART IV (To be completed by NRCS) Land Evaluation Information							
A. Total Acres Prime And Unique Farmland							
B. Total Acres Statewide And Local Important Farmland							
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted							
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value							
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)							
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))							
		Maximum Points					
1. Area in Nonurban Use		15		15			
2. Perimeter in Nonurban Use		10		10			
3. Percent Of Corridor Being Farmed		20		0			
4. Protection Provided By State And Local Government		20		0			
5. Size of Present Farm Unit Compared To Average		10		10			
6. Creation Of Nonfarmable Farmland		25		0			
7. Availability Of Farm Support Services		5		5			
8. On-Farm Investments		20		5			
9. Effects Of Conversion On Farm Support Services		25		0			
10. Compatibility With Existing Agricultural Use		10		0			
TOTAL CORRIDOR ASSESSMENT POINTS		160		45		0	
				0		0	
				0		0	
PART VII (To be completed by Federal Agency)							
Relative Value Of Farmland (From Part V)		100		100			
Total Corridor Assessment (From Part VI above or a local site assessment)		160		145		0	
						0	
TOTAL POINTS (Total of above 2 lines)		260		145		0	
						0	
						0	
1. Corridor Selected:		2. Total Acres of Farmlands to be Converted by Project:		3. Date Of Selection:		4. Was A Local Site Assessment Used?	
						YES <input type="checkbox"/> NO <input type="checkbox"/>	
5. Reason For Selection:							

Signature of Person Completing this Part: Lucas Land DATE: 5/11/05

NOTE: Complete a form for each segment with more than one Alternate Corridor

Appendix B
Permit Application and Support Material





WETLAND IMPACTS

- AREA 1 = 2.188 AC. SEE FIGURE 3
- AREA 2 = 1.165 AC. SEE FIGURE 3
- AREA 3 = 1.357 AC. SEE FIGURE 4
- AREA 4 = 0.679 AC. SEE FIGURE 4

TOTAL AREA OF IMPACT = 5.389 ACRES

REVISION OF S.C. 377 FOR BRIDGE REPLACEMENTS AND REPLACEMENT OF FOUR BRIDGES OVER BLACK RIVER (BLACK RIVER BRIDGE #1 OVER BLACK RIVER, BRIDGE #2 OVER BLACK RIVER, BRIDGE #3 OVER BLACK RIVER, BRIDGE #4 OVER BLACK RIVER)

FIGURE 2		FIGURE KEY	
NO.	DATE	BY	CHKD.
1	10/11/01	JMB	WJS
2	10/11/01	JMB	WJS
3	10/11/01	JMB	WJS
4	10/11/01	JMB	WJS
5	10/11/01	JMB	WJS
6	10/11/01	JMB	WJS
7	10/11/01	JMB	WJS
8	10/11/01	JMB	WJS
9	10/11/01	JMB	WJS
10	10/11/01	JMB	WJS
11	10/11/01	JMB	WJS
12	10/11/01	JMB	WJS
13	10/11/01	JMB	WJS
14	10/11/01	JMB	WJS
15	10/11/01	JMB	WJS
16	10/11/01	JMB	WJS
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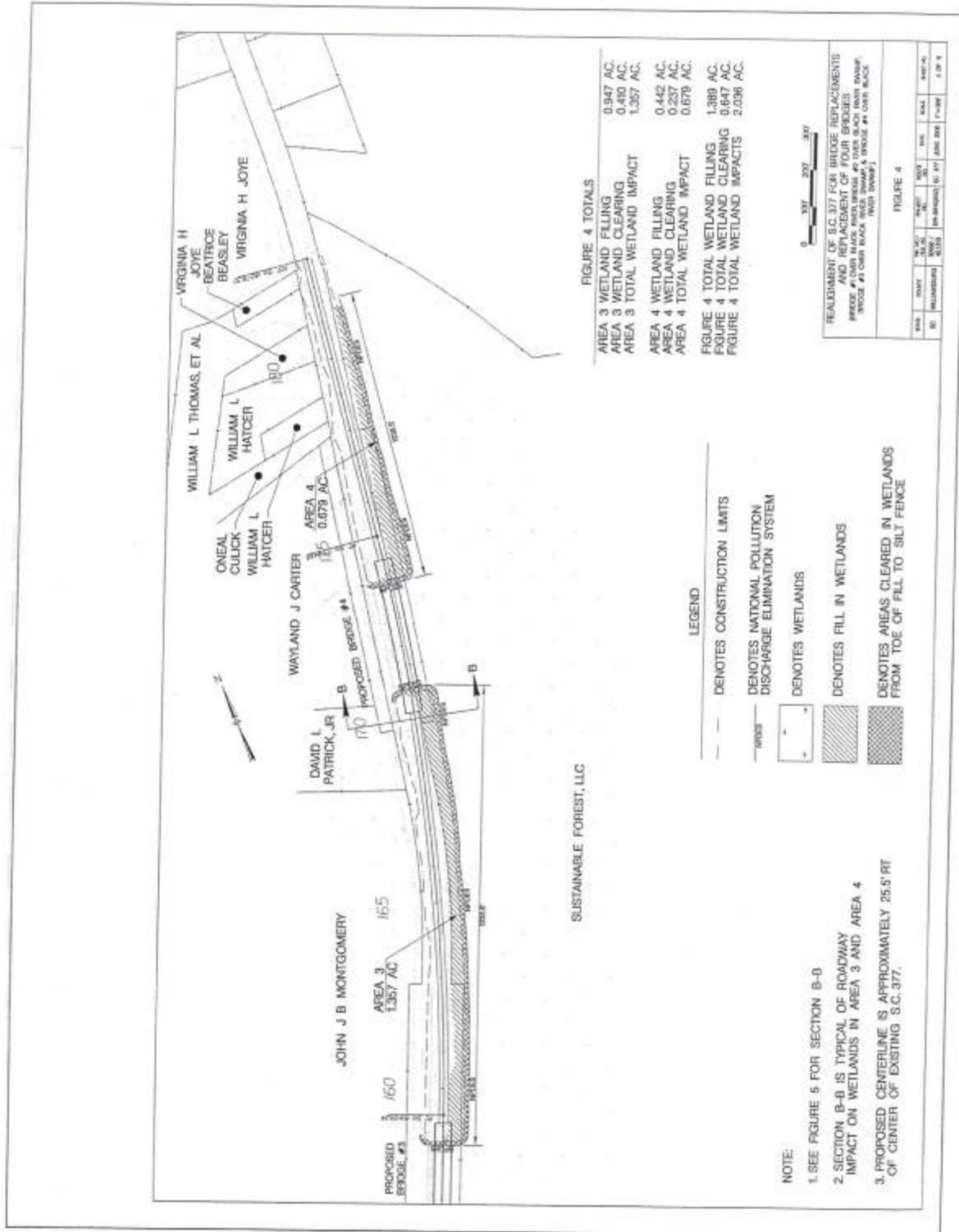


FIGURE 4 TOTALS

AREA 3 WETLAND FILLING	0.947 AC.
AREA 3 WETLAND CLEARING	0.410 AC.
AREA 3 TOTAL WETLAND IMPACT	1.357 AC.
AREA 4 WETLAND FILLING	0.442 AC.
AREA 4 WETLAND CLEARING	0.237 AC.
AREA 4 TOTAL WETLAND IMPACT	0.679 AC.
FIGURE 4 TOTAL WETLAND FILLING	1.389 AC.
FIGURE 4 TOTAL WETLAND CLEARING	0.647 AC.
FIGURE 4 TOTAL WETLAND IMPACTS	2.036 AC.

LEGEND

- DENOTES CONSTRUCTION LIMITS
- DENOTES NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM
- DENOTES WETLANDS
- ▨ DENOTES FILL IN WETLANDS
- ▩ DENOTES AREAS CLEARED IN WETLANDS FROM TOE OF FILL TO SILT FENCE

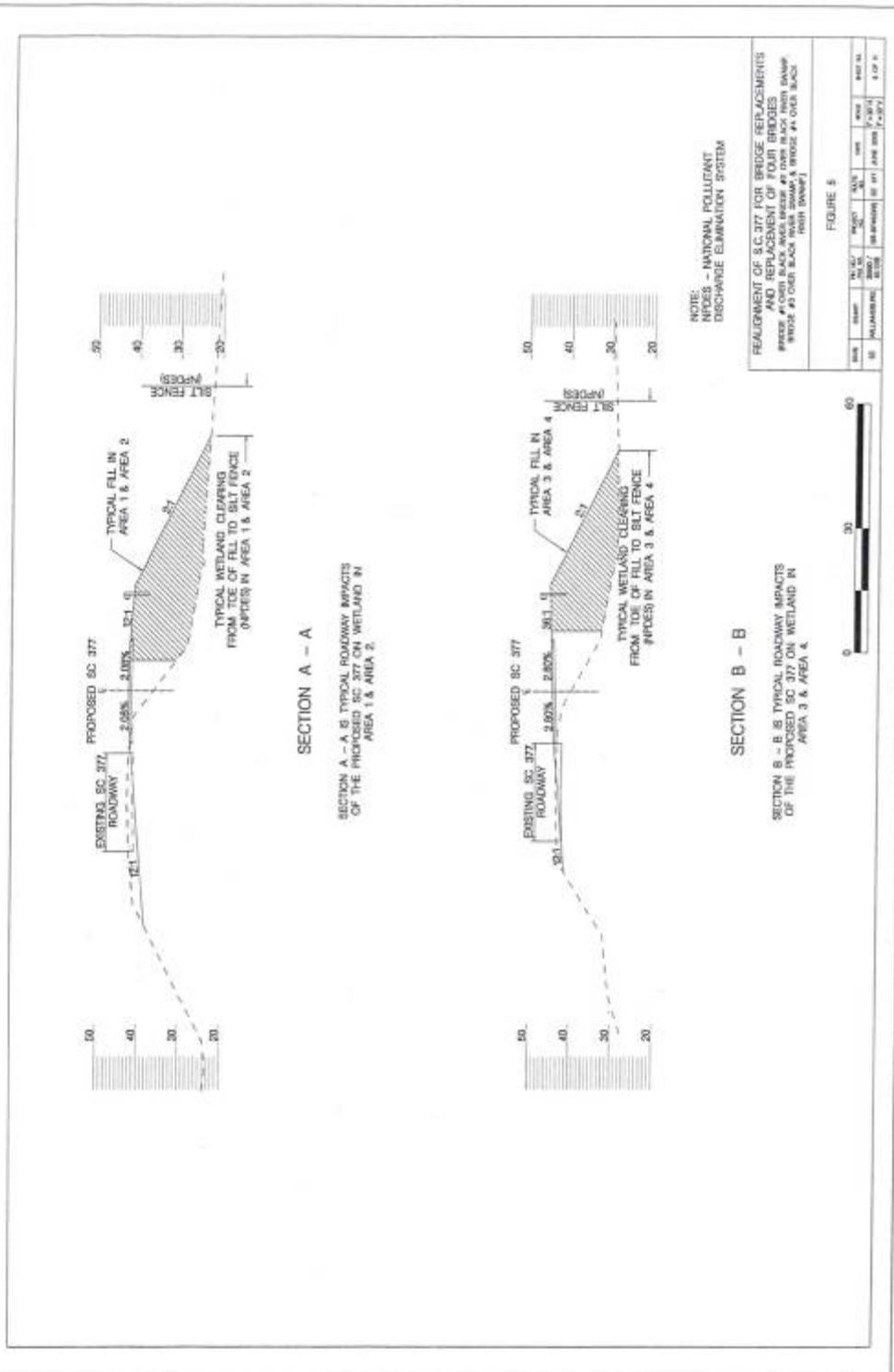
NOTE:

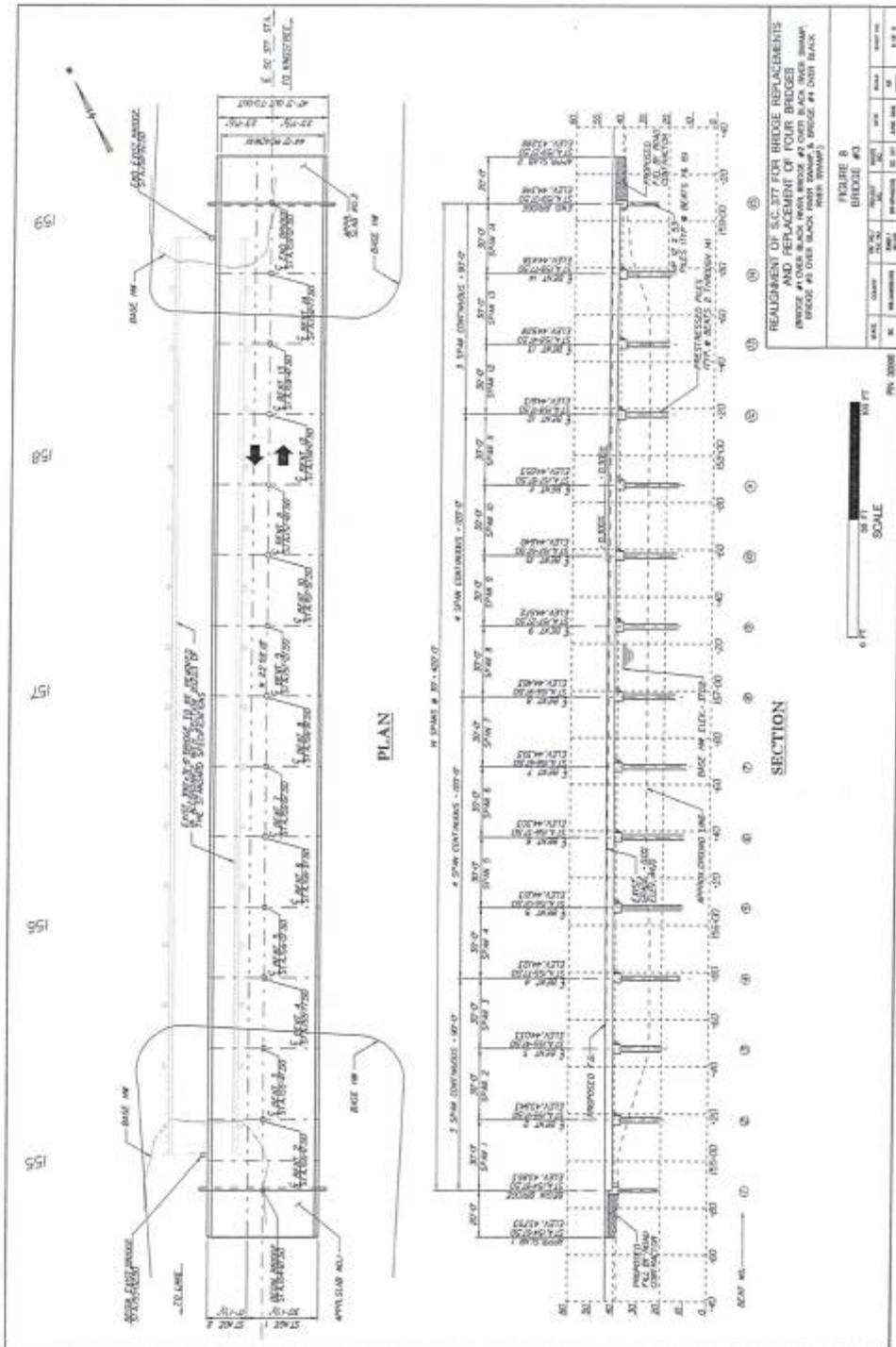
1. SEE FIGURE 5 FOR SECTION B-B
2. SECTION B-B IS TYPICAL OF ROADWAY IMPACT ON WETLANDS IN AREA 3 AND AREA 4
3. PROPOSED CENTERLINE IS APPROXIMATELY 25.5' FT OF CENTER OF EXISTING S.C. 377.

DATE	NO.	BY	SCALE	REV.	DATE	BY	SCALE
11/11/03	1	WJS	AS SHOWN	1	11/11/03	WJS	AS SHOWN

REVISION OF S.C. 377 FOR BRIDGE REPLACEMENTS AND REPLACEMENT OF FOUR BRIDGES. BRIDGE #1 OVER BLACK WATERS (AREA 3) BRIDGE #2 OVER BLACK WATERS (AREA 3) BRIDGE #3 OVER BLACK WATERS (AREA 3) BRIDGE #4 OVER BLACK WATERS (AREA 4)

FIGURE 4





PROPERTY OWNERS

Parcel	Last	First	Street Address	City/State	Zip Code
1	Cooper	Adalyn B	1203 Indiantown Rd.	Kingstree, SC	29556
2	Shinta	Adrienne F	5 Depot St.	Salters, SC	29590
3	Cooper	John R.	307 Clearview Dr.	Kingstree, SC	29556
4	Ellerbe	Patricia B	6025 Popular Ridge Rd.	Columbia, SC	29206
5	Cooper	Adalyn B	1203 Indiantown Dr.	Kingstree, SC	29556
6	Mixon	Virgil	7063 Georgetown Hwy.	Andrews, SC	29510
7	Cooper	George E	1203 Indiantown Dr.	Kingstree, SC	29556
8	Hayden	Lorraine B	124 Silver Lake Rd.	Columbia, SC	29223
9	Harville	Edward H	6972 US Hwy. 521	Salters, SC	29590
25	Montgomery, Etal	John J B	717 Bridgecreek Dr.	Chapin, SC	29036
26	Sustainable Forests, LLC		1515 Bourne St.	Georgetown, SC	29440
27	Partick, Jr	David L	3552 Martin Luther King Jr. Hwy.	Kingstree, SC	29556
28	Carter	Wayland J	106 W. Academy St.	Kingstree, SC	29556
29	Culick	Oneal	993 New Zion Rd.	Lake City, SC	29560
30	Hatcer	William L	3404 Martin Luther King Jr. Hwy.	Kingstree, SC	29556
31	Hatcer	William L	303 Martin Luther King Jr. Hwy.	Kingstree, SC	29556
32	Joye	Virginia H	P.O. Box 523	Kingstree, SC	29556
33	Thomas, Et Al	William L	781 Twin Lakes Rd.	Cades, SC	29518
34	Beasley	Beatrice	1188 Dennis Rd.	Lake City, SC	29560

Example Biological Assessment

Biological Survey of US 378/S-96 Interchange Improvements in Horry County, S.C.

Pursuant to Section 7 of the Endangered Species Act a field survey was conducted on the proposed new right of way. The following list of endangered (E) species was obtained from the U.S. Fish and Wildlife Service:

Animals

West Indian manatee (*Trichechus manatus*) - E
Finback whale (*Balaenoptera physalus*) - E
Humpback whale (*Megaptera novaeangliae*) - E
Northern right whale (*Eubaleana glacialis*) - E
Sei whale (*Balaenoptera borealis*) - E
Sperm whale (*Physeter catodon*) - E
Wood stork (*Mycteria americana*) - E
Red-cockaded woodpecker (*Picoides borealis*) - E
Piping plover (*Charadrius melodus*) - T
Kemp's ridley sea turtle (*Lepidochelys kempi*) - E
Leatherback sea turtle (*Dermochelys coriacea*) - E
Loggerhead sea turtle (*Caretta caretta*) - T
Green sea turtle (*Chelonia mydas*) - T
Shortnose sturgeon (*Acipenser brevirostrum*) - E

Plants

Sea-beach amaranth (*Amaranthus pumilus*) - T
Pondberry (*Lindera melissifolia*) - E
Canby's dropwort (*Oxypolis canbyi*) - E
Chaff-seed (*Schwalbea americana*) - E

Methods

The project area was examined by reconnaissance methods in August of 2001. Habitats surveyed were determined by each species' ecological requirements.

Results

The project corridor consists of commercial development. There is no habitat for any threatened or endangered species.

Based on lack of suitable habitat and/or no observations of the listed species during field surveys, results of the threatened and endangered species study indicate that the proposed action is not likely to jeopardize any threatened or endangered species or critical habitats currently listed by the USFWS.

Example 4(f) Document

4(f) EVALUATION

S.C. Route 72/121/215 over Broad River Bridge Replacement Project at the Chester/Union County Line

INTRODUCTION

Section 4(f) of the Department of Transportation Act of 1966 stipulates that, prior to taking an action that uses land from a significant publicly owned park, recreation area, or from a historic property on or eligible for the National Register of Historic Places, the agency proposing the action must first determine the following:

1. that there is no feasible and prudent alternative to the use of the land from the property; and
2. that the proposed action includes all possible planning to minimize harm to property resulting from such use.

This draft Section 4(f) describes resources affected by the S. C. Route 72/121/215 bridge replacement project over the Broad River and provides a preliminary estimation of impacts. Avoidance alternatives and measures to minimize and mitigate harm are discussed as required by 23 CFR 771.135 (i) and (j) and FHWA Technical Advisory T. 6640.8A.

The South Carolina Department of Transportation proposes to replace the bridge located on S.C. Route 72/121/215 over the Broad River on the Chester/Union county line, South Carolina (see project location map). The proposed action would include the replacement of the existing bridge with a modern prestressed concrete beam bridge 1430 feet in length. The new bridge will be constructed approximately 45 feet downstream of the existing horizontal alignment and the vertical alignment will be raised approximately three feet above the existing grade. The approach roadway section will be 28 feet of pavement with 8 feet grassed shoulders. Approach work will include the necessary embankments for shoulders to accommodate guardrail placement and approach slabs and surfacing work to tie the new bridge to the existing roadway. Approach work on the Chester side of the project will require the acquisition of additional right of way that would affect a Revolutionary War Battlefield, known as the Battle of Fishdam Ford (38CS52). This site is considered eligible for the National Register of Historic Places (NRHP).

A. PURPOSE AND NEED

The S.C. Route 72/121/215 bridge replacement over the Broad River is listed as a top priority in the Statewide Transportation Improvement Program. In 2000, the average daily traffic (ADT) was 3,200 vehicles per day (VPD). It is expected that by the year 2020, the ADT will increase to 5,280 VPD. This project is being advanced because of the structural deficiency of the bridge. The existing bridge has a sufficiency rating of 34.9.

The proposed bridge replacement project would result in safer, more efficient travel both locally and regionally. The improved bridge would provide sufficient capacity to serve existing and future development in the area and to enhance opportunities for expansion and diversification of economic activities within the region. The proposed bridge replacement would greatly improve traffic operations and enhance safety and is a key element to the project successfully meeting its purpose and need.

B. DESCRIPTION OF THE PROPOSED ACTION

The Department proposes to replace the existing 1405 by 26.2 feet bridge, which is structurally deficient, with a modern prestressed concrete beam bridge 1430 feet in length and having a 44 feet clear roadway width. The new bridge, which will be supported on cast in place concrete bent caps and drilled shaft foundations, will be constructed approximately 45 feet downstream of the existing horizontal alignment. This is the preferred alignment. Beginning at approximately STA 731+00, the roadway would be shifted onto new location. The maximum shift of the relocated roadway would be approximately 50 feet south of the existing centerline. The new alignment would extend for a distance of approximately 4500 feet and taper back into the existing roadway approximately 200 feet west of the intersection of S.C. Route 72/121/215 and Road S-438. All intersecting side roads would have their turning radii expanded and sight distances improved.

Where existing total right of way varies from 66 to 150 feet, with 33 or 75 feet to each side of the roadway centerline, right of way would be expanded to 70 to 100 feet from the centerline on the south side. In addition, right of way would be expanded to 50 to 60 feet from the centerline north of the bridge, from STA 724+50 to STA 730+00, for a distance of approximately 550 feet. On the western end of the project, right of way would be expanded to 70 to 85 feet (on each side of the roadway) for a distance of approximately 900 feet.

The estimated cost for this bridge replacement project is \$9,793,000.

C. HISTORIC 4(f) PROPERTIES AND IMPACTS

In accordance with 36 CFR 800.4, archaeological and architectural surveys were conducted in coordination with the State Historic Preservation Officer (SHPO). These surveys were conducted to locate, identify, and assess sites for eligibility for listing in the National Register of Historic Places (NRHP).

The site within and adjacent to the project area has been identified as eligible for the NRHP as a result of cultural resources surveys (Figure 2). The project would require the acquisition of property from this resource. This site is a Revolutionary War Battlefield known as the Battle of Fishdam Ford (38CS52).

1. The Battle of Fishdam Ford – This battle took place between British troops under Major James Wemyss and American troops under General Thomas Sumter. On November 9, 1780, Wemyss’ troops arrived at Fishdam Ford on the Broad River, where General Sumter’s troops were camped. The American pickets shot at Weymss, wounding him. The ensuing skirmish let six British killed, 15 wounded, and another 25 captured, including Major Wemyss. Although this battle did not inflict significant damage to either side, it boosted the moral of backcountry citizens, causing them to flock to Sumter’s camps to enlist.

This site (38CS52) is recommended eligible for NRHP under Criterion A (history and significant events), Criterion B (significant persons in the past), and potentially Criterion D (archaeology).

Impacts: A portion of the Revolutionary War Battlefield (38CS52) is within the proposed right of way. The proposed bridge replacement project would introduce a new location roadway into the battlefield, filling in an existing gully and partially destroying at least one rifle pit. This would be considered an adverse effect to the property.

Mitigation: Mitigation of the adverse effects caused by the project will be necessary. Mitigation procedures would include the purchase of the Revolutionary War Battlefield (approximately 30 acres), and donation to a historic preservation group or agency.

In addition, site 38UN989 was identified during the current archaeological survey. 38UN989 is an Archaic to Woodland prehistoric occupation, and has been determined potentially eligible for the NRHP. Further testing is necessary to make a final determination. However, if it is determined eligible and will be adversely impacted, mitigation will include data recovery. This resource is not eligible for preservation in place.

D. ALTERNATIVES AND FINDINGS

The Department considered various alternatives to avoid impacting this Section 4(f) property.

1. **Do Nothing** - The initial alternative considered would be to leave the existing deficient bridge in place. However, the bridge has a sufficiency rating of 34.9, and it would be neither feasible nor prudent to do nothing. This alternative would not correct the structural deficiency of this bridge. The deficiencies could lead to a sudden collapse and potential injury or loss of life. The “do nothing” alternative will not meet the purpose and need for the project.
2. **Repairs to Existing Bridge** – The second alternative would be to repair the existing bridge. Rehabilitating the S.C. Route 72/121/215 would involve considerable engineering difficulty and cost due to the advanced state of deterioration. Repairs to the existing bridge would mean closure of the bridge. Three state roads cross the Broad River here. Closure would mean a detour of approximately 30 miles. In addition, the bridge is important to area manufacturing companies and residents.
3. **Replacement on Existing Alignment** - This alternative would be to build the new bridge on the existing alignment. Building on the same alignment would mean closure of the bridge. Closure would mean a detour of approximately 30 miles. In addition, the bridge is important to area manufacturing companies and residents. This alternative is not prudent.
4. **Design Alternative 1** – This alternative would involve replacement of the bridge on the downstream side, with a steepening of slopes. This alternative would involve the construction of a wall. By steepening the slopes, there would be less of an impact to the rifle pits. However, even if the rifle pits could be avoided, construction to the south would pose an adverse effect to the battlefield site. An additional \$940,000 would be required to steepen the slopes and install a wall. This alternative is not feasible or prudent, because of the additional costs, and because this alternative would still cause an adverse effect to the battlefield. Instead of building a wall that would cost \$940,000, SHPO staff prefer acquiring site 38CS52 as mitigation.
5. **Design Alternative 2** - Another alternative would be to construct the proposed bridge on the north side (full relocation) of S.C. Route 72/121/215. An additional one to two million dollars would be necessary for this alternative. In addition, there is a listed National Register property that is located on this side of the road. The Fish Dam, a stone fish weir, is located approximately 200 feet north of the existing bridge. The fish dam extends the length of the river. Construction of the north side of the existing bridge would increase the likelihood that the Fish Dam would be damaged or destroyed by barges working on the bridge. This alternative also impacts a large borrow pit located north of S.C. Route 72/121/215. A tremendous amount of fill dirt would be needed for this borrow pit, increasing the cost of the project. For these reasons, this alternative is not considered feasible and prudent.
6. **Design Alternative 3** – Another alternative would be to conduct a staged construction upstream of the existing alignment. Additional costs would range from three to five million dollars, and the duration of construction would be twice as long. Construction would come within 120 feet of the fish dam, creating a high risk of barge activity damaging the stone weir. This alternative is considered neither feasible nor prudent.

Alignment	Residential Displacements	Business Displacements	Use of Section 4(f) Land	Harm to Section 4(f) Land
Design Alternative 1	0	0	Yes	Minor
Design Alternative 2	0	0	Yes	Greatest (could damage NRHP listed site)
Design Alternative 3	0	0	Yes	Great (could damage NRHP listed site)
Preferred Alignment	0	0	Yes	Minor

E. MEASURES TO MINIMIZE HARM

Through coordination with SHPO, a determination of "adverse effect" on the resource was received. A Memorandum of Agreement (MOA) has been initiated between the Federal Highway Administration, the State Historic Preservation Officer, and the South Carolina Department of Transportation. The draft MOA is included at the end of the Draft Section 4(f) evaluation. Proposed mitigation of impacts is discussed below; final mitigation plans will be submitted with the Final 4(f) Evaluation.

The project will have an adverse effect on a Revolutionary War Battlefield, known as the Battle of Fishdam Ford (38CS52). Total avoidance of this property does not appear possible. To minimize the harm to this property the SCDOT will undertake the documentation and topographical mapping of three rifle pits that are within the proposed new right-of-way. In addition, the battlefield (approximately 30 acres) will be purchased and donated to a historic preservation group or agency that will maintain a public information component.

F. COORDINATION

Section 106 consultation has been carried out with the State Historic Preservation Office with regard to the projected impacts and plans to minimize harm to the property as included in this document. Prior to the completion of the Final Section 4(f) Evaluation, the MOA with the SHPO will be completed and will include further details on the mitigation measures. An opportunity for a public hearing will be advertised to the public.

Example Public Hearing Certification

**SOUTH CAROLINA
DEPARTMENT OF TRANSPORTATION**

Columbia, South Carolina

File No: 8.801

Road: Railroad Ave Extension

PIN: 30326

CERTIFICATE OF LOCATION / DESIGN PUBLIC HEARING

This is to certify that on Thursday, November 4, 2004, between 6:00 p.m. and 8:00 p.m., a public hearing was held at Hanahan Elementary School, located at 4000 Mabeline Road in Berkeley County, S.C. as provided by 23 CFR 771.111 (h). Economic and social effects of the project's location, its impact on the environment, and its consistency with the goals and objectives of area planning, as promulgated by the community, have been considered by the South Carolina Department of Transportation.

Environmental Operations Manager

December 17, 2004

**Public Hearing Format for the Location / Design Public Hearing on the
Proposed Extension of Railroad Avenue from Mabeline Rd. to Eagle Landing Blvd.
Berkeley County, South Carolina**

- Location:** Hanahan Elementary School at 4000 Mabeline Road, in Berkeley County, South Carolina was selected because of its convenient location to the project. The school cafeteria provided table space for displays and areas for several tables and chairs for written and verbal comments and handouts.
- Time:** The public hearing was held on November 4, 2003, between 6:00 p.m. and 8:00 p.m.
- Handouts:** A booklet (attached as Appendix A) was presented to each attendee at the hearing. The booklet contained information welcoming those attending; explaining the new format; describing the project; and urging those in attendance to comment. The booklet also contained a copy of "Highways and You" and a comment form.
- Displays:** A project location map was displayed to orient the attendees to the project. Three sets of plans were available on the tables to provide a more detailed description of the project. One table was used for comment forms and boxes for responses. An area was arranged for recording equipment for verbal comments. A table denoted "Environmental" contained the environmental documents on the project. Two large posters were prominently displayed indicating the three ways to comment: (1) place your comment forms in the designated boxes, (2) have your comments recorded and (3) mail in your comments.
- Personnel:** Those actively participating in the public hearing from the SCDOT included Leland Colvin, Randall Young and Julie Barker from Engineering, Jeanie Prothro from Rights of Way; Jennifer Pearson from the Environmental Management Office. Mark Nesbitt and Brian Webb from the District Six Office were also in attendance.
- Process:** The attendees were greeted and given a booklet and the hearing format was briefly explained. A sign-up sheet to make verbal comments was pointed out to attendees. They were then urged to comment and directed to the appropriate person to have their questions answered. Department personnel were easily identified by SCDOT nametags. The displays were constantly manned and if any attendee appeared to have any questions, personnel sought them out to discuss the project or direct them to someone who could answer their questions. As everyone left, they were asked if they had any further questions or comments and urged to comment. They were also thanked for attending.
- Attendance:** 68 people were in attendance at the public hearing, and of this number 31 were minorities (27 white females, 2 minority female and 2 minority male). Copies of the sign-in sheets are attached as Appendix B.
- Comments:** No attendees had comments recorded. Twenty-one written comments were received at the hearing and eight were received during the fifteen day comment period following the hearing. These comments and responses are attached as Appendix D. A summary of comments is attached as Appendix C.

APPENDIX D

APPENDIX A

APPENDIX B

APPENDIX C

**Extension of Railroad Ave
From Mabeline Road to Eagle Landing Blvd.
Public Hearing Comment Summary**

- Raymond Blankenship – request copy of the EA
Robert Delong – looks reasonable and beneficial, must have traffic light
Barbara Woods – new road will cause added traffic and inconvenience for people in Eagle Landing
Woody Bessinger – road will become short cut to the mall and add traffic to Eagle Landing.
William Brown – request copy of EA
Jeff and Rose Ellen Umstead – glad to see it moving ahead, busses on Rivers Ave is dangerous
Concerned about increased traffic thru Eagle Landing
Lee Zakis – agree with the project, concerned with increased traffic at Railroad Ave/Hanahan Rd intersection.
Tim Henderson – Please begin soon, need right turn lane onto Railroad Ave, new road may be Bypass to Rivers Ave, consider double-lefts, reconsider closing Mabeline Rd.
George Wallace – do not agree with closing Mabeline Rd, will increase traffic by homes Adjacent to Trident Tech.
Dianne Bennett – concerned with traffic created on Roma Rd; use speed bumps and lower Speed limits
Cliff McLeod Jr – Please move forward, will improve access from Eagle Landing/Otranto to Churches, recreation games, and boat ramp, and improve access for police and fire Services; positives outweigh negatives
Gary Crawford – create new road to Rivers Ave off of Railroad Ave if Mabeline is closed
William Knobloch – plan looks good, supports closing Mabeline Rd.
Kevin Cox – close Horne Rd, not Mabeline Rd. Most people want Horne closed. Concerned With more traffic thru Eagle Landing – no left turns, or u-turns at Eagle Landing Blvd.
Francis Jenkins – pleased with the project; have always been concerned about children riding On Rivers Ave
Carl Jackson – likes proposed plan if don't close Mabeline Rd and if so, not until construction Is complete
Randy Kinard – project will improve emergency access; buses crossing railroad twice is Dangerous, project would eliminate this danger, supports closing Mabeline Rd.
Fire Chief Jerry Barham – supports extension project; improves access for emergency Services; addition of a center lane would be an asset, intersections at Mabeline and Railroad Ave is dangerous; closing Mabeline would be beneficial, project is important to Safety.
Nancy Lovelace – thanks for building the road, safer for school buses and improved fire and Police access.
Mayor Minnie Blackwell – supports project, vital for emergency services, school bus accidents On Rivers Ave, this will improve safety and is important for Hanahan.
Police Chief Donald Wilcox – this will improve emergency access to Eagle Landing and Otranto Subdivisions, intersection of Mabeline and Railroad Ave is dangerous; supports project; Please also consider bike/peds when planning for the project.
Burnis Acuff – road should only be used for school buses, afraid road will be used as a bypass For Rivers Ave, concerned about Otranto will become a major thoroughfare
Dennis Pieper (City Administrator)- residents in Otranto and Eagle Landing recommended no Left turns at intersection of Eagle Landing Blvd. to discourage thru traffic, anxious for the Project to begin.

APPENDICES
APPENDIX B

Raymond Blankenship – included property and tree information and is concerned about grand Trees being saved, should retain the name Mabeline Rd, Mabeline Road should be Relocated, not closed.

John Spencer – in favor of project, recommend a round about at Eagle Landing Blvd instead of A traffic light.

Rita Lucas – a wonderful idea, road should connect to Mabeline beyond the school, leave Mabeline Road open, close Horne Rd.

Conrad Zakis – excellent idea, request 35 mph, and block off Mabeline Rd.

Gordon Darby – owner of the Landing Apartments, concerned about closeness of right of way Line to apartments, would like more detail about right of way.

Richard Myers – concerned about increased traffic at Eagle Landing intersection, Mabeline Should remain open, close Horne Rd. Road may be used as drag strip because its Straight, plantings in the median at Eagle Landing entrance should be relocated, speed Limit should be 30 mph, landscape between road and sidewalk, open new road to Intersect with Ashley Phosphate Rd and close both Mabeline and Horne.

Example FONSI Request

May 11, 2000

Mr. Robert L. Lee
Division Administrator
Federal Highway Administration
1835 Assembly Street, Suite 1270
Columbia, SC 29201

Subject: BST-FLMB(003): Request for a Finding of No Significant Impact –
Widening of Hoffmeyer Road (Road S-13) in Florence
County, South Carolina, File No. 21.172A, PIN 21766

Dear Mr. Lee:

The Department received approval of an Environmental Assessment (EA) on the above referenced project from FHWA on May 22, 1998, and the approved document was made available for review in accordance with 23 CFR 771.119(d). Following availability of the environmental document, a Combination Location and Design Public Hearing was duly advertised and subsequently conducted on February 17, 2000, at the West Florence High School located at 221 North Beltline Drive, in the City of Florence. Approximately 88 interested individuals were in attendance of which 23 were minorities (all white females).

Nineteen written comments were received at the public hearing and twenty-nine written comments were received within the 15-day comment period following the public hearing. Comments received included approval of the project as proposed, opposition to the project as proposed, the need for utilities to be buried, and the need for more traffic lights.

As a result of the public hearing, the Department will shift the centerline of Hoffmeyer Road approximately seven feet south at the intersection with Ebenezer Road. In addition, the centerline of Ebenezer Road will be shifted approximately 14.5 feet west (see attached schematic). These changes will reduce the impacts to the landscaped property in the northeast quadrant of the intersection.

Mr. Robert L. Lee

May 11, 2000

Page 2

This alteration will not change any findings previously documented in the Environmental Assessment.

The public hearing certification and public hearing format is attached for your review and records. Based on the administrative and environmental documentation to date, it is the Department's recommendation that the project be processed as a Finding of No Significant Impact (FONSI). Also included is a request for location and preliminary design approval. Please advise should you require additional information.

Sincerely,

D. H. Freeman
State Highway Engineer

By: Blanche S. Sproul
Environmental Manager

BSS:cw

Enclosures

bc: Environmental Management
General File via SSE Freeman
Federal Aid Coordinator Lorick

File: Env/EWF

Example Re-Evaluation Letter

1992 Re-evaluation letter to FWHA

Subject: Project No. 12637- Re-evaluation of S.C. Route 111 (Sections 4 and 5) in
Whatever County

Dear Mr. Whoever:

The Department received a Finding of No Significant Impact by you office on the above referenced projects on (original date). Because of the time lapse since the Department received approval of the final environmental document, a re-evaluation was initiated recently to ensure adequate consideration of the project's probable effects on the human and natural environment.

An examination of the project with respect to present development in the area as well as current environmental guidelines has resulted in a determination that the social, economic, and environmental effects of the project remain essentially as previously described. The Department surveyed the project corridor for the presence of any threatened or endangered species after securing an updated county listing from the U.S. Fish and Wildlife Service. Results of the survey carried out in May of this year confirmed the absence of any species within the project corridor.

The Department again confirmed its commitment to carrying out elements of the approved mitigation plan for recovery of artifacts from the seven archaeological sites located within the project three corridor. Also to be taken into consideration in future development of the projects will be the recent enactment of regulatory guidelines pertaining to the avoidance of underground storage tanks and hazardous waste sites for those sections of roadway where right of way remains to be acquired.

In review of the aforementioned evaluation your concurrence is requested in the Department's determination that the projects' probable effects on the environment remain as essentially described in the final environmental document.

Sincerely,

Concur: _____ Date: _____

Permit Determination Form

Date: February 28, 2005

MEMORANDUM

FROM: Tiffany Keverline COMPANY: Civil Engineering Consultant Services, Inc. (CECS)
PRIME CONSULTANT CECS SUB CONSULTANT EcoScience

TO: Tim L. Hunter, Environmental Operations Manager

SUBJECT: Permit Determination

Project Description: S 26@S-358 Intersection Improvements

Route or Road No. S 26@ S-358 County: Florence

CONST. PIN 30215 OTHER PINS _____

Response:

() It has been determined that no permits are required because

(X) The following permit(s) is/are necessary: (Please Check which type(s) of Permit the Project will need)

ICOE COEGP* NW-14 JD (Jurisdictional Determination)

NW-3 NW-7 NW-23 NW-25 NW-27

NAV NAVGP USCG NW-15 OCRM

Other _____

If this selection is tentative, please submit another Permit Determination Sheet as soon as the permit type is determined so that SCDOT will be able to update its records.

***Selection is tentative. Permit Determination Sheet will be resubmitted if tentative selection changes.**

Biologist, SCDOT/Consultant Date

Example Permit Application



Civil Engineering Consulting Services, Inc.

*Transportation and Forensic Engineering
Environmental Planning • Consulting Management*

October 6, 2005

Mr. Travis Hughes
Regulatory Division
Charleston District Corps of Engineers
69A Hagood Avenue
Charleston, South Carolina 29403-5107

Subject: District 5 Safety Project / Intersection Improvements at US 501/701 Bus. and Road S-116 in Horry County, SC (SCDOT PIN 32964)

Dear Mr. Hughes:

This is to inform you of our intention to process the above referenced project under General Permit 2000-14-002. All conditions outlined in the GP will be adhered to during construction. The referenced project is one of several roadway projects being advanced at this time statewide that is intended to improve motorist safety.

The project involves modifications to the intersection of US 501 / US 701 Business and S-116. The existing intersection is a four-way signalized intersection. Approachways along US 501 / US 701 Business consist of a four-lane curb and gutter section with two 12-foot travel lanes in each direction. Approachways along S-116 consist of two 12-foot travel lanes. Left turn lanes will be added on all approachways. New right of way will vary from 40 to 45 feet along US 501 / 701 Business and 25 to 30 feet along S-116. Approximately 0.003 acre of waters of the U.S. would be impacted by this project. This is impact to 19 linear feet (0.003 ac.) of stream, resulting from the extension of an existing R.C.P. culvert, as well as impacts associated with the placement and relocation of utilities should this be necessary. This project would not result in any impact to jurisdictional wetlands. Since impact to wetlands/waters of the US is below the mitigation requirements of 0.1 acre and 50 linear feet of stream impact, no mitigation measures are planned other than use of Best Management Practices during construction.

This permit package includes items as noted on the enclosed Permit Checklist. If any additional information is needed, please feel free to contact me at (803) 779-0311 or the applicant, SCDOT at (803) 737-1395.

Sincerely,

Susan Land, P.E.
Director of Environmental Services

Attachments

cc: Mr. Robert H. Ridgell, SCDHEC
Mr. Robert Mikell, SCDHEC – OCRM
Ms. Jackie Galloway, SCDOT – Environmental Management Office
Mr. Glen Ward, P.E., SCDOT Program Manager

File: env

2000 Park Street, Suite 201 - Columbia, S.C. 29201 - Telephone (803) 779-0311 / Fax (803) 779-0528

Permit Checklist

Project: District 5 Safety Project / Intersection Improvements to US 501/701 Bus. at Road S-116 in Horry County, SC

SCDOT PIN # 32964

Type of ACOE permit applying: General Permit 2000-14-002

Fill out Application

- Two copies of concurrence page (one on yellow paper) and self-addressed envelope
- Jurisdictional Determination (JD letter & Drawing) SAC# 80-2005-0933-3
- Location Map, directions, lat/long
- USGS Topo (Quad) map outlining the entire project Boundary (should match JD request map)
- Photo documentation of Project area, especially impact areas
- T&E Spp. Report
- Impact Assessment Worksheet
- Drawings of work, cross sections for every impact, plan view. Existing and proposed. (Stream name, flow direction, wetland area defined, etc.)
- Cubic yards and acres of wetland filled and/or stream impacts in linear feet
- Description of proposed mitigation (must look onsite before using mitigation banks). **Since impact to wetlands/waters of the US is below the mitigation requirements of 0.1 acre and 50 linear feet of stream impact, no mitigation measures are planned other than use of Best Management Practices during construction.**
 - Investigate onsite or same watershed opportunities for mitigation
 - Mitigation plan (location, design, monitoring if necessary)
 - Required mitigation and proposed mitigation calculations
- Adjacent property owners (if necessary)

SCDOT review the complete Permit Package Date: _____ SCDOT Initials: _____

Mail or Hand-Deliver (Circle one) to Corps Date: _____

Notes:



South Carolina
Department of Transportation

October 6, 2005

U.S. Army Corps of Engineers
Charleston District, Regulatory Branch
Attn: Mr. Travis Hughes
69A Hagood Avenue
Charleston, SC 29403-5107

RE: SAC # _____

Subject: District 5 Safety Project / Improvements to Intersection of US 501/701 Bus. and Road S 116 in Horry County, SC (SCDOT PIN 32964) and Total Impact to Wetlands/Waters of the US of 0.003 acres.

Dear Mr. Hughes:

South Carolina Department of Transportation is requesting authorization under General Permit No. 2000-14-002 for unavoidable impacts to jurisdictional wetlands and/or waters of the United States associated with the above referenced project.

Enclosed please find a permit request package that includes the completed joint application form; a project narrative, the jurisdictional determination letter and map; permit drawings; a copy of the Categorical Exclusion approved by the Federal Highway Administration; copies of approval letters from the State Historic Preservation Officer; and a copy of the Biological Assessment detailing the findings of a field survey for federally protected species that was performed within the project corridor.

SCDOT understands our responsibility for providing all required information to constitute a complete notification, and any compensatory mitigation necessary to comply with the Charleston District Compensatory Mitigation SOP. Furthermore, SCDOT will ensure compliance with the GP terms and conditions and, if applicable, Charleston District's NWP Regional Conditions.

If necessary, SCDOT will obtain and provide the Corps with a copy of all appropriate state certifications and/or authorizations (i.e. 401 Water Quality Certification, Coastal Zone Management Consistency Determination, State Navigable Waters Permit) prior to commencement of work. In addition, SCDOT agrees to submit a signed compliance certification to the Corps within 30 days following completion of the authorized work to include evidence that any required mitigation has been executed.

Impact to wetlands/waters of the US is 0.003 (0.003 stream impact), below the mitigation requirements of 0.01 acre and 50 linear feet of stream impact, therefore, no mitigation measures are planned other than use of Best Management Practices during construction.

SCDOT hereby requests that this project be authorized under General Permit No. 2000-14-002. As SCDOT agrees to meet all terms and conditions of the General Permit, we respectfully request your signature of concurrence that the proposed work qualifies for authorization there under in the signature block provided below.

Sincerely,


Sean Connolly
Environmental Project Manager

enclosures

I concur with SCDOT's request for NWP and/ or General Permit authorization.

ACOE Signature _____ Date _____



Post Office Box 181
Columbia, South Carolina 29202-0181

Phone: (803) 737-2314
TTY: (803) 737-0870

AN EQUAL OPPORTUNITY
AFFIRMATIVE ACTION EMPLOYER



October 6, 2005

U.S. Army Corps of Engineers
Charleston District, Regulatory Branch
Attn: Mr. Travis Hughes
69A Hagood Avenue
Charleston, SC 29403-5107

RE: SAC # _____

Subject: District 5 Safety Project / Improvements to Intersection of US 501/701 Bus. and Road S 116 in Horry County, SC (SCDOT PIN 32964) and Total Impact to Wetlands/Waters of the US of 0.003 acres.

Dear Mr. Hughes:

South Carolina Department of Transportation is requesting authorization under General Permit No. 2000-14-002 for unavoidable impacts to jurisdictional wetlands and/or waters of the United States associated with the above referenced project.

Enclosed please find a permit request package that includes the completed joint application form; a project narrative, the jurisdictional determination letter and map; permit drawings; a copy of the Categorical Exclusion approved by the Federal Highway Administration; copies of approval letters from the State Historic Preservation Officer; and a copy of the Biological Assessment detailing the findings of a field survey for federally protected species that was performed within the project corridor.

SCDOT understands our responsibility for providing all required information to constitute a complete notification, and any compensatory mitigation necessary to comply with the Charleston District Compensatory Mitigation SOP. Furthermore, SCDOT will ensure compliance with the GP terms and conditions and, if applicable, Charleston District's NWP Regional Conditions.

If necessary, SCDOT will obtain and provide the Corps with a copy of all appropriate state certifications and/or authorizations (i.e. 401 Water Quality Certification, Coastal Zone Management Consistency Determination, State Navigable Waters Permit) prior to commencement of work. In addition, SCDOT agrees to submit a signed compliance certification to the Corps within 30 days following completion of the authorized work to include evidence that any required mitigation has been executed.

Impact to wetlands/waters of the US is 0.003 (0.003 stream impact), below the mitigation requirements of 0.01 acre and 50 linear feet of stream impact, therefore, no mitigation measures are planned other than use of Best Management Practices during construction.

SCDOT hereby requests that this project be authorized under General Permit No. 2000-14-002. As SCDOT agrees to meet all terms and conditions of the General Permit, we respectfully request your signature of concurrence that the proposed work qualifies for authorization there under in the signature block provided below.

Sincerely,

Sean Connolly
Environmental Project Manager

enclosures

I concur with SCDOT's request for NWP and/ or General Permit authorization.

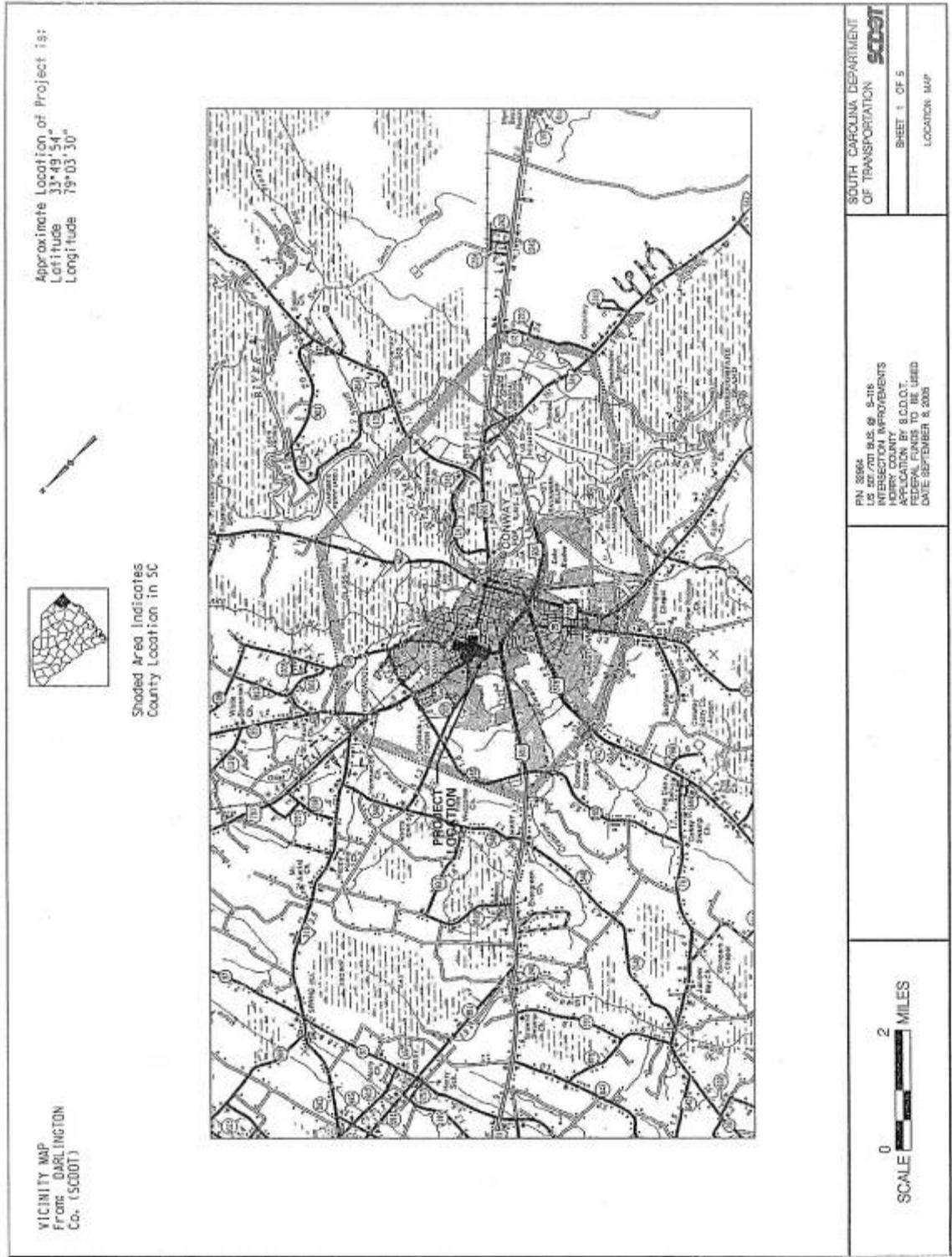
ACOE Signature _____ Date _____

General Permit No. 2000-14-002

Joint Federal and State Application Form For Activities Affecting Waters of the United States or Critical Areas of the State of South Carolina	This Space for Official Use Only. Application # _____ Date Received: _____ Project Manager: _____
Authorities: 33 USC 401, 33 USC 403, 33 USC 407, 33 USC 408, 33 USC 1341, 33 USC 1344, 33 USC 1413 and Section 46-39-10 et. seq. of the South Carolina Code of Laws. These laws require permits for activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. The Corps of Engineers and the State of South Carolina have established a joint application process for activities requiring both Federal and State review or approval. Under this joint process, you may use this form, together with the required drawings and supporting information, to apply for both the Federal and/or State permit(s).	
Drawings and Supplemental Information Requirements: In addition to the information on this form, you must submit a set of drawings and, in some cases, additional information. A completed application form together with all required drawings and supplemental information is required before an application can be considered complete. See the attached instruction sheets for details regarding these requirements. You may attach additional sheets if necessary to provide complete information.	
1. Applicant's Name. South Carolina Department of Transportation	4. Agent's Name (an agent is not required). Civil Engineering Consulting Services, Inc.
2. Applicant's Address. P.O. Box 191 955 Park Street Columbia, SC 29202-0191	5. Agent's Address. 2000 Park Street, Suite 201 Columbia, SC 29201 Attention: Susan Land
3. Applicant's Contact Number (include area code). Residence: N/A Business: (803) 737-1395 FAX: (803) 737-1394	6. Agent's Contact Number (include area code). Residence: N/A Business: (803) 779-0311 FAX: (803) 779-0528
7. Project Title. District 5 Safety Project / Intersection of US 501/701 Bus. and Road S-116 in Horry County, SC SCDOT PIN: 32964	9. Project Location. Street Address: Intersection of US 501/701 Bus. and Road S-116 County: Horry Latitude: 33° 49' 54" Longitude: 79° 03' 30"
8. Nearest Waterbody to project site (if known). Unnamed Tributary	
10. Directions to the Site (attach additional sheets if needed). Intersection of US 501/701 Bus. and Road S-116 in Horry County, SC (See location map).	
11. Description of the Overall Project and of Each Activity In or Affecting U. S. Waters or State critical areas (attach additional sheets if needed). The project involves modifications to the intersection of US 501 / US 701 Business and S-116. The existing intersection is a four-way signalized intersection. Approachways along US 501 / US 701 Business consist of a four-lane curb and gutter section with two 12-foot travel lanes in each direction. Approachways along S-116 consist of two 12-foot travel lanes. Left turn lanes will be added on all approachways. New right of way will vary from 40 to 45 feet along US 501 / 701 Business and 25 to 30 feet along S-116. Approximately 0.003 acre of waters of the U.S. would be impacted by this project. This is impact to 19 linear feet (0.003 ac.) of stream, resulting from the extension of an existing R.C.P. culvert, as well as impacts associated with the placement and relocation of utilities should this be necessary. This project would not result in any impact to jurisdictional wetlands. Since impact to wetlands/waters of the US is below the mitigation requirements of 0.1 acre and 50 linear feet of stream impact, no mitigation measures are planned other than use of Best Management Practices during construction.	
12. Overall Project Purpose and the Basic Purpose of Each Activity In or Affecting U. S. Waters (attach additional sheets if needed). The referenced project is one of several district wide safety projects being advanced at this time statewide that are intended to improve motorist safety.	

APPENDICES
APPENDIX B

<p>13. Type and Quantity of Materials To Be Discharged.</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 80%;">Dirt or Topsoil:</td><td style="width: 10%; border-bottom: 1px solid black;"></td><td style="width: 10%; text-align: right;">cy</td></tr> <tr><td>Clean Sand:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Mud:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Clay:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Gravel, Rock, or Stone:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Concrete:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Other (stream impact/culvert extension):</td><td style="text-align: right;">19</td><td style="text-align: right;">LF</td></tr> <tr><td></td><td style="text-align: right;">48.4</td><td style="text-align: right;">cy</td></tr> <tr><td></td><td style="text-align: right;">19</td><td style="text-align: right;">LF</td></tr> <tr><td>TOTAL:</td><td style="text-align: right;">48.481</td><td style="text-align: right;">cy</td></tr> </table>	Dirt or Topsoil:		cy	Clean Sand:		cy	Mud:		cy	Clay:		cy	Gravel, Rock, or Stone:		cy	Concrete:		cy	Other (stream impact/culvert extension):	19	LF		48.4	cy		19	LF	TOTAL:	48.481	cy	<p>14. Type and Quantity of Impacts to U. S. Waters (including wetlands).</p> <table style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 60%;">Filling:</td><td style="width: 10%; text-align: right;">0.003</td><td style="width: 10%; text-align: right;">acres</td><td style="width: 10%; text-align: right;">48.4</td><td style="width: 10%; text-align: right;">cy</td></tr> <tr><td>Backfill & Bedding:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">acres</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Land clearing:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">acres</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Dredging or Excavation:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">acres</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Flooding:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">acres</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Draining:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">acres</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>Shading:</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">acres</td><td style="border-bottom: 1px solid black;"></td><td style="text-align: right;">cy</td></tr> <tr><td>TOTALS</td><td style="text-align: right;">0.003</td><td style="text-align: right;">acres</td><td style="text-align: right;">48.4</td><td style="text-align: right;">cy</td></tr> </table>	Filling:	0.003	acres	48.4	cy	Backfill & Bedding:		acres		cy	Land clearing:		acres		cy	Dredging or Excavation:		acres		cy	Flooding:		acres		cy	Draining:		acres		cy	Shading:		acres		cy	TOTALS	0.003	acres	48.4	cy
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<p>15. Names and Addresses of All Adjoining Property Owners (attach additional sheets if needed).</p> <p>Attached with permit drawings</p>																																																																							
<p>16. Has any portion of the work already commenced? If yes, describe all work that has been done and the dates of the work.</p> <p>To date, no work has been begun.</p>																																																																							
<p>17. List all Certifications, Approvals, and Denials received from Federal, State, or Local Agencies for work described in this application.</p> <p>JD SAC 80-2005-0933-3</p>																																																																							
<p>18. Authorization of Agent. I hereby authorize the agent whose name is given in block number 4 of this application to act in my behalf in the processing of this application and to furnish supplemental information in support of this application.</p> <div style="text-align: right; margin-top: 10px;"> 9/5/05 Applicant's Signature Date </div>																																																																							
<p>19. Certification. Application is hereby made for a permit or permits to authorize the work and uses of the work as described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent for the applicant.</p> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> 9/5/05 Applicant's Signature Date </div> <div style="width: 45%;"> 10/5/05 Agent's Signature Date </div> </div>																																																																							
<p>The application must be signed by the person who desires to undertake the proposed activity or it may be signed by a duly authorized agent if the authorization statement in blocks 4 and 18 have been completed and signed. 18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.</p> <p>Submit the completed application form with the required drawings and all supporting information as indicated below.</p> <div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 30%;"> <p>Send all original application materials to: U. S. Army Corps of Engineers Charleston District, Regulatory Branch 69 A Hugood Avenue Charleston, SC 29402</p> </div> <div style="width: 30%;"> <p>Send one complete copy to: S. C. Dept of Health & Environmental Control Office of Coastal Resource Management 1362 McMillan Avenue, Suite 400 Charleston, SC 29405</p> </div> <div style="width: 30%;"> <p>Send one complete copy to: S. C. Dept of Health & Environmental Control Office of Environmental Quality Control Bureau of Water 2600 Ball Street Columbia, SC 29201</p> </div> </div>																																																																							



APPENDICES
APPENDIX B

Description	Site 1	Total
1. Fill in Wetlands Area		
Volume (C.Y.)		
2. Fill in Open Water Area		
Volume (C.Y.)		
3. Excavation in Wetlands Area		
Volume (C.Y.)		
4. Excavation in Open Water Area		
Volume (C.Y.)		
5. Clearing in Wetlands & Future Maintenance Area		
6. Channel/Relocation in Wetlands Linear Footage Area		
Volume (C.Y.)		
7. Culvert or Pipe Relocation in Uplands Linear Footage Area		
8. Existing Streams Filled for Relocation Area Area		
9. Existing Streams Affected by Culverts or Pipes Linear Footage Area Volume (C.Y.)	19 L.F. 0.003 AC 48.4 CY	19 L.F. 0.003 AC 48.4 CY
10. Ditch Clearing in Wetlands Linear Footage Area		
11. Grade Enhancement in Wetlands Area Volume (C.Y.)		

SOUTH CAROLINA DEPARTMENT
OF TRANSPORTATION
SCDOT

PRJ 2024
RHS/ BLS 08 5-16
IMPROVEMENTS
HOBBS COUNTY
AFFILIATION BY S.C.D.O.T.
FEDERAL FUNDS TO BE USED
DATE: SEPTEMBER 8, 2025

Approximate Location of Project is:
Latitude 33°49'54"
Longitude 79°03'30"

SHEET 4 OF 5
WETLANDS
SUMMARY

APPENDICES
APPENDIX B

Site No.	Tract	Name	Address
1	56	MYRTIS L. TIMBERS	P.O. BOX 826 CONWAY, SC 29528
	57	SKIPPER GLADYS JOAN ETAL	650 WILLARD RD CONWAY, SC 29526

SOUTH CAROLINA DEPARTMENT
OF TRANSPORTATION **SDOT**

SHEET 5 OF 5
PROPERTY OWNERS

PIN 20004
U.S. BRIDGE BUS © 4-78
INTERSECTION IMPROVEMENTS
HORRY COUNTY
APPLICATION BY S.C.D.O.T.
APPROVED FOR USE
DATE SEPTEMBER 10, 2008

Attachment "B"

SCDOT IMPACT ASSESSMENT

I. Processing

1. Check all of the approval(s) requested for this project:
- | | |
|---|---|
| <input checked="" type="checkbox"/> Section 404 Permit | <input checked="" type="checkbox"/> ACOE General Permit |
| <input type="checkbox"/> Section 10 Permit | <input type="checkbox"/> Nav. Water General Permit |
| <input checked="" type="checkbox"/> 401 Water Quality Certification | <input type="checkbox"/> CZMC – (OCRM) |

II. Applicant Information

1. Agent/Consultant Information
- Name: Civil Engineering Consulting Services, Inc.
Company Affiliation: Consultant
Mailing Address: Civil Engineering Consulting Services, Inc.
Attn: Susan Land
2000 Park Street, Suite 201
Columbia, SC 29201
Telephone Number: 803-779-0311 Fax Number: 803-779-0528
E-mail Address: landss@cecsinc.com

III. Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. The vicinity map must include a scale and north arrow. The maps and plans should include the appropriate USGS Topographic Quad Map with the project corridor outlined. For administrative and distribution purposes, the **USACE requires information to be submitted on sheets no larger than 8.5 by 11-inch format.**

1. Name of project: District 5 Safety Project/ Intersection Improvements to US 501/701 Bus. at Road S-116 in Horry County, SC (SCDOT PIN 32964)
2. Location
County: Horry Nearest Town: Conway
Directions to site (include road numbers, landmarks, etc.): Intersection of US 501/701 Bus. and Road S-116 in Horry County, SC (See vicinity map.)
3. Site coordinates, if available (UTM or Lat/Long): 33°49'54" / 79°03'30" (General Project Coordinates Only)
(Note – Since the project is linear, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
4. Property size (acres): Approximately 10.4 acres (area within project boundaries)

5. Nearest body of water (stream/river/sound/ocean/lake): Unnamed tributary
6. Describe the existing conditions on the site and general land use in the vicinity: The project area is composed primarily of maintained/disturbed land. One stream occurs within the project area as well as one disturbed depressional wetland.
7. Describe the overall project in detail: The project involves modifications to the intersection of US 501 / US 701 Business and S-116. The existing intersection is a four-way signalized intersection. Approachways along US 501 / US 701 Business consist of a four-lane curb and gutter section with two 12-foot travel lanes in each direction. Approachways along S-116 consist of two 12-foot travel lanes. Left turn lanes will be added on all approachways. New right of way will vary from 40 to 45 feet along US 501 / 701 Business and 25 to 30 feet along S-116. Approximately 0.003 acre of waters of the U.S. would be impacted by this project. This is impact to 19 linear feet (0.003 ac.) of stream, resulting from the extension of an existing R.C.P. culvert, as well as impacts associated with the placement and relocation of utilities should this be necessary. This project would not result in any impact to jurisdictional wetlands. Since impact to wetlands/waters of the US is below the mitigation requirements of 0.1 acre and 50 linear feet of stream impact, no mitigation measures are planned other than use of Best Management Practices during construction.
8. Explain the purpose of the proposed work: This project is one of several district wide safety projects being advanced at this time statewide that are intended to improve motorist safety.
9. List all Certifications, Approvals, and/or Denials received for this project: Request for jurisdictional determination was applied for on May 2, 2005 and approved on September 29, 2005 (SAC 80-2005-0933-3).
10. Has any portion of the work already commenced? If yes, describe: No work has begun on this project.

IV. Proposed Impacts to Waters of the United States/Waters of the State

All proposed impacts, permanent and temporary, must be listed herein, and must be clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) must be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs shall be included.

1. Individually list **wetland impacts** below:

Wetland Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Type of Wetland**
NONE					

- * List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.
- ** List a wetland type that best describes wetland to be impacted (e.g., freshwater/saltwater marsh, forested wetland, beaver pond, Carolina Bay, bog, etc.) Indicate if wetland is isolated (determination of isolation to be made by USACE only).

List the total acreage (estimated) of all existing wetlands on the property: 0.002 acre

Total area of wetland impact proposed: 0

2. Individually list all **intermittent and perennial stream impacts** below:

Stream Impact Site Number (indicate on map)	Type of Impact*	Length of Impact (linear feet)	Stream Name**	Average Width of Stream Before Impact	Perennial or Intermittent? (please specify)
1	culvert	19	Unnamed tributary	6 feet	Perennial

- * List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain), stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc.
- ** Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows.

Cumulative impacts (linear distance in feet) to all streams on site: 19 linear feet

3. Individually list all **open water impacts** (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

Open Water Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Name of Waterbody (if applicable)	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)
NONE				

- * List each impact separately and identify temporary impacts. Impacts include, but are not limited to: fill, excavation, dredging, flooding, drainage, bulkheads, etc.

V. Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts. Please attach a separate sheet, as an appendix, if more space is needed.

Impacts to wetlands have been eliminated by minimizing acquisition of right of way to decrease the overall project footprint. Use of Best Management Practices will also be employed during construction.

VI. Feasible Alternatives

Specifically describe measures *in detail* showing that SCDOT exhausted all feasible alternatives before filling in the wetland resources on-site. This should show that the proposed project was the least damaging alternative to water resources. Please attach a separate sheet, as an appendix, if more space is needed.

No feasible alternatives exist that would further minimize impacts. This project is being undertaken to improve motorist safety.

VII. Mitigation

Provide a description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and map, if offsite), affected wetland/stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet, as an appendix, if more space is needed.

Impact to wetlands/waters of the US is below the mitigation requirements of 0.1 acre and 50 linear feet of stream impact, therefore, no mitigation measures are planned other than use of Best Management Practices during construction.

VIII. Biological/ Habitat Assessment

Present a detailed report of the habitat and existing condition of that habitat. The report should include a detailed list of all State and Federal Threatened and Endangered Species and whether the species of concern was present and/ or if their habitat was present. Please attach a separate sheet, as an appendix, if more space is needed.

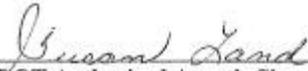
The project area was examined for habitat that meets the requirements for each federally protected species. Appropriate habitat was found for three species within the project area: 1) pondberry, 2) red-cockaded woodpecker, and 3) Schweinitz's sunflower. Plant-by-plant surveys were completed for pondberry within areas of suitable habitat (wetland habitats such as hardwoods; shade to full sun) on March 30, 2005. Surveys resulted in no findings of pondberry within the project area.

Red-cockaded woodpecker foraging habitat (pine dominated stands greater than 30 years old) occurs in several locations within the project area. In addition, potential nesting/breeding habitat occurs within the project area (pine stands greater than 60 years old). Due to the presence of foraging and potential nesting habitat within the project area, a 0.5-mile radius around the project area was surveyed for colonies/nesting/breeding habitat (Henry 1989). Surveys resulted in the finding of no suitable nesting/breeding habitat (no pine stands greater than 60 years old) for red-cockaded woodpecker within 0.5 mile of the project area. In addition, SCHK documents no known red-cockaded woodpecker within 2 miles of the project area.

Suitable habitat for Schweinitz's sunflower is present within the project area within sunny maintained areas. However, surveys are not necessary for Schweinitz's sunflower as indicated

APPENDICES
APPENDIX B

by Mark Caldwell of USFWS in an email coorespondence dated April 27, 2005 that stated "There is no need to survey for Schweinitz's sunflower in Horry County. This sunflower's historical range is in Lancaster and York Counties. The SCHAT database lists it for Horry County; however, this is due to mis-idenfication years ago. SCHAT is in the process of correcting its records on this species."



SCDOT Authorized Agent's Signature

10/5/2005

Date



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69A Hagood Avenue
CHARLESTON, SOUTH CAROLINA 29403-5107

September 29, 2005

Regulatory Division

Mr. David O'Loughlin
EcoScience Corporation
1101 Haynes Street, Suite 101
Raleigh, North Carolina 27604

Re: SAC 80-2005-0933-3
Horry County

Dear Mr. O'Loughlin:

This is in response to your letter of May 2, 2005, requesting a wetland determination, on behalf of the South Carolina Department of Transportation, for a 10.4 acre tract located at the intersection of U. S. Highway 501/701 business and S. C. SR 116, in the City of Conway, Horry County, South Carolina. The project area is depicted on maps 1 through 3 of 3 that you submitted which was prepared by your office, dated February 2005, Revised August 2005, and entitled "US 501/701 Bus/ S-116 INTERSECTION/ HORRY COUNTY, SOUTH CAROLINA."

The maps depict approximate boundaries of wetlands and other waters of the United States as established by your office. You have requested that this office verify the accuracy of this mapping as a representation of wetlands or other waters of the United States within the regulatory authority of this office. The property in question contains approximately 0.007 acres of federally defined freshwater wetlands or other waters of the United States which are subject to the jurisdiction of this office. The location and configuration of these areas are reflected on the maps referenced above.

Based on an on-site inspection and a review of aerial photography and soil survey information, it has been determined that the boundaries shown on the referenced maps are a reasonable approximation of the location and boundaries of the wetlands or other waters of the United States found on this site. However, you are cautioned that this delineation is approximate, subject to change, and should be used for planning purposes only. This office should be contacted prior to performing any work in or around these approximated wetlands or other waters of the United States. In order for a more accurate determination to be provided, these areas should be surveyed and platted. Upon receipt of such a plat, this office can then issue a letter verifying the accuracy of the actual jurisdictional boundaries. You should also be aware that the areas identified as wetlands or other waters of the United States may be subject to restrictions or requirements of other state or local government entities.

Please be advised that this determination is valid for five (5) years from the date of this letter unless new information warrants revision of the delineation before the expiration date. All actions concerning this determination must be complete within this time frame, or an additional delineation must be conducted. Further, be advised that this preliminary jurisdictional determination is **not** an appealable action under the Corps of Engineers administrative appeal procedures defined at 33 CFR 331.

In future correspondence concerning this matter, please refer to SAC 80-2005-0933-3. You may still need state or local assent. Prior to performing any work, you should contact the South Carolina Department of Health and Environmental Control, Office of Ocean and Coastal Resource Management. A copy of this letter is being forwarded to them for their information.

If you have any questions concerning this matter, please contact me at 843-365-4239.

Respectfully,



Tommy Fennel
Biologist

Enclosures:
Basis for Jurisdiction

Copy Furnished:
Mr. John Hensel
S.C. Department of Health
and Environmental Control
Office of Ocean and Coastal Resource Management
1362 McMillan Avenue, Suite 400
Charleston, South Carolina 29405

JURISDICTIONAL DETERMINATION
U.S. Army Corps of Engineers

Revised 8/13/04

DISTRICT OFFICE: Charleston
FILE NUMBER: SAC 80-2005-0933-3

PROJECT LOCATION INFORMATION:

State: South Carolina
County: Horry
Center coordinates of site (latitude/longitude): 33.84821/ 79.05947
Approximate size of area (parcel) reviewed, including uplands: 10.4 acres.
Name of nearest waterway: Waccamaw River
Name of watershed: Waccamaw

JURISDICTIONAL DETERMINATION

Completed: Desktop determination Date:
Site visit(s) Date(s): September 23, 2005

Jurisdictional Determination (JD):

- Preliminary JD - Based on available information, there appear to be (or) there appear to be no "waters of the United States" and/or "navigable waters of the United States" on the project site. A preliminary JD is not appealable (Reference 33 CFR part 331).
- Approved JD - An approved JD is an appealable action (Reference 33 CFR part 331).
Check all that apply:
- There are "navigable waters of the United States" (as defined by 33 CFR part 329 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:
- There are "waters of the United States" (as defined by 33 CFR part 328 and associated guidance) within the reviewed area. Approximate size of jurisdictional area:
- There are "isolated, non-navigable, intra-state waters or wetlands" within the reviewed area.
 Decision supported by SWANCC/Migratory Bird Rule Information Sheet for Determination of No Jurisdiction.

BASIS OF JURISDICTIONAL DETERMINATION:

- A. Waters defined under 33 CFR part 329 as "navigable waters of the United States":
 The presence of waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
- B. Waters defined under 33 CFR part 328.3(a) as "waters of the United States":
 (1) The presence of waters, which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide.
 (2) The presence of interstate waters including interstate wetlands¹.
 (3) The presence of other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce including any such waters (check all that apply):
 (i) which are or could be used by interstate or foreign travelers for recreational or other purposes.
 (ii) from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
 (iii) which are or could be used for industrial purposes by industries in interstate commerce.
 (4) Impoundments of waters otherwise defined as waters of the US.
 (5) The presence of a tributary to a water identified in (1) - (4) above.
 (6) The presence of territorial seas.
 (7) The presence of wetlands adjacent² to other waters of the US, except for those wetlands adjacent to other wetlands.

Rationale for the Basis of Jurisdictional Determination (applies to any boxes checked above). *If the jurisdictional water or wetland is not itself a navigable water of the United States, describe connection(s) to the downstream navigable waters. If B(1) or B(3) is used as the Basis of Jurisdiction, document navigability and/or interstate commerce connection (i.e., discuss site conditions, including why the waterbody is navigable and/or how the destruction of the waterbody could affect interstate or foreign commerce). If B(2, 4, 5 or 6) is used as the Basis of Jurisdiction, document the rationale used to make the determination. If B(7) is used as the Basis of Jurisdiction, document the rationale used to make adjacency determination: Wetlands and other waters are contiguous to Crab Tree Canal, which is a tributary of the Waccamaw River.*

Lateral Extent of Jurisdiction: (Reference: 33 CFR parts 328 and 329)

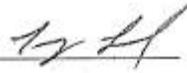
- | | |
|--|---|
| <input type="checkbox"/> Ordinary High Water Mark indicated by:
<input type="checkbox"/> clear, natural line impressed on the bank
<input type="checkbox"/> the presence of litter and debris
<input type="checkbox"/> changes in the character of soil
<input type="checkbox"/> destruction of terrestrial vegetation
<input type="checkbox"/> shelving
<input type="checkbox"/> other: | <input type="checkbox"/> High Tide Line indicated by:
<input type="checkbox"/> oil or scum line along shore objects
<input type="checkbox"/> fine shell or debris deposits (foreshore)
<input type="checkbox"/> physical markings/characteristics
<input type="checkbox"/> tidal gages
<input type="checkbox"/> other: |
|--|---|
- Mean High Water Mark indicated by:
 survey to available datum; physical markings; vegetation lines/changes in vegetation types.
- Wetland boundaries, as shown on the attached wetland delineation map and/or in a delineation report prepared by: Maps and report prepared by EcoScience Corp.

Basis For Not Asserting Jurisdiction:

- The reviewed area consists entirely of uplands.
 Unable to confirm the presence of waters in 33 CFR part 328(a)(1, 2, or 4-7).
 Headquarters declined to approve jurisdiction on the basis of 33 CFR part 328.3(a)(3).
 The Corps has made a case-specific determination that the following waters present on the site are not Waters of the United States:
- Waste treatment systems, including treatment ponds or lagoons, pursuant to 33 CFR part 328.3.
 - Artificially irrigated areas, which would revert to upland if the irrigation ceased.
 - Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
 - Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating and/or diking dry land to retain water for primarily aesthetic reasons.
 - Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States found at 33 CFR 328.3(a).
 - Isolated, intrastate wetland with no nexus to interstate commerce.
 - Prior converted cropland, as determined by the Natural Resources Conservation Service.
- Explain rationale:
 Non-tidal drainage or irrigation ditches excavated on dry land. Explain rationale:
 Other (explain):

DATA REVIEWED FOR JURISDICTIONAL DETERMINATION (mark all that apply):

- Maps, plans, plots or plat submitted by or on behalf of the applicant.
- Data sheets prepared/submitted by or on behalf of the applicant.
- This office concurs with the delineation report, dated August 2005, prepared by (company): EcoScience
- This office does not concur with the delineation report, dated _____, prepared by (company): _____
- Data sheets prepared by the Corps.
- Corps' navigable waters' studies:
- U.S. Geological Survey Hydrologic Atlas:
- U.S. Geological Survey 7.5 Minute Topographic maps:
- U.S. Geological Survey 7.5 Minute Historic quadrangles: Conway
- U.S. Geological Survey 15 Minute Historic quadrangles:
- USDA Natural Resources Conservation Service Soil Survey: Page 60
- National wetlands inventory maps:
- State/Local wetland inventory maps:
- FEMA/FIRM maps (Map Name & Date): _____
- 100-year Floodplain Elevation is: _____ (NGVD)
- Aerial Photographs (Name & Date): 1994 infrared (94:7441-016) & 1999 infrared (11222:133)
- Other photographs (Date): _____
- Advanced Identification Wetland maps:
- Site visit/determination conducted on: September 23, 2005
- Applicable/supporting case law: _____
- Other information (please specify): _____

Signature: Project Manager _____ Tommy Fennel 

¹Wetlands are identified and delineated using the methods and criteria established in the Corps Wetland Delineation Manual (87 Manual) (i.e., occurrence of hydrophytic vegetation, hydric soils and wetland hydrology).

²The term "adjacent" means bordering, contiguous, or neighboring. Wetlands separated from other waters of the U.S. by man-made dikes or barriers, natural river berms, beach dunes, and the like are also adjacent.



1101 Haynes Street Suite 101 Raleigh, NC 27604 Telephone: 919.828.3433 Fax: 919.828.3518

August 18, 2005

Tommy Fennel
U.S. Army Corps of Engineers
Charleston District
1949 Industrial Park Road
Rt. 110
Conway, SC 29526

RE: Request for update to verification of a jurisdictional area delineation associated with improvements to the intersection of US 501/701 Business and S-116 in Horry County, South Carolina. **05-225.06**

Dear Mr. Fennel,

EcoScience Corporation (ESC) personnel completed jurisdictional area delineations for the above-mentioned South Carolina Department of Transportation (SCDOT) project in Horry County on March 30, 2005. ESC made improvements to our application as suggested in our phone conversations.

The SCDOT proposes to make roadway improvements to the intersection of US 501/701 Business and S-116 (Figure 1). Project area limits encompass approximately 10.4 acres. The project area consists of 50 feet from the existing edge of pavement extending approximately 300 to 850 feet in each direction from the intersection of US 501/701 Business and S-116.

Please find attached a request wetland data forms, a project summary, a site location map (Figure 1), an aerial photograph overlain with soils for the project area and a key to jurisdictional area figures (Figure 2), jurisdictional area figures (Figures 3), and photographs of jurisdictional areas (Figure 4). Please note that the jurisdictional boundaries were surveyed using Global Positioning System (GPS) technology.

Please feel free to contact me to set up a meeting or if you require additional information.

Yours truly,

ECOSCIENCE CORPORATION

David O'Loughlin
Senior Scientist

Cc: Paul Emblar, Civil Engineering Consulting Services

Attachments: 2 copies US 501/701 Business and S-116 summary and figures

SUMMARY OF JURISDICTIONAL AREAS
IMPROVEMENTS TO THE INTERSECTION OF US 501/701 BUS AND S-116
HORRY COUNTY, SOUTH CAROLINA
Prepared for: Civil Engineering Consulting Services
Prepared by: EcoScience Corporation August 18, 2005

Project Description: The South Carolina Department of Transportation (SCDOT) is proposing improvements to the intersection of US 501/701 Business and S-116 in Horry County, South Carolina (Figure 1). ESC has been contracted to conduct jurisdictional area delineations contained within the project area limits. Project area limits encompass approximately 10.4 acres, which consists of 50 feet from the existing edge of pavement and approximately 300 to 850 feet in each direction from the intersection of US 501/701 Business and S-116. The project area is located on the north side of Conway.

Section 404 Jurisdictional Areas: The project area is composed primarily of maintained/disturbed land. One stream occurs within the project area as well as one small disturbed wetlands (Figures 3 to 4).

Table 1: Jurisdictional Areas

Name	Area
Project total	10.4 acres
Wetland	0.002 acre
Stream	39 linear feet

Streams: One jurisdictional stream is located within the project area north of US 501/701 Business and west of S-116. The stream is buried beneath several businesses, maintained/disturbed lots, and US 501/701 Business; the stream daylight north of US 501/701 Business from a culvert. Hydrology of the stream is attributed to groundwater and runoff from the surrounding maintained/disturbed land and stormwater drains. The stream is approximately 6 feet wide, with banks approximately 6 to 10 feet in height. Banks are downcutting and bank erosion is present. The stream has low to moderate flow, poor clarity, and little to no sinuosity. Riparian vegetation consists of a disturbed hardwood forest, which provides some cover/shading for the stream. The stream may be classified as riverine and upper perennial with an unconsolidated bottom composed primarily of sand and mud (R3UB2/3).

Wetlands: Wetlands are defined by the presence of three criteria: hydrophytic vegetation, hydric soils, and evidence of wetland hydrology during the growing season (Environmental Laboratory 1987). Open water systems and wetlands receive similar treatment and consideration with respect to Section 404 review. One jurisdictional wetland is located within the project area. The wetland is a small disturbed depression wetland within disturbed hardwood forest. This wetland has formed adjacent to the existing roadway toe of slope, possibly as a result of roadway construction. During field surveys, soils were saturated; free water was present approximately 4 inches below the soil surface. This wetland may be characterized as palustrine, forested with broad-leaved deciduous vegetation, and seasonally saturated/flooded (PFO1E).

Federally Protected Species: Species with federal classifications of Endangered or Threatened are protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The status of "Endangered" refers to "any species which is in danger of extinction throughout all or a significant portion of its range;" "Threatened" refers to "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range" (16 U.S.C. 1532). "Candidate" species are plants and animals for which the United States Fish and Wildlife Service (USFWS) has sufficient information on to propose as endangered or threatened under the Endangered Species Act, but for which development of a proposed listing regulation is precluded by other higher priority listing activities [61 FR 7596-7613 (February 28, 1996)]. Candidate species receive no statutory protection under the ESA. Table 2 lists federally protected

and candidate species within Horry County obtained from the USFWS (1999) and SCHAT (2003).

The project area was examined for habitat that meets the requirements for each federally protected species. Appropriate habitat was found for three species within the project area: 1) pondberry, 2) red-cockaded woodpecker, and 3) Schweinitz's sunflower. Plant-by-plant surveys were completed for pondberry within areas of suitable habitat (wetland habitats such as hardwoods; shade to full sun) on March 30, 2005. Surveys resulted in no findings of pondberry within the project area.

Red-cockaded woodpecker foraging habitat (pine dominated stands greater than 30 years old) occurs in several locations within the project area. In addition, potential nesting/breeding habitat occurs within the project area (pine stands greater than 60 years old). Due to the presence of foraging and potential nesting habitat within the project area, a 0.5-mile radius around the project area was surveyed for colonies/nesting/breeding habitat (Henry 1989). Surveys resulted in the finding of no suitable nesting/breeding habitat (no pine stands greater than 60 years old) for red-cockaded woodpecker within 0.5 mile of the project area. In addition, SCHAT documents no known red-cockaded woodpecker within 2 miles of the project area.

Suitable habitat for Schweinitz's sunflower is present within the project area within sunny maintained areas. However, surveys are not necessary for Schweinitz's sunflower as indicated by Mark Caldwell of USFWS in an email correspondence dated April 27, 2005 that stated "There is no need to survey for Schweinitz's sunflower in Horry County. This sunflower's historical range is in Lancaster and York Counties. The SCHAT database lists it for Horry County; however, this is due to mis-identification years ago. SCHAT is in the process of correcting its records on this species."

Table 2: Federally Protected Species for Horry County

Common Name	Scientific Name	Status	Habitat Present	Surveys Completed	Biological Conclusion
West Indian manatee	<i>Trichechus manatus</i>	Endangered	No	N/A	No Effect
Finback whale	<i>Balaenoptera physalus</i>	Endangered	No	N/A	No Effect
Humpback whale	<i>Megaptera novaeangliae</i>	Endangered	No	N/A	No Effect
Northern right whale	<i>Eubaleana glacialis</i>	Endangered	No	N/A	No Effect
Sei whale	<i>Balaenoptera borealis</i>	Endangered	No	N/A	No Effect
Sperm whale	<i>Physeter catodon</i>	Endangered	No	N/A	No Effect
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened	No	N/A	No Effect
Red-cockaded woodpecker	<i>Picoides borealis</i>	Endangered	Yes	March 30, 2005	No Effect
Wood stork	<i>Mycteria americana</i>	Endangered	No	N/A	No Effect
Piping plover	<i>Charadrius melodus</i>	Threatened	No	N/A	No Effect
Kemp's ridley sea turtle	<i>Lepidochelys kempi</i>	Endangered	No	N/A	No Effect
Leatherback sea turtle	<i>Dermochelys coriacea</i>	Endangered	No	N/A	No Effect
Loggerhead sea turtle	<i>Caretta caretta</i>	Threatened	No	N/A	No Effect
Green sea turtle	<i>Chelonia mydas</i>	Threatened	No	N/A	No Effect
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	Endangered	No	N/A	No Effect
Sea-beach amaranth	<i>Amaranthus pumilus</i>	Threatened	No	N/A	No Effect
Pondberry	<i>Lindera melissifolia</i>	Endangered	Yes	March 30, 2005	No Effect
Canby's drapwort	<i>Oxypolis Canbyi</i>	Endangered	No	N/A	No Effect
American chaffseed	<i>Schwalbea americana</i>	Endangered	No	N/A	No Effect
Schweinitz's sunflower	<i>Helianthus schweinitzii</i>	Endangered	Yes	N/A	No Effect
Dusky shark	<i>Carcharhinus obscurus</i>	Candidate	No	N/A	No Effect
Sand tiger shark	<i>Odontaspis taurus</i>	Candidate	No	N/A	No Effect
Night shark	<i>Carcharhinus signatus</i>	Candidate	No	N/A	No Effect
Speckled hind	<i>Epinephelus drummondhayi</i>	Candidate	No	N/A	No Effect
Jewfish	<i>Epinephelus itajara</i>	Candidate	No	N/A	No Effect
Warsaw grouper	<i>Epinephelus nigritus</i>	Candidate	No	N/A	No Effect
Nassau grouper	<i>Epinephelus striatus</i>	Candidate	No	N/A	No Effect

Request for Jurisdictional Determination: A request for United States Army Corps of Engineers jurisdictional determination was made on May 2, 2005 to the Charleston District (attached).

REFERENCES

- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. Laroe. 1979. Classification of U.S. Wetland and Deepwater Habitats of the United States. Fish and Wildlife Service, Department of the Interior.
- Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1. United States Army Engineer Waterways Experiment Station, Vicksburg, MS. 92 pp.
- Henry, V.G. 1989. Guidelines for Preparation of Biological Assessments and Evaluations for the Red-cockaded Woodpecker. U.S. Department of the Interior, Southeast Region, Atlanta, Georgia. 13 pp.
- South Carolina Heritage Trust (SCHT). 2003. South Carolina Rare, Threatened, and Endangered Species Inventory (online). Available: http://www.dnr.state.sc.us/pls/heritage/county_species.select_county_map [February 24, 2005]. S.C. Heritage Trust.
- United States Fish and Wildlife Service (USFWS). 1999. South Carolina Endangered Species, Threatened Species, and Federal Species of Concern (online). Available: <http://southeast.fws.gov/es/county%20lists.htm> [February 23, 2005]. U.S. Fish and Wildlife Service.

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Scherrer/Terwilliger</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>EC07</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>upland</u>
EC, ED (Wetlands 5,6)	

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Pinus taeda</u>	<u>tree</u>	<u>FAC</u>	9.		
2. <u>Gelsemium sempervirens</u>	<u>vine</u>	<u>FAC</u>	10.		
3. <u>Lonicera japonica</u>	<u>vine</u>	<u>FAC-</u>	11.		
4. <u>Rumex crispus</u>	<u>herb</u>	<u>FAC</u>	12.		
5. <u>Rubus argutus</u>	<u>vine</u>	<u>FAC-</u>	13.		
6. <u>Acer rubrum</u>	<u>tree</u>	<u>FAC</u>	14.		
7. <u>Andropogon virginicus</u>	<u>herb</u>	<u>FAC-</u>	15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 57%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u> </u> (in.) Depth to Free Water in Pit: <u> </u> (in.) Depth to Saturated Soil: <u> </u> (in.)	
Remarks: <u>No wetland hydrology indicators present.</u>	

SOILS

[Map Unit Name (Series and Phase):		Blanton sand		Drainage Class:	mod. well-drained
Taxonomy (Subgroup):		Grossarenic Paleudults		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0+		10YR3/3	10YR3/4	30%	loamy sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> Organic Streaking in Sandy Soils		<input type="checkbox"/> Listed on Local Hydric Soils List	
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List	
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)	
Remarks: No hydric soils indicators					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check)	(Check) Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Remarks		

Approved by HQUSACE 3/92
Forms version 1/02

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Scherrer/Terwilliger</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>EC07</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>wetland</u>
(If needed, explain on reverse.)	EC, ED (Wetlands 5,6)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Magnolia virginiana</u>	<u>tree</u>	<u>FACW+</u>	9. _____	_____	_____
2. <u>Ludwigia alternifolia</u>	<u>herb</u>	<u>OBL</u>	10. _____	_____	_____
3. <u>Osmunda cinnamomea</u>	<u>herb</u>	<u>FACW+</u>	11. _____	_____	_____
4. <u>Ilex coriacea</u>	<u>sap</u>	<u>FACW</u>	12. _____	_____	_____
5. <u>Lyonia lucida</u>	<u>shrub</u>	<u>FACW</u>	13. _____	_____	_____
6. <u>Lyonia ligustrina</u>	<u>shrub</u>	<u>FACW</u>	14. _____	_____	_____
7. <u>Persea borbonia</u>	<u>sap</u>	<u>FACW</u>	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0-4</u> (in.) Depth to Free Water in Pit: <u>0</u> (in.) Depth to Saturated Soil: <u>0</u> (in.)	
Remarks:	

SOILS

[Map Unit Name (Series and Phase):		Pocomoke fine sandy loam		Drainage Class:	very poorly drained
Taxonomy (Subgroup):		Typic Umbraqualls		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions:					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-5		10YR3/2	10YR6/4	20%	sand
5+		10YR3/2	10YR5/8	10%	sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> Concretions		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Organic Streaking in Sandy Soils	
<input checked="" type="checkbox"/> Reducing Conditions		<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Listed on Local Hydric Soils List	
<input type="checkbox"/> Histosol		<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> Listed on National Hydric Soils List	
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Other (Explain in Remarks)	
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check)	(Check) Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks		

Approved by HQUSACE 3/92
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DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Faquin/Saunders</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>EF05</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>upland</u>
	EF (Wetland 2)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Festuca sp.</u>	<u>herb</u>	<u>FAC- to FACU</u>	9. _____	_____	_____
2. <u>Smilax bona-rox</u>	<u>herb</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Geranium carolinianum</u>	<u>herb</u>	<u>--</u>	11. _____	_____	_____
4. <u>Lespedeza bicolor</u>	<u>herb</u>	<u>--</u>	12. _____	_____	_____
5. <u>Trifolium sp.</u>	<u>herb</u>	<u>FACU to FACU-</u>	13. _____	_____	_____
6. <u>Hudsonia sp.</u>	<u>herb</u>	<u>--</u>	14. _____	_____	_____
7. <u>Vicia sativa</u>	<u>herb</u>	<u>FACU</u>	15. _____	_____	_____
8. <u>Lonicera japonica</u>	<u>herb</u>	<u>FAC-</u>	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 13%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>--</u> (in.) Depth to Free Water in Pit: <u>--</u> (in.) Depth to Saturated Soil: <u>--</u> (in.)	
Remarks: <u>No wetland hydrology indicators present.</u>	

SOILS

Map Unit Name (Series and Phase):		Nansemond loamy fine sand		Drainage Class:	mod. well-drained
Taxonomy (Subgroup):		Aquic Hapludults		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions: Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0+		10YR3/1 2.5Y5/3	50% of each		loamy sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Aquic Moisture Regime	<input type="checkbox"/> Reducing Conditions	<input type="checkbox"/> Gleyed or Low-Chroma Colors
<input type="checkbox"/> Concretions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Other (Explain in Remarks)
Remarks: No hydric soils indicators					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Check)	(Check)
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks		

Approved by HQUSACE 3/92
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DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Faquin/Saunders</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>EF05</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>wetland</u>
(If needed, explain on reverse.)	EF (Wetland 2)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Arundinaria gigantea</u>	<u>shrub</u>	<u>FACW</u>	9. _____	_____	_____
2. <u>Juncus effusus</u>	<u>herb</u>	<u>FACW+</u>	10. _____	_____	_____
3. <u>Woodwardia areolata</u>	<u>herb</u>	<u>OBL</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>0-2</u> (in.) Depth to Free Water in Pit: <u>0</u> (in.) Depth to Saturated Soil: <u>0</u> (in.)	Remarks:

SOILS

Map Unit Name (Series and Phase):		Nansemond loamy fine sand		Drainage Class:	mod. well-drained
Taxonomy (Subgroup):		Aquic Hapludults		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-8		10YR3/1	--	--	sandy clay loam
8+		10YR4/1	10YR3/1 10YR6/2	20% 10%	loamy fine sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histic	<input type="checkbox"/> Histic Epipedon	<input type="checkbox"/> Sulfidic Odor	<input type="checkbox"/> Aquic Moisture Regime	<input checked="" type="checkbox"/> Reducing Conditions	<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors
<input type="checkbox"/> Concretions	<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils	<input type="checkbox"/> Organic Streaking in Sandy Soils	<input type="checkbox"/> Listed on Local Hydric Soils List	<input type="checkbox"/> Listed on National Hydric Soils List	<input type="checkbox"/> Other (Explain in Remarks)
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check)	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Remarks		

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DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Faquin/Saunders</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>HAD1</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>upland</u>
	<u>/HC (Wetlands 5)</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Festuca sp.</u>	<u>herb</u>	<u>FAC- to FACU</u>	9. _____	_____	_____
2. <u>Rubus argutus</u>	<u>shrub</u>	<u>FACU+</u>	10. _____	_____	_____
3. <u>Geranium carolinianum</u>	<u>herb</u>	<u>--</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>--</u> (in.) Depth to Free Water in Pit: <u>--</u> (in.) Depth to Saturated Soil: <u>--</u> (in.)	
Remarks: <u>No wetland hydrology indicators present.</u>	

SOILS

Map Unit Name (Series and Phase):		<u>Nansemond loamy fine sand</u>		Drainage Class:	<u>mod. well-drained</u>
Taxonomy (Subgroup):		<u>Aquic Hapludults</u>		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions:					
Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
<u>0+</u>		<u>10yr 4/3</u>	<u>--</u>	<u>--</u>	<u>silt loam</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histoel		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: No hydric soils indicators					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	(Check)		
Wetland Hydrology Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			(Check)
Hydric Soils Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
			Is this Sampling Point Within a Wetland?		
			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Remarks					

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Forms version 1/02

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Faquin/Saunders</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>HA01</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>wetland</u>
(If needed, explain on reverse.)	#HC (Wetlands 5)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Salix nigra</u>	<u>shrub</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Juncus sp.</u>	<u>herb</u>	<u>FACW to OBL</u>	10. _____	_____	_____
3. <u>Galium sp.</u>	<u>herb</u>	<u>FACW- to FACW+</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>4-8</u> (in.) Depth to Free Water in Pit: <u>0</u> (in.) Depth to Saturated Soil: <u>0</u> (in.)	
Remarks:	

SOILS

Map Unit Name (Series and Phase):		Nansemond loamy fine sand		Drainage Class:	mod. well-drained
Taxonomy (Subgroup):		Aquic Hapludults		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-5		10YR3/1	10YR5/4	30%	sandy clay loam
5-8		10YR5/4	10YR3/1	20%	sand
8+		2.5Y5/4	10YR3/1	10%	sand
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input checked="" type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check)		
Wetland Hydrology Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		(Check)
Hydric Soils Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks			

Approved by HQUSACE 3/92
Forms version 1/02

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Faquin/Saunders</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>HD01</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Plot ID: <u>wetland</u>
(If needed, explain on reverse.)	HD/HE (Wetlands 3, 1)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Salix nigra</u>	<u>shrub</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Juncus effusus</u>	<u>herb</u>	<u>FACW+</u>	10. _____	_____	_____
3. <u>Acer rubrum</u>	<u>shrub</u>	<u>FAC</u>	11. _____	_____	_____
4. <u>Typha latifolia</u>	<u>shrub</u>	<u>OBL</u>	12. _____	_____	_____
5. <u>Morella cerifera</u>	<u>shrub</u>	<u>FAC+</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC
(excluding FAC-). 100%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input checked="" type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>8</u> (in.) Depth to Free Water in Pit: <u>0</u> (in.) Depth to Saturated Soil: <u>0</u> (in.)	
Remarks:	

SOILS

Map Unit Name (Series and Phase):		<u>Nansemond loamy fine sand</u>		Drainage Class:	<u>mod. well-drained</u>
Taxonomy (Subgroup):		<u>Aquic Hapludults</u>		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
<u>0+</u>		<u>10YR3/2</u>	<u>10YR2/1</u>	<u>5%</u>	<u>loamy sand</u>
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input checked="" type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input checked="" type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks:					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Check)	(Check)
Wetland Hydrology Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Hydric Soils Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Remarks	

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DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>US 701/410 Intersection Improvement</u>	Date: <u>3/29/05</u>
Applicant/Owner: <u>SCDOT</u>	County: <u>Horry</u>
Investigator: <u>EcoScience Corporation, Faquin/Saunders</u>	State: <u>SC</u>
Do Normal Circumstances exist on the site? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Community ID: <u>maintained/disturbed</u>
Is the site significantly disturbed (Atypical Situation)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Transect ID: <u>HD01</u>
Is the area a potential Problem Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If needed, explain on reverse.)	Plot ID: <u>upland</u>
	HDVHE (Wetlands 3, 1)

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Festuca sp.</u>	<u>herb</u>	<u>FAC- to FACU</u>	9. _____	_____	_____
2. <u>Rubus argutus</u>	<u>shrub</u>	<u>FACU+</u>	10. _____	_____	_____
3. <u>Geranium carolinianum</u>	<u>herb</u>	<u>--</u>	11. _____	_____	_____
4. _____	_____	_____	12. _____	_____	_____
5. _____	_____	_____	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0%

Remarks:

HYDROLOGY

<input type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u> -- </u> (in.) Depth to Free Water in Pit: <u> -- </u> (in.) Depth to Saturated Soil: <u> -- </u> (in.)	
Remarks: <u>No wetland hydrology indicators present.</u>	

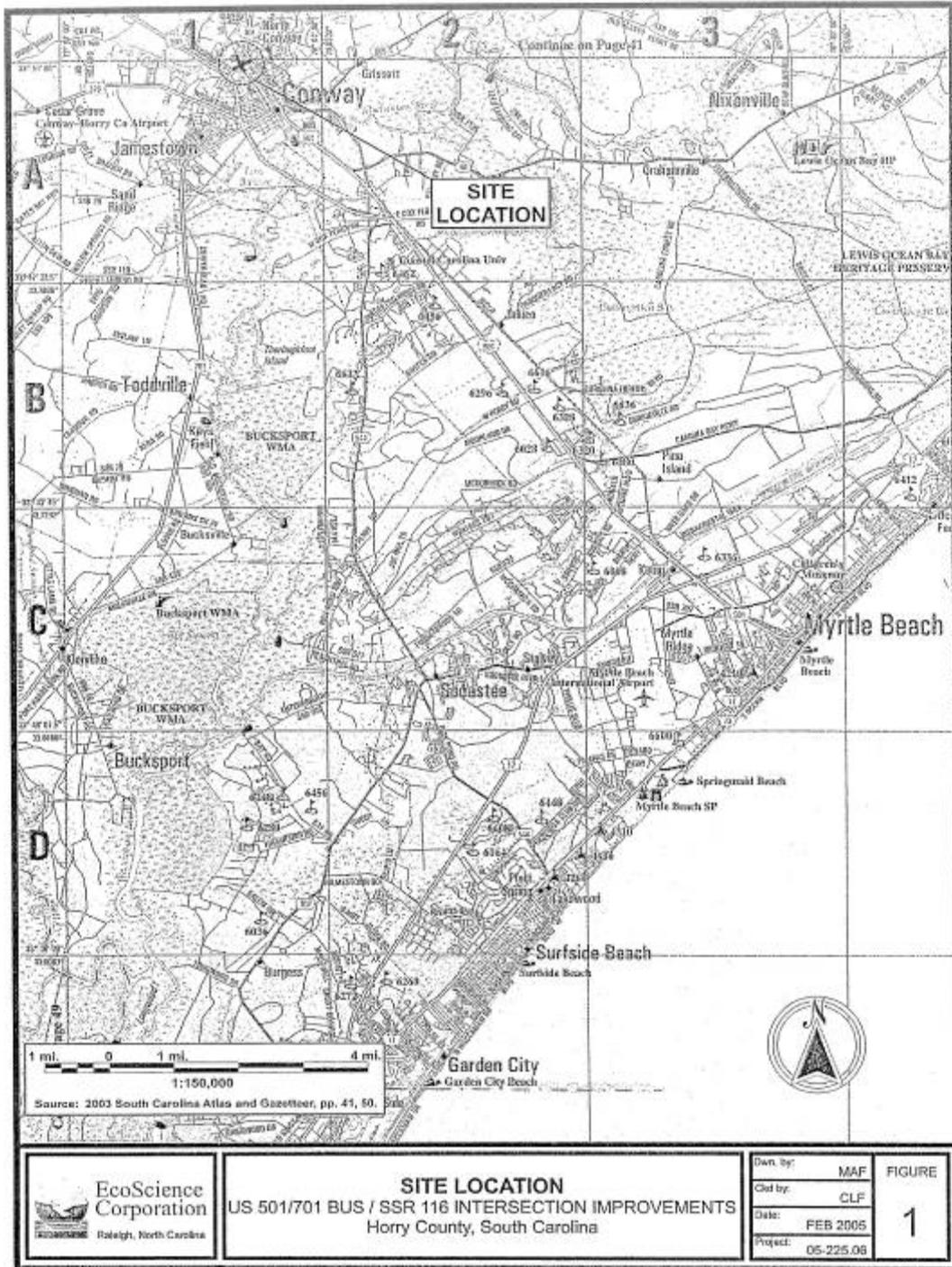
SOILS

Map Unit Name (Series and Phase):		Nansemond loamy fine sand		Drainage Class:	mod. well-drained
Taxonomy (Subgroup):		Aquic Hapludults		Field Observations Confirm Mapped Type?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Profile Descriptions:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0+		10yr 4/3	--	--	silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol		<input type="checkbox"/> Concretions			
<input type="checkbox"/> Histic Epipedon		<input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils			
<input type="checkbox"/> Sulfidic Odor		<input type="checkbox"/> Organic Streaking in Sandy Soils			
<input type="checkbox"/> Aquic Moisture Regime		<input type="checkbox"/> Listed on Local Hydric Soils List			
<input type="checkbox"/> Reducing Conditions		<input type="checkbox"/> Listed on National Hydric Soils List			
<input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Other (Explain in Remarks)			
Remarks: No hydric soils indicators					

WETLAND DETERMINATION

Hydrophytic Vegetation Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	(Check)	
Wetland Hydrology Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		(Check)
Hydric Soils Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Is this Sampling Point Within a Wetland? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Remarks			

Approved by HQUSACE 3/92
Forms version 1/02





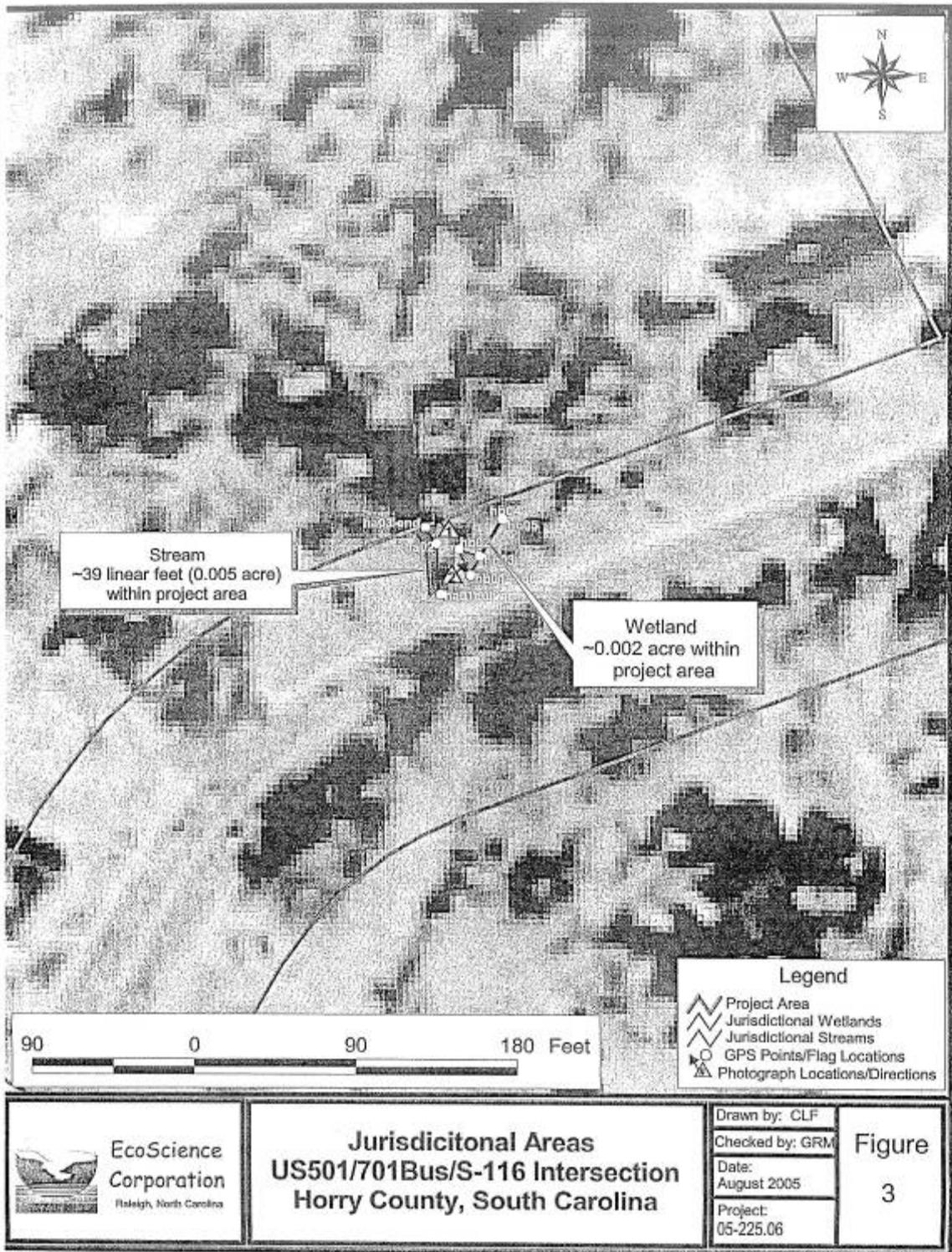


Figure 4
Photographs



Picture 1: Stream looking north.



Picture 2: Wetland looking northeast.



ENVIRONMENTAL MANAGEMENT OFFICE

PROCESSING FORM FOR CATEGORICAL EXCLUSIONS
NON MAJOR FEDERAL ACTIONS

Date: 7/29/05 Project No.: STP-SA26(004) Road/Route: US-501 & US-701 Bus. / S-116
Project Description: US-501 & US-701 Bus. / S-116
County: Horry Pin(s): 32964
File No.: 26.205B

The above described project has been environmentally classified as CE Type B (no individual environmental document required) based on information contained in the engineer's Project Planning Report. It is understood that any additions/deletions to the project may void environmentally processing the project as presently classified; consequently, any engineering changes must be brought to the attention of the Environmental Section immediately. The project's CE Classification should be shown in the remarks section on the Letter of Request for Authorization Form (PS Form 39) for right of way and/or construction for concurrence by FHWA.

Edward W. Meison

PPMS: ASD

S.C. DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL MANAGEMENT OFFICE

SUPPORT FORM – CATEGORICAL EXCLUSION TYPE B

Pin No.: 32964 File No.: 26.205B Project No.: STP-SA26(004)
Road/Route No.: US 501 & US 701 Bus. / S-116 County: Horry

Proposed Action: The project involves modifications to the intersection of US 501 / US 701 Business and S-116. The existing intersection is a four-way signalized intersection. Approachways along US 501 / US 701 Business consist of a four-lane curb and gutter section with two 12-foot travel lanes in each direction. Approachways along S-116 consist of two 12-foot travel lanes. Left turn lanes will be added on all approachways. New right of way will vary from 40 to 45 feet along US 501 / 701 Business and 25 to 30 feet along S-116.

Criteria: To be processed as a Categorical Exclusion Type B (CEB) the following conditions must be met in addition to the General Criteria. The action does not involve:

- The acquisition of more than minor amounts of temporary or permanent strips of right-of-way and the acquisition will not require any residential or business displacements. *
- Use of Section 4(f) properties.
- An adverse effect determination under Section 106 of the National Historic Preservation Act.
- Individual Coast Guard Permits.
- Individual Corps of Engineer Permits, a Corps Nationwide Permit 23, or a Corps Nationwide Permit 26 with greater than three acres of wetland impacts.
- Impacts to planned growth or land use, or significant impacts on travel patterns.
- Work encroaching in a regulatory floodway, adversely affecting the base floodplain, or potentially adversely affecting a National Wild and Scenic River.
- Changes in access control.
- Any known or potential major hazardous waste sites within the right-of-way.

* Right of way acquisition requires review of plans by staff archaeologist and / or biologist.

Noise: The proposed project is not of a traffic generating nature; therefore no noise impacts studies are required.

Air Quality: A project of this nature would not have an effect on ambient air quality. Horry County is in attainment for all automotive related air quality standards.

Water/Wetlands: Minor impacts to wetlands adjacent to the project are expected. One perennial stream was identified within the limits of the project, but impact to this stream is expected to be minor. A US Army Corps of Engineers General Permit is anticipated for this project. This project is not located within the 100-year floodplain limits.

Archaeological/Historical: No archaeological or historical sites were identified within the boundaries of the project (SHPO concurrence attached).

Endangered Species: The following list of federally protected species within Horry County was obtained from US Fish and Wildlife Service (USFWS) (1999) and SC Heritage Trust (2003).

Common Name	Scientific Name	Status*	Habitat Present	Surveys Completed	Biological Conclusion
West Indian manatee	<i>Trichechus manatus</i>	E	No	N/A	No Effect
Finback whale	<i>Balaenoptera physalus</i>	E	No	N/A	No Effect
Humpback whale	<i>Megaptera novaeangliae</i>	E	No	N/A	No Effect
Northern right whale	<i>Eubaleana glacialis</i>	E	No	N/A	No Effect
Sei whale	<i>Balaenoptera borealis</i>	E	No	N/A	No Effect
Sperm whale	<i>Physeter catodon</i>	E	No	N/A	No Effect
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	No	N/A	No Effect
Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Yes	March 30, 2005	No Effect
Wood stork	<i>Mycteria Americana</i>	E	No	N/A	No Effect
Piping plover	<i>Charadrius melodus</i>	T	No	N/A	No Effect
Kemp's ridley sea turtle	<i>Lepidochelys Coriacea</i>	E	No	N/A	No Effect
Leatherback sea turtle	<i>Dermochelys coriacea</i>	E	No	N/A	No Effect
Loggerhead sea turtle	<i>Caretta caretta</i>	T	No	N/A	No Effect
Green sea turtle	<i>Chelonia mydas</i>	T	No	N/A	No Effect
Shortnose sturgeon	<i>Acipenser brevirostrum</i>	E	No	N/A	No Effect
Sea-beach amaranth	<i>Amaranthus pumilus</i>	T	No	N/A	No Effect
Pondberry	<i>Lindera melissifolia</i>	E	Yes	March 30, 2005	No Effect
Canby's dropwort	<i>Oxypolis Canbyi</i>	E	No	N/A	No Effect
American chaffseed	<i>Schwalbea americana</i>	E	No	N/A	No Effect
Schweinitz's Sunflower	<i>Helianthus schweinitzii</i>	E	Yes	N/A	No Effect

* Threatened (T) Endangered (E)

The project area was examined for habitat that meets the requirements for each federally protected species. Appropriate habitat was found for two species within the project area: 1) pondberry and 2) red-cockaded woodpecker. Plant-by-plant surveys were completed for pondberry within the areas of suitable habitat (wetland habitats such as hardwoods; shade to full sun) on March 30, 2005. Surveys resulted in no findings of pondberry within the project area.

Red-cockaded woodpecker foraging habitat (pine dominated stands greater than 30 years old) occurs in several locations within the project area. In addition, potential nesting/breeding habitat occurs within the project area (pine stands greater than 60 years old). Due to the presence of foraging and potential nesting habitat within the project area, a 0.5 mile radius around the project area was surveyed for colonies/nesting/breeding habitat. Surveys resulted in the finding of no suitable nesting/breeding habitat (no pine stands greater than 60 years old) for red-cockaded woodpecker within 0.5 mile of the project area. In addition, SCHAT documents no known red-cockaded woodpecker within 2 miles of the project area.

Suitable habitat for Schweinitz's sunflower is present within the project area within sunny maintained areas. However, surveys are not necessary for Schweinitz's sunflower as indicated by Mark Caldwell of USFWS in an e-mail correspondence dated April 27, 2005 that stated "There is no need to survey for Schweinitz's sunflower in Horry County. This sunflower's historical range is in Lancaster and York Counties. The SCHAT database lists it for Horry County; however, this is due to mis-identification years ago. SCHAT is in the process of correcting its records on this species." (E-mail attached.)

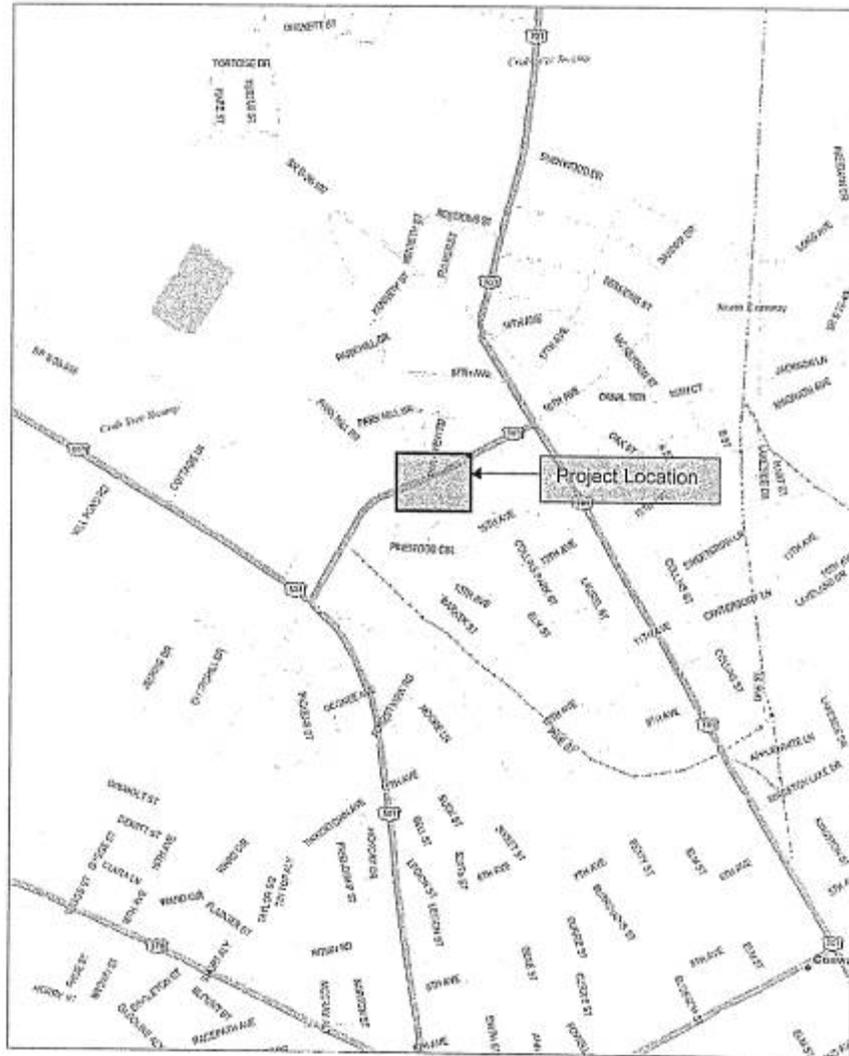
Farmlands: This project does not involve the conversion of farmland to non-farm use. All work will occur within an incorporated land use area.

USTs/Hazardous Waste: No USTs or other hazardous material sites have been identified within the boundaries of the project.

Relocations: No relocations will occur as a result of the project.

Additional Comments: No 4(f) properties will be impacted by the project.

Project Location





Tiffany Keverline

From: Susan S. Land [landss@cecsinc.com]
Sent: Thursday, May 05, 2005 4:10 PM
To: Corri Faquin
Cc: Brian Nickerson; Tiffany Keverline; Paul Embler
Subject: FW: DOT safety projects

Follow Up Flag: Follow up
Flag Status: Completed

Corri,
Please refer to Mark Caldwell's e-mail below:
1. For safety projects in Horry County (J4604, 4704 and 4804), it is not necessary to do the sunflower studies.
2. For the safety project in Marion County (J4904), USFWs has requested us to perform a survey for American Chafseed.

If you have any questions, please call.

Thanks,
Susan Land
Civil Engineering Consulting Services
Phone: 803-779-0311

-----Original Message-----
From: Tiffany Keverline [mailto:keverlinetr@cecsinc.com]
Sent: Thursday, May 05, 2005 3:09 PM
To: landss@cecsinc.com
Subject: FW: DOT safety projects

-----Original Message-----
From: Brian G. Nickerson [mailto:nickersonbg@cecsinc.com]
Sent: Thursday, May 05, 2005 10:42 AM
To: keverlinetr@cecsinc.com
Subject: FW: DOT safety projects

Tiffany,
Let's make sure they look for the Chaffseed. See Mark Caldwell's notes below.

Brian

-----Original Message-----
From: Still, Berry [mailto:StillJB@dot.state.sc.us]
Sent: Thursday, May 05, 2005 10:40 AM
To: Mark_Caldwell@fws.gov
Cc: nickersonbg@cecsinc.com; Tyndall, Patrick - FHWA; Ward, Glen B
Subject: RE: DOT safety projects

Mark,

Thanks for reviewing the information. I checked with our Consultant, they are indeed looking for the Caffseed on the US 501/ SC 41 project when they perform the biological assessment. They expect to start the work in the next week or so.

Thanks,

Berry

-----Original Message-----
From: Mark_Caldwell@fws.gov [mailto:Mark_Caldwell@fws.gov]
Sent: Wednesday, April 27, 2005 1:57 PM

APPENDICES
APPENDIX B

Berry,

A couple of notes on your review request on SCDOT safety projects.

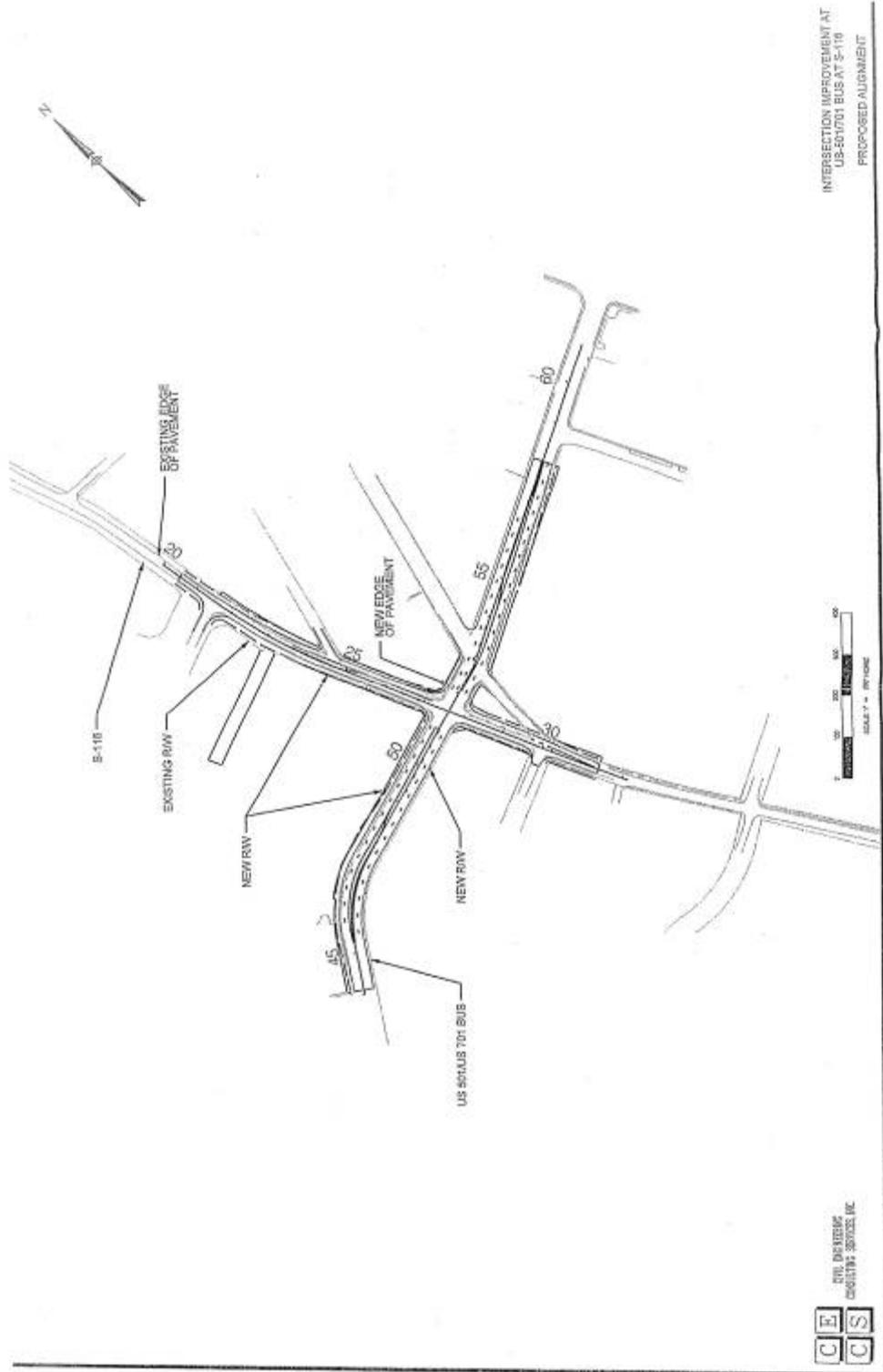
There is no need to survey for Schweinitz's sunflower in Horry county. This sunflower's historical range is in Lancaster and York Counties. The SC Heritage Trust Database lists it for Horry County, however, this is due to a mis-identification years ago. SC heritage Trust is in the process of correcting its records on this species.

There is no indication of a plant survey for the US 501/SC 41 project in Marion County. Although not listed in the database, there is a possibility that the chaffseed could be in this county. Please review the habitat at the project site to determine if it is similar to known locations of the chaffseed.

I am in the process of providing SCDOT with an official response to your submittal and will send it shortly.

Mark

Mark A. Caldwell
U.S. Fish and Wildlife Service
Ecological Services
176 Croghan Spur Road, Suite 200
Charleston, SC 29407
(843) 727-4707 ext. 215 - office
(843) 697-6043 - mobile
(843) 727-4218 - fax
mark_caldwell@fws.gov



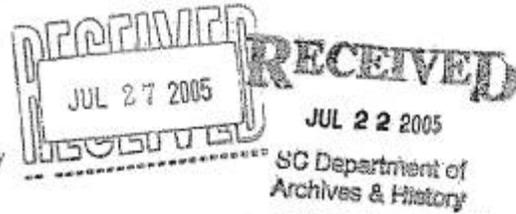


South Carolina
Department of Transportation

July 21, 2005

HOKK
5246
NHFA

Ms. Mary W. Edmonds
Deputy State Historic Preservation Officer
South Carolina Department of Archives and History
8301 Parklane Road
Columbia, South Carolina 29223-4905



RE: STP-SA26(004), Brockington and Associates' *Cultural Resources Survey of the Proposed US-501 & US-701 Bus./S-116 (Elm Street) Roadway Safety Project, Horry County, South Carolina.* PIN 32964, File No. 26.205B.

Dear Ms. Edmonds:

The Department's sub-consultant has completed an archaeological reconnaissance and historic architectural survey of the above referenced project. Three copies of the report are enclosed for your review and comment. Statewide survey cards are also included.

The archaeological reconnaissance resulted in the identification of no archaeological sites. The entire project area is disturbed. Five architectural resources were identified during the architectural survey. Resources 1325, 1326, 1327, 1328, and 1329 are all recommended not eligible for the National Register of Historic Places. They are not part of a NRHP eligible district. Resource 860 2219, identified during the 1988 survey of Horry County, is eligible for the NRHP. It is in the vicinity of the project, however it will not be affected by the current project. No historic properties are affected by the current project. No additional investigations are recommended.

In accordance with the memorandum of agreement approved by the Federal Highway Administration, March 16, 1993, the Department is providing this information as agency official designee, as defined under 36 CFR 800.2, to ensure compliance with Section 106 of the National Historic Preservation Act.

It is requested that you review the enclosed material and, if appropriate, indicate your concurrence in the Department's findings, thus completing the Section 106 consultation process. Please respond within 30 days if you have any objections or if you have need of additional information.

Sincerely,

Bonnie L. Frick
Bonnie L. Frick
Staff Archaeologist

BLF:cdw

Enclosures 3

I (~~do not~~) concur in the above determination.

Signed:

[Signature] SCDOT DOT Project Coordinator

Date:

7-22-05

cc: Patrick Tyndall, FHWA
Keith Derting, SCIAA
Ed Salo, Brockington and Associates, Inc.
Brian Taylor, CECS ✓

File # 26.205B
Columbia, South Carolina 29202-0191

Phone: (803) 737-2314
TTY: (803) 737-3870

AN EQUAL OPPORTUNITY/
AFFIRMATIVE ACTION EMPLOYER

Example Navigable Waters Permit Application



February 26, 2004

Mr. Robert H. Ridgell
SCDHEC
Division of Water Quality
2600 Bull Street
Columbia, SC 29201-1708

Subject: Bridge Construction over Broad River on U.S. Route 29 in Cherokee County,
File No. BRT-BR11, PIN 26615

Dear Mr. Ridgell:

Enclosed is an application package for a Navigable Waters General Permit for the
above referenced project. If any additional information is needed, please feel free to
contact Jackie Galloway at (803) 737-1395.

Sincerely,

A handwritten signature in black ink, appearing to read "Tim L. Hunter", is written over a horizontal line.

Tim L. Hunter
Environmental Manager

TLH:jg

Enclosures

cc: Mr. Danny Johnson, SCDNR

File: Env/JAG

South Carolina Department of Health and Environmental Control
Application For
Construction In Navigable Waters General Permit Authorization

1. Applicant

Name SCDOT
Address P.O. Box 191, Columbia, SC 29202
Telephone (803) 737-1395 Fax (803) 737-1394
Contact Person Jackie Galloway

2. Location where proposed activity exists or will occur.

County Cherokee
Nearest City or Town Gaffney
Nearest Street or Road U.S. Route 29
Name of Water body Broad River
Latitude 35° 05' 19" Longitude 81° 34' 11"

3. Description of proposed activity.

SCDOT proposes to replace the existing 1035.75' x 22.4' U.S. Route 29 Bridge over Broad River with a new 1050' x 44' bridge. No wetland fill will be required.

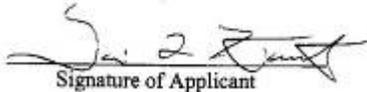
4. Date activity is proposed to begin 8/2004

Date activity is expected to be completed unknown

5. Adjacent property owner's addresses.

Lillie Ellis Est. c/o Alex Bridges Sr., 882 Victory Trail Rd., Gaffney, SC 29340
Edna Jacquelyn Alford, 4353 Cherokee Ave, Gaffney, S.C. 29340
Milliken & Company, PO Box 1926, Suite M116, Spartanburg, S.C. 29304
Waterree Holdings LLC, c/o Forest Investment Associates #15 Piedmont Center, Suite 1250, Atlanta, G.A 30305

6. Application is hereby made for authorization under General Permit GP-95-002 (Revised) for activities described herein.

 2/25/04
Signature of Applicant Date

Return completed application and all necessary attachments to:

Mr. Robert H. Ridgell
South Carolina Department of Health and Environmental Control
Division of Water Quality
2600 Bull Street
Columbia, SC 29201



AFFIDAVIT OF OWNERSHIP OR CONTROL

TO THE SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT

I hereby certify that I am the (check one):

- record owner _____
- lessee _____
- record easement holder _____
- applicant to record owner for easement _____
- right of way _____

of the below described property situated in Cherokee County, South Carolina; and that said property is all of that said property that is contiguous to and landward of the area in which the work proposed in the permit application is to be conducted. Furthermore, I certify that as record owner, lessee, or record easement holder I have, or will have prior to undertaking the work, necessary approvals or permission from all other persons with a legal interest in said property to conduct the work proposed in the permit application.

LEGAL DESCRIPTION OF HIGHLAND

Proposed Bridge Replacement over Broad River on US Route 29 in Cherokee County S.C.

I also certify that the project as proposed does not cross any wetlands or areas below mean high water which is in the ownership of other private persons or public or private entities and that there is no disputed claim to the wetlands or areas below mean high water by private persons or other entities due to a Kings Grant, State Grant, easement or conveyance or other legal document evidencing ownership of these areas.

Oscar K. Ruck

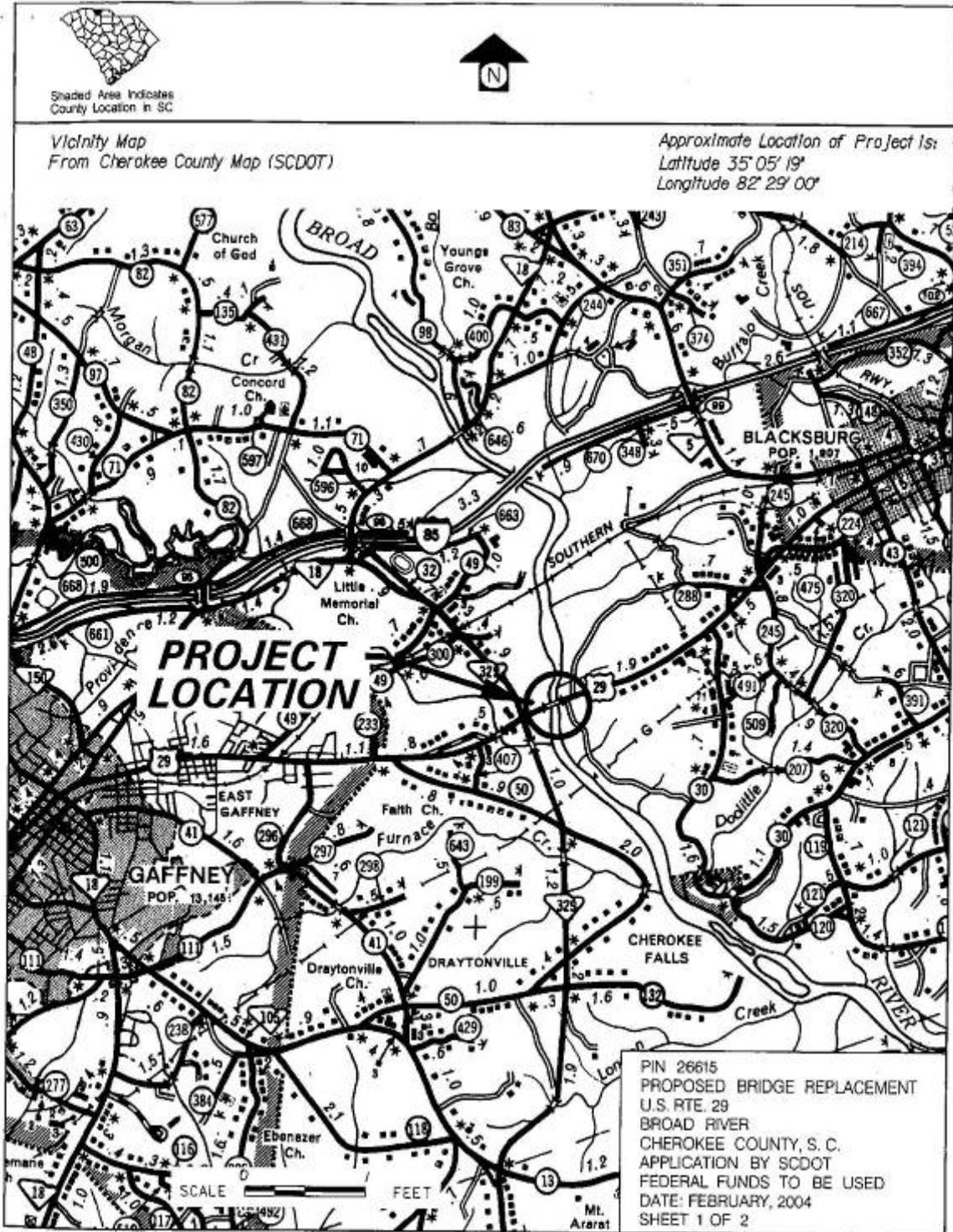
Sworn to and subscribed before me at Columbia
Richland County, South Carolina, this 17th

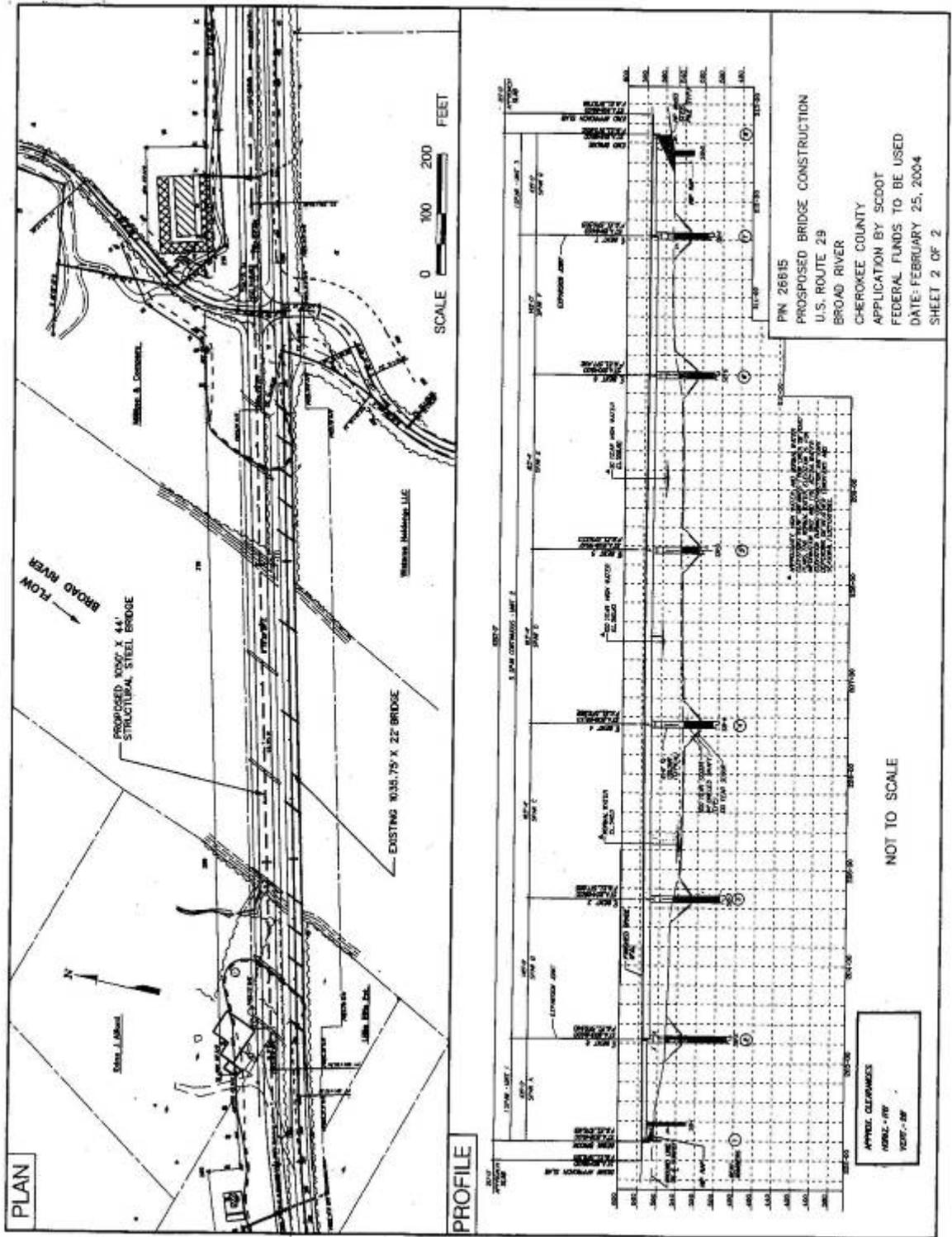
day of February, 2004.

Judy T. Hite
Notary Public

My commission expires: 4-30-2013

APPENDICES
APPENDIX B







February 26, 2004

Edna J. Alford
4353 Cherokee Ave.
Gaffney, S.C. 29340

Dear Ms. Alford:

The South Carolina Department of Transportation is submitting an application to the South Carolina Department of Health and Environmental Control requesting General Permit authorization under the Construction in Navigable Waters Permit Program. The proposed activity consists of replacing the deficient bridge over Broad River on U.S. Route 29 in Cherokee County, South Carolina. The existing 1035.75' x 22.4' bridge will be replaced with a 1050' x 44' Structural Steel Bridge slightly north-northwest of the existing bridge location. The purpose of the proposed activity is for highway improvement to maintain a safe and efficient transportation facility for the public.

All comments and data in support or opposition to the proposed work should be submitted in writing to:

Mr. Robert H. Ridgell
SC Department of Health and Environmental Control
Division of Water Quality
2600 Bull Street
Columbia, SC 29201

Comments will be received at the above address until March 12, 2004.



February 26, 2004

Lillie Ellis
c/o Alex Bridges Sr.
882 Victory Trail Rd.
Gaffney, S.C. 29340

To Whom It May Concern:

The South Carolina Department of Transportation is submitting an application to the South Carolina Department of Health and Environmental Control requesting General Permit authorization under the Construction in Navigable Waters Permit Program. The proposed activity consists of replacing the deficient bridge over Broad River on U.S. Route 29 in Cherokee County, South Carolina. The existing 1035.75' x 22.4' bridge will be replaced with a 1050' x 44' Structural Steel Bridge slightly north-northwest of the existing bridge location. The purpose of the proposed activity is for highway improvement to maintain a safe and efficient transportation facility for the public.

All comments and data in support or opposition to the proposed work should be submitted in writing to:

Mr. Robert H. Ridgell
SC Department of Health and Environmental Control
Division of Water Quality
2600 Bull Street
Columbia, SC 29201

Comments will be received at the above address until March 12, 2004.



February 26, 2004

Milliken & Company
P.O. Box 1926 Suite M116
Spartanburg, S.C. 29304

To Whom It May Concern:

The South Carolina Department of Transportation is submitting an application to the South Carolina Department of Health and Environmental Control requesting General Permit authorization under the Construction in Navigable Waters Permit Program. The proposed activity consists of replacing the deficient bridge over Broad River on U.S. Route 29 in Cherokee County, South Carolina. The existing 1035.75' x 22.4' bridge will be replaced with a 1050' x 44' Structural Steel Bridge slightly north-northwest of the existing bridge location. The purpose of the proposed activity is for highway improvement to maintain a safe and efficient transportation facility for the public.

All comments and data in support or opposition to the proposed work should be submitted in writing to:

Mr. Robert H. Ridgell
SC Department of Health and Environmental Control
Division of Water Quality
2600 Bull Street
Columbia, SC 29201

Comments will be received at the above address until March 12, 2004.



February 26, 2004

Wateree Holdings LLC
c/o Forest Investment Associates
#15 Piedmont Center, Suite 1250
Atlanta, G.A. 30305

To Whom It May Concern:

The South Carolina Department of Transportation is submitting an application to the South Carolina Department of Health and Environmental Control requesting General Permit authorization under the Construction in Navigable Waters Permit Program. The proposed activity consists of replacing the deficient bridge over Broad River on U.S. Route 29 in Cherokee County, South Carolina. The existing 1035.75' x 22.4' bridge will be replaced with a 1050' x 44' Structural Steel Bridge slightly north-northwest of the existing bridge location. The purpose of the proposed activity is for highway improvement to maintain a safe and efficient transportation facility for the public.

All comments and data in support or opposition to the proposed work should be submitted in writing to:

Mr. Robert H. Ridgell
SC Department of Health and Environmental Control
Division of Water Quality
2600 Bull Street
Columbia, SC 29201

Comments will be received at the above address until March 12, 2004.

APPENDIX C – ENVIRONMENTAL LAWS AND REGULATIONS

[The National Environmental Policy Act of 1969, as amended](#)
[CEQ - Regulations for Implementing NEPA](#)
[Title 23—Highways: Part 771--Environmental Impact And Related Procedures](#)
[Eminent Domain Procedure Act](#)
[SC Navigable Waters Regulation](#)
[SC Navigable Waters Map](#)
[SC 401 Water Quality Certification Regulations](#)
[SC OCRM Critical Area Permitting Regulations](#)
[Endangered Species Act](#)
[Executive Order 11990 – Protection of Wetlands](#)
[Executive Order 11988 – Floodplain Management](#)
[Water Classifications & Standards](#)
[Classified Waters](#)
[Farmland Protection Policy Act](#)
[Title 23 - Part 772 -- Procedures For Abatement Of Highway Traffic Noise And Construction Noise](#)
[36 CFR Part 800 - -- Protection Of Historic Properties](#)
[Executive Order 11593 – Protection and Enhancement of the Cultural Environment](#)
[Final Nationwide Section 4\(f\) Evaluation and Approval for Federally-Aided Highway Projects with Minor Involvements with Public Parks, Recreation Land, and Wildlife and Waterfowl Refuges](#)
[FHWA Actions To Address Environmental Justice In Minority Populations And Low-Income Populations](#)
[23 CFR 620 – Information relating to airports](#)

Note: The items shown in bold-face type are included in this appendix. The items not shown in bold-face type are available on the internet and may be accessed by using the links published in this manual.

APPENDIX D – GUIDANCE DOCUMENTS

List of COGs

SCDOT Public Involvement Document

Technical Advisory (T 6640.8A), Guidance for Preparing and Processing Environmental and Section 4(f) Documents

Section 4(f) De Minimis Guidance

SCDHEC Navigable Waters Guidance

OCRM Critical Areas Map

List of Endangered and Threatened Species by SC County

SCDOT Assessment Criteria and Farmland Conversion Impact Form

Manual for Air Quality Considerations in Environmental Documents

SCDOT Noise Abatement Policy

US Coast Guard Permit Application Guide

Permitting Flow Charts

Community Impact Assessment - A Quick Reference for Transportation

Note: The items shown in bold-face type are included in this appendix. The items not shown in bold-face type are available on the internet and may be accessed by using the links published in this manual.

List of COGs

REGIONAL COUNCILS OF GOVERNMENT (COGS)

APPALACHIAN	Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg	Robert M. Strother, Executive Director 30 Century Circle P.O. Drawer 6668, Greenville, SC 29606 (864) 242-9733
UPPER SAVANNAH	Abbeville, Edgefield, Greenwood, Laurens, McCormick, Saluda	Patricia C. Hartung, Executive Director 222 Phoenix Street, Suite 200 P.O. Box 1366, Greenwood, SC 29648 (864) 941-8050
CATAWBA	Chester, Lancaster, Union, York	Harold S. Shapiro, Executive Director 215 Hampton Street P.O. Box 450, Rock Hill, SC 29731 (803) 327-9041
CENTRAL MIDLANDS	Fairfield, Lexington, Newberry, Richland	Norman Whitaker, Executive Director 236 Stoneridge Drive Columbia, SC 29210 (803) 376-5390
LOWER SAVANNAH	Aiken, Allendale, Bamberg, Barrowell, Calhoun, Orangeburg	F. Wayne Rogers, Executive Director 2748 Wagener Road P.O. Box 850, Aiken, SC 29802 (803) 649-7981
SANTEE LYNCHES	Clarendon, Kershaw, Lee, Sumter	James T. Darby, Jr., Executive Director P.O. Box 1837, Sumter, SC 29151 (803) 775-7381
PEE DEE	Chesterfield, Darlington, Dillon, Florence, Marion, Marlboro	Johnny B. Brown, Executive Director P.O. Box 5719, Florence, SC 29502 (803) 669-3138
WACCAMAW	Georgetown, Horry, Williamsburg	C. Kenneth Thompson, Executive Director 1230 Highmarket Street Georgetown, SC 29440 (843) 546-8502
BERKELEY- CHARLESTON- DORCHESTER	Berkeley, Charleston, Dorchester	Ronald E. Mitchum, Executive Director 5290 Rivers Avenue, Suite 400 North Charleston, SC 29406-6357 (843) 529-0400
LOWCOUNTRY	Beaufort, Colleton, Jasper, Hampton	Criswell Bickley, Executive Director P.O. Box 98, Yemassee, SC 29945 (843) 726-5536

SCDOT Public Involvement Document

Public Involvement

- I. **Public Involvement Objectives and Benefits**
 - A. **SCDOT's objectives and benefits of public involvement to the transportation decision-making process**
 1. Meet community needs with the proposed transportation facility
 2. Save time and money by reducing the need to redesign and rework
 3. Prevent last minute "blow-ups" and delays
 4. Create an understanding and positive relationship between the SCDOT and the Public
 - B. **The community's objectives for the public involvement process**

The citizens of the community want to:

 1. Be informed early about a proposed project in their community
 2. Easily obtain pertinent information about the proposed project's status and upcoming events
 3. Believe that the community's participation matters
 4. Easily understand presented information (in non-SCDOT jargon) at public information meetings and hearings
 5. Understand how different transportation problems in their neighborhoods relate to the project
 6. Have their questions directly and concisely answered
 7. Have their points of view, concerns, and comments heard
 8. Easily understand how the community can influence the transportation planning and decision-making process
 9. Provide input quickly and inexpensively in the transportation planning and decision-making process
 10. Understand how their input will be used and incorporated into the project
- II. **Current Methods of Public Involvement Utilized by the SCDOT.**
 - A. Send letters of intent and notices to state and local agencies, officials, civic groups, and others
 - B. Provide the SCDOT Communications Department with information about the project
 - C. Post 1 day display type advertisements in the local news section of the newspaper
 - D. Post temporary signs with basic project and meeting/hearing information at the project's termini
 - E. Meet with local and civic groups as necessary
 - F. Conduct public information meetings and public hearings
 - G. Distribute "Highways & You" booklets at public information meetings and hearings
 - H. Receive and respond to the Public's questions and comments

Public Involvement

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- iii. **Proposed Methods of Planning and Outreach to Increase Public Involvement**
 - A. **Plan and create a timeline for public involvement in the earliest stages of project development**
 - B. **Provide the SCDOT Communications Department with accurate and current information and ensure the information is made available to the Public through various media outlets**
 - C. **Evaluate and optimize new tools to reach the Public**
 - 1. **Informational mailings**
 - 2. **Project fact sheets**
 - 3. **Project webpage**
 - 4. **News articles submitted to local newspapers**
 - 5. **Newsletters**
 - 6. **Public service announcements on television and/or radio**
 - 7. **Post information on the local cable providers public access channel**
 - 8. **Brochures**
 - 9. **Billboards**
 - 10. **Visiting civic and religious groups in the area**
 - 11. **Specifically tailored opinion surveys**
 - 12. **Survey flags**
 - 13. **Fliers**

SCDHPT PUBLIC INVOLVEMENT/PUBLIC HEARING PROGRAM

In accordance with 23 CFR 771.111(h), the following procedures to involve the public in the highway development process will be utilized.

To provide maximum opportunity for interdisciplinary involvement in the transportation planning process and to ensure widespread dissemination of information concerning highways, the SCDHPT will pursue a policy of informing and involving the public in the planning and development of highways throughout planning, location and design.

With respect to securing public input during the environmental study phase of project development, the public information meeting and public hearing will continue to be the principal vehicle. The Project Development Office and Environmental Section will be responsible to ensure that social, economic and environmental information is made available to the public and other agencies in accordance with this policy. These sections will be responsible for not only dissemination of information but also to ensure that interested parties, including local governments and metropolitan, regional, State and Federal agencies, community groups, and the public have the opportunity to participate in an open exchange of views throughout the entire process. In addition to social, economic and environmental effects, particular attention will be given to impacts associated with relocations of individuals, groups or institutions.

Public information meetings will be used on some projects to determine the most desirable alternatives. These meetings will be held early in the corridor study phase to collect data prior to the selection of alternatives. These meetings will also be held at other stages of project development if there is sufficient public interest.

Public Hearings will ensure full opportunity for effective public participation in the process of determining the need for a project, its location and design. One hearing will be held on Federal-aid projects requiring significant amounts of new right of way; substantial changes or functions of roadways; adverse impacts on abutting properties; significant social, economic and environmental effects; or on projects the FHWA determines that a public hearing is in the public's interest.

The "open house" public hearing format approved by FHWA on May 16, 1986 will continue to be used because it better provides the medium for free and open discussion on a one to one basis with engineering, right of way and environmental personnel involved with the project. These hearings will be held at a convenient time and place. The attendees will be provided handouts explaining the project's purpose, need and consistency with the goals of local planning; social, economic, environmental and other impacts; the relocation assistance program and right of way acquisition process. Comment forms will be included in the handouts. SCDHPT personnel will be available to explain the project, answer questions and urge attendees to comment. Written and recorded comments will be encouraged at the hearing and/or to be mailed to the SCDHPT within a two week comment period following the hearing. A transcript of these proceedings and comments will be forwarded to FHWA.

Public Notices, legal advertisements, will be used to keep the public informed of project development. These notices will be published in local newspapers at least 15 days but not more than 30 days prior to the public information meeting/public hearing. Opportunities for public hearings will be advertised in the same manner. Such notices will include explanatory information such as applicable regulations and Executive orders and the availability of other information prior to the public information meeting/public hearing. News releases will also be issued by the SCDHPT Public Information Office.

List of Endangered and Threatened Species by SC County

**South Carolina Distribution Records of
Endangered, Threatened, Candidate and Species of Concern
July, 2005**

- E Federally endangered
T Federally threatened
P Proposed in the Federal Register
CH Critical Habitat
C The U.S. Fish and Wildlife Service or the National Marine Fisheries Service has on file sufficient information on biological vulnerability and threat(s) to support proposals to list these species
S/A Federally protected due to similarity of appearance to a listed species
* Contact the National Marine Fisheries Service for more information on this species

These lists should be used only as a guideline, not as the final authority. The lists include known occurrences and areas where the species has a high possibility of occurring. Records are updated continually and may be different from the following.

County	Common Name	Scientific Name	Status	Occurrer
Abbeville				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
	Georgia aster	<i>Aster georgianus</i>	C	Known
Aiken				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Wood stork	<i>Mycteria americana</i>	E	Known
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E	Known
	Relict trillium	<i>Trillium reliquum</i>	E	Known
	Piedmont bishop-weed	<i>Ptilimnium nodosum</i>	E	Known
	Smooth coneflower	<i>Echinacea laevigata</i>	E	Known
Allendale				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Wood stork	<i>Mycteria americana</i>	E	Possible
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E	Known
	Smooth coneflower	<i>Echinacea laevigata</i>	E	Known
	Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
Anderson				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Smooth coneflower	<i>Echinacea laevigata</i>	E	Known
Bamberg				
	Wood stork	<i>Mycteria americana</i>	E	Possible
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Possible

County	Common Name	Scientific Name	Status	Occurrer
	Canby's dropwort	Oxypolis canbyi	E	Known
Barnwell				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Wood stork	Mycteria americana	E	Possible
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Smooth coneflower	Echinacea laevigata	E	Known
	Pondberry	Lindera melissifolia	E	Known
	Canby's dropwort	Oxypolis canbyi	E	Known
	Piedmont bishop-weed	Ptilimnium nodosum	E	Known
	American chaffseed	Schwalbea americana	E	Possible
Beaufort				
	West Indian manatee	Trichechus manatus	E	Known
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Wood stork	Mycteria americana	E	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Piping plover	Charadrius melodus	T, CH	Known
	Kemp's ridley sea turtle	Lepidochelys kempii*	E	Known
	Leatherback sea turtle	Dermodochelys coriacea*	E	Known
	Loggerhead sea turtle	Caretta caretta	T	Known
	Green sea turtle	Chelonia mydas*	T	Known
	Flatwoods salamander	Ambystoma cingulatum	T	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Pondberry	Lindera melissifolia	E	Known
	Canby's dropwort	Oxypolis canbyi	E	Possible
	Chaff-seed	Schwalbea americana	E	Known
	Kirtland's Warbler	Dendroica kirtlandii	E	Possible
Berkeley				
	West Indian manatee	Trichechus manatus	E	Possible
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Wood stork	Mycteria americana	E	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Loggerhead sea turtle	Caretta caretta	T	Known
Berkeley	Flatwoods salamander	Ambystoma cingulatum	T	Known
cont.	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Pondberry	Lindera melissifolia	E	Known
	Canby's dropwort	Oxypolis canbyi	E	Known

County	Common Name	Scientific Name	Status	Occurrer
	Chaff-seed	Schwalbea americana	E	Known
Calhoun				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Possible
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
Charleston				
	West Indian manatee	Trichechus manatus	E	Known
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Bachman's warbler	Vermivora bachmanii	E	Known
	Wood stork	Mycteria americana	E	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Piping plover	Charadrius melodus	T, CH	Known
	Kemp's ridley sea turtle	Lepidochelys kempii*	E	Known
	Leatherback sea turtle	Dermochelys coriacea*	E	Known
	Loggerhead sea turtle	Caretta caretta	T	Known
	Green sea turtle	Chelonia mydas*	T	Known
	Flatwoods salamander	Ambystoma cingulatum	T	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Sea-beach amaranth	Amaranthus pumilus	T	Possible
	Canby's dropwort	Oxypolis canbyi	E	Possible
	Pondberry	Lindera melissifolia	E	Known
	Chaff-seed	Schwalbea americana	E	Possible
	Kirtland's Warbler	Dendroica kirtlandii	E	Known
Cherokee				
	Dwarf-flowered heartleaf	Hexastylis naniflora	T	Known
	Georgia aster	Aster georgianus	C	Possible
Chester				
	Carolina heelsplitter	Lasmigona decorata	E	Known
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Possible
	Georgia aster	Aster georgianus	C	Known
Chesterfield				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Possible

County	Common Name	Scientific Name	Status	Occurrer
	Carolina heelsplitter	Lasmigona decorata	E, CH	Known
Clarendon				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Canby's dropwort	Oxypolis canbyi	E	Known
	Chaff-seed	Schwalbea americana	E	Known
Colleton				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Wood stork	Mycteria americana	E	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Piping plover	Charadrius melodus	T, CH	Known
	Kemp's ridley sea turtle	Lepidochelys kempii*	E	Known
	Leatherback sea turtle	Dermochelys coriacea*	E	Known
	Loggerhead sea turtle	Caretta caretta	T	Known
	Green sea turtle	Chelonia mydas*	T	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Pondberry	Lindera melissifolia	E	Possible
	Canby's dropwort	Oxypolis canbyi	E	Known
	Kirtland's Warbler	Dendroica kirtlandii	E	
Darlington				
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Possible
	Rough-leaved loosestrife	Lysimachia asperulaefolia	E	Known
Dillon				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Possible
Dorchester				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Wood stork	Mycteria americana	E	Possible
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Possible
	Pondberry	Lindera melissifolia	E	Known

County	Common Name	Scientific Name	Status	Occurrer
	Canby's dropwort	Oxypolis canbyi	E	Possible
	Bog asphodel	Nartheccium americanum	C	Known
Edgefield				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Carolina heelsplitter	Lasmigona decorata	E, CH	Known
	Miccosukee gooseberry	Ribes echinellum	T	Possible
	Relict trillium	Trillium reliquum	E	Known
	Georgia aster	Aster georgianus	C	Known
Fairfield				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Carolina heelsplitter	Lasmigona decorata	E	Possible
	Georgia aster	Aster georgianus	C	Known
Florence				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Chaffseed	Schwalbea americana	E	Known
Georgetown				
	West Indian manatee	Trichechus manatus	E	Known
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Wood stork	Mycteria americana	E	Known
	Piping plover	Charadrius melodus	T, CH	Known
	Kemp's ridley sea turtle	Lepidochelys kempii*	E	Known
	Leatherback sea turtle	Dermochelys coriacea*	E	Known
	Loggerhead sea turtle	Caretta caretta	T	Known
	Green sea turtle	Chelonia mydas*	T	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
Georgetown	Sea-beach amaranth	Amaranthus pumilus	T	Known
cont.	Pondberry	Lindera melissifolia	E	Possible
	Canby's dropwort	Oxypolis canbyi	E	Possible
	Chaffseed	Schwalbea americana	E	Possible
	Kirtland's Warbler	Dendroica kirtlandii	E	Possible
Greenville				

County	Common Name	Scientific Name	Status	Occurrer
	Bog turtle	<i>Clemmys muhlenbergii</i>	T S/A	Known
	Swamp-pink	<i>Helonias bullata</i>	T	Known
	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T	Known
	Small whorled pogonia	<i>Isotria medeoloides</i>	T	Known
	Bunched arrowhead	<i>Sagittaria fasciculata</i>	E	Known
	Mountain sweet pitcher-plant	<i>Sarracenia rubra</i> ssp. <i>jonesii</i>	E	Known
	White irisette	<i>Sisyrinchium dichotomum</i>	E	Known
	Rock gnome lichen	<i>Gymnoderma lineare</i>	E	Known
	White fringeless orchid	<i>Platanthera integrilabia</i>	C	Known
Greenwood				
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E, CH	Known
Hampton				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Wood stork	<i>Mycteria americana</i>	E	Known
	Eastern indigo snake	<i>Drymarchon corais couperi</i>	T	Possible
	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E	Known
	Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
Horry				
	West Indian manatee	<i>Trichechus manatus</i>	E	Known
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Wood stork	<i>Mycteria americana</i>	E	Known
	Piping plover	<i>Charadrius melodus</i>	T, CH	Known
	Kemp's ridley sea turtle	<i>Lepidochelys kempii</i> *	E	Known
	Leatherback sea turtle	<i>Dermochelys coriacea</i> *	E	Known
	Loggerhead sea turtle	<i>Caretta caretta</i>	T	Known
Horry	Green sea turtle	<i>Chelonia mydas</i> *	T	Possible
cont.	Shortnose sturgeon	<i>Acipenser brevirostrum</i> *	E	Known
	Sea-beach amaranth	<i>Amaranthus pumilus</i>	T	Known
	Pondberry	<i>Lindera melissifolia</i>	E	Possible
	Canby's dropwort	<i>Oxypolis canbyi</i>	E	Possible
	Chaff-seed	<i>Schwalbea americana</i>	E	Known
	Kirtland's Warbler	<i>Dendroica kirtlandii</i>	E	Possible

County	Common Name	Scientific Name	Status	Occurrer
Jasper				
	West Indian manatee	Trichechus manatus	E	Known
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Wood stork	Mycteria americana	E	Known
	Piping plover	Charadrius melodus	T, CH	Possible
	Eastern indigo snake	Drymarchon corais couperi	T	Possible
	Kemp's ridley sea turtle	Lepidochelys kempii*	E	Known
	Leatherback sea turtle	Dermochelys coriacea*	E	Known
	Loggerhead sea turtle	Caretta caretta	T	Known
	Green sea turtle	Chelonia mydas*	T	Possible
	Flatwoods salamander	Ambystoma cingulatum	T	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Pondberry	Lindera melissifolia	E	Possible
	Canby's dropwort	Oxypolis canbyi	E	Possible
	Chaff-seed	Schwalbea americana	E	Known
	Kirtland's Warbler	Dendroica kirtlandii	E	Possible
Kershaw				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Carolina heelsplitter	Lasmigona decorata	E, CH	Known
	Michaux's sumac	Rhus michauxii	E	Known
	Georgia aster	Aster georgianus	C	Known
Lancaster				
	Carolina heelsplitter	Lasmigona decorata	E, CH	Known
	Little amphianthus	Amphianthus pusillus	T	Known
	Smooth coneflower	Echinacea laevigata	E	Known
	Schweinitz's sunflower	Helianthus schweinitzii	E	Known
	Black-spored quillwort	Isoetes melanospora	E	Known
Laurens				
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Carolina heelsplitter	Lasmigona decorata	E	Possible
	Georgia aster	Aster georganus	C	Known
Lee				
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Canby's dropwort	Oxypolis canbyi	E	Known

APPENDICES
APPENDIX D

County	Common Name	Scientific Name	Status	Occurrer
	Chaffseed	Schwalbea americana	E	Known
Lexington				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Carolina heelsplitter	Lasmigona decorata	E	Possible
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Possible
	Smooth coneflower	Echinacea laevigata	E	Possible
	Schweinitz's sunflower	Helianthus schweinitzii	E	Known
Marion				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Wood stork	Mycteria americana	E	Possible
	Shortnose sturgeon	Acipenser brevirostrum*	E	Known
	Canby's dropwort	Oxypolis canbyii	E	Known
Marlboro				
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Shortnose sturgeon	Acipenser brevirostrum*	E	Possible
	Canby's dropwort	Oxypolis canbyi	E	Possible
McCormick				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Red-cockaded woodpecker	Picoides borealis	E	Known
	Wood stork	Mycteria americana	E	Known
	Carolina heelsplitter	Lasmigona decorata	E, CH	Known
	Miccosukee gooseberry	Ribes echinellum	T	Known
	Georgia aster	Aster georgianus	C	Known
Newberry				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Carolina heelsplitter	Lasmigona decorata	E	Possible
Oconee				
	Bald eagle	Haliaeetus leucocephalus	T	Known
	Smooth coneflower	Echinacea laevigata	E	Known
	Small whorled pogonia	Isotria medeoloides	T	Known
	Persistent trillium	Trillium persistens	E	Known
	Georgia aster	Aster georgianus	C	Known

County	Common Name	Scientific Name	Status	Occurrer
Orangeburg				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Flatwoods salamander	<i>Ambystoma cingulatum</i>	T	Known
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E	Known
	Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
Pickens				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Possible
	Bog turtle	<i>Clemmys muhlenbergii</i>	T S/A	Known
	Smooth coneflower	<i>Echinacea laevigata</i>	E	Known
	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T	Possible
	Black-spored quillwort	<i>Isoetes melanospora</i>	E	Known
	Mountain sweet pitcher-plant	<i>Sarracenia rubra</i> ssp. <i>jonesii</i>	E	Known
	Georgia aster	<i>Aster georgianus</i>	C	Known
Richland				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E	Known
	Smooth coneflower	<i>Echinacea laevigata</i>	E	Known
	Rough-leaved loosestrife	<i>Lysimachia asperulaefolia</i>	E	Known
	Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
	Georgia aster	<i>Aster georgianus</i>	C	Known
Saluda				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
Saluda	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
cont.	Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
	Piedmont bishop-weed	<i>Ptilimnium nodosum</i>	E	Known
	Little amphianthus	<i>Amphianthus pusillus</i>	T	Known
Spartanburg				
	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T	Known
Sumter				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known

County	Common Name	Scientific Name	Status	Occurrer
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E	Known
	Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
	Chaff-seed	<i>Schwalbea americana</i>	E	Known
Union				
	Georgia aster	<i>Aster georgianus</i>	C	Known
Williamsburg				
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Wood stork	<i>Mycteria americana</i>	E	Possible
	Red-cockaded woodpecker	<i>Picoides borealis</i>	E	Known
	Shortnose sturgeon	<i>Acipenser brevirostrum*</i>	E	Known
	Canby's dropwort	<i>Oxypolis canbyi</i>	E	Known
	Chaff-seed	<i>Schwalbea americana</i>	E	Known
York				
	Carolina heelsplitter	<i>Lasmigona decorata</i>	E	Possible
	Bald eagle	<i>Haliaeetus leucocephalus</i>	T	Known
	Little amphianthus	<i>Amphianthus pusillus</i>	T	Known
	Schweinitz' sunflower	<i>Helianthus schweinitzii</i>	E	Known
	Dwarf-flowered heartleaf	<i>Hexastylis naniflora</i>	T	Possible
	Georgia aster	<i>Aster georgianus</i>	C	Known

OPTIMAL PLANT SURVEY WINDOWS

County	Species Common Name	Optimal Time
Abbeville	Georgia aster	Early October - Mid November
Aiken	Relict trillium Piedmont bishop-weed Smooth coneflower	March – April Late May - Early June or August – October May - July
Allendale	Smooth coneflower Canby's dropwort	May – July August - September
Anderson	Smooth coneflower	May - July
Bamberg	Canby's dropwort	August - September
Barnwell	Smooth coneflower Pondberry Canby's dropwort Piedmont bishop-weed Chaff-seed	May – July Late February - Mid March or August – October August – September Late May - Early June or August – October April - June
Beaufort	Pondberry Canby's dropwort Chaff-seed	Late February - Mid March or August – October August – September April - June
Berkeley	Pondberry Canby's dropwort Chaff-seed	Late February - Mid March or August – October August – September April - June
Calhoun	None	None
Charleston	Sea-beach amaranth Pondberry Canby's dropwort Chaff-seed	August - September Late February - Mid March or August – October August – September April - June
Cherokee	Drawf-flowered heartleaf Georgia aster	Mid March - Early June Early October - Mid November
Chester	Georgia aster	Early October - Mid November
Chesterfield	None	None
Clarendon	Canby's dropwort Chaff-seed	August – September April - June
Colleton	Pondberry Canby's dropwort	Late February - Mid March or August – October August – September
Darlington	Rough-leaved loosestrife	Mid May - June
Dillon	None	None
Dorchester	Pondberry Canby's dropwort Bog asphodel	Late February - Mid March or August – October August – September June - July
Edgefield	Miccosukee gooseberry Relict trillium Georgia aster	March – April March – April Early October - Mid November
Fairfield	Georgia aster	Early October - Mid November
Florence	Chaff-seed	April - June
Georgetown	Pondberry Canby's dropwort Chaff-seed	Late February - Mid March or August – October August – September April - June
Greenville	Swamp pink Drawf-flowered heartleaf	March – May Mid March - Early June

APPENDICES
APPENDIX D

County	Species Common Name	Optimal Time
	Small whorled pagonia Bunched arrowhead Mountain sweet pitcher plant White irisette Rock gnome lichen White fringeless orchid	Mid May - Mid June May – July April – May May – July July – September July - September
Greenwood	None	None
Hampton	Canby's dropwort	August - September
Horry	Sea-beach amaranth Pondberry Canby's dropwort Chaff-seed	August – September Late February - Mid March or August – October August – September April - June
Jasper	Pondberry Canby's dropwort Chaff-seed	Late February - Mid March or August – October August – September April - June
Kershaw	Michaux's sumac	April - June or October - November
Lancaster	Little amphianthus Smooth coneflower Schweinitz's sunflower Black-spored quillwort	March - Mid April May – July Early November to frost May - June
Laurens	Georgia aster	Early October - Mid November
Lee	Canby's dropwort Chaff-seed	August – September April - June
Lexington	Smooth coneflower Schweinitz's sunflower	May – July Early November to frost
Marion	Canby's dropwort	August – September
Marlboro	Canby's dropwort	August – September
McCormick	Miccosukee gooseberry Georgia aster	March – April Early October - Mid November
Newberry	None	None
Oconee	Smooth coneflower Small whorled pagonia Persistent trillium Georgia aster	May – July Mid May - Mid June March – April Early October - Mid November
Orangeburg	Canby's dropwort	August – September
Pickens	Smooth coneflower Drawf-flowered heartleaf Black-spored quillwort Mountain sweet pitcher plant Georgia aster	May – July Mid March - Early June May – June April – May Early October - Mid November
Richland	Smooth coneflower Rough-leaved loosestrife Canby's dropwort Georgia aster	May – July Mid May – June August – September Early October - Mid November
Saluda	Piedmont bishop-weed Little amphianthus	Late May - Early June or August – October March - Mid April
Spartanburg	Drawf-flowered heartleaf	Mid March - Early June
Sumter	Canby's dropwort Chaff-seed	August – September April - June

APPENDICES
APPENDIX D

County	Species Common Name	Optimal Time
Union	Georgia aster	Early October - Mid November
Williamsburg	Canby's dropwort Chaff-seed	August – September April - June
York	Little amphianthus Schweinitz's sunflower Drawf-flowered heartleaf Georgia aster	March - Mid April Early November to frost Mid March - Early June Early October - Mid November

SCDOT Assessment Criteria and Farmland Conversion Impact Form

FARMLAND POLICY PROTECTION ACT

SCDOT Assessment Criteria for Form SCS-CPA-106

1. How much land is in non-urban use within a radius of 1 mile from where the project is intended?

More the 90 %	=	15 Points
85-90%	=	14
80-84%	=	13
75-79%	=	12
70-74%	=	11
65-69%	=	10
60-64%	=	9
55-59%	=	8
50-54%	=	7
45-49%	=	6
40-44%	=	5
35-39%	=	4
30-34%	=	3
25-29%	=	2
20-24%	=	1
Less than 20%	=	0

2. How much of the perimeter of the site borders on land in non-urban use?

More the 90 %	=	10 Points
83-90%	=	9
76-82%	=	8
68-75%	=	7
60-67%	=	6
52-59%	=	5
44-51%	=	4
36-43%	=	3
28-35%	=	2
20-27%	=	1
Less than 20%	=	0

3. How much of the site has been farmed more than 5 of the last 10 years?

More the 90 %	=	20 Points	50-53%	=	9
87-90%	=	19	47-79%	=	8
83-86%	=	18	43-46%	=	7
80-82%	=	17	39-42%	=	6
76-79%	=	16	36-38%	=	5
72-75%	=	15	32-35%	=	4
69-71%	=	14	28-31%	=	3
65-68%	=	13	25-27%	=	2
61-64%	=	12	21-24%	=	1

58-60%	=	11	Less than 20%	=	0
54-57%	=	10			

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?*

Yes = 20 Points
No = 0 Points

***Always assume 0 Points**

1. Is the farm unit(s) containing the site (before the project) as large as the average sized farming unit in the county?*

As large or larger	=	10 Points
95% as large	=	9
90% as large	=	8
85% as large	=	7
80% as large	=	6
75% as large	=	5
70% as large	=	4
65% as large	=	3
60% as large	=	2
55% as large	=	1
1-54% as large	=	0

*** Always assume 10 Points**

2. If this site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?*

Acreage equal to or more than 25 %	=	25 Points
Acreage equal to 20-24%	=	20
Acreage equal to 15-19%	=	15
Acreage equal to 10-14%	=	10
Acreage equal to 5-9%	=	5
Acreage equal to or less than 5%	=	0

*** Always assume 0 Points**

3. Does the site have available adequate supply of farm support services and markets?*

All	=	5 Points
Most	=	4
Adequate	=	3
Some	=	2
Few	=	1
None	=	0

*** Always assume 5 Points**

4. Does the site have substantial and well-maintained on-farm investments such as barns, other storage buildings, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil conservation measures?

High	=	20 Points
Many	=	15
Medium	=	10
Few	=	5
None	=	0

5. Would the project at this site, by converting farmland to non-agricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?*

Substantial Reduction	=	25 Points
Large Reduction	=	20
Medium Reduction	=	15
Small Reduction	=	10
Slight Reduction	=	5
No Reduction	=	0

*** Always assume 0 Points**

6. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to non-agricultural use?*

Incompatible	=	10 Points
76-99%	=	8
51-75%	=	6
25-50%	=	4
1-24%	=	2
Compatible	=	0

*** Always assume 0 Points**

Farmland Protection Policy Act

Assessment Criteria for Form SCS-CPA-106

Project : _____

PIN : _____

1. _____ Points (0-15)

2. _____ Points (0-10)

3. _____ Points (0-20)

4. 0 Points (Always 0)

5. 10 Points (Always 10)

6. 0 Points (Always 0)

7. 5 Points (Always 5)

8. _____ Points (0-20)

9. 0 Points (Always 0)

10. 0 Points (Always 0)

= _____ Total Points from Department Evaluation (part VI)

+ _____ Points from NCRS Evaluation (part V) (assume 100)

= _____ Total Points Assessment

**FARMLAND CONVERSION IMPACT RATING
FOR CORRIDOR TYPE PROJECTS**

PART I (To be completed by Federal Agency)		3. Date of Land Evaluation Request	4. Sheet 1 of _____		
1. Name of Project		5. Federal Agency Involved			
2. Type of Project		6. County and State			
PART II (To be completed by NRCS)		1. Date Request Received by NRCS	2. Person Completing Form		
3. Does the corridor contain prime, unique statewide or local important farmland? (If no, the FPPA does not apply - Do not complete additional parts of this form.)		YES <input type="checkbox"/> NO <input type="checkbox"/>	4. Acres Irrigated Average Farm Size		
5. Major Crop(s)	6. Farmable Land in Government Jurisdiction Acres: _____ %		7. Amount of Farmland As Defined in FPPA Acres: _____ %		
8. Name Of Land Evaluation System Used	9. Name of Local Site Assessment System		10. Date Land Evaluation Returned by NRCS		
PART III (To be completed by Federal Agency)		Alternative Corridor For Segment			
		Corridor A	Corridor B	Corridor C	Corridor D
A. Total Acres To Be Converted Directly					
B. Total Acres To Be Converted Indirectly, Or To Receive Services					
C. Total Acres in Corridor		0	0	0	0
PART IV (To be completed by NRCS) Land Evaluation Information					
A. Total Acres Prime And Unique Farmland					
B. Total Acres Statewide And Local Important Farmland					
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted					
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value					
PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)					
PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))		Maximum Points			
1. Area in Nonurban Use		15			
2. Perimeter in Nonurban Use		10			
3. Percent Of Corridor Being Farmed		20			
4. Protection Provided By State And Local Government		20			
5. Size of Present Farm Unit Compared To Average		10			
6. Creation Of Nonfarmable Farmland		25			
7. Availability Of Farm Support Services		5			
8. On-Farm Investments		20			
9. Effects Of Conversion On Farm Support Services		25			
10. Compatibility With Existing Agricultural Use		10			
TOTAL CORRIDOR ASSESSMENT POINTS		160	0	0	0
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)		100			
Total Corridor Assessment (From Part VI above or a local site assessment)		160	0	0	0
TOTAL POINTS (Total of above 2 lines)		260	0	0	0
1. Corridor Selected:	2. Total Acres of Farmlands to be Converted by Project:	3. Date Of Selection:	4. Was A Local Site Assessment Used? YES <input type="checkbox"/> NO <input type="checkbox"/>		
5. Reason For Selection:					

Signature of Person Completing this Part: _____

DATE _____

NOTE: Complete a form for each segment with more than one Alternate Corridor

NRCS-CPA-106 (Reverse)

CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor - type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor - type site or design alternative for protection as farmland along with the land evaluation information.

- (1) How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
More than 90 percent - 15 points
90 to 20 percent - 14 to 1 point(s)
Less than 20 percent - 0 points
- (2) How much of the perimeter of the site borders on land in nonurban use?
More than 90 percent - 10 points
90 to 20 percent - 9 to 1 point(s)
Less than 20 percent - 0 points
- (3) How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
More than 90 percent - 20 points
90 to 20 percent - 19 to 1 point(s)
Less than 20 percent - 0 points
- (4) Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
Site is protected - 20 points
Site is not protected - 0 points
- (5) Is the farm unit(s) containing the site (before the project) as large as the average - size farming unit in the County ? (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with \$1,000 or more in sales.)
As large or larger - 10 points
Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points
- (6) If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points
- (7) Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
All required services are available - 5 points
Some required services are available - 4 to 1 point(s)
No required services are available - 0 points
- (8) Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
High amount of on-farm investment - 20 points
Moderate amount of on-farm investment - 19 to 1 point(s)
No on-farm investment - 0 points
- (9) Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
Substantial reduction in demand for support services if the site is converted - 25 points
Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
No significant reduction in demand for support services if the site is converted - 0 points
- (10) Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points

SCDOT Noise Abatement Policy

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION NOISE ABATEMENT POLICY

I. Purpose

The purpose of this document is to provide policies and procedures for the consideration of highway traffic noise and highway traffic noise abatement in the planning, design and construction of highways.

II. Introduction

The South Carolina Department of Transportation (SCDOT) recognizes the adverse effects that highway traffic noise may have on the citizens of South Carolina and will do what is practical to make highway projects and noise sensitive land use more compatible by lessening these effects. During project development, alternate alignments, not building the project and various noise abatement schemes are considered to minimize the noise impacts. During the public information period, affected residents and business owners will be given the opportunity to comment on noise abatement measures. During construction, the Department requires its contractors to minimize disruption from construction noise. After all of the above efforts, some locations may still experience noise impacts.

Federal guidance for handling noise impacts and abatement are contained in 23 Code of Federal Regulation Part 772 (23 CFR 772), "Procedures for Abatement of Highway Traffic Noise and Construction Noise." SCDOT considers the policies and procedures that follow to be consistent with both 23 CFR 772 and the Highway Traffic Noise Guidance and Policies and Written Noise Policies Memorandum issued June 12, 1995 by the Federal Highway Administration (FHWA), Office of Environmental and Planning.

23 CFR 772 specifies two types of projects: Type I projects and Type II projects. A Type I project is defined as "a proposed Federal or Federal-aid highway project for the construction of a highway on new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes" to include major maintenance or rehabilitation actions. However, noise abatement is not normally provided for maintenance or rehabilitation projects. A Type II project is defined as "a proposed Federal or Federal-aid project for noise abatement on an existing highway." A Highway Traffic Noise Impact Study must be conducted for all Type I projects. SCDOT does not have a funding source for and therefore does not develop or implement Type II projects.

III. Traffic Noise Impact Study Procedures

1. Analysis Locations

An inventory will be made of all existing readily apparent land use activities, developed lands, and undeveloped lands for which development is planned and programmed, which may be affected by noise from the proposed highway or highway improvements. Proposed development will be considered planned, designed and programmed on the date of issuance of

building permits. Indoor noise levels are not normally considered unless special circumstances exist, such as churches or schools without air conditioning, or the absence of outdoor activity.

The public is considered to be officially notified of the adoption of the location of a proposed highway project when the CE, FONSI or ROD is approved. After this date, SCDOT is still responsible for analyzing changes in traffic noise impacts, when appropriate, but the Department is no longer responsible for providing noise abatement for new development which occurs adjacent to the proposed highway project.

2. Determination of Existing Noise Levels

The determination of existing noise levels at the existing and planned noise sensitive land uses will be made by measuring and/or predicting Leq noise levels for the traffic characteristics which yield the worst case hourly traffic noise levels on a regular basis. Normally, a minimum 15 minute Leq measurement is taken at several different locations in accordance with "FHWA-DP-45-1, Sound Procedures For Measuring Highway Noise" using an ANSI-Type 2 or better sound level meter or analyzer. Predictions will be made using a prediction method approved by the FHWA.

3. Prediction of Future Noise Levels

The Leq future noise levels will be predicted at existing and planned noise sensitive land uses for each alternative under detailed consideration, including the "no build" alternative, for the design year. The design year is normally 10 to 20 years in the future. The predictions will be made using a prediction method approved by the FHWA as outlined in the project's environmental assessment. The predictions will be made for the traffic characteristics which yield the worst hourly traffic noise impact on a regular basis.

4. Determination of Traffic Noise Impacts

Traffic noise impacts will be determined at each existing and planned noise sensitive land use by comparing the predicted design year noise level with the Noise Abatement Criteria (NAC) of 23 CFR 772 and with the existing noise level. If the predicted design year noise level approaches (falls within 1 dBA) or exceeds the NAC, a noise impact will occur. Noise impacts will also occur if the difference between the existing noise level and the predicted noise level is 15 dBA or greater. A 15 dBA increase is deemed to be a "substantial increase".

5. Evaluation of Noise Abatement Methods For Reducing or Elimination Noise Impacts

When future noise impacts are predicted to occur as a result of a highway project, the following noise abatement measures will be considered as a means to reduce or eliminate the traffic noise impacts.

- No Build
- Changing the Project's Horizontal and Vertical Alignment
- Traffic Control Measures
- Construction of a Noise Barrier

Often, examination of all abatement alternatives reveals no practical method to reduce noise impacts. However, when it is determined that a noise barrier would be the most practical method, the barrier must meet the Department's feasibility and reasonableness criteria as covered in detail in Section V.

6. Documentation of the Noise Impact Analysis

A detailed noise analysis will be conducted for each highway project as specified in 23 CFR 772. The following will normally be included in a detailed noise impact study:

- Location Map
- Noise Abatement Criteria
- Peak Hour Traffic Levels
- Predicted or Measured Existing Noise Environment
- Predicted Design Year No-Build Noise Environment
- Predicted Design Year Build Alternative Noise Environment
- Methodology For Measuring/Predicting Noise Environment
- Summary of Traffic Noise Impacts
- Evaluation of Abatement Measures Considered
- Description of Abatement Measures Likely to be Incorporated

IV. COORDINATION WITH LOCAL OFFICIALS

SCDOT has no authority over land use planning and development. SCDOT can only encourage local officials and developers to consider highway traffic noise in the planning, zoning and development of property near existing and proposed highway corridors. The lack of consideration of highway traffic noise in land use planning at the local level has added to the highway traffic noise problem which will continue to grow as development continues adjacent to major highways long after these highways were proposed and/or constructed. This lack of concern for predictably high levels of traffic noise by local governments has caused the Department and citizens around the state many problems. Normally, these issues are left to the Department for resolution when, because of the lack of planning, almost nothing can be done.

In order to help local officials and developers consider highway traffic noise in the vicinity of proposed Type I projects, SCDOT will inform them of the predicted future noise levels and the required distance from such projects needed to ensure noise levels remain below the NAC for each type of land use. The detailed noise analysis will be made available during the public availability period for the proposed project.

V. FEASIBILITY AND REASONABLENESS OF NOISE BARRIERS

SCDOT will employ the following guidelines to determine the need, feasibility, and reasonableness of noise abatement measures on all major highway projects.

1. Feasibility

Feasibility deals with engineering considerations - that is, can a substantial noise reduction be achieved given the conditions of a specific location? The ability to achieve noise reduction may be limited by:

- Topography - can a barrier be built given the topography of the location?
- Can a minimum 5 dBA noise reduction be achieved given certain access, drainage, safety or maintenance requirements?
- Are other dominant noise sources present in the area?

All of these considerations affect the ability of a noise barrier to achieve an actual noise reduction. Certain roadway/receiver relationships limit the ability of a barrier to block sound. The presence of local cross streets, driveways and access requirements also limit the dimensions of a barrier wall and therefore its ability to achieve noise reduction. It is the Department's policy that construction of a noise barrier is **NOT FEASIBLE** if a noise reduction of at least 5 dBA cannot be achieved for those receivers determined to be impacted.

2. Reasonableness

Reasonableness is a more subjective criterion. It implies good judgment and common sense have been applied in arriving at a decision. Reasonableness will be based on a number of factors. In making a determination of reasonableness some factors carry more weight than others - that is, one factor determined to be unreasonable may not make barrier construction totally unreasonable. Other factors, however, carry more weight. Therefore a reasonableness decision would take into consideration specific circumstances of the project, individual reasonableness criteria and reasonableness criteria as an aggregate.

The following criteria will normally be used to determine the reasonableness of a noise barrier:

- The abatement measure must be cost effective. Cost effectiveness is defined as \$25,000 per benefited receiver. A benefited receiver is one who receives at least a 5 dBA reduction in noise levels as a result of the noise abatement measure.
- The exposed height of the wall does not exceed a maximum of 7.5 meters (approximately 25')
- The change in noise levels between the existing levels and the design year build levels should exceed 4 dBA (a barely perceptible change).
- Normally, it is not considered reasonable to provide abatement for impacted businesses or isolated receptors. Businesses generally prefer visibility from the transportation facility.

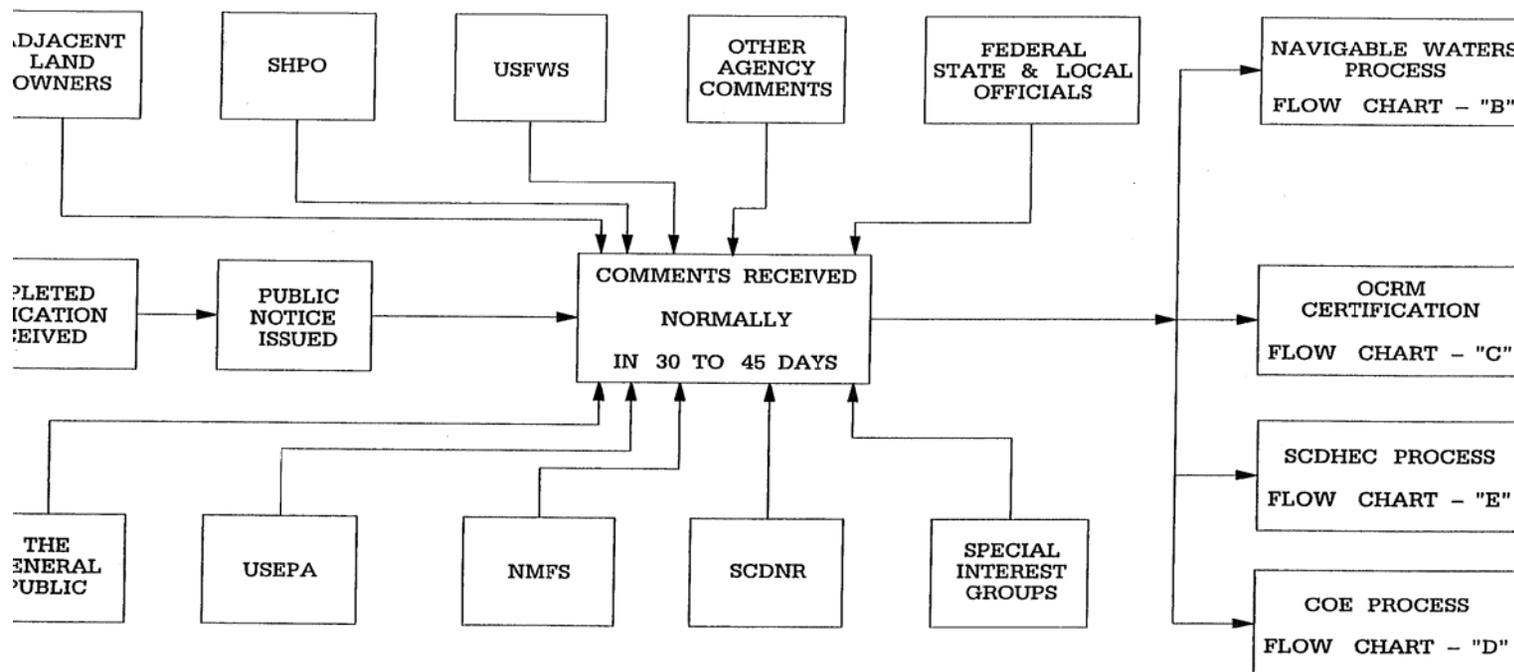
Based on past project experience, it is considered unreasonable to provide abatement for isolated residences due to the cost of abatement versus the benefits provided.

- Normally, it is not considered reasonable to provide abatement on non-controlled or partial controlled access facilities.
- The noise barrier will be located beyond the clear recovery zone or be incorporated into safety devices.
- Normally, it is not considered reasonable to construct walls on the shoulder because of the safety, drainage problems, trash accumulation, etc.
- In areas of impacted receptors where abatement measures have been considered, a vegetative barrier may be considered for aesthetic screening even though an acoustical barrier is not justified.
- A barrier is not considered reasonable if the majority of the affected residents do not want it. In determining the reasonableness and feasibility of noise abatement, SCDOT will solicit the views of the impacted residents. As available, specific details - location, length, height, aesthetic treatment, landscaping, maintenance, drainage, safety, etc. - of the noise barrier being studied will be provided in addition to alternatives to barrier construction. SCDOT will not make a final determination on reasonableness and feasibility until this information has been provided and residents' views collected.
- It is the Department's policy that a barrier is not considered reasonable if the residences were not constructed or the building permits were not issued before the date of public knowledge of the project.

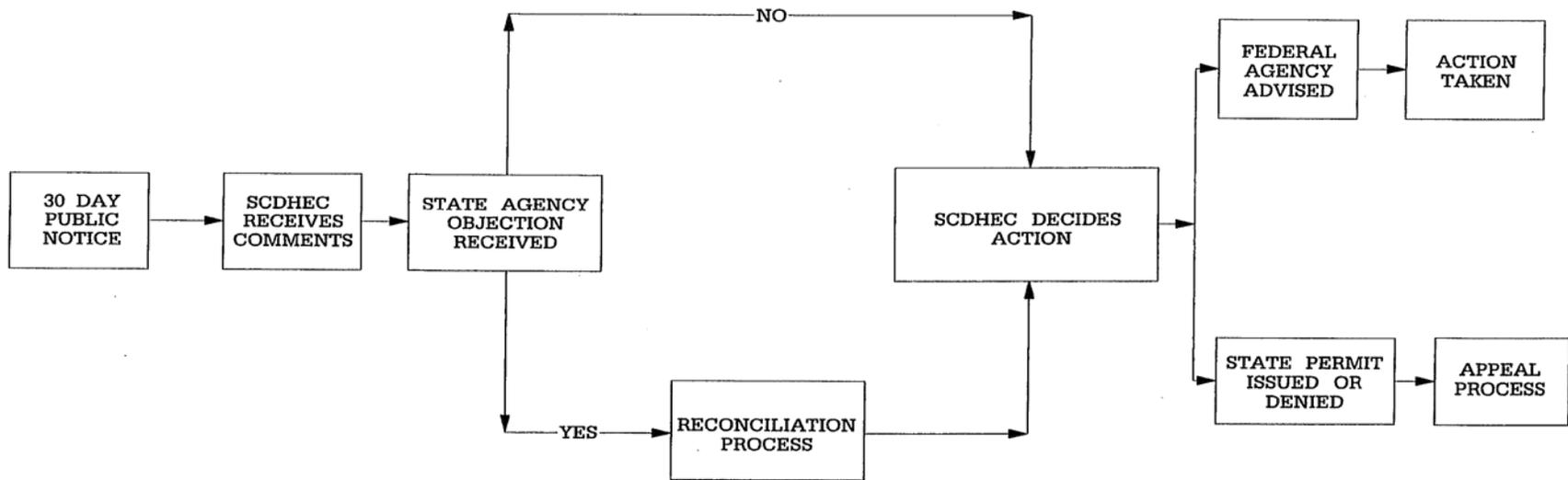
The above is not intended to be all encompassing. Rather, it is intended to indicate some of the factors that should be considered in determining the reasonableness of proposed abatement measures.

Permitting Flow Charts

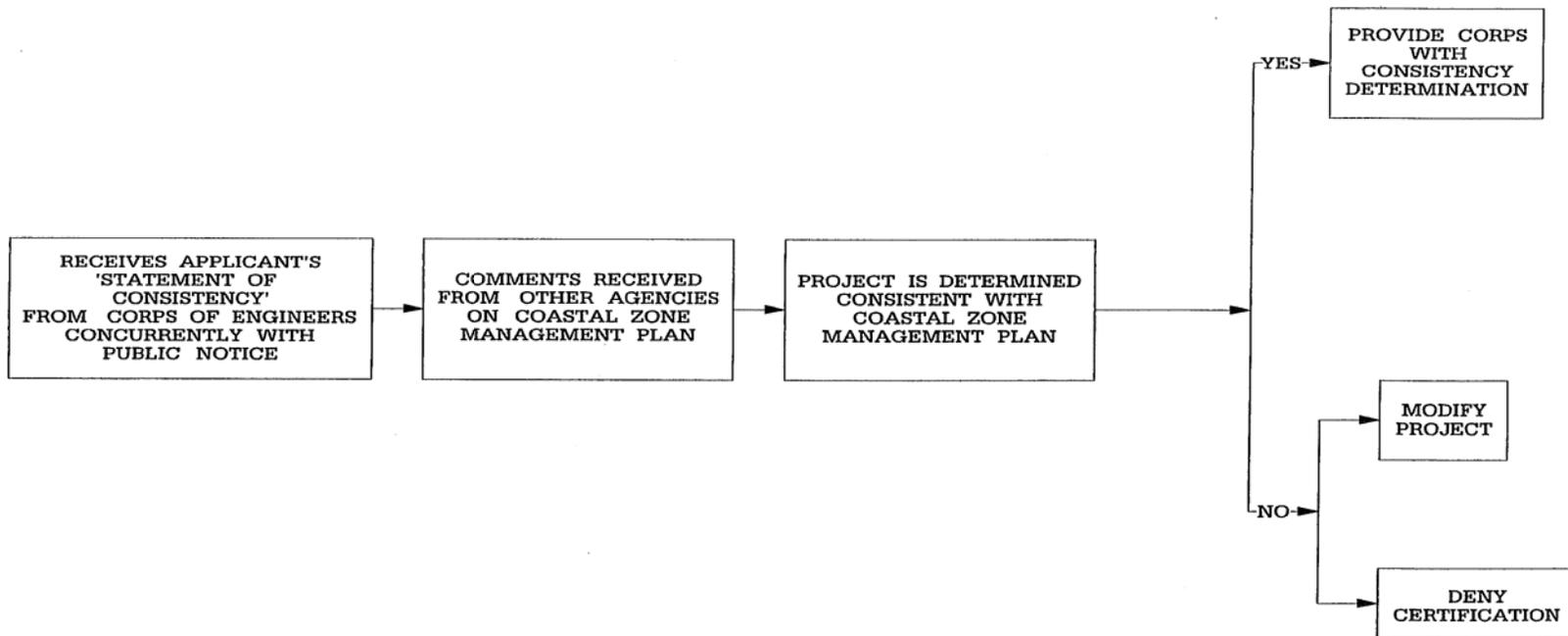
FLOW CHART - "A" INDIVIDUAL PERMIT PROCESS



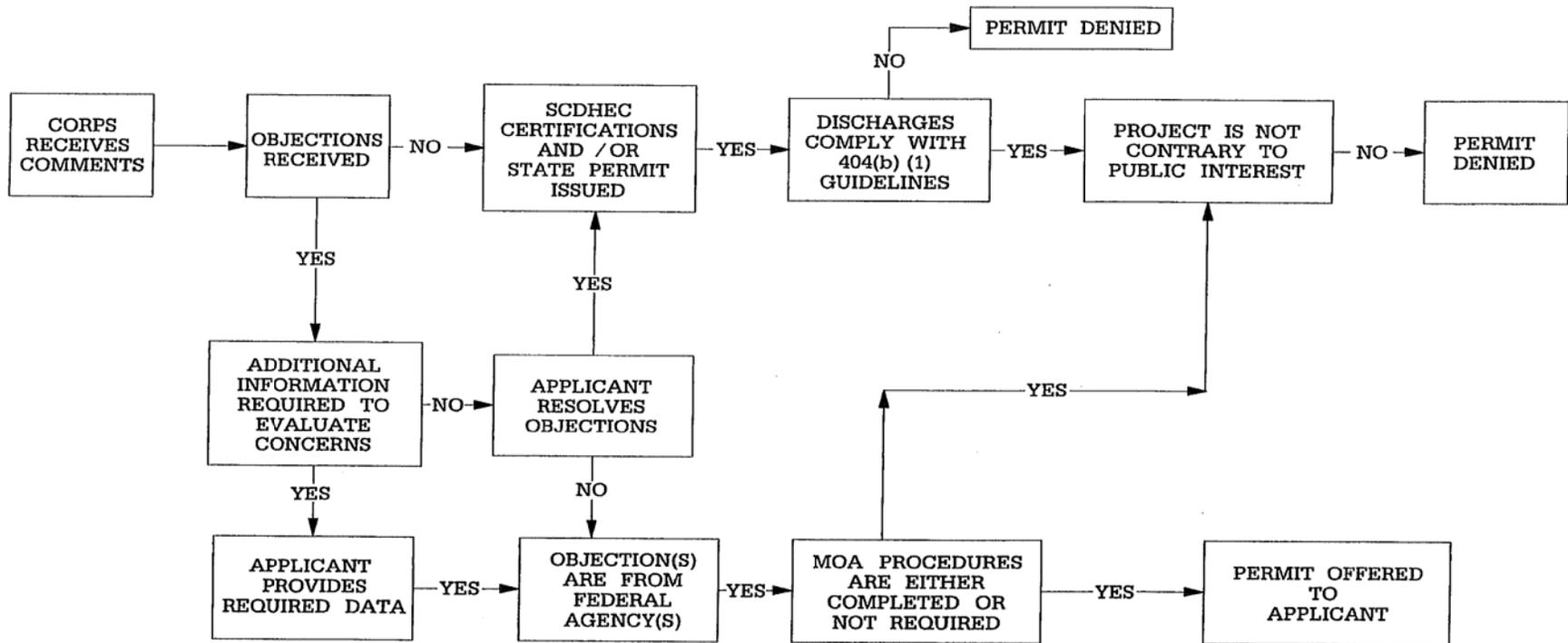
FLOW CHART - "B"
DEPARTMENT of HEALTH and ENVIRONMENTAL CONTROL
PROCESS FOR STATE NAVIGABLE WATERS



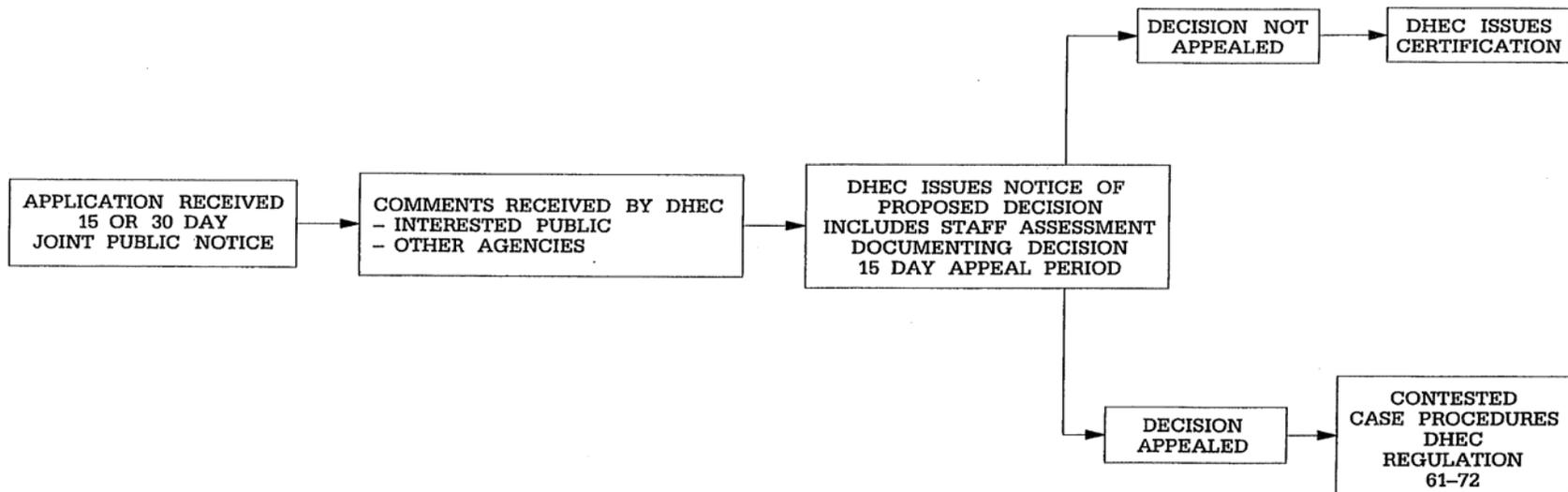
FLOW CHART - "C"
BUREAU of OCEAN and COASTAL RESOURCE MANAGEMENT
PROCESS FOR FRESHWATER WETLANDS

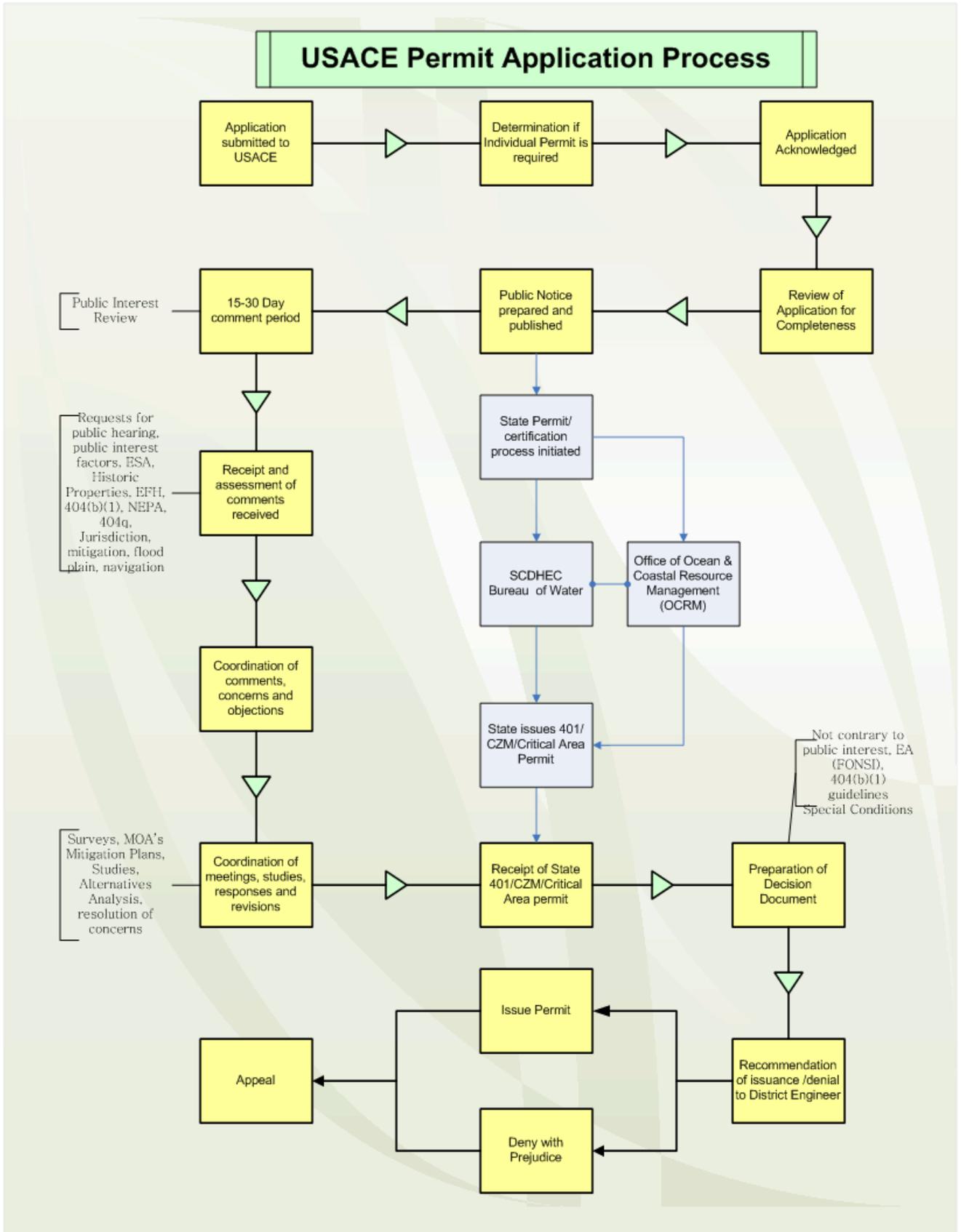


FLOW CHART - "D" CORPS OF ENGINEERS INDIVIDUAL PERMIT PROCESS



FLOW CHART - "E"
S.C. DEPARTMENT of HEALTH & ENVIRONMENTAL CONTROL
WATER QUALITY CERTIFICATION PROCESS
INDIVIDUAL PERMIT





APPENDIX E – GENERAL PERMITS

[US Army Corps of Engineers General Permit](#)
[US Army Corps of Engineers Nationwide Permit 3](#)
[US Army Corps of Engineers Nationwide Permit 7](#)
[US Army Corps of Engineers Nationwide Permit 14](#)
[US Army Corps of Engineers Nationwide Permit 23](#)
[General Permit for Navigable Waters](#)

Note: The items shown in bold-face type are included in this appendix. The items not shown in bold-face type are available on the internet and may be accessed by using the links published in this manual.

General Permit

General Permit No. 2005-14-001
Name of Applicant: S. C. Department of Transportation (SCDOT)
Effective Date: August 1, 2006
Expiration Date: July 31, 2011

DEPARTMENT OF THE ARMY

GENERAL PERMIT

A General Permit to perform work in or affecting waters of the United States, upon the recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403) and/or Section 404 of the Clean Water Act (33 U.S.C. 1344), is hereby issued by authority of the Secretary of the Army by the

District Engineer
Charleston District
Corps of Engineers
69-A Hagood Drive
Charleston, South Carolina 29403

to authorize the discharge of dredged and/or fill material, incidental to existing roadway, bridge, and other activities required for the construction, expansion, modification, or improvement of existing linear transportation projects in waters of the United States including "navigable waters of the United States", within the boundaries of the Charleston District in the State of South Carolina. This General Permit authorizes temporary and permanent impacts to waters of the United States, including wetlands. Permanent impacts for a single and complete project authorized by this General Permit are not to exceed: 3.0 acres of freshwater impacts; 0.50 acre of tidal wetland impacts; and/or 300 linear feet of stream. This General Permit is not considered to supersede or otherwise modify applicable Nationwide Permits (33 CFR 330).

This General Permit contains certain limitations intended to protect the environment including natural and cultural resources. However, conformance with the conditions contained in this permit does not necessarily guarantee authorization. In cases where the District Engineer, or his designee, considers it necessary, an individual Department of the Army permit will be required. Construction, dredging, or fill operations not specifically covered under this General Permit are prohibited unless authorized by a separate Department of the Army permit.

I. Definitions:

a. Bankfull – Bankfull corresponds to the discharge at which channel-forming processes, such as forming or removing bars or meanders, is most effective. It is typically associated with the 1.5-year storm event, the "ordinary high water mark", and the elevation on the stream bank where flooding begins in a stable stream system. It can often be identified in the field by the

elevation of the highest depositional feature (e.g., point bars), a recognizable floodplain, or a break in perennial vegetation.

b. Best Management Practices (BMPs) - BMPs are policies, practices, procedures, or structures implemented to minimize the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural. A BMP policy may affect the limits on a development.

c. Eligible Activities - Projects carried out by SCDOT that typically consist of rehabilitation, replacement, refurbishment and/or retrofitting of material and design to bridge structures and box culverts, in such manner as to restore or maintain usefulness, increase safety or extend life of structure or its purpose. These efforts may include placing of riprap (up to 300 linear feet); installing guardrails, pipes and culverts, widening of bridge approach ways (to include relocation of existing access to accommodate guardrails); and paving or repaving of roadway surface. Also included in these activities are improvements to roadway intersections/ interchanges and horizontal and vertical curve improvements where a need has been demonstrated to improve durability, safety, or capacity, and that said improvements would occur essentially on existing alignment, except where minor deviation is allowed to flatten the roadway's horizontal or vertical curvature. Cleaning and repairing of existing outfall and roadway ditches are also included in these activities, as well as shoulder improvements, Bicycle/Pedestrian lane additions, and road widening projects of one to multiple lanes.

d. Ephemeral Stream - Ephemeral streams are streams that flow only in direct response to rainfall or snowmelt and in which discrete periods of flow persist no more than 29 consecutive days per event.

e. Fill Material - Fill material is defined as material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land, or changing the bottom elevation of any portion of a water of the United States. Examples of such fill material include, but are not limited to rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States.

f. Independent Utility - A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

g. Intermittent Stream - Intermittent streams are streams that generally have defined natural watercourses that do not flow year around, but beyond periods of rainfall and with greater frequency than similarly located ephemeral streams.

h. Loss of Waters of the US - Waters of the US that include the filled area and other waters that are permanently adversely affected by flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent above-grade, at-grade, or

below-grade fills that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. Waters of the US temporarily filled, flooded, excavated, or drained, but restored to preconstruction contours and elevations after construction, are not included in the measurement of loss of waters of the US.

i. **Non-tidal Wetland** - A non-tidal wetland is a wetland (i.e., a water of the US) that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at item (p) of this section or at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

j. **Notification** - Process by which the SCDOT notifies District Engineer and appropriate resource and certifying agencies in accordance with Special Condition III b. of its request for authorization under this general permit.

k. **Perennial Stream** - Perennial streams are streams that flow most of the year in a well-defined channel.

l. **Project** - A transportation related proposal by S. C. Department of Transportation (SCDOT) funded either with State, Federal, or combination State and Federal funds.

m. **Single and Complete Project** - The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers (see definition of independent utility). For linear projects, the "single and complete project" (i.e., a single and complete crossing) will apply to each crossing of a separate water of the US (i.e., a single waterbody) at that location. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies. In situations where a linear project crosses the same waterbody at separate and distant locations, each crossing is considered a single and complete project.

n. **Stream Bed** - A stream bed is the substrate of the stream channel between the ordinary high water marks (33 CFR 328 and 329). The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

o. **Tidal Wetland** - A tidal wetland is a wetland (i.e., water of the US) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where that rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line (i.e., spring high tide line) and are inundated by tidal waters two times per lunar month, during spring high tides.

p. **Wetlands** - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, bogs, and similar areas.

II. General Conditions:

- a. All activities authorized by this general permit that involve the discharge of dredged or fill material in waters of the United States will be consistent with applicable water quality standards, effluent limitations, and standards of performance, prohibitions, pre-treatment standards and management practices established pursuant to the Clean Water Act (33 U.S.C. 1344) and applicable State and local law.
- b. All activities identified and authorized herein shall be consistent with the terms and conditions of this General Permit; any variance not specifically identified and authorized herein shall constitute a violation of the terms and conditions of this permit which may result in the modification, suspension, or revocation of the authorization, as set forth more specifically in General Condition c. below and in the institution of such legal proceedings as the United States Government may consider appropriate.
- c. Authorization of a specific work or structure authorized herein may be summarily suspended in whole or in part upon a finding by the District Engineer that immediate suspension would be in the general public interest or there has been a violation of any terms and conditions of this permit. Such suspension shall be effective upon receipt by the permittee of a written notice thereof which shall indicate (1) the extent of the suspension, (2) the reasons for this action, and (3) any corrective or preventative measures to be taken by a permittee which are deemed necessary by the District Engineer to abate imminent hazards to the general public interest. A permittee shall take immediate action to comply with the provisions of this notice. Within ten (10) days following the receipt of this notice of suspension, the permittee may request a meeting with the District Engineer or a public hearing to present information relevant to a decision whether their permit should be reinstated, modified, or revoked. If a public hearing is requested it shall be conducted pursuant to procedures prescribed by the Chief of Engineers. After completion of the public hearing or within a reasonable time after issuance of the suspension notice to the permittee if no hearing is requested, the authorization of the specific work or structure will be reinstated, modified, or revoked. Any modification, suspension, or revocation of authorization under this General Permit shall not be the basis for any claim for damages against the United States.
- d. The permittee shall allow the District Engineer or his authorized representative(s) to make periodic inspections at any time deemed necessary in order to assure that the activity being performed under authority of this permit is in accordance with the terms and conditions prescribed herein.
- e. This General Permit does not convey any property rights, either in real estate or material, or any exclusive privileges; and it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations, nor does it obviate the requirement to obtain other Federal, State, or local assent or to comply with any applicable standards required by ordinance for the activities authorized herein. Other Federal, State, and/or local agencies are not limited by this document and may impose more stringent requirements than those stated herein as they see fit.

- f. Upon receipt of a notice from the District Engineer for failure to comply with the terms, conditions, or standards of this General Permit shall, the structure owner must within 60 days without expense to the United States and in such manner as directed by the District Engineer or his authorized representative(s), effect compliance with the terms, conditions, and standards or remove the previously authorized structure.
- g. SCDOT understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.
- h. This general permit does not authorize the interference with any existing or proposed Federal project and SCDOT will not be entitled to compensation for damages or injury to the structures or work authorized herein which may be caused by or result from existing or future operations undertaken by the United States in the public interest.
- i. SCDOT must notify the District Engineer if the activity authorized by this General Permit may affect any historic properties listed, or which may be eligible for listing on the National Register of Historic Places. The activity is not authorized until the procedures for the protection of cultural resources (Appendix C to 33 CFR 325) have been completed on the eligible property or structure.
- j. If SCDOT, prior to or during the performance of the work authorized herein, encounters previously unidentified archeological remains or cultural resources within the area subject to Department of the Army authorization, the applicant agrees to cease work and contact the District Engineer, so that further coordination with the South Carolina Institute of Archaeology and Anthropology and the South Carolina Department of Archives and History may be conducted.
- k. SCDOT must notify the District Engineer if federally-listed or proposed for listing, endangered or threatened species or designated critical habitat are known to exist in the project vicinity. The activity is not authorized until the District Engineer determines that the requirements of the Endangered Species Act have been satisfied.
- l. If the District Engineer, or his designee, determines that Federal threatened or endangered species are known to exist in the project area and that such species or designated critical habitat may be affected by the proposed work, then authorization of that particular project is at the discretion of the US Army Corps of Engineers. Work may not commence until notification by the District Engineer that the requirements of the Endangered Species Act have been satisfied and the activity is authorized.
- m. At his discretion, the District Engineer, or his designee, may determine that this general permit will not be applicable to a specific construction proposal. In such case, the procedure for processing an individual or nationwide permit, whichever is applicable, in accordance with 33 CFR 325 will be available.

n. The permittee must make every reasonable effort to conduct the work authorized herein in a manner so as to avoid and minimize any adverse impact to fish, wildlife, and other environmental resources.

o. The permittee must make every reasonable effort to conduct the work authorized herein in a manner to ensure that there is no more than a minimal adverse effect on water quality.

p. As determined by the District Engineer, or his designee, there will be no unreasonable interference with navigation or the right of the public to riparian access by the existence or use of activities authorized by this general permit.

q. All projects authorized under this general permit must be a single and complete project and meet the requirements for independent utility. A project that is determined to be single and complete will not be segmented or "piece mealed" in order to qualify for this general permit.

r. SCDOT is advised that development activities in a 100-year floodplain, as designated in the Federal Emergency Management Agency's (FEMA) Flood Insurance Study Data, are subject to the floodplain management regulations of the National Flood Insurance Program [(NFIP) (44 CFR)]. The NFIP further prohibits any development within a designated floodway, including placement of fill that results in any increase in base flood elevations. SCDOT must also comply with the FEMA-U.S. Federal Highway Agreement on Floodplain Management.

III. Special Conditions:

a. This permit will require appropriate state and federal agency coordination prior to ACOE approval when a project represents an intrusion into designated Outstanding Resource Waters, Wild and Scenic Rivers, Trout Streams listed in State Regulations 61-68 and 61-69, National Estuarine Sanctuary, Designated Shellfish Ground, State Heritage Trust Preserve, State Parks, National Wildlife Refuge, or protected land (previous mitigation/restoration area).

b. All projects eligible under this permit which impact less than or equal to 0.5 acre of jurisdictional wetlands (tidal or freshwater) and less than or equal to 100 linear feet of stream impacts per single and complete project can begin work prior to receiving written approval from the Charleston District, U. S. Army Corps of Engineers (ACOE). However, SCDOT will be required to submit the following information to the ACOE and all appropriate agencies prior to commencement of work:

- (1) Jurisdictional Determination (SAC #, approval letter, and map),
- (2) Location Map (directions, lat/long),
- (3) SHPO concurrence,
- (4) Biological Assessment Report
 - Federal and State T&E
 - Habitat Survey
 - The biological assessment and project description will be sent to SCDNR for their review if projects are located in the primary priority areas as identified in Appendix A (Primary Priority Areas)
- (5) Impact Assessment Worksheet,

(6) Drawings on 11" x 17" (Cross section, bankfull, Plan view, etc),

(7) Description of Avoidance and Minimization,

- SCDOT will use 2:1 slopes, while maintaining slope stability, to further minimize construction impact. On a case-by-case basis, the ACOE may approve the use of 3:1 slopes without guardrail if it can be demonstrated that the roadway footprint within waters of the U.S. is approximately the same as 2:1 with guardrail.
- SCDOT will examine the reasonableness of roadway shifts (if multilane widening) immediately to either side of the existing roadway to reduce wetland impacts and provide justification there of.

(8) Completed ACOE application,

(9) Mitigation Plan (as defined in (III.q.) or (III.r.)).

c. Projects impacting greater than 0.5 acre of wetlands or greater than 100 linear feet of stream impacts per single and complete project will be required to submit the information described above (III. b.) to the ACOE. However, SCDOT cannot begin work until written approval is received from the ACOE.

d. Construction activities in waters of the US will be minimized to the maximum extent practicable during the months of March, April, May and June because of potential impacts to spawning fishes.

e. No activity may substantially disrupt the necessary life-cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area. Culverts placed in streams must be installed to maintain low flow conditions.

f. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material must avoid and minimize potential impacts to shellfish resources to the greatest extent possible. Activities should occur in areas with the least amount of shellfish or in areas void of shellfish resources, if possible. Direct encroachment on any shellfish beds should be avoided.

g. Activities, including structures and work in navigable waters of the US or discharges of dredged or fill material, in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., excavate, fill, or smother downstream by substantial turbidity) of an important spawning area are not authorized.

h. To the maximum extent practicable, the activity must be designed to maintain preconstruction downstream flow conditions (e.g., location, capacity, and flow rates). Furthermore, the activity must not permanently restrict or impede the passage of normal or expected high flows and the structure or discharge of dredged or fill material must withstand expected high flows. The activity must, to the maximum extent practicable, provide for retaining excess flows from the site, provide for maintaining surface flow rates from the site similar to preconstruction conditions, and provide for not increasing water flows from the project site, relocating water, or redirecting water flow beyond preconstruction conditions.

i. Stream channelizing and/or relocation will be reduced to the minimal amount necessary, and the activity must, to the maximum extent practicable, reduce adverse effects such as flooding or erosion downstream and upstream of the project site, unless the activity is part of a larger system designed to manage water flows. Specifically, necessary stream channelizing and/or relocation will not result in significant differences in channel dimensions within the project limits compared to upstream and downstream dimensions. In most cases, it will not be a requirement to conduct detailed studies and monitoring of water flow.

j. Appropriate soil and erosion control methods must be used at all times during construction activities. Prior to the initiation of the project, sediment barriers such as silt fencing, hay bales or other suitable devices must be placed between the adjacent wetlands or waterways and the project construction and staging areas. All erosion control methods must be regularly inspected and maintained in functional order during the course of the project. All exposed soils, either in the project area or staging area must be contained during construction activities and then permanently stabilized upon completion of the project. Once initiated, projects must be carried to completion in an expeditious manner in order to minimize the period of disturbance. The permittee is encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

k. All steps necessary must be taken to prevent oil, tar, trash, debris and other pollutants from entering adjacent wetlands and/or waterways.

l. When practicable, stream crossings are required to accommodate bankfull flows by maintaining the existing bankfull channel cross sectional area. Flows that exceed bankfull flow must be accommodated by placement of additional culverts above the bankfull elevation.

m. Information pertaining to the project for which a general permit has been applied will be kept for three years after actual construction of the project is finished.

n. Construction activities must avoid encroachment into any wetlands/ stream areas not designated as impact areas.

o. Riparian and emergent vegetation adjacent to right-of-way areas must not be cleared or adversely impacted.

p. SCDOT will mitigate for wetland impacts greater than 0.1 acre at prescribed ratios at the appropriate mitigation banks, given the absence of any reasonable opportunity for on-site mitigation.

q. SCDOT will submit to the ACOE and execute a mitigation plan for all perennial/ intermittent stream impacts greater than 100 linear feet per single and complete project for their review and approval. However, the ACOE has the discretion to request a mitigation plan for stream impacts that they deem significant. The mitigation plan could include onsite mitigation in the form of causeway removal, installation of tidal exchange pipes, flood plain culverts, bank stabilization, instream structures, and/or use of an approved Mitigation Bank. No mitigation will be required for impacts to ephemeral streams.

r. This permit allows for SCDOT to perform stream and wetland restoration activities associated with a proposed mitigation plan. SCDOT will not have to submit for a separate permit for activities in waters of the US associated with the restoration of former waters, the enhancement of degraded tidal and non-tidal wetlands and riparian areas, and the restoration and enhancement of tidal/ non-tidal streams and tidal/ non-tidal open waters. These activities may include installation of ditch plugs, the placement of in-stream habitat structures, modifications of stream bed and/or banks to restore or create meanders, or the creation of riffle and pool stream structures.

IV. Prohibited Activities:

All work that exceeds the terms and conditions specified herein is prohibited unless an Individual or Nationwide Department of the Army Permit has been obtained from the Corps of Engineers. All work for purposes other than those specified herein is expressly not authorized by this document.

V. Penalties for Violations:

Authorization obtained under this General Permit limits the size, length and use of structures. Any deviation from the specifications, or other terms or conditions of the General Permit shall constitute a violation of the Section 10 of the Rivers and Harbors Act of 1899 and/or Section 404 of the Clean Water Act, and may result in the District Engineer seeking judicial relief to have the permittee remove the structure or work and/or restore the project area to its former condition, as well as the imposition of penalties as provided by law.

VI. Limits Of Federal Liability:

In issuing this permit, the Federal Government does not assume any liability for the following:

- a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.
- b. Damages to the permitted project or uses thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest.
- c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.
- d. Design or construction deficiencies associated with the permitted work.
- e. Damage claims associated with any future modification, suspension, or revocation of this permit.

VI. Revocation of the General Permit:

This permit may be revoked by issuance of a public notice at any time the District Engineer determines that the cumulative effects of the activities authorized herein have an adverse effect on the public interest. Following such revocation, any future activities in areas covered by this General Permit will be processed as Individual or Nationwide Permits.

VII. Duration of the General Permit.

This General Permit will cover activities started within five (5) years and completed within six (6) years after the date of issuance unless this permit is revoked in the interim. Revoking the General Permit will not affect work performed in accordance with the conditions stated herein. At the end of the first year and every succeeding year, the Corps of Engineers and the Federal and State regulatory and resource agencies will jointly review activities authorized by this General Permit to determine if significant cumulative impacts have resulted. If the District Engineer determines revocation of this permit, in whole or in part, may be in order due to cumulative impacts, a public notice of the intention will be issued and after a review of all additional data submitted, action will be taken to amend, modify or revoke this permit as appropriate. Revocation of the General Permit will not affect the work that had been authorized when the General Permit was in effect if such work is in accordance with the provisions contained herein.

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

This permit shall become effective on the date of the District Engineer's signature.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:



(DISTRICT ENGINEER)

14 Aug 06

(DATE)

or his Designee

Tina B. Hadden
Chief, Regulatory Division

Nationwide Permit 3 - Maintenance

Activities related to: (i) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable, structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area including those due to changes in materials, construction techniques, or current construction codes or safety standards which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction. This NWP authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the District Engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(ii) Discharges of dredged or fill material, including excavation, into all waters of the US to remove accumulated sediments and debris in the vicinity of, and within, existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and the placement of new or additional riprap to protect the structure, provided the permittee notifies the District Engineer in accordance with General Condition 13. The removal of sediment is limited to the minimum necessary to restore the waterway in the immediate vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend further than 200 feet in any direction from the structure. The placement of rip rap must be the minimum necessary to protect the structure or to ensure the safety of the structure. All excavated materials must be deposited and retained in an upland area unless otherwise specifically approved by the District Engineer under separate authorization. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the District Engineer.

(iii) Discharges of dredged or fill material, including excavation, into all waters of the US for activities associated with the restoration of upland areas damaged by a storm, flood, or other discrete event, including the construction, placement, or installation of upland protection structures and minor dredging to remove obstructions in a water of the US. (Uplands lost as a result of a storm, flood, or other discrete event can be replaced without a Section 404 permit provided the uplands are restored to their original pre-event location. This NWP is for the activities in waters of the US associated with the replacement of the uplands.) The permittee must notify the District Engineer, in accordance with General Condition 13, within 12-months of the date of the damage and the work must commence, or be under contract to commence, within two years of the date of the damage. The permittee should provide evidence, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration. The restoration of the damaged areas cannot exceed the contours, or ordinary high water mark, that existed before the damage. The District Engineer retains the right to determine the extent of the pre-existing conditions and the extent of any restoration work authorized by this permit. Minor dredging to remove obstructions from the adjacent waterbody is limited to 50 cubic yards below the plane of the ordinary high water mark, and is limited to the amount necessary to restore the pre-existing bottom contours of the waterbody. The dredging may not be done primarily to obtain fill for any restoration activities. The discharge of dredged or fill material and all related work needed to restore the upland must be part of a single and complete project. This permit cannot be used in conjunction with NWP 18 or NWP 19 to restore damaged upland areas. This permit cannot be used to reclaim historic lands lost, over an extended period, to normal erosion processes.

This permit does not authorize maintenance dredging for the primary purpose of navigation and beach restoration. This permit does not authorize new stream channelization or stream relocation projects. Any work authorized by this permit must not cause more than minimal degradation of water quality, more than minimal changes to the flow characteristics of the stream, or increase flooding (See General Conditions 9 and 21). (Sections 10 and 404)

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Section 404(f) exemption for maintenance.

Nationwide Permit 7 – Outfall Structures and Maintenance

Activities related to: (i) Construction of outfall structures and associated intake structures where the effluent from the outfall is authorized, conditionally authorized, or specifically exempted, or are otherwise in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (Section 402 of the CWA), and (ii) Maintenance excavation, including dredging, to remove accumulated sediments blocking or restricting outfall and intake structures, accumulated sediments from small impoundments associated with outfall and intake structures, and accumulated sediments from canals associated with outfall and intake structures, provided that the activity meets all of the following criteria:

- a. The permittee notifies the District Engineer in accordance with General Condition 13;
- b. The amount of excavated or dredged material must be the minimum necessary to restore the outfalls, intakes, small impoundments, and canals to original design capacities and design configurations (i.e., depth and width);
- c. The excavated or dredged material is deposited and retained at an upland site, unless otherwise approved by the District Engineer under separate authorization; and
- d. Proper soil erosion and sediment control measures are used to minimize reentry of sediments into waters of the US.

The construction of intake structures is not authorized by this NWP, unless they are directly associated with an authorized outfall structure. For maintenance excavation and dredging to remove accumulated sediments, the notification must include information regarding the original design capacities and configurations of the facility and the presence of special aquatic sites (e.g., vegetated shallows) in the vicinity of the proposed work. (Sections 10 and 404)

Nationwide Permit 14 – Linear Transportation Projects

Activities required for the construction, expansion, modification, or improvement of linear transportation crossings (e.g., highways, railways, trails, airport runways, and taxiways) in waters of the US, including wetlands, if the activity meets the following criteria:

a. This NWP is subject to the following acreage limits:

(1) For linear transportation projects in non-tidal waters, provided the discharge does not cause the loss of greater than 1/2-acre of waters of the US; or

(2) For linear transportation projects in tidal waters, provided the discharge does not cause the loss of greater than 1/3-acre of waters of the US.

b. The permittee must notify the District Engineer in accordance with General Condition 13 if any of the following criteria are met:

(1) The discharge causes the loss of greater than 1/10-acre of waters of the US; or

(2) There is a discharge in a special aquatic site, including wetlands;

c. The notification must include a compensatory mitigation proposal to offset permanent losses of waters of the US to ensure that those losses result only in minimal adverse effects to the aquatic environment and a statement describing how temporary losses will be minimized to the maximum extent practicable;

d. For discharges in special aquatic sites, including wetlands, and stream riffle and pool complexes, the notification must include a delineation of the affected special aquatic sites;

e. The width of the fill is limited to the minimum necessary for the crossing;

f. This permit does not authorize stream channelization, and the authorized activities must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality of any stream (see General Conditions 9 and 21);

g. This permit cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars; and

h. The crossing is a single and complete project for crossing waters of the US. Where a road segment (i.e., the shortest segment of a road with independent utility that is part of a larger project) has multiple crossings of streams (several single and complete projects) the Corps will consider whether it should use its discretionary authority to require an Individual Permit. (Sections 10 and 404)

Note: Some discharges for the construction of farm roads, forest roads, or temporary roads for moving mining equipment may be eligible for an exemption from the need for a Section 404 permit (see 33 CFR 323.4).

Nationwide Permit 23 – Approved Categorical Exclusions

Activities undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department where that agency or department has determined, pursuant to the Council on Environmental Quality Regulation for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) (40 CFR part 1500 et seq.), that the activity, work, or discharge is categorically excluded from environmental documentation, because it is included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment, and the Office of the Chief of Engineers (ATTN: CECW-OR) has been furnished notice of the agency's or department's application for the categorical exclusion and concurs with that determination. Before approval for purposes of this NWP of any agency's categorical exclusions, the Chief of Engineers will solicit public comment. In addressing these comments, the Chief of Engineers may require certain conditions for authorization of an agency's categorical exclusions under this NWP. (Sections 10 and 404)



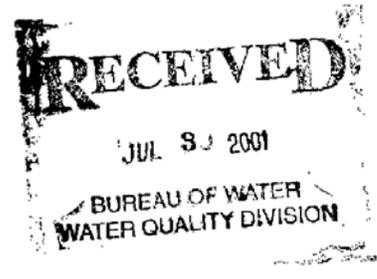
REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69 A Hagood Avenue
CHARLESTON, SOUTH CAROLINA 29403-5107

July 25, 2001

Regulatory Division

Ms. Blanche S. Sproul
Environmental Program Administrator
South Carolina Department of Transportation
P. O. Box 191
Columbia, South Carolina 29202



Dear Ms. Sproul:

This is in response to your letter dated August 3, 2000, concerning a five year extension for Department of the Army General Permit number 95-14-001 issued to your agency for certain minor highway projects in the State of South Carolina.

As you are aware the above-mentioned general permit has been revised. The new general permit, number 2000-14-001, has been finalized and I have enclosed a copy for your files.

Respectfully,

A handwritten signature in black ink, appearing to read "Robert H. Riggs".

Robert H. Riggs
Chief, Regulatory Division

Enclosure:

General Permit for Navigable Waters

General Permit No. 2000-14-002

Name of Applicant: S. C. Department of Transportation

Effective Date: July 25, 2001

Expiration Date: July 25, 2006

DEPARTMENT OF THE ARMY

GENERAL PERMIT

A General Permit to perform work in or affecting waters of the United States, upon the recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899 (33 U.S.C. 403) and/or Section 404 of the Clean Water Act (33 U.S.C. 1344), is hereby issued by authority of the Secretary of the Army by the

District Engineer
U.S. Army Engineer District
Charleston
Corps of Engineers
Post Office Box 919
Charleston, South Carolina 29402

to authorize the discharge of dredged and/or fill material, incidental to roadway, bridge, and other public transportation related construction in waters of the United States including "navigable waters of the United States", within the boundaries of the Charleston District in the State of South Carolina. This General Permit is applicable to individual projects impacting not more than 5 acres of waters of the United States, including wetlands or not more than 100 linear feet of stream. This General Permit is not considered to supersede or otherwise modify applicable Nationwide Permits (33 CFR 330).

This General Permit contains certain limitations intended to protect the environment including natural and cultural resources. However, conformance with the conditions contained in this permit does not necessarily guarantee authorization. In cases where the District Engineer, or his designee, considers it necessary, an individual Department of the Army permit will be required. Construction, dredging, or fill operations not specifically covered under this General Permit are prohibited unless authorized by a separate Department of the Army permit.

I. DEFINITIONS:

a. **Project** - transportation related proposal by S. C. Department of Transportation (SCDOT) funded either with State, Federal, or combination State and Federal funds.

b. **Fill Material** -The term "fill material" means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a waterbody. The term does not include any pollutant discharged into the water primarily to dispose of waste, as that activity is regulated under section 402 of the Clean Water Act. (See 33 CFR 323.3(c)) concerning the regulation of the placement of pilings in waters of the United States.

c. **Discharge of fill material** -The term "discharge of fill material" means the addition of fill material into waters of the United States. The term generally includes, without limitation, the following activities: Placement of fill that is necessary for the construction of any structure in a water of the United States; the building of any structure or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; dams and dikes; artificial islands; property protection and/or reclamation devices, such as riprap, groins, seawalls, breakwaters, and revetments; beach nourishment; levees; fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and subaqueous utility lines; and artificial reefs. The term does not include plowing, cultivating, seeding, and harvesting for the production of food, fiber, and forest products (See Section 323.4 for the definition of these terms). See 33 CFR 323.3(c) concerning the regulation of the placement of pilings in waters of the United States.

d. **Wetlands** - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances, do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, bogs, and similar areas.

e. **Eligible Activities** - Projects carried out by SCDOT that typically consist of rehabilitation, replacement, refurbishment and/or retrofitting of material and design to bridge structures and box culverts, in such manner as to restore or maintain usefulness, increase safety or extend life of structure or its purpose. These efforts may include placing of riprap (up to 500 linear feet); installing guardrails, pipes¹ and box culverts²; widening of bridge approach ways (to include relocation of existing access to accommodate guardrails); and paving or repaving of roadway surface. Also included in these activities are roadway intersections and horizontal and vertical curve improvements where a need has been demonstrated to improve durability, safety, or capacity, and that said improvements would occur essentially on existing alignment, except where minor deviation is allowed to flatten the roadway's horizontal or vertical curvature. Cleaning and repairing of existing outfall and roadway ditches are also included in these activities.

Also listed as eligible activities are projects carried out by SCDOT that typically consist of widening existing roadways more than one additional lane width and major bridge replacement projects involving the addition of more than one travel lane. These projects include widening roadways equally about the existing roadway centerline, immediately to either side, or

¹ Pre-cast concrete pipes and pre-cast concrete box culverts are jurisdictional only in navigable waters of the United States under Section 10 of the Rivers and Harbors Act of 1899. Installation of pre-cast concrete pipes and pre-cast concrete box culverts in other waters of the United States do not constitute a discharge of dredged or fill material and are not subject to Corps jurisdiction under Section 404 of the Clean Water Act.

combination thereof, for purpose of providing improved safety features and/or vehicle capacity. No widening of any portion entirely on new location through wetlands is authorized by this General Permit. Projects of this nature typically require permitting agency comment under NEPA during development of the draft environmental assessment.

f. **Category II Wetlands** - Habitat of high value for evaluation species and is relatively scarce or becoming scarce on a national basis or in the ecoregion section.

g. **Notification** - Process by which the SCDOT notifies District Engineer and appropriate resource and certifying agencies in accordance with Special Condition III d. of its request for authorization under this general permit from the ACOE for a project impacting between 1.0 and 5.0 acres of wetlands and/or impacts to more than 75 linear feet of streams with flows less than 1 cubic foot per second and impacts to more than 50 linear feet of streams with flows greater than 1 cubic foot per second. ACOE will afford agencies contacted 15 days upon receipt to provide response. Projects impacting between 3 acres and 5 acres of wetlands or more than the defined stream linear footage will be excluded from this general permit if the U.S. Fish and Wildlife Service notifies the ACOE of its belief that the impacts are more than minimal.

h. **Coastal Plain** – For the purpose of this general permit in order to differentiate between coastal and non-coastal plain streams, please refer to the map in appendix B.

II. GENERAL CONDITIONS:

a. All activities authorized by this general permit that involve the discharge of dredged or fill material in waters of the United States will be consistent with applicable water quality standards, effluent limitations, and standards of performance, prohibitions, pre-treatment standards and management practices established pursuant to the Clean Water Act (33 U.S.C. 1344) and applicable State and local law.

b. As determined by the District Engineer, or his designee, there will be no unreasonable interference with navigation or the right of the public to riparian access by the existence or use of activities authorized by this general permit.

c. The permittee, upon receipt of written notice from the Charleston District Engineer, or his designee, of failure to comply with the terms or conditions of this general permit, will, within 60 days, without expense to the U. S. Government, and in such manner as the Charleston District Engineer, or his designee, bring the project into compliance with the terms and conditions, or return the worksite to a pre-work condition. Remediation or restoration and other enforcement provisions will be directed by the lead enforcement agency.

d. The permittee must make every reasonable effort to perform the work authorized herein in a manner so as to minimize any adverse impact on fish, wildlife, and natural environmental values.

e. The permittee must perform the work authorized herein in a manner so as to minimize any degradation of water quality. The SCDOT Best Management Practices (BMPs) have been included as Appendix A.

f. The permittee will permit the Charleston District Engineer or his representative(s) to make periodic inspections at any time deemed necessary in order to assure that the activity is being performed or maintained in strict accordance with the Special and General Conditions of this permit.

g. This general permit does not convey any rights, either in real estate or material, or any exclusive privileges; and it does not authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations, nor does it obviate the requirement to obtain State or local assent required by law for the activity authorized herein.

h. Authorization provided by this general permit may be either modified, suspended, or revoked in whole or in part, if the Charleston District Engineer, acting on behalf of the Secretary of the Army, determines that such action would be in the best public interest. Unless subject to modification, suspension or revocation, the term of this general permit shall be five years from the date of approval. Any modification, suspension, or revocation of this authorization will not be the basis for any claim for damages against the U. S. Government.

i. This general permit does not authorize the interference with any existing or proposed Federal project and the permittee will not be entitled to compensation for damages or injury to the structures or work authorized herein which may be caused by or result from existing or future operations undertaken by the United States in the public interest.

j. This general permit will not be applicable to proposed construction when the Charleston District Engineer, or his designee, determines that the proposed activity would significantly affect the quality of the human environment.

k. This general permit will not be applicable if the Charleston District Engineer, or his designee, determines after any necessary investigations, that the proposed activity would adversely affect areas which possess historic, cultural, scenic, conservation, or recreational values. Application of this exemption applies to:

(1) Rivers named in Section 3 of the Wild and Scenic Rivers Act (15 U.S.C. 1273), those proposed for inclusion as provided by Sections 4 and 5 of the Act and wild, scenic, and recreational rivers established by State and local entities.

(2) Historic, cultural, or archaeological sites, listed in or eligible for inclusion in the National Register of Historic Places, as defined in the National Historic Preservation Act of 1966 and its codified regulations, the National Historic Preservation Amendment Acts of 1980 and 1992, the Abandoned Shipwreck Act of 1987 and the Native American Graves Protection and Repatriation Act.

(3) Sites included in or determined eligible for listing in the National Registry of Natural Landmarks.

(4) Endangered or threatened species or habitat of such species as determined by the Secretaries of Interior or Commerce in accordance with the Endangered Species Act (16 U.S.C. 1531).

l. The permittee is advised that development activities in a 100-year floodplain, as designated in the Federal Emergency Management Agency's (FEMA) Flood Insurance Study Data, are subject to the floodplain management regulations of the National Flood Insurance Program [(NFIP) (44 CFR)]. The NFIP further prohibits any development within a designated floodway, including placement of fill that results in any increase in base flood elevations. SCDOT must also comply with the FEMA-U.S. Federal Highway Agreement on Floodplain Management.

m. That all activities authorized herein shall be consistent with the terms and conditions of this permit; and that any activities not specifically authorized herein shall constitute a violation of the terms and conditions of this permit.

n. At his discretion, the Charleston District Engineer, or his designee, may determine that this general permit will not be applicable to a specific construction proposal. In such case, the procedure for processing an individual or nationwide permit, whichever is applicable, in accordance with 33 CFR 325 will be available.

III. SPECIAL CONDITIONS:

a. This General Permit is not applicable to projects requiring placement of dredge or fill material in tidal waters, tidal wetlands, or critical areas of the coastal zone.

b. This permit will not apply when a project represents a new location intrusion into designated Outstanding Resource Waters, and Trout Streams listed in State Regulations 61-68 and 61-69.

c. All projects eligible under this permit that impact less than or equal to 0.1 acres of jurisdictional wetlands or less than 25 linear feet of stream will not require mitigation. Projects impacting greater than 0.1 acres but less than 1.0 acre of jurisdictional wetlands and/or greater than 25 linear feet of coastal plain stream will be mitigated by debiting the Departments freshwater mitigation bank at its predetermined ratios, given the absence of any reasonable opportunity for on-site mitigation. Projects having stream impacts greater than 25 linear feet to non-coastal plain streams shall be mitigated in-kind at appropriate locations. Mitigation plans for projects that exceed the threshold limits outlined in Section III (e) shall be submitted with project plans for agency review. The SCDOT will provide written documentation to the District Engineer and South Carolina Department of Health and Environmental Control (DHEC) Office of Ocean and Coastal Resource Management (OCRM) and Office of Environmental Quality Control (EQC) of its intent to apply the general permit to projects whose impacts to waters of the United States are less than 1.0 acre and/or less than and/or impacts less than or equal to 75 linear feet of streams with flows less than 1 cubic foot per second and impacts to less than or equal to 50 linear feet of streams with flows greater than 1 cubic foot per second. Information will include location map and amount of wetland impact.

d. Projects impacting between 1.0 and 5.0 acres of wetlands and/or impacts more than 75 linear feet of streams with flows less than 1 cubic foot per second and impacts to more than 50 linear feet of streams with flows greater than 1 cubic foot per second will require the following additional information/actions:

(1.) SCDOT will examine the reasonableness of roadway shifts (if multilane widening) immediately to either side of the existing facility or about centerline at the location of wetland impact to reduce wetland involvement.

(2.) Steepening of slopes to 2:1 while maintaining slope stability, will be undertaken to further minimize construction impact. In locations where the roadway improvements impact Category II Wetlands, the Department will reduce median width to 4.7 meters (approximately 15 feet).

(3.) After SCDOT explores all opportunity for on-site mitigation, mitigation of wetland impact will consist of debiting the Department's freshwater wetland mitigation bank. Debits will be made at the prescribed ratios established by the bank and its signatory parties. In the absence of the Department's freshwater mitigation bank, other forms of mitigation may be used providing acceptability by all permitting and certifying agencies involved. Stream impacts greater than 25 linear feet to non-coastal plain streams shall be mitigated in-kind at appropriate locations. Stream mitigation plans shall be submitted with project plans for agency review. Mitigation for relocation of non-coastal plain streams shall be in accordance with the stream relocation methodology outlined in special condition "p".

e. SCDOT will advise the District Engineer, resource and certifying agencies (FWS, NMFS, SCDNR, SCDHEC-OCRM, SCDHEC-EQC, EPA) in writing of the intent to apply the general permit to projects whose impacts fall between 1 and 5 acres of wetlands and/or impacts to more than 75 linear feet of streams with flows less than 1 cubic foot per second and impacts to more than 50 linear feet of streams with flows greater than 1 cubic foot per second. Submission of plan sheets on which field delineations were made will be provided in addition to environmental documentation and other supporting material to reflect evidence of SCDOT having complied with all requirements and conditions of the General Permit including item d above and to facilitate environmental impact review by the agencies. The District Engineer, or his designee, will have 30 days from receipt of information in which to render a decision. Within this period, the District Engineer will accept input from appropriate agencies prior to reaching a decision in accordance with the notification definition contained herein. Projects impacting between 3 acres and 5 acres of wetlands or more than the defined stream linear footage will be excluded from this general permit if the U.S. Fish and Wildlife Service notifies the ACOE of its opinion that the impacts are more than minimal.

f. Projects developed solely with non-federal funds must comply with all special and general conditions, including General Condition II k.

g. Construction activities in state navigable waters, lakes and/or streams will be minimized to the maximum extent practicable during the months of March, April, May and June because of potential impacts to spawning fishes.

- h. All reasonable efforts will be made to design culverts to facilitate fish passage.
- i. Information pertaining to the project for which a general permit has been applied will be kept for three years after final payment of voucher for construction of the project.
- j. All projects that impact wetlands on new locations and/or natural streams greater than 100 feet in length per site are not eligible under this general permit.
- k. Prior to the beginning of any construction activities, appropriate erosion control measures, such as silt fences, silt barriers or other suitable devices, must be placed between the construction area and affected waterways (wetlands); and maintained in a functioning capacity until the area is permanently stabilized upon completion of the project.
- l. All steps necessary must be taken to prevent oil, tar, trash, debris and other pollutants from entering adjacent wetlands and/or waterways.
- m. Once initiated, projects must be carried to completion in an expeditious manner in order to minimize the period of disturbance and upon completion, all disturbed areas are permanently stabilized with vegetative cover and/or rip-rap, as appropriate.
- n. Construction activities must avoid to the extent practicable, encroachment into any wetlands/stream areas not designated as impact areas. To the greatest extent practicable, in kind mitigation must be utilized.
- o. Riparian and emergent vegetation adjacent to right-of-way-areas must not be cleared or adversely impacted.
- p. Realigned channel segments involving greater than 50 linear feet of natural, perennial, non-coastal plain streams with flows greater than one cubic foot per second would be configured and sized to match the natural channel system taking into account topographic setting and watershed characteristics. If relocation of the stream channel is unavoidable, the design of the replacement channel should provide dimension, pattern, and profile that afford natural channel stability. For small, "minor relocation" of streams at the inlet and outlet of structures, the channel immediately upstream of the structure would be mimicked if it is stable.

When practicable, the Department would employ a proven and accepted method of study for natural channel relocation through a process of stream classification consistent with Dave Rosgen's Classification System. A detailed explanation will be provided if the Department determines it is not practicable. The objectives of his system are: 1) to provide methodology for predicting a stream's behavior based on its appearance; 2) determine specific hydraulic and sediment transport relationships for stream type and state; 3) to provide mechanisms for data comparison of similar reaches; and 4) provide a reference for communicating stream conditions and morphology across disciplines.

The sequence of a channel analysis would be as follows:

Data Collection.

Data collection includes both office study and field surveys. Much of the information needed for initial classification would be obtained from topographic mapping and aerial photography. A field survey would be conducted to provide more detailed information for refinement of the initial classification as well as the analysis and design process. It should include, as a minimum, collection of the following data:

Classification

- Bankfull channel width
- Mean Channel depth
- Bankfull maximum depth
- Bankfull cross-sectional area
- Channel slope
- Sinuosity
- Bed and Bank material
- Width of the flood-prone area

Analysis and Design

- Channel dimensions
- Channel pattern (e.g., meander length, amplitude, radius of curvature, and belt width)
- Channel profile (valley slope and average water surface slope)

With the data collected and further determination of stream features such as entrenchment ratio, width/depth ratio, and sinuosity, a stream type classification can be established.

Existing Conditions.

It is important to assess the condition of the stream as it relates to stability, state and causes of changes, potential future impacts and hydrologic and hydraulic requirements. This assessment process should address:

- Bank stability,
- Bed stability,
- Meander geometry,
- In-stream debris,
- Aggradation/degradation, and
- Discharge levels and conveyance requirements

Proposed Plan.

The evaluation process should provide the engineer with information and knowledge necessary to develop a channel relocation design that meets hydrological and ecological requirements and provides a natural stable system. When practicable, this plan would be implemented and monitored with the applicable morphological-metrics listed above as success criteria. A detailed explanation will be provided if

the SCDOT determines it is not practicable. The Department would undertake any necessary remediation actions if these measures of stability are not met within three years or one bank-full event (whichever is less) of construction completion. Natural materials conforming to those found in reference streams would be used for any remediation work (e.g., root wads for bank stabilization, logs or natural rocks for grade control).

q. A 40-foot wide forested riparian buffer would be established on either side of a relocated stream segment except where it may result in a safety hazard. If a forested buffer would result in a safety hazard, the Department will provide a detailed explanation. If the buffer is cleared for stream relocation, the area must be replanted with willow trees or other wetland species. No mowing or maintenance will be permitted in these buffer areas.

IV. CULTURAL RESOURCES:

1. If a permittee discovers any previously unknown historic or archaeological remains while accomplishing the activity authorized by this permit, he must immediately cease work and notify this office of what has been found. He will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

2. If a proposed activity authorized by the General Permit impacts a site potentially eligible for inclusion in the National Register of Historic Places, such activity is not authorized until the procedures for the protection of cultural resources (Appendix C to 33 CFR 325) have been completed.

V. ENDANGERED SPECIES:

1. If the District Engineer, or his designee, determines that Federal threatened or endangered species are known to exist in the project area and that such species or designated critical habitat may be affected by the proposed work, then that particular project is not authorized by this General Permit. If field surveys or additional information relative to a determination of the presence of endangered or threatened species at the project site is deemed necessary by the District Engineer or his designee then the thirty day clock will stop until such time as the information request is satisfied.

VI. LIMITS OF THIS AUTHORIZATION:

a. This permit does not obviate the need to obtain other Federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

VII. LIMITS OF FEDERAL LIABILITY:

In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof, as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

VIII. REEVALUATION OF PERMIT DECISION:

This office may reevaluate its decision on this permit in whole or in part at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. Failure to comply with the terms and conditions of this permit.

b. The information provided in support of your permit notification proves to have been false, incomplete, or inaccurate.

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures, in whole or in part, contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may, in certain situations (such as those specified in 33 CFR 209.170), accomplish the corrective measures by contract or otherwise and bill you for the cost.

IX. PENALTIES FOR VIOLATIONS. Authorization given under this General Permit is limited by the conditions specified above. Any deviation from the terms and conditions of the General Permit may constitute a violation of Section 404 of the Clean Water Act, and could result in the

Corps of Engineers seeking judicial relief to have the responsible party restore the adversely impacted waters of the United States to its former condition, as well as, the imposition of penalties as provided by law.

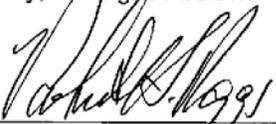
X. REVOCATION OF THE GENERAL PERMIT. This permit may be revoked by issuance of a public notice at any time the District Engineer determines that the cumulative effects of the activities authorized herein have a documented adverse effect on the public interest. Following such revocation, any future activities in areas covered by this General Permit will be processed as individual or nationwide permits, whichever is appropriate.

XI. DURATION OF THE GENERAL PERMIT. Unless this General Permit is revoked, activities will be authorized under this General Permit for a period of five (5) years from its date of issuance (i.e.: date of the District Engineer's signature). Unless this permit is revoked in the interim, SCDOT activities authorized and initiated within the five (5) year effective period of the General Permit will be honored by this office for a period not exceeding one (1) year subsequent to the expiration date of the General Permit. SCDOT activities impacting between 1.0 and 5.0 acres potentially authorized by this General Permit may not commence until receiving written approval from the U. S. Army Corps of Engineers. Revoking the General Permit will not affect work performed in accordance with the conditions hereby stated.

This permit shall become effective on the date of the District Engineer's signature.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



(DISTRICT ENGINEER)
PETER W. MUELLER, LTC

July 25, 2001
(DATE)

or his Designee
ROBERT H. RIGGS

APPENDIX F – INTERNET LINKS

- American Association of State Highway and Transportation Officials (AASHTO) Center for Environmental Excellence: <http://environment.transportation.org>
- National Environmental Policy Act: <http://ceq.eh.doe.gov/nepa/regs/nepa/nepaeqia.htm>
- CEQ Regulations: http://ceq.eh.doe.gov/nepa/regs/ceq/toc_ceq.htm
- CEQ web site: [Council on Environmental Quality](http://www.councilonenvironmentalquality.gov)
- CEQ Guidance: <http://ceq.eh.doe.gov/nepa/regs/guidance.html>
- FHWA regulations:
http://www.access.gpo.gov/nara/cfr/waisidx_99/23cfr771_99.html
- Technical Advisory (T 6640.8A), Guidance for Preparing and Processing Environmental and Section 4(f) Documents:
<http://www.fhwa.dot.gov/legsregs/directives/techadvs/t664008a.htm>
- FHWA Environmental Guidebook:
<http://www.environment.fhwa.dot.gov/guidebook/index.asp>
- Summary of Environmental Legislation Affecting Transportation (December 1998):
http://www.fhwa.dot.gov/environment/env_sum.htm
- Eminent Domain - South Carolina Law (Section 28-2-70 (C)):
<http://www.scstatehouse.net/code/t28c002.htm>
- SC Navigable Waters Regulations: <http://www.scdhec.gov/eqc/water/regs/r19-450.pdf>
- SC Navigable Waters Guidance:
<http://www.scdhec.gov/eqc/water/pubs/gdnavwt.pdf>
- SC 401 Water Quality Certification Regulations:
<http://www.scdhec.gov/eqc/water/regs/r61-101.pdf>
- OCRM Critical Area Permitting Regulations:
http://www.scdhec.gov/environment/ocrm/regs/docs/CAREgs_0605.pdf
- 23 CFR 771 – Environmental Impact and Related Procedures:
<http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0771.htm>
- Endangered Species Act: <http://www.fws.gov/endangered/esaall.pdf>
- Clean Water Act: <http://www.epa.gov/region5/water/pdf/ecwa.pdf>
- Executive Order 11990 – Protection of Wetlands:
<http://www.usace.army.mil/inet/functions/cw/cecwo/reg/exo11990.htm>
- Executive Order 11988 – Floodplain Management:
<http://www.usace.army.mil/inet/functions/cw/cecwo/reg/eo11988.htm>
- “Water Classifications & Standards (R.61-68):
<http://www.scdhec.net/eqc/water/regs/r61-68.doc>
- SC Classified Waters: <http://www.scdhec.net/eqc/water/regs/r61-69.doc>
- Farmland Protection Policy Act (FPPA) of 1981:
http://www.nrcs.usda.gov/programs/fppa/pdf_files/FPPA_Law.pdf
- Farmland Conversion Impact Rating Form:
http://www.nrcs.usda.gov/programs/fppa/pdf_files/CPA106.pdf

- Clean Air Act Amendments of 1990 (40 CFR 51):
http://www.access.gpo.gov/nara/cfr/waisidx_99/40cfr51_99.html
- Manual for Air Quality Considerations in Environmental Documents:
[http://knowledge.fhwa.dot.gov/cops/hcx.nsf/All+Documents/8D5ED1390AD0193485256A81005C1E20/\\$FILE/envdocs.doc](http://knowledge.fhwa.dot.gov/cops/hcx.nsf/All+Documents/8D5ED1390AD0193485256A81005C1E20/$FILE/envdocs.doc)
- 23 CFR 772 - Procedures For Abatement Of Highway Traffic Noise And Construction Noise: <http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0772.htm>
- 36 CFR 800 -- Protection Of Historic Properties: <http://www.achp.gov/regs-rev04.pdf>
- Executive Order 11593 - Protection And Enhancement Of The Cultural Environment:
http://www.gsa.gov/Portal/gsa/ep/contentView.do?P=XAE&contentId=12094&contentType=GSA_BASIC
- Final Nationwide Section 4(f) Evaluation and Approval for Federally-Aided Highway Projects with Minor Involvements with Public Parks, Recreation Lands, and Wildlife and Waterfowl Refuges:
<http://www.environment.fhwa.dot.gov/projdev/4fmparks.asp>
- Section 4(f) “de minimis” guidance:
<http://www.fhwa.dot.gov/hep/guidedeminimis.htm>
- FHWA Web Page on The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970: <http://www.fhwa.dot.gov/realestate/ua/index.htm>
- FHWA Actions To Address Environmental Justice In Minority Populations And Low-Income Populations:
http://www.fhwa.dot.gov/legsregs/directives/orders/6640_23.htm
- Community Impact Assessment - A Quick Reference for Transportation:
<http://www.ciatrans.net/TABLE.html>
- Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations:
<http://www.eh.doc.gov/oepa/guidance/justice/eo12898.pdf>
- 23 CFR 60 – Engineering (Addresses highways in vicinity of airports):
<http://www.washingtonwatchdog.org/documents/cfr/title23/part620.html>
- U.S. Coast Guard Bridge Permit Application Guide: <http://www.uscg.mil/hq/g-o/g-opt/BPAG%202000/BPAG%20COMDTPUB%20P16591.3B%20II%20Final%20Version.pdf>
- SC Navigable Waters Map: <http://www.scdhec.gov/eqc/water/pubs/navweb.pdf>
- SC Critical Areas Map: <http://www.scdhec.net/environment/ocrm/>

Note: The items shown in bold-face type are included in this appendix. The items not shown in bold-face type are available on the internet and may be accessed by using the links published in this manual.

APPENDIX G – BLANK FORMS

[EA Template](#)

[Biological Assessment Template](#)

[Archaeological Field Report Form](#)

[Permit Determination Form](#)

[Impact Assessment Form](#)

[Permit Application Form](#)

[Permit Checklist](#)

[SC Navigable Waters Permit Application Form](#)

Note: The items shown in bold-face type are included in this appendix. The items not shown in bold-face type are available on the internet and may be accessed by using the links published in this manual.

EA Template

Project Name

_____ County, South Carolina

ENVIRONMENTAL ASSESSMENT



Submitted by the
U.S. Department of Transportation
Federal Highway Administration
and
S.C. Department of Transportation

Date of Approval

S.C. Department of Transportation

Date of Approval

Federal Highway Administration

The following individuals may be contacted for additional information concerning the project:

Name
Planning and Environmental Engineer
Federal Highway Administration
1835 Assembly Street
Suite 758
Columbia, SC 29201
(803) 253-3881

Name
Program Manager
S.C. Department of Transportation
P. O. Box 191
Columbia, SC 29202
(803) 737-2085

Constr. Pin No. Pin No.

APPENDICES
APPENDIX G

Project No. [Project No.](#)

Environmental Commitments

This page will contain all known commitments agreed to in the document.

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I. INTRODUCTION

The South Carolina Department of Transportation proposes _____ in (City, South Carolina). The project, as proposed, would result in certain modifications to the human and natural environment. However, the Department has not identified any significant impacts that would occur and therefore the project meets the criteria under 23 CFR 771.115(c) for processing as an Environmental Assessment. Specific preliminary environmental studies conducted in the early stages of project development and, understandings of the scope of work to be performed were considered in this decision.

II. PURPOSE OF AND NEED FOR PROJECT

The project study corridor involves (insert types of land uses that occur throughout the project area). The project extends approximately ___ miles from (include limits) as indicated on the location map on page ___.

Need

Refer to FHWA Memo on P & N – September 18, 1990 (attached):

Congestion Relief projects: Discuss existing, future no-build, and build. Include mapping depicting traffic volumes and LOS tables for existing, future build and no-build conditions.

Safety projects: Discuss crashes and proposed improvements by implementing the project. What is the relation with state average (if known) for a similar facility?

(Include the following verbiage: Project included in STIP, Need-safety, efficiency, improve congestion, etc.). If you have information regarding accidents rates please include. Also, include existing and future traffic volumes. Listed below is an example of an acceptable Purpose and Need discussion.

The U.S. Route 21 project corridor is listed in the Statewide Transportation Improvement Program (STIP) as a part of the System Upgrade Program for the Lowcountry Council of Governments. The purpose of project US Route 21 is to increase the safety and efficiency of the roadway, by reducing traffic delays and the potential for accidents. The project would provide improved traffic flow by providing designated turn lanes, which would allow cars turning left off of US Route 21 to move out of the flow of traffic. In addition, safety would be improved by providing an obstruction free shoulder that affords drivers of out of control vehicles a reasonable chance to regain control and avoid serious injury. Right of way acquisition funds for U.S. Route 21 have been established for Fiscal Year 2003.

Traffic studies show a substantial increase in the average daily traffic within the project corridor. These studies indicate that the average daily traffic volume (ADT) for this section of US Route 21 is presently 10,400 vehicles per day (VPD). By the year 2020, the average daily traffic is expected to increase to 16,500 VPD, (approximately 63%). The road is more heavily traveled in the summer, as it serves as a primary connection to Hunting Beach State Park, Fripp Island, and other vacation destination islands in the area. US Route 21 serves as the hurricane evacuation route for St Helena and other outlying islands.

Traffic accident reports indicate that a total of 113 accidents, including 22 injuries and 3 fatalities, occurred within the limits of the proposed project corridor from January 1998 through June 2001. Of this total, 85 accidents (75%) were either rear end or right angle collisions, which occur most often during vehicular turning movements. The provision of left-turn lanes could help to reduce these types of accidents, reducing accident-related property damage and injury. The section of US 21 between the Beaufort County Airport and Chowan Creek was improved from two lanes to three lanes with a

continuous center turn lane; this area experienced a 69 percent reduction in accident rate after construction was complete.

Existing Facility

US Route 21 serves as the main highway through St Helena Island, connecting it to both Lady's Island, the Town of Beaufort and I-95 to the west and to Fripp Island and Hunting Beach State Park to the east. US Route 21 provides the primary access to several communities and islands including Longwood, Fort Fremont, Scott, Polawana, Dataw, and Hunting Islands and Fripp Island Resort. US Route 21 serves as the hurricane evacuation route for these islands.

According to the Beaufort County Department of Planning, the county has seen significant growth in the last 10 years. Between 1990 and 2000, population grew from 86,400 to 120,900 (approximately 40%). The populations of St. Helena Island and Lady's Island have grown by 44% and 85%, respectively, during the same 10-year period.

The 3.2-mile section of the US Route 21 corridor is mainly rural with sparse residential development. Development is more concentrated around a small Gullah community known as the Corners Community, which is located along the US Route 21 corridor near the intersection of Martin Luther King, Jr. Drive. Several restaurants, gift shops, a post office, a hotel and the Penn Center Historic District are all located within this community. Through local guidelines, Beaufort County has identified the Corners Community as a Community Preservation District (CPD), which will serve as a guide for the development while encouraging the continued sustainability of the community's culture.

The St Helena Island Branch of the Beaufort County Public Library and St Helena Elementary School are also located along US Route 21 toward the eastern terminus of the project corridor.

US Route 21 is currently a two-lane facility, consisting of one travel lane in each direction with earthen shoulders and ditches. Total existing right of way varies though the corridor from 75 to 100 feet. The posted speed limit varies from 40 to 45 miles per hour (mph).

Proposed Facility

The Department proposes to widen the existing two-lane roadway (see typical sections pages 6 and 7). The widening would begin at the existing three-lane section from Beaufort, at Road S-165 and would continue east approximately 3.2 miles to the intersection of Road S-517. Outside of the Corners Community, the new roadway would be a two-lane ditch section, consisting of one 12-foot travel lane in each direction, separated by an eight-foot paved median. There will be an eight-foot paved shoulder and designated left turn lanes at major intersections. Turn lanes will allow motorists turning left to move out of the travel lanes, reducing the number of accidents associated with turning movements. Within the Corners Community, the typical section has been reduced to fit within the

existing right of way. This section of the roadway will also have 12-foot travel lanes with an eight-foot paved median and eight-foot paved shoulders on both sides. However, this portion of the roadway will be a curb and gutter section to minimize right of way impacts to the historic buildings within the community. Sidewalks were originally proposed within the Corners Community but were removed from the project at the community's request. During hurricane evacuation, the 8-foot paved shoulders throughout the corridor will allow room for two lanes of traffic exiting St. Helena Island, while maintaining one lane for incoming vehicles. The shoulders will also accommodate bicycle use. At Road S-517, the roadway would transition back into two lanes. New right of way will be required in some areas of the corridor; the total new right of way is expected to vary from 100 to 120 feet and the speed limit would vary throughout the corridor from 55 mph to 35 mph within the Corners Community.

Traffic signalization needs were also examined at locations throughout the corridor. Traffic signals will be installed at the intersections of Polawana Rd. and Martin Luther King Dr.; pedestrian crosswalks will be at these intersections. A 4-foot raised, landscaped median will also be installed at these intersections to serve as a pedestrian refuge and community 'gateways.'

The estimated cost for this widening project is \$6.05 million, including \$1.15 million for right of way acquisition, and \$4.9 million for engineering and construction.

III. ALTERNATIVES

The Department has considered location and design alternatives in the process of developing the currently proposed "build" alternative. The "no-build" alternative, which consists of the Department making no improvements, was considered as a baseline for comparison; however, the "no-build" alternative would not improve the efficiency or safety of the roadway. Therefore, this alternative is not considered acceptable.

Alternatives that widen symmetrically about the centerline, to the west side of the existing route and to the east side of the existing route were considered in the development of the recommended project alignment. While the proposed location and design of the project represents the best "build" alternative for meeting travel demands, input received during the public hearing process and environmental document availability period will be carefully evaluated in the future project development. Modifications will be made where appropriate.

ENVIRONMENTAL MATRIX

Impact Category	Impacts by Alternative		
	Alternative A	Alternative B	Alternative C
Residential relocations			
Commercial relocations			
Farmland			
Floodplains			
Wetlands			
Streams			
Threatened/Endangered Species			
State listed species			
Noise			
Cultural Resources			
Historical			
Archaeological			
Section 4(F) Resources (parks, etc...)			
Hazardous Materials			
Permits			

Use the above matrix to summarize impacts.

IV. PROBABLE IMPACTS OF THE PROJECT ON THE ENVIRONMENT

This section includes a discussion on the probable beneficial and adverse social, economic, and environmental effects of the alternatives under consideration and describes the measures proposed to mitigate any adverse impacts. This information has sufficient scientific and analytical substance to provide a basis for evaluating the merits of the project. Environmental studies conducted by Department personnel indicate the absence of any significant impact on the human and natural environment. The following paragraphs provide a brief overview of the Department's environmental findings.

Land Use

Are the alternatives consistent with land use in the project area? Discuss current development trends. What effects will the project have on current land use plans? Is the preferred alternative consistent with development plans? Include land use maps for the project area.

Threatened or Endangered Species

Pursuant to Section 7 of the Endangered Species Act of 1973, a field survey of the proposed new right of way was conducted. The following lists of endangered (E) and threatened (T) species for _____ County were obtained from the U.S. Fish and Wildlife Service (USFWS):

Beaufort County

Animals

Bald eagle (<i>Haliaeetus leucocephalus</i>)	T
Red-cockaded woodpecker (<i>Picoides borealis</i>)	E
Shortnose sturgeon (<i>Acipenser brevirostrum</i>)	E
West Indian manatee (<i>Trichechus manatus</i>)	E
Finback whale (<i>Balaenoptera physalus</i>)	E
Humpback whale (<i>Megaptera novaeangliae</i>)	E
Northern right whale (<i>Eubaleana glacialis</i>)	E
Sei whale (<i>Balaenoptera borealis</i>)	E
Sperm whale (<i>Physeter catodon</i>)	E
Wood stork (<i>Mycteria americana</i>)	E
Kemp's ridley sea turtle (<i>Lepidochelys kempii</i>)	E
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	E
Green sea turtle (<i>Chelonia mydas</i>)	T
Loggerhead sea turtle (<i>Caretta caretta</i>)	T
Flatwoods salamander (<i>Ambystoma cingulatum</i>)	T
Piping plover (<i>Charadrius melodus</i>)	T

Plants

Canby's dropwort (<i>Oxypolis canbyi</i>)	E
Chaff-seed (<i>Schwalbea americana</i>)	E
Pondberry (<i>Lindera melissifolia</i>)	E

A review of the project corridor (define "corridor.") by the Department's biologist in (Date), failed to identify the presence of any species from the list provided by the USFWS. Based on the lack of suitable habitat and no observations of the listed species during field surveys, results of the biological assessment indicate that the proposed action is not likely to jeopardize any threatened or endangered species or critical habitats currently listed for Beaufort County. See Biological Summary in Appendix A.

Include a table (as above) that indicates the species occurring within the proposed project APE. See attached USFWS memo dated March 15, 2001 and FHWA memo dated February 20, 2002 for further information on consultation requirements.

Farmlands

The Farmland Protection Policy Act of 1981 requires evaluation of farmland conversions to nonagricultural uses. Farmland can be prime farmland, unique farmland, or farmland of statewide or local importance. Prime farmland soils are those that have characteristics favorable for economic production of sustained high yields of crops. These soils may or may not be presently used as cropland. Conversely, land that is presently used as cropland may or may not be prime farmland. Most of the prime agricultural land in the study area is currently used for residential purposes.

Through the use county farmland listings provided by the Natural Resources Conservation Service (NRCS), it has been determined that the project area would involve lands protected under the Act. A Farmland Conversion Impact Rating Form SCS-CPA-160 has been completed for the project corridor. The form provides a site assessment scoring system with criteria for evaluating adverse effects of projects on the protection of farmland. Sites receiving highest scores up to a maximum of 260 are considered most suitable for protection while those with lowest scores are considered least suitable. Sites receiving scores less than the maximum allowable score of 160 are to be given minimal consideration for protection. The score computed for this proposed action was 140, assuming a relative soil value of _____. As the total points are less than 160, neither consideration of alternative sites nor additional studies for the study area are required under the Act.

If the impact to farmland is greater than 160 points, the section should discuss alternatives to avoid farmland impacts. If avoidance was not possible, discuss minimization or mitigation as it relates for farmland impacts.

Water Quality

The project will involve work within_____. During construction activities, temporary siltation may occur in the creek beds and erosion will be of a greater degree than presently occurring on existing terrain. The contractor would be required to minimize this impact through implementation of construction best management practices, reflecting policies contained in 23 CFR 650 B and SCDOT's Supplemental Specifications on Seeding and Erosion Control Measures (August 15, 2001).

Include information related to existing conditions of streams and other waterbodies within the project area and discuss impacts or potential impacts that will occur as a result of the project.

Permits (if any)

Include discussion of required permits for proposed project.

Wetlands

Wetland habitats are defined as those areas that are inundated by water with sufficient frequency and duration to support vegetation that is tolerant of saturated soil conditions. The U.S. Army Corps of Engineers utilizes specific hydrologic, soil, and vegetation criteria in establishing the boundary of wetlands within their jurisdiction.

One method of assessing the value and function of wetlands is in terms of wildlife habitat. The U.S. Fish and Wildlife Service (USFWS) Resource Category criteria are outlined in the USFWS Mitigation Policy, 46 CFR 7644-7663. Resource categories and mitigation planning techniques are assigned based on the following criteria:

- Category 1 - Communities of one-of-a-kind high value to wildlife, unique and irreplaceable on a national or eco-regional basis, habitat is not replaceable in kind based on present-day scientific and engineering skills within a reasonable time frame.
- Category 2 - Communities of high value to wildlife, which are relatively scarce or are becoming scarce on a national or eco-regional basis, habitat can be replaced in kind within a reasonable time frame based on present-day scientific and engineering skills.
- Category 3 - Community types of high to medium wildlife value which are relatively abundant on a national basis, out-of-kind replacement is allowable if a tradeoff analysis demonstrates equivalency of substituted habitat type and/or habitat values. These sites are often in conjunction with a replenishing source.
- Category 4 - Community types of low to medium wildlife value, generally losses will not have a substantial adverse effect on important fish and wildlife resources. These sites have often been affected by the present roadway or human disturbances and are usually isolated.

A combination of vegetation analysis, hydrological observations, and soil sampling was utilized to determine the locations of wetlands within the proposed _____ project area. [Include a description of regarding types of wetland impacts with acreage.](#) Total wetland impacts are approximately ____ acres (____ square feet). The proposed project will require a *Corps of Engineers Section 404 permit and an Ocean and Coastal Resource Management (OCRM) permit*. Permit drawings indicating the areas of wetland impacts are included in Appendix B.

Wetlands were given special consideration during development and evaluation of the project with a subsequent determination that the present design would pose the least disruption to wetlands other than the "no build" alternative. The project will also utilize _____ fill slopes to minimize the taking of wetland throughout the project. [Implementing erosion control measures, which include seeding of slopes, hay bale emplacement, silt fences, and](#)

sediment basins as appropriate, would also minimize impact on adjacent wetlands. Other best management practices would be required of the contractor to ensure compliance with policies reflected in 23 CFR 650B. Reclamation of wetland areas temporarily lost through construction activities will involve returning disturbed areas to their original elevations to the extent possible, allowing for adjacent vegetation to naturally reclaim the area. SCDOT will comply with Executive Order 11990 regarding protection of wetland.

Based on the above considerations, it appears that there is no practicable alternative to the proposed new construction in these wetland areas; the proposed action will include all practicable measures to minimize harm to wetlands that may result from construction.

Include information related to numbers of acre(s) of wetland(s) impacted by the proposed project, and the type and function of those wetlands impacted. Discuss the impact of the proposed project on the function of wetland. Include information related to measures to minimize/ mitigate impacts to wetlands.

Basically, will or will not the wetland still be able to function normally after impacts from the project?

Terrestrial and Aquatic Wildlife

Discuss the impacts, including loss of habitat, the proposed project will have on wildlife in the project area.

Wild/Scenic Rivers (if applicable)

Include information detailing impacts to wild and scenic rivers.

Floodplains

Based on a study of the Flood Insurance Rate Maps (FIRM), published by the Federal Emergency Management Agency (FEMA), the proposed project **would or would not** involve construction within the 100-year flood limits of numerous creeks and rivers surrounding the project area, including _____. At the appropriate stage of project development, a complete study will be conducted to more precisely determine the effects of the project on the base floodplain. However, the project is not expected to be a significant or longitudinal encroachment as defined under 23 CFR 650A, nor is it expected to have an appreciable environmental impact on this base floodplain. The level of risk analogous with the probable area of flooding and its consequences attributed to this encroachment is not expected to be any greater than that associated with the present roadway. Also, the project is not expected to have any increased potential for impact on those critical elements that would constitute a significant risk under 23 CFR 650A.

Reference Executive Order 11988 (Floodplain Management and 23 CFR 650 subpart A). If applicable, include a map showing the location of floodplains impacted. Floodplain impacts should be quantified. Indicate whether the project will cause less than 1.0 foot of backwater above the base flood elevation.

Air Quality

This project would be consistent with the South Carolina State Air Quality Implementation Plan (SIP) regarding the attainment of the National Ambient Air Quality Standards. Presently, _____ County meets all air quality standards for automobile related pollutants. The State Bureau of Air Quality at the South Carolina Department of Health and Environmental Control (SCDHEC) has determined that transportation control measures (TCMs) are not required to maintain the area's air quality.

For projects located in RFATS and York County, include verbiage regarding non-attainment, and completion of a conformity analysis. Projects located in GPATS, COATS (Lexington and Richland) SPATS and ANATS: include a discussion related to the signing of the Early Action Compact. These areas have been deemed not to meet air quality standards under the Clean Air Act but their non-attainment status has been deferred due their participation in the Early Action Compact (EAC).

Noise

As stated in the Code of Federal Regulations (CFR) Section 23, Part 772.5(h), a traffic noise analysis is required for proposed Federal-aid highway projects that will construct a highway on new location or physically alter an existing highway, which will significantly change either the horizontal or vertical alignment of the road or increase the number of through-traffic lanes.

Include verbiage regarding- What the analysis indicated. Discuss the number of receivers above the NAC in the existing, future, and future no-build scenario. Discuss whether noise abatement is feasible. Include verbiage related to coordination with local officials, and a table indicating the number of noise receivers, existing, future and future no-build impacts. Does the receiver show a substantial increase? Does it exceed the NAC?

Hazardous Waste and Underground Storage Tanks

Hazardous waste/material sites are regulated by the Resource Conservation and Recovery Act (RCRA), as amended, the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended, and the Superfund

Amendments and Reauthorization Act of 1986 (SARA). An Initial Site Assessment (ISA) was conducted by the SCDOT Right of Way Office to identify possible sites involving the presence and/or past use of underground storage tanks (USTs), above ground storage tanks (ASTs), and/or other hazardous materials within the project corridor. A review of the SCDHEC CERCLA site inventory and an on-site reconnaissance survey of the project corridor were performed.

The ISA identified ___ sites in or adjacent to the proposed right of way that contained USTs. [Description of the sites located in the project area.](#) The results of the testing may lead to minor changes in the design or alignment of the roadway in order to avoid those sites identified with contamination problems.

It is the SCDOT's policy to avoid the acquisition of underground storage tanks and other hazardous materials, if possible. If avoidance is not a viable alternative, tanks and other hazardous materials will be tested and removed and/or treated in accordance with the U.S. Environmental Protection Agency (USEPA) and SCDHEC requirements. Cost of necessary remedial actions would be considered during the right of way appraisal and acquisition process.

[Where applicable, discuss hazardous material impacts \(type and number\). Identify the appropriate testing needed for those resources.](#)

Cultural Resources

Section 106 of the National Historic Preservation Act of 1966 [as amended](#) requires federal agencies to consider the effects of their actions on historic properties. In accordance with 36 CFR 800.4, archival research and coordination with the State Historic Preservation Officer (SHPO) was performed to identify and help predict the locations of significant cultural resources in the vicinity of the proposed action. The archaeological and architectural surveys performed were designed to provide the necessary management data to allow for the sites and properties to be evaluated for recommendations of eligibility to the National Register of Historic Places (NRHP).

Cultural Resources Surveys have been conducted within the project corridor. The Survey identified ___ NRHP listed ___ archaeological site within the corridor.

___ NRHP eligible structures have been identified in the project area, including [\(description of resources and impacts discussion.\)](#).

The SHPO's coordination is ongoing due to the presence of numerous historic structures and cultural resources within the project corridor (SHPO coordination to date included in Appendix A). Final determinations of effect on historic structures within the Corners Community and any mitigation measures (including a Memorandum of Agreement, if necessary) will be outlined in the final environmental documentation.

Discuss the avoidance, minimization and mitigation process that has or is occurring with the project. Summarize the impacts and proposed mitigation measures for each resource. Section should demonstrate that all the requirements of 36 CFR 800 have been met.

For projects with tribal resources, include a discussion related to tribal consultation.

Section 4(f) Resources (if any)

No other recreational areas or wildlife refuges were found within the project corridor.

Discuss avoidance, minimization and mitigation process. If the resource cannot be avoided discuss the impacts to the 4(f) resource(s). If the 4(f) document is prepared separately, it should be circulated to the appropriate agencies. Indicate that the 4(f) document is being prepared in accordance to 23 CFR 771.135(i).

Relocation Impacts

The relocation study was conducted throughout the project corridor. The study indicated that the proposed project would cause the displacement of _____ single-family residences.

The project will also impact _____ businesses. New right of way will impact _____. Describe types of businesses. Damages to this business property will be assessed during the right of way appraisal process.

The Department's Rights of Way Office conducted a relocation study, which concluded that sufficient resources are available to relocate the displacees. Relocation is not expected to disrupt or remove the displacees from their churches, schools and other community activities (see attached relocation report). The relocation program will be conducted in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Public Law 91-646, as amended by 100-17; 49 CFR Part 24). The program is designed to provide assistance to displaced persons in finding replacement property in which to live or to do business. Relocation of displaced persons will be offered in areas at least as desirable in regard to public utilities and commercial facilities. Rent and sale prices of replacement housing offered will be within the financial means of the families and individuals displaced and be reasonably accessible to their places of employment.

The Department will provide the displacees full benefits accorded under the Act. This will include fair market value for the acquired property in addition to equitable compensation normally associated with relocation. Ample lead time will be given to the individuals to allow for any planning contingencies that may arise. All other benefits available under the act will be carefully explained to the individual.

As is the policy of the South Carolina Department of Transportation, in response to the non-discrimination requirements in Title VI of the Civil Rights Act of 1964, the relocation advisory assistance shall be provided to all eligible persons without discrimination.

Discuss the number of displacements related to the project (i.e., residential, churches, commercial by alternative). Describe the type commercial relocations, and the number of employees impacted by the project. Please include a copy of the conceptual relocation report in the appendix.

Social and Economic

Social impacts identified in this assessment are effects on the residences and subdivisions adjacent to the corridor. In efforts to work with Beaufort County and the Corners Community's CPD planning efforts, SCDOT and FHWA representatives met with residents of the Corners Community who had expressed concerns about the US 21 widening project throughout its history. Meetings were held in March and May of 2003 to work with these residents to ensure that the project met their needs and fit within their plans for the community's future. The projects typical section was significantly altered to meet the community's needs. Within the community boundaries, the originally proposed 15-foot continuous center turn lane was reduced to an 8-foot paved median with designated turn lanes only at major intersections. The sidewalks and bike lanes originally planned within the Corners Community have been omitted from the project at the community's request. An 8-foot paved shoulder has been incorporated into the project to allow for bicycle use and two lanes of traffic exiting the islands during hurricane evacuation. The asphalt shoulder will be tinted with dye for a more natural, aesthetic look in an effort to preserve the rural character of the area.

It is not anticipated that the proposed action and associated relocations would result in any appreciable change in local population and employment patterns in the area. Right of way acquisitions from residential properties are not expected to cause a change in existing land uses. Right of way taking would be minor in most cases. Slope permission may be necessary in some locations. Property owners would be compensated for the right of way taking and any damages to remaining property, in accordance with SCDOT policy and the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended. Relocation would not significantly disrupt community activities and adequate replacement housing exists for rehousing displacees.

Traffic services would be maintained throughout project construction with no anticipated adverse effects on emergency services in the area. After the proposed project's completion, improved traffic service for both public and private uses would be realized.

The project would not adversely affect local government finances. The minor additional right of way required would not result in a significant reduction of property tax assessments. Economic benefits to Beaufort County should result from the project because of improved access and more efficient movement of tourists, local motorists and goods in the area. Efforts have been made to ensure that the proposed project will not change the general character of the area.

The proposed project was evaluated in accordance with Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations).

Include demographics specific to the project area, county, and state (% African American and Hispanic). Therefore the project is not expected to specifically benefit, harm, or disproportionately impact any social group, including elderly, handicapped, non-drivers, minority, or ethnic groups.

Discussion should include demographic information related to race, gender and income levels (EJ). Also discuss community cohesion-Will the project affect schools, travel patterns, etc.? Information Title VI information

Indirect and Cumulative Impacts

These impacts may be discussed in a separate section or within the appropriate resource sections.

V. COORDINATION

DOT project managers Kevin Sheppard and Mike Sullivan attended a meeting held by the St Helena Citizens Advisory Committee and the Corners Community Preservation Committee on October 5, 2001 to explain the proposed improvements for the US Route 21 corridor. The Committees also presented their preferred plan for the project within their area; this plan opposed the originally proposed bicycle lanes but included a meandering sidewalk within the Corners Community. As a result of the community's concerns, pedestrian facilities will be included in the proposal within the Corners Community. However, because a meandering sidewalk would require the purchase of extra right of way from many businesses within the community and from historic properties protected under Section 4(f), the sidewalk will parallel the roadway but will be separated from the road by a grass buffer.

A Public Information Meeting was held at St. Helena Elementary School on December 10, 2002 to afford residents the opportunity to comment on the proposed project. Approximately 475 individuals attended the meeting. 369 written and email comments were received during the comment period. The majority of comments fell into the following categories:

- Support for widening US 21 – 190 (126 comments for 3 lanes, 7 comments for 4 lanes, 24 comments for 5 lanes, and 34 comments that supported any widening improvements)
- Support for improved, unpaved shoulders and selected turning lanes (DWA recommendations) - 63
- Support for a no build alternative (no improvements would be done) – 17
- Requests for a traffic signal and intersection improvements at the US 21/ Polowana intersection – 131
- Requests for a traffic signal and intersection improvements at the US 21 / Martin Luther King, Jr. Drive intersection – 60
- Requests for improvements (turning lanes and/or a traffic signal) at the post office - 29

- Support for bicycle and pedestrian facilities – 36

Appendices

Include coordination correspondence from agencies and technical studies. If technical studies are separate documents, attach them to the EA.

General comments

Include visuals/maps as much as possible in the EA. Submit all technical studies when document is sent to FHWA for review and or approval.

APPENDIX A

APPENDIX B

Biological Assessment Template

ENDANGERED SPECIES

Pursuant to Section 7 of the Endangered Species Act a field survey was conducted on the proposed new right of way. The following list of endangered (E) species for _____ County was obtained from the U. S. Fish and Wildlife Service:

ANIMALS

Red-cockaded woodpecker - *Picoides borealis* - (E)

PLANTS

Michaux's sumac - *Rhus michauxii* - (E)

Chaffseed - *Schwalbea americana* - (E)

The project area was examined by reconnaissance methods in February 1994. Habitats surveyed were determined by the species ecological requirements. The improvements will require primarily cleared fields and cultivated areas with a few small areas of palustrine forested wetland. The palustrine forested wetland areas are characterized by *Juncus spp.*, swamp chestnut oak (*Quercus michauxii*), and sweetgum (*Liquidambar styraciflua*).

No pine stands greater than 30 years of age are located within the project corridor. Therefore, a half-mile survey for red-cockaded woodpecker activity was not conducted. No habitat for shortnose sturgeon, chaffseed, or Michaux's sumac was located within the project corridor. Consequently, the proposed project should have no impact on any endangered or threatened species listed for Florence County.

OR

Section 7 of the Endangered Species Act of 1973, as amended, requires all agencies receiving federal funding to ensure that their actions are not likely to jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of critical habitat of such species. To comply with Section 7(c) of the Act, background research, agency consultations, and field surveys were conducted to determine if any federally-protected species are likely to occur within or adjacent to the project limits.

The study area is within the potential distributional ranges of _____ species listed by the U.S. Fish and Wildlife Service (USFWS) as being federally endangered or threatened:

Animals

Plants

According to the S.C. Department of Natural Resources Heritage Trust Program records, none of the federally-protected species have been sighted in the vicinity of the proposed action. The project area was examined by reconnaissance methods in , _____. Based on the lack of suitable habitat and no observations of the listed species during field surveys, results of the threatened and endangered species study indicate that the proposed action is not likely to jeopardize any threatened or endangered species or critical habitats currently listed by the USFWS. The USFWS has concurred with the results of this biological assessment, as documented on page ___ in the Appendix.

OR

Pursuant to Section 7 of the Endangered Species Act of 1973, information on threatened and endangered species was obtained from published habitat management guidelines developed by the U.S. Fish and Wildlife Service (USFWS), sighting records from the S.C. Department of Natural Resources, literature sources, and field surveys of the project area.

The USFWS has listed _____ species with ranges which may extend into _____ County:

Animals

Plants

The project area was examined by reconnaissance methods in _____, _____. Habitats surveyed were determined by each species ecological requirements.

The improvements will require primarily (agricultural/commercial/residential) areas. In addition, small forested and wetland areas are located in the project area. The upland forested areas are characterized by _____, _____, and _____. The small wetland areas are classified as _____ wetlands.

Possible habitat for _____, _____, and _____ was observed in the project corridor. However, none of the listed species were observed in the new right of way. Consequently, the proposed project should have no impact upon any endangered or threatened species for _____ County. Coordination with and concurrence from the USFWS is documented on page ___ in the Appendix.

OR

The Endangered Species Act of 1973 requires all agencies receiving federal funding to survey lands that will be altered for the presence of animals and plants which receive protection under the Act. In addition, the Act conserves these species' habitats,

thus the species and its habitat must be identified if they are believed to exist within the project corridor.

The U.S. Fish and Wildlife Service (USFWS) has listed ___ species with ranges which may extend into _____ County:

Animals

Plants

A reconnaissance survey was conducted in January, 1994 and it was determined that the proper habitat for the listed species is not located in the project area. None of the listed species for _____ County were located within the project corridor. Therefore, the project should have no effect upon any endangered or threatened species.

OR

One threatened species has been identified by the U.S. Fish and Wildlife Service as likely to occur in the project area. The information presented in paragraphs that follow was obtained from published habitat management guidelines developed by the U.S. Fish and Wildlife Service, sighting records from the S.C. Department of Wildlife and Marine Resources (SCWMRD), literature sources, and field surveys of the project area. The species is discussed briefly along with the results of the field survey conducted by Department personnel.

Dwarf-flowered Heartleaf (*Hexastylis naniflora*) - Threatened

Dwarf-flowered Heartleaf is a threatened plant species that grows in acidic soils along bluffs and adjacent slopes, in boggy areas next to streams and creek heads, and along the slopes of nearby hillsides and ravines. The species is distinguished from other members of the genus *Hexastylis* by its small flowers and its distinctive habitat.

A field survey was conducted in October 1991 and located a *Hexastylis* species near an unnamed tributary of Cherokee Creek. An additional survey was conducted in late March, 1992 to collect flower samples for a comparative study by Dr. Douglas Rayner, a botanist specializing in rare and endangered species. It was determined that this species is *Hexastylis minor* which is fairly common in this area. Therefore, the project should have no effect upon any threatened or endangered species.

Archaeological Field Report Form

ARCHAEOLOGICAL FIELD REPORT
SCDOT ENVIRONMENTAL SECTION
SCDOT

TITLE:
DATE OF RESEARCH: PROJECT: ARCHAEOLOGIST:
COUNTY: File No. PIN:
F. A. No.:

DESCRIPTION:

LOCATION:

USGS QUADRANGLE: DATE: SCALE: 7.5'
UTM: ZONE: 17 EASTING: NORTHING:

ENVIRONMENTAL SETTING:

NEAREST RIVER/STREAM AND DISTANCE:

SOIL TYPE:

REFERENCE FOR SOILS INFORMATION: /19 /Soil Survey of County, South Carolina. USDA,
Soil Conservation Service, Washington, D. C.

GROUND SURFACE VISIBILITY: 0% ___ 1-25% ___ 26-50% ___ 51-75% ___ 76-100% ___

CURRENT VEGETATION:

INVESTIGATION:

Table 1. Previously identified archaeological sites in the vicinity of the project area.

SITE	SOURCE	PREHISTORIC	HISTORIC	TIME PERIOD	ELIGIBILITY

Permit Determination Form

Attachment "A"
Date: _____

MEMORANDUM

FROM: _____ COMPANY _____

PRIME CONSULTANT _____ Contact Person _____

SUB CONSULTANT _____ Contact Person _____

SCDOT PROJECT ENGINEER _____

TO: Tim L. Hunter, Environmental Operations Manager

SUBJECT: Permit Determination

Project Description: _____

Route or Road No. _____ County: _____

CONST. PIN _____ OTHER PINS _____

Response:

() It has been determined that no permits are required because

() The following permit(s) is/are necessary: (Please Check which type(s) of Permit the Project will need)

___ICOE ___COEGP ___NW-14 ___JD (Jurisdictional Determination)

___NW-3 ___NW-7 ___NW-23 ___NW-25 ___NW-27

___NAV ___NAVGP ___USCG ___NW-15 ___OCRM

Other _____

Estimated Wetland Total _____

Estimated Stream Impact per Crossing 1) _____ 2) _____ 3) _____ 4) _____ 5) _____ 6) _____

Estimated Stream Impact Total _____

If this selection is tentative, please submit another Project Determination Sheet as soon as the permit type is determined so that SCDOT will be able to update its records.

Biologist, SCDOT/Consultant Date

Impact Assessment Form

Attachment "B"

SCDOT IMPACT ASSESSMENT

Processing

1. Check all of the approval(s) requested for this project:
- | | |
|--|--|
| <input type="checkbox"/> Section 404 Permit | <input type="checkbox"/> ACOE General Permit |
| <input type="checkbox"/> Section 10 Permit | <input type="checkbox"/> Nav. Water General Permit |
| <input type="checkbox"/> 401 Water Quality Certification | <input type="checkbox"/> CZMC – (OCRM) |

Applicant Information

1. Agent/Consultant Information
- Name: _____
- Company Affiliation: _____
- Mailing Address: _____
- _____
- _____
- Telephone Number: _____ Fax Number: _____
- E-mail Address: _____

Project Information

Attach a **vicinity map** clearly showing the location of the property with respect to local landmarks such as towns, rivers, and roads. The vicinity map must include a scale and north arrow. The maps and plans should include the appropriate USGS Topographic Quad Map with the project corridor outlined. For administrative and distribution purposes, the **USACE requires information to be submitted on sheets no larger than 8.5 by 11-inch format.**

1. Name of project: _____
2. Location
- County: _____ Nearest Town: _____
- Directions to site (include road numbers, landmarks, etc.): _____
- _____
- _____
3. Site coordinates, if available (UTM or Lat/Long): _____
- (Note – Since the project is linear, attach a sheet that separately lists the coordinates for each crossing of a distinct waterbody.)
4. Property size (acres): _____
5. Nearest body of water (stream/river/sound/ocean/lake): _____
6. Describe the existing conditions on the site and general land use in the vicinity: _____
- _____
- _____
7. Describe the overall project in detail: _____
- _____
- _____
- _____

8. Explain the purpose of the proposed work: _____

9. List all Certifications, Approvals, and/or Denials received for this project: _____

10. Has any portion of the work already commenced? If yes, describe: _____

IV. Proposed Impacts to Waters of the United States/Waters of the State

All proposed impacts, permanent and temporary, must be listed herein, and must be clearly identifiable on an accompanying site plan. All wetlands and waters, and all streams (intermittent and perennial) must be shown on a delineation map, whether or not impacts are proposed to these systems. Wetland and stream evaluation and delineation forms should be included as appropriate. Photographs shall be included.

1. Individually list **wetland impacts** below:

Wetland Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Located within 100-year Floodplain (yes/no)	Distance to Nearest Stream (linear feet)	Type of Wetland**

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: mechanized clearing, grading, fill, excavation, flooding, ditching/drainage, etc. For dams, separately list impacts due to both structure and flooding.

** List a wetland type that best describes wetland to be impacted (e.g., freshwater/saltwater marsh, forested wetland, beaver pond, Carolina Bay, bog, etc.) Indicate if wetland is isolated (determination of isolation to be made by USACE only).

List the total acreage (estimated) of all existing wetlands on the property: _____

Total area of wetland impact proposed: _____

2. Individually list all **intermittent and perennial stream impacts** below:

Stream Impact Site Number (indicate on map)	Type of Impact*	Length of Impact (linear feet)	Stream Name**	Average Width of Stream Before Impact	Perennial or Intermittent? (please specify)

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: culverts and associated rip-rap, dams (separately list impacts due to both structure and flooding), relocation (include linear feet before and after, and net loss/gain), stabilization activities (cement wall, rip-rap, crib wall, gabions, etc.), excavation, ditching/straightening, etc.

** Stream names can be found on USGS topographic maps. If a stream has no name, list as UT (unnamed tributary) to the nearest downstream named stream into which it flows.

Cumulative impacts (linear distance in feet) to all streams on site: _____

3. Individually list all **open water impacts** (including lakes, ponds, estuaries, sounds, Atlantic Ocean and any other water of the U.S.) below:

Open Water Impact Site Number (indicate on map)	Type of Impact*	Area of Impact (acres)	Name of Waterbody (if applicable)	Type of Waterbody (lake, pond, estuary, sound, bay, ocean, etc.)

* List each impact separately and identify temporary impacts. Impacts include, but are not limited to: fill, excavation, dredging, flooding, drainage, bulkheads, etc.

Impact Justification (Avoidance and Minimization)

Specifically describe measures taken to avoid the proposed impacts. It may be useful to provide information related to site constraints such as topography, building ordinances, accessibility, and financial viability of the project. The applicant may attach drawings of alternative, lower-impact site layouts, and explain why these design options were not feasible. Also discuss how impacts were minimized once the desired site plan was developed. If applicable, discuss construction techniques to be followed during construction to reduce impacts. Please attach a separate sheet, as an appendix, if more space is needed.

Feasible Alternatives

Specifically describe measures *in detail* showing that SCDOT exhausted all feasible alternatives before filling in the wetland resources on-site. This should show that the proposed project was the least damaging alternative to water resources. Please attach a separate sheet, as an appendix, if more space is needed.

Mitigation

Provide a description of the proposed mitigation plan. The description should provide as much information as possible, including, but not limited to: site location (attach directions and map, if offsite), affected wetland/stream and river basin, type and amount (acreage/linear feet) of mitigation proposed (restoration, enhancement, creation, or preservation), a plan view, preservation mechanism (e.g., deed restrictions, conservation easement, etc.), and a description of the current site conditions and proposed method of construction. Please attach a separate sheet, as an appendix, if more space is needed.

Biological/ Habitat Assessment

Present a detailed report of the habitat and existing condition of that habitat. The report should include a detailed list of all State and Federal Threatened and Endangered Species and whether the species of concern was present and/ or if their habitat was present. Please attach a separate sheet, as an appendix, if more space is needed.

/ / 20

SCDOT Authorized Agent's Signature *Date*

Permit Application Form

General Permit No. 2000-14-002

<p style="text-align: center;">Joint Federal and State Application Form For Activities Affecting Waters of the United States or Critical Areas of the State of South Carolina</p>	<p style="text-align: center;">This Space for Official Use Only.</p> <p>Application # _____</p> <p>Date Received: _____</p> <p>Project Manager: _____</p>
<p>Authorities: 33 USC 401, 33 USC 403, 33 USC 407, 33 USC 408, 33 USC 1341, 33 USC 1344, 33 USC 1413 and Section 48-39-10 et. seq of the South Carolina Code of Laws. These laws require permits for activities in, or affecting, navigable waters of the United States, the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. The Corps of Engineers and the State of South Carolina have established a joint application process for activities requiring both Federal and State review or approval. Under this joint process, you may use this form, together with the required drawings and supporting information, to apply for both the Federal and/or State permit(s).</p> <p>Drawings and Supplemental Information Requirements: In addition to the information on this form, you must submit a set of drawings and, in some cases, additional information. A completed application form together with all required drawings and supplemental information is required before an application can be considered complete. See the attached instruction sheets for details regarding these requirements. You may attach additional sheets if necessary to provide complete information.</p>	
<p>1. Applicant's Name. South Carolina Department of Transportation</p>	<p>4. Agent's Name (an agent is not required).</p>
<p>2. Applicant's Address. P.O. Box 191 955 Park Street Columbia, SC 29202-0191</p>	<p>5. Agent's Address.</p>
<p>3. Applicant's Contact Number (include area code). Residence: N/A Business: (803) 737-1395 FAX: (803) 737-1394</p>	<p>6. Agent's Contact Number (include area code). Residence: Business: FAX:</p>
<p>7. Project Title. <u>SCDOT PIN No.</u></p>	<p>9. Project Location. Street Address: County: Latitude: Longitude:</p>
<p>8. Nearest Waterbody to project site (if known).</p>	
<p>10. Directions to the Site (attach additional sheets if needed).</p>	
<p>11. Description of the Overall Project and of Each Activity In or Affecting U. S. Waters or State critical areas (attach additional sheets if needed).</p>	
<p>12. Overall Project Purpose and the Basic Purpose of Each Activity In or Affecting U. S. Waters (attach additional sheets if needed).</p>	

Permit Checklist

Attachment "C"

Permit Checklist

Project: _____ SCDOT PIN # _____

Type of ACOE permit applying: _____

- Fill out Application
 - Two copies of concurrence page (**one on yellow paper**) and self-addressed envelope
 - Jurisdictional Determination (**JD letter & Drawing**) SAC# _____
 - Location Map, directions, lat/long
 - USGS Topo (Quad) map outlining the entire project Boundary (should match JD request map)
 - Photo documentation of Project area, especially impact areas
 - SHPO Concurrence
 - T&E Spp. Report
 - Impact Assessment Worksheet**
 - Drawings, Profile at bridge and culverts, cross sections at impact, plan view, Existing and proposed. (Stream name, flow direction, JD area defined, fill area defined, legend, etc.)
 - Cubic yards and acres of wetland filled and/or stream impacts in linear feet
 - Description of proposed mitigation (must look onsite before using mitigation banks).
 - Investigate onsite or same watershed opportunities for mitigation.
 - Mitigation plan (location, design, monitoring if necessary)
 - Required mitigation and proposed mitigation calculations
 - Adjacent property owners (if necessary)
 - Affidavit of ownership or control
- SCDOT review the complete Permit Package Date: _____ SCDOT Initials: _____
- Mail or Hand-Deliver (Circle one) to Corps Date: _____

Notes:

SC Navigable Waters Permit Application Form

South Carolina Department of Health and Environmental Control
Application for
Construction in Navigable Waters General Permit Application

1. Applicant

Name SCDOT

Address P. O. Box 191, Columbia, SC 29202

Telephone _____

Contact Person _____

2. Location where proposed activity exists or will occur.

County _____

Nearest City or Town _____

Nearest Street or Road _____

Name of Water body _____

Latitude _____ Longitude _____

2. Description of proposed activity

3. Date activity is proposed to begin _____

Date activity is expected to be completed _____

4. Adjacent property owner's addresses.

5. ~~Application is hereby made for authorization under General Permit GP-95-002 (Revised) for activities described herein~~

Signature of Applicant

Date

Return completed application and all necessary attachments to:

Mr. Robert H. Ridgell
South Carolina Department of Health and Environmental Control
Division of Water Quality
2600 Bull Street
Columbia, SC 29201

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