PROGRESS ENERGY CAROLINAS
TRANSMISSION DEPARTMENT
TRANSMISSION PROJECTS SECTION

CONSTRUCTION SPECIFICATION
T4 SPECIFICATION
SECTION 15
RIGHT-OF-WAY PREPARATION

Part 2
Erosion Control Regulations for Transmission Construction

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Transmission - Technical Specifications & Standards

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TABLE OF CONTENTS

SECTION	TITLE	PAGE
1.0	PURPOSE ----------	4
2.0	DEFINTIONS----------	4
3.0	SEEDING----------	6
4.0	GENERAL----------	6
5.0	STRUCTURE INSTALLTION----------	7
6.0	CONCLUSION----------	7

PROGRESS ENERGY CAROLINAS (PEC)

EROSION CONTROL REGULATIONS
FOR
TRANSMISSION LINE CONSTRUCTION
DATED February 2011

1.0 PURPOSE

This specification describes erosion control measures that must be used by Progress Energy Carolinas (PEC) Construction Contractors to minimize erosion on transmission line rights of way. This specification also establishes requirements the Construction Contractor must follow in maintaining existing erosion control measures that were previously employed during initial clearing. The goal is to return the right of way to a condition where ground cover is provided in all disturbed areas, stream crossings are returned to their natural state, and erosion is eliminated.

1.1 Permits

Contractor is responsible for obtaining all work permits and posting notices concerning the actual construction work. PEC will obtain the necessary environmental permits and/or authorizations required for the transmission line's completed construction. Any environmental permit conditions may supercede these specifications and shall be followed.

1.1.1 In North Carolina, the Contractor shall conduct all operations in compliance with all measures outlined in the PEC Erosion Control Plan, and applicable laws and regulations, for each transmission line approved by the State of North Carolina. A copy of the approved Erosion Control Plan shall be kept on site at all times as required by the N.C. Sedimentation Pollution Control Act of 1973.

1.1.2 In South Carolina, the contractor shall conduct all operations in compliance with all measures as referenced in the site-specific approved NPDES general permit for construction activities, issued by SCDHEC.

2.0 DEFINTIONS

2.0 **Initial Clearing** - Applies to transmission line right-of-way being cleared for the first time.

2.1 **Company** - Progress Energy Carolinas (PEC).

2.2 **Contractor** - Any person, firm, etc., hired by the Company to assist with the specific project.

2.3 **Designated Representative** - An authorized representative of Company acting as a liaison between the Company and the Contractor regarding all construction and erosion control regulations activities. This representative will inspect and review the Contractor's construction operations to assure that this procedure's intent is followed.

2.4 **Environmental Law** - Any federal, state or local law, statute, ordinance, rule, guideline, judicial or administrative order or other public authority now in effect or hereafter enacted relating to (1) the regulation or protection of human health, safety, occupational safety and health, the environment or natural resources or (2) any Regulated Substance.

2.5 **Regulated Substance** - Any chemical, material, substance or waste regulated by any law or governmental agency.

2.6 **Clearing Plan** - Drawings and data furnished by the Company specifying location and type of clearing.

2.7 **Erosion Control Plan** - Drawings and data prepared by the Company outlining erosion and sedimentation control measures for individual transmission projects. These plans must be approved by the appropriate regulatory authority in either North Carolina or South Carolina.

2.8 **Buffer Zone** - A strip of land adjacent to a wetland, stream or other water body, the width of which is typically measured outward from the regulated jurisdictional boundary [e.g.,"ordinary high water mark" (OHWM, which is normally the stream bank or boundary of full pool on lake)], and which entails special clearing conditions. These conditions, which are specified in the clearing plan, typically include selective cutting of vegetation and limited use of heavy equipment. Buffers typically extend 20 feet from wetland boundaries, 30 feet from the OHWM for "non-regulated" streams (streams without specific buffers imposed by regulations) and 50ft for regulated streams (streams with specific buffers imposed by federal, state or local regulation). Unless described differently in the clearing plan or marked otherwise in the field, buffers run parallel to the stream or wetland boundary.

2.9 **Sensitive Areas** – Areas that include wetlands and streams; archeological and cultural sites**;** rare, endangered and threatened species sites; conservation easements; and buffers. The archeological and cultural sites fall under a narrower group of culturally sensitive areas and all other areas fall under environmentally sensitive areas. Blue flagging will be used to mark environmentally sensitive areas and specific constraints noted in the erosion control plan, and yellow flagging will be used for culturally sensitive areas.

2.10 **Mats** – Mats are commercially constructed wood or synthetic structures to be used primarily in wetlands to avoid potential impacts to wetlands. The expected performance standard is that the wetland functions remain intact. Construction in wetlands should not substantially disturb the root mat, nor use mechanized pushing, dragging or similar activities that redeposit excavated soil material. The use of heavy equipment in these areas is precluded except on mats. Timber mats (brush mats or

cord mats or mats from non-bound, non-consolidated material) are not acceptable.

2.11 **Low Ground Pressure Equipment** - Equipment that does not affect the functioning of the wetland (e.g., does not cause ground disturbance or compact wetland soils as described in definition 2.10).

2.12 **Heavy Equipment** - Conventional equipment, not specifically designed to work in sensitive areas such as wetlands, and which generally would degrade the functioning or other aspects of those areas (e.g., damage wetlands or areas containing cultural/archeological resources).

3.0 SEEDING

All seeding referenced in this specification shall be conducted according to site specific Erosion Control Details provided to the Contractor by PEC.

4.0 GENERAL

4.1 The contractor shall not cross streams with any equipment unless approved by PEC's designated representative. The Contractor shall be required to cross streams only using temporary bridges as expressed in the bid package. Filling and/or culverting of streams, unless expressly provided in permits, is not allowed. Temporary bridges are not provided by PEC.

4.2 Stream banks shall not be disturbed by equipment crossings or temporary bridges. Adequate matting on each side of the stream shall be provided by the Contractor to prevent any disturbance to the stream banks or buffer zones on each side of the stream (Refer to Fig-1).

4.3 For any existing access paths used by the Contractor, the Contractor shall install appropriate erosion control measures to prevent sediment from entering wetlands, streams, creeks or other sensitive areas.

4.4 Sensitive areas will be marked with either blue or yellow flagging. If crossing through a sensitive area is required to access an upland area, prior approval from the Designated Representative or environmental support personnel is required. The Contractor shall use matting or low ground pressure equipment in or across sensitive areas.

4.5 Within 15 days after construction activities are completed in a particular area, the Contractor shall restore the right-of-way to the original conditions and seed per the approved Erosion Control Details and/or storm water plan.

4.6 Road ditches that were altered for access shall be reshaped and seeded.

4.7 As directed by PEC's Designated Representative, the Contractor shall install berms or other erosion control measures to prevent erosion of soil compacted by the Contractors equipment on steep slopes.

4.8 The low ground pressure equipment shall be allowed to operate in wetlands or other sensitive areas. The expected performance standard is that the wetland functions

remain intact. The construction should not substantially disturb the root mat. The use of heavy equipment in these areas is precluded except on mats. The Contractor shall use commercially constructed wood or synthetic mats to avoid potential impacts to wetlands. Timber mats (brush mats or cord mats or mats from non-bound, non-consolidated material) are not acceptable.

5.0 STRUCTURE INSTALLTION

The Contractor shall restore all disturbed areas around structure installations to their natural contours and seed per site specific Erosion Control Details provided to the Contractor by PEC. Particular care shall be taken to ensure adequate drainage so that water does not collect around the structure area.

6.0 CONCLUSION

The Contractor is required to minimize ground disturbance and changes to ground topography, and restore pre-existing conditions. The Contractor is required to conduct all activities so that existing erosion control measures are not destroyed or seriously impaired. The Contractor will be held responsible for restoring all areas disturbed during construction which could result in erosion. Finally, the Contractor will be held responsible for repairing any previously established erosion control measures disturbed during construction.

GENERAL BRIDGE NOTES:

1) Bridge structure shall be constructed at or above bank elevation to prevent entrapment of floating materials and debris.
2) If required, bridge abutments shall be installed parallel to and on stable banks, (not shown in the figure). The contractor shall be responsible for installing such abutments. Fiberglass/composite mats shall be utilized for bridge approaches.
3) Bridge spans shall be constructed to span the entire channel.
4) Upon removal of the bridge, all disturbed areas shall be seeded and covered with straw for stabilization.
5) As best as possible, all bridges shall be installed perpendicular to stream channels.
6) Per approval of owner/engineer, timber mats may be substituted for fiberglass/composite mats.