PROJECT DESCRIPTION

This project consists of (describe project LOCATION, LIMITS and WORK)

The receiving water is (provide receiving water(s))

SUMMARY

Soil disturbing activities will include roadway grading. The total disturbed area for the project is approximately (provide project specific total for disturbed area)

(Describe the pavement surface, provide runoff coefficient prior to and after construction)

(Erosion and Sediment Control Plans, provide sheet numbers)

EROSION AND SEDIMENT CONTROLS

Erosion Control and Turf Establishment measures listed in this narrative are defined and outlined in the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, PF-14 and in the Special Contract Requirements. The attached Erosion and Sediment Control Plan, (provide sheet numbers) provides details regarding the installation of the erosion and sediment controls.

Temporary Best Management Practices (BMP) to reduce erosion as a result of project work will be implemented in conjunction with the construction of this project. These include:

- Provide project specific best management practices, examples include;
  - Install wire-backed silt fence per Detail 157-A in all areas of ground disturbance where sheet flow may cause erosion, particularly at the toe of fills. Coordinate the installation, use, and removal of erosion and sediment control measures with roadway activities to assure economical, effective, and continuous erosion and sediment control.
  - Install special silt fence per Detail 157-B in areas where cofferdams or temporary diversion berms are not in place.
  - Employ temporary stabilization practices in incremental stages as construction proceeds.
  - Install all erosion and sediment control measures as directed by the Contracting Officer (CO). Do not modify the type, size, or location of any control or practice without prior approval from the CO.
  - Do not drive construction equipment across flowing waterways.
  - Do not allow construction vehicles to track sediment outside the project limits.
  - Do not allow any construction equipment to operate on or access the down-slope side of the perimeter control measures.
  - Direct storm water to vegetated buffer areas and do not discharge directly into surface waters.
  - Inspect and maintain regularly all mechanized equipment used in or near surface waters to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.
  - In general, preserve existing vegetation, trees and shrubs.
  - Stockpile topsoil stripped from the construction area in an area that will not interfere with construction phases.
  - Cover stockpiled soil with plastic or surround it with silt fence.
  - Provide watering for dust control within the construction limits, on active haul roads, and in pits and staging areas. Solid waste resulting from the construction will consist of construction debris, garbage, and empty containers. Collect and store all waste in dumpsters, or in metal or plastic drums as appropriate.
  - Hazardous waste will not be generated from normal construction activities. Equipment fueling and maintenance could generate spills, leaks, and hazardous wastes like motor oil, diesel, gasoline, and battery fluid. If feasible, conduct these activities in a covered area to avoid contact with storm water. Store all hazardous waste materials in appropriate and clearly marked containers away from other non-waste materials. Do not dispose of hazardous waste materials into the on-site dumpsters. Dispose of material according to Federal, State, and local regulations.
  - Report spills large enough to discharge to surface water to the National Resource Center (NRC) at 1-800-424-8802 or 1-202-267-2675.

After the completion of roadway construction and culvert replacement, do the following as directed by the CO to permanently stabilize disturbed areas:

- Provide project specific permanent stabilization measures, examples include:
  - Where necessary, replace eroded topsoil and re-apply permanent turf establishment to disturbed areas where vegetation has not established.
  - Inspect, clean, and repair all culvert outlet protection, riprap basins, and stabilized riprap slopes.
  - Remove all devices used for dewatering.
  - Remove silt fence after all upslope areas are stabilized and vegetation is well established.
  - Stabilize all areas that are disturbed due to the removal of sediment control devices.

VEGETATIVE STABILIZATION

Stabilize X.X acres as a result of this project. The area will be prepared for turf establishment with topsoil and mulch. In accordance with the Special Contract Requirements, apply seed at the rates for each season as stated below:

- (provide project specific seed mix and application rates)
- (provide riparian seed mix for riparian areas. Obtain mix from local seed supplier, the Partner or develop a mix according to the NC Dept. on Environmental and Natural Resources, Guidelines for Riparian Buffer Restoration)

Name of Seed

<table>
<thead>
<tr>
<th>Seasons and Dates</th>
<th>Kentucky Bluegrass</th>
<th>Big Bluestem</th>
<th>Indiangrass</th>
<th>Switchgrass</th>
<th>Rye Grass</th>
<th>Total Seed</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 1, April 30</td>
<td>29</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>15</td>
<td>78</td>
</tr>
<tr>
<td>May 1, August 30</td>
<td>29</td>
<td>8</td>
<td>6</td>
<td>4</td>
<td>25</td>
<td>58</td>
</tr>
</tbody>
</table>

In accordance with the Special Contract Requirements, apply mulch at the following rates:

<table>
<thead>
<tr>
<th>Mulch</th>
<th>Rate (pounds per acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Straw</td>
<td>50# (1 to 2 inch mat)</td>
</tr>
</tbody>
</table>

EROSION & SEDIMENT CONTROL CONSTRUCTION SEQUENCE

PHASE I Establish Perimeter Controls

Prior to any clearing, grubbing, and excavation, construct perimeter controls to ensure that disturbed sediment does not leave the project site. Perimeter controls include silt fence and other approved measures outside the construction limits.

PHASE II - Intermediate Controls

- Apply intermediate controls during rough grading operations. Install wire-backed silt fence and special silt fence in areas called out on the Erosion and Sediment Control Plans, sheets MJO-MH4. Install filter berms (excursion walls) in ditches along the roadway, and use filter bags for dewatering at the abutment and wing walls installation. Obtain the CO’s approval before installing any control not specified in the SWPPP/ECN.

- The CO may direct the installation of certain controls in order to forestall or mitigate potential or existing erosion problems.

- Apply temporary turf establishment in completed disturbed areas that will remain exposed for over 7 calendar days, or as directed by the CO.

- As soon as practical, but not to exceed 7 calendar days, apply permanent turf establishment to the finished slopes according to Section 524 and 525.

- At the end of each day’s grading operations, shape earthwork to minimize and control erosion from storm runoff.

- Do not allow ponded water to encroach into the travel lanes.

- Provide silt fence around all stockpiled excavated roadway material.

- Apply temporary turf establishment to stockpiles remaining in place longer than 14 days, or when directed by the CO.
PHASE III- Final Construction / Stabilization

After completion of roadway construction do the following as directed by the CD:

- Finish grading, place naiap, and apply permanent turf establishment to any remaining disturbed areas.
- Where necessary, replace eroded topsoil and re-apply permanent turf establishment to disturbed areas where vegetation has not established.
- Remove silt fence only after all upslope areas are stabilized and vegetation is well established.
- Remove all other perimeter controls when directed by the CD.

LOCATION OF SPECIAL RESOURCES OR PROBLEM AREAS

Provide special areas of interest or critical project requirements, examples include:

Caney Fork Creek is a North Carolina Designated Trout Water. Under no circumstances should rock, sand, or other materials be dredged from the wetted stream channel, except in the immediate permitted work area. Construction in the stream channel, and within a 25-foot buffer zone along each bank of the river, must occur from April 16 to October 14, to avoid impacts to trout reproduction and downstream aquatic resources. If bridge construction cannot be completed within this window, leave temporary traffic control in place (along with associated erosion and sediment control measures) until the following April. All disturbed soils must be stabilized by September 30, and remain stable through March 31.

MAINTENANCE AND INSPECTION PROCEDURES

(Provide a list of all erosion and sediment control practices used on the project, and their maintenance and inspection procedures)
EQUIPMENT AND VEHICLE MAINTENANCE
1. Maintain vehicle and equipment to prevent discharge of fluids.
2. Provide drip pans under any stored equipment.
3. Identify leaks or spillage from equipment, or remove leaking equipment from the project.
4. Collect all spent tools, store in separate containers and properly dispose as hazardous waste (recycle when possible).
5. Removeingoil-soaked vehicles and construction equipment from service until the problem has been corrected.
6. Bring oil-soaked vehicles, equipment, hydrocarbons, fluids and other petroleum products to a recycling or disposal center that handles these materials.

LITER, BUILDING MATERIAL AND LAND CLEARING WASTE
1. Never burn or burn waste. Place litter and debris in approved waste containers.
2. Provide a sufficient number and size of waste containers (e.g., dumpster, trash receptacle) on site to contain construction and domestic wastes.
3. Locate waste containers at least 50 feet away from storm drain inlets and surface waters unless other alternatives are reasonably available.
4. Locate waste containers on sites that do not receive substantial amounts of runoff from upland areas and does not drain directly to a storm drain, stream or wetland.
5. Cover waste containers at the end of each workday and before storm events or periods of excessive precipitation. Repair or replace damaged waste containers.
6. Anchor all high top items in waste containers during times of high winds.
7. Locate waste containers as needed to prevent improper runoff. Clean up immediately if containers overfill.
8. Dispose waste offsite at an approved disposal facility.
9. On business days, clean up and dispose of waste in designated waste containers.

PAINT AND OTHER LIQUID WASTE
1. Do not dump paint and other liquid waste into storm drains, streams or waters.
2. Locate paint waste at least 50 feet away from storm drain inlets unless waterways under no other circumstances are reasonably available.
3. Contain liquid wastes in a controlled area.
4. Containment must be labeled, sized and placed appropriately for the needs of site.
5. Prevent the discharge of oils, solvents, detergents and other liquid wastes from construction sites.

PORTABLE TOILETS
1. Install portable toilets on level ground, at least 50 feet away from storm drains, streams or wetlands and other local waterways.
2. Provide a disposal area for portable toilet units.
3. Monitor portable toilets for leaking and properly dispose of any leaking material.

EARTH ENHANCED MANAGEMENT
1. Stock the stockpile basins on plans. Locate earthen-matter stockpile basins at least 50 feet away from storm drain inlets, sediment basins, perimeter sediment controls and surface waters unless it can be shown that reasonable alternatives are reasonably available.
2. Correct spills and spills in storm drains, streams or wetlands and other local waterways.
3. Provide stable access point when feasible.
4. Submit a urinary advice for the timeframes provided on this sheet and in accordance with the approved plan and any additional requirements. Soil stabilization is defined as an approved soil-reclamation or soil-stabilization technique that will restrict accelerated erosion on disturbed soils for temporary or permanent control measures.

POLYCARBOXAMIDES (PAAMs) AND FLOCULANTS
1. Select flocculants that are appropriate for the soils being exposed during drilling.
2. Apply flocculants at or before the inlets to Erosion and Sediment Control Measures.
3. Apply flocculants at the concentrations specified in the NC DRW List of Approved FAM/Floculants and in accordance with the manufacturer's instructions.
4. Provide gaging area for containment of treated stormwater before discharge offsite.
5. Stock flocculants in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures.

PREDICTED WASTE FROM THE PROJECT:
1. Do not discharge concrete or cement slurry from the site.
2. Dispose of, or recycle settled, hardened concrete residue in accordance with local and state solid waste regulations and at an approved facility.
3. Manage washout from mortar mixers in accordance with the above items and in addition place the mixer and associated materials on impervious barrier and within no more than 214 feet of a storm drain system.
4. Install temporary concrete washwaters per local requirements, where applicable. If an alternative method or product is to be used, contact your approval authority for review and approval.
5. Do not use concrete washwaters for discharging or storing defective curb or sidewalk sections.
6. Stormwater accumulated within the washout may not be pumped into or discharged to the storm drain system or receiving surface water; liquid waste must be pumped out and removed from project.
7. Locate washouts at least 50 feet from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. At a minimum, install protection of storm drain inlet(s) closest to the washout which could receive spills or overflow.
8. Locate washouts in an accessible area, on level ground and install a storm drain entrance pad in front of the washout. Additional controls may be required by the approving authority.
9. Install at least one sign directing concrete trucks to the washout within the project limits. Post signage on the washout itself to identify this location.
10. Remove flow from the washout when at approximately 75% to 80% capacity or when overflows will occur.
11. The purpose of the concrete wash, remove remaining leaching and dispose of in an approved disposal facility. Fill pit, if applicable, and dilate any disturbance caused by removal of washout.

RECOMMENDATIONS:
1. Store and apply herbicides, pesticides and rodenticides in accordance with label restrictions.
2. Store herbicides, pesticides and rodenticides in their original containers with the label, which lists directions for use, ingredients and first aid steps in case of accidental poisoning.
3. Do not store herbicides, pesticides and rodenticides in areas where flooding is possible or where they may spill or leak into waters, stormwater drains, ground water or surface water. If a spill occurs, cleanup immediately.
4. Do not store these materials onsite.

HAZARDOUS AND TOXIC WASTE
1. Create designated hazardous waste collection areas on-site.
2. Place hazardous waste containers under cover or in secondary containment.
3. Do not store hazardous chemicals, drums or bagged materials directly on the ground.
PART II - SECTION G, ITEM (E)

DRAWN DOWN OF SEDIMENT BASINS FOR MAINTENANCE OR CLOSEOUT

Sediment basins and traps that receive runoff from drainages of areas of one acre or more shall use outlet structures that will add water to the surface when these devices need to be drawn down for maintenance or close out unless this is infeasible. The circumstances in which it is not feasible to withdraw water from the surface shall be rare (for example, times with extended cold weather) from surface withdrawals from sediment basins shall be allowed only when all of the following criteria have been met:

(a) The E&C plan author has provided documentation of the non-surface withdrawal and the specific time periods or conditions in which it will occur.
(b) The non-surface withdrawal has been reported as an anticipated by-pass in accordance with Part II, Section C, Item (26) and (d) of this permit.
(c) Dewatering devices are treated as continuous to minimize discharges of pollutants from stormwater that is removed from the sediment basin. Examples of appropriate controls include properly sized, designed and maintained dewatering tanks, weir tanks, and filtration systems.
(d) Vegetated, upland areas of the site or a properly designed storm drain shaft is used to convey the extent feasible at the outlet of the dewatering treatment device described in Item (c) above.
(e) Visibility disruption devices such as check dams, sediment traps, and riprap are provided at the discharge points of all dewatering devices, and
(f) Sediment removed from the dewatering treatment device described in Item (c) above is disposed of in a manner that does not cause discharge of sediment into waters of the United States.

EFFECTIVE: 04/01/19

PART III - SECTION B, RECORDED KEEPING AND REPORTING

1. E&C Plan Documentation

The approved E&C plan per item at the E&C plan shall be kept on the site. The approved E&C plan must be kept up-to-date throughout the coverage under this permit. The approved E&C plan shall be kept on-site and available for inspection at all times during normal business hours.

(a) Each E&C plan has been installed and does not significantly deviate from the locations, dimensions and relative elevations shown on the approved E&C plan.
(b) A copy of the approved E&C plan has been kept in the main office or at the location of the project.
(c) A series of grading has been completed.
(d) Ground cover is intact and intact in accordance with the approved E&C plan.
(e) The maintenance and repair requirements for all E&C elements have been performed.
(f) Corrective actions have been taken to E&C requirements.

PART III - SELF-INSPECTION, RECORDKEEPING AND REPORTING

1. Occurrences That Must Be Reported

Permittees shall report the following occurrences:
(a) Visible sediment deposition in a stream or wetland.
(b) Oil spills; They are 25 gallons or more. They are less than 25 gallons but cannot be cleaned up within 24 hours. They cause sheen on surface waters (regardless of volume), or They are within 100 feet of surface waters (regardless of volume).
(c) Releases of hazardous substances in excess of reportable quantities under Section 1311 of the Clean Water Act (40 CFR Part 116) or Section 304 of CERCLA (40 CFR part 307).
(d) Anticipated by-passes and unanticipated by-passes.
(e) Noncompliance with the conditions of this permit that may endanger health or the environment.

2. Reporting Timeframes and Other Requirements

After a permittee becomes aware of an occurrence that must be reported, he shall contact the appropriate Division office within the timeframe and in accordance with the other requirements listed below. Occurrences outside normal business hours may be reported to the Department's Environmental Emergency Center personnel at (800) 858-0085.

(a) Document any sediment deposition in streams or wetlands:
(b) Reporting Timeframe:
Within 24 hours, on oral or electronic notifications; or
Within 7 calendar days, a report that contains a description of the occurrence and/or system to address the cause of the deposition.

(c) E&C Plan modifications for activities associated with the occurrence identified above:
Within 24 hours, on oral or electronic notifications; or
Within 7 calendar days, a report that contains a description of the occurrence, affected area, and the modification to the E&C plan to address the occurrence within the timeframe of this Permit.

United States Department of Transportation
Office of Federal Lands Highway
Erosion and Sediment Control Narrative

Sheet 4 of 4