

**OKLAHOMA DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISIONS
FOR
MANAGEMENT OF EROSION, SEDIMENTATION, AND
STORM WATER POLLUTION PREVENTION AND CONTROL**

These Special Provisions revise, amend, and where in conflict, supersede applicable sections of the 1999 Standard Specifications for Highway Construction, English and Metric. Units of measurement are provided in the subsections in both English and Metric equivalents. The units for this project shall be those specified in the project plans.

**SECTION 220
MANAGEMENT OF EROSION, SEDIMENTATION, AND
STORM WATER POLLUTION PREVENTION AND CONTROL**

220.01 DESCRIPTION.

(a) **General.** This work consists of overseeing the construction and maintenance of erosion and sediment control measures, in accordance with these specifications, in compliance with the details shown in the contract, and as approved by the Engineer. The purpose of this work is to minimize or eliminate air pollution and pollution of rivers, streams, impoundments, and private properties from the discharge of dust and/ or storm water associated with construction activity.

(b) **Definitions.**

1. BMP's (Best Management Practices). A wide range of project management practices, schedules, activities, or prohibition of practices, that when used alone or in combination, prevent or reduce erosion, sedimentation, and/or pollution of adjacent properties, water bodies, and wetlands. BMP's include temporary or permanent structural and nonstructural devices and practices.

2. Completion Date. See ODOT's Standard Specification Subsection 101.17 or 105.17.

3. Erosion and Sedimentation.

Erosion is the detachment and movement of soil particles from their original location by force of water, wind, ice and gravity.

Sedimentation occurs when the eroded soil particles are deposited at a new location.

4. Erosion and Sediment Control.

Erosion control reduces the potential of soil particles from being detached by use of soil stabilization practices. These practices are noted in the SWMP and SWPPP.

Sediment control minimizes detached particles from leaving the site or entering a water body by use of structural practices. These practices are noted in the SWMP and SWPPP.

5. Final Stabilization. A point in time when all earth-disturbing activities are complete and permanent erosion and sediment controls are established and functional. The stabilized site is protected from erosive forces of raindrop impact and water flow. Typically, all unpaved areas except graveled shoulders, crushed aggregate base course, or other areas not covered by permanent structures are protected by either a uniform blanket of perennial vegetation (at least 70% of native background cover) or equivalent stabilization measures including but not limited to riprap, geotextiles, gabions or paved ditches.

6. SPRP (Spill Prevention and Response Plan). The Contractors detailed plan for prevention of pollution that stems from the use, containment, cleanup, and disposal of hazardous material, including petroleum products generated by construction activities and the use of construction

- equipment.
7. OPDES. Oklahoma Pollutant Discharge Elimination System Act.
 8. ODEQ. Oklahoma Department of Environmental Quality.
 9. NOI (Notice of Intent). The OPDES General Permit application form to commence earth-disturbing activities for storm water discharges on projects which have earth disturbing activities of one acre or more.
 10. Authorization to Discharge. The document issued from ODEQ, as a result of the NOI application, serving as the official notification of the site specific permit.
 11. NOT (Notice of Termination). The OPDES General Permit application form indicating the end of earth-disturbing activities and the attainment of final stabilization.
 12. ODEQ / OPDES General Permit. The General Permit for Storm Water Discharges from Construction Activities, issued by the Oklahoma Department of Environmental Quality (ODEQ) under the Oklahoma Pollutant Discharge Elimination System (OPDES) regulations. It requires an SWPPP (Storm Water Pollution Prevention Plan) prior to earth-disturbing activities for the project. ODEQ is the regulatory, enforcement and permitting authority for the Environmental Protection Agency (EPA) in the State of Oklahoma.
 13. SWMP (Storm Water Management Plan). The Department's general plan for control of project-related erosion and sedimentation. The SWMP normally consists of the following:
 - 3.1 SWMP Information Sheet.
 - 3.2 Site Specific Erosion and Sediment Control Plan Sheets.
 - 3.3 Contract Pay Items with Plan Notes.
 - 3.4 Summary of Temporary & Permanent Erosion & Sediment Controls.
 - 3.5 Site Specific Drainage Map.It is developed by the Department and included in the project plans and specifications. It serves as a resource for bid estimation and a framework from which the Contractor develops the project SWPPP.
 14. SWPPP (Storm Water Pollution Prevention Plan). The Contractors' plan for erosion and sediment control and storm water management under the OPDES General Permit. The SWPPP is developed by incorporating pertinent information supplied by the Department (SWMP) with the Contractors' information and describing site-specific controls and management of issues identified for the project based upon construction sequences and activities. See specific requirements in 220.04(c)3.

220.02 MATERIALS.

Provide materials for erosion and sediment control measures that conform to details shown in the contract and requirements of this specification. These measures are subject to updates and amendments by the Contractor during project progression. The items, estimated quantities and locations of the control measures will be shown on the plans, however, the Engineer may increase or decrease the quantity of these items as the need arises. The Engineer also may allow other materials and work as the need arises and as approved in writing.

220.04 CONSTRUCTION METHODS.

- (a) **General.** Provide an SWPPP and an NOI in accordance with the provisions of the latest version of the OPDES General Permit for Construction Activities issued by the ODEQ on construction projects with one acre (0.405 hectares) or more of earth disturbance. Projects to be constructed within the corporate limits of a municipality may require additional permits and compliance with additional local requirements or constraints. All projects that involve earth disturbing operations require the appropriate BMP's developed for that specific site with up-to-date amendments by the Contractor.

(b) **Department Responsibilities for SWMP.** The Department will obtain dated photographs and video documentation of pre-existing project site conditions at drainage locations and evidence of vegetation density prior to utility relocation or construction. The Department will prepare and include in the construction plans the SWMP and SWMP Information. The SWMP sheets of the construction plan include:

1. The SWMP Information sheet will list the:
 - 1.1 Nature of the activity.
 - 1.2 Proposed construction sequencing.
 - 1.3 Total site area.
 - 1.4 Total disturbed area.
 - 1.5 Runoff coefficient for pre/post construction.
 - 1.6 Latitude and longitude of the site.
 - 1.7 Basic drainage, receiving waters and site information required for SWPPP development.
2. Site Maps.
3. Drainage patterns.
4. Discharge locations.
5. Approximate slopes.
6. Limits of construction (areas of earth-disturbance and areas of no earth-disturbance or buffer zones).
7. Locations of major controls.
8. Temporary and permanent structural and nonstructural practices.
9. Conditions prior to and after construction.
10. Limits of right-of-way.
11. Easements.
12. Existing and new structures.
13. Existing and proposed roadway grades.
14. Wetlands and other environmental conditions.
15. Notes providing special conditions for endangered and threatened species or critical habitat.
16. Detours.
17. Details of the description and timing of final stabilization practices.
18. Pay items and estimated pay quantities based on the above information. The Department will provide a partially completed NOI with the award package for completion and signature by the Contractor.

Require documentation from the Contractor to ensure the ODEQ Authorization to Discharge has been obtained prior to allowing earth-disturbing activities to commence.

(c) **Contractor Responsibilities for SWPPP.** Submit for review by the Engineer at the preconstruction conference as required by Section 108.02, SWPPP's that address:

1. Intended sequence of construction with a proposed schedule of activities.
2. All required erosion and sediment control measures for each construction phase.
3. Compliance with the provisions of the latest version of the OPDES General Permit, which include but are not limited to the following items or activities:
 - 3.1 SWMP/SWPPP
 - 3.2 Copy of completed NOI with Contractor information and the ODEQ Authorization to Discharge.
 - 3.3 The proposed dates and locations of planned and actual clearing and grubbing activities, earthwork activities, and construction of temporary and permanent erosion control features.
 - 3.4 A description, location and schedule of temporary and permanent best management practices.

- 3.5 A description, location and schedule of control practices used to divert flows from exposed soils.
 - 3.6 A description of construction material storage and controls used to minimize pollution from these materials.
 - 3.7 A prepared Spill Prevention and Response Plan.
 - 3.8 A description of the existing vegetation density within the project limits and adjacent land. (Include pictures and video, documented by date and location.)
 - 3.9 Documentation of existing conditions of streams and water courses prior to earth-disturbing activities. (Include pictures and video documented by date and location.)
 - 3.10 Current OPDES General Permit is available on the project site.
 - 3.11 How vehicle tracking will be prevented, reduced or repaired during the project.
 - 3.12 Names, titles, companies, and 24 hour contact information, of people responsible for erosion and sediment control.
 - 3.13 A signed qualification narrative provided by the Contractor, designating the person(s) responsible for the SWPPP, identifying their familiarity with the SWPPP, and documenting their training and experience.
 - 3.14 A Contractor Certification statement for subcontractors is recommended. This document places the responsibility of complying with and abiding by the intent and purpose of the storm water permit with the Sub-Contractor for any and all work performed under the authority and direction of the Prime-Contractor. A sample certification statement may be obtained on ODEQ's website at www.deq.state.ok.us. Go to Water Quality, General Permits, Storm Water, OKR10 Storm Water Discharges from Construction Activities, Addendum D.
4. Develop the SWPPP using a combination of structural, nonstructural, and vegetative BMP's to adequately control erosion and sedimentation and manage storm water. Modify the SWPPP as needed to address changes in the field that develop during construction. Submit amendments to the SWPPP for approval as work progresses or as the proposed phasing/scheduling changes.
 5. Provide a copy of ODEQ NOI and Authorization to Discharge to the Resident Engineer prior to commencement of earth disturbing activities. Failure to obtain the ODEQ Authorization to Discharge will not be a basis for delaying time charges.
 6. Identify Contractor personnel responsible for on site inspection of storm water management and documentation procedures to be used as specified in 220.04(h)4.
- (d) **Retention of Records.** The SWPPP is a dynamic document. Retain and maintain all changes made to the SWPPP as required by the latest version of the OPDES General Permit. This will be the official record. Retain and place in the SWPPP a copy of the permit language and all inspection and maintenance reports. Perform inspection and maintenance reports from the commencement of earth disturbing activities to the completion date of the project. Make these records available to ODEQ or other regulatory agencies during normal business hours. Provide copies to ODOT of any and all ODEQ inspection reports, warning letters, technical assistance, Notice of Violation, Consent Order and/ or Administrative Compliance Orders. Submit the official SWPPP and all inspection and maintenance reports to the Engineer at the completion of the project.
- (e) **Notice of Intent (NOI).** Complete the mailing information and sign the Contractor's NOI provided with the contract award package to the ODEQ prior to the preconstruction conference. Provide to the Engineer copies of the submitted NOI for review at the preconstruction conference and the Authorization to Discharge certificate prior to earth disturbing activities. At the preconstruction meeting, indicate your understanding of the terms and conditions of the OPDES General Permit and that you will fully implement and maintain the SWPPP as proposed or modified during the progress of the project.

- (f) **Notice of Termination (NOT).** The NOT must be submitted by the Contractor to the ODEQ. The Contractor will submit a copy of the NOT and ODEQ's final inspection report to the Resident Engineer. ODEQ's final inspection must not have any critical exceptions for the project to be declared complete and the Contractor relieved of any related construction site responsibilities, in accordance with ODOT's Standard Specification 105.17 "Project Completion and Acceptance." ODEQ will require the Contractor to apply for a new permit if the project does not have 70% stabilization or any other discrepancies are found.
- (g) **Off-Site Pollution Prevention Plan.** Prepare and submit SWPPP documentation complying with the latest version of the OPDES General Permit to ODEQ for all related work to take place outside the project right-of-way. Submit copies of required SWPPP's storm water permit documents for borrow pits, work/maintenance yards, and waste disposal yards, asphalt and concrete plants dedicated to the project to the Engineer at least 48 hours before related work starts. Install, repair, and maintain BMP's outside of the project limits at no additional cost to the Department.
- (h) **Contractor's Operations.** Keep to a minimum project activity within the right-of-way in areas other than on the paved roadway to prevent damage and destruction of existing vegetation.

Keep all construction areas in an orderly condition, and promptly dispose of all refuse and discarded materials.

Repair or replace erosion and sediment control measures damaged due to negligence, improper installation, or lack of maintenance at no additional cost to the Department.

1. **Sequence of Operations.** Schedule and conduct an on-site inspection with the Engineer to review and designate the locations and types of erosion and sediment control protection to be placed prior to beginning any work that will disturb existing vegetation. Indicate on the SWPPP, proposed erosion and sediment control devices used to divert flows, store flows, limit runoff from exposed areas, stabilize exposed soil, and filter sediment for each phase of the scheduled work.

Coordinate the placement of the temporary and permanent erosion and sediment control measures shown in the SWMP with up-to-date documented amendments to ensure effective and continuous erosion and sediment control throughout construction.

Do not initiate earth-disturbing operations until the Engineer has reviewed the SWPPP and the appropriate erosion control measures are in place.

2. **Protection of Watercourses.** Locate and construct waste disposal areas, maintenance and storage yards, and haul roads within the project limits in a manner that will prevent sediment and other pollutants from entering streams and water impoundment areas or leaving the project site.

Do not operate mechanized equipment in perennial streams, unless otherwise allowed in the contract.

Clear streambeds and watercourses, as soon as practical of false work, piling, debris, and other obstructions placed during construction which are not part of the finished work. Do not deposit concrete waste or clean haul trucks in these areas. Recover slurry from drill shaft operations and remove it from the project. Do not allow slurry to flow into streambeds.

3. **Earthwork Operations.** Protect excavation or embankment slopes as construction progresses. A maximum length of 1 mile (1.6 km) may be exposed without either placement of temporary (e.g., seeding, mulching, soil retention blankets, or other approved soil stability), or permanent (e.g., seeding, sprigging or sodding) erosion control measures. Obtain approval from the Engineer in the preconstruction schedule for any increase or decrease in the amount of the area exposed by construction operations. In addition to the maximum exposed surface area, no exposed area shall remain unprotected for more than 14 calendar days without being stabilized. Areas within 50 feet (15m) of any streams will be stabilized within 48 hours of inactivity of construction operations. Install temporary or permanent erosion or sediment control measures on excavation or embankment

slopes as work progresses in vertical increments of not more than 10 feet (3 m) unless otherwise directed by the Engineer.

Maintain the top of the subgrade in all roadway sections through all construction stages so as to prevent silt from leaving the construction limits.

4. **Inspection and Maintenance of Measures.** Inspect and document all measures at least once every seven (7) calendar days and within 24 hours of ½ inch (12.5mm) or greater rainfall event. Maintain all erosion and sediment control measures in accordance with the specifications at all times during the life of the contract for all disturbed areas, material storage areas, discharge locations, drainage structures and vehicle entrances/exits for off-site tracking. Repair damaged measures; remove trapped sediment, and correct measures that are not working within three (3) calendar days. Initiate repairs as needed or as directed by the Engineer within one (1) calendar day of damage occurring to erosion or sediment control measures that could result in discharge of sediment into live streams, water impoundments, or other nearby bodies of water.

Remove accumulated silt before the control measures reach 50% capacity. Document each inspection of erosion and sediment control measures on the "SWPPP Inspection and Maintenance Report" form provided by the Engineer. Submit copies of the completed inspection forms signed by qualified personnel to the Engineer within 24 hours of the inspections. Install a rain gauge at the project site and document rainfall amounts in the inspection schedule or reports.

5. **Removal of Control Measures.** Remove all temporary erosion and sediment control features from the project area when no longer required, unless otherwise designated in the contract or directed by the Engineer. Restore the areas of removal as close as possible in order to meet the previous ground lines, cover, and features.

Obtain approval from the Engineer to deposit sediment removed from control features within the right-of-way. If silt is disposed in stabilized areas, restabilize the area at no cost as directed by the Engineer.

- (i) **Storm Water Compliance Inspections.** The Contractor shall perform periodic storm water compliance inspections and document each inspection in accordance with Section 220.04(h)4. The Engineer shall perform periodic inspections for compliance with OPDES Permit or General Permit requirements and SWPPP documentation and control measures. The ODEQ may inspect for compliance with NOI requirements at any time until the NOT is submitted.

220.05 METHOD OF MEASUREMENT.

- (a) SWPPP documentation and management will be measured on a lump sum basis.
- (b) Properly installed and maintained erosion and sediment control applications in accordance with the specifications within the right-of-way or as reviewed by the Engineer will be measured under other items of work.
- (c) Erosion and sediment control applications attributed to the Contractor's negligence, carelessness, lack of maintenance or are outside the right-of-way for material source or waste sites, haul roads, equipment storage and Contractor offsite facilities will not be measured for payment.
- (d) Non-Compliance Damages. The Department believes that the OPDES program is an integral part of the project, and any failure to maintain the measures in the field or lack of orderly documentation, including but not limited to continuous inspection reports and revisions of the SWPPP, may result in non-compliance citations by the ODEQ and/or other local, state and federal agencies. The Department will consider one or more of the following actions for failure to comply: 1) withhold a portion of payment for the lump sum item for SWPPP documentation and management, 2) withhold progressive payments for the project, 3) stop work on the project, 4) suspension of bidding for the Contractor, 5) apply non-compliance assessments in accordance with subsection 220.06(b), 6) the Engineer will proceed to maintain the project in accordance with ODOT's Standard Specification Subsection 105.14.

220.06 BASIS OF PAYMENT.

- (a) Approved documentation of NOI, Authorization to Discharge, initial and updated SWPPP’s, inspections, inspection reports, and acceptance of NOT by ODEQ will be paid at contract unit price as follows:

(SP) SWPPP DOCUMENTATION AND MANAGEMENT LUMP SUM

Such payment shall be full compensation for furnishing all materials, equipment, labor, an annual ODEQ permit fee and incidentals to complete the work as specified. Temporary erosion, sedimentation and storm water pollution prevention and control pay items will be measured for payment under their respective pay item numbers in Section 200.

Payment for this item of work shall be on the following schedule:

- 10 percent** for approved earth disturbing SWPPP documentation
- 15 percent** when 25 percent of the contract work is completed
- 25 percent** when 50 percent of the contract work is completed
- 25 percent** when 75 percent of the contract work is completed
- 25 percent** when 70 percent stabilization has been obtained, all temporary erosion and sediment control devices have been removed and the storm water permit has been terminated.

- (b) **Non-compliance assessment.**

Table 220.06A - Non-Compliance Assessment Schedule

Rates of Non-Compliance Assessments		
Total acres(hectares) of Disturbed Area shown on the SWMP sheet		Rates per Calendar Day
From	To & Including	
1(0.4)	5(2)	\$500.00
5(2)	50(20.2)	\$1,000.00
50(20.2)	100(40.5)	\$1,500.00
100(40.5)	No Limit	\$2,000.00

If the Engineer determines it to be appropriate, non-compliance assessments will be charged in accordance with Table 220.06A for failure to comply with the procedures specified in subsection 220.04(h), failure to document inspection and maintenance activities specified in subsections 220.04 (c, d, e, f, & g), or failure to document, install, or maintain field changes in erosion control measures in a timely and prescribed manner as directed in writing by the Engineer. The Engineer will provide written notice of non-compliance to the Contractor with a time line for accomplishment before assessments are applied. The Engineer will compile a schedule of calendar days for each and every day of non-compliance by the Contractor. The compiled schedule of calendar days will form the basis for charging the non-compliance assessments.

Non-compliance assessments will continue until the Engineer provides written notice of satisfactory compliance with these specifications to the Contractor.

(c) In addition to any Non-Compliance Assessments:

1. Indemnify and hold harmless the Department, officers, and employees from all acts and/or failure to act by the Contractor, his/her officers, employees or agents and any other subcontractors which result in damages to the environment or to third parties or which are found to violate any rule or regulation of any regulatory agency.
2. Reimburse the Department for the actual cost of any reasonable legal fees, liability, damage judgment or finding, fine, penalty, or expenses as a result of Contractor's negligent acts or violations of the above noted laws in its performance of the Contract.
3. Reimburse the Department within 10 Calendar Days of the amount of assessment, damage judgment or finding, fine, penalty, or expense or the Department may withhold this amount from the Contractor's next pay estimate or claim against the Contractor's bond if estimates are inadequate and deliver that sum to the permitting agencies issuing the assessment, damage judgment or finding, fine, or penalty.

These assessments are not to be construed as a penalty but are actual damages to recover the costs assessed against the Department due to the Contractor's failure to comply with the above requirements.