

**KANSAS DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION TO THE
STANDARD SPECIFICATIONS, 2007 EDITION**

Delete SECTION 901 and replace with the following:

SECTION 901

TEMPORARY EROSION AND POLLUTION CONTROL

901.1 DESCRIPTION

Install, maintain and remove temporary erosion and pollution control devices as required during the construction of the project.

BID ITEMS

Temporary Berm
Temporary Slope Drain
Temporary Slope Barrier (Set Price)
Temporary Ditch Check
Temporary Ditch Check (Rock) (Set Price)
Temporary Inlet Sediment Barrier
Temporary Sediment Basin
Temporary Stream Crossing
Sediment Removal (Set Price)
Temporary Fertilizer (**)
Temporary Seed (***)
Soil Erosion Mix
Temporary Seeding
Erosion Control (*)
Mulching (Temporary)
Mobilization (Emergency Erosion Control) (Set Price)
Curb Inlet Protection
* Class & Type
** Type of Fertilizer
*** Type

UNITS

Linear Foot
Linear Foot
Linear Foot
Linear Foot
Cubic Yard
Each
Cubic Yard
Each
Cubic Yard
Pound
Pound
Pound
Lump Sum
Square Yard
Acre
Each
Linear Foot

901.2 MATERIALS

a. Provide sediment barriers, fertilizers, seeds, soil erosion mix, erosion control materials and mulch that comply with **DIVISION 2100**.

Provide aggregate that complies with aggregate ditch lining, $D_{50} = 6$ inches, **DIVISION 1100**. Existing aggregate from the project may be used under this specification, provided all applicable physical requirements are met.

b. Straw or Hay Bales. Provide straw or hay bales that are free of weeds declared noxious by the Kansas Department of Agriculture. Provide bales bound with twine. Do not use bales bound with wire.

The Engineer will accept the straw or hay bales based on **DIVISION 2100**.

c. Temporary Slope Drain. Provide metal pipe, plastic pipe or flexible rubber pipe for temporary slope drains.

The Engineer will accept the material for temporary slope drain based on the condition of the pipe and visual inspection of the installed drain.

d. Biodegradable Logs. Provide commercially available biodegradable logs manufactured from rice straw, excelsior wood fiber, coconut fiber, jute or other biodegradable material bound with an open mesh fabric of jute or light-weight plastic.

The Engineer will accept the biodegradable logs based on compliance with dimensional and other requirements shown in the Contract Documents, and visual inspection of the installed material.

e. Geo-Ridge Permeable Berm™ or equivalent. The Environmental Scientist (Bureau of Design, Environmental Services Section) will consider an equivalent of the brand name specified. Provide the Engineer with a complete description, literature, test reports, etc. on the proposed equivalent.

The Engineer will accept the Geo-Ridge Permeable Berm™ (or an equivalent approved by the Environmental Scientist) based on brand name and visual inspection of the installed material.

f. Triangular Silt Dike™ or equivalent. The Environmental Scientist (Bureau of Design, Environmental Services Section) will consider an equivalent of the brand name specified. Provide the Engineer with a complete description, literature, test reports, etc. on the proposed equivalent.

The Engineer will accept the Triangular Silt Dike™ (or an equivalent approved by the Environmental Scientist) based on brand name and visual inspection of the installed material.

g. Curb Inlet Protection. Provide burlap bags or synthetic mesh, aggregate, 2 inch by 4 inch board as specified in the Contract Documents. Alternative products may be used with the Engineer's approval. The Engineer will accept the material for curb inlet protection based on condition and visual inspection of the installed material.

901.3 CONSTRUCTION REQUIREMENTS

a. Responsibility. Take all measures necessary to prevent erosion and pollution on the project and project related borrow areas.

If the contract does not include temporary erosion and pollution control bid items, and such work is required, items will be added as provided for in **subsection 104.8**.

Use KDOT's Temporary Erosion Control Manual as a guide for the design, installation and maintenance of temporary erosion control measures.

Install erosion control devices according to the approved erosion control site plan, prior to, or simultaneously with the clearing and grubbing operations. Do not perform grading until erosion control devices are in place as approved by the Engineer. Install devices to establish a perimeter control of the project in areas where it is anticipated that storm water runoff will leave the project.

Update the erosion control site plan as work progresses to show changes due to revisions in work schedules or sequence of construction, or as directed by the Engineer. Update the site map to reflect erosion control devices that have been installed or removed.

As a minimum, perform the following erosion control actions:

- Use temporary erosion and pollution control actions to control erosion resulting from the construction of the project;
- Use temporary erosion and pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds or other areas of water impoundment;
- Coordinate temporary erosion and pollution control measures with the construction of permanent erosion control features to provide continuous erosion control;
- Schedule construction of drainage structures and permanent erosion control features as soon as practical; and
- Immediately initiate placement of appropriate erosion control Best Management Practices (BMPs) in any exposed steep slope areas (40% or greater) where construction activities have permanently or temporarily ceased, and will not resume for a period exceeding 7 calendar days. For vegetative cover areas, in addition to seeding, watering, mulching, and any other required activities related to the planting and establishment of vegetation, utilize other appropriate erosion control practices such as geotextiles or erosion control mats.

Initiate temporary stabilization on areas that have been disturbed immediately after construction activities have permanently ceased on that portion of the project site. Initiate temporary stabilization measures on areas that have been disturbed immediately after construction activities have temporarily ceased on that portion of the project site if construction activities will not resume for a period exceeding 14 calendar days. Temporary stabilization may include temporary seeding, geotextiles, mulches or other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb the area. This stabilization must be completed within 21 calendar days.

b. Permits.

(1) Projects with 1 acre or more of erodible surface. KDOT will obtain a National Pollutant Discharge Elimination System (NPDES) permit for the project. The Contractor shall accept full responsibility, coverage, and liability for the permit, along with KDOT. Within 10 business days after notice of the award of contract or within any time extension the Bureau Chief of Construction and Maintenance has granted for completion of documents the Bidding Proposal Form requires, complete, sign and return to KDOT the KDHE form "REQUEST FOR JOINT OWNER/OPERATOR". A blank copy of the form is attached. The Secretary will not sign the contract until the Contractor has returned the completed, signed "REQUEST FOR JOINT OWNER/OPERATOR". If the Contractor fails to complete, sign, and return the "REQUEST FOR JOINT OWNER/OPERATOR" within the required time, the Secretary will cancel the award of contract as provided in **subsection 103.5**. KDOT will submit the completed form to KDHE for authorization. After approved by KDHE, copies will be distributed to KDOT and the Contractor. This joint permit does not cover Contractor plant sites and Contractor-Furnished borrow and waste sites adjacent to, or in the near vicinity of the project.

KDOT will not issue the Notice of Acceptance, **subsection 105.16**, until the necessary cleanup and seeding is completed for the project. Failure to complete this work could result in liquidated damages, **subsection 108.8**.

When Contractor-furnished borrow or plant sites are outside the project limits, obtain all required permits and clearances required for compliance, **subsection 107.2**.

(2) Projects with less than 1 acre of erodible surface. The Contractor is required to comply with this specification, which includes completing inspection and maintenance forms according to **subsection 901.3q**, except that neither a NPDES permit, nor a Storm Water Pollution Prevention Plan (SWPPP) in **subsection 901.3d**, will be required.

Even though a Project SWPPP is not required, the Contractor is required to comply with the concepts for erosion and pollution control presented in **subsection 901.3d**.

c. Project Storm Water Pollution Prevention Plan (SWPPP). Before the preconstruction conference, submit to the Field Engineer a minimum of 3 original copies of the SWPPP. No contract work may begin until the Field Engineer has approved the SWPPP.

Include in the project SWPPP:

- the SWPPP Inspection and Maintenance Report Forms;
- the Contractor's Erosion Control Site Plan;
- the SWPPP Contractor Certification Form 246. The Contractor and all subcontractors are required to certify that they understand the terms and conditions of the general NPDES permit. The Engineer will provide the SWPPP Certification Form (Form No. 246), or it can be found on the KDOT Internet;
- a copy of the Project Notice of Intent Form (NOI) for Stormwater Runoff from Construction Activities. (obtained from KDOT).
- Reference Contract Documents pertaining to temporary erosion and water pollution control. KDOT standard specifications, contractual special provisions and the policy on Storm Water Discharges can be found on the KDOT Internet at www.ksdot.org.

As a minimum, include the following information in the Contractor's Erosion Control Site Plan:

- (1) The planned sequence of major construction activities.
- (2) Site maps showing the locations and devices to be used for the initial perimeter controls and for every phase of the project.
- (3) A detailed description of controls to be used including:
 - Stabilization practices for all areas disturbed by construction, including borrow locations;
 - Structural practices for all drainage/discharge locations; and
 - Other controls, including:

- Waste disposal practices which prevent discharge of solid materials into water in the U.S. also, see **subsection 107.9d.**;
- Methods of preventing contamination in areas designated for fuel and lubrication storage;
- Actions to minimize offsite tracking of sediment by construction vehicles;
- Actions to obtain compliance with state or local waste disposal, sanitary sewer or septic system regulations; and
- When actions will be implemented, including permanent erosion control items when required in the Contract Documents.

(4) Acknowledgment that State and Local requirements have been included in the SWPPP.

(5) Provide a Maintenance and Inspection Report. See **subsection 901.3s.**

d. Water Pollution Control Manager. Designate a “Water Pollution Control Manager (“WPCM”)” who shall visit the Project on a frequent basis and in no instance less than once per week until the submittal of the Notice of Acceptance. The WPCM shall:

- Have the authority to supervise all work performed by the Contractor and sub-contractors that involves stormwater requirements or affects stormwater compliance;
- Have the responsibility to order Contractor employees and subcontractors to take appropriate corrective action to comply with stormwater requirements, including requiring any such person to cease or correct a violation of stormwater requirements and to order or recommend such other actions or sanctions as necessary to meet stormwater requirements;
- Be familiar with the Project SWPPP;
- Ensure the Contractor meets the Contractor’s responsibility for updating the Project SWPPP;
- Be the point of contact for KDOT regarding stormwater compliance;
- Be responsible for reviewing inspection reports within 3 days after receiving such reports, acknowledging awareness of any deficiencies and ensuring the correction of all deficiencies.

e. Stormwater Erosion Control Conferences.

Each Project shall have a stormwater erosion control pre-construction conference before the start of construction activities.

KDOT and the Contractor shall also hold stormwater erosion control conferences before the start of each major phase of construction and before the winter shutdown period begins.

These conferences shall be attended by the KDOT Area/Metro Engineer, the WPCM, erosion control Inspector(s) for the Project, and any erosion control subcontractor (s). The attendance sheet and minutes of the conference will be kept in the SWPPP note book.

f. General. Unless approved in writing by the Engineer, do not exceed 750,000 square feet of surface area of erodible earth material per equipment spread at one time. The Engineer will limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and embankment operations. Limit the exposed erodible earth material according to the capability and progress and in keeping with the approved schedule.

If on-site or state-furnished off-site borrow areas are to be excavated below the ground water elevation, construct a permanent berm around the borrow area to prevent storm water runoff from entering the excavated area.

Restrict construction operations in rivers, streams and other water impoundments to those areas that must be entered for the construction of temporary or permanent structures. When no longer required, promptly remove all falsework, piling, temporary crossings and other obstructions caused by the construction.

Do not ford live streams with construction equipment.

As dictated by weather conditions, actual site conditions and construction procedures, install and maintain temporary erosion and pollution control devices as shown in the Contract Documents, and as directed by the Engineer.

Implement temporary erosion and pollution control with berms, slope drains, ditch checks, slope barriers, sediment basins, inlet sediment barriers, fertilizer, seeding, mulching and erosion control blankets.

If temporary erosion and pollution control is not implemented and maintained according to the approved schedule, all work on the project shall cease until conditions are brought into compliance, as determined by the Engineer.

g. Temporary Berms. Use temporary berms to divert storm runoff to stabilized slopes or temporary slope drains. Construct temporary berms as shown in the Contract Documents. Compact the berms until no further consolidation is observed, using a dozer track, grader wheel or other equipment.

h. Temporary Slope Drains. Use temporary slope drains to carry storm runoff down fill slopes and cut backslopes. Construct the temporary slope drains as shown in the Contract Documents.

i. Temporary Slope Barriers. Use any of the materials listed in the Contract Documents to construct temporary slope barriers.

When temporary biodegradable logs, straw or hay bales are used, remove and dispose of the sediment when deposits reach approximately $\frac{1}{2}$ the height of the log or bale.

When conditions warrant, supplement the temporary silt fence with a support fence. Reduce the post spacing and drive the posts further in the ground in low and soft, swampy areas. Remove and dispose of sediment deposits when the deposit approaches $\frac{1}{3}$ the height of the silt fence.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

j. Temporary Ditch Checks. The option exists to use any materials listed in the Contract Documents, excluding rock, to construct temporary ditch checks. When deposits reach approximately $\frac{1}{2}$ the height of the temporary ditch check, remove and dispose of the accumulated sediment.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

k. Temporary Ditch Checks Rock. Use rock to construct temporary rock ditch checks listed in the Contract Documents. When deposits reach approximately $\frac{1}{2}$ the height of the temporary rock ditch check, remove and dispose of the accumulated sediment.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

l. Temporary Inlet Sediment Barrier. Use any of the materials listed in the Contract Documents to construct temporary inlet sediment barriers.

When temporary silt fence is used, reduce post spacing and drive the posts further into the ground in low and soft, swampy areas. Remove and dispose of the sediment when deposits reach approximately $\frac{1}{3}$ the height of the silt fence.

When temporary triangular silt dike, straw or hay bales are used, remove and dispose of the sediment when deposits reach approximately $\frac{1}{2}$ the height of the silt dike or bales.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

m. Temporary Sediment Basins. Before constructing a temporary sediment basin, clear the area of all vegetation. Construct the temporary sediment basin with a wide cross-section and a minimum grade, as shown in the Contract Documents. Dispose of excess excavated material.

Remove and dispose of the accumulated sediment when deposits reach approximately $\frac{1}{3}$ the depth of the structure.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

n. Temporary Stream Crossing.

(1) General. Before beginning work in the streambed, record existing stream channel elevations.

Use any of the materials shown in the Contract Documents to construct temporary stream crossings.

When the Contractor's operations require a temporary stream crossing, and one is not shown in the Contract Documents, the Contractor may install one at no cost to KDOT. Comply with all applicable rules and regulations, obtain all required permits and provide copies of all permits to the Field Engineer.

Place 1 pipe buried 6 inches into the stream bottom, in the lowest point of the channel to allow the passage of aquatic organisms, with additional pipes placed along the remainder of the stream channel bottom such that ordinary high water (OHW) flows designated in the Contract Documents shall flow through the pipes without overtopping the crossing. If the OHW is not designated in the Contract Documents, the Engineer will determine the OHW. The OHW means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

Submit to the Engineer for review and approval, the design flow calculations to determine the number and diameter of pipes required. A minimum 12 inch diameter pipe is required.

Place pipes parallel to flow.

Cover pipes with a minimum of 12 inches of clean aggregate fill.

Dispose of sediment on the project at locations approved by the Engineer. When necessary, stabilize the material as directed by the Engineer.

(2) Maintenance. At a minimum, perform weekly inspections to verify that drift and debris are not blocking the flow of water through the pipes. Perform additional inspections, as needed. Remove drift and debris when blockage occurs. Repair eroded areas, if necessary, to prevent washout and allow passage of flows.

(3) Removal. Remove the temporary crossing and all materials as soon as no longer needed. Restore the disturbed bed and bank area of the stream channel to its pre-existing elevations.

o. Temporary Fertilizer, Seed and Mulch. Prepare the seedbed, fertilize, seed and mulch according to **DIVISION 900**. Apply the temporary fertilizer, seed and mulch at the rates shown in the Contract Documents.

p. Soil Erosion Mix. Prepare a smooth, weed-free and debris-free area, and broadcast or hydro-seed the soil erosion mix seed over the prepared area. Lightly hand rake broadcasted seed before placement of the erosion control.

Only use the soil erosion mix under erosion control blankets.

There are no seasonal placement limitations for the soil erosion mix.

q. Temporary Seeding. "Temporary Seeding" is to be used only if the project has less than 1 acre of erodible surface. If this item is used, fertilize, seed and mulch all exposed erodible earth.

Prepare the seedbed, fertilize, seed and mulch according to **DIVISION 900**. Apply the temporary fertilizer, seed and mulch at the rates shown in the Contract Documents.

r. Erosion Control. After seeding according to **DIVISION 900**, install erosion control according to the manufacturer's requirements for edge and junction overlaps, staple size and staple pattern.

(1) Areas with Erosion Control (Class I). Place the Erosion Control (Class I). Do not mulch over the Erosion Control (Class I).

(2) Areas with Erosion Control (Class II). Place the Erosion Control (Class II) as shown in the Contract Documents.

If Pyramat® erosion control (Class II) is used, cover it with ½ inch of pulverized, fine-grained soil. Hand rake the soil into the erosion control material; then mulch the area according to **SECTION 904**.

s. Inspection, Maintenance, and Removal of Temporary Erosion and Pollution Control Devices.

Maintain the effectiveness of the temporary erosion and pollution control devices as long as required to contain sediment runoff. Monitor temporary erosion and pollution control devices daily. KDOT's Environmental Inspector and the Contractor's representative shall perform a joint inspection of the temporary erosion and pollution control devices and complete the inspection and maintenance reports every 14 days and within 24 hours of a rainfall event of ½ inch or more. Any deficiencies noted shall be corrected by the Contractor within 7 days of the inspection despite weather conditions that make it difficult (but not impossible) to perform corrections. The Contractor shall receive no additional time for making corrections on the basis of weather unless weather conditions made it physically impossible for the Contractor to complete the corrections within the 7 days allowed. Thus, the failure to begin corrections until day 6 or 7, followed by a significant rain or other weather event, will not extend the time for corrections and will not suspend the imposition of disincentive assessment damages under **subsection 901.3t** for failure to make the corrections within the 7 days allowed. The obligation to conduct formal inspections

and complete an associated report every 14 days and within 24 hours of a rainfall event of ½ inch or more does not limit or otherwise modify the Contractor's obligation to monitor and maintain temporary erosion and pollution control devices daily.

Submit copies of inspection and maintenance reports to the Field Engineer and Contractor's WPCM within 24 hours after an inspection has been made. Both the KDOT and Contractor representatives performing the inspection shall sign the inspection and maintenance report. Use only KDOT-furnished maintenance report forms.

Remove the temporary devices when directed by the Engineer. After removing the temporary erosion and pollution control devices, remove and dispose of the silt accumulation. Grade, fertilize, seed and mulch any bare areas.

When temporary erosion and pollution control devices are installed according to the Contract Documents, or as approved by the Engineer and such devices are no longer effective because of deterioration or functional incapacity, payment will be made for replacement of these devices, as directed by the Engineer. No payment will be made for replacing temporary erosion control devices that become ineffective because of improper installation, lack of maintenance or the Contractor's failure to pursue timely installation of permanent erosion control devices according to the Contract Documents.

t. Erosion Control Disincentive Assessment.

If the Contractor fails to follow a requirement in this Special Provision, Part 7 of the KGP, titled "Stormwater Pollution Prevention Plan Requirements and Guidelines", Part 10 of the KGP, titled "General Requirements of this Permit", or Part 11 of the KGP titled "Standard Conditions" (or equivalent provisions in the event section numbers change in any future Permit), the Contractor shall be liable for a disincentive assessment. The disincentive assessment charged and owing shall be One thousand five hundred dollars (\$1,500.00) per day for each calendar day, or part thereof, that the Contractor fails to follow one or more of these requirements.

The failure to follow a requirement in this Special Provision and the KGP includes, without limitation, the failure to install, operate, or maintain BMP's in accordance with the SWPPP as well as the improper installation, operation, or maintenance of such BMP's.

The Engineer will deduct and withhold from contract funds the Erosion Control Disincentive Assessments under **subsection 901.3t**. The assessments are to be computed in the same manner as damages under **subsection 108.8**, (Liquidated Damages and Disincentive Assessments) except calendar days include Sundays, Holidays and the Winter Holiday Period.

u. Penalties and Fines. Assume liability and pay KDHE, EPA, or both for penalties, fines, both penalties and fines, and any interest thereon (penalties/fines) that KDHE or EPA impose against the Contractor because of the Contractor's failure to comply with applicable laws, regulations, ordinances, NPDES permit, other permits, the SWPPP, or a combination thereof. Assume liability and pay KDHE, EPA, or both for penalties, fines, both penalties and fines, and any interest thereon (penalties/fines) that KDHE or EPA impose against the Contractor because of the Contractor's failure to comply with governmental administrative compliance orders, administrative corrective action orders, administrative claims settlements, consent decrees, and legal judgments that govern KDOT projects (Violations) and that are included in the Proposal Form or that are added to the contract by change order as Extra Work under Standard Specification subsection 104.6. Hold KDOT harmless from such penalties/fines.

The Contractor shall have no obligation to pay KDOT for penalties/fines that KDOT is required to pay to KDHE or EPA for KDOT's failure to comply with applicable laws, regulations, ordinances, NPDES permit, other permits, the SWPPP, governmental administrative compliance orders, administrative corrective action orders, administrative claims settlements, consent decrees, and legal judgments that govern KDOT projects.

The Contractor understands that penalties/fines may be imposed against KDOT, the Contractor, or both because of "shared" responsibility/liability under applicable environmental law, regulations, ordinances; the NPDES permit, other permits, the SWPPP administrative corrective action orders, administrative claims settlements, consent decrees, legal judgments or a combination thereof. The Contractor shall have no claim that such shared responsibility/liability voids the Contractor's liability for penalties/fines under this **subsection 901.3**.

v. Curb Inlet Protection. Install the curb inlet protection as shown in the Contract Documents.
901.4 MEASUREMENT AND PAYMENT

The Engineer will measure temporary berms, temporary slope drains, temporary slope barriers and temporary ditch checks by the linear foot.

The Engineer will measure temporary rock ditch checks by the cubic yard.

The Engineer will measure each temporary inlet sediment barrier and temporary stream crossing as a unit.

The Engineer will measure temporary sediment basins by the cubic yard excavated to construct the basin.

The Engineer will measure sediment removal by the cubic yard of sediment removed. If the quantity of sediment removal is approximately 50 cubic yards or greater in one location, the Engineer may pay for sediment removal by force account according to **subsection 109.3** rather than paying the contract set price for the bid item "Sediment Removal". Whether paid as a set price or by force account, the Engineer will not pay for a quantity or cost that is incurred because of the Contractor's failure to install seed timely or failure to remove sediment timely as **SECTION 109** requires.

The Engineer will measure temporary fertilizer, temporary seed and soil erosion mix by the pound.

The Engineer will measure "Temporary Seeding" as a lump sum; no measurement of area is made.

The Engineer will measure erosion control by the square yard.

The Engineer will measure temporary mulching by the acre.

The Engineer will measure any disincentive assessment on a per day basis.

The Engineer will measure curb inlet protection by the linear foot.

Payment for the various items of temporary erosion and pollution control is full compensation for the specified work. Contract unit prices will govern regardless of overruns or underruns of the estimated quantity.

Payment for "Temporary Slope Barrier (Set Price)", "Temporary Ditch Check Rock (Set Price)", "and Sediment Removal (Set Price)" at the contract set unit prices is full compensation for the specified work.

The Engineer will not measure for separate payment any erosion control devices or seeding installed in Contractor-Furnished borrow and waste locations or plant site locations outside the project limits.