

SECTION 205 – EROSION AND SEDIMENT CONTROL

205-1 DESCRIPTION

The CONTRACTOR shall be responsible for installing, maintaining, replacing, and removing all of the erosion and sediment control measures existing, as shown on the plans, or as deemed necessary by the ENGINEER, to effectively control pollution of waterways and sedimentation onto adjacent properties or into any downstream drainage facilities. Installation shall be done in accordance with the North Dakota Department of Health, Division of Water Quality *Guide to Temporary Erosion Control Measures* or plan details.

Erosion and sediment control measures shall be sufficient to contain sediments within the construction limits. If any excavation or embankment material does flow onto adjacent properties or downstream, the CONTRACTOR shall immediately rectify the problem and repair any damages.

Any failure of the erosion and sedimentation control measures shall be repaired within 48 hours of the runoff event, along with any erosion damages at the CONTRACTOR's expense. The CONTRACTOR shall be required to maintain erosion and sediment control installations until such time as the project is accepted as complete by the ENGINEER, thence notifying and forwarding the responsibility to maintain the erosion and sediment control measures over to the next contractor, developer, or builder/owner.

The CONTRACTOR may request additional compensation for extra clean up or erosion control items, in the event two or more rainfalls occur within 48 hours which overwhelm the normally expected and approved control features causing excessive failures and/or erosion repairs, as directed by the ENGINEER.

If directed by the ENGINEER, the CONTRACTOR shall remove and dispose of erosion control items before the end of the warranty period. Cleanup shall be according to Section 121 "Finishing and Cleanup." All removal and cleanup items shall be considered incidental to other bid items.

205-1.1 PROTECTION OF WATER RESOURCES. The CONTRACTOR shall dispose of all fuels, lubricants, and other organic or inorganic wastes at locations approved by regulatory agencies. Fueling, lubricating, and overhauling of all equipment shall be accomplished at locations, and in such a manner, that contaminants can be controlled and disposed of without polluting surface or subsurface waters.

Surface drainage from cuts and fills within the project limits, whether or not complete, and from borrow and waste disposal areas, shall be held in suitable sedimentation ponds or the site shall be graded to control erosion within acceptable limits. Temporary erosion and sediment control measures such as berms, dikes, drains, silt fences, bales, wattles, fabrics and sedimentation basins, if required to meet the above standards, shall be provided and maintained until permanent drainage and erosion control facilities are complete and operative.

The CONTRACTOR shall be required to maintain all excavations, embankments, stockpiles, haul roads, plant sites, waste areas, borrow areas, and all other work areas to be free from dust which would cause a hazard or nuisance to others. The CONTRACTOR must have sufficient, competent equipment on the job to control dust. Dust control will be performed as the work proceeds and whenever a dust nuisance or hazard occurs.

The CONTRACTOR shall maintain all facilities constructed for pollution control for as long as the operations creating the particular pollutant are being carried out or until the materials of concern become stabilized to the extent that pollution is no longer being created.

205-2 MATERIALS

205-2.1 SILT FENCE WITH WIRE BACKING. Silt fence fabric shall conform to AASHTO M288 silt fence specification. Filter fabric shall be composed of fibers consisting of long chain synthetic polymers composed of at least 95 percent by weight of polyolefins, polyesters, or polyamides. The fibers shall be formed into a network such that the filaments or yarns retain dimensional stability relative to each other. The filter fabric shall be free of any treatment or coating which might adversely alter its physical properties after installation. The fabric shall be free of defects or flaws that affect its physical and/or filtering properties. The fabric shall have a minimum width of 36 inches. The filter fabric shall be furnished with suitable wrapping for protection against moisture and extended ultraviolet exposure prior to placement. Backing for a filter fabric silt fence shall consist of steel wire fence fabric. A woven wire fence shall conform to ASTM A 116, Class 1 zinc coating for wire. The woven wire support fence shall be at least 32 inches high with a maximum opening size of 6 inches by 6 inches. The wire shall be a minimum of 14-gauge grade 60.

205-2.2 POSTS. Either wood or steel posts shall be used. Wood posts shall be treated (Penta or Green Treated) and shall be a minimum of 5 feet long with minimum dimensions of 2 inches in diameter for round posts or 1½ inches by 1½ inches for rectangular posts. Steel posts shall be a minimum of 5 feet long, weigh a minimum of 1.3 pounds per square foot and have projections to aid in fastening the wire or fabric. Steel posts shall also have a metal plate welded near the bottom such that when the post is driven to the proper depth, the plate will be below the ground level for added stability. Installation shall be done in accordance with the North Dakota Department of Health, Division of Water Quality *Guide to Temporary Erosion Control Measures* or plan detail.

205-2.3 WEIGHTED FIBER ROLL. Weighted fiber roll shall be a photodegradable, extruded netting tube filled with wood curled excelsior and a weighted inner core. The roll diameter shall be 6 inches and the lengths shall be as required. The weight shall be a minimum of 8½ pounds per foot. An adequate number of weighted fiber rolls shall be placed around an inlet to provide complete protection.

205-2.4 EROSION CONTROL BLANKET. The erosion control blanket (ECB) shall be of organic biodegradable mulch material such as straw, curled wood excelsior, coconut fiber, or any combination of these materials. The ECB shall have a consistent thickness of mulch material evenly distributed over the entire area. The ECB materials must be secured on at least one side with netting. The netting must be of photodegradable polypropylene or other plastic material fused to the strand intersections. The ECB shall be a minimum width of 48 inches and shall be weed and pest free.

- A. **Wood Excelsior Blanket.** The wood excelsior blanket shall consist of a machine-produced blanket of cured wood excelsior in which 80 percent of the fibers are 6 inches or longer. The wood excelsior blanket shall be smolder-resistant without using additives.
- B. **Straw Blanket.** The straw blanket shall consist of a machine-produced, 100 percent weed-free, agricultural straw, certified by an accredited agency, in which 80 percent of the fibers are 3 inches or longer.
- C. **Straw and Coconut Blanket.** The straw and coconut blanket shall consist of a machine-produced blanket of 70 percent straw and 30 percent coconut fibers by weight in which 80 percent of the fibers are 3 inches or longer.

EROSION CONTROL BLANKET

TYPE	ECB 1		ECB 2		ECB 3		ECB 4	
	Straw	Wood	Straw	Wood	Straw/Coconut	Wood	Coconut	Wood
Material	100% Straw	100% Excelsior Fibers	100% Straw	100% Excelsior Fibers	70% Straw and 30% Coconut Fibers	100% Excelsior Fibers	100% Coconut Fibers	100% Excelsior Fibers
Fiber Length 80% Must be Greater Than	3 inches	80% > 6 inches	3 inches	6 inches	3 inches	80% > 6 inches	3 inches	80% > 6 inches
Min Mass Per Unit Area ASTM D 6475	0.5 lbs/sy	0.51 lbs/sy	0.5 lbs/sy	0.51 lbs/sy	0.5 lbs/sy	0.69 lbs/sy	0.5 lbs/sy	0.88 lbs/sy
Min Thickness ASTM D 6525	0.25 inch	0.25 inch	0.25 inch	0.25 inch	0.25 inch	0.25 inch	0.25 inch	0.50 inch
Net Opening Minimum	0.5x0.5 inch	0.75x0.75 inch	0.5x0.5 inch	0.75x0.75 inch	0.5x0.5 inch	0.75x0.75 inch	0.6x0.6 inch	0.75x0.75 inch
Max Shear Stress @ 0.50 inches soil loss ASTM D 6460	-	1.50 lbs/sy	1.50 lbs/sy	1.75 lbs/sy	1.75 lbs/sy	2.0 lbs/sy	2.25 lbs/sy	2.25 lbs/sy
Slope Gradient Application	≤3H:1V	<3H:1V - 2H:1V	≤2H:1V	2H:1V - 1.5H:1V	≤1.5H:1V	≤1.5H:1V	≤1H:1V	≤1H:1V
Net Backing Type	Rapid Photodegradable Polypropylene		Polypropylene		Polypropylene		Black UV Stabilized Polypropylene	
Functional Longevity	≤ 3 months		≤ 12 months		12 to 24 months		> 24 months	
Min Machine Direction Tensile Strength ASTM D 6818	50 lbs/ft		75 lbs/ft		100 lbs/ft		125 lbs/ft	

The information in this table has been derived from information obtained from the Erosion Control Technology Council. All values must be within (+/-) 10 percent of the minimums shown on the table.

U-shaped wire staples or metal Geotextile pins shall be used to anchor the blanket(s) to the ground surface. Wire staples shall be a minimum thickness of 8-gauge. Metal pins shall be at least 0.20-inch diameter steel with 1½-inch steel at the head of the pin. All anchors shall be between 6 to 18 inches long and have sufficient ground penetration to resist pulling out. Longer anchors may be required for loose soils. Heavier metal stakes may be required in rocky soils.

205-2.5 BALE DITCH CHECKS. Bale ditch checks shall be placed in ditches with slopes not exceeding 6 percent. Bale ditch checks shall be constructed of wheat straw, oat straw, prairie hay, or brome grass hay that is free of weeds declared noxious by the North Dakota State Board of Agriculture.

The stakes used to anchor the bales shall be made of hardwood material with the following minimum dimensions: 2 inches by 2 inches square (nominal) by 4 feet long.

Twine shall be used to bind the bales. The use of wire binding is prohibited because it does not biodegrade readily.

205-2.6 ROCK CHECKS. Rock checks shall be placed in ditches with slopes steeper than 6 percent. Rock gradations and size shall be as specified in the plans or by the ENGINEER.

205-2.7 STRAW WATTLES, 9-INCH DIAMETER. Straw wattles shall consist of rice or wheat straw fibers as filler within a containment netting. Filler shall be certified as weed-free. Fibers must have an average length greater than 3 inches and shall contain ultraviolet inhibitors. The strand thickness shall be no less than 0.030 inches, the knot thickness no less than 0.0555 inches, and the netting weight no less than 0.35 ounces per foot. The entire wattle unit shall be sufficiently durable to withstand weather, construction, and installation conditions for at least 3 months, including multiple movements and reinstallations. Wattles shall have a 9-inch diameter (1-inch tolerance) and a minimum unit weight of 1.6 pounds per square foot. Wood posts of sufficient strength to withstand installation and weather shall be used for anchoring. Stakes shall be wooden, 1½ inches thick by 30 inches long.

205-2.8 STRAW WATTLES, 12-INCH DIAMETER. Wattles shall consist of a rice or wheat straw fibers as filler within a containment netting. Filler shall be certified as weed-free. Fibers must have an average length greater than 3 inches and shall contain ultraviolet inhibitors. The strand thickness shall be no less than 0.035 inches, the knot thickness no less than 0.0555 inches, and the netting weight no less than 0.35 ounces per foot. The entire wattle unit shall be sufficiently durable to withstand weather, construction, and installation conditions for at least 3 months, including multiple movements and reinstallations. Wattles shall have a 12-inch diameter (1-inch tolerance) and a minimum unit weight of 3.75 pounds per linear foot. Wood posts of sufficient strength to withstand installation and weather shall be used for anchoring. Stakes shall be wooden, 1½ inches thick by 30 inches long.

205-2.9 DRAINAGE STRUCTURE INLET FILTER. The drainage structure inlet filter shall be the FLEXSTORM Inlet Filter manufactured by Inlet & Pipe Protection, Inc., or

an approved equivalent. The inlet filter assembly frame shall be rigid steel and include an overflow feature designed to allow full flow of water into the structure if the filter bag is filled with sediment. The inlet filter assembly bag shall be constructed of polypropylene fabric with a minimum flow rate of 145 gallons per minute per square foot, and designed for a minimum silt and debris capacity of 2 cubic feet.

205-2.10 CONCRETE EROSION CONTROL BLANKETS. Prefabricated concrete erosion blanket shall be Creflex 40F. The concrete erosion control blanket shall have geotextile fabric backing of 7-ounce minimum of 40 pounds per square foot. Concrete used to fabricate the erosion control blanket shall have a compressive strength of 4,000 pounds per square inch.

205-2.11 EROSION CONTROL BERM. Inlet pipes shall be 6-inch PVC and coiled pipes shall be 6-inch perforated pipe. Wire and/or twine shall be used to tie the pipe coils together. Wooden stakes shall be used with a minimum length of 24 inches. Riprap shall consist of rocks with diameters of 9 to 12 inches placed on a woven fabric.

205-3 CONSTRUCTION REQUIREMENTS

205-3.1 GENERAL. The CONTRACTOR shall furnish all labor, materials, and services necessary for and incidental to the completion of all work as shown on the drawings and specified herein. All machinery and equipment owned or controlled by the CONTRACTOR shall be of sufficient size to meet the requirements of the work and shall produce satisfactory work. All work shall be subject to the inspection and approval of the ENGINEER. The CONTRACTOR shall employ at all times a sufficient force of workmen of such experience and ability that the work can be completed in a satisfactory and workmanlike manner.

205-3.2 SILT FENCE WITH WIRE BACKING. The CONTRACTOR shall be responsible to furnish and install silt fence with wire backing as directed by the ENGINEER to effectively control erosion and sedimentation. The CONTRACTOR shall install and maintain silt fence with wire backing by the end of the workday upon notification by the ENGINEER. The CONTRACTOR shall construct silt fences as presented in Standard Detail 205-3. The reuse of silt fence materials without prior approval by the ENGINEER will not be allowed.

The CONTRACTOR shall check the operation and maintenance of the silt fence each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. The CONTRACTOR shall be responsible for all maintenance to silt fences. Sediment shall be maintained in such a way that it does not exceed one-third of the silt fence height.

The CONTRACTOR shall remove silt fences as directed by the ENGINEER. This shall include the removal of wire backing, silt fence fabric, and all stakes. All sediment accumulation shall be removed and all excavations shall be backfilled and properly compacted. The site shall be graded to blend with the terrain, and all disturbed areas shall be seeded.

205-3.3 WEIGHTED FIBER ROLL. The CONTRACTOR shall be responsible to furnish and install weighted fiber roll as directed by the ENGINEER to effectively control erosion and sedimentation. The CONTRACTOR shall install and maintain weighted fiber rolls by the end of the workday upon notification by the ENGINEER. Approximately 3 to 6 inches shall be left between the weighted fiber rolls and the inlet. The ends shall overlap 12 inches.

When silt is one-third the height of the roll, the CONTRACTOR shall remove and dispose of the silt and debris to allow the device to function properly. The CONTRACTOR shall inspect the operation and maintenance of the weighted fiber roll each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract, incidental to the price bid for "Weighted Fiber Roll." Rainfall shall be measured on site.

The CONTRACTOR shall remove fiber rolls as directed by the ENGINEER. Removal shall include any size of fiber roll and shall include removal of all stakes. All sediment accumulation shall be removed and all excavations shall be backfilled and properly compacted. The site shall be graded to blend with the terrain, and all disturbed areas shall be seeded.

205-3.4 EROSION CONTROL BLANKET. The CONTRACTOR shall be responsible to furnish and install erosion control blankets as directed by the ENGINEER to effectively control erosion and sedimentation. The CONTRACTOR shall install and maintain erosion control blankets by the end of the workday upon notification by the ENGINEER.

The area to be covered shall be properly prepared and seeded before the blanket is applied. All rocks or clods over 1½ inches in diameter and all sticks and other foreign material shall be removed. Blankets shall be rolled out in the direction of the flow. Blanket ends shall be overlapped by a minimum of 1 foot where additional rolls are needed. When implementing multiple blankets, upstream/upslope blankets shall overlap downstream/downslope blankets. Wire staples and metal pins shall be driven flush to the soil surface.

The CONTRACTOR shall inspect the operation and maintenance of the erosion control blanket each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. Blankets damaged by construction operations shall be repaired by the CONTRACTOR and at the CONTRACTOR's expense. The area shall be restored to the proper contour, seeded and fertilized, and recovered with the same type of erosion control blanket as the one which was damaged.

The CONTRACTOR shall allow erosion control blankets to degrade naturally, unless otherwise specified in plans or by the ENGINEER.

205-3.5 BALE DITCH CHECKS. The CONTRACTOR shall furnish and install bale ditch checks as directed by the ENGINEER to effectively control erosion in channels or ditches with slopes not exceeding 6 percent. The CONTRACTOR shall install and

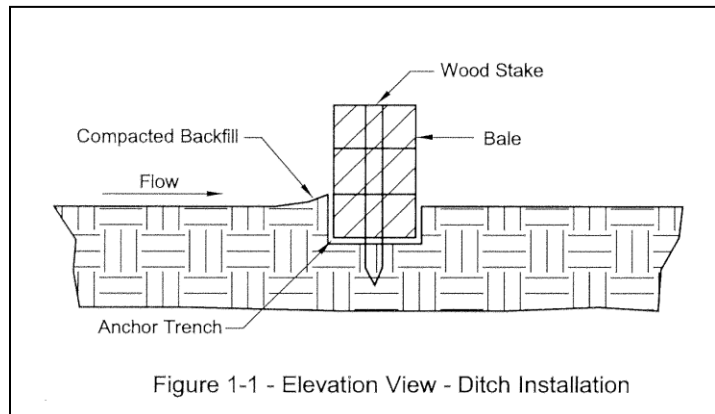
maintain the bale ditch checks by the end of the workday upon notification by the ENGINEER.

Bale ditch checks shall be placed perpendicular to the flow line of the ditch. The ditch check shall extend far enough so that the ground level at the ends of the check is higher than the top of the lowest center bale. This prevents water from flowing around the check.

The following table provides bale ditch check spacing for given ditch grades.

Ditch Check Spacing

Ditch Grade (percent)	Check Spacing (feet)
<1.0	200
2.0	98
3.0	66
4.0	49
5.0	39
6.0	10
>6.0	Do not use bales



Perpendicular to the ditch flow line, excavate a trench that is 6 inches deep and a bale's width wide. Extend the trench in a straight line along the entire length of the proposed ditch check. Place soil on the upstream side of the trench to save for later use. Place the bales in the trench, making sure that they are butted tightly. Two stakes shall be driven through each bale along the centerline of the ditch check, approximately 6 to 8 inches in from the bale ends. Stakes shall be driven at least 18 inches into the ground.

Once all the bales have been installed and anchored, place the excavated soil against the upstream side of the check and compact it. The compacted soil shall be no more than 3 to 4 inches deep and shall extend upstream no more than 24 inches.

The CONTRACTOR shall inspect the operation and maintenance of bale ditch checks each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. The CONTRACTOR shall be responsible for all maintenance to bale ditch checks. Sediment shall be maintained in such a way that it does not exceed one-third of the bale height.

The CONTRACTOR shall remove bale ditch checks appropriately after all sediment-producing areas have been stabilized. All sediment accumulation at the barrier(s) shall be removed, and all excavations shall be backfilled and properly compacted. The site shall be graded to blend with the terrain, and all disturbed areas shall be seeded.

205-3.6 ROCK DITCH CHECKS. The CONTRACTOR shall furnish and install rock ditch checks as directed by the ENGINEER to effectively control erosion in channels or ditches with slopes steeper than 6 percent. The CONTRACTOR shall install and

maintain the rock ditch checks by the end of the workday upon notification by the ENGINEER.

Rock ditch checks shall be placed perpendicular to the flow line of the ditch. The rock ditch check shall extend far enough that the ground level at the ends of the check is higher than the lowest point on the crest of the check. This prevents water from flowing around the check. The ditch check shall be 18 to 24 inches high with side slopes not steeper than 1:1.

The following table provides rock ditch check spacing for given ditch grades.

Rock Ditch Check Spacing	
Ditch Grade (Percent)	Check Spacing (Feet)
4.0	75
5.0	60
6.0	50
7.0	45
8.0	35
9.0	33
10.0	30

The CONTRACTOR shall inspect the operation and maintenance of rock ditch checks each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. The CONTRACTOR shall be responsible for all maintenance to rock ditch checks. Sediment shall be maintained in such a way that it does not exceed one-third of the rock height.

The CONTRACTOR shall remove rock ditch checks upon stabilization of the site. All sediment accumulated at the barrier(s) shall be removed, and all excavations shall be backfilled and properly compacted. The site shall be graded to blend with the terrain. All disturbed areas shall be seeded following the removal of rock ditch checks.

205-3.7 STRAW WATTLES (9-INCH AND 12-INCH DIAMETER). The CONTRACTOR shall be responsible to furnish and install straw wattles as directed by the ENGINEER to effectively control erosion and sedimentation. The CONTRACTOR shall install and maintain straw wattles by the end of the workday upon notification by the ENGINEER.

Trenches must be dug to a depth of 3 to 5 inches. Lay the first straw wattle snug into the trench. NO DAYLIGHT SHALL BE SEEN UNDER THE WATTLES. Pack soil from trenching against the wattle on the uphill side. When installing running lengths of straw wattles, the second wattle shall be installed 9 to 12 inches from the first wattle. DO NOT OVERLAP THE ENDS. Each wattle shall have a minimum of 3 stakes with additional stakes spaced at a minimum of one (1) every 3 feet. Stakes shall not extend more than 2 inches above straw wattle.

The following table provides maximum downslope spacing for various slopes.

Maximum Spacing - Downslope	
9-Inch Diameter Straw Wattles	12-Inch Diameter Straw Wattles
1:1 slopes = 10 feet apart	1:1 slopes = 10 feet apart
2:1 slopes = 20 feet apart	2:1 slopes = 20 feet apart
3:1 slopes = 30 feet apart	3:1 slopes = 30 feet apart
4:1 slopes = 40 feet apart	4:1 slopes = 40 feet apart

Adjustments may have to be made for the soil type. For soft, loamy soils: adjust the rows closer together. For hard, rocky soils: adjust the rows father apart.

The CONTRACTOR shall inspect the operation and maintenance of straw wattles each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. The CONTRACTOR shall be responsible for all maintenance to straw wattles. Sediment shall be maintained in such a way that it does not exceed one-third of the straw wattle height.

The CONTRACTOR shall remove straw wattles appropriately after all sediment-producing areas have been stabilized or as directed by the ENGINEER. Removal shall include any size of straw wattle and shall include the removal of all stakes. All sedimentation shall be removed and all excavations shall be backfilled and properly compacted. The site shall be graded to blend with the terrain and all disturbed areas shall be seeded.

205-3.8 DRAINAGE STRUCTURE INLET FILTER. The CONTRACTOR shall be responsible to furnish and install drainage structure inlet filters as directed by the ENGINEER to effectively control erosion and sedimentation.

The CONTRACTOR shall inspect the operation and maintenance of drainage structure inlet filters each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. The CONTRACTOR shall be responsible for all maintenance to drainage structure inlet filters. Periodic cleaning of the filter shall be incidental.

The inlet filter assembly shall remain in place until removal is directed by the ENGINEER and shall include the disposal of debris or silt that has accumulated in the bag.

205-3.9 CONCRETE EROSION CONTROL BLANKETS. The CONTRACTOR shall be responsible to furnish and install concrete erosion control blankets to line and grade as shown on the plans or as directed by the ENGINEER to effectively control erosion and sedimentation. Each concrete erosion control blanket panel shall be butted against adjacent panels. The inslopes shall be free of debris and dressed to a smooth, firm surface.

Concrete erosion control blankets shall be anchored as follows:

- A. A 6-inch loop is strung around the loops of two mats that are to be anchored together. The 6-inch loop is strung through the eyehole of the anchor and

clamped. The driven depth of the anchor shall be 36 to 42 inches deep. Drive the anchor until the top side loops are pulled down into the soil. This provides sufficient tension on the anchor, so if movement of the mats should occur, the anchor will turn and set itself.

- B. Each concrete erosion control panel shall be tied together with each adjacent panel at a maximum of 8-foot spacing.

The CONTRACTOR shall inspect the operation and maintenance of concrete erosion control blankets each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. The CONTRACTOR shall be responsible for all maintenance to concrete erosion control blankets.

The CONTRACTOR shall remove concrete erosion control blankets appropriately after all sediment-producing areas have been stabilized or as directed by the ENGINEER. All sedimentation shall be removed and all excavations shall be backfilled and properly compacted. The site shall be graded to blend with the terrain and all disturbed areas shall be seeded.

205-3.10 EROSION CONTROL BERM. The CONTRACTOR shall be responsible to furnish and install erosion control berms as directed by the ENGINEER to effectively control erosion and sedimentation at curb and road ends. The CONTRACTOR shall construct erosion control berms as presented in Standard Detail 205-2.

The CONTRACTOR shall inspect the operation and maintenance of erosion control berms each week and within 24 hours following rainfall events of 1/2 inch or more until final acceptance of the contract. Rainfall shall be measured on site. The CONTRACTOR shall be responsible for all maintenance to erosion control berms.

The CONTRACTOR shall remove erosion control berms appropriately after all sediment-producing areas have been stabilized or as directed by the ENGINEER. All sedimentation shall be removed and all excavations shall be backfilled and properly compacted. The site shall be graded to blend with the terrain, and all disturbed areas shall be seeded.

205-4 MEASUREMENT AND PAYMENT

205-4.1 SILT FENCE WITH WIRE BACKING. Silt Fence With Wire Backing shall be measured by the linear foot (LF) based on one-time installations (i.e., repair and maintenance is incidental) and paid for at the unit price for "Silt Fence With Wire Backing" complete, in place, and accepted by the ENGINEER.

205-4.2 WEIGHTED FIBER ROLL. Weighted Fiber Roll shall be measured by the linear foot (LF) and paid for at the unit price for "Weighted Fiber Roll" complete, in place, and accepted by the ENGINEER

205-4.3 EROSION CONTROL BLANKET TYPE 1. Erosion Control Blanket Type 1 shall be measured by the actual surface area covered to the nearest square yard complete, in place, and accepted by the ENGINEER. No allowance will be made for overlaps and buried blankets or mats. Staples or any other material required to place the material, as specified, will not be measured for payment but shall be included in the price for the pay item. Material that is damaged, wasted, or not properly placed will not be measured for payment.

205-4.4 EROSION CONTROL BLANKET TYPE 2. Erosion Control Blanket Type 2 shall be measured by the actual surface area covered to the nearest square yard complete, in place, and accepted by the ENGINEER. No allowance will be made for overlaps and buried blankets or mats. Staples or any other material required to place the material, as specified, will not be measured for payment but shall be included in the price for the pay item. Material that is damaged, wasted, or not properly placed will not be measured for payment.

205-4.5 EROSION CONTROL BLANKET TYPE 3. Erosion Control Blanket Type 3 shall be measured by the actual surface area covered to the nearest square yard complete, in place, and accepted by the ENGINEER. No allowance will be made for overlaps and buried blankets or mats. Staples or any other material required to place the material, as specified, will not be measured for payment but shall be included in the price for the pay item. Material that is damaged, wasted, or not properly placed will not be measured for payment.

205-4.6 EROSION CONTROL BLANKET TYPE 4. Erosion Control Blanket Type 4 shall be measured by the actual surface area covered to the nearest square yard complete, in place, and accepted by the ENGINEER. No allowance will be made for overlaps and buried blankets or mats. Staples or any other material required to place the material, as specified, will not be measured for payment but shall be included in the price for the pay item. Material that is damaged, wasted, or not properly placed will not be measured for payment.

205-4.7 BALE DITCH CHECK. Bale Ditch Checks shall be measured by the linear foot (LF), and paid for at the unit price bid for "Bale Ditch Checks" complete, in place, and accepted by the ENGINEER.

205-4.8 STRAW WATTLES (9-INCH DIAMETER). Straw Wattles (9-Inch Diameter) shall be paid for by the linear foot (LF) and paid for at the unit price bid for "Straw Wattles (9-Inch Diameter)" complete, in place, and accepted by the ENGINEER.

205-4.9 STRAW WATTLES (12-INCH DIAMETER). Straw Wattles (12-Inch Diameter) shall be paid for by the linear foot (LF) and paid for at the unit price bid for "Straw Wattles (12-Inch Diameter)" complete, in place, and accepted by the ENGINEER.

205-4.10 FIBER ROLL REMOVAL. Fiber Roll Removal shall be measured by the linear foot (LF) and paid for at the unit price bid for "Fiber Roll Removal" complete and accepted by the ENGINEER.

205-4.11 SILT FENCE REMOVAL. Silt Fence Removal (Wired and Regular) shall be measured by the linear foot (LF) and paid for at the unit price bid for "Silt Fence Removal" complete and accepted by the ENGINEER.

205-4.12 DRAINAGE STRUCTURE INLET FILTER. Drainage Structure Inlet Filter shall be measured on an individual unit basis (EA) and be paid for at the unit price bid for "Drainage Structure Inlet Filter" complete, in place, and accepted by the ENGINEER

205-4.13 CONCRETE EROSION CONTROL BLANKET. Concrete Erosion Control Blanket shall be measured by the square yard (SY) and paid for at the unit price bid for "Concrete Erosion Control Blanket" complete, in place, and accepted by the ENGINEER. Anchors and installation shall be included in bid for concrete erosion control blanket.

205-4.14 EROSION CONTROL BERM. Erosion Control Berm shall be measured by the cubic yard (CY) and paid for at the unit price bid for "Erosion Control Berm" complete, in place, and accepted by the ENGINEER. This item to include all items shown on Standard Detail 205-2.