

PROJECT SPECIAL PROVISIONS**ROADWAY****SHOULDER GRADING PER SHOULDER MILE:****Description**

The work covered by this provision consists of clipping high shoulders and reconstructing the earth shoulder in accordance with *Roadway Standard Drawing Nos. 560.01 and 560.02*, except that the rate of slope and width will be as shown on typical section, or to the existing shoulder point, whichever is nearer, as long as the desired typical is achieved, and when completed, seeding and mulching. This work shall be performed immediately after the resurfacing operations are complete, as directed by the Engineer.

Materials

The Contractor shall make use of the existing earth material along the shoulders such that no waste material is generated.

The Contractor shall furnish all earth material necessary for the construction of the shoulders. Provide soil with a P.I. greater than 6 and less than 25 and with a pH ranging from 5.5 to 6.8 and capable of supporting vegetation. Remove stones and other foreign material 2 inches or larger in diameter. All soil is subject to test and acceptance or rejection by the Engineer.

The Contractor shall be required to use Aggregate Shoulder Borrow (ASB) on Maps 1,2,3 (SR 1134 – Shearon Harris Road) which meets the following gradation:

Sieve	Percent Passing
1 1/2"	100
1/2"	55 – 95
#4	35 – 74

Construction Methods

Obtain material from within the project limits or approved borrow source. Prior to adding borrow material, the existing shoulder shall be scarified to provide the proper bond and shall be compacted to the satisfaction of the Engineer.

Any excess material generated by the shoulder grading shall be disposed of by the Contractor in an approved disposal site.

Measurement and Payment

Shoulder Grading will be measured and paid as the actual number of miles of shoulders that have been reconstructed. Measurement will be made along the surface of each shoulder to the nearest 0.01 of a mile. Such price will include disposing of any excess material in an approved disposal site, and for all labor, tools, equipment, and incidentals necessary to complete the work.

Borrow Excavation will be paid in accordance with Section 230 of the Standard Specifications for earth material furnished by the Contractor. The requirements of Article 104-5 of the Standard Specifications pertaining to revised contract prices for overrunning minor items will not apply to the item of Borrow Excavation. If ASB is used for borrow, a unit weight of 140 pounds per cubic foot will be used to convert the weight of ASB to cubic yards.

Incidental Stone Base will be measured and paid as provided in Article 545-6 of the Standard Specifications.

Seeding and Mulching will be measured and paid as shown elsewhere in the contract documents. Where ASB or ABC is used, seeding and mulching will not be required.

Payment will be made under:

Pay Item	Pay Unit
Shoulder Grading	Shoulder Mile
Borrow Excavation	Cubic Yard

INCIDENTAL STONE BASE:

(7-1-95) (Rev.7-18-06)

545

R5 R28

Description

Place incidental stone base on driveways, mailboxes, etc. immediately after paving and do not have the paving operations exceed stone base placement by more than one week without written permission of the Engineer.

Materials and Construction

Provide and place incidental stone base in accordance with Section 545 of the *2012 Standard Specifications*.

Measurement and Payment

Incidental Stone Base will be measured and paid in accordance with Article 545-6 of the *2012 Standard Specifications*.

ASPHALT PAVEMENTS - SUPERPAVE:

(6-19-12)

605

R6 R01

Revise the *2012 Standard Specifications* as follows:

Page 6-3, Article 605-7 APPLICATION RATES AND TEMPERATURES, replace this article, including Table 601-1, with the following:

Apply tack coat uniformly across the existing surface at target application rates shown in Table 605-1.

**TABLE 605-1
APPLICATION RATES FOR TACK COAT**

Existing Surface	Target Rate (gal/sy)
	Emulsified Asphalt
New Asphalt	0.04 ± 0.01
Oxidized or Milled Asphalt	0.06 ± 0.01
Concrete	0.08 ± 0.01

Apply tack coat at a temperature within the ranges shown in Table 605-2. Tack coat shall not be overheated during storage, transport or at application.

**TABLE 605-2
APPLICATION TEMPERATURE FOR TACK COAT**

Asphalt Material	Temperature Range
Asphalt Binder, Grade PG 64-22	350 - 400°F
Emulsified Asphalt, Grade RS-1H	130 - 160°F
Emulsified Asphalt, Grade CRS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-1H	130 - 160°F
Emulsified Asphalt, Grade HFMS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-2	130 - 160°F

Page 6-18, Article 610-1 DESCRIPTION, lines 40-41, delete the last sentence of the last paragraph.

Page 6-19, Subarticle 610-3(A) Mix Design-General, line 5, add the following as the first paragraph:

Warm mix asphalt (WMA) is allowed for use at the Contractor's option in accordance with the NCDOT Approved Products List for WMA Technologies available at:

<http://www.ncdot.org/doh/operations/materials/pdf/wma.pdf>

SHOULDER WEDGE:

(9-20-11) (Rev. 6-19-12)

610

R6 R03

Revise the *2012 Standard Specifications* as follows:

Page 6-26, Article 610-8, add the following after line 43:

Attach a device, mounted on screed of paving equipment, capable of constructing a shoulder wedge with an angle of 30 degrees plus or minus 4 degrees along the outside edge of the roadway, measured from the horizontal plane in place after final compaction on the final surface course. Use an approved mechanical device which will form the asphalt mixture to produce a wedge with uniform texture, shape and density while automatically adjusting to varying heights.

Payment for use of this device will be incidental to the other pay items in the contract.

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:

(11-21-00) (Rev. 7-19-11)

609

R6 R15

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course	Type B 25.0__	4.4%
Asphalt Concrete Intermediate Course	Type I 19.0__	4.8%
Asphalt Concrete Surface Course	Type S 4.75A	6.8%
Asphalt Concrete Surface Course	Type SF 9.5A	6.7%
Asphalt Concrete Surface Course	Type S 9.5__	6.0%
Asphalt Concrete Surface Course	Type S 12.5__	5.5%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the *2012 Standard Specifications*.

ASPHALT PLANT MIXTURES:

(7-1-95)

609

R6 R20

Place asphalt concrete base course material in trench sections with asphalt pavement spreaders made for the purpose or with other equipment approved by the Engineer.

SECTION 541**FLEXIBLE PAVEMENT RECLAMATION USING PORTLAND CEMENT:****541-1 DESCRIPTION**

Perform the work covered by this section, including but not limited to, reclamation of roadway by pulverizing, treating with Portland Cement, mixing, and compacting the existing asphalt pavement, base, subbase, and subgrade materials to a specified depth to produce a uniform mixture which meets density requirements.

541-2 MATERIALS

Refer to Division 10:

Portland Cement, Type I, II, 1S.....Article 1024-1

Water.....Article 1024-4

Use asphalt, base, subbase and subgrade material existing in the area, or other materials proportioned by the Engineer, that is free from vegetation, roots, or other objectionable matter, and does not contain asphalt, aggregate or stone larger than 2 inches (50.8 mm).

541-3 LIMITATIONS

Do not perform flexible pavement reclamation when the air temperature is below 40°F (5°C.) in the shade or when conditions indicate that the temperature may fall below 40°F (5°C.) Do not place or mix materials with frozen subgrade. Protect the base from freezing for a period of 7 days after completion. Perform the work and meet density requirements only during daylight hours of the day the section was started, except as otherwise provided for in special provisions or traffic control plans. If the work is interrupted for more than 30 minutes after cement has been added, or if rain causes excessive moisture, reconstruct the entire section and provide the cement required at no cost to the Department. Regulate operations to limit the application of cement to sections small enough so that all of the mixing, compacting, and finishing operations can be completed

within the required time limit of three (3) hours.

541-4 CONSTRUCTION REQUIREMENTS

(A)EQUIPMENT

A self-propelled reclaimer, with a minimum of 400 hp, capable of fully reclaiming the existing road to a depth of 12 inches and no less than 8 feet wide, is required. The reclaimer is also required to have a metered full-width spray bar system for adding water directly into the milling drum, and a breaker bar for use in conjunction with the milling drum.

A cement spreader that has an adjustable rate of flow and the capability of spreading the required amount of cement in one pass. Correct any leakage of fluids and/or materials promptly or the Engineer may order such equipment removed and replaced with satisfactory equipment. Use equipment and methods for applying cement and water that will not damage the roadway and meets the requirements of Article 107-21 (Safety and Accident Protection).

A motor grader equipped with a cross slope indicator, and capabilities to perform aeration, mixing, spreading and final shaping.

Water truck capable of nursing water into the reclaimer.

Water truck for adjusting moisture content and for wetting the curing reclaimed sections.

Self-propelled compaction equipment consisting of vibratory sheeps-foot, vibratory smooth-drum, and pneumatic tire rollers.

Details of the asphalt reclaimer shall be submitted to the Engineer for review at least five calendar days before the machine is brought onto the project site.

(B) LENGTH OF ROADWAY ALLOWED TO BE PROCESSED

Except by written permission of the Engineer, the length of roadway pulverized will not exceed the length that can: be completely pulverized, mixed, graded, compacted, pass density, cured and protected against damage by normal anticipated traffic in the same working day.

(C) INITIAL PULVERIZING AND MIXING

The pulverizing and mixing shall breakup the existing roadway to the specified depth to the extent that 100% weight passes a 2-inch sieve and a minimum of 50% passes a No. 4 sieve. The moisture content shall be maintained at a point that is at or below the optimum moisture content shown on the plans unless approved otherwise by the Engineer.

(D) SPREADING AND MIXING

Apply the required quantity of cement, as established by the Engineer, in a uniform spread on the pulverized roadway and immediately blend water and cement until uniformly distributed throughout the base mixture. Apply cement on days when wind will not interfere with spreading. Multiple mixing passes may be necessary to obtain thorough blending. Have the moisture content at or below the optimum moisture at the time of application of cement.

At the time of final mixing and during compaction, maintain the moisture content within a range of optimum to optimum plus 1.5% as determined. Make sure that the moisture content in the mix does not exceed the quantity that will cause the base course to become unstable during compaction or finishing operations.

541-5 COMPACTION

Begin compaction immediately after cement and water has been incorporated into the base. During compaction, maintain the moisture content of the material within a range of optimum to optimum plus 1.5%. Initial shaping may be required to obtain uniform compaction and required grade and cross-section. Initial compaction of the base should be performed with an approved selfpropelled, vibratory sheep's-foot roller, to be followed by a vibratory smooth-drum roller and a pneumatic-tired roller. Compact to a density equal to at least 97% of the maximum density obtained by compaction of a material sample in accordance with AASHTO T-99, Method D, as determined by the Department.

After uniformly compacting the mixture, grade to required shape and cross-slope. Deficient areas needing additional material should be scarified before the addition of material, then compacted to density requirements, and graded to required shape and cross-slope. Copies of the testing procedures are available upon request from the Materials and Tests Unit. The Engineer may, at his option, utilize nuclear methods, as described in the current NCDOT Nuclear Gauge Operators Manual, to determine the density of the base in conjunction with the methods required above. Copies of this manual are available upon request from the Materials and Tests Unit.

Complete final compaction, including that necessary due to correction of high or low areas, within 3 hours after water has been added to the mixture. Do not leave any cement-roadway mixture undisturbed for more than 30 minutes if it has not been compacted and finished. When rain causes excessive moisture, or the 3-hour time limit is exceeded, reconstruct the entire section. When such reconstruction is necessary, perform the work of reconstruction, and provide the cement required, at no cost to the Department. The amount of cement to be used in reconstruction is 50% of the original rate. The finished surface shall be kept moist until either the curing seal, another surface treatment, or the next pavement course is applied.

541-6 CONSTRUCTION JOINTS

At the end of each day's construction, form a straight transverse construction joint by cutting back into the completed work to form a vertical face unless the road is to be opened to traffic. Build the base for large, wide areas in a series of parallel lines of convenient length and width meeting the approval of the Engineer. Form straight longitudinal joints at the edge of each day's construction by cutting back into the completed work to form a vertical face free of loose or shattered materials.

541-7 TOLERANCES

After final shaping and compacting of the base, the Engineer will check the surface of the base for conformance to the grade and typical section and determine the base thickness. Construct the thickness of the base so that it is within a tolerance of plus or minus ½ Inch (12.7mm) of the base thickness required by the plans. Construct the base so that the maximum differential between the established grade and the base within any 50-foot (15-meter) section is ½ inch (12.7mm)

541-8 TRAFFIC

Completed sections of the base may be opened when necessary to lightweight local traffic, provided the base has hardened sufficiently to prevent marring or distorting of the surface, and provided the curing is not impaired. Do not operate construction equipment on the base except as necessary to discharge into the spreader during paving operations.

541-9 MAINTENANCE

Maintain the base in an acceptable condition until final acceptance of the project. Include immediate repair of any defects or damage that may occur in any maintenance operation. Perform this maintenance at no cost to the Department and repeat as often as may be necessary to keep the base in an acceptable condition. Perform repairs to the base by replacing the base for its full depth.

541-10 METHOD OF MEASUREMENT AND PAYMENT

Flexible Pavement Reclamation will be measured in units of square yards. The length will be measured along the surface of the pavement. The width shall be the width specified on the plans or in writing by the Engineer.

(a) Unit Price Coverage

The contract unit price for Flexible Pavement Reclamation shall be the full price for furnishing all materials (cement, water), equipment, tools, labor, and incidentals necessary to complete the work.

(b) Payment Will Be Made Under Item No.

Flexible Pavement Reclamation – per square yard.

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

(11-21-00)

620

R6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2012 Standard Specifications*.

The base price index for asphalt binder for plant mix is \$637.14 per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **May 1, 2012**.

FINAL SURFACE TESTING NOT REQUIRED:

(5-18-04) (Rev. 5-15-12)

610

R6 R45

Final surface testing is not required on this project.

ASPHALT CONCRETE SURFACE COURSE COMPACTION:

(7-1-95)

R6 R49

Compact the asphalt surface course on this project in accordance with Subarticle 610-9 of the *2012 Standard Specifications* and the following provision:

Perform the first rolling with a steel wheel roller followed by rolling with a self-propelled pneumatic tired roller with the final rolling by a steel wheel roller.

RESURFACING EXISTING BRIDGES:

(3-20-12)

R6 R61B

The Contractor's attention is directed to the fact that he will be required to mill and resurface the bridges on this project if directed by the Engineer.

Place the surface so as to follow a grade line set by the Engineer with the minimum thickness as shown on the sketch herein or as directed by the Engineer. State Forces will make all necessary repairs to the bridge floors prior to the time that the Contractor places the proposed surfacing. Give the Engineer at least 15 days notice prior to the expected time to begin operations so that State Forces will have sufficient time to complete their work.

At all bridges that are not to be resurfaced, mill a taper into existing pavement for a length of 25 feet per inch of final surface. A temporary asphalt wedge will be required immediately after milling to ensure smooth travel if the final layer of surface course is not placed on the same day as milling.

TRENCHING FOR BASE COURSE:

(7-1-95) (Rev. 1-17-12)

610

R6 R79 A

Perform all trenching necessary to place the asphalt concrete base course widening in accordance with the typical sections, at locations shown on the sketch maps, and as directed by the Engineer.

Perform the trenching for the base course on the same day that the base course is to be placed. If the base course cannot be placed on the same day the trench section is excavated, backfill the trench with earth material and compact it to the satisfaction of the Engineer. Once the trench is open, perform backfilling and re-opening of the trench at no cost to the Department.

The Contractor will be restricted to widening one side of the project at a time unless otherwise permitted by the Engineer. In widening, operate equipment and conduct operations in the same direction as the flow of traffic.

Density tests may be taken every 2,000 feet in the widened areas as directed by the Engineer. Shape and compact the subgrade in the widened areas to the satisfaction of the Engineer. Compact the asphalt concrete base course in the widened areas in accordance with the provisions of Article 610-9 of the *2012 Standard Specifications*.

Place the excavated material from trenching operation on the adjacent shoulder area as directed by the Engineer. Cut adequate weep holes in the excavated material to provide for adequate drainage as directed by the Engineer. Remove all excavated material from all drives to provide ingress and egress to abutting properties and from in front of mailboxes and paper boxes. Saw a neat edge and remove all asphalt and/or concrete driveways, and existing asphalt widening, as directed by the Engineer, to the width of the widening and dispose of any excavated concrete or asphalt materials. Properly reconnect driveways.

Upon completion of the paving operation, backfill the trench to the satisfaction of the Engineer. Properly dispose of any excess material remaining after this operation.

No direct payment will be made for trenching, sawing, and removal of driveways, depositing material on shoulder area, backfilling trench, or removal of spoil material, as the cost of this work shall be included in the bid unit price per ton for *Asphalt Concrete Base Course, Type ____*.

PATCHING EXISTING PAVEMENT:

(1-15-02) (Rev.11-29-10)

610

R6 R88

Description

The Contractor's attention is directed to the fact that there are areas of existing pavement on this project that will require repair prior to resurfacing. Patch the areas that, in the opinion of the Engineer, need repairing. The areas to be patched will be delineated by the Engineer prior to the Contractor performing repairs.

Materials

The patching consists of Asphalt Concrete Base Course, Asphalt Concrete Intermediate Course, Asphalt Concrete Surface Course, or a combination of base, binder and surface course.

Construction Methods

Remove existing pavement at locations directed by the Engineer in accordance with Section 250 of the *2012 Standard Specifications*.

Place Asphalt Concrete Base Course, in lifts not exceeding 5.5 inches. Utilize compaction equipment suitable for compacting patches as small as 3.5 feet by 6 feet on each lift. Use an approved compaction pattern to achieve proper compaction. If patched pavement is to be open to traffic for more than 48 hours prior to overlay, use Asphalt Surface Course in the top 1.25 inches of the patch.

Schedule operations so that all areas where pavement has been removed will be repaired on the same day of the pavement removal and all lanes of traffic restored.

Measurement and Payment

Patching Existing Pavement will be measured and paid as the actual number of tons of asphalt plant mix complete in place that has been used to make completed and accepted repairs. The asphalt plant mixed material will be measured by being weighed in trucks on certified platform scales or other certified weighing devices. The above price and payment will be full compensation for all work covered by this provision, including but not limited to removal and disposal of all types of pavement; furnishing and applying tack coat; furnishing, placing, and compacting of asphalt plant mix; furnishing of asphalt binder for the asphalt plant mix; and furnishing scales.

Patching Existing Pavement will be considered a minor item. In the event that the item of Patching Existing Pavement overruns the original bid quantity by more than 100 percent, the provisions of Article 104-5 of the *2012 Standard Specifications* pertaining to revised contract

unit price for overrunning minor items will not apply to this item. Any provisions included in the contract that provides for adjustments in compensation due to variations in the price of asphalt binder will not be applicable to payment for the work covered by this provision.

Payment will be made under:

Pay Item	Pay Unit
Patching Existing Pavement	Ton

ADJUSTMENT OF MANHOLES:

(7-1-95)

858

R8 R95

The Contractor's attention is directed to Section 858-3 of the *2012 Standard Specifications*.

The use of cast iron or steel fittings in the adjustment of manholes will not be permitted on this project except where it is considered by the Engineer to be in the best interest of the Department to allow rings to be used. When rings are permitted for the adjustment of manholes, the rings shall have satisfactory bearing on the existing manhole frames and 50 percent of the circumference shall be tack welded at four equally spaced locations as directed by the Engineer. If the existing covers do not fit the rings, furnish and install new covers at no additional expense to the Department.

MATERIALS:
(2-21-12) (Rev. 6-19-12)

1005, 1081, 1092

R10 R01

Revise the *2012 Standard Specifications* as follows:

Page 10-23, Table 1005-1, AGGREGATE GRADATION-COARSE AGGREGATE, replace with the following:

Std. Size #	Percentage of Total by Weight Passing														Remarks
	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#10	#16	#40	#200			
4	100	90-100	20-55	0-15	-	0-5	-	-	-	-	-	A		Asphalt Plant Mix	
467M	100	95-100	-	35-70	-	0-30	0-5	-	-	-	-	A		Asphalt Plant Mix	
5	-	100	90-100	20-55	0-10	0-5	-	-	-	-	-	A		AST, Sediment Control Stone	
57	-	100	95-100	-	25-60	-	0-10	0-5	-	-	-	A		AST, Str. Concrete, Shoulder Drain, Sediment Control Stone	
57M	-	100	95-100	-	25-45	-	0-10	0-5	-	-	-	A		AST, Concrete Pavement	
6M	-	-	100	90-100	20-55	0-20	0-8	-	-	-	-	A		AST	
67	-	-	100	90-100	20-55	0-10	0-5	-	-	-	-	A		AST, Str. Concrete, Asphalt Plant Mix	
78M	-	-	-	100	98-100	75-100	20-45	0-15	-	-	-	A		Asphalt Plant Mix, AST, Str. Conc. Weep Hole Drains	
14M	-	-	-	-	100	35-70	5-20	-	0-8	-	-	A		Asphalt Plant Mix, AST, Weep Hole Drains, Str. Concrete	
9	-	-	-	-	100	85-100	10-40	-	0-10	-	-	A		AST	
ABC	-	100	75-97	-	55-80	-	35-55	-	25-45	-	14-30	4-12 ^B		Aggregate Base Course, Aggregate Stabilization	
ABC (M)	-	100	75-100	-	45-79	-	20-40	-	0-25	-	-	0-12 ^B		Maintenance Stabilization	
Light-C weight	-	-	-	-	100	80-100	5-40	0-20	-	0-10	-	0-2.5		AST	

A. See Subarticle 1005-4(A).
 B. See Subarticle 1005-4(B).
 C. For Lightweight Aggregate used in Structural Concrete, see Subarticle 1014-2(E)(6).

Page 10-162, Subarticle 1081-1(A) Classifications, lines 4-7, delete the second and third sentences of the description for Type 3A.

Page 10-162, Subarticle 1081-1(B) Requirements, lines 26-30, replace the second paragraph with the following:

For epoxy resin systems used for embedding dowel bars, threaded rods, rebar, anchor bolts and other fixtures in hardened concrete, the manufacturer shall submit test results showing that the bonding system will obtain 125% of the specified required yield strength of the fixture. Furnish certification that, for the particular bolt grade, diameter and embedment depth required, the anchor system will not fail by adhesive failure and that there is no movement of the anchor bolt. For certification and anchorage, use 3,000 psi as the minimum Portland cement concrete compressive strength used in this test. Use adhesives that meet Section 1081.

List the properties of the adhesive on the container and include density, minimum and maximum temperature application, setting time, shelf life, pot life, shear strength and compressive strength.

Page 10-169, Subarticle 1081-3(G) Anchor Bolt Adhesives, delete this subarticle.

Page 10-204, Subarticle 1092-2(A) Performance and Test Requirements, replace **Table 1092-3 Minimum Coefficient of Retroreflection for NC Grade A** with the following:

Observation Angle, degrees	Entrance Angle, degrees	White	Yellow	Green	Red	Blue	Fluorescent Yellow Green	Fluorescent Yellow
0.2	-4.0	525	395	52	95	30	420	315
0.2	30.0	215	162	22	43	10	170	130
0.5	-4.0	310	230	31	56	18	245	185
0.5	30.0	135	100	14	27	6	110	81
1.0	-4.0	120	60	8	16	3.6	64	48
1.0	30.0	45	34	4.5	9	2	36	27

TEMPORARY TRAFFIC CONTROL DEVICES:

(1-17-12)

1105

R11 R05

Revise the *2012 Standard Specifications* as follows:

Page 11-5, Article 1105-6 Measurement and Payment, add the following paragraph after line 24:

Partial payments will be made on each payment estimate based on the following: 50% of the contract lump sum price bid will be paid on the first monthly estimate and the remaining 50% of

the contract lump sum price bid will be paid on each subsequent estimate based on the percent of the project completed.

EROSION AND STORMWATER CONTROL FOR SHOULDER CONSTRUCTION AND RECONSTRUCTION:

(11-16-10)

105-16, 225-2, Division 16

R16 R03

Land disturbing operations associated with shoulder construction/reconstruction may require erosion and sediment control/stormwater measure installation. National Pollutant Discharge Elimination System (NPDES) inspection and reporting may be required.

Erosion control measures shall be installed per the erosion control detail in any area where the vegetated buffer between the disturbed area and surface waters (streams, wetlands, or open waters) or drainage inlet is less than 10 feet. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. Erosion control measures shall be spot checked every 14 days until permanent vegetative establishment.

In areas where shoulder construction/reconstruction includes disturbance or grading on the front slope or to the toe of fill, relocating ditch line or backslope, or removing vegetation from the ditch line or swale, NPDES inspection and monitoring are required every 14 days or within 24 hours of a rainfall event of 0.5" or greater. Maintain daily rainfall records. Install erosion control measures per detail.

In areas where the vegetated buffer is less than 10 feet between the disturbed area and waters of the State classified as High Quality Water (HQW), Outstanding Resource Water (ORW), Critical Areas, or Unique Wetlands, NPDES inspection and monitoring are required every 14 days or within 24 hours of a rainfall event of 0.5" or greater. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. The plans or provisions will indicate the presence of these water classifications. Maintain daily rainfall records. Install erosion control measures per detail.

Land disturbances hardened with aggregate materials receiving sheet flow are considered non-erodible.

Sites that require lengthy sections of silt fence may substitute with rapid permanent seeding and mulching as directed by the Engineer.

NPDES documentation shall be performed by a Level II Erosion and Sediment Control/Stormwater certificate holder.

Materials used for erosion control will be measured and paid as stated in the contract.