

## **Description/Specifications/Statement of Work**

### **100 - PREAMBLE**

The work outlined is in response to Hurricane Helene repairs to restore access based on the following criteria:

- 1) Life and Safety-providing access for emergency vehicles and minimizing flood risks
- 2) Proving access to residents and communities
- 3) Road and trail debris removal for safe passage and flood risk mitigation

The roads identified in this package meet the criteria of Emergency Repairs Federally Owned (ERFO) Quick Release funding and have been coordinated with the applicable district staffs to develop the needs listed in this statement of work.

### **110 – SCOPE OF CONTRACT**

Contractor shall furnish all labor, transportation, equipment, supervision, and other incidentals necessary to perform road reconditioning and associated work as indicated on the Schedule of Items in accordance with the specifications, terms and conditions as contained herein. Work includes surface maintenance, road reconditioning, cleaning and reshaping ditches, cleaning culverts, placing aggregate surfacing, placing riprap, removing existing culverts, furnishing and installing new culverts, and vegetation maintenance.

All work shall be performed between dawn and dusk on weekdays (exclusive of Federal Holidays). Approval to work outside these hours must be obtained from the Contracting Officer (CO). If the Contractor elects to conduct operations at more than one work sites concurrently, the Contractor shall coordinate with the Forest Service representative(s) as to the location, crew and equipment at each site. The Contractor shall notify the Forest Service representative a minimum of 24 hours prior to beginning and completion of work.

The Contracting Officer (CO) and/or Contracting Officer's Representative (COR) will give approval of delay for work on if conditions are too wet. If one inch or more of rain has been received in the last 24 hours, work will be delayed until dryer conditions are achieved. Weather delays will be considered to extend task order contract time by the CO on a case-by-case basis.

Estimated quantities are shown in the Schedule of Items. The Schedule of Items specifies the road number, name, and associated mileage of various activities, and other pertinent information or special instructions necessary for planning and execution of the work.

Notice to proceed and completion date will be provided by separate correspondence. Unless otherwise formally agreed in writing, all work shall be completed during the normal operating seasons (March 1 – December 15). Adjustments to these schedules may be made as mutually agreed to and documented in writing by the Contractor and the CO.

The Contractor shall exercise caution and care while pursuing the work to prevent unnecessary conflict with, or potential hazards to road users. Whenever possible, the road shall remain passable

to traffic while work is being performed. Road closures will be considered on a case-by-case basis. The Contractor shall notify the Forest Service representative a minimum of 5 working days (one week) prior to planned road closures to allow for public notification.

The Contractor shall be held liable for any damage caused by his personnel or equipment to any existing structures such as bridges, culverts, signs, guardrails, or any other Government infrastructure or property. Repair or replacement to these structures shall be at the Contractor's expense. The Government shall not be liable to loss, damage, or destruction of equipment furnished by the Contractor.

## **120 – PROJECT LOCATION**

All work is located within the boundaries of the George Washington & Jefferson National Forests and as indicated on the Schedule of Items. Specific work site(s) will be as indicated on each task order as issued.

District 1:       **Clinch Ranger District** (Wise, VA) –  
Virginia Counties: Dickenson, Lee, Scott, Wise

District 2:       **Mount Rogers National Recreation Area** (Marion, VA) –  
Virginia Counties: Bland, Carroll, Grayson, Smyth, Tazewell, Washington, Wythe

District 3:       **Eastern Divide Ranger District** (Blacksburg, VA) –  
Virginia Counties: Bland, Botetourt, Craig, Giles, Montgomery, Pulaski, Roanoke, Tazewell, Wythe

## **130 - Superintendence by the Contractor**

At all times during the performance of the contract and until the work is completed and accepted, the Contractor shall directly supervise the work or assign and have on the work site(s) a competent superintendent(s) who is satisfactory to the CO and has authority to act for the Contractor. The superintendent(s) shall be designated in writing to the CO prior to the commencement of work on the first delivery order.

## **140 - Equipment & Operator Requirements and Transportation**

All equipment proposed to be used for performance of the work shall be of the size, type and in such condition to properly pursue the requirements of this contract. All equipment furnished must be in satisfactory, safe condition and able to perform the required task. All equipment shall have a Rollover Protective Structure (ROPS).

The Contractor's proposed equipment shall be made available for inspection prior to starting work under the contract. If at any time during the course of this contract any equipment is deemed unsatisfactory, the Contracting Officer may order removal and may require a satisfactory replacement, within 3 days at Contractor's expense, meeting original specifications. Any movement or transportation of equipment to or from work areas required to pursue the work in the delivery order, to repair or replace equipment, or for the Contractor's convenience shall be at the Contractor's expense, unless specifically stated otherwise.

Equipment is to be provided with a competent operator, including chainsaw operators. The

contractor shall use only experienced, and/or licensed/certified operators with a minimum of 5 years of full-time experience in the stated work and in the operation and maintenance of the required equipment.

Contractor shall submit proof of adequate personnel, equipment, and ability to complete the required work activities (including amount and type of equipment, and personnel qualifications) to the CO prior to start of work at all locations.

### **150 – Inspection & Acceptance of Work**

All items of work on each individual road must be satisfactorily completed in accordance with the applicable specifications, inspected and accepted by the responsible Forest Service representative and documented in writing. Forty-Eight (48) hours, or 2 business days, prior to leaving an area, and before the Contractor is authorized to start work on the next road, the Contractor shall request inspection and acceptance of the completed work. Unacceptable work shall be re- accomplished at the Contractor's expense.

### **155 – Inspection & Acceptance of Equipment**

The contractor's proposed equipment shall be made available to the COR for inspection prior to award of this contract. If at any time during the course of this contract any equipment is deemed unsatisfactory, the Contracting Officer may order removal and may require a satisfactory replacement at Contractor's expense.

Equipment shall be clean and free of organic material before it used on National Forest System lands. Make equipment available for inspection and approval before mobilizing onto National Forest System lands. Wash equipment that has been exposed to invasive plants on the forest prior to moving to another area on the forest. Acceptance of the equipment shall be contingent upon approval of the COR. This requirement applies to all owned, rented and leased equipment.

### **160 - Public Safety and Traffic Control**

The Contractor shall exercise caution and care while pursuing the work to prevent unnecessary conflict with, or potential hazards to, road users or others within the work area. The Contractor is to pursue all work on site in accordance with all Federal, State and Local laws governing the transportation and work being performed.

The Contractor shall post warning signs on each end of the section of road being worked. Signs are to be of the size, quantity, and colors as required in the current edition of the "Manual on Uniform Traffic Control Devices", (MUTCD) and as follows:

- Warning signs shall have a black legend on an orange background.
- The use of standard orange flags or yellow flashing warning lights in conjunction with signs is required.
- All signs shall be minimum size 30"x30".
- All signs to be used during hours of darkness shall be reflectorized or illuminated.
- As a general rule, signs shall be located on the right-hand side of the roadway.
- Signs mounted on barricades or temporary supports shall be not less than one foot to the bottom of the sign from the road surface.

- Signs shall be no more than 2 miles apart, and when considered necessary by the COR, may be placed closer to actual work.
- For maximum mobility during rock picking or culvert cleaning, a warning sign may be effectively mounted on a vehicle moving along with the work operation.
- Required signs shall be placed to ensure that traffic is warned from each direction.

These signs shall be moved as required per the MUTCD to properly delineate and identify the section of the road being maintained. At no time shall these signs be more than two (2) miles from operating equipment and shall be in place when road equipment or persons are performing operations. All slow-moving equipment is to have a reflectorized "slow moving" vehicle emblem properly attached.

All work requiring closure of a road must be scheduled and approved by the COR prior to the commencement of that portion of work. All work is to be scheduled so that at the end of a working day, the road is passable for the type of traffic normally using the road. If for any reason traffic hazards (segments of unfinished work which may present a hazard to road users, such as rolls of surface material, berms on the shoulder, etc.) are left in or adjacent to the road after normal working hours, the work is to be properly signed as hazardous and visibly illuminated at night.

Any culvert work started at one site shall be completed before any work is started at any other site. Traffic delays shall be held to a minimum.

### **165 – Safety Plan**

Contractor shall provide a copy of their company safety plan to the Contracting Officer as evidence that they shall maintain safe operations during their work. Contractor shall be required to identify any additional current safety protocols that may be required by the Forest Service (such as pandemic, or fire related) and incorporate such protocols into their safety plan as necessary to carry out the work. The contractor remains fully responsible for safe operations of their equipment and personnel on the jobsite, in addition to maintaining safe conditions for the public where necessary.

### **170 - Accomplishment Records and Reports**

The Contractor shall maintain detailed records of accomplishment using the form shown in the exhibits. If work is performed on multiple districts, keep records distinct for each district. These records shall be delivered to the Forest Service representative in a timely manner and shall become the property of the Government. No payment shall be made prior to receipt of these records. If requested, a copy of the form, "Summarized Daily Accomplishment Report", can be furnished to the Contractor by the Forest Service representative prior to the start of work.

### **180 – Performance Time**

Contractor shall not exceed a maximum of fifteen (15) miles of surface maintenance activities, fifteen (15) miles of drainage maintenance (including 150 culverts cleaned) per week. Performance time will be established at the rate of five (5) working days for every fifteen miles. Subject to change if mutually agreed to and documented in writing by the Contractor and CO/COR.

### **190 – Key Personnel**

The Contractor shall assign to this contract the following key personnel:  
Superintendent(s)

During the first ninety (90) days of performance, the Contractor shall make no substitutions of key personnel unless the substitution is necessitated by illness, death, or termination of employment. The Contractor shall notify the CO within 10 calendar days after the occurrence of any of these events and provide the information required by the paragraph below. After the initial 90-day period, the Contractor shall submit the information required by the paragraph below to the CO at least 10 days prior to making any permanent substitutions.

The Contractor shall provide a detailed explanation of the circumstances necessitating the proposed substitutions, complete resumes for the proposed substitutes, and any additional information requested by the CO. Proposed substitutes should have comparable qualifications to those of the persons being replaced. The CO will notify the Contractor within 15 calendar days after receipt of all required information of the decision on substitutions. The contract will be modified to reflect any approved changes of key personnel.

## **200 – TECHNICAL SPECIFICATIONS**

### **210 – GOVERNING SPECIFICATIONS**

The U.S. Department of Transportation, Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Project FP-14 shall be used unless superseded by the included Forest Service Supplemental Specifications (FSSS). It is known that the FP-14 has been superseded by the FP-24, both the FP-14 will be used for this contract because the current FSSS correspond to the FP-14. All FP-14 specifications apply to work unless superseded by the FSSS. Specific applicable specification(s) for each pay item is listed and will be strictly adhered to by the contractor.

### **210 – GENERAL AND PROJECT REQUIREMENTS**

Section 101 - Terms, Format, and Definitions  
Section 102 - Bid, Award, and Execution of Contract  
Section 103 - Scope of Work  
Section 104 - Control of Work  
Section 105 - Control of Material  
Section 106 - Acceptance of Work  
Section 107 - Legal Relations and Responsibility to the Public  
Section 108 - Prosecution and Progress  
Section 109 - Measurement and Payment  
Section 151 – Mobilization  
Section 152 – Construction Survey and Staking  
Section 153 – Contractor Quality Control  
Section 154 – Contractor Sampling and Testing  
Section 155 - Schedules for Construction Contracts

Section 156 - Public Traffic

Section 157 - Soil Erosion and Sediment Control

Section 158 – Water For Dust Control

Contractor should build these costs into their bid price (i.e. incidental to the work).

Any movement or transportation of equipment to or from areas required to pursue the work, repair or replace equipment, or for the Contractor's convenience, shall be at the Contractor's expense.

## **220 – OPERATION**

Equipment shall be operated at sufficient speed and in such manner, dependent upon conditions, so as to achieve the desired results, within the parameters of the task order and/or the contract. All operators are subject to acceptability by the Contracting Officer. All operators and equipment shall be furnished with safety devices required by the Occupational Safety and Health Administration (OSHA) and shall be used.

## **230 - TECHNICAL REQUIREMENTS**

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## **Pay Item 811 ROAD RECONDITIONING**

Applicable FP-14 Specification(s):

Section 303. — ROAD RECONDITIONING

### Description

303.01 This work consists of reconditioning ditches, shoulders, roadbeds, aggregate surfaces, or the entire road.

### Material

303.02 Conform to the following Subsection:

Water 725.01(c)

### Construction Requirements

303.03 Ditch Reconditioning. Remove slide material, sediment, vegetation, and other debris from existing ditches and culvert inlets/outlets. Reshape ditches and culvert inlets/outlets to achieve positive drainage and uniform ditch width, depth, and grade. Dispose of waste at designated sites or according to Subsection 204.14.

303.04 Shoulder Reconditioning. Remove slide material, vegetation, and other debris from existing shoulders including shoulders in parking areas, turnouts, and other widened areas. Repair soft and unstable areas according to Subsection 204.07. Reshape shoulders to the widths and slopes shown in the plans. Dispose of waste at designated sites or according to Subsection 204.14.

303.05 Roadbed Reconditioning. Remove organic, deleterious, and material larger than 6 inches (150 millimeters) from the top 6 inches (150 millimeters) of subgrade. Dispose of waste according to Subsection 204.14. Repair soft and unstable areas according to Subsection 204.07. Scarify surface to a 6-inch (150-millimeter) depth. Remove irregularities and shape to a uniform surface. Finish earth surfaces to within 0.05 feet (15 millimeters) and rock surfaces to within 0.10 feet (30 millimeters) of required line, grade, and cross-section. Compact according to Subsection 204.11.

303.06 Aggregate Surface Reconditioning. Repair soft and unstable areas to the full aggregate surface depth and according to Subsection 204.07. Scarify the thickness of aggregate surfacing material or to 6 inches (150 millimeters), whichever is less. Remove irregularities and shape to a uniform surface. Finish and compact the surface according to Subsection 302.05.

303.07 Roadway Reconditioning. Perform applicable work described in Subsections 303.03 through 303.06. Maintain existing cross slope and crown or as shown in the plans.

303.08 Acceptance. See Table 303-1 for sampling, testing, and acceptance requirements. Road reconditioning work will be evaluated under Subsections 106.02 and 106.04.

### **Additional Requirements**

Smooth and shape native or aggregate surfaced roads including traveled way, shoulders, turnouts, and intersections. Clean out and reshape water bars and drain dips to allow these features to properly turn water off of the roadway.

Road surface maintenance operations shall scarify the roadbed as required to remove, ruts, potholes, corrugations, and berms. The roadbed shall be scarified no more than 6 inches. All suitable dislodged aggregate shall be smoothly redistributed over the entire traveled way to produce proper cross slope or crown (1/4" to 1/2" per foot).

All suitable aggregate which has been worked onto road shoulder by traffic or maintenance activities shall be reclaimed onto the traveled way. Grass or leaf litter disturbed within the traveled way shall be smoothly spread within the traveled way or along the shoulder after movement sufficient to sift out surface aggregate.

Assure proper surface drainage following this operation. No undercutting of road surface at shoulder line nor material berms blocking drainage will be allowed unless designated by the COR.

Loose rocks protruding three (3) inches or more above graded surface shall be removed from the traveled way. It is permissible to waste these rocks over the road shoulder edge/fill slope and away from drainage ditches

All traveled way widths (aggregate surface) shall be perpetuated as existing. Dips and swales within the traveled way designed to control surface drainage shall be maintained.

#### Performance Standards

All roads listed are either maintenance level 3 or 2 roads

#### ***Maintenance Level 3 Roads***

A road surface is maintained to standard when the surface is compact, crowned, or sloped to drain, without segregation of the surfacing materials. The road surface has no ruts or rills, suitable materials have been recovered and incorporated. Unsuitable materials have been removed. Ditches and road surface drainage structures function efficiently.



Figure 01: Example #1 Maintenance Level 3 Road





Figure 02: Example #2 Maintenance Level 3 Road



Figure 03: Example #3 Maintenance Level 3 Road

### ***Maintenance Level 2 Roads***

A road surface is maintained to standard when the surface is shaped to drain, and where ditches and road surface drainage structures function efficiently. The road surface has no continuous ruts or rills, and no large concentrations of unsuitable materials remain.



Figure 04: Example #1 Maintenance Level 2 Road



Figure 05: Example #2 Maintenance Level 2 Road

When directed by the COR use berm material for surface maintenance. Suitable materials shall be recovered and incorporated. Unsuitable materials shall be removed. When ordered by the Contracting Officer to work in a weed infested area the contractor will be required to prevent spreading the infestation into un-infested areas by cleaning vehicles and equipment. The contractor will use wash stations approved by the Contracting Officer.

#### Location of Work

As specified on roads listed on the road listing, shown on the plans, marked on the ground, or as ordered by the Contracting Officer. Locations of weed infested areas are marked on the ground. Do not operate in the weed infested areas unless ordered to do so by the Contracting Officer.

#### Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

Road Mile: Work activity will be measured along the centerline of the road regardless of the number of lanes.

**Payment**

The accepted quantities will be paid at the contract price per unit of measurement for the Section 811 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.

**Pay Item 811 SURFACE MAINTENANCE**

**Acceptable Quality Levels**

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Surface Irregularities (Level 3)	Potholes greater than 2" deep and wider than 1 foot	Potholes 2" or less deep and 1 foot or less wide	5 per 500 ft	5 per 500 ft	Rework if greater than 4 major defects *	Rework if greater than 4 minor defects *
	Washboards greater than 1" deep	Washboards less than 1" deep and not exceeding 20 feet long	5 per 500 ft	5 per 500 ft	Rework if greater than 4 major defects *	Rework if greater than 4 minor defects *
Road Cross Section (Level 3)	Crown or Cross Slope is not uniform and does not drain as specified on more than 250' of surface per mile	Crown or Cross Slope is not uniform and does not drain as specified on less than 250' of surface per mile	0	3 per mile	Rework	Rework if greater than 3 minor defects *
Road Cross Section (Level 2)	Road surface does not drain properly and causes erosion, or obstructs high clearance vehicles	Road surface does not drain properly, but does not cause erosion	0	5 per mile	Rework	Rework if greater than 5 minor defects *
Oversized Material (Level 3)	Material greater than 3" diameter remaining on the road surface	Material less than 3" diameter remaining on the road surface and traffic safety is not compromised	0	3 per mile	Rework	Rework if greater than 3 minor defects *

**Pay Item 811 SURFACE MAINTENANCE**

**Acceptable Quality Levels (continued)**

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Oversized Material (Level 2)	Objects in traveled way that obstruct high clearance vehicles	Debris in traveled way that may impede high clearance vehicles	0	1 per mile	Rework	Rework if greater than 1 minor defects *
Aggregate Surface Quality	Gradation of surface aggregate is degraded by more than 10 %	Gradation of surface aggregate is degraded by less than 10 %	0	1 per mile	Rework	Rework if greater than 1 minor defects *
	A loss of more than 10 CY/mile	A loss of less than 10 CY/mile	0	1 per mile	Replace or recover lost material	Accept the loss of material
	Surfacing is segregated over more than a 100 square yard area per 1000 linear feet of road and traffic safety is compromised	Surfacing is segregated over less than a 100 square yard area per 1000 linear feet of road and traffic safety is not compromised	0	N/A	Rework	Accept the loss of surface quality*
Backslopes	Undercut backslope will result in destabilization of slope	Undercut backslope will not result in destabilization of slope	0	100 ft per mile	Repair and Stabilize	Revegetate if greater than 5 minor defects *
Ditches and Road Drainage Structures	Impeded flow or water diverted out of drainage structures	< 20% impeded, but water will stay in the channel	0	2 per mile	Rework	Rework if greater than 1 minor defect
Unpaved Shoulders (Level 3)	Elevation difference between pavement and shoulder is greater than 1"	Elevation difference between pavement and shoulder is less than 1"	0	100 ft per 1000 ft	Rework	Rework if greater than 1 minor defects *
	Material greater than 1/4" diameter remaining on the road surface and traffic safety is compromised	Material 1/4" diameter or less remaining on the road surface and traffic safety is not compromised	0	100 ft per 1000 ft	Rework	Rework if greater than 1 minor defects
	Does not drain away from pavement	Does not drain away from pavement	0	0	Rework	Rework
Working outside of project limits	Area contains invasive weeds	N/A	0	N/A	Repair and treat affected areas as directed by the Contracting Officer	N/A

**Pay Item 812 ROAD RESURFACING**

**Pay Item 813 SPOT SURFACING**

**Pay Item 832 CULVERT BEDDING AND BACKFILL**

Applicable FP-14 Specification(s):

Section 302. — MINOR CRUSHED AGGREGATE

Description

302.01 This work consists of furnishing and placing crushed aggregate for bedding, backfill, and roadway aggregates on a prepared surface.

Material

302.02 Conform to the following Subsections:

Crushed aggregate 703.06

Water 725.01(c)

Construction Requirements

302.03 Preparing Surface.

(a) Roadway aggregate. Prepare the surface on which the aggregate course is placed according to Section 303.

(b) Bedding and backfill aggregate. Shape, compact, and finish the surface to the required lines, grade, elevation, and cross-section according to Section 209.

302.04 Placing Crushed Aggregate.

Written approval of the surface is required before placing aggregate.

(a) Roadway aggregate. Mix the aggregate and adjust the moisture content to obtain a uniform mixture. Adjust the moisture content to obtain proper compaction. Spread and shape in uniform layers not to exceed 6 inches (150 millimeters) compacted thickness. Where more than one layer is necessary, compact the underlying layer according to Subsection 302.05.

(b) Bedding and backfill aggregate. Place and shape the mixture in layers that, when compacted, do not exceed 6 inches (150 millimeters) in depth.

302.05 Compacting and Finishing Crushed Aggregate.

(a) Roadway aggregate. Unless otherwise specified by CO, compact according to method 2. Finish surface according to Subsection 301.06.

(1) Method 1. Compact each layer according to Subsection 204.11(a). Roll from the sides to the center, parallel to the centerline of the road. Compact the material along curbs, headers, walls, and places not accessible to a roller with approved tampers or compactors. Compactive effort may be decreased if in-place densities show that less compactive effort is required under Method 2.

(2) Method 2. Compact each layer according to Subsection 301.05.

(b) Bedding and backfill aggregate. Compact each layer according to Subsection 209.10.

302.06 Acceptance. See Table 302-1 for sampling, testing, and acceptance requirements.

Crushed aggregate will be evaluated under Subsections 106.02 and 106.03. Submit a production certification including gradation and quality properties for each source.



Construction of roadway aggregate courses will be evaluated under Subsections 106.02 and 106.04. Method 2 compaction will be evaluated under Subsection 106.04. Placement of bedding and backfill aggregate will be evaluated under Subsections 106.02 and 106.04.

#### Measurement

302.07 Measure the Section 302 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

When measuring crushed aggregate by the ton, measure as delivered by haul truck to job site, placed and accepted. Weights will be verified by certified weight tickets from source of supply.

#### Payment

302.08 The accepted quantities will be paid at the contract price per unit of measurement for the Section 302 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

#### **Additional Requirements**

Aggregate used for pay item 812 ROAD RESURFACING will be VA DOT #26 “crusher run” unless otherwise approved by CO/COR in writing prior to purchase from the source(s) of supply. Contractor assumes the costs of material purchased, delivered and placed that is not accepted the Government due the Contractor failing to obtain prior approval.

Aggregate used for pay item 813 SPOT SURFACING will be VA DOT #357 or an equal blend of VA DOT #3 and #57, blended at quarry. Use of any other aggregate for pay item 813 SPOT SURFACING must be approved by CO/COR in writing prior to purchase from the source(s) of supply. Contractor assumes the costs of material purchased, delivered and placed that is not accepted the Government due the Contractor failing to obtain prior approval.

Pay Item 832 CULVERT BEDDING AND BACKFILL will be VA DOT aggregate base material size #21A or #21B, corresponding to AASHTO A-1-B Class I structural backfill material unless otherwise approved by CO/COR in writing prior to purchase from the source(s) of supply. Contractor assumes the costs of material purchased, delivered and placed that is not accepted the Government due the Contractor failing to obtain prior approval. Contractor assumes material costs and time lost if Government rejects one of more culvert installation because the wrong backfill and bedding material was used, and culvert installation must be re-done. Costs include the cost of new pipe purchase since the pipe to be replaced will not be re-used.

All materials transported onto National Forest System land will be free of all organic material. Written documentation of methods used to determine the clean status of any and all materials furnished by the contractor will be furnished to the CO/COR before transport of any materials onto National Forest System land.

#### Location of Work

As specified on roads listed on the ROAD LISTING, SHOWN ON THE PLANS, or as ordered by the Contracting Officer.

Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

Material measured by the ton shall be verified by certified weight tickets.

Payment

The accepted quantities will be paid at the contract price per unit of measurement for the Section 812, 813 and 835 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.

**Pay Item 812 ROAD RESURFACING and Pay Item 813 SPOT SURFACING**

**Acceptable Quality Levels**

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Depth of Aggregate	Dimension of spot surfacing deviates by more than 1" from depth specified. Or less than 1" from dimension specified but is consistently high or low.	Dimension of spot surfacing deviates by 1" or less than from depth specified and not consistently high or low.	0	N/A	If depth is low, correct placement of aggregate to specified dimensions. If depth is high, properly respread and only pay for ordered amount	Accept aggregate as placed, pay only for delivered quantities.
Width of Aggregate	Dimension of spot surfacing is less than specified width or more than 1' wider than specified.	Dimension of spot surfacing is up to 1' wider than specified but not consistently wide.	0	N/A	If width is narrow, correct placement of aggregate to specified dimensions. If width is too wide reshape.	Accept aggregate as placed, pay only for delivered quantities.
Length	Dimension of spot surfacing is shorter than specified length or more than 100' longer than specified.	Dimension of spot surfacing is shorter than specified length or up to 100' longer than specified.	0	N/A	If length is shorter than specified, correct placement of aggregate to specified dimensions. If too long pay only for ordered amount.	Accept aggregate as placed, pay only for delivered quantities.
Compaction	Visible displacement occurs under heavy spreading equipment	N/A	0	N/A	Rework	N/A
Aggregate Quality	Does not meet specified gradation or durability requirements and is not suitable for intended use	Does not meet specified gradation or durability requirements and is suitable for intended use	0	N/A	Reject and replace	Accept but may reduce payment.
	Material source does not meet weed free requirement	N/A	0	N/A	Reject source	N/A
Finish Quality	Spot surfacing doesn't conform to the adjacent road segments and traffic is impeded.	Spot surfacing generally conforms to the adjacent road segments, but traffic may be slowed.	0	2 per 1000 ft	Reshape or recompact surfacing as needed.	Accept but may reduce payment.

**Pay Item 832 CULVERT BEDDING AND BACKFILL**

**Acceptable Quality Levels**

See Pay Item 831 DRAINAGE STRUCTURE INSTALLATION AND REMOVAL \_\_\_\_\_

**Pay Item 819 ROADWAY VEGETATION MAINTENANCE**

Applicable FP-14 Specification(s):

Section 201. — CLEARING AND GRUBBING

Description

201.01 This work consists of clearing ~~and grubbing~~ within the clearing limits designated in the plans.

Material

602.02 Conform to the following Sections and Subsections:

Tree wound dressing 713.08(g)

Construction Requirements

201.03 General. Construct erosion control measures according to Section 157. Perform work within designated limits.

Do not damage vegetation designated to remain. If damage occurs, repair or replace the vegetation in an acceptable manner. Where possible, preserve vegetation adjacent to bodies of water. Treat cuts or scarred surfaces of trees and shrubs with tree wound dressing.

201.04 Clearing. Within the clearing limits clear trees, brush, downed timber, and other vegetation as follows:

- (a) Cut trees so they fall within the clearing limits;
- (b) In areas of cut slope rounding, cut stumps flush with or below the final ground-line;
- (c) In areas outside the excavation, embankment, and slope rounding limits, cut stumps to within 6 inches (150 millimeters) of the ground; and
- (d) Trim tree branches that extend over the road surface and shoulders to attain a clear height of 20 feet (6 meters). If required, remove other branches to present a balanced appearance. Trim according to accepted tree surgery practices. Treat wounds with tree wound dressing.

201.06 Disposal. Merchantable timber is Government property. Dispose of clearing and grubbing debris according to Subsection 203.05 on site or at location designated by the COR.

201.07 Acceptance. Clearing will be evaluated under Subsection 106.02.

Material for tree wound dressing will be evaluated under Subsection 106.03.

Backfilling and compacting of stumps and grubbing holes will be evaluated under Section 209.

Measurement

**Additional Requirements**

Roadway vegetation maintenance is complete when the vegetation has been removed from the designated treatment area which interferes with traffic (including road bridge decks/bridge corners), obscures signage, impedes the flow of water or diverts water from drainage structures.

**A. Maintenance Level 3 roads**

Vegetation shall be removed to a maximum height of 14 ft above ground surfaces. Trees larger



than 4 inches dbh are designated to remain.

**B. Maintenance Level 2 roads**

Vegetation shall be removed to a maximum height of 14 ft above ground surfaces. Trees larger than 4 inches dbh are designated to remain.

**C. All Roads**

Cut vegetation shall not be left within 25’ of active stream courses. Piling of cut vegetation material into windrows or large piles shall be reviewed and approved by the CO in advance.

**Location of Work**

As specified on roads listed on the road listing, shown on the plans, marked on the ground, or as ordered by the Contracting Officer.

**Measurement**

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

Road Mile: Work activity will be measured along the centerline of the road regardless of the number of lanes

**Pay Item 819 ROADWAY VEGETATION MAINTENANCE**

**Acceptable Quality Levels**

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Tree damage	Damage to more than 30% of the tree bole	Damage to 30% or less of the tree bole	1 per 0.25 mi	3 per 0.25 mi	Remove or Treat	Treat
Horizontal Clearance	More than 20% not cleared to limits	20% or less not cleared to limits	0	1 per 0.25 mi	Rework	Rework if greater than 1 minor defects *
Vertical Clearance	More than 20% not cleared to limits	20% or less not cleared to limits	0	1 per 0.25 mi	Rework	Rework if greater than 1 minor defects *
Height above ground surface	More than 20% not cleared to limits	20% or less not cleared to limits	0	1 per 0.25 mi	Rework	Rework if greater than 1 minor defects *
Drainage	Impeded flow or water diverted out of drainage structures.	20% or less impeded, but water will stay in the channel.	0	1 per 0.25 mi	Rework	Rework if greater than 1 minor defects *

**Pay Item 819 ROADWAY VEGETATION MAINTENANCE**

**Acceptable Quality Levels (continued)**

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Oversized Material (Level 3)	Material greater than 3" diameter and 12" in length remaining on the road surface	Material 1" - 3" in diameter and 36" in length remaining on the road surface	0	2 per 0.25 mi	Rework	Rework if greater than 1 minor defects *
	Material greater than 3" diameter and 36" in length remaining on the roadway drainages or has the potential to move into drainages.	Material 1" - 3" in diameter and greater 36" in length remaining on the roadway slopes and drainages or has the potential to move into drainages.	0	2 per 0.25 mi	Rework	Rework if greater than 1 minor defects *
Oversized Material (Level 2)	Concentrations of material greater than 6" diameter and 3 feet in length remaining on the road surface	Material less than 6" diameter and 3 feet in length remaining on the road surface	0	2 per 0.25 mi	Rework	Rework if greater than 1 minor defects *
	Unstable concentrations of material less than 6" diameter and 3 feet in length remaining on the roadway slopes.	N/A	0	N/A	Rework	N/A
	Material greater than 3" diameter and 36" in length remaining on the roadway drainages or has the potential to move into drainages.	Material 1" - 3" in diameter and greater 36" in length remaining on the roadway slopes and drainages or has the potential to move into drainages.	0	3 per 0.25 mi	Rework	Rework if greater than 1 minor defects *

**Pay Item 821 EXISTING DRAINAGE STRUCTURE MAINTENANCE**

Applicable FP-14 Specification(s):

**Section 607. — CLEANING, RELAYING, AND REPAIRING EXISTING DRAINAGE STRUCTURES**

**Description**

607.01 This work consists of cleaning, relaying, and repairing existing drainage and appurtenant structures.

**Construction Requirements**

607.02 Cleaning Drainage Structures in Place. Remove foreign material within the structure and accessories by approved methods.

Remove debris, vegetation, and earthen material that impedes inlet and outlet channel flow to the structure. Obtain approval from the CO before removing trees.

Dispose of removed material according to Subsection 203.05.

Regrade inlet and outlet channels at structures to provide positive drainage. Reshape inlet to direct flow into the structure entrance.

607.05 Acceptance. Cleaning and repairing existing drainage structures will be evaluated under Subsection 106.02.

**Measurement**

607.06 Measure the Section 607 pay items listed in the bid schedule according to Subsection 109.02.

**Payment**

607.07 The accepted quantities will be paid at the contract price per unit of measurement for the Section 607 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05

**Additional Requirements**

**Tail and Lead-Off Ditches.** Ditches shall be opened to provide drainage away from the roadway, with no berms left at the end of these ditches to block water (daylight). No material excavated from these structures shall be reclaimed onto the roadbed.

**Culvert Cleaning** All culverts shall be inspected and cleaned as necessary of dirt, silt, muck, debris and vegetative matter to maintain a smooth flow of water. Silt shall be removed from culverts so that no more than 2” of debris is left in any pipe, except that all silt shall be removed from the first 3’ at both outlet ends of culverts. This activity also includes – brushing and debris removal at culvert inlets and outlets, catch basins, and other appurtenant structures such that they drain to daylight. All culverts shall be brushed out around the edge of the pipe and minimum of 10’ in all direction of grass, brush and trees with a DBH of 4” or less.

Throughout this operation, care shall be taken to prevent damage to culvert pipes, end sections and

all other appurtenances. All material, including brush, extracted in this operation shall be disposed of at the site outside of the roadway from natural or man-made drainages.

#### Performance Standard

Drainage system maintenance is complete when no obstruction remains in the defined area adjacent to the structure or in ditches which would have the potential to block water from entering the structure, back water into the structure (except for structures designed to function in a back-flooded manner), or divert water outside the defined channel. This includes clearing obstructions from culvert inlets and outlets when performing work under Pay Item 834(4) Clean Ditches. Equipment operation in live streams or hydraulic flushing of drainage structures is not permitted.

When ordered by the Contracting Officer to work in a weed infested area the contractor will be required to prevent spreading the infestation into un-infested areas by cleaning vehicles and equipment. The contractor will use wash stations approved by the Contracting Officer.\

#### Location of Work

As specified on roads listed on the road listing, shown on the plans, marked on the ground and/or ordered by the Contracting Officer and;

Drainage structures including inlet structures, culverts, catch basins, inlet/outlet channels, and ditches within the area shown on the plans or in the supplemental specifications.

Culverts - a minimum external horizontal distance of 10 feet in any direction from the inlet and outlet end and a minimum internal distance of 3 feet from the inlet and outlet ends.

Ditches adjacent to the roadbed.

This work does not include bridges, cattleguards, drain dips, or water bars.

Do not operate in the weed infested areas marked on the ground unless ordered to do so by the Contracting Officer.

#### Measurement

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

#### Payment

B. The accepted quantities will be paid at the contract price per unit of measurement for the Section 834 pay items listed in the schedule of items. Payment will be full compensation for the work prescribed in this Section.

**Pay Item 821 EXISTING DRAINAGE STRUCTURE MAINTENANCE**

**Acceptable Quality Levels**

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Blocked Culverts	Greater than 20 % of end area blocked	20% or less of end area blocked	0	0	Rework	Rework
Damaged Culvert Inlet/outlets	Greater than 20 % of end area blocked	20% or less of end area blocked	0	0	Rework	Rework
Impeded flow for ditches, inlet/outlet channels, and catch basins	Water will be diverted out of the drainage structure or system	< 20% impeded, but water will stay in the channel and drain away to daylight	0	2 ft per 1000 ft	Rework	Rework if greater than 1 minor defects *
Debris on Road (ML 3) produced by Service Provider operations.	Debris in traveled way that may impede traffic.	Debris in traveled way that may slow traffic.	0	0	Rework	Rework
Debris on Road (ML 2) produced by Service Provider operations.	Objects in traveled way that obstruct high clearance vehicles	Debris in traveled way that may impede high clearance vehicles	0	0	Rework	Rework
Aggregate Surface Quality	Gradation of surface aggregate is degraded by more than 10 %	Gradation of surface aggregate is degraded by 10 % or less	0	100 ft per 1000 ft	Rework	Rework if greater than 1 minor defects *
Backslopes	Undercut backslope will result in destabilization of slope	Undercut backslope will not result in destabilization of slope	0	10 ft per 100 ft	Repair and Stabilize	Revegetate if greater than 1 minor defects *
Vegetation	Woody vegetation within 10 feet of the inlet end of drainage structures or in ditches that interferes with flow	Low growing vegetation within 5 feet or more of inlet end of drainage structures or in ditches that does not interfere with flow	0	N/A	Remove	Leave in place
Work Area Management	Not following 150 Public Safety reqmts & company safety plan which may include signs, flaggers, and other temporary traffic control measures	Not following 150 Public Safety reqmts & company safety plan which may include signs, flaggers, and other temporary traffic control measures	0	0	Suspend work until in compliance	Suspend work until in compliance
Working outside project limits	Area contains invasive weeds	N/A	0	N/A	Repair and treat affected areas as directed by the Contracting Officer	N/A

**Pay Item 831 DRAINAGE STRUCTURE INSTALLATION AND REMOVAL**

Applicable FP-14 Specification(s):

Section 203. — REMOVAL OF STRUCTURES AND OBSTRUCTIONS

03.05 Disposing of Material. Dispose of debris, unsuitable material, and excess material as follows:

- (a) Remove from project. Recycle or dispose of material legally off the project. Submit a statement documenting the nature and quantity of material processed or sold for recycling. Otherwise, submit a signed copy of the disposal agreement before disposal begins.

Section 602. — CULVERTS AND DRAINS

Description

602.01 This work consists of furnishing and installing culverts, drains, and precast concrete box culverts.

Material

602.02 Conform to the following Sections and Subsections:

Metal pipe     707

Construction Requirements

602.03 General. Furnish culvert pipe with a wall thickness not less than that shown in the plans or determined from the fill-height tables included in the plans. Use the same material and coating on contiguous pipe sections and special sections (such as elbows and branch connections). For culvert extensions, furnish the same material as the existing culvert.

Plans show the size, length, and approximate location of culverts. Determine final location, skew, length, elevations, and grade according to Section 152. Do not order culvert material until the CO has accepted the final structure size, length, and alignment.

Construct cast-in-place concrete box culverts according to Section 552. For precast concrete box culverts, submit design drawings and details with supporting calculations according to Subsection 104.03.

Excavate and backfill according to Section 209.

Place elongated pipes with the minor axis within 5 degrees of vertical.

602.05 Laying Metal Pipe. Position the pipe with a longitudinal joint so the joint is opposite the invert. Unless otherwise specified fully join pipe sections to control the infiltration of soil according to AASHTO M 36 or AASHTO M 196. Use one of the following: Standard Connecting bands. Band corrugation shall match that of the pipe sections being joined or the annular rerolled ends of those pipe sections.

602.08 Acceptance. Material for culverts furnished will be evaluated under Subsections 106.02 and 106.03.

Installation of culverts will be evaluated under Subsections 106.02 and 106.04.

Excavation and backfill will be evaluated under Section 209.

#### Measurement

602.09 Measure the Section 602 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

When measuring pipe and box culverts by the linear foot (meter), measure along the invert. Measure end sections, elbows, and branch connections by the each. If there is no pay item for elbows or branch connections, measure them as additional pipe length along the invert. Measure pipe anchor assemblies under Section 606.

#### Payment

602.10 The accepted quantities will be paid at the contract price per unit of measurement for the Section 602 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

### **Additional Requirements**

**This section shall be construction under the DBA wage determination.**

Install or remove drainage structures including culverts, water-bars, drivable drain dips, and cross ditches.

**Culvert Removal** – This activity consists of removing damaged or undersized culverts from the roadbed. The contact/CO/COR will indicate which culverts will be removed. Remove structures and obstructions in the roadbed to 12 inches below subgrade elevation. Remove structures and obstructions outside the roadbed to 12 inches below finished grade or to the natural stream bottom. The material removed shall become the property of the Contractor and removed from National Forest System Lands.

**Furnish and Install Culvert** – This activity consists of furnishing and installing 18”, 24”, 36”, 48”, 60” and 72” diameter Aluminized Type II Coated Corrugated Metal Pipe, HL-93 load rated, inclusive of bands needed for joining multiple pipe sections, and including all bedding and backfilling materials required to complete the work. The maximum depth of culvert installation shall be 5 ft from the finished road surface to the pipe inlet. Activities required for dewatering the jobsite shall be incidental to the culvert installation. The contact/CO/COR will specify the size, length, and location of pipe.

Lay the bottom of the pipe so that it is in contact with the bedding throughout its length. Place outside laps facing upstream. Ensure that the final installed alignment allows no reverse grades. The COR shall inspect and approve the bedding and pipe alignment prior to backfill.

After bedding is prepared and the pipe is placed, compact the backfill using a mechanical hand tamper (or other suitable vibratory equipment designed for this purpose) under the haunches and alongside the pipe. Use backfilling material that is free of frozen or solid clumps larger than 3 in diameter. On each side of the pipe, place an area of compacted material at least as wide as the diameter of the pipe. Compact the backfill without damaging or displacing the pipe. Place a minimum of 12 inches of compacted material on top of the pipe.

**Pay Item 841 LOAD, HAUL, AND PLACE RIP-RAP**

Applicable FP-14 Specification(s):

Section 251. — RIPRAP

Description

251.01 This work consists of furnishing and placing riprap for bank protection, slope protection, drainage structures, and erosion control.

Riprap acceptance methods are designated according to Table 251-1. If no acceptance method is designated, use Method A.

Riprap classes are designated according to Table 705-1.

Geotextile filters are designated according to Table 714-1.

Material

251.02 Conform to the following Subsections:

Geotextile        714.01

Riprap            705.02

Construction Requirements

251.03 General. Perform the work under Section 209. Dress the slope to produce a smooth surface. If geotextile filter is required, place according to Section 207.

251.04 Placed Riprap. Placed riprap is rock placed on a prepared surface to form a well-graded mass.

Place riprap to its full thickness in one operation to avoid displacing the underlying material. Do not place riprap material by methods that cause segregation or damage to the prepared surface.

Place or rearrange individual rocks by mechanical or hand methods to obtain a dense uniform blanket with a reasonably smooth surface.

51.07 Acceptance. See Table 251-1 for sampling, testing, and acceptance requirements.

Rock for riprap will be evaluated under Subsections 106.02 and 106.04.

Measurement

251.08 Measure the Section 251 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

When measuring riprap by the cubic yard (CY), measure in place.

Payment

251.09 The accepted quantities will be paid at the contract price per unit of measurement for the Section 251 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Additional Requirements**

Rip-rap used for pay item 841 LOAD, HAUL, AND PLACE RIP-RAP will be VA DOT Class 1 rip-rap (12” - 24”, mean 18” diameter quarried stone). Use of any other sized or sourced rip-rap



for pay item 841 LOAD, HAUL, AND PLACE RIP-RAP must be approved by COR in writing prior to purchase from the source(s) of supply. Contractor assumes the costs of material purchased, delivered and placed that is not accepted the Government due the Contractor failing to obtain prior approval.

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted. As stated above, rip-rap measurement is in cubic yard (CY). However, the agreed conversion factor will be 1 CY is exactly equal to 1.5 tons (i.e. 20 tons equals 13.33 CY). Material that is priced, measured and invoiced by the Contractor in tonnage shall be verified by certified weight tickets using this designated conversion factor.

**Measurement**

Measurement under this Section will be made by the total number of units for each item listed in the SCHEDULE OF ITEMS completed and accepted.

**Pay Item 841 LOAD, HAUL, AND PLACE RIP-RAP**

**Acceptable Quality Levels**

Description	Major Defect	Minor Defect	Allowable Defects		Required Action	
			Major	Minor	Major	Minor
Slopes	Unstable material left on slopes	Material left on slopes that can be stabilized and won't block drainages	0	0	Remove	Remove or stabilize in place
Backslopes	Undercut backslope will result in destabilization of slope	Undercut backslope will not result in destabilization of slope	0	0	Repair and Stabilize	Rework
Ditches, inlet/outlet channels, streams and catch basins	Water will be diverted out of the drainage structure or soil enters system	< 20% impeded, but water will stay in the channel.	0	0	Rework	Remove Debris
Debris on Road (ML 3)	Debris in traveled way that may impede traffic.	Debris in traveled way that may slow traffic.	0	0	Rework	Rework
Debris on Road (ML 2)	Objects in traveled way that obstruct high clearance vehicles	Debris in traveled way that may impede high clearance vehicles	0	0	Rework	Rework
Work Area Management	Not following 150 Public Safety reqmts & company safety plan which may include signs, flaggers, and other temporary traffic control measures	Not following 150 Public Safety reqmts & company safety plan which may include signs, flaggers, and other temporary traffic control measures	0	0	Suspend work until in compliance	Suspend work until in compliance

**End  
Description/Specifications/Statement of Work**