

DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION 9
ALLEGHENY NATIONAL FOREST

BHSP Iron Quad Stewardship

FR 221 Slater Run 0.6 Miles Reconstruction – Maintenance – Level C
FR 224 Warner Run 1.0 Mile Reconstruction – Maintenance – Level C
FR 224A Warner Run – A 0.4 Miles Reconstruction – Maintenance – Level D

Marienville Ranger District
Forest County
Pennsylvania

Contents

Vicinity Map.....2
Schedule of Items3
General Notes4
Road Log - Work Descriptions.....6
Roadbed Details.....9

The location and design elements of this facility have been correlated with the plans, policies and constraints of the approved Spring Creek and North End Environmental Impact Statements.

Plans are to be used with "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-03 with Special Project Specifications thereto included in this contract.

Prepared By:

Ivan E. Martinez

Approved By:

Paul Noel
District Ranger

5/3/13
Date

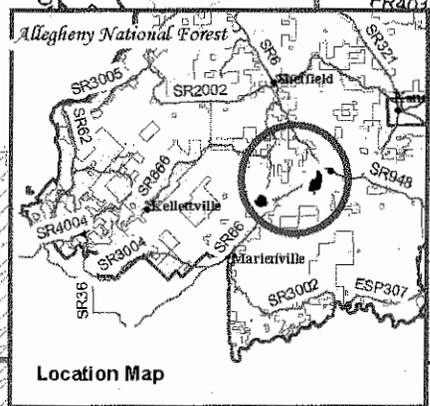
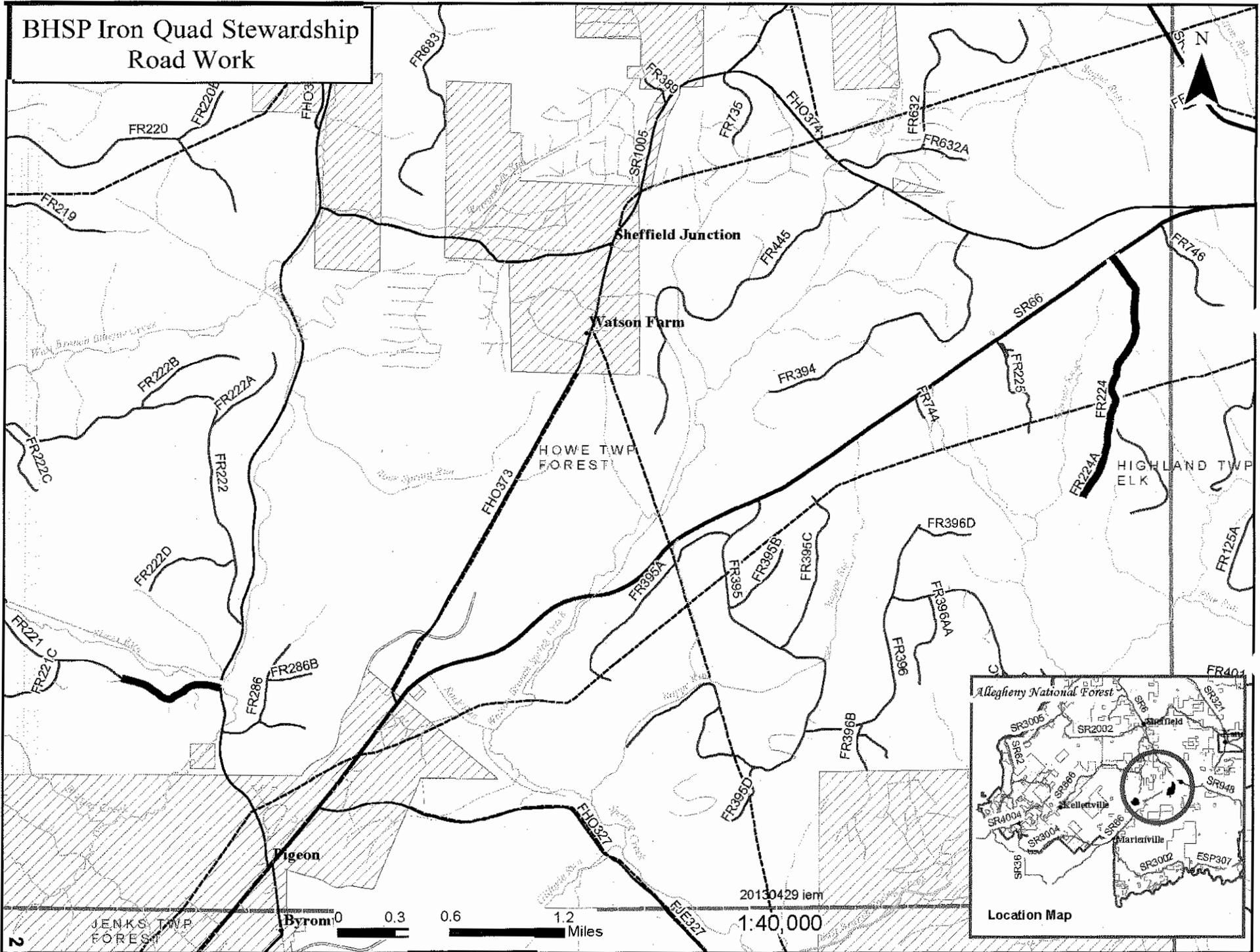
Dan Siler
Forest Engineer

5-6-2013
Date

Jane Siler (acting for)
Forest Supervisor

5-6-13
Date

BHSP Iron Quad Stewardship Road Work



2
JENKS TWP FOREST
Byrom
0 0.3 0.6 1.2 Miles
20130429 iem
1:40,000

Schedule of Items

FR 221

Item	Description	Unit	Quantity
15101	Mobilization (Lump Sum)	All	1
20301	Removal of culverts	Each	4
30111	Aggregate surface course, grading pit run, compaction method B	Cubic Yard	120
30326	Road reconditioning	Mile	0.6
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A backfill material	Linear Foot	148
60264	24 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A backfill material	Linear Foot	40
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1

FR 224

Item	Description	Unit	Quantity
15101	Mobilization (Lump Sum)	All	1
30111	Aggregate surface course, grading pit run, compaction method B	Cubic Yard	180
30318	Road reconditioning	Mile	1.0

FR 224A

Item	Description	Unit	Quantity
15101	Mobilization (Lump Sum)	All	1
30111	Aggregate surface course, grading pit run, compaction method B	Cubic Yard	192
30326	Road reconditioning (dozer)	Mile	0.4
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A backfill material	Linear Foot	28
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1

General Notes

- Prior to any earth disturbing activities, contractor shall call the Pennsylvania One Call System (800-242-1776) and all Oil & Gas Operators in the work area to determine locations of any underground utility lines.
- All road work will be completed prior to timber haul, unless otherwise approved.
- Contractor is responsible for maintenance of all Forest Service roads over which pit run or commercial stone material is hauled. Roads shall be bladed or shaped to restore travel way to the condition found prior to haul.
- Culvert cleaning and repair will be considered incidental to road reconditioning.
- Contractor shall furnish, erect and maintain the minimum barricades and warning signs identified in the Special Project Specifications until final inspection and acceptance, unless otherwise directed by the Engineer. Signs shall conform to the Manual on Uniform Traffic Control Devices (MUTCD). **Contractor shall install "ROAD CONSTRUCTION AHEAD" signs on all roads in this project area and at ATV trail crossings. Contractor's sign plan must be approved by Forest Service prior to work. Signs will be covered on weekends, holidays and any days when contractor is not working.**
- Roads shall be completed in such a manner that water shall not pond on roadbed or in ditch lines.
- All removed corrugated metal pipe culverts shall be hauled off Federal lands and become the property of the contractor, unless otherwise indicated for salvage. Steel pipe casings shall be returned to the Sheffield Work Center unless otherwise directed by the Engineer.
- Forest Service gate plans are available at the Allegheny National Forest Supervisor's Office, Warren, PA. 16365. The following are gate manufacturers:

Gary Asel	ADM Welding
Marienville, PA.	2818 Penna. Ave. West
(814) 927-8380	Warren, PA. 16365
	(814) 723-7227
- Pit run aggregate quantities are estimated as compacted in place on the road.
- **Potential commercial pit run source: Ellithrope Run Pit, Steve Dyne (814) 598-1056.**
- Contouring, topsoil re-spreading, seeding and mulching of disturbed areas as determined by the Forest Service is required.
- DSA limestone shall be shipped at optimum moisture content not exceeding 15%. Limestone loads that fail field test parameters will be rejected.
- When replacing culverts in live streams, contractor shall install silt fence and straw bales at approaches to live stream crossings to eliminate sediment in the stream course. When culverts are located on High Quality and Exceptional Value streams, contractor shall install compost filter socks. Any sediment collected will be removed and ground will be stabilized with seed and mulch. Dewatering pumps will be used to redirect water out of the stream course at the time of stream crossing installation. Silt fence and straw bales will be removed only after vegetation is clearly re-established as determined by the Engineer. Contractor is responsible for obtaining any Department Of Environmental Protection GP-11 or GP-7 stream crossing permits and preparing a Soil Erosion and Sediment Control Plan. This work will be considered incidental to Section 151 Mobilization.

– Roadway sod encountered during road reconditioning operations will be spread and leveled outside the road template avoiding piles. Natural terrain depressions and openings are the preferred waste locations. Seeding and mulching may be required to supplement natural revegetation.

– Vegetation cut down during roadside brushing will be pulled beyond the clearing limits and the toe of any roadway template construction. Mixing of soil and cut vegetation shall be avoided. All material will be scattered and lopped within 3' of the ground.

– Aggregate stockpiled for culvert replacement will be located on the existing road surface to assure maximum utilization of the material and eliminate disturbance of existing vegetated areas.

– **Contractor shall install silt fence and straw bales at live stream crossings to eliminate sediment in the stream course. Any sediment collected will be removed and stabilized with seed and mulch. This will be considered incidental to Pay Item 602.**

Road Log - Work Descriptions

FR 221 Slater Run (Level C)
 (Termini: Beginning T358 (Job Corp), Ending SR1003 (Blue Jay))

Station	Road Log/Work Description (11/2012)
0+00	Intersection T358 (Job Corp Road)
198+25 – 228+90	Recondition roadbed see TYPICAL RECONDITION SECTION, and clean all culverts
198+25	OGM road right
199+20	Remove 18" x 28' CMP, install 18" x 28' CMP, apply 12 CY pit run, spring
203+50	Reconstruct turnaround right, apply 36 CY pit run
204+95	18" x 28' CMP, clean outlet
210+00	Install 18" x 30' CMP on left forward skew, apply 12 CY pit run, CAUTION: Buried OGM pipeline in left ditch
212+85	Remove 18" x 40' CMP, install 24" x 40' CMP, apply 24 CY pit run, (spring), turnout right
214+35	Turnout left
214+60	Remove black cherry tree left
215+75	Turnout left
218+50	Install 18" x 30' CMP on left forward skew, apply 12 CY pit run, drains springs left
220+15	Remove 18' x 28' CMP, install 18" x 30' CMP, apply 12 CY pit run, change flow line outlet on natural ground (spring)
220+65	OGM road right
221+45	STOP AHEAD sign right
221+90 – 228+65	Existing DSA limestone
222+50	18" x 28' CMP
227+35	Remove 18" x 28' CMP, install 18" x 30' CMP, apply 12 CY pit run
227+80	Turnaround left
227+90	NARROW ROUGH ROAD sign left
228+40	WEIGHT LIMIT 10 TONS sign left
228+50	Road number sign and caution snowmobile and motor vehicle sign left
228+65	STOP sign right
228+90	Intersection SR1003 (Blue Jay Road) edge of pavement

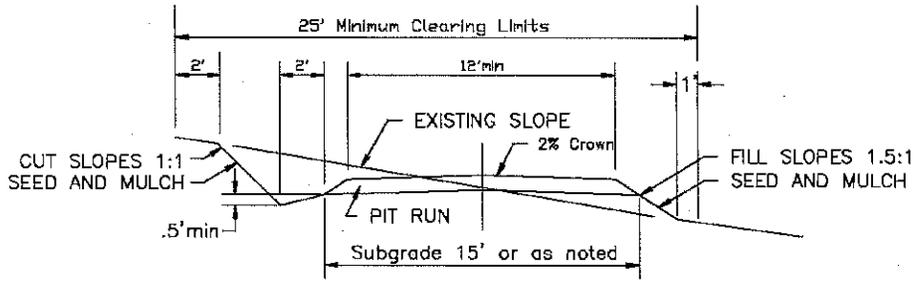
FR 224 Warner Run (Level C)

Station	Road Log/Work Description (12/2012)
0+00	Intersection with State Route 66
0+00 – 50+65	Recondition roadbed see TYPICAL RECONDITION SECTION and clean all culverts
0+00 – 50+65	Apply 180 CY pit run spot stoning as directed by Forest Service inspector (particularly on the ATV trail section)
0+00 – 1+20	Existing DSA limestone (2004)
0+09	18" x 40' CMP
0+25	Road number sign right
0+35	STOP sign left
0+55	Leadoff ditch right
1+60-2+95	Turnout and parking lot left
3+10	Forest Service gate
5+45	18" x 28' CMP no skew
8+75	Leadoff ditch right
9+00 – 19+00	Existing DSA surfacing
9+10 – 10+45	Turnout left
9+65	Well road left
12+60	18" x 28' CMP no skew
21+00-22+20	Turnout and parking lot left
22+80	18" x 28' CMP no skew
27+10	Pit road left
31+35	18" x 28' CMP no skew
40+30-41+70	Turnout right
41+20	18" x 28' CMP no skew
43+05	ORVs PROHIBITED sign left
43+80	Tennessee Gas pipeline right of way (70' wide)
44+15	ATV trail right joins road
45+25-45+65	Old landing and parking area and turnaround left
50+65	FR 224A right, end road reconditioning; road continues ahead

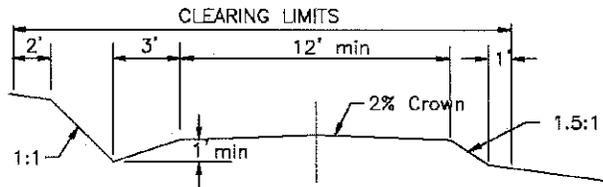
FR 224A Warner Run A (Level D)

Station	Road Log/Work Description (12/2012)
0+00	Intersection with FR 224 station 50+65
0+00 – 23+35	Dozer recondition roadbed see TYPICAL RECONDITION SECTION and clean all culverts
0+20	Road number sign right
1+50	18" x 28' CMP (2004)
4+95	18" x 28' CMP (2004), clean inlet
7+70	Install 18" x 28' CMP on a right forward skew, apply 12 CY pit run
8+50	Landing right
8+30 – 12+20	Apply 6" pit run surfacing (108 CY)
10+00	18" x 28' CMP (2004), clean inlet/outlet
13+10	18" x 28' CMP (2004)
18+30	12" x 28' CMP, clean inlet/outlet
19+20	Reconstruct 30' leadoff ditch right
20+90 – 21+65	Remove logs and earthen berm parallel to road, right (incidental to road reconditioning)
21+65	18" x 28' CMP (2004)
21+25 – 22+65	Apply 6" pit run surfacing (36 CY)
22+65	Reconstruct turnaround left, apply 36 CY pit run
23+35	End road reconditioning, end of road

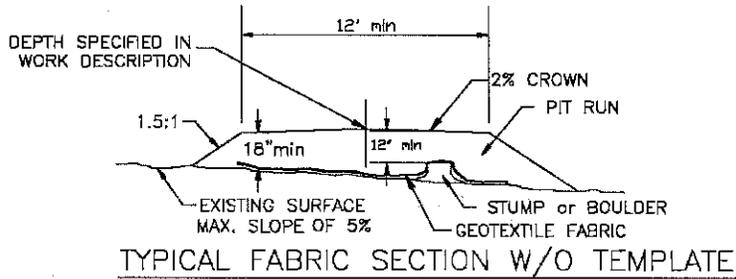
Roadbed Details



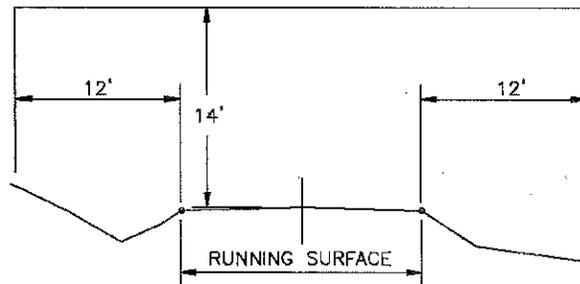
TYPICAL CONSTRUCTION SECTION



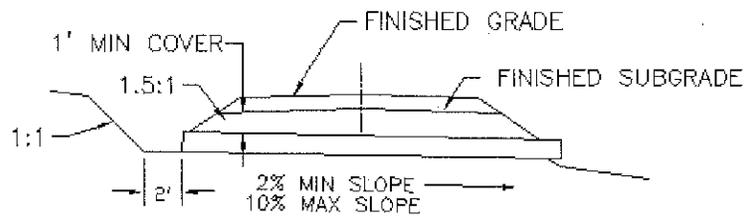
TYPICAL RECONDITION SECTION



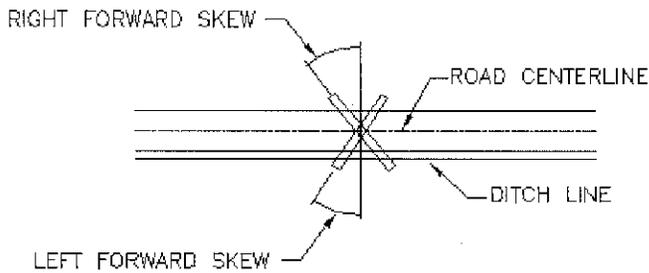
TYPICAL FABRIC SECTION W/O TEMPLATE



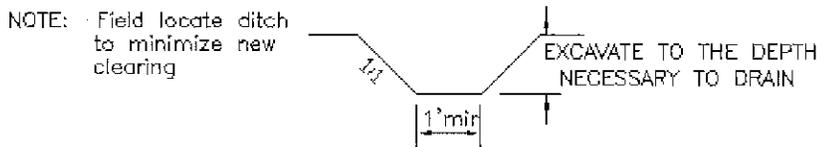
ROADSIDE BRUSHING DETAIL



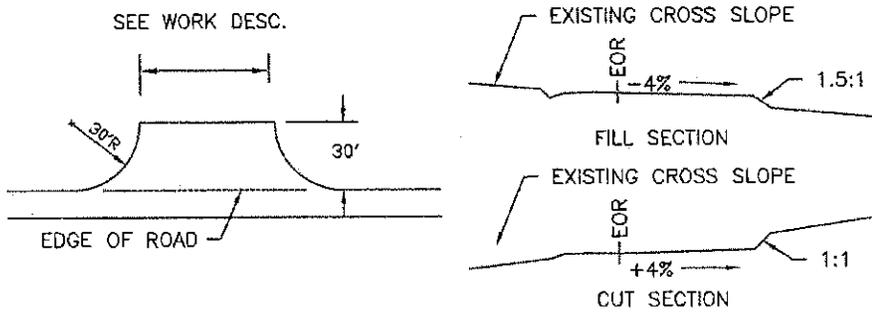
CULVERT SECTION



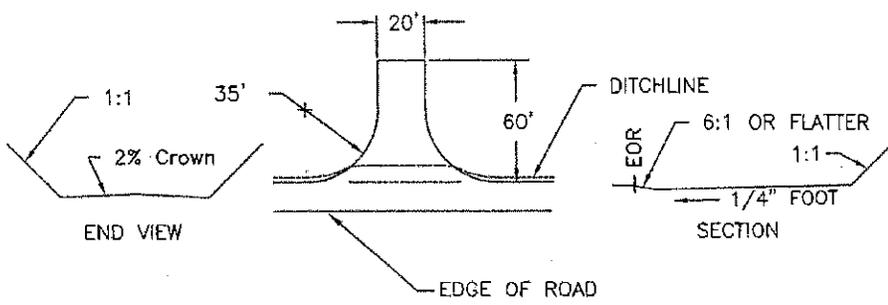
SKEW DETAIL



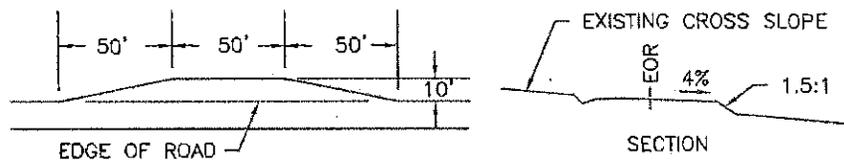
OUTLET/LEAD OFF DITCH SECTION



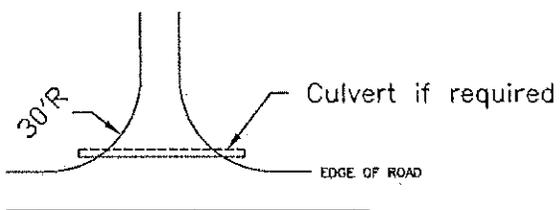
PARKING LOT DETAIL



TURNAROUND DETAIL



TURNOUT DETAIL



INTERSECTION DETAIL

GENERAL NOTES

ALL STEEL SHALL BE PAINTED WITH (2) COATS OF IRON OXIDE RED PRIMER AND (1) COAT OF WALNUT BROWN PAINT, FED. STANDARD 595 A PAINT NO. 20140 (EXCEPT PIVOT TUBE)
 ALL STEEL SHALL BE NEW MATERIAL
 WELD ALL CROSS ARM ASSEMBLY JOINTS WITH 3/16" FILLETS ALL AROUND
 ALL WELDS ON GATE ASSEMBLY SHALL BE STRUCTURALLY SOUND
 DRILL 1/4" DIAMETER HOLES 4" ON CENTER IN BOTTOM OF CROSS ARM TO FACILITATE DRAINAGE
 APPLY GREASE TO OUTSIDE OF PIVOT TUBE, ENTIRE LENGTH, PRIOR TO INSTALLATION OF CROSS ARM ASSEMBLY. TYPE OF GREASE SHALL BE EXTREME PRESSURE MULTIPURPOSE WHEEL BEARING GREASE OR EQUAL
 POSTS SHALL BE ENCASED WITH CONCRETE TO WITHIN 1 FT. OF GROUND LEVEL AND BACKFILL COMPACTED (3 POSTS)
 PRIOR TO GATE INSTALLATION, NOTIFY FOREST SERVICE FOR LOCATION ON ROAD
 PARTS MAY BE FLAME CUT AND ALL BURRS REMOVED
 INSTALL SIGNS AFTER INSTALLATION OF GATE
 TECHNICAL CONTACT IS JIM BUCKETT, FOREST SERVICE, WARREN, PA. (814) 728-6257

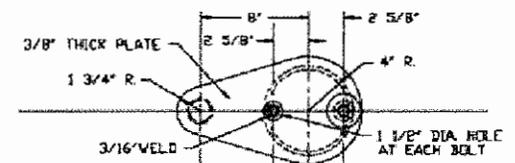
SIGN CODE

- ① (2) L-R AND (2) R-R TYPE 1 BARRICADE MARKERS - RED ON WHITE - 12" x 36"
 - ② (1) ROAD CLOSED TO PUBLIC MOTOR VEHICLE USE
 - ③ (3) TYPE 2 OBJECT MARKERS (OM-2-B) - YELLOW (REFLECTORIZED) - 6" x 12"
 - (2) ON GATE POST AND (2) ON CLOSED POSITION LOCK POST
 - (1) ON OPEN POSITION LOCK POST FACED TO ONCOMING TRAFFIC
- NOTE: ALL SIGNS SHALL BE FURNISHED BY THE FOREST SERVICE AND INSTALLED BY THE CONTRACTOR.

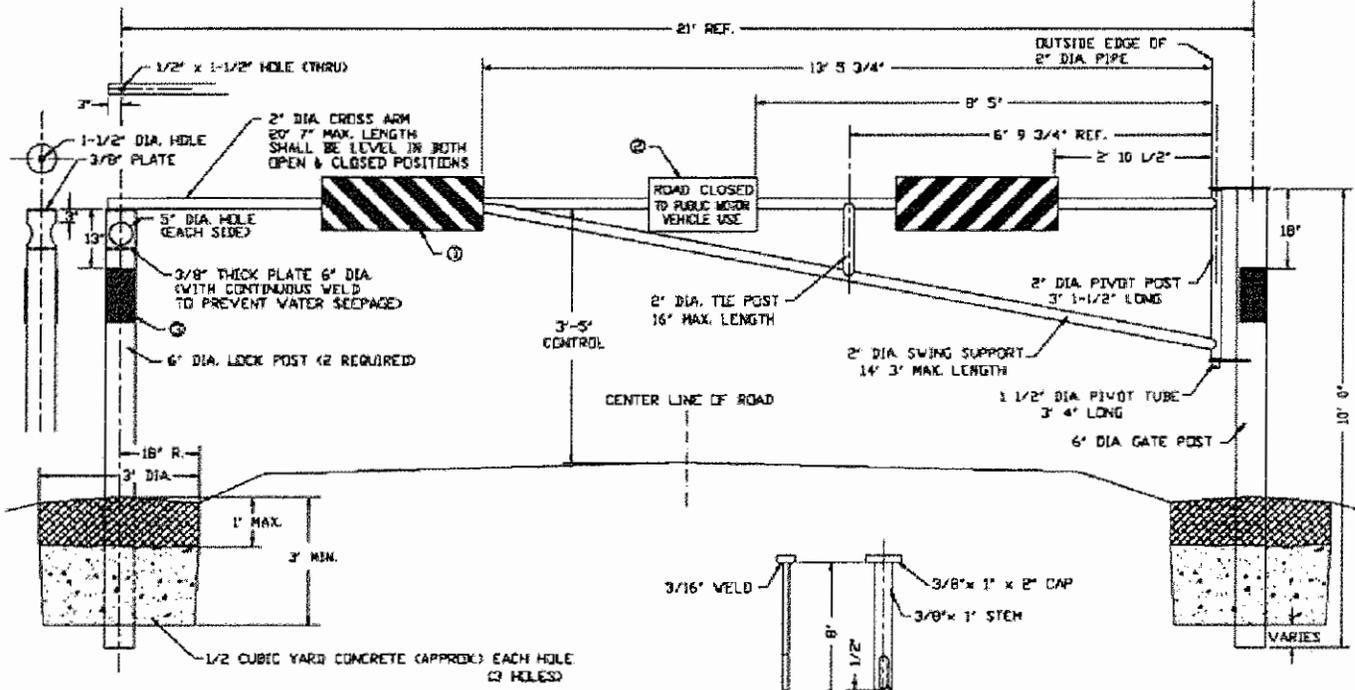
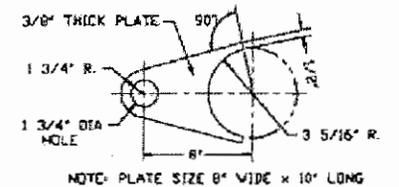
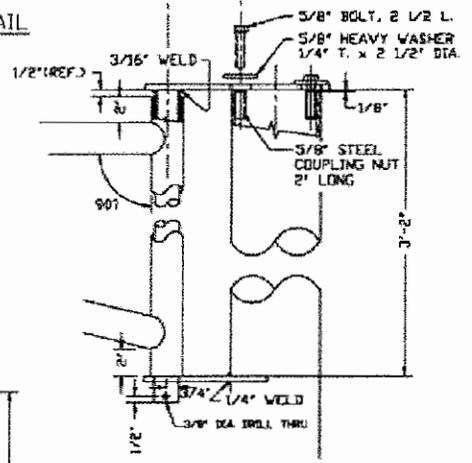
ESTIMATED QUANTITIES

MATERIAL	QUANTITY (LF)	REMARKS
1-1/2" DIA PIPE(NOM)	3' 4"	PIVOT TUBE
2" DIA PIPE(NOM)	39' 4"	CROSS ARM ASSEMBLY
6" DIA PIPE(NOM)	30' 0"	GATE POSTS (3)
3/8" x 1" STRAP	0' 10"	LOCK PIN
3/8" x 8" PLATE	4' 1"	MISC
BOLTS, NUTS, WASHERS		TWO (2) OF EACH

NOTE: PLATE SIZE 8" WIDE x 13 3/4" LONG



DETAIL



LOCK PIN
ONE REQUIRED
SLOT 1/2" WIDE x 2" LONG

LEVEL "D" FOREST SERVICE GATE	
ALLEGHENY NATIONAL FOREST WARREN, PA	
DES. ELMORE, S. JOHNSON, R. BALLO - 3/27/09	
DRN. ELMORE & RUMOLD - 3/27/09	
NOT TO SCALE	

**SCHEDULE OF ITEMS, SPECIFICATIONS & DRAWINGS FOR SPECIFIED
ROADS**

Contents

Road Summary.....	2
Schedule of Items.....	3
Specifications Description.....	5
Preface.....	5
101 - Terms, Format, and Definitions.....	6
102 - Bid, Award, and Execution of Contract.....	9
103 - Scope of Work.....	10
104 - Control of Work.....	11
105 - Control of Material.....	12
106 - Acceptance of Work.....	13
107 - Legal Relations and Responsibility to the Public.....	14
108 - Prosecution and Progress.....	16
109 - Measurement and Payment.....	17
151 - Mobilization.....	18
155 - Schedules for Construction Contracts.....	19
201 - Clearing and Grubbing.....	20
203 - Removal of Structures and Obstructions.....	23
209 - Structure Excavation and Backfill.....	24
301 - Untreated Aggregate Courses.....	26
303 - Road Reconditioning.....	30
602 - Culverts and Drains.....	33
625 - Turf Establishment.....	34
633 - Permanent Traffic Control.....	37
650 - Road Closure Devices.....	38

Road Summary

SPECIFIED ROADS

a. Description of Work:

Reconstruction: FR 221, FR 224, FR 224A

Mobilization, Culvert Installation, Seeding & Mulching, Removal of Culverts, Pit Run Surfacing and Road Reconditioning.

b. Construction Costs:

<u>Road No.</u>	<u>Miles</u>	<u>Estimated Road Cost</u>	<u>Engineer's Estimate</u>	<u>Reconstruction Deposits</u>
221	0.6 ®	\$11,776.00	\$12,818.00	\$3,000.00
224	1.0 ®	\$4,720.00	\$5,210.00	\$1,200.00
224A	0.4 ®	\$5,944.00	\$6,522.00	\$1,500.00
<u>Total</u>		<u>\$22,440.00</u>	<u>\$24,550.00</u>	<u>\$5,700.00</u>

Completion dates: 9/30/2014

Schedule of Items

FR 221

Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	1600.00	\$ 1,600.00	1900.00	\$ 1,900.00
20301	Removal of culverts	Each	4	120.00	\$ 480.00	140.00	\$ 560.00
30111	Aggregate surface course , grading pit run*, compaction method B	Cubic Yard	120	17.00	\$ 2,040.00	17.50	\$ 2,100.00
30326	Road reconditioning	Mile	0.6	1200.00	\$ 720.00	1400.00	\$ 840.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A backfill material	Linear Foot	148	32.00	\$ 4,736.00	33.50	\$ 4,958.00
60264	24 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A backfill material	Linear Foot	40	40.00	\$ 1,600.00	42.00	\$ 1,680.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	600.00	\$ 600.00	780.00	\$ 780.00
TOTAL					\$ 11,776.00		\$ 12,818.00

FR 224

Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	1000.00	\$ 1,000.00	1200.00	\$ 1,200.00
30111	Aggregate surface course , grading pit run*, compaction method B	Cubic Yard	180	14.00	\$ 2,520.00	14.50	\$ 2,610.00
30318	Road reconditioning	Mile	1.0	1200.00	\$ 1,200.00	1400.00	\$ 1,400.00
TOTAL					\$ 4,720.00		\$ 5,210.00

FR 224A

Pay Item	Description	Pay Unit	Estimated Quantity	Unit Price	Extended Total	Engineer's Estimate Unit Price	Engineer's Extended Total
15101	Mobilization (Lump Sum)	All	1	1600.00	\$ 1,600.00	1900.00	\$ 1,900.00
30111	Aggregate surface course , grading pit run*, compaction method B	Cubic Yard	192	14.00	\$ 2,688.00	14.50	\$ 2,784.00
30326	Road reconditioning (dozer)	Mile	0.4	1400.00	\$ 560.00	1600.00	\$ 640.00
60263	18 inch aluminized steel, type 2, corrugated steel pipe, 0.064 inch thickness, method A backfill material	Linear Foot	28	32.00	\$ 896.00	33.50	\$ 938.00
62501	Seeding, hydraulic or dry method (Lump Sum)	All	1	200.00	\$ 200.00	260.00	\$ 260.00
TOTAL					\$ 5,944.00		\$ 6,522.00

*Pit Run rates are based on a commercial pit source (Ellithorphe Run Pit approx. 6 miles south of Kane, with a hauling distance of 8 miles to FR 224 and 14 miles to FR 221).

Specifications Description

The following specifications will be used for this contract:

Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects – FP-03 U.S. Customary Units. FP-03 is available on the internet at the following site: <http://flh.fhwa.dot.gov/resources/pse/specs/>

Supplemental Specifications – The specifications identified in this contract were prepared by the Forest Service and are a supplement to or change the FHWA specifications.

Special Project Specifications – Are specifications prepared on the Allegheny National Forest and pertain to Pennsylvania Department of Transportation nomenclature. These are designated SPS.

Preface

Preface_wo_03_15_2004_m

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.00_nat_us_07_25_2005

101.01_nat_us_01_22_2009

101.01 Meaning of Terms

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.03_nat_us_06_16_2006

101.3 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	National Institute of Standards and Technology
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

Add the following to (b) SI symbols:

mp	Milepost
ppm	Part Per Million

101.04_nat_us_03_29_2007

101.4 Definitions.

Delete the following definitions and substitute the following:

Bid Schedule--The Schedule of Items.

Bridge--No definition.

Contractor--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the "purchaser".

Culvert--No definition.

Right-of-Way--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

Adjustment in Contract Price--“Equitable adjustment,” as used in the Federal Acquisition Regulations, or “construction cost adjustment,” as used in the Timber Sale Contract, as applicable.

Change--“Change” means “change order” as used in the Federal Acquisition Regulations, or “design change” as used in the Timber Sale Contract.

Design Quantity--“Design quantity” is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges*. Under these FP specifications this term is replaced by the term “Contract Quantities”.

Forest Service--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line--A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road--Temporary construction access built along the route of the project.

Purchaser--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

Schedule of Items--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

Utilization Standards--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

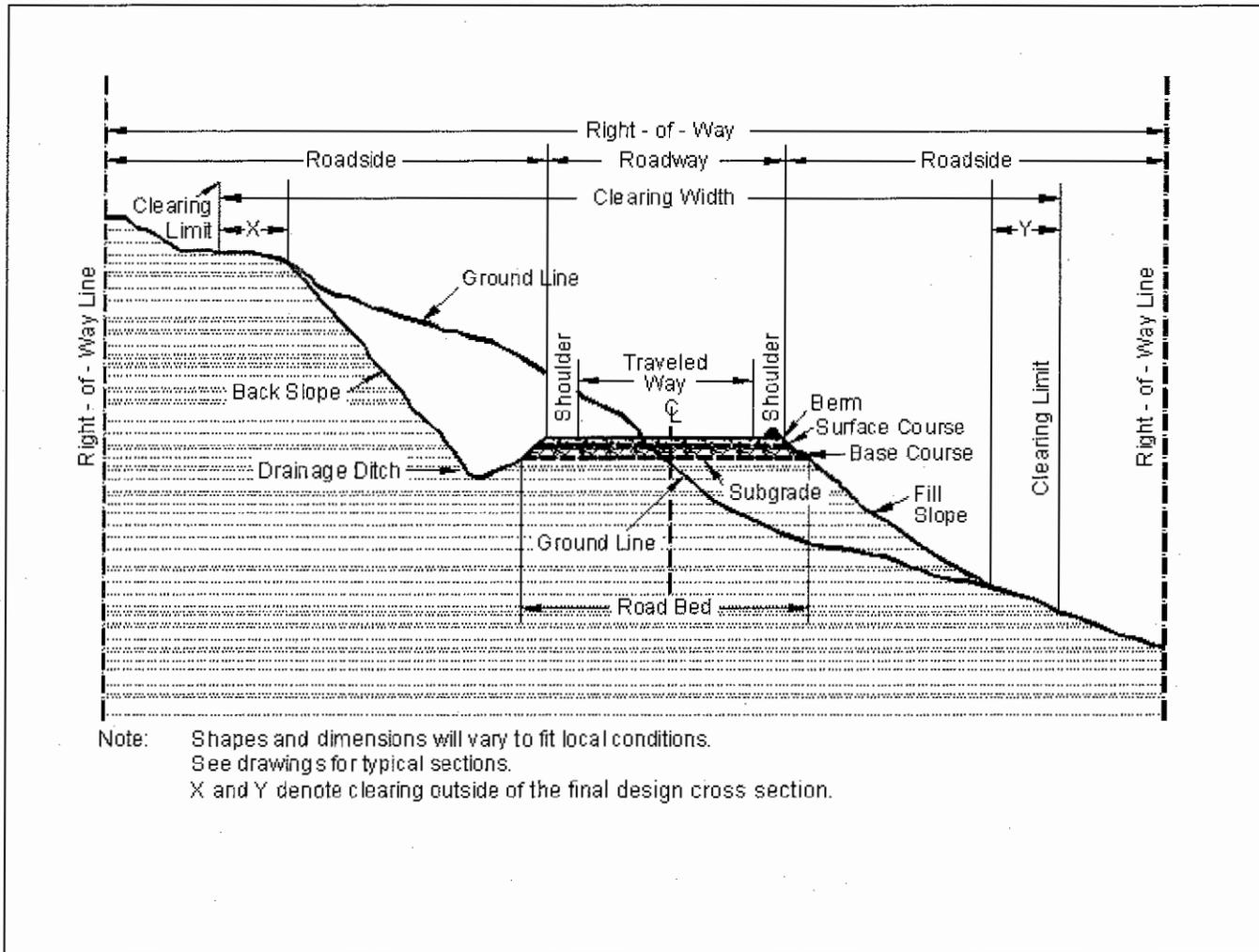


Figure 101-1—Illustration of road structure terms.

102 - Bid, Award, and Execution of Contract

102.00_nat_us_02_16_2005

102 Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

103.00_nat_us_02_16_2005

Deletions

Delete all but subsection 103.01 Intent of Contract.

104 - Control of Work

104.00_nat_us_06_16_2006

Deletions

Delete Sections 104.01, 104.02, and 104.04.

104.06_nat_us_02_17_2005

Add the following subsection:

104.06 Use of Roads by Contractor

The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

105 - Control of Material

105.02_nat_us_01_18_2007

105.02 Material Sources.

105.02(a) Government-provided sources.

Add the following:

Comply with the requirements of 30 CFR 56, subparts B and H. Use all suitable material for aggregate regardless of size unless otherwise designated. When required, re-establish vegetation in disturbed areas according to section 625.

105.05_nat_us_05_12_2004

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

106 - Acceptance of Work

106.07_nat_us_05_11_2004

106.07 Delete
Delete subsection 106.07.

107 - Legal Relations and Responsibility to the Public

107.05_nat_us_05_11_2004

107.5 Responsibility for Damage Claims.

Delete the entire subsection.

107.06_nat_us_06_16_2006

107.6 Contractor's Responsibility for Work.

Delete the following from the first paragraph.

“except as provided in Subsection 106.07”.

107.09_nat_us_06_16_2006

107.9 Legal Relationship of the Parties.

Delete the entire subsection.

107.10_nat_us_06_16_2006

107.10 Environmental Protection.

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

108 - Prosecution and Progress

108.00_nat_us_02_16_2005

108 Delete.

Delete Section 108 in its entirety.

109 - Measurement and Payment

109.00_nat_us_02_17_2005

109 Deletions

Delete the following entire subsections:

109.6 Pricing of Adjustments.

109.7 Eliminated Work.

109.8 Progress Payments.

109.9 Final Payment.

109.02_nat_us_06_16_2006

109.02 Measurement Terms and Definitions.

(b) Contract quantity.

Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

“(b) Cubic yard” to “(c) Cubic yard”.

Add the following definition:

(p) Thousand Board Feet (Mbf). 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job. For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

151 - Mobilization

151.03_nat_us_08_05_2005

151.03 Payment

Delete the entire subsection and add the following:

151.03 Payment

Mobilization is considered an indirect cost of this contract and will not be compensated as a separate work item.

155 - Schedules for Construction Contracts

155.00_nat_us_05_11_2004

155 Delete.

Delete Section 155 in its entirety.

201 - Clearing and Grubbing

201.00_nat_us_08_05_2009

201.2 Material:

Delete Tree wound dressing material reference.

201.3 General.

Delete the last sentence.

201.4 Clearing.

Delete the last sentence of (d).

201.01 Description

Replace with the following

This work consists of clearing and grubbing within clearing limits and other designated areas.

201.04_nat_us_03_03_2005

Construction Requirements

201.04 Clearing.

Add the following:

Utilization standards for merchantable timber are listed below. Fall and buck merchantable material into lengths not to exceed 40 feet. Pieces (logs) meet utilization standards when such pieces would have met Utilization Standards if bucking lengths were varied to include such material.

Minimum Utilization Standards

Length	Diameter (Inside Bark) at Small End	33-1/3% Net Scale in % of Gross Scale
8 feet	9.6 inches	

201.04 Clearing. (c)

Delete paragraph (c) and replace with the following:

(c) In areas outside the excavation, embankment, and slope rounding limits, cut stumps to within 12 inches or one-third of the stump diameter of the ground, whichever is higher, measured on the side adjacent to the highest ground. For timber sales, stump heights will meet the requirements of the Timber Sale contract.

201.04 Clearing.

Delete subsection (d) and replace with the following:

(d) Do not cut vegetation less than 3 feet tall and less than 3 inches in diameter, that is within the clearing limits but beyond the roadway and not in a decking area, and that does not interfere with sight distance along the road.

Add the following:

(e) Trim branches of remaining trees or shrubs to give a clear height of 14 feet above the roadbed unless otherwise indicated. Trim tree limbs as near flush with the trunk as practicable.

(f) Remove brush from log decks. Deck logs so that logs are piled parallel to one another; can be removed by standard log loading equipment; will not damage standing trees; will not interfere with drainage, and will not roll. Keep logs in log decks free of brush and soil.

201.04 Clearing.

Add the following:

When marked in advance, remove dead trees over 6 inches in diameter measured at 12 inches above the ground that lean toward the road and are tall enough to reach the roadbed.

201.06 Disposal.

Delete the first sentence of this subsection and substitute the following:

Merchantable timber removed from Forest Service land is subject to the Forest Resources Conservation and Shortage Relief Act of 1990 (PL 101-382; 104 Stat. 714-726; 16 USC 620 et. seq.). Do not export timber from the United States or use in direct or indirect substitution for unprocessed timber exported from the United States, from private lands by Purchaser, or any person as defined in Section 493 (16 USC 620e) of the Act.

Unless Forest Service determines that circumstances warrant a written waiver or adjustment, (1) hammer brand all products on both ends with an assigned contract brand before removal from the project site, (2) hammer brand each product exempt from domestic processing on both ends with an exempt brand registered for use on exempt logs from National Forest, and (3) paint all domestic processing products on both ends with 2 inch circle of yellow paint according to Interim Specification 2400-400 (available upon request). Paint or brand products before removing them from project site unless approved by the CO. Brands and yellow paint must remain on logs until they are processed.

Contractor may remanufacture logs into different log lengths as approved. Repaint or rebrand all remanufactured pieces. Pay all surveillance costs except that Forest Service may waive such payment if such costs are minor and part of normal remanufacturing operations.

203 - Removal of Structures and Obstructions

203.01_nat_us_02_25_2005

203.01 Description.

Delete and replace with the following:

This work consists of disposing of construction slash and debris, salvaging, removing, and disposing of buildings, fences, structures, pavements, culverts, utilities, curbs, sidewalks, and other obstructions.

203.05_nat_us_02_24_2005

203.05 Disposing of Material.

Add the following:

(e): Scattering. Scatter pieces of wood less than 3 inches in diameter and 3 feet in length within the clearing limits. Do not place construction slash in lakes, meadows, streams, or streambeds. Immediately remove construction slash that interferes with drainage structures.

203.08_nat_us_02_24_2005

203.08 Payment

Add the following:

Disposal of construction slash will be compensated under the designated pay item in Section 201.

209 - Structure Excavation and Backfill

209.10_nat_us_10_23_2007

209.10 Backfill.

(a) General.

Add the following:

Replace any pipe that is distorted by more than 5 percent of nominal dimensions, or that is ruptured or broken.

Do not place or backfill pipe that meets any of the following conditions until the excavation and foundation have been approved in writing by the CO:

- Embankment height greater than 6 feet at subgrade centerline.
- Installation in a protected streamcourse.
- Round pipe with a diameter of 48 inches or greater.
- Pipe arches with a span of 50 inches or greater.
- Any box culvert of structure other than pipe culverts.

(b) Pipe culverts.

(1) Pipe culverts with compacted backfill.

Add the following:

Excavate an area on each side of the pipe as needed to effectively achieve compaction requirements. Backfill without damaging or displacing the pipe. Complete backfilling of the trench with suitable material.

209.11_nat_us_02_24_2005

209.11 Compacting.

Delete the subsection and add the following:

Compact backfill using designated compaction method A, B, or C:

Method A. Ensure that backfill density exceeds the density of the surrounding embankment.

Method B. Adjust the moisture content of the backfill material to a moisture content suitable for compaction. Compact each layer using appropriate compaction equipment until visual displacement ceases. For compaction under sections 252, 254, 255, 257, 258 and 262 compact with a vibratory steel wheeled roller with a mass of at least 8 tons.

Method C. Determine optimum moisture content and maximum density according to AASHTO T 99 method C. Adjust the moisture content of the backfill material to a moisture content suitable for compaction. Compact material placed in all layers to at least 95 percent of the maximum density. Determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

Table 209-1 Sampling and Testing Requirements

Add the following:

(2) Compaction methods (A) and (B) do not require AASHTO T-99 or T-310 test methods for foundation fill.

301 - Untreated Aggregate Courses

301.00_nat_us_03_03_2005

301 Title Change.

Change the title to: **Section 301 Aggregate Courses**

301.01_nat_us_03_03_2005

301.01 Work.

Add the following:

Work includes producing aggregate by pit-run, grid rolling, screening, or crushing methods, or placing Government-furnished aggregate. Work may include additive mineral filler, or binder.

301.02_nat_us_05_16_2005

301.02 Material.

Add the following:

Bentonite	725.30
Calcium Chloride Flake	725.02
Lignon Sulfonate	725.20
Magnesium Chloride Brine or Calcium Chloride Liquid	725.02

301.03_nat_us_09_14_2005

301.3 General.

Add the following:

Written approval of the roadbed is required before placing aggregate.

For pit run or grid-rolled material, furnish material smaller than the maximum size. No gradation other than maximum size will be required for pit-run or grid-rolled material. For grid rolling, use all suitable material that can be reduced to maximum size. After processing on the road, remove all oversize material from the road and dispose of it as directed by the CO.

Provide additives or binder, if required, at the proportions specified.

Develop and use Government furnished sources according to Section 105.

If the aggregate is produced and stockpiled before placement, handle and stockpiled according to Section 320. Establish stockpile sites at locations approved. Clear and grub stockpile sites according to Section 201.

301.04_nat_us_03_03_2005

301.4 Mixing and Spreading.

Delete the first sentence of the first paragraph and add the following:

Ensure that aggregate and any required additives, water, mineral filler, and binder are mixed by the specified method except, if crushed aggregate products are being produced and mineral filler, binder, or additives are required, uniformly blend following crushing. Control additive proportions to 0.5 percent dry weight.

(a) Stationary Plant Method. Mix the aggregate with other required materials in an approved mixer. Add water during the mixing operation in the amount necessary to provide the moisture content for compacting to the specified density. After mixing, transport the aggregate to the jobsite while it contains the proper moisture content, and place it on the roadbed or base course using an aggregate spreader.

(b) Travel Plant Method. After placing the aggregate for each layer with an aggregate spreader or windrow-sizing device, uniformly mix it with other required materials using a traveling mixing plant. During mixing, add water to provide the necessary moisture content for compacting.

(c) Road Mix Method. After placing the aggregate for each layer, mix it with other required materials at the required moisture content until the mixture is uniform throughout. Mix aggregate, water, and all other materials until a uniform distribution is obtained.

Spread the aggregate in a uniform layer, with no segregation of size, and to a loose depth that will provide the required compacted thickness.

When placing aggregate over geotextile, place aggregate in a single lift to the full depth specified.

Route and distribute hauling and leveling equipment over the width and length of each layer.

301.05_nat_us_05_17_2005

301.5 Compacting

Delete and replace with the following:

Compact each layer full width. Roll from the sides to the center, parallel to the centerline of the road. Along curbs, headers, walls, and all places not accessible to the roller, compact the material with approved tampers or compactors.

Compact the aggregate using one of the following methods as specified:

Compaction A. Operating spreading and hauling equipment over the full width of the travelway.

Compaction B. Operate rollers and compact as specified in Subsection 204.11(a)(1).

Compaction C. Moisten or dry the aggregate to a uniform moisture content between 5 and 7 percent based on total dry weight of the mixture. Operate rollers and compact as specified in Subsection 204.11(a)(1).

Compaction D. Compact to a density of at least 95 percent of the maximum density, as determined by AASHTO T 99, method C or D.

Compaction E. Compact to a density of at least 96 percent of the maximum density, as determined by the Modified Marshall Hammer Compaction Method (available upon request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

Compaction F. Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

Compaction G. Compact to a density of at least 100 percent of the maximum density as determined by the Modified Marshall Hammer Compaction Method (available upon request from USDA Forest Service, Regional Materials Engineering Center, P.O. Box 7669, Missoula, MT 59807).

For all compaction methods, blade the surface of each layer during the compaction operations to remove irregularities and produce a smooth, even surface. When a density requirement is specified, determine the in place density and moisture content according to AASHTO T 310 or other approved test procedures.

301.06_nat_us_03_03_2005

301.6 Surface Tolerance.

Add the following:

Thickness and Width requirements:

The maximum variation from the compacted specified thickness is ½ inch. The compacted thickness is not consistently above or below the specified thickness and the average thickness of 4 random measurements for any ½ mile of road segment is within + ¼ inch of the specified thickness.

The maximum variation from the specified width will not exceed +12 inches at any point. The compacted width is not consistently above the specified width and the average of any four random measurements along any ½ mile of road segment is within +4 inches of the specified width.

301.09_nat_us_07_07_2005

301.9 Measurement.

Replace the second paragraph with the following:

Measure aggregate by cubic yard compacted in place when payment is by contract quantities.

301.10_nat_us_03_03_2005

301.10 Payment

Delete the following:

adjusted according to Subsection 106.05

303 - Road Reconditioning

303.00_01_us_10_11_2006

Delete Section 303 in its entirety and replace with the following.

Description

303.1 This work consists of reconditioning ditches, shoulders, roadbeds, parking areas, turnouts, approach road intersections, cattleguards, asphalt surfaces and aggregate surfaces. Construct outslopes, clean and maintain all roadbed drainage structures when shown on the plans.

Material

303.2 Conform to the following Subsection:

Water 725.01

Construction Requirements

303.3 Ditch Reconditioning. Remove all slide material, sediment, vegetation, and other debris from the existing ditches and culvert inlets and outlets. Reshape ditches and culvert inlets and outlets to achieve positive drainage and a uniform ditch width, depth, and grade. Dispose of waste as shown on the plans.

303.4 Shoulder Reconditioning. Repair soft and unstable areas according to Subsection 204.07. Remove all slide material, vegetation, and other debris from existing shoulders including shoulders of parking areas, turnouts, and other widened areas. Dispose of waste as shown on the plans.

303.5 Roadbed Reconditioning Repair soft and unstable areas according to Subsection 204.7. Remove all organic, deleterious material larger than 6 inches from the top 6 inches of subgrade. Dispose of waste as shown on the plans. Scarify, rip and shape the traveled way and shoulders at locations and to the depth and width designated on the plans. Remove surface irregularities and shape to provide a uniform surface.

Dispose of rock larger than 4 inches brought to the surface during scarification in areas designated on the plans.

For portions of roads not requiring scarification, the roadbed may contain rocks larger than 4 inches provided they do not extend above the finished roadbed surface. Reduce in

place or remove rock extending above the finished roadbed surface. Dispose of removed rock in areas designated on the plans.

Compact using the following method as specified:

- (a) **Compaction A.** Operate equipment over the full width.
- (b) **Compaction B.** Operate rollers over the full width of each layer until visual displacement ceases, but not fewer than three complete passes. Use rollers that meet the following requirements:
 - (1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch of width of the compression roll or rolls.
 - (2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum weight of 6 tons, specifically designed to compact the material on which it is used.
 - (3) Pneumatic-tired rollers with smooth tread tires of equal size that will provide a uniform compacting pressure for the full width of the roller and capable of exerting a ground pressure of at least 80 psi.

303.6 Aggregate Surface Reconditioning. Repair soft and unstable areas to the full depth of the aggregate surface and according to Subsection 204.07. Scarify to the depth of the aggregate surface or to a depth of 8 inches, whichever is less, and remove surface irregularities. Reshape, finish, and compact the entire aggregate surface according to Section 308.

303.7 Roadway Reconditioning. Perform all the applicable work described in Subsections 303.03 through 303.06.

Maintain the existing cross slope or crown unless otherwise shown on the plans. Establish a blading pattern that will retain the surfacing on the roadbed and provide a through mixing of the materials within the completed surface width.

Blade and shape the subgrade for both surfaced and unsurfaced roads when moisture content is suitable for compaction.

303.8 Pulverizing. Scarify the surface to the designated depth and width. Pulverize all material to a size one and one half times the maximum sized aggregate or to 1½ inches, whichever is greater. Mix, spread, compact, and finish the material according to Section 301.

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

Measurement

303.10 Measure the Section 303 items listed in the Schedule of Items according to Subsection 109.02 and the following as applicable.

Measure ditch reconditioning and shoulder reconditioning by the mile, by the station or foot horizontally along the centerline of the roadway for each side of the roadway.

Measure roadbed reconditioning, aggregate surface reconditioning, roadway reconditioning, and pulverizing by the mile, by the station, or by the square yard.

Payment

303.11 The accepted quantities will be paid at the contract price per unit of measurement for the Section 303 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

602 - Culverts and Drains

602.03_nat_us_09_06_2005

602.03 General.

Add the following:

Ensure that the final installed alignment of all pipe allows no reverse grades, and does not permit horizontal and vertical alignments to vary from a straight line drawn from center of inlet to center of outlet by more than 2 percent of pipe center length or 1.0 feet, whichever is less.

625 - Turf Establishment

625.03_nat_us_07_02_2007

625.3 General.

Delete this subsection and replace with the following:

Apply turf establishment to prepared ground or any disturbed area between April 15th and October 15th. Apply turf establishment to the areas shown on the plans or worklists within 7 days after completion of ground disturbing activities. Unless otherwise specified in writing by the CO apply turf establishment after each 1000 foot section of road has been constructed to template lines. Seeded areas damaged by construction activities shall be reseeded within 10 days of the damage. Do not seed during windy weather or when the ground is excessively wet, frozen, or snow covered.

Assure that all seed and mulch used in the work conforms to the weed free requirements of Section 713.

625.4 Preparing Seedbed.

Delete entire subsection and replace with the following:

Ensure that the surface soil is in a roughened condition favorable for germination and growth.

625.5 Watering

Delete entire subsection.

625.6 Fertilizing.

Delete entire subsection and replace with the following:

Apply fertilizer having a chemical analysis as listed below by the following methods.

(a) Dry Method. Apply the fertilizer with approved mechanical equipment. Hand operated methods are satisfactory on areas inaccessible to mechanical equipment.

(b) Hydraulic method. Use hydraulic-type equipment capable of providing a uniform application using water as the carrying agent. Add fertilizer to the slurry and mix before adding seed. Add the tracer material when designated by the CO.

Fertilizer. Apply fertilizer at the rate of 450 pounds per acre. Insure that the fertilizer meets the following chemical analysis:

<u>Nutrient</u>	<u>Percent</u>
Nitrogen, N	<u>10</u>
Phosphorus, P ₂ O ₅	<u>20</u>
Potassium, K	<u>20</u>

625.7 Seeding.

Delete the first sentence and add the following.

Apply seed mix by the following methods:

(a) **Dry method.** Delete the third sentence.

Add the following after subsection

(b).**Seed Mix.** Furnish and apply the following kinds and amounts of pure live seed from Ernst Conservation Seeds, 9006 Mercer Pike, Meadville, PA (800) 873-3221 or Fax (814) 336-5191 or www.ernstseed.com Native Right-of Way Woods Seed Mix with Annual Ryegrass-ERNMX-132-1:

<u>Type of Seed</u>	<u>Quantity of Pure Live Seed (Lbs/Acre)</u>
1. 30% Virginia Wild Rye	9
2. 20% Annual Rye Grass	6
3. 15% Shelter Switchgrass	4.5
4. 10% Creeping Red Fescue	3
5. 5% Autumn Bentgrass	3
6. 5% Fox Sedge	3
7. 5% Showy Tick Trefoil	3
8. 5% Nimble Will	3
9. 5% Tioga Deer Tongue	3

Total Seeding Rate 30lb per acre

Determine the pounds of seed to be furnished per acre by dividing the pounds of pure live seed required per acre by the product of the percent purity and percent germination.

625.8 Mulching.

Delete the entire subsection and replace with the following:

Apply Mulch within 24 hours after seeding by the following methods.

(a) **Dry Method.** Apply mulch with a hand spreader or a spreader utilizing forced air at a rate of 4000 pounds per acre. Anchor the mulch with an approved stabilizing emulsion tackifier at a rate of 0 gallons per acre. Do not mark or deface structure, pavements, utilities, or plant growth with tackifier.

(b) **Hydraulic Method.** Apply mulch in a separate application from the seed using hydraulic-type equipment according to Subsection 625.07(b).

Apply wood fiber or grass straw cellulose fiber mulch at a rate of 775 pounds per acre.

Apply bonded fiber matrix hydraulic mulch at a minimum rate of 775 pounds per acre. Apply so no hole in the matrix is greater than 0.04 inches. Apply so that no gaps exist between the matrix and the soil.

Inaccessible areas may be mulched by hand. Apply mulch uniformly over the entire disturbed area.

625.9 Protecting and Caring for Seeded Areas

Delete the first sentence and add the following:

Protect and care for seeded areas until final acceptance.

625.11 Measurement.

Delete the entire Subsection and replace with the following:

Measure the Section 625 items listed in the bid schedule according to Subsection 109.02.

633 - Permanent Traffic Control

633.02_nat_us_03_03_2005

633.2 Material.

Add the following subsections

Protective Overlay Film	718.02
Edge Film	718.02

633.03_nat_us_03_03_2005

633.3 General.

Delete the subsection and add the following:

Furnish traffic control devices and guide signs according to the MUTCD, approved USDA-FS and state supplements, the current edition of USDA-FS EM-7100-15 Sign and Poster Guidelines for the Forest Service, and Standard Highway Signs published by FHWA. Submit the sign list for approval before ordering.

633.05_nat_us_03_03_2005

633.05 Panels.

Add the following:

Apply protective overlay film and top edge film as required and according to with manufacturer's recommendations.

Delete the sentence: "Use antitheft fasteners where possible" in the fifth paragraph and replace it with the following: "For each sign panel use at least one antitheft fastener."

650 - Road Closure Devices

650.00_nat_us_06_28_2007

Description

650.1 Work. Furnish and install, or install only, road closure devices using fabricated gates and accessories, combination post and rail barriers, concrete barriers, earth mound barriers, and other devices.

Materials

650.2 Requirements. Furnish materials to be used in fabricating gates and barriers. Ensure that all hardware is galvanized in accordance with AASHTO M 232 and meets the requirements of ASTM A 307. Furnish plain or cut washers that are American Standard Washers.

Furnish timber posts, rails, and lumber that meet the requirements of AASHTO M 168. Provide timber of the species and type, and rate of preservative treatment. Furnish concrete that meets the requirements of Subsection 601.03, method B or C. Construct earth mound barriers from excavated material adjacent to the barrier location, or from other designated locations.

Construction

650.3 Performance. Place road closure devices at designated locations. Construct all devices to the required dimensions. In assembling gates, perform required welding in accordance with the best modern practice and the applicable requirements of AWS D1.1.

After assembly, clean non-galvanized steel pipe gates and paint them with one coat of zinc-rich primer and two coats of exterior enamel of the required type and color.

Set all posts vertically and embed them to the required depth. Place concrete for embedment against undisturbed earth within an excavation sized to achieve the embedment dimensions. Compact the backfill in 6 inch layers to finished grade.

Furnish and install all signs and/or reflective warning markers accessory to the road closure device.

650.4 Acceptance. Construction of road closure devices will be evaluated under Subsections 106.02 and 106.04.

Measurement

650.5 Measure the items listed in the bid schedule according to Subsection 109.02.

Payment

650.6 The accepted quantities, measured as provided in Subsection 109.02 and above, will be paid at the contract price per unit of measurement for the Section 650 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.