

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

TIMBER SALE CONTRACT

(Applicable to Sales to be Measured before Felling)

Name of Purchaser

National Forest
Mt. Hood

Ranger District
Clackamas River

Region
Pacific N-West

Contract Number

Sale Name
Rail

Award Date

Termination Date
12/31/2025

The parties to this contract are The United States of America, acting through the Forest Service, United States Department of Agriculture, hereinafter called Forest Service, and _____ hereinafter called Purchaser.

Forest Service having advertised a sale at which either (1) Purchaser, whose required bid deposit is now held by Forest Service as an initial deposit, was the successful bidder, or (2) no bids were received and Purchaser having subsequently offered at least the minimum advertised price and made an initial deposit in the same amount as the bid deposit specified in the sale advertisement; and the parties hereto desiring to record their agreement; now therefore,

Unless provided otherwise herein, Forest Service agrees to sell and permit Purchaser to cut and remove Included Timber and Purchaser agrees to purchase, cut, and remove Included Timber.

This contract consists of three Divisions: AT - Specific Conditions, BT - Standard Provisions, and CT - Special Provisions, together with Sale Area Map, Plans and specifications for developments (if any), and such attachments as may be provided for in Division CT. Specific Conditions are numbered and apply to the Part, Section, Subsection, or Item of the Standard Provisions, as indicated hereunder. Other conditions of this contract are stated in Division CT - Special Provisions.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the award date.

UNITED STATES OF AMERICA

Two Witnesses:^{1/}

(Name)

(Address)

(Name)

(Address)

By: _____
Contracting Officer

(Title)

By: _____
(Purchaser) ^{2/}

(Title)

(Business Address)

I, ^{3/} _____, certify that I am the _____
Secretary of the corporation named as Purchaser herein; that _____
who signed this contract on behalf of Purchaser, was then _____
of the corporation; that the contract was duly signed for and in behalf of the corporation by authority of its governing body, and is
within the scope of its corporate powers.

**CORPORATE
SEAL** ^{4/}

INSTRUCTIONS:

- 1/ The signatures and addresses of two witnesses are required if Purchaser is other than a corporation.
- 2/ If Purchaser is a co-partnership, the signatures should be: XYZ Company, by John Doe, a member of the firm. If Purchaser is a corporation, form of signature should be: XYZ Company, by John Doe, President (or other officer or agent) and the seal of the corporation must be impressed or indicated.
- 3/ The certificate must be completed if Purchaser is a corporation.
- 4/ If the corporation has no corporate seal that fact shall be stated, in which case a scroll or adhesive seal shall follow the corporate name.

EXAMPLE 1/

Subcontractor Certification
Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion

Timber Sale Name: _____
National Forest: _____

The prospective subcontractor (participants in lower tier covered transactions) certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this timber sale by any Federal department or agency.

Where the prospective subcontractor is unable to certify to any of the statements in this certification, such prospective subcontractor shall attach an explanation to this proposal.

Name of Subcontractor: _____
Business Address: _____

_____ Date _____ Signature

1/ It is the Purchaser's responsibility to have subcontractors complete this certification and to maintain a file of completed certifications. This certification does not need to be returned to the Forest Service, except at the written request of the Contracting Officer.

The following conditions apply to the indicated portions of Division BT - Standard Provisions issued June 2006.

AT1 - Location and Area, applicable to BT1.1

This Sale Area of 1757 acres more or less is located in:

Sections 16, 17, 20, 21, 22, 23, 27, 28, T.4S., R.5S., W.M., Surveyed, Clackamas County, Oregon

AT2 - Volume Estimate and Utilization Standards, applicable to BT2.1, BT2.2, BT2.4, and BT6.4

Species	Product	Estimated Quantity *	Unit of Measure	Minimum Specifications				
				Merchantable Tree		Piece Required to be Removed		
				Diameter Breast High (d.b.h.) (inches)	Number of Minimum Pieces per Tree	Length (feet)	Diameter Inside Bark at Small End (inches)	Net Scale in % of Gross Scale
Douglas-fir	Sawtimber	13,770.00	CCF	N/A	1	8	6.0	40
Western Hemlock and Other Coniferous Species	Sawtimber	191.00	CCF	N/A	1	8	6.0	40
All Coniferous Species	Grn Bio Cv	444.00	CCF	N/A	1	8	4.0	N/A
Timber Subject to Agreement under CT2.11#								
All Species	Grn Bio Cv	unestimated	CCF	N/A	1	2	1.0	N/A
Total Quantity		14,405.00	CCF					

* Quantities not included here are described in BT2.4.

AT3- Timber Designations, applicable to BT2.3; acres are approximate:

	Number	Acres
Clearcutting Units (BT2.31)	_____	_____
Specified Road Clearing (BT2.32)	_____	_____
Overstory Removal Units (BT2.33)	_____	_____
Understory Removal Units (BT2.34)	_____	_____
Individual Trees (BT2.35)	<div style="background-color: #cccccc; width: 100px; height: 15px;"></div>	345
Incompletely Measured Payment Units (BT2.36)	_____	_____

AT4 - Timber Payment Rates, applicable to BT3.1 and BT4.0

AT4a - For Species and Products to be Paid for at Rates Escalated under BT3.2

Species	Product	Unit of Measure	Rates per Unit of Measure					Required Deposits Slash Disposal \$	Base Index
			Base \$	Advertised \$	Bid Premium \$	Bid (Tentative) \$			
Douglas-fir	Sawtimber	CCF	3.00	40.51			1.18	261.21	
Western Hemlock and Other Coniferous Species	Sawtimber	CCF	3.00	28.41			1.18	183.89	

AT4b- For Species and Products to be Paid for at Flat Rates

Species	Product	Unit of Measure	Rates per Unit of Measure					Required Deposits Slash Disposal \$
			Base \$	Advertised \$	Bid Premium \$	Bid (Flat) \$		
All Coniferous Species	Grn Bio Cv	CCF	.25	.25			1.18	
Timber Subject to Agreement under CT2.11#								
All Species	Grn Bio Cv	CCF						

For purposes of convenience in collection and bookkeeping, Bid Rates stated in AT4 include payment of deposits for sale area betterment required pursuant to 16 USC 576b. Such deposits are not included as Required Deposits defined hereunder.

AT4c - Schedule of Payment Units

Payment Unit No.	Approx. Acres	Quantity of Species and Products to be Escalated under AT4a	Total Tentative Payment \$	Quantity of Species and Products to be Paid for at Flat Rates under AT4b	Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$
2	46	Douglas-fir <i>Sawtimber</i> 1,849.00 CCF		All Coniferous Species Grn Bio Cv 60.00 CCF		2,252.62
		Total PU Quantity And Value 1,849.00 CCF		Total PU Quantity And Value 60.00 CCF		
4	25	Douglas-fir <i>Sawtimber</i> 1,005.00 CCF		All Coniferous Species Grn Bio Cv 33.00 CCF		1,224.84
		Total PU Quantity And Value 1,005.00 CCF		Total PU Quantity And Value 33.00 CCF		
6	18	Douglas-fir <i>Sawtimber</i> 724.00 CCF		All Coniferous Species Grn Bio Cv 23.00 CCF		881.46
		Total PU Quantity And Value 724.00 CCF		Total PU Quantity And Value 23.00 CCF		
14	25	Douglas-fir <i>Sawtimber</i> 1,005.00 CCF		All Coniferous Species Grn Bio Cv 33.00 CCF		1,224.84
		Total PU Quantity And Value 1,005.00 CCF		Total PU Quantity And Value 33.00 CCF		
16	32	Douglas-fir <i>Sawtimber</i> 1,286.00 CCF		All Coniferous Species Grn Bio Cv 42.00 CCF		1,567.04
		Total PU Quantity And Value 1,286.00 CCF		Total PU Quantity And Value 42.00 CCF		
18	32	Douglas-fir <i>Sawtimber</i> 1,252.00 CCF Western Hemlock <i>Sawtimber</i> 68.00 CCF and Other Coniferous Species		All Coniferous Species Grn Bio Cv 39.00 CCF		1,603.62
		Total PU Quantity And Value 1,320.00 CCF		Total PU Quantity And Value 39.00 CCF		
22	17	Douglas-fir <i>Sawtimber</i> 683.00 CCF		All Coniferous Species Grn Bio Cv 22.00 CCF		831.90
		Total PU Quantity And Value 683.00 CCF		Total PU Quantity And Value 22.00 CCF		
24	6	Douglas-fir <i>Sawtimber</i> 241.00 CCF		All Coniferous Species Grn Bio Cv 8.00 CCF		293.82
		Total PU Quantity And Value 241.00 CCF		Total PU Quantity And Value 8.00 CCF		
26	45	Douglas-fir <i>Sawtimber</i> 1,809.00 CCF		All Coniferous Species Grn Bio Cv 59.00 CCF		2,204.24
		Total PU Quantity And Value 1,809.00 CCF		Total PU Quantity And Value 59.00 CCF		
28	4	Douglas-fir <i>Sawtimber</i> 161.00 CCF		All Coniferous Species Grn Bio Cv 5.00 CCF		195.88
		Total PU Quantity And Value 161.00 CCF		Total PU Quantity And Value 5.00 CCF		
30	4	Douglas-fir <i>Sawtimber</i> 156.00 CCF Western Hemlock <i>Sawtimber</i> 9.00 CCF and Other Coniferous Species		All Coniferous Species Grn Bio Cv 5.00 CCF		200.60
		Total PU Quantity And Value 165.00 CCF		Total PU Quantity And Value 5.00 CCF		

Payment Unit No.	Approx. Acres	Quantity of Species and Products to be Escalated under AT4a	Total Tentative Payment \$	Quantity of Species and Products to be Paid for at Flat Rates under AT4b	Total Flat Rate Payment \$	Total Required Deposits for Slash Disposal \$
32	12	Douglas-fir <i>Sawtimber</i> 482.00 CCF		All Coniferous Species Grn Bio Cv 16.00 CCF		587.64
		Total PU Quantity And Value 482.00 CCF		Total PU Quantity And Value 16.00 CCF		
36	25	Douglas-fir <i>Sawtimber</i> 1,005.00 CCF		All Coniferous Species Grn Bio Cv 33.00 CCF		1,224.84
		Total PU Quantity And Value 1,005.00 CCF		Total PU Quantity And Value 33.00 CCF		
38	19	Douglas-fir <i>Sawtimber</i> 743.00 CCF Western Hemlock <i>Sawtimber</i> and Other Coniferous Species 40.00 CCF		All Coniferous Species Grn Bio Cv 23.00 CCF		951.08
		Total PU Quantity And Value 783.00 CCF		Total PU Quantity And Value 23.00 CCF		
40	35	Douglas-fir <i>Sawtimber</i> 1,369.00 CCF Western Hemlock <i>Sawtimber</i> and Other Coniferous Species 74.00 CCF		All Coniferous Species Grn Bio Cv 43.00 CCF		1,753.48
		Total PU Quantity And Value 1,443.00 CCF		Total PU Quantity And Value 43.00 CCF		

The following definitions are established for the terms used in AT4:

Base Rates are the lowest rates of payment for timber that are authorized by this contract. Base Rates remain constant throughout the life of this contract and are not subject to change by rate redetermination, except for reduction under BT3.31, BT3.32, or BT3.33.

Advertised Rates are the minimum acceptable Bid Rates for timber, exclusive of Required Deposits. These rates are those indicated by appraisal, with a cost allowance made for construction of Specified Roads listed in AT7, but are never less than Base Rates.

Bid Premium Rates are the amounts by which Purchaser's bid is in excess of Advertised Rates. The Bid Premium Rates are constant during this contract, except as provided in BT3.31, BT3.32, and BT3.33.

Bid Rates are the rates bid by Purchaser (exclusive of Required Deposits for slash disposal and road maintenance) and are the sum of Advertised Rates and Bid Premium Rates. Until a rate redetermination becomes effective, the Bid Rate for species and products in AT4a is the Tentative Rate that is subject to quarterly adjustment under BT3.2; for species and products in AT4b, the Bid Rate is the Flat Rate.

Required Deposits are deposits that Purchaser may be required to pay for slash disposal (16 USC 490) and road maintenance (16 USC 537). Required Deposits may be adjusted as part of a rate redetermination or a Contract Term Extension. The table shows only Required Deposits for slash disposal; road maintenance deposits, if any, are given in CT5.32#.

Base Index is the specified average of the lumber or other product selling value index used as the basis for computing adjustment in rates for variance in product selling value, as provided in BT3.2.

AT5 - Indices Used in Quarterly Adjustment, applicable to BT3.2

Species	Index Name and Date
Douglas-fir	WWPA, PNW Douglas Fir (17-18 Basis), (PNWCD)
Western Hemlock and Other Coniferous Species	WWPA, PNW Hem-Fir (17-18 Basis), (PNWCB)

AT6 - High Stumps, applicable to BT6.412

Species	Product	Maximum Stump Height * (inches)
All	All	12

** 12 inches, or 1/3 stump diameter, whichever is greater

AT7 - Specified Roads, applicable to BT5.2

Name and Date of Governing Road Specifications: FP-14 Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, as amended and supplemented (English)

Project		Design Class	Approx. Length (mi./km.)	Sheet Numbers and Approval Date	Performance Responsibility		
Road No.	Name				Survey	Design	Construction Staking ^{1/}
4610 000	4610 (R) (segment 0 to 7.25)	Single Lane - 20 mph	7.25 / 11.67	1-12 08/12/2020	FS	FS	FS BC

^{1/} Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to BT5.212.

AT8 - Forest Service Engineering Completion Schedule, applicable to BT5.21

Road No.	Road Name	Type of Work	Completion Date
NOT APPLICABLE			

AT9 - Fire Precautionary Period, applicable to BT7.2

April 01 to October 31, inclusive

AT10 - Purchaser Responsibility to Furnish Crews and Equipment for:

Initial Fire Suppression, applicable to BT7.3

Within 5 road miles

Fire Suppression Reinforcement, applicable to BT7.312 and BT7.313

Within 100 road miles

AT11 - Purchaser's Obligation per Operations Fire, applicable to BT7.41

Maximum Amount: \$ \$300,000

AT12 - Termination Date, applicable to BT8.2

December 31, 2025

AT13 - Normal Operating Season, applicable to BT6.31, BT6.66, BT8.21 and BT9.3

First Period: June 01 to October 31, inclusive

Second Period: _____ to _____, inclusive

AT14 - Performance Bond, applicable to BT9.1

Performance Bond Amount: _____

AT15 - Downpayment, applicable to BT4.211

Downpayment Amount: _____

AT16 - Periodic Payment Amount, applicable to BT4.213

	<u>Periodic Payment Determination Date</u>	<u>Amount</u>
Initial Payment:	<u>December 01, 2023</u>	_____
Additional Payment:	<u>December 01, 2024</u>	_____

AT17 - Market-Related Contract Term Addition Producer Price Index, applicable to BT8.212Index Name: Softwood Lumber Index Number: 0811**AT18 - Inapplicable Standard Provisions**

The following listed Sections, Subsections, or Items of Division BT - Standard Provisions - are hereby made inapplicable. (Instructions: List by reference number and title.)

BT4.211	DOWNPAYMENT
BT4.4	PAYMENTS NOT RECEIVED
BT8.212	MARKET-RELATED CONTRACT TERM ADDITION
BT8.64	DEBARMENT AND SUSPENSION CERTIFICATION

AT19 - List of Special Provisions

The following listed special provisions are attached to and made a part of this contract as Division CT. Provisions with reference numbers followed by # contain blanks into which data have been entered for this sale. (Instructions: List by reference number, title, and date.)

CT2.11#	TIMBER SUBJECT TO AGREEMENT (06/1972)
CT2.35# (OPTION 1)	INDIVIDUAL TREE DESIGNATION (06/2010)
CT4.211	DOWNPAYMENT (06/2007)
CT4.212	TEMPORARY REDUCTION OF DOWNPAYMENT (08/2009)
CT4.4	PAYMENTS NOT RECEIVED (08/2012)
CT5.1# (OPTION 1)	TEMPORARY ROAD AND LANDING CONSTRUCTION (06/2008)
CT5.12#	USE OF ROADS BY PURCHASER (06/1999)
CT5.13#	ROAD COMPLETION DATE (04/2004)
CT5.213#	DEPOSIT FOR RECONSTRUCTION ENGINEERING SERVICES (04/2020)
CT5.221#	MATERIAL SOURCES (04/2004)
CT5.31#	ROAD MAINTENANCE REQUIREMENTS (07/2001)
CT5.32#	ROAD MAINTENANCE DEPOSIT SCHEDULE (08/2012)
CT6.315#	SALE OPERATION SCHEDULE (06/1994)
CT6.405	ALTERNATE REMOVAL OF INCLUDED TIMBER (05/2005)
CT6.41#	SPECIFIC REQUIREMENTS (01/2000)
CT6.42#	YARDING/SKIDDING REQUIREMENTS (06/2010)
CT6.6#	EROSION CONTROL AND SOIL TREATMENT BY PURCHASER (03/2017)
CT6.7	SLASH DISPOSAL (03/2017)
CT6.74#	SLASH TREATMENT REQUIREMENTS (02/2002)
CT6.8	MEASURING (08/2000)

CT6.84	ACCOUNTABILITY (06/2006)
CT6.84 (OPTION 1)	USE OF PAINT BY PURCHASER (05/2005)
CT7.1	PLANS (09/2004)
CT7.11	ADDITIONAL AREA OF FIRE RESPONSIBILITY (03/1989)
CT7.2	SPECIFIC FIRE PRECAUTIONS (09/2002)
CT7.201	BURNING BY PURCHASER (01/1993)
CT7.22	EMERGENCY FIRE PRECAUTIONS (06/2018)
CT8.13	DISCLAIMER OF EXPRESSED OR IMPLIED WARRANTY (09/2004)
CT8.212	MARKET-RELATED CONTRACT TERM ADDITION (11/2008)
CT8.64	DEBARMENT AND SUSPENSION CERTIFICATION (03/2018)
CT8.66# (Option 1)	USE OF TIMBER (04/2004)

UNITED STATES DEPARTMENT OF AGRICULTURE
Forest Service

TIMBER SALE CONTRACT
DIVISION BT

June 2006
(Date of Issue)

STANDARD PROVISIONS FOR TIMBER SALES TO BE MEASURED BEFORE FELLING

This Division is organized into Parts, Sections, Subsections, and Items. These are numbered in accordance with the following scheme: Part BT1.0, Section BT1.1, Subsection BT1.11, and Item BT1.111. References to a Part include all Sections, Subsections, and Items within that Part; references to a Section include all Subsections and Items within that Section; and references to a Subsection include all Items within that Subsection. Cross-references within this contract cite the reference number of the applicable Division, Part, Section, Subsection, and Item. Descriptive headings used

are not to be considered in determining the rights and obligations of the parties.

The Standard Provisions in this Division are subject to Specific Conditions of the contract stated in Division AT. Wherever appropriate, Specific Conditions established in Division AT are cited by reference number. The listing of Sections, Subsections, or Items of this Division in AT18 has the effect of striking or deleting them from Division BT. AT19 lists Special Provisions that comprise Division CT. Where appropriate, references to Special Provisions are made by citing the applicable reference numbers.

INDEX TO TERMS

Term	Reference	Term	Reference
Advertised Rates	AT4	Off-Road Equipment	BT6.35
Base Index	AT4	Operations Fire	BT7.41
Base Rates	AT4	Out-of-Pocket Expenses	BT8.35
Bid Premium Rates	AT4	Overstory Removal Units	BT2.3
Bid Rates	AT4	Payment Unit	BT4.1
Catastrophic Damage	BT2.133	Plans	BT5.211
Claim	BT9.2	Purchaser's Operations	BT6.3
Clearcutting Units	BT2.3	Release for Cutting	BT6.3
Contract Term Adjustment	BT8.21	Required Deposits	AT4
Contract Term Extension	BT8.23	Sale Area	BT1.1
Current Contract Rates	BT3.1	Sale Area Map	BT1.1
Current Contract Value	BT3.1	Schedule of Items	BT5.2
Current Unit Rates	BT5.251	Shop Drawings	BT5.211
Design Change	BT5.253	Specified Roads	BT5.2
Extension Deposit	BT4.217	Streamcourses	BT6.5
Fire Precautionary Period	BT7.2	Substantially Completed	BT5.23
Flat Rates	AT4	Temporary Roads	BT5.1
Included Timber	BT2.1	Tentative Rate	AT4
Indicated Advertised Rates	BT8.221	Termination Date	BT8.2
Marked	BT2.35	Timber Sale Account	BT4.2
Measuring	BT6.8	Understory Removal Units	BT2.3
Negligent Fire	BT7.42	Unrecovered Expenditures	BT8.35
Normal Operating Season	BT6.31	Utilization Standards	AT2, BT2.2

CONTENTS

Reference Number	Title	Page	Reference Number	Title	Page
BT1.0	SALE AREA	113	BT4.211	Downpayment	117
BT1.1	Sale Area Map	113	BT4.212	Advance Deposits	118
BT1.2	Claims	113	BT4.213	Periodic Payment Schedule	118
BT2.0	TIMBER SPECIFICATIONS	113	BT4.214	Deposits for Charges Subject to Escalation	118
BT2.1	Included Timber	113	BT4.215	Deposits When Payment Guaranteed	118
BT2.11	Standard Timber	113	BT4.216	Blanket Cash Deposits	118
BT2.12	Substandard Timber	113	BT4.217'	Extension Deposits	118
BT2.13	Damaged Timber	113	BT4.218	Cooperative Deposits	118
BT2.131	Damaged by Purchaser	113	BT4.22	Temporary Reduction of Downpayment	118
BT2.132	Negligent or Willful Damage	113	BT4.23	Refund of Excess Cash	119
BT2.133	Damaged by Catastrophe	113	BT4.24	Refund after Final Charges for Released Timber	119
BT2.134	Minor Damage by Natural Causes	114	BT4.3	Payment Guaranteed by Bond or Deposited Securities	119
BT2.14	Unintentionally Cut Timber	114	BT4.31	Blanket Bond	119
BT2.15	Construction Timber	114	BT4.32	Letters of Credit for Payment Bond	119
BT2.16	Other Material	114	BT4.4	Payments Not Received	119
BT2.2	Utilization and Removal of Included Timber	114	BT5.0	TRANSPORTATION FACILITIES	120
BT2.3	Timber Designations	114	BT5.1	Authorization	120
BT2.31	Clearcutting Units	114	BT5.11	Requirements of Rights-of-Way	120
BT2.32	Construction Clearing	114	BT5.12	Use of Roads by Purchaser	120
BT2.321	Specified Road Clearings	114	BT5.2	Specified Roads	120
BT2.322	Other Authorized Clearings	114	BT5.21	Engineering	120
BT2.33	Overstory Removal Units	114	BT5.211	Contract Plans	121
BT2.34	Understory Removal Units	114	BT5.212	Construction Staking	121
BT2.35	Individual Trees	114	BT5.22	Material Delivery	121
BT2.36	Incompletely Measured Payment Units	114	BT5.23	Use of Partially Constructed Roads	122
BT2.37	Designation Changes	114	BT5.24	Estimated Cost	122
BT2.4	Quantity Estimate	114	BT5.25	Construction Cost Adjustment	122
BT2.41	Adjustment for Quantity Deficit	115	BT5.251	Variation in Quantities	122
BT2.42	Adjustment for Excess Quantity	115	BT5.252	Physical Change	122
BT2.43	Adjustment for Quantity Errors	115	BT5.253	Design Change	123
BT3.0	RATES OF PAYMENT	115	BT5.26	Alternate Facilities	123
BT3.1	Current Contract Rates	115	BT5.27	Temporary Credit for Unamortized Specified Road Construction Cost	123
BT3.2	Escalation Procedure	116	BT5.3	Road Maintenance	124
BT3.21	Unavailable Index	116	BT5.4	Use by Others	124
BT3.3	Rate Redetermination	116	BT6.0	OPERATIONS	124
BT3.31	Rate Redetermination for Environmental Modification	116	BT6.1	Representatives	124
BT3.32	Rate Redetermination after Catastrophic Damage	116	BT6.11	Notices	124
BT3.33	Rate Redetermination for Market Change	116	BT6.2	Improvements	125
BT3.34	Emergency Rate Redetermination	117	BT6.21	Removal	125
BT3.4	Other Payment Rates	117	BT6.22	Protection of Improvements	125
BT3.41	Material and Quantities Not in AT2	117	BT6.221	Protection of Improvements Not Owned by Forest Service	125
BT3.42	Timber Cut Through Mistake	117	BT6.222	Protection of Property	125
BT3.43	Undesignated Timber Damaged Without Negligence	117	BT6.23	Protection of Land Survey Monuments	125
BT3.44	Undesignated Timber Unnecessarily Damaged or Negligently or Willfully Cut	117	BT6.24	Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources	125
BT3.45	Liquidated Damages	117	BT6.3	Control of Operations	126
BT4.0	PAYMENTS	117	BT6.31	Operating Schedule	126
BT4.1	Amount Payable for Timber	117	BT6.311	Plan of Operations	126
BT4.2	Timber Sale Account	117			
BT4.21	Cash Deposits	117			

Reference Number	Title	Page	Reference Number	Title	Page
BT6.312	Plan of Operations for Road Construction	126	BT7.6	Performance by Contractor	132
BT6.32	Protection of Residual Trees	127	BT8.0	OTHER CONDITIONS	132
BT6.33	Safety	127	BT8.1	Title and Liability	132
BT6.34	Sanitation and Servicing	127	BT8.11	Title Passage	132
BT6.341	Prevention of Oil Spills	127	BT8.12	Liability for Loss	132
BT6.342	Hazardous Substances	127	BT8.2	Period of Contract	132
BT6.35	Equipment Cleaning	127	BT8.21	Contract Term Adjustment	132
BT6.36	Acceptance of Work	128	BT8.211	Delay in Reconstruction of Processing Facilities	133
BT6.361	Acceptance of Specified Roads	128	BT8.212	Market-Related Contract Term Addition	133
BT6.4	Conduct of Logging	128	BT8.22	Termination for Catastrophe	133
BT6.41	Felling and Bucking	128	BT8.221	Termination by Purchaser	133
BT6.411	Felling in Clearings	129	BT8.222	Termination by Forest Service	133
BT6.412	Stump Heights	129	BT8.23	Contract Term Extension	133
BT6.413	Limbing	129	BT8.231	Conditions for Contract Term Extension	133
BT6.42	Skidding and Yarding	129	BT8.3	Contract Modification	134
BT6.421	Rigging	129	BT8.31	Changed Conditions	134
BT6.422	Landings and Skid Trails	129	BT8.32	Modification for Catastrophe	134
BT6.423	Skidding on Roads	129	BT8.33	Contract Suspension and Modification	134
BT6.424	Arches and Dozer Blades	129	BT8.34	Contract Termination	134
BT6.5	Streamcourse Protection	129	BT8.341	Termination by Forest Service	135
BT6.6	Erosion Prevention and Control	129	BT8.342	Termination by Purchaser	135
BT6.61	Meadow Protection	129	BT8.35	Out-of-Pocket Expenses	136
BT6.62	Wetlands Protection	129	BT8.36	Termination for Market Change	136
BT6.63	Temporary Roads	130	BT8.4	Performance by Other than Purchaser	136
BT6.631	Temporary Roads to Remain Open	130	BT8.5	Sale of Other Materials	137
BT6.64	Landings	130	BT8.6	Provisions Required by Statute	137
BT6.65	Skid Trails and Fire Lines	130	BT8.61	Covenant against Contingent Fees	137
BT6.66	Current Operating Areas	130	BT8.62	Officials Not to Benefit	137
BT6.67	Erosion Control Structure Maintenance	130	BT8.63	Nondiscrimination in Employment	137
BT6.7	Slash Disposal	130	BT8.64	Debarment and Suspension Certification	137
BT6.8	Measuring	130	BT8.65	Contract Consistency With Other Laws	138
BT6.81	Product Identification	130	BT9.0	PERFORMANCE AND SETTLEMENT	138
BT6.9	Records	130	BT9.1	Performance Bond	138
BT7.0	FIRE PRECAUTIONS AND CONTROL	131	BT9.11	Bond Reduction	138
BT7.1	Plans	131	BT9.12	Letters of Credit	138
BT7.2	Fire Precautions	131	BT9.13	Temporary Bond Reduction	138
BT7.21	Substitute Precautions	131	BT9.2	Disputes	138
BT7.22	Emergency Precautions	131	BT9.21	Time Limits for Submission of Claim	139
BT7.3	Fire Control	131	BT9.22	Contract Documents	139
BT7.31	Purchaser's Reinforcement Obligations	131	BT9.3	Breach	139
BT7.311	Suspend Operations	131	BT9.31	Termination for Breach	139
BT7.312	Personnel	131	BT9.4	Damages for Failure to Cut or Termination for Breach	140
BT7.313	Equipment	131	BT9.5	Settlement	140
BT7.4	Fire Suppression Costs	131	BT9.6	Contract Closure	140
BT7.41	Operations Fire	131			
BT7.42	Negligent Fire	131			
BT7.43	Other Fires on Sale Area	132			
BT7.5	State Law	132			

BT1.0—SALE AREA

BT1.1 Sale Area Map. The boundaries of “Sale Area” and any Payment Unit thereof, are as shown on the attached “Sale Area Map” that is made a part hereof, and were, before timber sale advertisement, designated on the ground by Forest Service to meet the anticipated needs of the parties. The location of Sale Area and its approximate acreage are stated in AT1. Payment Units may be revised and additional ones may be established only by written agreement. Upon Purchaser’s request, Forest Service shall subdivide Payment Units to reduce them to a size that can be logged within 60 days at Purchaser’s normal rate of logging. However, the rate of logging used in such adjustment of Payment Unit size shall not be less than a rate necessary for removal of all Included Timber during Normal Operating Seasons prior to Termination Date. Payment Units or cutting units may be eliminated from Sale Area under conditions described in BT6.36. Catastrophically Damaged areas may be removed from Sale Area under BT8.32.

Where applicable, the following are also identified on Sale Area Map:

- (a) Identified claims limiting Purchaser’s rights under BT1.2;
- (b) Payment Units where timber is to be Measured or Marked after date of timber sale advertisement and approximate location of sample Marked timber under BT2.36 and BT2.4;
- (c) Boundaries of Clearcutting Units, Overstory Removal Units, and Understory Removal Units under BT2.3;
- (d) Diameter limits for Overstory Removal Units and Understory Removal Units under BT2.33 and BT2.34;
- (e) Areas where leave trees are Marked to be left uncut under BT2.35;
- (f) Specified Roads listed in AT7;
- (g) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items under CT5.221;
- (h) Roads where log hauling or use is prohibited or restricted under BT5.12;
- (i) Roads and trails to be kept open under BT6.22;
- (j) Improvements to be protected under BT6.22;
- (k) Locations of known wildlife or plant habitat and cave resources to be protected under BT6.24;
- (l) Locations of areas known to be infested with specific invasive species of concern under BT6.35;
- (m) Maximum stump heights when more than one height is listed by areas in AT6 under BT6.412;
- (n) Skidding or yarding methods specified under BT6.42;
- (o) Streamcourses to be protected under BT6.5;
- (p) Locations of meadows requiring protection under BT6.61;
- (q) Locations of wetlands requiring protection under BT6.62;
- (r) Locations of temporary roads to be kept open under BT6.631; and
- (s) Other features required by Division BT or CT.

BT1.2 Claims. Valid claims are excluded from Sale Area, except those on which timber cutting is authorized

in writing by the claimant and except mining claims on which cutting is authorized by the Act of July 23, 1955 (30 USC 614). Claims that limit Purchaser’s rights to operate under this contract and that Forest Service has been able to identify are shown on Sale Area Map. Purchaser is not obligated to operate contrary to existing claim limitations. Forest Service shall designate boundaries of claims on the ground to the extent necessary to identify Included Timber.

BT2.0—TIMBER SPECIFICATIONS

BT2.1 Included Timber. “Included Timber” consists of:

BT2.11 Standard Timber. Live and dead trees and portions thereof that meet Utilization Standards under BT2.2 and are designated for cutting under BT2.3.

BT2.12 Substandard Timber. Live and dead trees that:

- (a) Do not meet Utilization Standards and
- (b) Are located in Clearcutting Units or construction clearings or are otherwise designated for cutting.

BT2.13 Damaged Timber.

BT2.131 Damaged by Purchaser. Undesignated live trees meeting Utilization Standards:

(a) Within 200 feet slope distance from centerline of roads constructed hereunder that are damaged by Purchaser’s construction to the extent that considerable deterioration or mortality is imminent and are designated by Forest Service for felling before the nearest road segment is Substantially Completed or

(b) That are damaged by Purchaser in logging and are subsequently Marked before Purchaser has completed skidding or yarding operations in the immediate area.

By agreement, such trees may be left without charge if their removal would cause undue damage or be grossly uneconomic.

BT2.132 Negligent or Willful Damage. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Purchaser, if included by Contracting Officer.

BT2.133 Damage by Catastrophe. As provided under BT8.32, undesignated live and dead timber within Sale Area, meeting Utilization Standards, and affected by Catastrophic Damage. “Catastrophic Damage” as used hereunder is major change or damage to Included Timber on Sale Area, to Sale Area, to access to Sale Area, or a combination thereof:

(a) Caused by forces, or a combination of forces, beyond control of Purchaser, occurring within a 12-month period, including, but not limited to, wind, flood, earthquake, landslide, fire, forest pest epidemic, or other major natural phenomenon and

(b) Affecting the value of any trees or products meeting Utilization Standards, within Sale Area and estimated to total either:

- (i) More than half of the estimated timber quantity stated in AT2 or
- (ii) More than two hundred thousand cubic feet (2,000 CCF) or equivalent.

Catastrophic Damage does not include changes caused by forest pest epidemics or foreseeable deterioration if Included Timber was sold for salvage or pest control.

BT2.134 Minor Damage by Natural Causes. Undesignated trees within Sale Area and meeting Utilization Standards, in amounts less than specified in BT2.133, that become insect infested, windthrown, suffer serious damage, or die, as designated by agreement.

BT2.14 Unintentionally Cut Timber. Trees, within or immediately adjacent to Sale Area or to road construction or other authorized clearing outside Sale Area, not designated for cutting under BT2.3 but that are cut through mistake by Purchaser, when included by Contracting Officer.

BT2.15 Construction Timber. Trees to be used for construction under BT5.1.

BT2.16 Other Material. Species or products not listed in AT2, upon written approval of Contracting Officer under BT3.41.

BT2.2 Utilization and Removal of Included Timber. "Utilization Standards" for trees and minimum pieces are stated in AT2. To meet minimum tree specifications, trees must equal or exceed tree diameters listed in AT2 and contain at least one minimum piece. Except for timber required or authorized to be left, Purchaser shall fell and buck such trees and shall remove from Sale Area all pieces that:

(a) Meet minimum piece standards in AT2 or

(b) Do not meet such standards, but would have qualified as part of minimum pieces if bucking lengths were varied to include such material.

BT2.3 Timber Designations. Timber designated for cutting shall be confined to Sale Area, except as provided in BT2.131, BT2.14, BT2.15, BT2.32, and BT5.1. Sale Area Map indicates Payment Units, if any, where Marking under BT2.35 is to be done after timber sale advertisement, except for construction clearing under BT2.32, designation changes under BT2.37, and damaged timber.

The boundaries of Clearcutting Units, Overstory Removal Units, and Understory Removal Units were plainly Marked on ground before timber sale advertisement and are shown on Sale Area Map. Boundary trees shall not be cut. Such units where Measuring is to be completed after date of timber sale advertisement are also shown. The number of units and approximate acreage of timber designations are stated in AT3.

BT2.31 Clearcutting Units. All trees that meet Utilization Standards within "Clearcutting Units" are designated for cutting.

BT2.32 Construction Clearing. All timber is designated for cutting that is within the clearing limits of roads constructed hereunder or is in other authorized clearings. All dead or unstable live trees are designated for cutting that are sufficiently tall to reach Purchaser's landings or the roadbed of Specified and Temporary Roads when Marked in advance of felling of timber in the immediate vicinity. Pieces meeting Utilization Standards from such dead or unstable live trees shall be removed, unless there is agreement that to do so could damage the

road. Such designation may be revised as part of agreed changes in road location under BT5.2.

BT2.321 Specified Road Clearings. Timber within the clearing limits of Specified Roads is within separate Payment Units, as shown on Sale Area Map, and the quantities are in AT2. These Payment Units are subject to revision, as specified in BT2.37. The quantities of dead or unstable trees designated outside the clearing limits are not included in AT2.

BT2.322 Other Authorized Clearings. Timber within authorized clearings for Temporary Roads, landings, or other construction clearings is designated for cutting. Quantities of such timber are not included in AT2.

BT2.33 Overstory Removal Units. All trees within "Overstory Removal Units" are designated for cutting when they meet Utilization Standards and equal or exceed the diameter limits shown on Sale Area Map.

BT2.34 Understory Removal Units. All trees within "Understory Removal Units" are designated for cutting when they meet Utilization Standards and are smaller than the diameter limits shown on Sale Area Map.

BT2.35 Individual Trees. All trees to be cut, other than in the units described in BT2.31, BT2.32, BT2.33, and BT2.34, are Marked or designated by description. Trees are "Marked" when individually designated by Forest Service with paint marks above and below stump height.

Sale Area Map indicates areas plainly identified on the ground where leave trees are Marked to be left uncut.

BT2.36 Incompletely Measured Payment Units. Trees within incompletely Measured Payment Units shown on Sale Area Map at time of timber sale advertisement shall be designated in accordance with CT2.36. A representative sample of the timber to be designated has been Marked prior to timber sale advertisement in accordance with such rules. The approximate locations of the representative sample areas are shown on Sale Area Map.

BT2.37 Designation Changes. Within Sale Area, minor adjustments may be made in boundaries of cutting units or in the timber individually Marked for cutting when acceptable to Purchaser and Forest Service.

In event Contracting Officer accepts alternate facilities under BT5.26, Contracting Officer shall revise the affected Payment Units and adjust estimated quantities.

In the event Purchaser does not construct portions of Specified Roads, Payment Units involved shall be revised to eliminate the road portions not to be constructed. Parts of such areas within non-road-related Payment Units shall be added to such Payment Units and the timber thereon shall be designated by the methods provided for in the Payment Units. Estimated quantities for Payment Units so revised shall be adjusted as necessary.

BT2.4 Quantity Estimate. The estimated quantities of timber by species designated for cutting under BT2.3 and expected to be cut under Utilization Standards are listed in AT2. Estimated quantity in AT2 does not include the following:

(a) Damaged timber under BT2.13;

(b) Unintentionally cut timber under BT2.14;

(c) Construction timber under BT2.15 cut outside of Payment Units and removed from construction use for utilization by Purchaser;

(d) Timber within clearing limits of Temporary Roads or other authorized clearings and that is not designated under BT2.31, BT2.33, BT2.34, or BT2.35; or

(e) Dead or unstable live trees that are sufficiently tall to reach Purchaser's landings or the roadbed of Specified Roads under BT2.32.

Estimated quantities for such timber not included in AT2 shall be determined as stated in CT6.8.

If Sale Area Map shows Payment Units where Marking or Measuring is to be completed after date of timber sale advertisement, the objective of Forest Service shall be to designate for cutting in such Payment Units sufficient timber so that Sale Area shall yield the approximate estimated quantities by species or species groups stated in AT2. However, the estimated quantities stated in AT2 are not to be construed as guarantees or limitations of the timber quantities to be designated for cutting under the terms of this contract.

Quantity adjustments shall not be made under this Section after there is modification for Catastrophic Damage under BT8.32.

BT2.41 Adjustment for Quantity Deficit. If Sale Area Map shows Payment Units where Marking or Measuring is to be completed after the date of timber sale advertisement and if Contracting Officer determines that a deficit in the estimated quantity will cause the quantity designated to be less than 90 percent of the total estimate shown in AT2, Forest Service, upon request by Purchaser, shall designate additional timber within Sale Area. Such additional timber shall be limited to that estimated to be necessary to reach approximately the estimated quantities by species listed in AT2. Any such additional designation shall be consistent with land and resource management plans.

BT2.42 Adjustment for Excess Quantity. If Sale Area Map shows Payment Units where Marking or Measuring is to be completed after date of timber sale advertisement and if Contracting Officer determines that the quantity designated will be more than 120 percent of the total estimated quantity listed in AT2, Forest Service, upon request by Purchaser, shall make an adjustment in Marking or cutting unit boundaries with the objective of designating for cutting the approximate estimated quantities by species listed in AT2. Such adjustments in quantities shall be confined to (a) Marking adjustments on Sale Area and (b) reduction in area to be cut over. Such adjustments or reductions shall not conflict with the silvicultural treatment being applied on Sale Area and shall not materially change the average value by species of the timber designated for cutting. Such adjustments may be made notwithstanding the provisions of BT1.1 and BT2.3.

If the timber designated for cutting is not reduced by such adjustments to less than 120 percent of the total estimated quantity listed in AT2, Purchaser, after cutting 120 percent of the total estimated quantity listed in AT2, may elect to have Sale Area reduced to eliminate Payment Units where felling has not begun.

BT2.43 Adjustment for Quantity Errors. An estimated quantity shown in AT2 shall be revised by correcting identified errors made in determining estimated quantity that result in a change in total timber sale quantity of at least 10 percent or \$1,000 in value, whichever is less, when an incorrect estimated quantity is caused by computer malfunction or an error in calculations, area determination, or computer input.

No adjustments in quantity shall be made for variations in accuracy resulting from planned sampling and Measuring methods or judgments of timber quality or defect.

For payment purposes, corresponding revisions in quantity and total payment shall be shown in AT4c for each Payment Unit involved. Adjustment in rates will not be made. Adjustment in quantities shall not obligate Forest Service to designate additional quantities when the original quantity estimate is overstated.

BT3.0—RATES OF PAYMENT

BT3.1 Current Contract Rates. Included Timber that is Released for Cutting shall be paid for at Current Contract Rates determined under this Section. "Current Contract Rates" shall be (a) Flat Rates and (b) Tentative Rates adjusted by the escalation procedures in BT3.2. Flat Rates and Tentative Rates shall be those listed in AT4, unless superseded by rates redetermined under BT3.3 or established for Contract Term Extension.

Current Contract Rates, based on rates redetermined under BT3.3 or established under BT8.23, shall apply to all Payment Units from which removal of timber from Sale Area has not been completed on the effective date of the revised rates, except Current Contract Rates in effect at the time of Release for Cutting shall be applicable:

(a) On Payment Units for Specified Roads Released for Cutting on which clearing has begun and

(b) For not more than two other Payment Units from which removal from Sale Area has begun.

Notwithstanding the exceptions provided in this Section, rates redetermined under BT3.31, BT3.32, and BT3.33 shall apply to all Included Timber removed subsequent to the rate redetermination.

In event there are more than two Payment Units from which timber removal has not been completed on the effective date, the rates in effect at the time of Release for Cutting shall apply to the two units from which the greatest estimated proportions of Payment Unit quantities have been removed. Otherwise, in released Payment Units, redetermined rates or rates established for Contract Term Extension shall apply to the entire quantity shown in AT4c for those units. In addition, Required Deposits shall be made as listed in AT4 and CT5.32, or established under BT3.3 or BT8.23.

In the event Termination Date is adjusted under BT8.21 or BT8.212, Current Contract Rates shall be continued in the same manner as immediately prior to the adjustment period.

"Current Contract Value" is the sum of the products of Current Contract Rates and estimated remaining

quantities by species of Included Timber meeting Utilization Standards.

BT3.2 Escalation Procedure. Tentative Rates for those species and products listed in AT4a are subject to quarterly escalation in accordance with the following procedures: The calendar quarter index average for each price index described in AT5 is the arithmetic average of the three such monthly price indices preceding January 1, April 1, July 1, and October 1. The difference between calendar quarter index average and Base Index listed in AT4a shall be the basis for quarterly escalation. To arrive at Current Contract Rates for Payment Units Released for Cutting during the preceding calendar quarter, Tentative Rates for each species shall be reduced or increased by such difference, except when the calendar quarter index average is:

(a) Less than the Base Index, the reduction shall not result in a rate below Base Rate or

(b) Greater than the Base Index, the increase shall not exceed the difference between Tentative Rate and Base Rate.

In the event of Contract Term Extension, the escalation procedure will be used during the extension period, except that adjusted payment rates for any calendar quarter cannot be less than Tentative Rates, for each species and product group, established under BT8.23 for the extension period.

BT3.21 Unavailable Index. If an index described in AT5 is no longer available, Contracting Officer may replace that index. If Contracting Officer determines that a replacement index does not exist, Current Contract Rates for the remainder of the timber sale shall be a Flat Rate. Flat Rates will be Tentative Rates adjusted by the arithmetic average of the index described in AT5 for a 12-month period prior to its becoming unavailable using the quarterly adjustment procedure outlined in BT3.2. Contracting Officer will determine availability and a beginning point to average the index for Flat Rates. Such Flat Rates are subject to rate redetermination as provided elsewhere under this contract.

BT3.3 Rate Redetermination. Rates may be redetermined as set forth in this Section. Bid Premium Rates shall be added to all redetermined rates, except as provided in BT3.31, BT3.32, and BT3.33.

Rate redeterminations shall be made in accordance with the standard Forest Service methods in effect 45 days prior to rate redetermination. Such methods shall take into consideration factors that may affect timber value at rate redetermination date.

Redetermined rates shall not be less than Base Rates listed in AT4, except for reduction under BT3.31, BT3.32, or BT3.33. Required Deposits shall be redetermined. Redetermined Specified Road construction cost is subject to the limitations of BT5.26.

BT3.31 Rate Redetermination for Environmental Modification. In the event of a contract modification under BT8.33 or partial termination under BT8.34, Contracting Officer shall make an appraisal to determine for each species the difference between the appraised unit value of Included Timber remaining

immediately prior to the revision and the appraised unit value of Included Timber to be cut under the modification. The appraisal shall consider the estimated cost of any construction work listed in the Schedule of Items that was performed and abandoned.

Tentative Rates and Flat Rates in effect at the time of the revision will be adjusted by said differences to become Current Contract Rates. Accordingly, Base Rates shall be adjusted to correspond to the redetermined rates if redetermined rates are less than the original Base Rates, subject to a new Base Rate limitation of the cost of essential reforestation or 25 cents per hundred cubic feet or equivalent, whichever is larger. However, existing Base Indices shall not be changed under this Subsection.

Redetermined rates, or differences for rates subject to BT3.2, and Required Deposits shall be considered established under BT3.1 for Included Timber removed subsequent to the contract revision.

BT3.32 Rate Redetermination after Catastrophic Damage. In event of Catastrophic Damage and adjustment, if any, of Included Timber, Contracting Officer shall make an appraisal to determine for each species the catastrophe-caused difference between the appraised unit value of Included Timber remaining immediately prior to the catastrophe and the appraised unit value of existing and potential Included Timber immediately after the catastrophe. Included Timber is any that would not be eliminated under BT8.32. Potential Included Timber is any that would be added under BT8.32.

Tentative Rates and Flat Rates in effect at the time of catastrophe shall be adjusted by said differences to become the redetermined rates for the purpose of a contract modification under BT8.32. Accordingly, Base Rates shall be adjusted to correspond to the redetermined rates if redetermined rates are less than the original Base Rates, subject to new Base Rate limitations of 25 cents per hundred cubic feet or equivalent. However, existing Base Indices shall not be changed under this Subsection.

Upon agreement under BT8.32, redetermined rates and Required Deposits shall be considered established under BT3.1 for Included Timber removed subsequent to Catastrophic Damage.

At time of such appraisal, Specified Road construction cost shall include the estimated cost of any construction work listed in the Schedule of Items performed and abandoned.

BT3.33 Rate Redetermination for Market Change. In the event of delay or interruption, exceeding 90 days, under BT8.33, Contracting Officer shall make an appraisal to determine for each species the difference between the appraised unit value of Included Timber immediately prior to the delay or interruption and the appraised unit value of Included Timber immediately after the delay or interruption. The appraisal shall be done after any rate redetermination done pursuant to BT3.31, using remaining volumes.

Tentative Rates and Flat Rates in effect at the time of delay or interruption or established pursuant to BT3.31 will be reduced, if appraised rates declined during the delay or interruption, to become Current Contract Rates.

Increases in rates will not be considered. Accordingly, Base Rates shall be adjusted to correspond to the redetermined rates if redetermined rates are less than the original Base Rates, subject to a new Base Rate limitation of the cost of essential reforestation or 25 cents per hundred cubic feet or equivalent, whichever is larger. However, existing Base Indices shall not be changed under this Subsection.

Redetermined rates shall be considered established under BT3.1 for Included Timber removed subsequent to the delay or interruption.

BT3.34 Emergency Rate Redetermination. Forest Service shall redetermine rates if, upon Purchaser's application, Forest Service determines that, because of changes in the timber market since the award date or the last rate redetermination under this provision, the Producer Price Index identified in AT17 has declined by 25 percent. Rates shall be redetermined under BT3.3 and shall be considered established under BT3.1 for Payment Units described therein at the time of Purchaser's application. This Subsection shall not apply during Contract Term Extension.

BT3.4 Other Payment Rates.

BT3.41 Material and Quantities Not in AT2. Incidental amounts of products or portions of trees of species listed in AT2 that do not meet Utilization Standards may be removed without charge. Such material may be purposely removed in more than incidental amounts without charge upon written approval of Contracting Officer, and subject to agreement on deposits if needed for road maintenance and use.

Other species or products not listed in AT2 may be cut and removed upon written approval of Contracting Officer and subject to agreement on rates of payment and deposits if needed for road maintenance and use.

Timber for which the quantity is not included in the estimate listed in AT2, as described in BT2.4, shall be paid for at Current Contract Rates and Required Deposits.

BT3.42 Timber Cut Through Mistake. Undesignated timber meeting Utilization Standards, cut by Purchaser through mistake and included by Contracting Officer under BT2.14, shall be removed and paid for at Current Contract Rates and Required Deposits, unless such material is not listed in AT2. In such event, Contracting Officer, in accord with standard Forest Service methods, shall establish rates to be paid.

BT3.43 Undesignated Timber Damaged Without Negligence. Undesignated timber meeting Utilization Standards, damaged without negligence by Purchaser and designated by Forest Service under BT2.131, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits.

BT3.44 Undesignated Timber Unnecessarily Damaged or Negligently or Willfully Cut. Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Purchaser, if included by Contracting Officer under BT2.132, shall be cut, removed, and paid for at Current Contract Rates and

Required Deposits that are in addition to liquidated damages under BT3.45.

If such timber is of a species or size not listed in AT2 or is of a quality different from designated timber, Contracting Officer shall establish payment rates in accord with standard Forest Service methods.

BT3.45 Liquidated Damages. Unnecessary damage to or negligent or willful cutting of undesignated timber, as described in BT3.44, on portions of Sale Area cut over under this contract is likely to cause substantial silvicultural or other damage to the National Forest. It will be difficult, if not impossible, to determine the amount of such damage. Therefore, Purchaser shall pay as fixed, agreed, and liquidated damages an amount equivalent to the amount payable at Current Contract Rates. If designated by Contracting Officer, Purchaser shall remove such damaged or cut timber and pay for it at Current Contract Rates.

BT4.0—PAYMENTS

BT4.1 Amount Payable for Timber. Except as provided in BT3.1, Current Contract Rates and Required Deposits in effect when a Payment Unit is Released for Cutting shall be applied to the timber quantities to determine the amount Purchaser shall pay. A "Payment Unit" is a portion of Sale Area established for payment purposes.

BT4.2 Timber Sale Account. "Timber Sale Account" is an account maintained by Forest Service of all Purchaser's deposits, credits, payment guarantees, and the charges for:

- (a) Timber at Current Contract Rates;
- (b) Slash disposal and road maintenance at Required Deposit rates;
- (c) Cooperative work at rates established by specific agreement under BT4.218; and
- (d) Other charges provided in this contract.

Cash deposits shall be recorded currently in such account.

Charges for Payment Units Released for Cutting shall be made when Forest Service prepares and furnishes to Purchaser periodic statements of quantity and value of such timber. Charges subject to escalation under BT3.2 shall be made initially on the basis stated in BT4.214 and shall be adjusted at the end of each calendar quarter, as provided in BT3.2.

Charges shall be made according to BT3.4 when trees are subsequently Marked or designated for cutting.

BT4.21 Cash Deposits. Within the limitations of this Subsection, Purchaser shall make cash deposits to meet Purchaser's obligations within 15 days of billing by Forest Service. Deposits shall be made to Forest Service, U.S.D.A., by mail or delivery to the address to be furnished by Forest Service. Forest Service shall explain the bill at the time it requests each deposit.

BT4.211 Downpayment. The downpayment amount shown in AT15 may not be applied toward any other payment required under the provisions of this contract, except damages determined pursuant to BT9.4, transferred to other timber sales, or refunded until stumpage value representing 25 percent of the total bid value of

the timber sale is shown on Timber Sale Account to have been cut, removed, and paid for, or if 36 CFR 223.49(e) is applicable, the estimated value remaining to be cut and removed, as shown on Timber Sale Account, is equal to or less than the amount of the downpayment. For lump sum timber sales, the downpayment may be applied to payment for release of the single payment unit.

If Forest Service makes a determination that this contract should not have been included under increased downpayment requirements (36 CFR 223.49(e)), the downpayment shall be revised and applied in accordance with 36 CFR 223.49(f).

BT4.212 Advance Deposits. Purchaser agrees to make cash deposits in advance of cutting to meet charges under BT4.2.

Forest Service billings for advance cash deposits shall be in such amounts that Timber Sale Account will maintain an unobligated balance that covers the applicable charges for Payment Units Released for Cutting and designated material not included in AT2 expected to be cut within the next 60 days. This advance cash deposit may be reduced to a smaller amount by the terms of BT4.211, BT4.213, BT4.215, and/or BT4.217. Except for amounts required pursuant to BT4.211, BT4.213, and BT4.217, Purchaser shall not be required to make advance deposits above those required under this Item.

When the credit balance in Timber Sale Account is exceeded by the charges for timber within Payment Units Released for Cutting and for the estimated quantity to be cut in 10 days of cutting designated material not included in AT2, Contracting Officer will suspend all or any part of Purchaser's Operations until payment or acceptable payment guarantee is received.

BT4.213 Periodic Payment Schedule. Purchaser shall make periodic payments for stumpage value, as shown in AT16.

In the event Purchaser has not paid the amount(s) stated in AT16 as stumpage for quantity removed by the periodic payment determination date(s), Forest Service shall issue a bill for collection for the difference between the required amount and payments made by Purchaser. If payment(s) fall due on a date other than a normal billing date, the payment date shall be extended to coincide with the next Timber Sale Account billing date.

The amount of the periodic payment(s) will be reduced if the payment(s) would result in Purchaser's credit balance for timber charges exceeding the Current Contract Value.

Only cash may be used for this purpose. No other form of payment is acceptable. Forest Service will apply the payments to subsequent charges on this contract under the terms of BT4.212.

Except for Contract Term Extensions under BT8.23, periodic payment determination date(s) that have not been reached shall be adjusted one day for each additional day of contract time granted.

BT4.214 Deposits for Charges Subject to Escalation. Deposits requested to cover estimated charges for timber subject to escalation under BT3.2 shall

be based upon Current Contract Rates and related deposits in effect during previous calendar quarter.

BT4.215 Deposits When Payment Guaranteed. To the extent payment guarantee is provided under BT4.3, requirements for advance cash deposits under BT4.212 shall be waived for the value of timber on Sale Area that has been Released for Cutting, but not removed, and for the estimated value of products removed from Sale Area for not more than a monthly billing period, subject to the provisions of BT4.4.

BT4.216 Blanket Cash Deposits. Purchaser may make cash deposits under a written agreement to cover charges made under this and other timber sale contracts within the same National Forest. Forest Service shall allocate such deposits to such timber sales. When there is to be no timber cutting hereunder for 30 days or more and payment of current charges has been made, the allocation to this timber sale shall be reallocated to other timber sales within the same National Forest at Purchaser's request. Purchaser shall not start cutting until allocation has again been made to this timber sale.

BT4.217 Extension Deposits. In the event of Contract Term Extension, Forest Service shall divide the difference between Current Contract Value as of the start of any Contract Term Extension and the credit balance of any deposit made pursuant to BT4.213 by the number of whole months remaining in Normal Operating Season(s) within the extension period to determine the amount of each "Extension Deposit."

Purchaser shall make the initial Extension Deposit prior to Forest Service executing the contract modification. In response to Forest Service billing under BT4.21, Purchaser shall make advance cash deposits. Such deposits shall at least equal each Extension Deposit required for each whole month remaining in Normal Operating Season(s) during the extension period. Extension Deposits shall be due by the last day of each month during Normal Operating Season whether or not any Payment Unit is to be released.

Due dates for Extension Deposits during the extension period may be delayed when Purchaser earns Contract Term Adjustment if Termination Date, as adjusted, results in one or more additional complete months within Normal Operating Season(s).

BT4.218 Cooperative Deposits. On a basis of cooperation or assistance (16 USC 572) and by a written agreement, Forest Service shall perform all or portions of the work that Purchaser is obligated to perform under this contract, as well as furnish other services in connection with activities under this contract. When Forest Service is to perform such work, Purchaser shall make one or more deposits to cover the estimated cost of the work. On request of Purchaser, Forest Service shall render monthly accounts, as may be specified in such agreement.

BT4.22 Temporary Reduction of Downpayment. When, under BT8.33, Contracting Officer orders a delay or interruption of Purchaser's Operations for more than 30 days when scheduled operations would be occurring but for the order, the downpayment amount

required shall be temporarily reduced upon the written request of Purchaser or at the discretion of the Contracting Officer. For the period of the delay or interruption, the downpayment on deposit may be reduced to \$1,000 or two (2) percent of the downpayment amount listed in AT15, whichever is larger.

Any downpayment amount temporarily reduced pursuant to this Subsection may be refunded or transferred at the request of Purchaser. However, if Purchaser has outstanding debt owed to the United States, Contracting Officer must apply the amount of downpayment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3701, *et seq.*).

Upon Purchaser's receipt of bill for collection and written notice from Contracting Officer that the basis for the delay or interruption no longer exists, Purchaser shall restore the downpayment to the full amount shown in AT15 within 15 days after the date the bill for collection is issued, subject to the provisions of BT4.4. Purchaser shall not resume contract operations until the downpayment amount is fully restored.

BT4.23 Refund of Excess Cash. If at any time the credit balance of Timber Sale Account exceeds the charges for timber within Payment Units Released for Cutting and for designated material not included in AT2 that Forest Service estimates will be cut within the next 60 days, any portion of such excess that is due to cash in the account shall be refunded, if requested by Purchaser, unless deposited under BT4.211, BT4.213, or BT4.217. If Purchaser plans no cutting within the next 60 days, Forest Service may refund the entire unencumbered cash balance, except as provided in this Subsection. However, Forest Service shall not reduce the credit balance below the total value of partially cut Payment Units and designated material not included in AT2 that is cut before operations cease. After a refund for a shutdown, deposits shall be made to meet the requirements of BT4.212 before additional timber may be cut.

BT4.24 Refund after Final Charges for Released Timber. Any cash deposit, in excess of that required to meet charges under BT4.2, shall be refunded or transferred within 15 days of Purchaser's request after final charges for Included Timber have been made, except for amounts estimated to be required under BT9.5.

BT4.3 Payment Guaranteed by Bond or Deposited Securities. To guarantee payment, Purchaser may furnish and maintain an acceptable surety bond or deposit in a Federal Depository negotiable securities of the United States. The securities shall be deposited through the Regional Fiscal Agent accompanied by a power of attorney and agreement authorizing the bond-approving officer to sell or collect such securities if payment is not made within 15 days of billing by Forest Service. The penal sum of such surety bond or the market value at time of deposit of such negotiable securities shall be the maximum amount of the payment guaranteed.

For payment purposes, penal sum of the surety bond or market value at time of deposit of negotiable securities

shall be in lieu of the performance bond furnished under BT9.1.

BT4.31 Blanket Bond. If Purchaser furnishes an acceptable bond, or deposits securities, in accordance with BT4.3, to guarantee payment for timber from this and other timber sales within the same National Forest, the amount of such bond or deposited securities shall be allocated to such timber sales by Forest Service. When there is to be no timber cutting hereunder for 30 days or more and payment of current charges has been made, the allocation to this timber sale shall be reallocated to other timber sales at Purchaser's request. Purchaser shall not start cutting hereunder until this timber sale receives an allocation that will meet the obligation for payment guarantee.

BT4.32 Letters of Credit for Payment Bond. Notwithstanding the provisions of BT4.3, Purchaser may use letters of credit in lieu of a surety bond for payment bond purposes when approved by Contracting Officer.

BT4.4 Payments Not Received. (a) Payments are due and payable on the date of issue indicated on the bill for collection. When a payment for timber cut and other charges is not received at the location designated by Forest Service by the date allowed in the bill for collection for receipt of payment, Contracting Officer will suspend all or any part of Purchaser's Operations until payment or acceptable payment guarantee is received. Other charges include, but are not limited to:

- (i) Slash disposal and road maintenance deposits;
- (ii) Cooperative work at rates established by specific agreement under BT4.218;
- (iii) Damages pursuant to BT9.4;
- (iv) Road use fees;
- (v) Restoration of downpayment pursuant to BT4.22;
- (vi) Periodic payments pursuant to BT4.213;
- (vii) Extension Deposits pursuant to BT4.217; and
- (viii) Other mandatory deposits.

(b) Failure to pay amounts due by the date allowed in the bill for collection for receipt of payment shall be considered a breach under BT9.3. The 30-day notice period prescribed therein shall begin to run as of the end of business on the date allowed for receipt of payments. If the performance or payment is guaranteed by surety bond, the surety will receive a copy of the written notification of breach. Demand will be made on the surety or other institution providing the guarantee or bond instrument for immediate payment 10 days after issuance of written notification of the breach.

(c) Pursuant to the Debt Collection Improvement Act of 1996, as amended, if payment is not received by Forest Service within 15 days after the date of issue indicated on the bill for collection:

- (i) Simple interest shall be assessed at the higher of the Current Value of Funds Rate or the Prompt Payment Rate as established by the Secretary of the Treasury. Interest will begin to accrue as of the date of issue indicated on the initial bill for collection.

(ii) Debtors will be assessed administrative charges, in addition to the delinquent amount due. Administrative charges are those additional costs incurred by the Government in processing, handling, and collecting delinquent debts.

(iii) A penalty charge of six (6) percent per annum will be assessed on any portion of a debt delinquent more than 90 days. This penalty charge is in addition to interest and administrative charges under paragraphs (c)(i) and (c)(ii). The penalty charge shall accrue from the date of issue indicated on the bill for collection and shall be assessed on all outstanding amounts, including interest and administrative costs assessed under paragraphs (c)(i) and (c)(ii).

(iv) Payments will be credited on the date received by the Federal Depository or Collection Officer designated on the bill for collection.

(d) Forest Service remedies for Purchaser's failure to make payment for timber cut and other charges when due, except for accrual of interest, suspension of all or any part of Purchaser's Operations, and administrative offset, shall be stayed for so long as:

(i) A bona fide dispute exists as to Purchaser's obligation to make such payment and

(ii) Purchaser files and prosecutes a timely Claim.

BT5.0—TRANSPORTATION FACILITIES

BT5.1 Authorization. Purchaser is authorized to construct and maintain roads, bridges, and other transportation facilities, as needed for harvesting Included Timber on National Forest and other lands where Forest Service has such authority. As used in this contract "construct" includes "reconstruct."

Location and construction of Specified Roads shall be in accordance with BT5.2. Unless otherwise provided herein, construction may be progressive during this contract. Maintenance shall be governed by BT5.3. The location and clearing widths of all Temporary Roads or facilities shall be agreed to in writing before construction is started. "Temporary Roads" are roads other than Specified Roads that are constructed by Purchaser for the purpose of harvesting Included Timber.

Purchaser is authorized to cut and use for construction without charge construction timber designated by agreement.

BT5.11 Requirements of Rights-of-Way. Purchaser's road construction and use of rights-of-way identified in attached list or CT5.11 shall be confined to rights-of-way and limited by the related easements and stipulations, if any, unless Purchaser makes other arrangements that will not infringe upon or adversely affect the grantee's rights. Easements or right-of-way documents are available in the offices of the Forest Supervisor and District Ranger.

BT5.12 Use of Roads by Purchaser. Except as provided herein, Purchaser is authorized to use existing National Forest system roads and Specified Roads listed in AT7, when Forest Service determines that such use

will not cause damage to the roads or National Forest resources.

If Purchaser's use of an existing temporary or National Forest system road, not listed in AT7, cannot be satisfactorily accommodated without reconstruction, Purchaser shall be authorized to use such road upon agreement as to the minimum reconstruction work that Purchaser shall perform before hauling. When appropriate, such road shall be included in AT7 as an alternate facility under BT5.26.

CT5.12 lists existing roads shown on Sale Area Map that for such reasons as limitations in structural capacity, safety, and protection of soil, water, and roads:

(a) Cannot be used for log hauling or

(b) May be used only under the restrictive limitations stated therein.

BT5.2 Specified Roads. "Specified Roads" are roads, including related transportation facilities and appurtenances, shown on Sale Area Map and listed in AT7. Purchaser shall construct Specified Roads used under this contract. Construction initiated by Purchaser on any such Specified Road shall be completed to an agreed terminus that meets Purchaser's needs and prevents unnecessary impact on National Forest resources. Construction to such terminus shall be in full accordance with Plans and specifications and the Schedule of Items identified in AT7 or specifications attached hereto, except for agreed adjustments needed to accommodate such terminus. The "Schedule of Items" is a list and description of construction items, quantities, units of measure, methods of measurement, unit price, and total amount. Forest Service shall revise the Schedule of Items to show the estimated cost for the portion constructed to the revised terminus as a separate segment.

A Temporary Road shall not be constructed substantially on the location for a Specified Road, except by agreement.

In event of agreed substitution or revision of construction design, specifications, or performance responsibility under BT5.212, BT5.25, BT5.26, or CT5.215, AT7 shall be modified. If Purchaser does not need a Specified Road or a portion of a Specified Road for harvesting Included Timber and the Specified Road is not constructed, the deletion of the road or road segment will be a mutually agreed Design Change and Timber Sale Account will be adjusted for the reduction in cost, as provided in BT5.25.

References in the contract to specifications, standards, or test methods adopted by the American Association of State Highway and Transportation Officials (AASHTO), American Society for Testing and Materials (ASTM), General Services Administration (GSA), or other recognized national technical associations shall mean specifications, standards, or test methods, including interim or tentative issues, that are in effect on the date of timber sale advertisement.

BT5.21 Engineering. Forest Service completed survey and design for Specified Roads prior to timber sale advertisement, unless otherwise shown in AT8 or

Purchaser survey and design are specified in AT7. On those roads for which Forest Service completes the design during the contract, the design quantities shall be used as the basis for revising estimated costs stated in the Schedule of Items and adjusting Timber Sale Account.

Forest Service engineering shall be completed according to the schedule in AT8. Should Forest Service be unable to perform the designated survey and design by the completion date or other agreed to time, upon written agreement, Purchaser shall assume responsibility for such work. In such event, Contracting Officer shall revise:

(a) AT7 to show Purchaser's performance responsibility.

(b) The Schedule of Items to include costs of survey and design, as provided under BT5.24, and adjust Timber Sale Account, as provided in BT5.25. Forest Service shall calculate such costs, using unit rates comparable with those used in the Schedule of Items.

Purchaser shall furnish a schedule to Forest Service of specific dates for the start of construction. The schedule of construction shall be submitted to Forest Service for approval within 60 days after contract award and prior to beginning work. Purchaser's construction schedule shall reflect Forest Service survey and design completion dates. Forest Service may agree to Purchaser's request for an alternate date for starting construction.

Purchaser shall perform survey, design, and construction staking of Specified Roads to be engineered by Purchaser in accordance with specifications attached hereto. Based upon the quantities developed by such design, as approved by Forest Service, Contracting Officer shall revise the estimated costs stated in the Schedule of Items and adjust Timber Sale Account. The methods of computing such revised costs shall be consistent with the methods that would have been used had the engineering been performed prior to timber sale advertisement.

BT5.211 Contract Plans. "Plans" are documents that show location, details, and dimensions of the work to be performed. On any of the contract Plans where a portion of the work is drawn out and the remainder is shown in outline, the parts drawn out shall apply to all other like portions of the work.

"Shop Drawings" include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, lists or tables, performance and test data, and similar materials furnished by Purchaser to explain in detail specific portions of the work required by the contract. Purchaser shall submit a minimum of five (5) sets of required Shop Drawings to Forest Service, three (3) sets of which will be retained by Forest Service. Shop Drawings shall not exceed 24 inches by 36 inches in size. Approval or rejection and date will be noted or stamped on each set. Unless agreed otherwise, Forest Service shall approve or reject the Shop Drawings within 10 days of submission. Such approval of the Shop Drawings shall not be construed as a complete check, but will indicate

only that the general method of construction and detailing is satisfactory. If the Shop Drawings are rejected, Purchaser must make the noted revisions and resubmit the Shop Drawings.

A change in the amount of construction work that exceeds construction tolerances specified in the specifications identified in AT7 caused by a Forest Service error in construction staking shall be treated as a Design Change. When incompatible situations arise between Plans, specifications, and actual conditions on the ground, Purchaser shall make corrections pursuant to BT5.253.

BT5.212 Construction Staking. Purchaser shall avoid careless or negligent damage to construction stakes, flags, or marks. If such damage occurs, Purchaser shall be required to replace stakes necessary to construction. Purchaser's replacement staking shall be approved by Forest Service. Alternatively, upon Purchaser's request, Contracting Officer may agree to perform such work under BT4.218.

When AT7 shows that construction stakes are to be set by Forest Service after clearing, Purchaser shall submit to Forest Service a written schedule for clearing, construction staking, and construction that will provide Forest Service a reasonable period for setting construction stakes. Time for setting construction stakes may be modified by written agreement.

If Forest Service performs construction staking for Specified Roads, timing of such staking shall permit Purchaser's clearing and other construction activity to proceed without hindrance or delay, provided Purchaser's construction activity is reasonably consistent with needs identified in Purchaser's Operating Schedule or amendments thereto.

Should Forest Service be unable to perform construction staking in such reasonable period, upon written agreement, Purchaser shall assume the responsibility for construction staking for agreed upon portions of Specified Roads. In such event, Contracting Officer shall revise:

(a) AT7 to show Purchaser's performance responsibility.

(b) The Schedule of Items to include costs of construction staking, as provided under BT5.24, and adjust Timber Sale Account, as provided in BT5.25. Forest Service shall calculate such costs, using unit rates comparable with those used in the Schedule of Items.

BT5.22 Material Delivery. Within 60 days after award date, Purchaser shall provide Forest Service a written schedule showing the desired delivery dates of any material to be supplied by Forest Service. With reasonable notice, schedule may be amended by agreement. Forest Service agrees to make delivery within 15 days after the scheduled delivery dates that are at least 60 days after the schedule is submitted, unless prevented by causes beyond control of Forest Service.

If Purchaser does not provide Forest Service the written schedule within the period provided in this Subsection, Forest Service agrees to make delivery within 90 days after a late schedule is submitted, unless

prevented by causes beyond control of Forest Service. After delivery to and written receipt by Purchaser, Purchaser is responsible for installation of needed material and for any loss of or damage to such material due to Purchaser's negligence prior to installation or return of unused material to Forest Service.

At Purchaser's option, Forest Service deliveries shall be to Purchaser's storage area, as agreed, or to the nearest practicable point to the job site along existing roads. Unused material shall be returned to Forest Service at location of delivery, unless agreed otherwise.

BT5.23 Use of Partially Constructed Roads.

Unless Contracting Officer determines that there is justification under existing conditions and ground conditions permit hauling without undue damage, portions of Specified Roads shall be Substantially Completed prior to their use for hauling timber. When necessary to facilitate construction and protect bridges and roads from damage, timber felled in construction and timber logged directly to the road from areas immediately adjacent thereto may be hauled before road construction is Substantially Completed. Such hauling shall be confined to periods when abnormal soil erosion and damage to National Forest lands will not result.

"Substantially Completed" means:

- (a) Completion of grading and installation of drainage structures so they will function effectively and
- (b) Laying the specified depth of base course, if any.

No more than half of Included Timber to be hauled over such portions of road shall be hauled until the base course has been applied.

Unless agreed otherwise, specified reconstruction shall be completed on any portion of road prior to hauling on that portion.

BT5.24 Estimated Cost. Estimated costs by construction phases for Specified Roads listed in AT7 are stated by segments in the Schedule of Items. Such estimated costs are subject to adjustment under BT3.3, BT5.2, BT5.21, BT5.212, BT5.25, and BT5.26. Appropriately adjusted costs shall be made a part of a revised Schedule of Items and shown as adjustments to Timber Sale Account. The revised Schedule of Items shall supersede any prior Schedule of Items when it is dated and signed by Contracting Officer and a copy is furnished to Purchaser.

BT5.25 Construction Cost Adjustment.

Contracting Officer, as provided in BT5.21, BT5.212, BT5.251, BT5.252, and BT5.253, shall adjust Specified Road construction cost estimates in the Schedule of Items and show the adjustments as credits or debits to Timber Sale Account in the month when the road segment is accepted.

BT5.251 Variation in Quantities. (a) This Item applies only to differences between quantities shown in the Schedule of Items and measured quantities actually constructed and accepted that are not covered under BT5.252 or BT5.253. Only changes in quantities where other than contract quantity or lump sum is specified in the Schedule of Items are subject to this Item.

(b) Adjustments to the Specified Road construction cost for variation in quantities shall be computed at unit rates established in the Schedule of Items for units of work actually constructed and measured in accordance with specified method of measurement shown in the Schedule of Items and described in the specifications identified in AT7, except that:

(i) When quantity of authorized work performed or material furnished by Purchaser, under any item shown in the Schedule of Items and covered by this Item, is more than 115 percent of original quantity, use Current Unit Rates to calculate the adjustment for that portion of work above 115 percent of original quantity.

(ii) When quantity of authorized work performed or material furnished by Purchaser, under any item shown in the Schedule of Items and covered by this Item, is less than 85 percent of original quantity, Forest Service shall make a revised estimate of cost for such work. Any revised estimate shall use the same procedures as those used in original estimates using rates comparable to those used in computing the most recent cost estimate for the timber sale. The revised cost estimate shall take into account any increase or decrease in unit rates that results from a reduction in quantity of work.

(c) "Current Unit Rates" are Forest Service estimates of the unit rates for doing the work at the time the adjustment is approved.

BT5.252 Physical Change. (a) Forest Service shall adjust the Specified Road construction cost if, prior to acceptance under BT6.36, a physical change, caused by a single event and not due to negligence of Purchaser, results in an increase or decrease in work and/or materials furnished by Purchaser involving additional estimated cost of:

(i) More than \$10,000 or

(ii) More than 10 percent of total Specified Road construction cost, whichever is less.

(b) Increases to the Specified Road construction cost shall include cumulative estimated costs of repairing damage from things such as slides, washouts, landslips, and fire. Plans and specifications shall be revised when necessary to meet new conditions. Quantities of work and/or materials determined from such revised Plans and specifications, together with estimated quantities of work and/or materials abandoned, shall be the basis for the revised Specified Road construction cost.

(c) Forest Service shall determine difference in quantities for portions of Specified Road affected by physical change by comparing most recent previous quantities with total of:

(i) Estimated quantities actually constructed prior to physical change, including work abandoned, and

(ii) Estimated quantities to be constructed following physical change.

(d) Forest Service shall calculate the amount of increase to the Specified Road construction cost by applying:

(i) Current Unit Rates to differences when quantities increase and

(ii) Unit rates comparable to those used in computing most recent cost estimate for the timber sale when quantities decrease.

(e) When quantity of authorized work to be performed or material furnished by Purchaser, under any item shown in the Schedule of Items, is reduced to less than 85 percent of original quantity, Forest Service shall make a revised estimate of cost for such work and adjust the Specified Road construction cost. Any revised estimate shall use the same procedures as those used in the original estimates using rates comparable to those used in the most recent cost estimate for the timber sale. The revised estimate shall take into account any increase or decrease in unit rates that results from a reduction in quantity of work.

BT5.253 Design Change. (a) "Design Change" is a change in work and/or materials shown in the Schedule of Items and described in Plans or specifications that has been mutually agreed to in writing or ordered by Contracting Officer. Changes of a minor nature (such as adjustment in horizontal and vertical alignment, that do not exceed specified tolerance, necessary to maintain or balance earthwork quantities substantially as designed) and variation in quantities, as described in BT5.251, shall not be considered Design Changes.

(b) Additions, deletions, or changes in types or diameter of culverts shown in Plans and changes in designated water sources shown on Plans shall be considered Design Changes.

(c) Forest Service may, by written notice from Contracting Officer, order changes in work to be performed and/or materials to be furnished by Purchaser within general scope of the contract. Such work shall:

(i) Be due to differences between anticipated and actual field conditions,

(ii) Be necessary to construct Specified Roads to design standards, or

(iii) Be necessary to assure stability of Specified Roads.

(d) In addition, Contracting Officer may include work to protect resource values in ordered Design Changes. Such work must be related to construction of Specified Roads and be necessary to prevent damage to soil and water values immediately tributary to Specified Roads. Other Design Changes may be made by mutual written agreement.

(e) Forest Service shall revise Plans and specifications as necessary to meet new conditions. Quantities of work and/or materials determined from such revised Plans and specifications, together with quantities of work and/or materials abandoned, shall be the basis for adjusting the Specified Road construction cost.

(f) Forest Service shall determine the difference in quantities for the portion of Specified Road affected by Design Change by comparing the most recent previous quantities with the total of:

(i) Estimated quantities actually constructed prior to Design Change and

(ii) Estimated quantities to be constructed following Design Change.

(g) Calculate the amount of adjustment to the Specified Road construction cost by applying:

(i) Current Unit Rates to difference when quantities increase and

(ii) Unit rates comparable to those used in computing most recent cost estimates of the timber sale when quantities decrease.

(h) When quantity of authorized work to be performed or material furnished by Purchaser, under any item shown in the Schedule of Items, is reduced to less than 85 percent of original quantity, Forest Service shall make a revised estimate of cost of such work and adjust the Specified Road construction cost. Any revised estimate shall use the same procedures as those used in original estimates using rates comparable to those used in the most recent cost estimate for the timber sale. The revised estimate shall take into account any increase or decrease in unit rates that results from a reduction in quantity of work.

BT5.26 Alternate Facilities. If under Purchaser's Operating Schedule, roads needed for the removal of Included Timber differ substantially from Specified Roads, other roads may be added to AT7. Contracting Officer shall assure that road routing, location, design, and needed easements will make such other roads acceptable as parts of the National Forest transportation facilities. Purchaser shall provide survey, design, and construction staking for such other roads.

Based on design quantities from such engineering, Forest Service shall estimate Specified Road construction costs of alternate facilities, using methods consistent with those used in the original computation of the Schedule of Items. If Specified Road construction costs for acceptable alternate facilities are less than the estimated costs of facilities listed in the original Schedule of Items that Purchaser does not construct, Timber Sale Account shall be adjusted by Forest Service to reflect the reduction in costs. In event of rate redetermination under BT3.3, such allowed costs shall be the redetermined estimated costs of facilities listed in the original Schedule of Items that Purchaser does not construct.

BT5.27 Temporary Credit for Unamortized Specified Road Construction Cost. When, under BT8.33, Contracting Officer orders a delay or interruption of Purchaser's Operations for more than 30 days when scheduled operations would be occurring but for the order, the Contracting Officer shall credit the unamortized cost of Specified Roads to Purchaser's Timber Sale Account, upon the written request of Purchaser or at the discretion of Contracting Officer. The amount credited to Purchaser shall be limited to stumpage paid above Base Rates.

Any Specified Road construction cost credited to Purchaser pursuant to this Subsection may be refunded or transferred at the request of Purchaser. However, if Purchaser has outstanding debt owed the United States,

Contracting Officer must apply the amount of credit that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act of 1996, as amended.

Upon written notice from Contracting Officer that the basis for the delay or interruption no longer exists, Purchaser shall pay for timber a per unit amount, in addition to Current Contract Rates, that is equal to the amount credited to Purchaser's Timber Sale Account divided by 80 percent of the estimated remaining volume of the contract, until the full amount credited to Purchaser has been returned.

BT5.3 Road Maintenance. Purchaser shall maintain roads, commensurate with Purchaser's use, in accordance with Road Maintenance Requirements in CT5.31 and the Road Maintenance Specifications. Performance of road maintenance work by Purchaser may be required prior to, during, or after each period of use. The timing of work accomplishment shall be based on Purchaser's Operating Schedule under BT6.31.

When two or more commercial users are simultaneously using the same road where Forest Service is not requiring maintenance deposits, the commercial users will develop maintenance responsibilities and arrangements for accomplishing the work. Forest Service must agree to this plan. If the commercial users cannot agree on maintenance responsibilities, Forest Service shall resolve the differences.

If Purchaser elects to use different roads than those listed in CT5.31, Forest Service shall determine Purchaser's commensurate share of road maintenance and revise road maintenance deposits in CT5.32.

If Forest Service cannot perform its full commensurate share of road maintenance, Forest Service shall make a cash payment to Purchaser for performance of such work.

Unless agreed in writing, prehaul maintenance shall be completed on any portion of road prior to hauling on that portion. Maintenance, as used in this contract, does not include road reconstruction or repairs of an extraordinary nature.

BT5.4 Use by Others. Forest Service shall have the right to use any road constructed by Purchaser under this contract for any and all purposes in connection with the protection and administration of the National Forest. Other parties, in connection with the logging of tributary National Forest timber, may use roads constructed by Purchaser hereunder when Contracting Officer determines that such use will not materially interfere with Purchaser's Operations. Third party use shall be contingent upon Contracting Officer determining, and third party agreeing to pay, a fair share of maintenance cost commensurate with such commercial use.

Unless otherwise provided in CT5.4, Forest Service shall authorize other uses of roads constructed by Purchaser hereunder only if:

(a) Contracting Officer makes appropriate arrangements to relieve Purchaser of related maintenance costs commensurate with such other uses and

(b) Such other uses will not materially interfere with Purchaser's Operations.

Where Purchaser reconstructs a road having established use, Purchaser's use during reconstruction and thereafter shall be such as to reasonably accommodate such established use. Contracting Officer shall ensure that other users do not materially interfere with Purchaser's right to use such reconstructed road.

BT6.0—OPERATIONS

BT6.1 Representatives. Unless otherwise agreed, Purchaser shall designate, in writing, a representative who is authorized to receive notices in regard to performance under this contract and take related action. In no case shall Purchaser designate any representative to this contract who is currently debarred, proposed for debarment, or suspended by the Federal Government. Purchaser's representative shall provide a copy of the contract to Purchaser's field supervisor and persons authorized to assume responsibilities in the field supervisor's absence. Prior to initial operations and after shutdowns of 10 days or more, Purchaser's representative shall notify Forest Service 2 days, excluding weekends and Federal holidays before any operations begin on Sale Area.

Purchaser's representative shall designate, in writing, a field supervisor, one of whose responsibilities shall be on-the-ground direction and supervision of Purchaser's Operations. The field supervisor shall be readily available to the area of operations when operations are in progress and shall be authorized to receive notices in regard to performance under this contract and take related action. The responsibilities of the field supervisor shall include the safeguarding of National Forest resources and performance within the terms of the contract. Purchaser representative will furnish Forest Service with names of persons authorized to assume responsibilities in field supervisor's absence. Such delegations may be made a part of Purchaser's annual Operating Schedule under BT6.31.

Unless Contracting Officer designates another Forest Service representative and notifies Purchaser in writing, the District Ranger is the representative of Forest Service. Forest Service representative shall:

(a) Receive notice in regard to performance under this contract,

(b) Take action in relation to this contract, and

(c) Be readily available to the area of construction and logging operations.

Contracting Officer or Forest Service representative shall designate other on-the-ground representatives in writing along with their specific contractual responsibilities and authority. Representatives with authority delegated in writing are the only Forest Service personnel authorized to provide notice or take related actions under the contract. Such delegation shall be made within 30 days of receipt of Purchaser's Plan of Operations.

BT6.11 Notices. Notices by either party as to action taken or to be taken by the other respecting this contract shall be made in writing to the other party's designated representative.

BT6.2 Improvements. Purchaser is authorized to construct on National Forest land, buildings, facilities, and other improvements needed to log Included Timber. Such construction shall be located where approved in writing by Forest Service and shall be constructed and used in a manner that will protect National Forest values.

Purchaser shall comply with the rules and regulations governing the operation of premises that are occupied and shall perform the contract in a manner that will not interrupt or interfere with the conduct of Forest Service business.

Forest Service shall grant written permission before any camp, quarry, borrow pit, storage, or service area, other than as shown on Plans, is opened or operated on National Forest land or administered lands. A camp is interpreted to include the campsite or trailer parking area of any employee, agent contractor, Subcontractor or their employees or agents working on the project for Purchaser. Such permission, if granted, shall be without charge to Purchaser.

BT6.21 Removal. Unless Forest Service authorizes continued use, Purchaser shall remove or dispose of all improvements when no longer needed. Should Purchaser fail to remove or dispose of improvements within 6 months after Termination Date, Forest Service may dispose of improvements at Purchaser's expense under BT9.5 or may, upon written notice to Purchaser, assume title to improvements in the name of the United States. In the latter event, Purchaser shall not be required to remove such improvements.

BT6.22 Protection of Improvements. So far as practicable, Purchaser shall protect Specified Roads and other improvements (such as roads, trails, telephone lines, ditches, and fences):

- (a) Existing in the operating area,
- (b) Determined to have a continuing need or use, and
- (c) Designated on Sale Area Map.

Purchaser shall keep roads and trails needed for fire protection or other purposes and designated on Sale Area Map reasonably free of equipment and products, slash, and debris resulting from Purchaser's Operations. Purchaser shall make timely restoration of any such improvements damaged by Purchaser's Operations and, when necessary because of such operations, shall move such improvements, as specified in CT6.22.

BT6.221 Protection of Improvements Not Owned by Forest Service. Forest Service will notify all utility companies, or other parties affected, and make arrangements for all necessary adjustments of the public utility fixtures, pipelines, and other appurtenances likely to be affected by Purchaser's Operations.

When Purchaser's Operations are adjacent to properties of railway, telephone, or power companies, or other property, work shall not begin until Purchaser has identified actions necessary to prevent damage.

Purchaser shall cooperate with the owners of any underground or overhead utility lines in their removal and/or rearrangement operations in order that these operations may progress in a reasonable manner, utility duplication

or rearrangement work may be reduced to a minimum, and services shall not be unnecessarily interrupted.

In the event of interruption to utility services because of accidental breakage or as a result of lines being exposed or unsupported, Purchaser shall promptly notify the proper authority and shall cooperate with that authority in the restoration of service until the service is restored.

When materials are to be hauled across the tracks of any railway, Forest Service will make arrangements with the railroad for the use of any existing crossing or for any new crossing required. Purchaser shall make arrangements for use of alternate crossings. All construction work to be performed by Purchaser on the railroad right-of-way shall not damage railroad company's property.

BT6.222 Protection of Property. In construction and reconstruction of Specified Roads, Purchaser shall not unnecessarily remove, deface, injure, or destroy trees, shrubs, or other natural features, unless specifically authorized. To the extent practicable, Purchaser shall confine operations to within the clearing limit or other areas designated in the contract and prevent the depositing of rocks, excavated materials, stumps, or other debris outside these limits.

Material that falls outside these limits shall be retrieved, disposed of, or incorporated in the work to the extent practicable and necessary to protect adjacent resource values, unless otherwise agreed.

BT6.23 Protection of Land Survey Monuments. Forest Service shall appropriately designate on the ground all known survey monuments, section corners, and other corner accessories. Forest Service shall post identifying signs on two sides of each known bearing tree.

Forest Service shall arrange protective or perpetuate action that does not cause unnecessary delay to Purchaser in authorized clearings, such as Clearcutting Units and road construction, and in other instances where damage to monuments, section corners, and other corner accessories is unavoidable.

Purchaser shall protect all known survey monuments, witness corners, reference monuments, and bearing trees against avoidable destruction, obliteration, or damage during Purchaser's Operations. If any known monuments, corners, or accessories are destroyed, obliterated, or damaged by Purchaser's Operations, Purchaser shall hire the appropriate county surveyor or a registered land surveyor to reestablish or restore at the same location the monuments, corners, or accessories. Such surveyors shall use procedures in accordance with the Bureau of Land Management "Manual of Instructions for the Survey of the Public Lands of the United States" for General Land Office surveys and in accordance with State law for others. Purchaser shall record such survey in appropriate county records.

BT6.24 Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources. (a) Areas, known by Forest Service prior to timber sale advertisement, needing special measures for the protection of plants, animals, cultural resources, and/or cave resources are shown on Sale Area Map

and/or identified on the ground, and shall be treated as follows:

(i) Unless agreed otherwise, wheeled or track laying equipment shall not be operated in areas identified as needing special measures except on roads, landings, tractor roads, or skid trails approved under BT5.1 or BT6.422. Purchaser may be required to backblade skid trails and other ground disturbed by Purchaser's Operations within such areas in lieu of cross ditching required under BT6.6. Additional special protection measures needed to protect such known areas are identified in CT6.24.

(ii) Unless agreed otherwise, trees will not be felled into areas identified as needing special measures.

(iii) Purchaser shall conduct operations in a manner that does not damage or disturb identified areas. In the event that protective measures identified by the Forest Service are for any reason inadequate, Contracting Officer may delay or interrupt Purchaser's operations, under this Contract, and/or modify this Contract pursuant to BT8.33.

(iv) Purchaser shall immediately notify the Forest Service if its operations disturb or damage any area identified as needing special protection, and shall immediately halt its operations in the vicinity of such area until the Forest Service authorizes continued operations. In the event that Purchaser's operations disturb or damage an area identified as needing special protection, then Purchaser shall reimburse the Forest Service for the full cost and expense of any evaluative and remedial measures undertaken by the Forest Service in connection with such disturbance or damage. Such payment shall not relieve Purchaser from civil or criminal liability under applicable law.

(b) Nothing contained in this Subsection shall establish, or be deemed to establish any express or implied warranty on the part of the Forest Service (i) that the Forest Service has identified all areas within the Sale Area requiring special protection, or (ii) that measures prescribed by the Forest Service for protection of such areas are adequate.

(c) Following sale advertisement, additional areas needing special measures for protection may be discovered or identified; protective measures may be revised or newly prescribed; and, additional species of plants and/or animals may be added to federal lists of protected species. In such event, Contracting Officer may delay or interrupt Purchaser's operations, under this Contract, and/or modify this Contract pursuant to BT8.33.

(d) Discovery, by either the Purchaser or the Forest Service, of additional areas, resources, species, or members of species needing special protection shall be promptly reported to the other party.

BT6.3 Control of Operations. Under this contract, "Purchaser's Operations" shall include activities of or use of equipment of Purchaser, Purchaser's employees, agents, contractors, Subcontractors, or their employees or agents, acting in the course of their employment in operations hereunder on National Forest lands or within

Forest Service protection boundary (unless acting under the immediate supervision of Forest Service).

Purchaser's Operations shall be conducted in a workmanlike and orderly manner. The timing of required Forest Service designation of work on the ground and the performance of other Forest Service work shall not be such as to cause unnecessary delay to Purchaser.

"Release for Cutting" is written authorization to Purchaser to begin cutting in a Payment Unit. Upon Purchaser's request for release of a Payment Unit, Forest Service shall either:

(a) Give tentative approval and bill Purchaser as necessary under BT4.21 or

(b) Reject the request, stating reasons for rejection.

When payment or payment guarantee has been confirmed, Forest Service shall issue Release for Cutting within 10 days. Purchaser shall not cut timber in any Payment Unit until it is Released for Cutting.

BT6.31 Operating Schedule. Purchaser shall, before commencing operations, provide in writing an annual Operating Schedule of anticipated major activities and needs for logging Included Timber, such as logging, road maintenance, and construction, including construction staking under BT5.212 and material delivery under BT5.22. Upon reasonable notice to Forest Service, such schedule shall be subject to modifications necessitated by weather, markets, or other unpredictable circumstances.

Subject to BT6.6 and when the requirements of BT6.66 are met, Purchaser's Operations may be conducted outside Normal Operating Season. "Normal Operating Season" is the period(s) beginning and ending on the dates stated in AT13 of any year.

BT6.311 Plan of Operations. For timber sales with 2 or more years between award date and Termination Date, within 60 days of final award of contract, Purchaser shall furnish Forest Service a written general Plan of Operations that shall be in addition to the annual Operating Schedule required under BT6.31. The Plan of Operations shall set forth planned periods for and methods of road construction, timber harvesting, and completion of slash disposal, erosion control measures, and other contractual requirements. Forest Service written approval of the Plan of Operations is prerequisite to commencement of Purchaser's Operations. Purchaser may revise this Plan of Operations when necessitated by weather, markets, or other unpredictable circumstances, subject to approval of Contracting Officer. In the event of delays beyond the control of Purchaser that qualify for Contract Term Adjustment, the Plan of Operations shall be adjusted by mutual agreement to accommodate the adjusted contract period.

BT6.312 Plan of Operations for Road Construction. Annually, prior to start of construction, Purchaser shall submit a supplement to the Plan of Operations that shall include a schedule of proposed progress and a description of planned measures to be taken to provide erosion control for work in progress, including special measures to be taken on any segments of construction not Substantially Completed prior to periods of seasonal precipitation or runoff. Purchaser shall submit a

revised schedule when Purchaser proposes a significant deviation from the progress schedule.

Prior to beginning construction on any portion of Specified Roads identified as sensitive on Plans, Purchaser and Forest Service shall agree on proposed method of construction.

BT6.32 Protection of Residual Trees. Purchaser's Operations shall not unnecessarily damage young growth or other trees to be reserved.

BT6.33 Safety. Purchaser's Operations shall facilitate Forest Service's safe and practical inspection of Purchaser's Operations and conduct of other official duties on Sale Area. Purchaser has all responsibility for compliance with safety requirements for Purchaser's employees.

In the event that Contracting Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract shall be modified and Purchaser may request an adjustment in Current Contract Rates to compensate for the changed conditions.

Unless otherwise agreed in writing, when Purchaser's Operations are in progress adjacent to or on Forest Service controlled roads and trails open to public travel, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warning of hazardous or potentially hazardous conditions associated with Purchaser's Operations. Purchaser and Forest Service shall agree to a specific Traffic Control Plan for each individual project prior to commencing operations. Devices shall be appropriate to current conditions and shall be covered or removed when not needed. Except as otherwise agreed, flagmen and devices shall be as specified in the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD) and as shown on Plans, Sale Area Map, Traffic Control Plan, or in specifications attached hereto.

BT6.34 Sanitation and Servicing. Purchaser shall take all reasonable precautions to prevent pollution of air, soil, and water by Purchaser's Operations. If facilities for employees are established on Sale Area, they shall be operated in a sanitary manner. In the event that Purchaser's Operations or servicing of equipment result in pollution to soil or water, Purchaser shall conduct cleanup and restoration of the polluted site to the satisfaction of Forest Service.

Purchaser shall maintain all equipment operating on Sale Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. Purchaser shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. Purchaser shall furnish oil-absorbing mats for use under all stationary equipment or equipment being serviced to prevent leaking or spilled petroleum-based products from contaminating soil and water resources. Purchaser shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily

bags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.

BT6.341 Prevention of Oil Spills. If Purchaser maintains storage facilities for oil or oil products on Sale Area, Purchaser shall take appropriate preventive measures to ensure that any spill of such oil or oil products does not enter any stream or other waters of the United States or any of the individual States.

If the total oil or oil products storage exceeds 1,320 gallons in containers of 55 gallons or greater, Purchaser shall prepare a Spill Prevention Control and Countermeasures Plan. Such plan shall meet applicable EPA requirements (40 CFR 112), including certification by a registered professional engineer.

Purchaser shall notify Contracting Officer and appropriate agencies of all reportable (40 CFR 110) spills of oil or oil products on or in the vicinity of Sale Area that are caused by Purchaser's employees, agents, contractors, Subcontractors, or their employees or agents directly or indirectly, as a result of Purchaser's Operations. Purchaser will take whatever initial action may be safely accomplished to contain all spills.

BT6.342 Hazardous Substances. Purchaser shall notify the National Response Center and Contracting Officer of all releases of reportable quantities of hazardous substances on or in the vicinity of Sale Area that are caused by Purchaser's employees, agents, contractors, Subcontractors, or their employees or agents, directly or indirectly, as a result of Purchaser's Operations, in accordance with 40 CFR 302.

BT6.35 Equipment Cleaning. (a) Areas, known by Forest Service prior to timber sale advertisement, that are infested with invasive species of concern are shown on Sale Area Map. A current list of invasive species of concern and a map showing the extent of known infestations is available at the Forest Supervisor's Office. For purposes of this provision, "Off-Road Equipment" includes all logging and construction machinery, except for log trucks, chip vans, service vehicles, water trucks, pickup trucks, cars, and similar vehicles.

(b) Purchaser shall adhere to the following requirements with regard to cleaning "Off-Road Equipment":

(i) Prior to moving Off-Road Equipment onto the Sale Area, Purchaser shall identify the location of the equipment's most recent operation. Purchaser shall not move any Off-Road Equipment that last operated in an area infested with one or more invasive species of concern onto Sale Area without having cleaned such equipment of seeds, soil, vegetative matter, and other debris that could contain or hold seeds, and having notified Forest Service, as provided in (iii). If the location of prior operation cannot be identified, then Purchaser shall assume that the location is infested with invasive species of concern.

(ii) Prior to moving Off-Road Equipment from a cutting unit that is shown on Sale Area Map to be infested with invasive species of concern to, or through any other area that is shown as being free of invasive species of

concern, or infested with a different invasive species, Purchaser shall clean such equipment of seeds, soil, vegetative matter, and other debris that could contain or hold seeds, and shall notify the Forest Service, as provided in (iii).

(iii) Prior to moving any Off-Road Equipment subject to the cleaning requirements set forth above, Purchaser shall advise Forest Service of its cleaning measures and make the equipment available for inspection. Forest Service shall have 2 days, excluding weekends and Federal holidays, to inspect equipment after it has been made available. After satisfactory inspection or after such 2 day period, Purchaser may move the equipment as planned. Equipment shall be considered clean when a visual inspection does not disclose seeds, soil, vegetative matter, and other debris that could contain or hold seeds. Purchaser shall not be required to disassemble equipment unless so directed by the Forest Service after inspection.

(iv) If Purchaser desires to clean Off-Road Equipment on National Forest land, such as at the end of a project or prior to moving to, or through an area that is free of invasive species of concern, Purchaser shall obtain prior approval from Contracting Officer as to the location for such cleaning and measures, if any, for controlling impacts.

(v) Contracting Officer may order delay, interruption, or modification of this Contract pursuant to BT8.33.

(c) Nothing contained in this Subsection shall be interpreted as creating any warranty on the part of the Forest Service that all locations of invasive species of concern have been described herein, elsewhere in this Contract, or designated on the ground. Following sale advertisement, additional locations may be described or designated, and other species may be added to the list of invasive species of concern. In such event, Contracting Officer may order delay, interruption, or modification of this Contract pursuant to BT8.33.

(d) The parties shall promptly communicate with one another with respect to description or designation of additional locations; discovery of locations of new species or new infestation; and, addition of species to the list of invasive species of concern.

BT6.36 Acceptance of Work. Upon Purchaser's written request and assurance that work has been completed, Forest Service shall perform an inspection within 5 days, excluding weekends and Federal holidays, so as not to delay unnecessarily the progress of Purchaser's Operations. Such a request may be for acceptance of:

(a) Any reasonable portion of Specified Road listed in the Schedule of Items;

(b) Specific requirements on a Payment Unit (such as logging, slash disposal, erosion control, or snag felling); or

(c) All contract requirements on a Payment Unit.

Forest Service may perform such inspections without request from Purchaser.

Within 2 days of inspection, excluding weekends and Federal holidays, Forest Service shall furnish Purchaser

with written notice either of acceptance or of work remaining to be done.

In the event that Forest Service is unable to make such inspection within 5 days of Purchaser's request, Purchaser shall be notified in writing of necessity for postponement and time when inspection can be made. The same final approval procedure shall be used at the end of Purchaser's construction period on any completed portion of road.

When all contractual work of Purchaser has been accepted for any Payment Unit or cutting unit identified on Sale Area Map, Payment Unit or cutting unit shall be eliminated from Sale Area on written notice of either party to this contract.

BT6.361 Acceptance of Specified Roads. Specified Road work may be accepted subject to completion of clearing work that does not affect the road structure when completion is delayed for reasons beyond control of Purchaser, such as adverse weather.

Specified Road work may be accepted subject to completion of planting and seeding for soil stabilization when completion is delayed for reasons beyond control of Purchaser, such as seasonal limitations. Purchaser shall complete planting or seeding on such road during the next suitable planting season.

Specified Road work may be conditionally accepted prior to the application of dust palliatives when application is not necessary to prevent dusting of the road surface due to climatic conditions. Purchaser shall apply dust palliative on such roads prior to use during periods when dusting may occur.

Prior to request for final inspection, Specified Road work, roadways, borrow pits, and quarries, occupied and no longer needed by Purchaser in connection with Purchaser's Operations, shall be cleared of all rubbish, excess materials, and temporary structures.

BT6.4 Conduct of Logging. Unless otherwise specifically provided herein, Purchaser shall fell trees designated for cutting and shall remove the portions that meet Utilization Standards, as provided in BT2.2, prior to acceptance of Payment Unit for completion of logging under BT6.36. Forest Service may make exceptions for occasional trees inadvertently not cut or trees or pieces not removed for good reason, including possible damage to forest resources or gross economic impracticability at the time of removal of other timber. Logging shall be conducted in accordance with the following, unless CT6.4 provisions set forth requirements to meet special or unusual logging conditions:

BT6.41 Felling and Bucking. Felling shall be done to minimize breakage of Included Timber and damage to residual timber. Unless agreed otherwise, felling shall be done by saws or shears. Bucking shall be done to permit removal of all minimum pieces set forth in AT2. Purchaser may buck out cull material when necessary to produce pieces meeting Utilization Standards. Such bucked out material shall contain a minimum amount of sound wood, not in excess of the net Measure in percentage of gross Measure, or based on the merchantability factor, whichever is stated in AT2. If necessary to assess

extent of defect, Purchaser shall make sample saw cuts or wedges.

BT6.411 Felling in Clearings. Insofar as ground conditions, tree lean, and shape of clearings permit, trees shall be felled so that their tops do not extend outside Clearcutting Units, construction clearings, and areas of regeneration cutting.

BT6.412 Stump Heights. Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in AT6, except that occasional stumps of greater heights are acceptable when Purchaser determines that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, Purchaser shall re-cut high stumps so they will not exceed heights specified in AT6 and shall dispose of severed portions in the same manner as other logging debris. The stump heights shown in AT6 were selected with the objective of maximum reasonable utilization of the timber, unless Sale Area Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.

BT6.413 Limbing. When Forest Service determines it is necessary to minimize damage to the residual stand during skidding, Purchaser shall cut exposed limbs from products prior to skidding. Purchaser may leave uncut those limbs that cannot be cut with reasonable safety.

BT6.42 Skidding and Yarding. Methods of skidding or yarding specified for particular areas, if any, are indicated on Sale Area Map. Outside Clearcutting Units and construction clearings, insofar as ground conditions permit, products shall not be skidded against reserve trees or groups of reproduction and tractors shall be equipped with a winch to facilitate skidding.

BT6.421 Rigging. Insofar as practicable, needed rigging shall be slung on stumps or trees designated for cutting.

BT6.422 Landings and Skid Trails. Location of all landings, tractor roads, and skid trails shall be agreed upon prior to their construction. The cleared or excavated size of landings shall not exceed that needed for efficient skidding and loading operations.

BT6.423 Skidding on Roads. Products may be skidded on permanent roads authorized for hauling under BT5.12 only by prior written agreement.

BT6.424 Arches and Dozer Blades. Unless otherwise specified in CT6.424, skidding tractors equipped with pull-type arches or dozer blades wider than tractor width or C-frame width, whichever is greater, shall not be used in residual timber outside Clearcutting Units and other authorized clearings, except on constructed tractor roads or landings, unless there is written agreement that residual timber will not be damaged materially by such use.

BT6.5 Streamcourse Protection. "Streamcourses" that are subject to provisions of this Section are shown on Sale Area Map. Unless otherwise agreed, the following measures shall be observed to protect Streamcourses:

(a) Purchaser's Operations shall be conducted to prevent debris from entering Streamcourses, except as

may be authorized under paragraph (d). In event Purchaser causes debris to enter Streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, Purchaser shall remove such debris as soon as practicable, but not to exceed 2 days, and in an agreed manner that will cause the least disturbance to Streamcourses.

(b) Culverts or bridges shall be required on Temporary Roads at all points where it is necessary to cross Streamcourses. Such facilities shall be of sufficient size and design and installed in a manner to provide unobstructed flow of water and to minimize damage to Streamcourses. Trees or products shall not be otherwise hauled or yarded across Streamcourses unless fully suspended.

(c) Wheeled or track-laying equipment shall not be operated in Streamcourses, except at crossings designated by Forest Service or as essential to construction or removal of culverts and bridges.

(d) Flow in Streamcourses may be temporarily diverted only if such diversion is necessary for Purchaser's planned construction and Forest Service gives written authorization. Such flow shall be restored to the natural course as soon as practicable and, in any event, prior to a major storm runoff period or runoff season.

BT6.6 Erosion Prevention and Control. Purchaser's Operations shall be conducted reasonably to minimize soil erosion. Equipment shall not be operated when ground conditions are such that excessive damage will result. Purchaser shall adjust the kinds and intensity of erosion control work done to ground and weather conditions and the need for controlling runoff. Erosion control work shall be kept current immediately preceding expected seasonal periods of precipitation or runoff.

If Purchaser fails to do seasonal erosion control work prior to any seasonal period of precipitation or runoff, Forest Service may temporarily assume responsibility for the work and any unencumbered deposits hereunder may be used by Forest Service to do the work. If needed for such work, Purchaser shall make additional deposits on request by Forest Service. Any money deposited or used for this purpose shall be treated as cooperative deposits under BT4.218.

BT6.61 Meadow Protection. Reasonable care shall be taken to avoid damage to the cover, soil, and water in meadows shown on Sale Area Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings, and tractor roads are approved under BT5.1 or BT6.422. Unless otherwise agreed, trees felled into meadows shall be removed by endlining. Resulting logging slash shall be removed where necessary to protect cover, soil, and water.

BT6.62 Wetlands Protection. Wetlands requiring protection under Executive Order 11990 are shown on Sale Area Map. Vehicular or skidding equipment shall not be used in such wetlands, except where roads, landings, and tractor roads are approved under BT5.1 or BT6.422. Additional measures needed to protect such areas are provided in CT6.62.

BT6.63 Temporary Roads. As necessary to attain stabilization of roadbed and fill slopes of Temporary Roads, Purchaser shall employ such measures as out-sloping, drainage dips, and water-spreading ditches.

After a Temporary Road has served Purchaser's purpose, Purchaser shall give notice to Forest Service and shall remove bridges and culverts, eliminate ditches, out-slope roadbed, remove ruts and berms, effectively block the road to normal vehicular traffic where feasible under existing terrain conditions, and build cross ditches and water bars, as staked or otherwise marked on the ground by Forest Service. When bridges and culverts are removed, associated fills shall also be removed to the extent necessary to permit normal maximum flow of water.

BT6.631 Temporary Roads to Remain Open. To maintain short term access to portions of Sale Area for post-sale treatments and other purposes after a Temporary Road has served Purchaser's purpose, pursuant to BT6.63, Purchaser agrees, that on Temporary Roads designated on Sale Area Map as "Remain Open," to construct cross ditches and water bars, as designated, staked, or otherwise directed by Forest Service, that can be traversed by a normal two-wheel drive pickup truck. On "Remain Open" Temporary Roads, all bridges and culverts shall remain in place and ditches shall not be eliminated. All drainage structures shall be left in functional condition.

BT6.64 Landings. After landings have served Purchaser's purpose, Purchaser shall ditch and slope them to permit water to drain or spread. Unless agreed otherwise, cut and fill banks around landings shall be sloped to remove overhangs and otherwise minimize erosion.

BT6.65 Skid Trails and Fire Lines. Purchaser shall construct cross ditches and water-spreading ditches on tractor roads and skid trails, where staked or otherwise marked on the ground by Forest Service. Forest Service shall designate cross ditching on Purchaser-built fire lines prior to or during construction. By agreement, Purchaser may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.

BT6.66 Current Operating Areas. Where logging or road construction is in progress but not completed, unless agreed otherwise, Purchaser shall, before operations cease annually, remove all temporary log culverts and construct temporary cross drains, drainage ditches, dips, berms, culverts, or other facilities needed to control erosion.

Such protection shall be provided, prior to end of a Normal Operating Season, for all disturbed, unprotected ground that is not to be disturbed further prior to end of operations each year, including roads and associated fills, tractor roads, skid trails, and fire lines. When weather permits operations after Normal Operating Season, Purchaser shall keep such work on any additional disturbed areas as up to date as practicable.

BT6.67 Erosion Control Structure Maintenance. During the period of this contract, Purchaser shall provide maintenance of soil erosion control structures constructed by Purchaser until they become stabilized,

but not for more than 1 year after their construction. Contracting Officer may agree to perform such structure maintenance under BT4.218, if requested by Purchaser, subject to agreement on rates. Purchaser shall not be responsible for repair of such structures damaged by other National Forest users whose activities are not a part of Purchaser's Operations.

BT6.7 Slash Disposal. Purchaser's timing of product removal and preparatory work shall not unnecessarily delay slash disposal. Specific slash disposal measures to be employed by Purchaser are stated in CT6.7 and are in addition to Required Deposits for slash disposal.

BT6.8 Measuring. "Measuring" is the estimation of timber quantities using certain dimensions and applicable volume tables or formulae to determine the contents of trees or stands in a standard manner. Sampling may be on an individual tree or area basis. Examples of standard procedures are tree measurement, sample tree measurement, and area estimate. The quantity of timber designated or to be designated for cutting has been or shall be Measured, as specified in CT6.8.

BT6.81 Product Identification. Before removal from Sale Area, unless Contracting Officer determines that circumstances warrant a written waiver or adjustment, Purchaser shall:

(a) Hammer brand all products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter.

(b) West of the 100th meridian, paint with a spot of highway-yellow paint all domestic processing products that are eight (8) feet or more in length and one-third (1/3) or more sound, on each end that is seven (7) inches or more in diameter. Each paint spot must be not less than three (3) square inches in size.

Contracting Officer shall assign brands and, if Sale Area is within a State that maintains a log brand register, brands shall be registered with the State. Purchaser shall use assigned brand exclusively on logs from this sale until Contracting Officer releases brand. Purchaser will furnish and apply highway-yellow paint of a lasting quality (oil-base or equivalent).

All hammer brands and/or highway-yellow paint must remain on logs until they are domestically processed. Purchaser shall replace identifying marks if they are lost, removed, or become unreadable. Purchaser may remanufacture products into different log lengths. Except for logs remanufactured as part of the mill in-feed process immediately before processing, remanufactured products must be rebranded with the assigned timber sale brand and repainted with highway-yellow paint, unless otherwise agreed to in writing by Contracting Officer. For such remanufactured products, Contracting Officer may approve use of a brand to be used exclusively as a catch brand, in lieu of the assigned timber sale brand.

BT6.9 Records. Upon request, Purchaser shall provide access to appropriate annual records in Purchaser's books and accounts to enable Forest Service to obtain and analyze accurate operating costs and selling price data for appropriate use in appraising Federal timber. Operating cost and selling price data shall include that

applicable for appraising timber obtained from Federal sources in or processed in the Region. Purchaser shall provide access to such data on behalf of subsidiary entities owned or controlled by Purchaser to the extent they participate in harvesting, manufacturing, or marketing timber into products recognized in National Forest timber appraisals in the area. To a like extent, Purchaser shall request in writing Purchaser's contractors and Subcontractors to make such data available to Forest Service.

Information so obtained shall be treated as confidential, as provided in regulations issued by the Secretary of Agriculture (7 CFR 1.12), and shall be available for review by parties from whom such data are obtained.

BT7.0—FIRE PRECAUTIONS AND CONTROL

BT7.1 Plans. Prior to initiating Purchaser's Operations during Fire Precautionary Period, Purchaser shall file with Forest Service a Fire Prevention and Control Plan providing for the prevention and control of fires on Sale Area and other areas of Purchaser's Operations. Such plan shall include a detailed list of personnel and equipment at Purchaser's disposal for implementing the plan. This requirement may be met by preparing a single plan for more than one timber sale.

BT7.2 Fire Precautions. Specific fire precautionary measures listed in CT7.2 shall be applicable during Purchaser's Operations in "Fire Precautionary Period" described in AT9. Contracting Officer may change the dates of Fire Precautionary Period by advance written notice, if justified by unusual weather or other conditions. Required tools and equipment shall be kept in serviceable condition and immediately available for fire fighting at all times during Purchaser's Operations in Fire Precautionary Period.

BT7.21 Substitute Precautions. Forest Service may authorize substitute measures or equipment, or waive specific requirements by written notice, if substitute measures or equipment will afford equal protection or some of the required measures and equipment are unnecessary.

BT7.22 Emergency Precautions. Forest Service may require the necessary shutting down of equipment on portions of Purchaser's Operations, as specified by the emergency fire precautions schedule of CT7.22. Under such conditions, after Purchaser ceases active operations, Purchaser shall release for hire by Forest Service, if needed, Purchaser's shutdown equipment for fire standby on Sale Area or other areas of Purchaser's Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by Purchaser for other fire fighting or protection from fire. Equipment shall be paid for at fire fighting equipment rates common in the area or at prior agreed rates and, if Purchaser requests, shall be operated only by personnel approved by Purchaser. Personnel so hired shall be subject to direction and control by Forest Service and shall be paid by Forest Service at fire fighting rates common in the area or at prior agreed rates.

BT7.3 Fire Control. Purchaser shall, both independently and in cooperation with Forest Service, take all reasonable and practicable action to prevent and suppress

fires resulting from Purchaser's Operations and to suppress any forest fire on Sale Area. Purchaser's independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary personnel and equipment at Purchaser's disposal on Sale Area or within the distance of Sale Area stated in AT10.

BT7.31 Purchaser's Reinforcement Obligations. Whenever an Operations Fire or Negligent Fire, whether on or off Sale Area, or any other forest fire on Sale Area, has not been suppressed by initial action and appreciable reinforcement strength is required, Forest Service may require further actions by Purchaser until such fire is controlled and mopped up to a point of safety. Such actions may include any or all of the following as necessary to fight such fire:

BT7.311 Suspend Operations. To suspend any or all of Purchaser's Operations.

BT7.312 Personnel. To release for employment by Forest Service any or all of Purchaser's personnel engaged in Purchaser's Operations or timber processing within the distance of Sale Area stated in AT10. Any organized crew so hired shall include Purchaser's supervisor, if any. Personnel so employed shall be paid at Forest Service standard emergency fire fighting rates.

BT7.313 Equipment. To make available for Forest Service rental at fire fighting equipment rates common in the area or at prior agreed rates any or all of Purchaser's equipment suitable for fire fighting and currently engaged in Purchaser's Operations within the distance of Sale Area stated in AT10. Equipment shall be operated only by personnel approved by Purchaser, if so requested by Purchaser.

BT7.4 Fire Suppression Costs. Purchaser's obligations for cost of fire suppression vary according to three classifications of fires as follows:

BT7.41 Operations Fire. An "Operations Fire" is a fire caused by Purchaser's Operations other than a Negligent Fire.

Forest Service, except as provided in BT7.3, shall use cooperative deposits under BT4.218 to perform fire suppression activities on Operations Fires. Purchaser agrees to reimburse Forest Service for such cost for each Operations Fire, subject to a maximum of the dollar amount stated in AT11. The cost of Purchaser's actions, supplies, and equipment on any such fire provided pursuant to BT7.3, or otherwise at the request of Forest Service, shall be credited toward such maximum. If Purchaser's actual cost exceeds Purchaser's obligation stated in AT11, Forest Service shall reimburse Purchaser for the excess.

BT7.42 Negligent Fire. A "Negligent Fire" is a fire caused by negligence or fault of Purchaser's Operations, including, but not limited to, one caused by smoking by persons engaged in Purchaser's Operations during the course of their employment, or during rest or lunch periods; or if Purchaser's failure to comply with the requirements of BT7.2 and BT7.3 results in a fire starting or permits a fire to spread. Damages and the cost of suppressing Negligent Fires shall be borne by Purchaser.

BT7.43 Other Fires on Sale Area. Forest Service shall pay Purchaser, at fire fighting rates common in the area or at prior agreed rates, for equipment or personnel furnished by Purchaser pursuant to BT7.3, or otherwise at the request of Forest Service, on any fire on Sale Area other than an Operations Fire or a Negligent Fire.

BT7.5 State Law. Purchaser shall not be relieved by the terms of this contract of any liability to the United States for fire suppression costs recoverable in an action based on State law, except for such costs resulting from Operations Fires. Amounts due Purchaser for fire fighting expenditures in accordance with BT7.41 shall not be withheld pending settlement of any such claim or action based on State law.

BT7.6 Performance by Contractor. Where Purchaser's employees, agents, contractors, Subcontractors, or their employees or agents perform Purchaser's Operations in connection with fire responsibilities, Purchaser's obligations shall be the same as if performance was by Purchaser.

BT8.0—OTHER CONDITIONS

BT8.1 Title and Liability.

BT8.11 Title Passage. All right, title, and interest in and to any Included Timber shall remain in Forest Service until it has been Measured, removed from Sale Area or other authorized cutting area, and paid for, at which time title shall vest in Purchaser. For purposes of this Subsection, timber in Payment Units Released for Cutting covered by cash deposit or payment guarantee under BT4.3 shall be considered to have been paid for. Title to any Included Timber that has been Measured and paid for, but not removed from Sale Area or other authorized cutting area by Purchaser on or prior to Termination Date, shall remain in Forest Service.

BT8.12 Liability for Loss. If Included Timber is destroyed or damaged by an unexpected event that significantly changes the nature of Included Timber, such as fire, wind, flood, insects, disease, or similar cause, the party holding title shall bear the timber value loss resulting from such destruction or damage; except that such losses caused by insect or disease after felling of timber shall be borne by Purchaser, unless Purchaser is prevented from removing such timber for reasons that would qualify for Contract Term Adjustment. Deterioration or loss of value of salvage timber is not an unexpected event, except for deterioration due to delay or interruption that qualifies for Contract Term Adjustment or under BT8.33.

In the event Included Timber to which Forest Service holds title is destroyed, Purchaser will not be obligated to remove and pay for such timber. In the event Included Timber to which Forest Service holds title is damaged, Contracting Officer shall make an appraisal to determine for each species the difference between the appraised unit value of Included Timber immediately prior to the value loss and the appraised unit value of timber after the loss. Current Contract Rates in effect at the time of the

value loss shall be adjusted by differences to become the redetermined rates.

There shall be no obligation for Forest Service to supply, or for Purchaser to accept and pay for, other timber in lieu of that destroyed or damaged. This Subsection shall not be construed to relieve either party of liability for negligence.

BT8.2 Period of Contract. All obligations of Purchaser shall be discharged not later than "Termination Date" stated in AT12, unless it is adjusted pursuant to BT8.21 or BT8.212 or extended pursuant to BT8.23 or BT8.32, excepting only those obligations for which Forest Service has given written permission to delay performance. Such written permission shall be considered a Contract Term Adjustment for the purpose of Purchaser completing performance of obligations covered by such permission.

BT8.21 Contract Term Adjustment. "Contract Term Adjustment" means adjustment only as provided for in the three circumstances described in this Subsection. Under these circumstances, the contract term shall be adjusted in writing to include additional calendar days in one or more Normal Operating Seasons equal to the actual time lost, except as limited by paragraph (b) in this Subsection.

To qualify for such adjustment, Purchaser shall give written notice of the lost time not later than 30 days after end of Normal Operating Season in which time was lost and at least 10 days before Termination Date. Contracting Officer shall make prompt written acknowledgment of such notice, indicating concurrence with the number of days in the notice or the number of days Forest Service considers as qualifying for the adjustment. Lost portions of days shall be disregarded in computing time lost. The three circumstances qualifying for a Contract Term Adjustment are:

(a) Purchaser experiences delay in starting scheduled operations or interruptions in active operations, either of which stops removal of Included Timber from Sale Area through curtailment in felling and bucking, yarding, skidding and loading, hauling, or road construction, as scheduled under BT6.31, for 10 or more consecutive days during a Normal Operating Season due to causes beyond Purchaser's control, including, but not limited to, acts of God, acts of the public enemy, acts of the Government, labor disputes, fires, insurrections, or floods.

(b) Causes described in paragraph (a) substantially affect the disposition or processing of Included Timber during Normal Operating Season through their effects on primary timber processing facilities, with a resulting delay of 60 days or more in use of such facilities. In such event, Contract Term Adjustment shall not extend for more than 12 consecutive months.

(c) (i) Contracting Officer requests Purchaser, in writing, to delay or interrupt operations during the Normal Operating Season for any purpose other than suspension under BT4.4 or BT9.3 or

(ii) Purchaser suffers a delay or interruption of Purchaser's Operations affecting skidding, yarding,

and loading because of fire emergency closure ordered by Forest Service (or another agency in its behalf), and the total of such lost time is 10 or more days during any Normal Operating Season.

If Termination Date is adjusted, as described in this Subsection, and later extended under BT8.23, the appraisal for the extension shall be made as of the unadjusted Termination Date, but the date on which the new rates become effective, if higher than Current Contract Rates immediately prior to Termination Date, shall be the adjusted Termination Date.

BT8.211 Delay in Reconstruction of Processing Facilities. Notwithstanding the 12-month limitation in BT8.21, if Purchaser demonstrates a diligent effort has been made to replace primary timber processing facilities and that delays in doing so have been beyond Purchaser's control, Contracting Officer may authorize Contract Term Adjustment up to a total of 24 months.

BT8.212 Market-Related Contract Term Addition. The term of this contract may be adjusted when a drastic reduction in wood product prices has occurred in accordance with 36 CFR 223.52. The Producer Price Index used to determine when a drastic reduction in price has occurred is stated in AT17. Purchaser will be notified whenever the Chief determines that a drastic reduction in wood product prices has occurred. If the drastic reduction criteria specified in 36 CFR 223.52 are met for 2 consecutive calendar quarters, after contract award date, Contracting Officer will add 1 year to the contract term, upon Purchaser's written request. For each additional consecutive quarter such a drastic reduction occurs, Contracting Officer will, upon written request, add an additional 3 months to the term during Normal Operating Season. Contracting Officer must receive Purchaser's written request for a market-related contract term addition before the expiration of this contract.

The total amount of contract term addition is limited to the lesser of twice the length of the original contract or 3 years. The revised contract term may not exceed 10 years as a result of market-related contract term addition. Additional contract time may not be granted for those portions of the contract that have a required completion date or for those portions of the contract where Contracting Officer determines that the timber is in need of urgent removal or that timber deterioration or resource damage will result from delay.

When a contract is lengthened as a result of market-related contract term addition, any subsequent periodic payment date shall be delayed 1 month for each month added to the contract's term.

BT8.22 Termination for Catastrophe. In event of Catastrophic Damage, this contract may be modified under BT8.32, following rate redetermination under BT3.32, or terminated under this Subsection. Such termination shall not be considered a termination under BT8.34.

BT8.221 Termination by Purchaser. This contract shall be terminated, upon election and written notice by Purchaser, if Catastrophic Damage rate redetermination under BT3.32 shows that the appraised

weighted average Indicated Advertised Rate of all Included Timber remaining immediately prior to the catastrophe has been reduced through Catastrophic Damage by an amount equal to or more than the weighted average Current Contract Rate.

"Indicated Advertised Rates" are Forest Service estimates of fair market value of the timber.

BT8.222 Termination by Forest Service. This contract may be terminated by written notice from Contracting Officer, if there is Catastrophic Damage and Purchaser does not agree, under BT8.32, within 30 days of receipt from Contracting Officer of contract modifications proposed to permit the harvest of the catastrophe-affected timber.

BT8.23 Contract Term Extension. "Contract Term Extension" means an extension of the term of this contract, at the request of Purchaser, under this Subsection. This Subsection does not obligate Contracting Officer to grant Contract Term Extension.

When such extension is made, Forest Service shall make an appraisal using standard Forest Service methods and appraisal data in effect 45 days prior to the original Termination Date. Bid Premium Rates shall be added to such appraised rates to establish Flat Rates or Tentative Rates for the extension period. In event rates so established would develop Current Contract Value immediately prior to such an extension that is less than Current Contract Value at that time, Flat Rates and Tentative Rates in effect immediately prior to extension shall be retained for the extension period.

In consideration for granting an extension, Purchaser shall pay the Government for Purchaser's failure to cut and remove timber meeting Utilization Standards prior to Contract Term Extension, an amount that shall be the total of the costs to the Government resulting from the delay in harvest of Included Timber. Such costs will be determined by Forest Service and shall include, but not be limited to, the following:

(a) Interest at the Current Value of Funds Rate established by the Secretary of the Treasury, on Current Contract Value of timber remaining on Sale Area, less the credit balance of any deposit made pursuant to BT4.213, as of the original Termination Date, or as adjusted pursuant to BT8.21 or BT8.212, until the midpoint of the extension period;

(b) Increased costs of regeneration, including nursery stock loss, carryover, or replacement costs; and

(c) Costs of remarking timber on Sale Area, reestablishing cutting unit boundaries, and/or remarking areas requiring protection on Sale Area.

BT8.231 Conditions for Contract Term Extension. Contracting Officer may grant Purchaser's written request for Contract Term Extension, if Purchaser has met all of the following conditions at time of Purchaser's request:

(a) At least 75 percent of estimated quantity in AT2 has been cut and removed from Sale Area.

(b) Specified Roads needed by Purchaser for removal of all Included Timber, in accordance with the approved Plan of Operations submitted pursuant to

BT6.311, were constructed and accepted by Forest Service prior to the applicable road completion date shown in CT5.13.

(c) Purchaser's Operations to date have been in reasonable compliance with contract terms and the approved Plan of Operations under BT6.311.

(d) All contractual requirements have been met by Purchaser and accepted by Forest Service on area cut over at time of Purchaser's request, except for areas where logging is in progress at time of Purchaser's request. Purchaser's burning of current slash or seeding or planting for erosion control may be temporarily waived, if weather or other considerations make such work impractical.

(e) Any payment required under BT4.213 has been made.

Contract Term Extension shall not become effective, unless payments required by BT8.23 have been paid and the initial Extension Deposit required by BT4.217 has been made by the effective date of any extension.

BT8.3 Contract Modification. The conditions of this timber sale are completely set forth in this contract. Except as provided in BT8.32 and BT8.33, this contract can be modified only by written agreement between the parties. Only Contracting Officer may make contract modifications, with compensating adjustments to Current Contract Rates where appropriate, on behalf of Forest Service.

BT8.31 Changed Conditions. When it is agreed that the completion of certain work or other requirements hereunder would no longer serve the purpose intended because of substantial change in the physical conditions of Sale Area or Included Timber since the date of this contract, the requirements shall be waived in writing. The estimated cost of such waived work or other requirement shall be charged to Timber Sale Account.

BT8.32 Modification for Catastrophe. In event of Catastrophic Damage, Forest Service, in consultation with Purchaser, shall outline on Sale Area Map:

(a) Any areas of catastrophe-affected live and dead timber meeting Utilization Standards and having undesignated timber so situated that it should be logged with the designated timber;

(b) If needed, any such areas where the damaged undesignated timber can reasonably be logged separately; and

(c) Areas of affected or unaffected timber that are to be eliminated from Sale Area.

Forest Service shall locate and post the boundaries of all such areas, as needed.

After Sale Area Map has been outlined under this Subsection, Forest Service may propose contract modification to permit the harvest of catastrophe-affected timber. If Purchaser accepts Forest Service proposed modifications, this contract shall be modified to include rates redetermined under BT3.32 and other related revisions as necessary, such as revision of Operating Schedule to ensure prompt removal of affected timber when necessary to avoid further loss and provision for additional contract time, if needed.

BT8.33 Contract Suspension and Modification. (a) Contracting Officer may, by written order, delay or interrupt authorized operations under this contract or, notwithstanding BT8.3, modify this contract, in whole or in part:

(i) To prevent environmental degradation or resource damage, including, but not limited to, harm to habitat, plants, animals, cultural resources, or cave resources;

(ii) To ensure consistency with land and resource management plans or other documents prepared pursuant to the National Environmental Policy Act of 1969, 42 USC 4321-4347;

(iii) To conduct environmental analysis, including, but not limited to, engaging in consultation pursuant to the Endangered Species Act of 1973, 16 USC 1531, et seq.; or

(iv) Upon agreement of the Regional Forester, due to administrative appeal or litigation, regardless of whether Contracting Officer's order is required by a court order or this contract is named in such a proceeding.

(b) In the event of an order delaying or interrupting Purchaser's Operations under this Subsection, Purchaser's remedy shall be:

(i) Contract Term Adjustment,

(ii) reimbursement for Out-of-Pocket Expenses,

(iii) rate redetermination to measure any decline in the market,

(iv) temporary reduction of downpayment,

(v) temporary credit for unamortized Specified Road construction cost, and

(vi) temporary bond reduction.

However, the foregoing remedies shall be available only to the extent that the Contracting Officer's order was the sole and exclusive cause of the delay or interruption of Purchaser's operations.

(c) In cases of modification under this Subsection, Purchaser shall only receive a rate redetermination pursuant to BT3.31. However, if there is an order delaying or suspending operations in addition to a modification, then Purchaser shall also be entitled to the remedies provided under BT8.33(b) for such delay or suspension.

(d) Remedies awarded to the Purchaser shall not be duplicative, and Contracting Officer shall have the right to structure remedies provided herein to avoid duplicative compensation.

(e) Purchaser agrees that this Subsection, and the remedies provided herein shall apply regardless of any finding by any court or administrative body that the Forest Service failed to comply with any statute, regulation and/or policy in connection with awarding, advertising, or authorizing this sale, or a similar sale. However, nothing in this Subsection precludes Purchaser from exercising rights under the Contract Disputes Act.

BT8.34 Contract Termination. This contract may be terminated, in whole or in part, by Forest Service or Purchaser, as provided in Items BT8.341 and BT8.342, respectively. In the event of any such termination, Purchaser shall be entitled to the applicable remedies, subject to the limitation upon duplicative compensation

set forth in BT8.33(d). Purchaser agrees that this Subsection, and the remedies contained in the following Items shall apply regardless of any finding by any court or administrative body that the Forest Service failed to comply with any statute, regulation and/or policy in connection with awarding, advertising, or authorizing this sale, or a similar sale. However, nothing in this Subsection precludes Purchaser from exercising rights under the Contract Disputes Act.

BT8.341 Termination by Forest Service.

(a) The Chief or the Chief's designee may unilaterally terminate this contract, in whole or in part, for any of the reasons set forth in paragraph (a) of BT8.33.

(b) Purchaser's compensation for termination of this contract under this Item shall be:

(i) refund or release of advanced deposits for timber cut but not removed,

(ii) reimbursement for Out-of-Pocket Expenses, and

(iii) replacement timber under subparagraph (c), and/or liquidated damages under subparagraph (d); provided that liquidated damages shall be available if, and only if, after good faith efforts, the Parties (1) cannot locate replacement timber or agree upon the applicable stumpage price, or (2) the volume of deleted timber exceeds the volume of any replacement timber.

(c) Subject to applicable laws, regulations and policies, Forest Service and Purchaser shall make good faith efforts to identify replacement timber of similar volume, quality, access, and topography within Sale Area. If suitable replacement timber cannot be located within Sale Area, the parties shall expand the search to the National Forest in which the Sale Area is located. Stumpage price shall be adjusted under BT3.31 to account for differences between replacement timber and deleted timber. If Forest Service and Purchaser agree upon suitable replacement timber and the applicable stumpage price, then this contract shall not terminate and instead shall be modified pursuant to 36 CFR 223.85(c) and shall remain in force with respect to such replacement timber and, in the case of partial termination, any remaining Included Timber. If the parties cannot agree on suitable replacement timber or the applicable stumpage price of such timber, either party may end the search and Purchaser shall be compensated under subparagraph (d).

(d) Forest Service shall pay as fixed, agreed, and liquidated damages an amount equivalent to 15 percent of the estimated delivered log value of the volume of timber not harvested due to the termination or partial termination. Estimated delivered log value and volume of timber not harvested shall be determined by the Contracting Officer as of Termination Date, using Forest Service methods in use as of the Termination Date.

(e) In any instance of partial termination, in which the Forest Service deletes one or more cutting units from the Sale Area, Purchaser's sole and exclusive remedy with regard to remaining units shall be a rate redetermination pursuant to BT3.31. Purchaser shall be required to complete Contract Operations with regard to remaining

units and any obligations pertaining to cessation of operations on deleted units, including without limit erosion control, brush disposal, and road maintenance. If Purchaser fails to fulfill any such duty or obligation, then Contracting Officer may make deductions from compensation due Purchaser, including without limit costs and expenses of completing such work.

BT8.342 Termination by Purchaser. (a)

Purchaser may, by written notice, terminate this Contract, in whole or in part, as described herein,

(i) in the event of an order delaying or interrupting its operations pursuant to BT8.33, or

(ii) in the event of an order modifying this Contract pursuant to BT8.33, if Purchaser decides to reject the terms of the modification prior to its acceptance. Purchaser shall have the right to terminate this Contract in whole only when the Contracting Officer's order under BT8.33 applies to all cutting units within the Sale Area. When the order affects only a portion of the cutting units, Purchaser shall have the right to terminate this Contract in part, by deleting one or more of the units covered by the Contracting Officer's order. The foregoing right of termination, in whole or in part, shall not exist when the delay, interruption, or modification arises from wind, flood, landslide, fire, forest pest epidemic, or other major natural phenomenon.

(b) Purchaser's compensation for termination of this Contract, in whole or in part, under this Item shall be:

(i) refund or release of advanced deposits for timber cut but not removed,

(ii) reimbursement for Out-of-Pocket Expenses, and

(iii) if the duration of the delay or interruption exceeds either six months of Normal Operating Season time, or one calendar year from the date of the order, then: replacement timber as provided under (c) and/or liquidated damages under (d); provided that liquidated damages shall be available if, and only if, after good faith efforts, the Parties (1) cannot locate replacement timber or agree upon the applicable stumpage price, or (2) the volume of deleted timber exceeds the volume of any replacement timber.

(c) Subject to applicable laws, regulations and policies, Forest Service and Purchaser shall make good faith efforts to identify replacement timber of similar volume, quality, access, and topography within Sale Area. If suitable replacement timber cannot be located within Sale Area, the parties shall expand the search to the National Forest in which the Sale Area is located. Stumpage price shall be adjusted under BT3.31 to account for differences between replacement timber and deleted timber. If Forest Service and Purchaser agree upon suitable replacement timber and the applicable stumpage price, then this contract shall not terminate and instead shall be modified pursuant to 36 CFR 223.85(c) and shall remain in force with respect to such replacement timber and, in the case of partial termination, any remaining Included Timber. If the parties cannot agree on suitable replacement timber or the applicable stumpage price of such timber, either party may end the

search and Purchaser shall be compensated under subparagraph (d).

(d) Forest Service shall pay as fixed, agreed, and liquidated damages an amount equivalent to 15 percent of the estimated delivered log value of the volume of timber not harvested due to the termination or partial termination. Estimated delivered log value and volume of timber not harvested shall be determined by the Contracting Officer as of Termination Date, using Forest Service methods in use as of the Termination Date.

(e) In any instance of partial termination, in which Purchaser deletes one or more cutting units from Sale Area, Purchaser's sole and exclusive remedy with regard to remaining units shall be a rate redetermination pursuant to BT3.31. Purchaser shall be required to complete Contract Operations with regard to remaining units and any obligations pertaining to cessation of operations on deleted units, including without limit, erosion control, brush disposal, and road maintenance. If Purchaser fails to fulfill any such duty or obligation, then Contracting Officer may make deductions from compensation due Purchaser, including without limit costs and expenses of completing such work.

BT8.35 Out-of-Pocket Expenses.

"Out-of-Pocket Expenses" are Unrecovered expenditures arising directly from performing the contract that were rendered unrecovered due to delay, interruption, or termination pursuant to BT8.33 or BT8.34. An expenditure is "Unrecovered" within the meaning of this Subsection when Purchaser did not gain the benefit of its expenditure because Contract operations were not permitted. In determining whether an expenditure is "Unrecovered," Contracting Officer shall not conclude that an award of liquidated damages constitutes the benefit of that expenditure.

(a) Out-of-Pocket Expenses shall not include, in particular and without limitation, any of the following:

- (i) attorneys fees;
- (ii) costs and expenses of operating a saw mill or other processing facility;
- (iii) expectancy damages; and,
- (iv) anticipatory profits.

(b) Forest Service shall reimburse Purchaser for only the following Out-of-Pocket Expenses:

(i) Out-of-Pocket Expenses for maintenance of the timber sale performance and payment bonds during the period when operations were delayed or interrupted or, if terminated, from the date operations were halted until the expiration of the bonds;

(ii) Out-of-Pocket Expenses for maintenance of the downpayment or other cash deposits during the period when operations were delayed or interrupted or, if terminated, from the date operations were halted until the cash is returned to Purchaser;

(iii) Out-of-Pocket Expenses for the lesser of move-out and move-in or leaving equipment and/or logging camps on site, if the Purchaser and Contracting Officer have agreed to leave equipment and/or logging camps on site in lieu of move-out and move-in;

(iv) Out-of-Pocket Expenses for felling, bucking,

logging, skidding, yarding, and decking any products so processed, but not removed from Sale Area because: (1) the sale was terminated, or (2) the products no longer meet Utilization Standards because of delay or interruption;

(v) If terminated, in whole or in part, Out-of-Pocket Expenses for unamortized Temporary Roads, road maintenance, dust abatement and improvements authorized under B6.2;

(vi) Out-of-Pocket Expenses for the investment in Specified Roads during the period when operations were delayed or interrupted or, if terminated in whole or in part, Out-of-Pocket Expenses for unamortized Specified Road construction and reconstruction; and

(vii) If terminated, in whole or in part, Out-of-Pocket Expenses for bid preparation, including review of sale offering.

(c) Purchaser shall submit documentation of claimed expenditures, including those actually paid and those for which the Purchaser has a legal obligation to pay but has not yet paid, and supporting analysis to Contracting Officer to assist in Contracting Officer's calculation of reimbursement. Contracting Officer shall determine the amount of reimbursement under this Subsection using information from Purchaser and/or Forest Service methods in use on the date that operations were delayed, interrupted, or terminated. Purchaser's failure to substantiate any claimed Out-of-Pocket Expense may constitute grounds for Contracting Officer's denial of reimbursement.

(d) Purchaser shall make reasonable efforts to minimize its Out-of-Pocket Expenses.

BT8.36 Termination for Market Change. a) In the event of delay or interruption under BT8.33, exceeding 90 days, and Contract has not been modified to include replacement timber, this contract may be terminated upon election and written notice by Purchaser, if (i) a rate redetermination for market change under BT3.33 shows that the appraised weighted average Indicated Advertised Rate of all Included Timber remaining immediately prior to the delay or interruption has been reduced through a market change by an amount equal to or more than the the weighted average Current Contract Rate, or (ii) the appraised value of the remaining timber is insufficient to cover the adjusted base rates as determined under BT3.33.

(b) Prior to termination under this Subsection, Purchaser shall complete all obligations on areas not affected by the delay or interruption.

(c) Damages caused by termination of contract under this Subsection will be limited to Out-of-Pocket Expenses.

BT8.4 Performance by Other than Purchaser. The acquisition or assumption by another party, under an agreement with Purchaser, of any right or obligation of Purchaser under this contract shall be ineffective as to Forest Service, until Forest Service has been notified of such agreement and Contracting Officer has given written approval. In no case shall such recognition or approval:

(a) Operate to relieve Purchaser of the responsibilities or liabilities Purchaser has assumed hereunder or

(b) Be given unless such other party:

(i) Is acceptable to Forest Service as a Purchaser of timber and assumes in writing all of the obligations to Forest Service under the terms of this contract as to the uncompleted portion thereof or

(ii) Acquires the rights in trust as security and subject to such conditions as may be necessary for the protection of the public interests.

BT8.5 Sale of Other Materials. Forest Service reserves the right to sell from Sale Area during the period of this contract any materials or products not subject to its terms, but shall not permit removal, possession, or use thereof that will materially interfere with Purchaser's Operations. Purchaser shall not be obligated to do any work made necessary by the action of others.

BT8.6 Provisions Required by Statute.

BT8.61 Covenant against Contingent Fees.

Purchaser warrants that no person or agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial agencies maintained by Purchaser for the purpose of securing business. For breach or violation of this warranty, Forest Service shall have the right to annul this contract without liability or to require Purchaser to pay, in addition to the contract price or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

BT8.62 Officials Not to Benefit. No member of Congress or Resident Commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, unless it is made with a corporation for its general benefit (18 USC 431, 433).

BT8.63 Nondiscrimination in Employment. If the total value of this contract is in excess of \$10,000, Purchaser agrees during its performance as follows:

(a) Purchaser will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Purchaser will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Purchaser agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by Forest Service setting forth the provisions of this Subsection.

(b) Purchaser will, in all solicitations or advertisements for employees placed by or on behalf of Purchaser, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) Purchaser will send to each labor union or representative of workers with which Purchaser has a collective bargaining agreement or other contract or under-

standing, a notice to be provided by Forest Service, advising the labor union or worker's representative of Purchaser's commitments under this Subsection, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) Purchaser shall comply with all provisions of Executive Order No. 11246, as amended by Executive Order No. 11375 and Executive Order No. 12086, and the rules, regulations, and relevant orders of the Secretary of Labor.

(e) Purchaser will furnish all information and reports required by Executive Order No. 11246, as amended, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to books, records, and accounts by Forest Service and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(f) In event of Purchaser's noncompliance with this Subsection or with any of such rules, regulations, or orders, this contract may be terminated or suspended, in whole or in part, and Purchaser may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246, as amended, and such other sanctions may be imposed and remedies invoked, as provided in Executive Order or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(g) Purchaser will include the provisions of paragraphs (a) through (f) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order No. 11246, as amended, so that such provisions will be binding upon each Subcontractor or vendor. Purchaser will take such action with respect to any subcontract or purchase order as Forest Service may direct as a means of enforcing such provisions, including sanctions for noncompliance. Provided, however, that in the event Purchaser becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by Forest Service, Purchaser may request the United States to enter into such litigation to protect the interests of the United States.

BT8.64 Debarment and Suspension Certification. Pursuant to 7 CFR Part 3017, Purchaser shall obtain certifications from its Subcontractors regarding debarment, suspension, ineligibility, and voluntary exclusion, including additional Subcontractors obtained after award of this contract. "Subcontractors" are participants in lower tier covered transactions.

Purchaser may rely upon a certification of a prospective Subcontractor that it is not proposed for debarment under 48 CFR 9.4, debarred, suspended, ineligible, or voluntarily excluded from participating in covered transactions or timber sales, unless Purchaser knows that the certification is erroneous.

Purchaser shall keep the certifications of its Subcontractors on file until timber sale Termination Date and any extensions thereof, and will provide a copy at the written request of Contracting Officer. Nothing contained in the foregoing shall be construed to require

establishment of a system of records in order to render in good faith the certification required by this Subsection. The knowledge and information of Purchaser is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

If Purchaser knowingly enters into a timber sale transaction with a person who is proposed for debarment under 48 CFR 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in covered transactions or timber sales, in addition to other remedies available to the Government, Forest Service may pursue available remedies, including suspension and/or debarment.

The Subcontractor for a timber sale shall complete a "Subcontractor Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion." An example of this certification is shown following the instructions for page 101 of this contract.

BT8.65 Contract Consistency With Other Laws. The contract shall govern if State and local environmental quality laws conflict with or preclude performance of contractual requirements.

BT9.0—PERFORMANCE AND SETTLEMENT

BT9.1 Performance Bond. As a further guarantee of the faithful performance of the provisions of this contract, Purchaser delivers herewith and agrees to maintain a surety bond in the dollar amount stated in AT14, unless the amount is adjusted as provided in BT9.11 or BT9.13. In lieu of surety bond, Purchaser may deposit into a Federal Depository, as directed by Forest Service under BT4.21, and maintain therein, cash in the dollar amount stated in AT14 or negotiable securities of the United States having market value at time of deposit of not less than the dollar amount stated in AT14.

Any adjustment or extension of time for completion of this contract beyond 1 year may be granted only with the consent of surety on bond or delivery of a new bond. Should the sureties on the bond delivered herewith, or any bond delivered hereafter in connection with this contract, become unsatisfactory to Forest Service, Purchaser shall, within 30 days of receipt of demand, furnish a new bond with surety satisfactory to Forest Service.

BT9.11 Bond Reduction. Upon Purchaser's written request, Contracting Officer shall redetermine the amount of Purchaser's performance bond to an amount not less than Purchaser's remaining obligations, including the value of Included Timber remaining on Sale Area, plus the estimated cost of uncompleted work required of Purchaser and any unpaid billings due on the timber sale. Contracting Officer shall provide written notice of the redetermined amount to Purchaser and to Purchaser's surety. Similarly, Contracting Officer shall report to Purchaser in writing the amount of deposited cash or deposited securities required thereafter, if such deposits exist in lieu of a surety bond.

As soon as security for the performance of this contract or the settlement of Claims incident thereto is no longer necessary, appropriate notice shall be given to

surety or deposits that may have been made in lieu of surety bond shall be returned to Purchaser, subject to the conditions in BT9.5.

BT9.12 Letters of Credit. Notwithstanding the provisions of BT9.1, approved letters of credit may be used in lieu of a surety bond for performance bond purposes. Such letters of credit shall be subject to approval by Contracting Officer.

BT9.13 Temporary Bond Reduction. When, under BT8.33, Contracting Officer orders a delay or interruption of Purchaser's Operations for more than 30 days when scheduled operations would be occurring but for the order, the performance bond amount required shall be temporarily reduced upon the written request of Purchaser or at the discretion of Contracting Officer. For the period of the delay or interruption, the performance bond may be reduced to an amount not less than the estimated cost of uncompleted work required of Purchaser and any unpaid billings due on the timber sale.

Upon Purchaser's receipt of written notice from Contracting Officer that the basis for the delay or interruption no longer exists, Purchaser shall restore the performance bond to the full amount shown in AT14 within 15 days. Purchaser shall not resume contract operations until the performance bond amount is fully restored.

BT9.2 Disputes. This contract is subject to the Contract Disputes Act of 1978 (41 USC 601, *et seq.*). Except as provided in the Contract Disputes Act of 1978, all disputes arising under or relating to this contract shall be resolved in accordance with this Section.

As used herein, "Claim" means a written demand or assertion by one of the parties seeking, as a legal right, the payment of money, adjustment or interpretation of contract terms, or other relief, arising under or relating to this contract. A voucher, invoice, or request for payment that is not in dispute when submitted is not a Claim. However, where such submission is subsequently not acted upon in a reasonable time, or disputed either as to liability or amount, it may be converted to a Claim. A Claim by Purchaser shall be made in writing and submitted to Contracting Officer for decision. A Claim by the Government against Purchaser shall be subject to a decision by Contracting Officer.

For Purchaser Claims of more than \$100,000, Purchaser shall submit with the Claim a certification that the Claim is made in good faith; the supporting data are accurate and complete to the best of Purchaser's knowledge and belief; and the amount requested accurately reflects the contract adjustment for which Purchaser believes the Government is liable. Purchaser, if an individual, shall execute the certification. When Purchaser is not an individual, the certification shall be executed by a senior company official in charge at Purchaser's plant or location involved or by an officer or general partner of Purchaser having overall responsibility for the conduct of Purchaser's affairs.

For Purchaser Claims of \$100,000 or less, Contracting Officer must render a decision within 60 days. For Purchaser Claims in excess of \$100,000, Contracting Of-

ficer must decide the Claim within 60 days or notify Purchaser of the date when the decision will be made.

Contracting Officer's decision shall be final unless Purchaser appeals or files a suit.

The authority of Contracting Officer does not extend to Claims or disputes that by statute or regulation other agencies are expressly authorized to decide.

Interest, at the Prompt Payment Rate established by the Secretary of the Treasury, on the amount found due on Purchaser's Claim shall be paid from the date the Claim is received by Contracting Officer until the date of the payment.

Except as the parties may otherwise agree, pending final resolution of a Claim of Purchaser arising under the contract, Purchaser shall proceed diligently with the performance of the contract in accordance with Contracting Officer's decision.

BT9.21 Time Limits for Submission of Claim.

Failure by Purchaser to submit a Claim within established time limits shall relinquish the United States from any and all obligations whatsoever arising under the contract or portions thereof. Purchaser shall file such Claim within the following time limits:

(a) When Purchaser constructs Specified Road, Purchaser must file any Claim not later than 60 days after receipt of Forest Service written notification of acceptance;

(b) When Forest Service constructs Specified Road, Purchaser must file any Claim not later than 60 days after receipt of Forest Service written notification authorizing use of road;

(c) For Payment Units and cutting units, Purchaser must file any Claim not later than 60 days after receipt of Forest Service written notification that Payment Unit has been accepted; and

(d) In all other cases, Purchaser must file any Claim not later than 60 days after receipt of Contracting Officer written notification that timber sale is closed.

BT9.22 Contract Documents. All contract documents are intended to be consistent with each other. In case of discrepancy, the following is the order of precedence:

- (a) Special Provisions (CT)
- (b) Sale Area Map
- (c) Specific Conditions (AT) and Schedule of Items
- (d) Standard Provisions (BT)
- (e) Special project specifications
- (f) Plans, such as slash, erosion control, and dust abatement
- (g) Agreements between Purchaser and Forest Service, as authorized under the contract
- (h) Plans:
 - (i) Figured dimensions over scaled dimensions
 - (ii) Large scale Plans over small scale Plans
- (i) Standard specifications
- (j) Lists and/or tables in Plans over any conflicting notations on Plans
- (k) Shop Drawings

BT9.3 Breach. In event Purchaser breaches any of the material provisions of this contract, Forest Service

shall give Purchaser notice of such breach and, allowing reasonable time for remedy of such breach and of Forest Service's election to suspend, may give notice to suspend all or any part of Purchaser's Operations. Such notice of breach and notice to suspend Purchaser's Operations shall be written, except oral notices may be given if such breach constitutes an immediate threat to human life or a threat of immediate and irreparable damage to National Forest resources. Notwithstanding Section BT6.1, such oral suspension notice may be given to Purchaser's work supervisor or, in work supervisor's absence, to those performing the operation. An oral suspension notice shall be promptly followed by telephone notice and a written explanation from Forest Service to Purchaser.

Suspension under this Section shall not entitle Purchaser to any remedies arising under BT8.33.

Immediately upon oral or written suspension, Forest Service representative shall notify Contracting Officer of the suspension and related circumstances. Contracting Officer shall promptly review the suspension to determine if the suspension should be continued or lifted. Such suspension shall be lifted as early as conditions permit.

Upon receipt of oral or written notice of such breach, Purchaser shall remedy the breach as follows:

(a) If remedying such breach requires on-the-ground action by Purchaser, Purchaser shall have 30 practicable operating days during Normal Operating Season to remedy the breach, except under emergency conditions when action should not be delayed to prevent major damage or

(b) If such breach does not require on-the-ground action by Purchaser, such breach shall be remedied within 30 days.

BT9.31 Termination for Breach. Contracting Officer, with the concurrence of the Regional Forester, may terminate this contract for breach in the event Purchaser:

(a) Is convicted for violation of criminal statutes, civil standards, or any other offense indicating a lack of business integrity or honesty that seriously and directly affects the responsibility of Purchaser; including, but not limited to:

(i) Theft, forgery, bribery, embezzlement, falsification or destruction of records, making false statements, or receiving stolen property, any of which occurred in connection with obtaining, attempting to obtain, selling, trading, or processing public timber;

(ii) Fraud, criminal offenses, or violation of Federal or State antitrust laws, any of which occurred in connection with obtaining, attempting to obtain, or performing a public contract or subcontract; or

(iii) Threatening, resisting, intimidating, or interfering with Forest Officers engaged in, or on account of, the performance of their official duties involving the protection, improvement, or administration of National Forest lands;

(b) Is convicted for violation of criminal statutes or civil standards, orders, permits, or other regulations for environmental protection issued by a Federal agency, State agency, or political subdivision thereof in the conduct of operations hereunder on National Forest lands, pursuant to BT6.01;

(c) Has engaged in a pattern of activity that demonstrates flagrant disregard for the terms of this contract, such as, but not limited to, repeated suspensions for breach pursuant to BT9.3, causing undesignated timber meeting Utilization Standards to be unnecessarily damaged or negligently or willfully cut, or causing other serious environmental degradation or resource damage;

(d) Fails to comply with contract provisions related to nondiscrimination in employment; or

(e) Fails to remedy a breach of contract within time limits stated in BT9.3.

Damages due the United States for termination under this Subsection shall be determined pursuant to BT9.4.

BT9.4 Damages for Failure to Cut or Termination for Breach. (a) In event of Purchaser's failure to cut designated timber on portions of Sale Area by Termination Date or termination for breach under BT9.31, Forest Service shall appraise remaining Included Timber, unless termination is under BT8.22 or BT8.34. Such appraisal shall be made with the standard Forest Service method in use at time of termination.

(b) If the sale is resold, damages due shall be the amount by which Current Contract Value, plus costs described in paragraph (d) of this Section, exceeds the resale value at new Bid Rates.

(c) If the contract is not reoffered or there are no responsive bids on the reoffered contract, damages due shall be the amount by which Current Contract Value exceeds the value determined by appraisal, plus costs described in paragraph (d) of this Section.

(d) If applicable, the following costs shall be included in damages:

(i) The cost of resale or reoffering, including, but not limited to, salary costs, document preparation and duplication costs, mailing costs, and timber sale advertisement costs.

(ii) If Purchaser has failed to cut individual trees in the portions of Sale Area cut over and there is no resale of such individual trees, Purchaser shall pay Forest Service for cost of felling and removal or otherwise eliminating such uncut trees, except for occasional trees not cut for reasons stated in BT6.4.

(iii) The Government's loss caused by the delay in receipt of stumpage payments. Such loss will be measured by interest at the Current Value of Funds Rate established by the Secretary of the Treasury, on the unpaid contract value at Termination Date. Interest will be charged for the total number of months, or portions thereof, from Termination Date until midpoint of the contract resale period, less any time in excess of 1 year needed to make the resale.

(iv) Any increase in reforestation costs, including site preparation, seeding, and planting caused by Purchaser's failure to harvest Included Timber by Termination Date.

BT9.5 Settlement. If obligations of Purchaser have not been fully discharged by Termination Date, any money advanced or deposited hereunder shall be retained and applied toward unfulfilled obligations of Purchaser without prejudice to any other rights or remedies of Forest Service. Such funds may be treated as cooperative deposits under BT4.218 for uncompleted work 30 days after receipt of written notice from Contracting Officer to Purchaser of work to be done and Purchaser's failure to deny the obligation or to do the work.

BT9.6 Contract Closure. Contracting Officer shall give appropriate written notice to Purchaser when Purchaser has complied with the terms of this contract. Purchaser shall be paid refunds due from Timber Sale Account under BT4.24 and excess cooperative deposits under BT4.218.

DIVISION CT

Special Provisions

In accordance with AT19, the Sections, Subsections, and Items therein listed are attached and made a part hereof. The material is indexed by the numbering system used in Division BT. The numbers after the CT (that identifies material in this Division) indicates the Part, Section, Subsection, or Item of Division BT that is being supplemented or modified by each particular provision included in this Division.

TRAFFIC CONTROL PLAN AND SPECIFICATIONS - B(T)6.33 Safety

Unless otherwise agreed, the following measures are required to provide adequate warning of hazards for users of roads and trails adjacent to Purchaser/Contractors's Operations.

Part I. Signing and Other Warning Methods:

(a) Signs. The following signs are required when Purchaser/Contractors's Operations are in progress adjacent to or on Forest Service controlled roads and trails:

<u>MINIMUM LETTER SIZE AND LEGEND</u>	<u>MINIMUM SIZE AND SHAPE</u>	
1. LOGGING OPERATIONS (4" letters)	30" x 30" (diamond)	Min. 100 ft. outside of any work areas, on roads listed in C(T)5.31# and trails listed in Part II.
2. NEXT <> MILES (4" letters)	24" x 18" (rectangle)	To be used as a supplemental plaque mounted below "Logging Operations" where work area is continuous.
3. FOR LOGGING USE ONLY (4" letters)	30" x 30" (diamond)	Required where roads listed in C(T)5.31# and Temporary Roads intersect with C(T)5.31# roads. Install a cross ditch to discourage use when sign is covered or removed for extended periods.
4. LOG TRUCKS or HEAVY TRUCK TRAFFIC (4" letters)	30" x 30" (diamond)	At critical intersections on roads listed in C(T)5.31# when traffic is heavy or otherwise exceeds volumes stated in Part II below. Remove or cover when the sign is not applicable.
5. END LOGGING OPERATIONS (4" letters)	30" x 30" (diamond)	Use in conjunction with "Logging Operations/Next <> Miles" and "Logging Operations."
6. TREE FELLING AHEAD (4" letters)	30" x 30" (diamond)	Required 200 feet in advance of danger area where timber is being felled adjacent to all roads, including Temporary Roads, and trails.
7. ROAD MACHINERY AHEAD (4" letters)	30" x 30" (diamond)	Required at least 200 feet in advance of road maintenance operations on roads listed in Schedule C(T)5.31#.

All signs shall meet requirements as specified in Parts 1 and 6 of the Manual of Uniform Traffic Control Devices (MUTCD).

Sign borders and lettering shall be black. Borders are 7/8 inch wide, inset 5/8 inch from outside edge of sign. All sign backgrounds shall be orange, except that signs that need to be seen both day and night shall be retroreflective orange or illuminated.

Signs shall be installed on posts or on temporary supports complying with MUTCD standards. Post-mounted signs shall have a 5 foot minimum height above road surface, except that the "NEXT <> MILES" supplemental plaque, when used in conjunction with the "LOGGING OPERATIONS" sign, shall be a minimum of 4 feet above road surface.

All signs are to be removed or covered when operations are interrupted for seasonal nonuse or other extended periods.

TRAFFIC CONTROL PLAN AND SPECIFICATIONS - B(T)6.33 Safety (continued)

Purchaser/Contractor shall furnish flag personnel meeting the requirements of Chapter 6E of the MUTCD and advance warning signs when cable or helicopter logging above roads or trails, felling adjacent to roads or trails, where logs being bucked may roll into roads or trails, and in areas where fallout from blasting may occur. Except as identified in Part II, Purchaser/Contractor may temporarily block roads listed in C(T)5.31# and Temporary Roads in lieu of furnishing flag personnel. On roads controlled by other jurisdictional authorities, Purchaser/Contractor shall receive approval from that authority for Purchaser/Contractors's safety measures and traffic control plans before commencement of operations.

(b) Barricades. On roads listed in C(T)5.31#, if Purchaser/Contractors's Operations cause the traveled way or road shoulders to be constricted overnight, or longer, by such obstructions as decked logs, parked equipment, or piled slash, Purchaser/Contractor shall place barricades on both sides of the encroaching obstruction to safely channel traffic around such obstructions. Barricades shall remain in place until the obstruction is removed.

Barricades shall be Type II and meet specifications in MUTCD, Part 6. Barricades must be at least 3 feet high. Rails must be at least 2 feet long. Striping shall be alternating orange and white, sloping at a 45 degree angle, and reflectorized. For rails 2 feet to 3 feet long, striping shall be 4 inches wide. For rails longer than 3 feet, striping shall be 6 inches wide. Two rails, 8-12 inches in width, must face each direction.

Barricades shall be equipped with warning lights which shall be Type A low intensity flashing and shall be maintained so as to be capable of being visible on a clear night from a distance of 3,000 feet.

(c) Other Traffic Control Methods. The posting of CB channel signs may be authorized.

On roads listed in C(T)5.31#, Purchaser/Contractor may be authorized to install temporary gates, barricades (except cables), or natural barriers. The devices must be installed with the necessary hazard markers, be reasonably passable by Forest Service, and be removed prior to acceptance of the subdivision being served by the road.

Part II. Specific Requirements:

OHV TRAILS: The Sale Area is in a high use OHV recreation area, signage "TREE FELLING AHEAD" and blocking of OHV access, will be required when trails intersect with areas of felling and yarding operations to ensure public safety.

4610115 is a joint use road for OHV. Where identified by the Forest Service the Purchaser shall post Signage "TREE FELLING AHEAD" and block OHV access from the PI Trail that intersects with 4610115.

Purchaser/Contractor and Forest Service agree to the above stated requirements of the Traffic Control Plan:

_____	_____
Name	Name
_____	_____
Title	Title
_____	_____
Date	Date

CT2.11# - TIMBER SUBJECT TO AGREEMENT (06/1972)

In addition, there is within Sale Area an unestimated quantity of:

Species	Product
All Species	Grn Bio Cv

that shall be Included Timber upon written agreement.

CT2.35# (OPTION 1) - INDIVIDUAL TREE DESIGNATION (06/2010)

All live trees as specified by the designation by description table which meet the minimum tree diameter stated in AT2 are designated for cutting. Additional timber to be cut, if any, will be designated for cutting in accordance with BT2.37.

Leave trees, Marked with orange or pink tracer paint, or identified by specified as leave by the designation by description table are not to be cut, unless designated by the Forest Service.

CT4.211 - DOWNPAYMENT (06/2007)

The downpayment amount shown in AT15 may not be applied toward any other payment required under the provisions of this contract, except damages determined pursuant to BT9.4, transferred to other timber sales, or refunded until (a) stumpage value representing 25 percent of the total bid value of the timber sale is shown on Timber Sale Account to have been cut, removed, and paid for, or (b) the estimated value remaining to be cut and removed, as shown on Timber Sale Account, is equal to or less than the amount of the downpayment, or (c) if 36 CFR 223.49(e) is applicable, the estimated value remaining to be cut and removed, as shown on Timber Sale Account, is equal to or less than the amount of the downpayment. For lump sum timber sales, the downpayment may be applied to payment for release of the single payment unit.

If Forest Service makes a determination that this contract should not have been included under increased downpayment requirements (36 CFR 223.49(e)), the downpayment shall be revised and applied in accordance with 36 CFR 223.49(f).

DESCRIPTION PURSUANT TO CT2.35# (OPTION 1) - INDIVIDUAL TREE DESIGNATION (06/2010)

PAYMENT UNIT	DESIGNATED SPECIES*	DxD SPACING FEET ^{1/2}	Maximum Diameter at Stump Height (DSH ^{2/2}) inches	SKIPS	GAPS	HEAVY THINS
2	DF	16	--	--	YES	YES
4	DF	18	--	--	YES	YES
6	DF	15	--	--	YES	YES
14	DF	14	--	--	YES	YES
16	DF	13	--	--	YES	YES
18	DF, WH	12	--	--	YES	YES
22	DF	12	24.8	YES	YES	YES
24	DF	14	--	--	--	YES
26	DF	12	--	--	--	YES
28	DF	12	--	--	--	--
30	DF, WH	16	--	--	--	--
32	DF	16	--	--	YES	YES
36	DF	20	--	--	--	--
38	DF, WH	13	--	YES	YES	YES
40	DF, WH	18	--	--	YES	YES

*Douglas-fir (DF), western hemlock (WH)

A. **Designation by Description (DxD)**

Subdivisions that include a Maximum DSH^{2/2}, Skips, Gaps, and/or Heavy Thins follow the specifications below:

Maximum DSH^{2/2} Leave Trees: Leave all trees greater than or equal to the maximum Diameter at Stump Height (DSH^{2/2}).

Skips: All trees within 58 feet^{1/2} measured from stump height^{2/2} of a tree Marked with two horizontal **ORANGE** tracer paint bands around the bole and a stump mark shall be retained.

Gaps: Except for those trees exceeding the maximum DSH^{2/2}, cut all designated species which meet a 6 inch minimum DSH^{2/2} within 58 feet^{1/2} measured from stump height^{2/2} of a tree Marked with one horizontal **YELLOW** tracer paint band around the bole and a stump mark. Trees Marked with **YELLOW** tracer paint are to be cut.

Heavy Thins: Except for those trees exceeding the maximum DSH^{2/2}, cut all designated species which meet a 6 inch minimum DSH^{2/2} within 25 feet^{1/2} measured from stump height^{2/2} of a tree Marked with one horizontal **PINK** tracer paint band around the bole and a stump mark. Trees Marked with **PINK** tracer paint are to be retained.

In areas outside of Skips, Gaps, and Heavy Thins described above, cut all designated species which meet a 6 inch minimum DSH^{2/2} within the DxD spacing^{1/2} measured from stump height^{2/2} of a live tree with the largest stump diameter^{2/2}. Trees exceeding the maximum DSH^{2/2}, trees within a skip, boundary trees or species other than a designated species which have the largest DSH^{2/2} can be used as the largest tree to designate cut trees.

^{1/2} Distances are measured in slope distance, tree face to tree face outside bark at stump height^{2/2} above the natural forest floor on the high or uphill side. The face of the tree is defined as the portion of the bole that is closest to the bole of the tree being measured from.

^{2/2} Stump height is measured at 4 inches above the natural forest floor on the high or uphill side of the tree. Diameter taken at a right angle to the lean of the tree.

CT4.212 - TEMPORARY REDUCTION OF DOWNPAYMENT (08/2009)

Notwithstanding BT4.211 or CT4.211, upon the Purchaser's written request Forest Service may temporarily reduce the downpayment when Purchaser's scheduled operations are delayed or interrupted for 30 or more consecutive days, or the contract term is extended for 30 or more consecutive days for any of the following reasons:

- (1) Forest Service requests or orders Purchaser to delay or interrupt scheduled operations for reasons other than breach;
- (2) Purchaser interrupts or delays scheduled operations to work on a sale designated by the Forest Service as in urgent need of harvesting; or
- (3) An adjustment of the contract term authorized upon a determination of substantial overriding public interest, including a market-related contract term addition, or an urgent removal contract term extension under 36 CFR 223.53.

When Purchaser is not cutting or removing timber under contract during a qualifying period of delay, interruption, or extension listed above the downpayment may be reduced to \$1000 or 2 percent of the downpayment amount stated in the contract, whichever is greater. The Purchaser must restore the downpayment to the full amount stated in the contract within 15 days from receipt of the bill for collection and written notice from the Contracting Officer that the basis for temporarily reducing the downpayment no longer exists. Purchaser shall not cut or remove timber on a contract where the downpayment has been temporarily reduced until the downpayment amount stated in the contract is fully restored.

CT4.4 - PAYMENTS NOT RECEIVED (08/2012)

(a) Payments are due and payable on the date of issue indicated on the bill for collection. When a payment for timber cut and other charges is not received at the location designated by Forest Service by the date specified in the bill for collection, Contracting Officer will suspend all or any part of Purchaser's Operations until payment or acceptable payment guarantee is received. Other charges include, but are not limited to:

- (i) Slash disposal and road maintenance deposits;
- (ii) Cooperative work at rates established by specific agreement under BT4.218;
- (iii) Damages pursuant to BT9.4;
- (iv) Road use fees;
- (v) Restoration of downpayment pursuant to BT4.22;
- (vi) Periodic payments pursuant to BT4.213;
- (vii) Extension Deposits pursuant to BT4.217; and
- (viii) Other mandatory deposits.

(b) Failure to pay amounts due by the date specified in the bill for collection shall be considered a breach under BT9.3. The 30-day notice period prescribed therein shall begin to run as of the end of business on the date specified for receipt of payments. If the performance or payment is guaranteed by surety bond, the surety will receive a copy of the written notification of breach. Demand will be made on the surety or other institution providing the guarantee or bond instrument for immediate payment 10 days after issuance of written notification of the breach.

(c) Pursuant to the Debt Collection Improvement Act of 1996, as amended, if payment is not received by Forest Service within 15 days after the date of issue indicated on the bill for collection:

(i) Simple interest shall be assessed at the Current Value of Funds Rate as established by the Secretary of the Treasury. Interest will begin to accrue as of the date of issue indicated on the initial bill for collection.

(ii) Debtors will be assessed administrative charges, in addition to the delinquent amount due. Administrative charges are those additional costs incurred by the Government in processing, handling, and collecting delinquent debts.

(iii) A penalty charge of six (6) percent per annum will be assessed on any portion of a debt delinquent more than 90 days. This penalty charge is in addition to interest and administrative charges under paragraphs (c)(i) and (c)(ii). The penalty charge shall accrue from the date of issue indicated on the bill for collection and shall be assessed on all outstanding amounts, including interest and administrative costs assessed under paragraphs (c)(i) and (c)(ii).

(iv) Payments will be credited on the date received by the Federal Depository or Collection Officer designated on the bill for collection.

(d) Forest Service remedies for Purchaser's failure to make payment for timber cut and other charges when due, except for accrual of interest, suspension of all or any part of Purchaser's Operations, and administrative offset, shall be stayed for so long as:

- (i) A bona fide dispute exists as to Purchaser's obligation to make such payment and
- (ii) Purchaser files and prosecutes a timely Claim.

CT5.1# (OPTION 1) - TEMPORARY ROAD AND LANDING CONSTRUCTION (06/2008)

In addition to the requirements of BT5.1 and BT6.63, Purchaser and Forest Service will agree to the design, construction, maintenance, closure, and obliteration of all Temporary Roads.

Construction of Temporary Roads in areas shown on Sale Area Map shall be in accordance with the attached plans or criteria.

Unless otherwise agreed, if Purchaser's Operations require more than N/A cubic N/A of rock for Temporary Roads, landings, or other temporary uses, such rock shall be obtained from commercial sources.

PLANS AND/OR CRITERIA PURSUANT TO CT5.1# (OPTION 1) - TEMPORARY ROAD AND LANDING CONSTRUCTION (06/2008)_
see Table on following page

CT5.12# - USE OF ROADS BY PURCHASER (06/1999)

Purchaser's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

Code	Use Limitations
X	Hauling prohibited
R	Hauling restricted
U	Unsuitable for hauling prior to completion of agreed reconstruction
P	Use prohibited
A	Public use restriction
W	Regulation waiver

Roads coded A will be signed by the Forest Service to inform the public of use restrictions. Purchaser's use of roads coded R, A, or W shall be in accordance with the following restrictions:

See Restricted Road List Table.

PLANS AND/OR CRITERIA PURSUANT TO CT5.1# (OPTION 1) - TEMPORARY ROAD AND LANDING CONSTRUCTION
(06/2008)

Construction: When appropriate, reestablish existing road alignments unless a new location will cause less resource damage. Temporary roads and landings that obstruct ditch lines or drainage ways shall be improved with french drains, drivable dips or materials that provide effective drainage and prevent erosion, prior to haul. Proper drainage will be maintained on all temporary roads throughout the operating season. Any instream culverts installed on temporary roads will be installed and removed between July 15 and August 15 unless otherwise approved. Landings shall not be located within 100 feet of any stream channel unless additional mitigations are approved. Certified weed-free rock shall be used when necessary to reduce erosion, puddling and compaction on landings and Temporary Roads. If possible, vegetation will be left in place and driven over. All stumps, rocks, slash, and debris will be left along edge of road and/or landing in such a manner as to be stable but fully retrievable during rehabilitation (generally on the uphill side of road). Roadbed will not exceed 12 feet and clearing limits 16 feet in width unless approved by the Forest Service.

Rehabilitation: Temporary roads and landings will be decompacted. If rock was used the rock will be removed or incorporated into the soil by decompacting or scarifying the roadbed. Remove culverts and cross-drain ditches and install water bars where designated by the Forest Service. Available logging slash, logs, or root wads will be placed across the road or landing surface. Block motorized access by construction of an 8 foot earthen berm, placement of large boulders, or other techniques approved by the Forest Service, or as described below. Following rehabilitation all areas of exposed soil will be seeded and mulched as required by Provision CT6.6#.

Areas of OHV trails authorized for use as a temporary road need rehabilitated to its prior condition. Areas where temporary roads intersect with OHV trails will need blocked post use to restrict unauthorized OHV access off-trail.

TABLE PURSUANT TO CT5.12# - USE OF ROADS BY PURCHASER (06/1999)

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
4610 000	Abbott Road	0.00	7.81	R	1/ 2/ 3/ 4/
4610 115		0.00	1.21	R	1/ 2/ 3/

1/ Protection of Roads - Heavy Haul Restricted. Road has limited structural capacity and may not support commercial traffic during adverse weather conditions. Haul shall cease when indicators of road damage are observed.

2/ Protection of Roads - Winter Haul Restricted. To protect the integrity of roads, haul will not occur when the roadbed is under freeze-thaw conditions. To determine if freeze-thaw conditions exist measurements of the road surface temperature will be taken at the highest and lowest elevations along the haul route on National Forest System Roads to ensure that haul roads are either completely frozen or completely thawed to accommodate haul. Temperature readings at these locations should both be at or below 28° F, or both be at or above 38° F. Roads that have been under standing snow for at least 3 days with no evidence of snow melt may be assumed to be completely frozen. The Contracting Officer may allow haul to proceed if temperature readings are within this range but determines that the haul roads are completely frozen or completely thawed.

3/ Protection of Roads - Wet Weather Haul Restricted. Commercial haul shall cease whenever 1-inch of precipitation (rain or combination of rain and melted equivalent of snow) occurs within any given 24-hour period as measured at the lowest elevation along the haul route. To measure precipitation, the Purchaser may install a temporary rain gauge on National Forest System Roads near the lowest elevation along the haul route as agreed upon by the Contracting Officer; otherwise precipitation will be measured according to the Wanderer's Peak RAWS station (WPK03): <https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=mso&sid=wpko3&num=48&raw=0&dbn=m&banner=no> or Red Box RAWS station (WPK03): <http://www.wrh.noaa.gov/mesowest/getobext.php?sid=RXFO3&table=1&banner=off>.

4/ Temporary Road Closure - Lowboy Vehicles. The use of long lowboy vehicles, any time of year, on the first 2.2 miles of Road 4610 000 will require a short temporary closure of 4610 000 to minimize hazards.

The load, weight, height, length, or width limitations of vehicles on National Forest roads shall be in accordance with all State, County, and Local laws & ordinances unless otherwise approved in writing by special-use authorization.

Title and Date of Governing Road Rules Document:

Mt. Hood National Forest Transportation
System Management Road Rules

Commercial Road Rules

January 1992 and Amendments through
Timber Sale Award Date

Effective Date

CT5.13# - ROAD COMPLETION DATE (04/2004)

Construction of Specified Roads shall be completed no later than 10/31/2021; except for earlier construction completion dates for roads listed below:

Road Number	Road Name	Station		Completion Date
		From	To	

N/A

Completion date is binding on the party that constructs road, whether Purchaser or Forest Service. Contracting Officer shall modify the completion date in writing to conform to the approved Plan of Operations under BT6.311 at the request of Purchaser.

When Purchaser elects Forest Service construction of Specified Roads shown in sale advertisement, Forest Service may adjust construction completion date when road construction is delayed or interrupted for causes that qualify for an adjustment of the completion date of Forest Service's road construction contract. When qualifying delays or interruptions of road construction occur, Forest Service shall evaluate such occurrences and document any findings. The current status of any adjustment shall be available to Purchaser on request. Promptly after the end of Normal Operating Season in which qualifying days occur, Forest Service shall give Purchaser written notice of (a) number of qualifying days claimed, and (b) new construction completion dates. After all road construction is complete, Forest Service shall grant Contract Term Adjustment. Such adjustment shall be limited to road completion date delays that occurred during Normal Operating Season.

If Forest Service is responsible for road construction and the actual date of road completion is 1 year or more after the completion date stated above, Purchaser may request a rate redetermination under BT3.3 for remaining volume. Such request must be made within 30 days of notification that road construction has been completed. Upon receipt of such request, Forest Service shall redetermine rates using standard methods in effect on the completion date of road construction. Rates to be established shall apply to all timber removed from Sale Area after the effective date of the rate redetermination.

Forest Service shall in no way be responsible for any delay or damage caused by road contractor in performing the road construction, except such delay as may be the fault or negligence of Forest Service.

When Purchaser constructs Specified Roads and requests Contract Term Adjustment, completion dates shall be adjusted by number of days that qualify for such adjustment, provided such qualifying days occur before specified construction completion date. When Purchaser desires to construct an alternate facility under BT5.26, Forest Service and Purchaser shall agree, in writing, on a construction completion date for alternate facility. Contract Term Adjustment as noted above will apply. Completion date shall be adjusted where a Design Change or physical changes necessitate a modification of Specified Road construction work that increases the scope or magnitude of the required work.

If Purchaser fails to complete construction of any or all Specified Roads by applicable completion date, as adjusted, Contract Term Extension shall not be granted.

As used in this Subsection, construction of a road is completed when:

- (a) Purchaser constructs Specified Roads and Forest Service furnishes Purchaser with written notice of acceptance under BT6.36 or
- (b) Forest Service constructs road and furnishes Purchaser with written notice authorizing use of road.

Notwithstanding BT5.1, Purchaser shall not use a road that Purchaser has elected for Forest Service to

construct, until construction is completed and Forest Service furnishes Purchaser with written notice authorizing use of road.

CT5.213# - DEPOSIT FOR RECONSTRUCTION ENGINEERING SERVICES (04/2020)

Purchaser shall make a cash deposit for engineering services (preconstruction and construction) provided by Forest Service for reconstruction of National Forest system roads necessary to accommodate Purchaser's use under this contract, pursuant to 16 USC 537.

The total amount to be deposited by Purchaser for reconstruction related engineering services to be completed by Forest Service personnel or by public works contract is \$12,343.00. Purchaser shall make this deposit at the end of the first full Normal Operating Season or 12 months from contract award, whichever occurs first. If payment falls due on a date other than a normal billing date, the payment date shall be extended to coincide with the next Timber Sale Account billing date. In the event a different deposit schedule is agreed to, such deposit shall be due within 15 days after the date of issue indicated on the initial bill for collection, pursuant to BT4.4.

The amount of the required deposit will be shown as an associated charge on Purchaser's Timber Sale Account. Forest Service shall retain any unexpended deposit for reconstruction related engineering services.

The deposit for reconstruction related engineering services shall be commensurate with project need and Purchaser's road use. Forest Service shall complete reconstruction related engineering services on the following schedule unless a different completion schedule is agreed in writing:

Road or Facility No.	Termini		Engineering Services Completion Date
	From	To	

N/A

Reconstruction related engineering services may consist of some or all of the engineering work and expense of: preparing, setting out, controlling, inspecting, and measuring the reconstruction of a National Forest system road.

CT5.221# - MATERIAL SOURCES (04/2004)

Sources of local materials are designated on Plans and Sale Area Map. Forest Service assumes responsibility for the quality and quantity of material in designated sources. Purchaser shall determine the equipment and work required to produce the specified product, including the selection of acceptable material that is reasonably available in the source that meets specifications. The designation of source includes the rights of Purchaser to use certain area(s) for plant site, stockpiles, and haul roads.

Should the designated source, due to causes beyond the control of Purchaser, contain insufficient acceptable material, Forest Service will provide another source with adjustment in accordance with BT5.253.

When Purchaser elects not to use designated sources, Purchaser shall furnish the specified product with no adjustment in unit rates. Quality testing shall be the responsibility of Purchaser. Test results shall be furnished to Forest Service.

When Purchaser elects not to use designated sources and the Schedule of Items lists pit development separately, cost allowance will be reduced under BT5.253 when Forest Service determines the work will not be required.

When materials are subject to a weight measurement, the specific gravity or weight/volume relationship used as a basis for determination of estimated quantities shall be:

Source I N/A, Source II N/A, and Source III N/A.

Purchaser may, when agreed in writing, use on the project such suitable stone, gravel, and sand, or other material found in the excavation, and will earn a cost allowance for the excavation of such materials at the corresponding contract unit price and for the pay items for which the excavated material is used. Purchaser shall replace, without additional cost allowance, sufficient suitable materials to complete the portion of the work, which was originally contemplated to be constructed with such material. Purchaser shall not excavate or remove any material, except that which is within the excavation limits, without written authorization from Forest Service.

When material is appraised from non-National Forest designated sources, owner charges for the material in terms of unit cost for royalties, purchase of raw materials, or finished products shall be as follows until N/A:

See Material Source Table.

Should quantity vary from that estimated, payment to owners shall be for units actually obtained. Purchaser shall make arrangements with owner(s) for measurement and payment for royalties, purchase of raw materials, or finished products, as shown above.

Materials produced or processed from National Forest lands in excess of the quantities required for performance of this contract are the property of Forest Service, unless prior written agreement has been obtained to use excess material on other National Forest sales. Forest Service is not obligated to reimburse Purchaser for the cost of their production.

Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials shall be located to facilitate their prompt inspection. Sites on Forest Service administered land, approved by Forest Service, may be used for storage purposes and for the placing of Purchaser's plant equipment. All storage sites provided by Forest Service shall be restored at Purchaser's expense. Purchaser shall be responsible for making arrangements for storage on other than Forest Service administered lands.

When the construction of the portion of the project for which Temporary Roads used for hauling materials is completed, all such Temporary Roads shall be restored as nearly as practicable to their original ground profile, unless otherwise agreed in writing.

MATERIAL SOURCE TABLE PERSUANT TO CT5.221# - MATERIAL SOURCES (4/2004)

Material	Type of Purchase	Owner(s)	Unit of Measure	Unit Price	Estimated Quantity	Total
		N/A				

Sale Name: Rail

CT5.31# - ROAD MAINTENANCE REQUIREMENTS (07/2001)

Purchaser shall maintain roads in accordance with the following Contract Road Maintenance Requirements Summary:

See Contract Road Maintenance Requirements Summary Table.

TABLE PURSUANT TO CT5.31# - ROAD MAINTENANCE REQUIREMENTS (07/2001)

Contract Road Maintenance Requirements Summary

Road	Termini		Miles	Applicable Prehaul Road Maintenance Specifications				
	From	To		T-811B	T-813B	T-836	T-839	T-842
4610 000 (Paved)	0.00	2.36	2.36	--	--	P	--	P
4610 000 (Gravel)	2.36	7.25	4.89	P	P	P	--	P*
4610 115	0.00	1.21	1.21	--	--	--	P	--

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party
 P* = Do not perform T-842 on 4610 000 from M.P. 3.27 to M.P. 3.61; identified as invasive species concern on Sale Area Map.

Road	Termini		Miles	Applicable During Haul Road Maintenance Specifications				
	From	To		Travel Way	T-836	T-839	T-842	T-854
4610 000 (Paved)	0.00	2.36	2.36	D	P	--	P	P
4610 000 (Gravel)	2.36	7.25	4.89	--	P	--	--	P
4610 115	0.00	1.21	1.21	--	--	P	--	P

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

Road	Termini		Miles	Applicable Post Haul Road Maintenance Specifications	
	From	To		T-836	T-839
4610 000 (Paved)	0.00	2.36	2.36	P	--
4610 000 (Gravel)	2.36	7.25	4.89	P	--
4610 115	0.00	1.21	1.21	--	P

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party

See Mt. Hood National Forest Road Rules Policy dated 1-01-1992.

Description of work required by the above listed T-specs is shown in the following ROAD MAINTENANCE REQUIREMENTS SPECIFICATION table, and included in the timber sale contract.

ROAD MAINTENANCE REQUIREMENTS SPECIFICATION TABLE PURSUANT TO CT5.31# - ROAD MAINTENANCE REQUIREMENTS (07/2001)

1 Road No. and Termini	2 Special Project Specifi- cation	3 Travel Way			4 Brush And Log Out	5 *Surfacing**	6 Dust Abatement			7 Seasonal Mainte- nance	8 Snow Removal	9 Post Haul	
		Width	X Slope	Comp			Product	Applic Rate	Width			Block	Treat
4610 000 (Paved) 0.00-2.36	T836, T842, T854	AI	AI	--	8' L & R	--	--	--	--	--	--	--	--
4610 000 (Gravel) 2.36-7.25	T811, T813A, T836, T842, T854	AI	AI	B	8' L & R	130 CY	--	--	--	--	--	--	--
4610 115	T839	AI	AI	--	--	--	--	--	--	W/B	--	P*	--

NOTE: Forest Service approved erosion control devices will be required during road maintenance activities (including Blading, Shaping, Ditch Cleaning, and Slide and Slough Removal) and Landing Construction. These devices may include but are not limited to check dams, silt fencing, straw bales, wattles, staked bio bags, etc.

Surfacing - Roads & Landings that require spot rocking shall be approved by the Contracting Officer.

Surfacing - Aggregate to be obtained from Agency approved commercial source that is reasonably free of seeds and organic materials from noxious weeds and invasive species of concern and shall be placed as staked in the field by the Contracting Officer through the contract administration team.

* Denotes blockage location and type to be flagged by Forest Service at time of placement.

ROAD MAINTENANCE REQUIREMENTS SPECIFICATION CODES TABLE PURSUANT TO CT5.31# - ROAD MAINTENANCE REQUIREMENTS (07/2001)

Column No.	Heading	Entry	
	Any	Blank	Except as otherwise described, no entry indicates Purchaser is not authorized or required to perform the work item(s).
	Any	RC	This work requirement applies only when haul of Contract related construction materials occurs.
2	Special Project Specification	Number	Entry indicates Special Project Specification which applies.
3	Travel Way	EX Numbers IS, C, OS, F, or AI A or B	Purchaser shall maintain the traveled way to the width existing upon entry, or at the completion of Specified Road work. Purchaser shall maintain the traveled way to the standard width indicated by the entry, plus curve widening, in accordance with Section T-811. If required, the road template shall be shaped to this width and to the designated cross slope before haul and during recurring maintenance. Cross slopes are designated as: IS (Inslope), C (Crown), OS (Outslope), F (Flat), AI (As Is). If compaction is required.
4	Brush and Log Out	Numeric & R and or L As Staked (AS) OPT H	Purchaser shall remove brush for specified width on either or both the right (R) side or left (L) side of road. Limits of brushing are as staked or marked in the field. Purchaser may use hand or mechanical means of brushing. Only hand brushing may be used.
5	Surfacing	Aggregate Grading D	Purchaser shall place surfacing on roads listed according to the grading indicated. Purchaser is to make deposits for listed road maintenance, including surface rock replacement.
6	Dust Abatement	OPT Product Abbr. EX Numbers	Product selection is Purchaser's choice from those listed in Section T-812. Unless otherwise agreed, Purchaser is restricted to product listed corresponding to the abbreviation shown in Section T-812; (i.e., LigS = Lignon Sulfonate) Application rates are estimated amounts. Purchaser shall abate dust on the existing width. Purchaser shall abate dust to the width indicated by entry.
7	Seasonal Maintenance	W B	Waterbars and/or crossditching shall be required prior to expected seasonal precipitation. Entrance barriers shall be installed by Purchaser prior to nonuse periods.
8	Snow Removal	TS JU Blank	Snowplowing authorized for Purchaser's Operations without recreation access being provided per Section T-803 requirements. Snowplowing authorized, but must provide for recreation joint use per Section T-803 requirements. Snowplowing is not authorized. Forest Service may authorize plowing by permit when not in conflict with other uses.
9	Post Haul	P	P denotes that work is Purchaser's Responsibility to perform.

CT5.32# - ROAD MAINTENANCE DEPOSIT SCHEDULE (08/2012)

Other provisions herein notwithstanding, when Forest Service requests payment in lieu of Purchaser's performance of road maintenance, Purchaser shall make Required Deposits (16 USC 537) for current and/or deferred road maintenance. Such deposits are based on the estimated volume and distance hauled and Purchaser's commensurate use of each road listed in the Road Maintenance Plan in CT5.31#.

Purchaser and Forest Service may agree in writing on adjustment of such rates. If Purchaser uses roads under jurisdiction of Forest Service other than those listed in the Road Maintenance Plan, Forest Service shall establish rates commensurate with Purchaser's use of such roads.

The Required Deposits for Forest Service work in lieu of Purchaser performance are N/A per CCF for recurrent maintenance, and \$1.56 per CCF for deferred maintenance.

The following table lists who Purchaser will make deposits for road maintenance to, and the rate per unit of measure of the deposit. The Road Maintenance Agreement is available for inspection at the Forest Supervisor's office.

<u>Deposit Made To</u>	<u>Rate</u>	<u>Unit of Measure</u>
<hr/>		
N/A		

CT6.315# - SALE OPERATION SCHEDULE (06/1994)

Unless otherwise agreed to in writing between Purchaser and Forest Service, Purchaser's Operations shall be performed in accordance with the following schedule.

See attached schedule.

SCHEDULE PURSUANT TO CT6.315# - SALE OPERATION SCHEDULE (06/1994)

Payment Unit	Operating Conditions	Purpose						
<p>Ground-based Payment Units and Tethered Payment Units</p>	<p>Operation of off-road, ground-based equipment will generally not occur during wet periods when detrimental harm to soils or erosion may occur. Exceptions may be made for equipment operating over a sufficient slash mat when approved by the Forest Service.</p> <p><u>Conditioned-based ground-based or tethered operations:</u></p> <p>Three factors are considered when determining if conditions are conducive for ground operations:</p> <ol style="list-style-type: none"> soil type antecedent precipitation visual indicators. <p>a) <u>Soil type -</u></p> <p><u>Soil Group 1- ground-based areas as shown on Sale Area Map, Payment Units 2, 14, 22, 24, and 38:</u> Most susceptible to ground disturbance when moist. Ground-based operations may need to be deferred until late summer or early fall. Skidding should be avoided when moist.</p> <p><u>Soil Group 2- tethered areas as shown on Sale Area Map, Payment Units 2, 4, 6, 14, 16, 18, 26, 28, 30, 32, 36, 40:</u> Moderately susceptible to ground disturbance when moist. Ground-based operations may need to be deferred until mid to late summer. Ground-based operations should be avoided when moist.</p> <p>b) <u>Antecedent precipitation</u> - This factor is considered to determine if soil conditions are too wet for ground-based timber harvest operations.</p> <p><u>Rain</u> - includes melted snow. The USGS Clear Lake Snotel Site will be used to determine when soils are likely wet or saturated. The soil is considered too wet to operate if soil moisture has been greater than 20 percent at the 2-inch depth reading for more than 5 consecutive days.</p> <p>It is likely too wet to operate when the preceding rainfall is more than</p> <ul style="list-style-type: none"> 0.6 inch in 4 hours 1.0 inch in 24 hours 2.0 inches in 72 hours or 0.3 inches average for 7 days <p>Rainfall will be measured by using as agreed by the Forest Service or by Wanderer's Peak RAWS station (WPK03): https://www.wrh.noaa.gov/mesowest/getobext.php?wfo=mso&sid=wpko3&num=48&raw=0&dbn=m&banner=no or Red Box RAWS station (WPK03): http://www.wrh.noaa.gov/mesowest/getobext.php?sid=RXFO3&table=1&banner=off.</p> <p><u>For over-snow, conditions necessary for operations are as follows:</u></p> <table border="1" data-bbox="261 1318 1122 1394"> <tr> <td>Soil not frozen</td> <td>Need 10 inches of machine-packed snow</td> </tr> <tr> <td>2 inches of frozen soil</td> <td>Need 6 inches of machine-packed snow</td> </tr> <tr> <td>4 inches of frozen soil</td> <td>No snow cover necessary</td> </tr> </table> <p>It is likely too wet to operate when:</p> <ul style="list-style-type: none"> it's warm and melting there is less than 24 inches of uncompacted snow depth temperature is above freezing for more than 6 hours each day ground beneath an uncompacted snowpack is not frozen rain is falling on snow <p>c) <u>Visual indicators</u> - If a visual indicator is present, operations should be curtailed until soils dry further.</p> <ul style="list-style-type: none"> Rutting in skidtrails greater than 12 inches deep Off-trail rutting greater than 6 inches deep Rutting of temporary roads greater than 6 inches deep Water running down road surface Standing water or ponding on the ground Puddles in skidtrails, landings or roads that last more than 5 days Observable turbidity in streams issuing from culverts or in ditches Presence of free water in a soil sample (water comes out of dirt clod when firmly squeezed) Mud mixed with snow from machine travel Ruts in soil below snowpack management. 	Soil not frozen	Need 10 inches of machine-packed snow	2 inches of frozen soil	Need 6 inches of machine-packed snow	4 inches of frozen soil	No snow cover necessary	<p>Soil Protection</p>
Soil not frozen	Need 10 inches of machine-packed snow							
2 inches of frozen soil	Need 6 inches of machine-packed snow							
4 inches of frozen soil	No snow cover necessary							

SCHEDULE PURSUANT TO CT6.315# - SALE OPERATION SCHEDULE (06/1994) (continued)

Payment Unit	Operating Conditions	Purpose
All native surfaced roads	Haul will not occur on native surfaced roads during wet conditions as described in conditioned-based ground-based operations b and c above, unless hardened with crushed aggregate or other rock, and drainage structures or other erosion control measures are installed to prevent sediment delivery to streams and protect the road structure.	Stream Protection
Specified Road Reconstruction/ Temporary Road Construction	Soil disturbing road reconstruction and temporary road construction activities will not occur during wet conditions as described in conditioned-based ground-based operations b and c above, unless the road segment has no hydrologic connection.	Stream Protection
All Payment Units	All harvest operations, and use of motorized equipment will be restricted to March 31 to November 30.	Deer and Elk Winter Range
14, 16, 18	All harvest, and haul operations, including temporary road rehabilitation will be completed by December 31, 2022.	Recreation Trail Construction
Road 4610	Log haul, rock haul, or equipment transport will be restricted on weekends and holidays, the use of these vehicles will not occur unless accompanied by a pilot car.	Public Safety

CT6.405 - ALTERNATE REMOVAL OF INCLUDED TIMBER (05/2005)

Purchaser and Forest Service may agree to alternate removal requirements of Included Timber contained in AT2. Alternate removal requirements are to be set forth in an agreement signed by both Purchaser and Contracting Officer. The terms of the agreement binds both parties and becomes part of the timber sale contract.

The development and execution of the agreement is based upon the determination by the Contracting Officer that removal of Included Timber is economically impractical if Purchaser has no ready market for such logs in the tributary area. A tributary area is defined as the area in which the Purchaser and competitors regularly deliver saw logs, or 200 miles from the Sale Area, whichever distance is greater.

The agreement for alternate removal requirements shall be executed prior to removing any timber from the Payment Units included in the agreement. Alternate removal requirements shall apply only to whole units and not to portions of units. All material meeting alternate removal specifications shall be cut and removed to locations designed in the agreement.

Volumes of material with alternate removal requirements will be determined from the National Cruise report for the sale. Purchaser will be charged for the following:

- a) stumpage value at current contract rates of the alternatively removed timber;
- b) plus the cost of other work required by the Forest Service to dispose of alternatively removed material;
- c) plus the difference between the appraised transportation cost of the Sawtimber and/or Nonsawtimber material involved and the appraised transportation cost of the alternative.
- d) Minus any work required to be completed by the Purchaser associated with alternate removal requirements.

Charges will be debited to the Purchaser's timber sale account.

Upon acceptance of the alternate removal requirements, the Payment Unit will be removed from the Sale Area under BT6.36.

Title to material included in the alternate removal agreement shall remain with the Forest Service.

CT6.41# - SPECIFIC REQUIREMENTS (01/2000)

Notwithstanding BT6.41, BT6.411, BT6.5, and BT6.61, felling objectives shall be accomplished by the type of felling methods and equipment listed herein. Methods or equipment other than those specified may be approved. For Payment Units shown in the following table, Purchaser shall submit a cutting plan for Forest Service acceptance, prior to the start of felling operations.

See attached table.

TABLE PURSUANT TO CT6.41# - SPECIFIC REQUIREMENTS (01/2000)

<u>FELLING METHODS</u>	<u>PAYMENT UNITS</u>
<ol style="list-style-type: none"> 1. Approved snags and maximum DSH leave trees inside the unit boundaries and approved trees located outside of unit boundaries that need to be felled for safety or operational reasons shall be left where felled. 2. Directional felling methods are required within all unit boundaries. Trees shall be felled away from unit boundaries, stream buffers, leave areas and paved roads. Trees that inadvertently fall in stream buffers will be left onsite. 3. Leave a minimum stump height of 4" on the highside of the stump. 4. Process and leave tops at stump, remove limbs on three sides of the bole at a minimum. 	All
<ol style="list-style-type: none"> 5. Leave trees with a diameter of 24.8 inches or greater at stump height approved to be felled for safety or operational reasons will be left onsite. 	22
<u>FELLING EQUIPMENT</u>	<u>PAYMENT UNIT</u>
<ol style="list-style-type: none"> 1. <u>Mechanized felling equipment:</u> <ol style="list-style-type: none"> A. Will generally operate on slopes less than 35 percent. B. If approved by the Forest Service, for areas 180 feet from a stream, equipment can operate on slopes from 35 to 40 percent, if equipment stays on existing approved skid trails, or moves straight up and down the slope. C. Limited to a single pass on each pathway unless operating on continuous slash-covered paths. D. Slash is not required when equipment is moving on approved skid trails. E. Harvester paths will be spaced a minimum average of 60 feet apart, except where converging. F. When tethered, harvesters may operate on slopes up to 60%. 2. Steel tracked equipment shall not be operated on asphalt or bituminous surfaced roads. If there is not a suitable site for unloading and loading, then paved surfaces must be protected with matting materials approved by the Forest Service. 	All

CT6.42# - YARDING/SKIDDING REQUIREMENTS (06/2010)

Purchaser shall submit for Forest Service approval a Yarding/Skidding Plan prior to the start of felling operations. Requirements other than those specified in the following table may be approved. When appropriate, such approval shall include adjustments in Current Contract Rates and revision of the Sale Area Map. In no such case shall the adjustments result in Current Contract Rates less than Base Rates.

Location of all skid roads and trails, tractor roads, skyline corridors, mechanized harvester trails, forwarder roads, and other log skidding facilities, shall be approved prior to felling, construction or use.

See attached table for requirements.

TABLE PURSUANT TO CT6.42# - YARDING/SKIDDING REQUIREMENTS (06/2010)

YARDING/SKIDDING REQUIREMENTS	PAYMENT UNITS
<p><u>Ground-based Yarding:</u></p> <ol style="list-style-type: none"> 1. Ground-based yarding equipment shall be confined to pre-approved skid trails. 2. Use existing skid trails to the maximum extent possible. 3. Where new skid trails are needed: uphill skidding will generally be on slopes less than 20% except on short pitches; and downhill skidding will generally be on slopes less than 30%. 4. Generally new skid trails shall be spaced an average of 150 feet apart, except where converging at the landing. 5. Where existing skid trails are used: some ground-based operations may occur on slopes steeper than 30% where existing skid trails are not hydrologically connected. Skid trails in these situations are typically contouring or diagonally constructed skid roads with cut and fill. 6. Skid trails shall not be constructed within 100 feet of protected streamcourses or through areas with a high water table, or be located in areas that will channel water onto unstable headwall areas, or located down swale bottoms. 7. Rutting within skid trails will not exceed 12 inches in depth over more than 10 percent of a designated skid trail system per unit. 	<p>2, 14, 22, 24, 38</p>
<p><u>Skyline Yarding:</u></p> <ol style="list-style-type: none"> 1. Skyline equipment shall be rigged to obtain one end suspension at all times, except during lateral yarding. 2. Individual corridor widths will not exceed 12 feet. 3. There shall generally be a minimum distance of 150 feet between skyline corridors on parallel settings and on radial settings 200 feet between tail trees at the unit boundary. 	<p>2, 4, 6, 14, 16, 18, 26, 28, 30, 32, 36, 40</p>
<p><u>Tethered Yarding:</u></p> <ol style="list-style-type: none"> 1. Equipment paths will be spaced a minimum average of 60 feet apart, except where converging. Equipment will operate over continuous slash-covered paths; the layer of woody debris will be as thick as possible. 2. When tethered equipment may operate on slopes up to 60%. 	<p>2, 4, 6, 14, 16, 18, 26, 28, 30, 32, 36, 40</p>
<p>Do not tailhold or use guyline anchors on other ownership as shown on the Sale Area Map.</p>	<p>All</p>
<p>Do not yard tops and limbs; leave in Payment Unit.</p>	<p>All</p>
<p>All existing downed logs or debris currently in units will be retained. Downed logs may be moved within the payment unit to facilitate skidding operations.</p>	<p>All</p>
<p>Refueling of all machinery shall not occur within 150 feet of any surface waters.</p>	<p>All</p>
<p>Steel tracked equipment will not be operate on asphalt or bituminous surfaced roads. If there is not a suitable site for unloading and loading, then paved surfaces must be protected with matting materials approved by the Forest Service.</p>	<p>All</p>

CT6.6# - EROSION CONTROL AND SOIL TREATMENT BY PURCHASER (03/2017)

Erosion prevention and control work required by BT6.6, shall be completed within 15 calendar days after yarding/skidding operations related to each landing are substantially completed or after Forest Service designation on the ground of work where such designation is required hereunder. Said time limit shall be exclusive of full days lost in Purchaser's Operations due to causes beyond Purchaser's control. Such on the ground designation shall be done as promptly as feasible unless it is agreed that the location of such work can be established without marking on the ground. After September 15, and as long thereafter as operations continue, the work shall be done as promptly as practicable. Damage resulting from Purchaser's Operations due to failure to perform required work shall be repaired by Purchaser.

On slopes greater than 20 percent, erosion control measures will be done with methods other than mechanized equipment, unless otherwise agreed.

Where soil has been disturbed or displaced on Sale Area by Purchaser's Operations and where measures described in BT6.6 will not result in satisfactory erosion control or where subsoiling is shown on Sale Area Map, the following shall be performed. If applicable, timing of the work shall be coordinated with required scarification or subsoiling.

(a) Where staked or otherwise marked on the ground by Forest Service, seed, fertilizer, and mulch will be applied as indicated in the attached seeding, fertilizing, and mulching schedule. All applications shall be current and done during the period from April 15 to September 15, unless otherwise agreed to. Applications shall be done only during favorable conditions. If Purchaser and Forest Service agree, seed can be applied and covered within 10 days of ground disturbance, and may be done outside the required periods.

(b) Where shown on Sale Area Map, landings, Temporary Roads and/or skidtrails/roads shall be scarified to a depth of 18 inches to provide a seedbed for grass seed, fertilizer, and mulch. Seed, fertilizer, and mulch shall be spread evenly at the rates shown in the table. When the seed, fertilizer, and mulch are applied in separate operations, the second or third operations shall be within 10 days of the first or second.

(c) Where shown on Sale Area Map, landings, Temporary Roads, and skid trails/roads used by Purchaser shall be subsoiled to a minimum depth of N/A inches, except that Forest Service may agree to lesser depths. Each subsoiler shank shall be equipped with a shoe and wings which has a total width of at least N/A inches. The design of the shank and wings will be such that the treated, compacted soil is slightly lifted and well-fractured rather than plowed, mixed, or displaced. The distance between subsoiler shank passes shall not exceed N/A inches. Treated areas shall span the total width of compaction. Subsoiling shall be kept reasonably current and shall be done during Normal Operating Season unless otherwise agreed.

(d) When agreed to, Purchaser may use alternate methods of erosion control. Seed shall meet current Forest Service requirements, with the additional requirement that no seed containing any noxious weed seed in excess of established state limitations as listed in the current "State Noxious Weed Requirements Recognized in the Administration of the Federal Seed Act" publication will be used (commonly referred to as the "all states" noxious weed seed list). Seed shall be furnished separately or in mixture in standard containers clearly marked with: (1) seed name; (2) lot number; (3) net weight; (4) percentages of purity and of germination (in case of legumes, percentage of germination to include hard seed); (5) percentage of weed seed content; and (6) certification that no noxious weed seeds in excess of established state standards are present. The Purchaser shall furnish the Government duplicate signed copies of a certificate, signed by a Registered Seed Technologist or Seed Analyst (certified through either the Association of Official Seed Analysis or the Society of Commercial Seed Technologists), certifying that each lot of seed has been tested in accordance with the Association of Official Seed Analysts Standards within 12 months prior to date of application. This certificate shall include (1) name and address of laboratory, (2) date of test, (3) lot number for each kind of seed, (4) name of seed, (5) percentage of germination, (6) percentage of purity, (7) percentage of weed seed content, and (8) certification that no noxious weed seeds in excess of established state limitations are present in any kind of seed. Legume seed shall be inoculated with approved cultures in accordance with the instructions of the manufacturer. No

seed may be applied without prior written approval by the government.

(e) Purchaser may be required to seed areas disturbed by harvest activities to prevent the spread of noxious weeds, or the establishment of new areas.

See attached application schedule.

See attached application schedule.

APPLICATION SCHEDULE PURSUANT TO CT6.6# - EROSION CONTROL AND SOIL TREATMENT BY PURCHASER (03/2017)

PAYMENT UNIT OR UNIT NUMBER	AREAS	SEED		FERTILIZER		MULCH	
	A) SKID TRAILS B) FIRELINES C) TEMP. ROADS D) LANDINGS E) OTHER <u>4/</u>	APPLICATION		APPLICATION		APPLICATION	
		SPECIES <u>1/</u> MIXTURE	LBS/AC	TYPE <u>2/</u>	LBS/AC	TYPE <u>3/</u>	LBS/AC
All	A, C, D, and E) Cut and fill slopes	Clackamas River R.D. native grass seed: <i>Application rate is determined by seed species supplied.</i>	25-30	--	--	Spring Wheat Straw <u>5/</u> : certified by the State of Oregon as weed free OR Annual ryegrass straw <u>5/</u> : certified by the State of Oregon as weed free OR originating from fields which grow State of Oregon certified annual ryegrass seed OR originating from Willamette Valley Oregon fields which grow only annual ryegrass seed for large-scale commercial seed production OR Wood fiber mulch: <i>Exact application rate to be determined by wood fiber type and percent slope of area.</i> OR Slash	3000

Grass seed will be provided by Forest Service.

The Contractor will be required to pay a co-op deposit of \$.04/CCF for the cultivation and harvest of replacement seed of native species for use on future contracts.

1/ For sales in Oregon, the seed shall meet the State certification specifications. Seed must be packaged in containers carrying official certification labels sewn in, glued to, or printed upon the container, with the following information:

1. Variety (if certified as to variety) and kind.
2. Quantity of seed (pounds or bushels).
3. Class of certified seed (blue tags for certified seed).
4. Inspection or lot number traceable to the certifying agency's records.

For sales in Washington, the seed shall be labeled as "Prohibited and Restricted Noxious Weed Free for the State of Washington." The purchaser shall furnish a copy of the seed analysis.

For state of California lands in Region 6, seed must be certified by the state of California, or by an independent agency or company that is approved by the state of California for "prohibited and restricted noxious weed free for the state of California."

For mixtures of seed, each ingredient in excess of 5 percent must be listed with its percentage by weight and its germination percentage.

Legumes must be inoculated with nitrogen fixing bacteria before planting. The label must show the expiration date of the inoculant.

All seed treated with a fungicide or pesticide must be labeled that it is "treated" giving the name of the chemical used, and an appropriate warning or a caution statement.

2/ Fertilizer shall be a standard commercial fertilizer with guaranteed analysis of contents clearly marked on containers.

3/ Mulch shall meet the appropriate State's certification specifications, with evidence of its certification traceable to the certifying agency's records.

4/ Areas coded as 'E' in the table will be designated by the Forest Service for application of seed by the contractor.

5/ Contractor is to supply Forest Service with documentation of origin of annual ryegrass straw or spring wheat straw for approval prior to purchase. Straw shall be dry. Contractor is to supply Forest Service with weight tickets from a certified scale indicating pounds of annual ryegrass straw supplied to the project.

CT6.7 - SLASH DISPOSAL (03/2017)

As used in the following Subsections, the term "slash" is vegetative debris including, but not limited to, cull logs, blasted or pushed-out stumps, chunks, broken tops, limbs, branches, rotten wood, damaged brush, damaged or destroyed reproduction, saplings or poles, resulting from Purchaser's Operations, including construction of roads or other improvements under this contract. Slash resulting from the construction of Specified Roads shall be disposed of as provided for in Section 201 of the Standard and Special Specifications and as shown in Drawings.

Any burning of slash or refuse by Purchaser is subject to CT7.201.

Forest Service may agree to substitute methods of slash disposal if such substitute methods will give equally satisfactory results.

Forest Service may waive specific slash treatment requirements. Purchaser's Timber Sale Account will be charged for any slash treatment requirements waived. The amount of such charges will be determined by Forest Service prior to felling operations in each Payment Unit.

CT6.74# - SLASH TREATMENT REQUIREMENTS (02/2002)

Purchaser shall pile, burn, yard, construct firelines or otherwise treat slash defined in CT6.7, within designated areas. Work required of Purchaser shall be in accordance with the following slash plan and specifications, and the Sale Area Map.

Unless otherwise agreed, or shown in attached slash plan or specifications, when Included Timber is removed during Normal Operating Season, required slash work shall be completed within 30 days of removal of approximately three-quarters of the volume in the unit. When Included Timber is removed outside Normal Operating Season, required work will be completed within 30 days of the beginning of the next Normal Operating Season.

See following specifications.

SPECIFICATIONS PURSUANT TO CT6.74# - SLASH TREATMENT REQUIREMENTS (02/2002)

I. Unless otherwise agreed, slash on ground-base landings shall be scattered to a depth less than 18 inches.

II. Piling of Skyline Landing Slash

1. Slash to be Piled

Unless otherwise agreed, all slash on landings meeting the following specifications shall be piled:

- a. Over 1 inch in diameter and over 2 feet in length.
- b. Over 10 feet in length regardless of diameter.
- c. Over 6 inches in diameter regardless of length.
- d. Damaged reproduction as designated by Forest Service.

2. Construction and Size of Piles

Unless otherwise agreed, all slash shall be piled as compact as possible and free of noncombustible material. Piles shall not have a width greater than two times the height. Piles shall have a good base to prevent toppling.

3. Location of Piles

Piles shall not be located in landing area(s) where burning may cause damage to standing trees. Unless otherwise approved by the Forest Service, piles shall be at least 25 feet from any part of any tree. Piles shall not be located where they shall interfere with the functioning of drainage structures, ditches, or stream channels.

4. Covering of All Piles Required

Only waterproof polyethylene plastic covering will be placed in the upper portion of piles with coverage to the ground on two sides. The polyethylene plastic must be of sufficient size and placement to provide coverage of 50 percent of the pile. Slash will be placed on top of plastic covering in an adequate amount as to prevent the plastic covering from blowing away during heavy wind events. The polyethylene plastic sheeting shall be 6 mil thickness and black.

CT6.8 - MEASURING (08/2000)

The estimated quantity of timber in AT2 was determined in advance of advertisement. Any timber subsequently added or deleted under BT2.13, BT2.14, BT2.15, BT2.31, BT2.32, BT2.33, BT2.34, BT2.35, or BT2.37 will be measured by the Forest Service and formulated using Forest Service Handbook 2409.12, Timber Cruising Handbook Standards, unless otherwise agreed to in writing.

CT6.84 - ACCOUNTABILITY (06/2006)

The following requirements are applicable to product removal permits:

1. Forest Service will issue to Purchaser or designated representative(s) serially numbered Product Removal Permit Books for use only on this sale. Product Removal Permit Books, whether used or unused, shall be returned to issuing Forest Service Office in accordance with instructions contained on cover of each book.

2. All permits shall be completed and attached to load by an individual named in writing, other than the truck driver in accordance with the instructions on the inside cover of the Product Removal Permit Book. Product Removal Permit will be attached prior to removal from the immediate vicinity where loading is done. The permit will remain attached until the load is decked at the delivery point.

When products are manufactured on site and removed as chips, the permit shall be attached to a 12" x 18" vertically mounted board on the front panel on the driver's side of the conveyance unit. The previously validated Product Removal Permit shall be removed from the board before attaching a new permit. The board's texture, density, and thickness shall be such as to accommodate construction type staples and be of durable material for securing the attached permits.

3. Purchaser shall require truck drivers to stop when requested by Forest Service for purposes of monitoring accountability when products are in transit. Methods to be used to alert drivers of an impending stop shall be agreed to in advance of hauling products.

CT6.84 (OPTION 1) - USE OF PAINT BY PURCHASER (05/2005)

Notwithstanding BT6.81, use of paint by the Purchaser within the Sale Area in the color(s) used by the Forest Service in the preparation of the sale and administration of the contract will be by written approval of the Forest Service.

CT7.1 - PLANS (09/2004)

The plan shall state how Purchaser's representative or alternates will be contacted in a fire emergency, both during periods of operation and at other times such as evenings or weekends. Purchaser shall certify compliance with specific fire precautionary measures included as Subsections under CT7.2 - Specific Fire Precautions, before beginning operations during Fire Precautionary Period (closed season) and shall update such certification when operations change.

If helicopter yarding is required, the plan shall include a schedule of rates mutually agreed to for computing Purchaser costs incurred toward meeting Purchaser's obligations under AT11, or for paying for helicopters controlled by Purchaser and used under Forest Service direction for suppressing Operations Fires or other fires on Sale Area, excluding Negligent Fires.

CT7.11 - ADDITIONAL AREA OF FIRE RESPONSIBILITY (03/1989)

The area within 200 feet slope distance of the center line of any road constructed or reconstructed under this contract on National Forest lands outside of Sale Area shall be considered as a part of Sale Area in connection with responsibilities under BT7.3 and BT7.4 until the road has been accepted in writing by Forest Service.

CT7.2 - SPECIFIC FIRE PRECAUTIONS (09/2002)

When the industrial fire precautions level is I or higher, unless waiver is granted under CT7.22, specific required fire precautionary measures are as follows:

A. Fire Security.

Purchaser will designate in writing a person or persons who shall perform fire security services listed below on Sale Area and vicinity. The designated person will be capable of operating Purchaser's communications and fire fighting equipment specified in the contract, excluding helicopters, and of directing the activities of Purchaser's personnel on Forest fires. Such person must report any fire detected to Forest Service within 15 minutes of detection. In lieu of having the designated person perform the required supervisory duties, Purchaser may provide another person meeting the qualifications stated above to direct the activities of Purchaser's personnel and equipment during all fire fighting activities.

Services described shall be for at least 1 hour from the time Purchaser's Operations are shut down. For the purposes of this provision, personnel servicing equipment, and their vehicles, who are not engaged in cutting or welding metal are excluded.

Fire security services shall consist of moving throughout the operation area or areas constantly looking, reporting, and taking suppression action on any fires detected. Where possible, the designated person shall observe inaccessible portions of helicopter operating areas from vantage points within or adjacent to Sale Area.

Purchaser shall furnish fire security services based on the predicted industrial precaution level, obtained by Purchaser from the appropriate Ranger District Headquarters. If predictions made after 6:00 p.m. local time, are significantly different than originally estimated, Forest Service will inform Purchaser when changes in fire security services are indicated.

B. Fire Extinguishers and Equipment (on Trucks, Tractors Power Saws, etc.).

(a) Each yarder or loader equipped with an internal combustion engine or other spark emitting source shall be equipped with a readily accessible fire extinguisher, with an Underwriter's Laboratory (UL) Rating of at least 5 B,C.

(b) All power-driven equipment operated by Purchaser on National Forest land, except portable fire pumps, shall be equipped with one fire extinguisher having a UL rating of at least 5 B,C and one "D" handled or long handled round point shovel, size 0 or larger. In addition, each motor patrol, truck and passenger-carrying vehicle shall be equipped with a double-bit axe or Pulaski, 3-1/2 pounds or larger.

(c) Equipment required in (a) and (b) shall be kept in a serviceable condition and shall be readily available.

(d) Each gasoline power saw operator shall be equipped with a pressurized chemical fire extinguisher of not less than 8-ounce capacity by weight, and one long handled round point shovel, size 0 or larger, except at a landing where a suitable fire extinguisher and shovel are immediately available. The extinguisher will be kept in possession of the saw operator at all times. The shovel shall be accessible to the operator within 1 minute.

(e) Each helicopter shall be equipped with one fire extinguisher having a UL rating of at least 5 B,C mounted inside the aircraft within reach of the pilot's operating position.

(f) One refill for each type or one extra extinguisher sufficient to replace each size extinguisher required on equipment shall be safely stored in the fire tool box or other agreed upon place on Sale Area that is protected and readily available.

(g) At each area where helicopters are being serviced or supplied, a carbon dioxide fire extinguisher with a UL rating of at least 20 B,C will be provided on the site and placed where it is available for immediate use.

C. Spark Arresters and Mufflers.

Each internal combustion engine shall be equipped with a spark arrester qualified and rated under USDA Forest Service Standard 5100-1a as shown in the National Wildfire Coordination Group Spark Arrester Guide, unless it is:

(a) Equipped with a turbine-driven exhaust supercharger such as the turbocharger. There shall be no exhaust bypass.

(b) A multi-position engine, such as on power saws which must meet the performance levels set forth in the Society of Automotive Engineers (SAE) "multi-positioned small engine exhaust fire ignition standard, SAE recommended practice J335B" as now or hereafter amended.

(c) A passenger carrying vehicle or light truck, or medium truck up to 40,000 GVW, used on roads and equipped with a factory designed muffler complete with baffles and an exhaust system in good working condition.

(d) A heavy duty truck, such as a dump or log truck, or other vehicle used for commercial hauling, used only on roads and equipped with a factory designed muffler and with a vertical stack exhaust system extending above the cab.

Exhaust equipment described in this Subsection, including spark arresters and mufflers, shall be properly installed and constantly maintained in serviceable condition.

D. Fire Tools.

Purchaser shall furnish serviceable fire fighting tools in a readily accessible fire tool box or compartment of sound construction with a hinged lid and hasp so arranged that the box can be secured or sealed. The box shall be red and marked "Fire Tools" in letters at least 1 inch high. It shall contain a minimum of:

(a) Two axes or Pulaskis with a 32 inch handle.

(b) Three adze eye hoes. One Pulaski may be substituted for one adze eye hoe.

(c) Three long handled, round point shovels, size 0 or larger.

E. Tank Truck.

Purchaser shall provide a tank truck or trailer, containing not less than 300 gallons of water, during yarding, skidding, loading, land clearing, right-of-way clearing, mechanical falling, and mechanical treatment of slash. Such tank truck or trailer shall be maintained in a serviceable condition and located within 10 minutes, round trip, from each operating side during Fire Precautionary Period (closed season), except as provided under BT7.21.

The tank truck or trailer shall be equipped with a pump capable of discharging 20 gallons of water per minute, using a 1/4 inch nozzle tip, through a 50 foot length of rubber or poly lined hose. In addition, 500 feet of serviceable hard rubber poly or rubber lined or FJRL hose of not less than 1 inch outside diameter, fitted with a nozzle capable of discharging a straight stream of 1/4 inch diameter and a spray pattern shall be immediately available for use. The tank, pump, nozzle and at least 250 feet, of the total 500 feet of hose, shall be connected and ready for use at all times. Synthetic hoses may be used by agreement.

If a trailer is used, it shall be equipped with a hitch to facilitate prompt movement. A serviceable tow vehicle shall be immediately available for attachment to the trailer and must meet the time requirements stated above. Such truck or trailer shall be equipped to operate for a minimum of 8 hours.

Where designated on Sale Area Map, Purchaser shall provide a tank trailer or water source and pumping equipment, including accessories, which can be lifted and transported by the yarding system. The component parts shall meet all specifications above. The tank trailer or water supply and pumping accessories shall be deliverable to a fire, in area of operations, within 15 minutes of detection.

In lieu of the above tank trailer or water supply for helicopter operations, Purchaser may provide a suitable helicopter water bucket with a 300 gallon capacity. When Purchaser provides a water bucket, a water source shall be provided within 5 minutes round trip flight time from operating side.

F. Communications.

During Purchaser's Operations, excluding powersaw falling and bucking, Purchaser shall provide adequate two-way communication facilities to report a fire to Forest Service within 15 minutes of detection. Citizen band radios (CB's) are not considered adequate two-way communications because FCC Regulations prohibit commercial use.

G. Smoking and Open Fire Restrictions. Smoking and fires shall be permitted only at the option of Purchaser. Purchaser shall not permit open fires on Sale Area without advance permission in writing from Forest Service.

H. Blasting.

Blasting shall be permitted only for road construction purposes unless advance permission is obtained from Forest Service.

Whenever the Industrial Fire Precaution Level is II or greater, a fire security person equipped with a long handled round point No. 0 or larger shovel and a 5 gallon backpack pump can filled with water, will stay at location of blast for 1 hour after blasting is done. Blasting may be suspended by Forest Service, in areas of high rate of spread and resistance to control.

Fuses shall not be used for blasting. Explosive cords shall not be used without permission of Forest Service, which may specify conditions under which such explosives may be used and precautions to be taken.

I. Compliance with State Fire Laws.

Listing of specific fire precautionary measures in the foregoing Subsections is not intended to relieve Purchaser in any way from compliance with State fire laws covering fire prevention and suppression equipment, applicable to Purchaser's Operations.

J. Aircraft Communications.

Every aircraft used in conjunction with Purchaser's Operations shall be equipped with an operable radio system. The radio system shall be capable of transmitting and receiving on VHF frequency 122.85 Megahertz (MHz) with a minimum output of 5 watts at the transmitter. The system shall be located and installed so that the pilot can operate it while flying. A shielded all-weather broad-band antenna shall be part of the system. Radio and antenna shall be properly installed and maintained.

Upon discovery or notification of a fire on Sale Area, all aircraft pilots controlled by Purchaser shall monitor VHF frequency 122.85 MHz when within 5 miles of a fire and broadcast their intentions.

K. Logging Block Equipment.

Purchaser shall provide a serviceable 5 gallon backpack pump full of water, one axe, and one long handled round point shovel, size 0 or larger, at each haulback block through which a running line passes.

The area below such blocks must be kept clear of all flammable debris under 4 inches in diameter for a distance of 6 feet in all directions. Material larger than 4 inches that poses a fire risk, such as punky logs, must also be removed.

Purchaser shall avoid line-rub on rocks or woody material which may result in sparks or sufficient heat to cause ignition of fire.

CT7.201 - BURNING BY PURCHASER (01/1993)

Notwithstanding the Fire Precautionary Period limitation of BT7.2, the Purchaser is required to obtain written permission from the Forest Service prior to any burning on the National Forest Lands.

CT7.22 - EMERGENCY FIRE PRECAUTIONS (06/2018)

Purchaser shall restrict operations in accordance with the Industrial Fire Precaution Levels attached. Forest Service may change the Industrial Fire Precaution Levels to other values upon revision of the National Fire Danger Rating System and may change the specific Industrial Fire Precaution Levels when such changes are necessary for the protection of the National Forest. When sent to Purchaser, the revised Industrial Fire Precaution Levels will supersede the attached levels.

INDUSTRIAL FIRE PRECAUTIONS SCHEDULE

LEVEL I. FIRE SEASON

Fire season requirements are in effect. In addition to other fire prevention measures, a Firewatch is required at this and all higher levels unless otherwise waived

LEVEL II. LIMITED SHUTDOWN

The following may operate only between the hours of 8 P.M. and 1 P.M.:

- Power saws except at loading sites;
- Feller-bunchers with rotary head saws;
- Cable yarding;
- Blasting;
- Welding, cutting, or grinding of metal.

LEVEL III. RESTRICTED SHUTDOWN

Cable yarding is prohibited except that gravity operated logging systems employing non-motorized carriages or approved motorized carriages (defined below), may operate between 8 P.M. and 1 P.M. when all blocks and moving lines are suspended 10 feet above the ground except the line between the carriage and the chokers and during rigging.

The following are permitted to operate between the hours of 8 P.M. and 1 P.M. where mechanized equipment capable of constructing fire line is immediately available to quickly reach and effectively attack a fire start:

- Ground-based operations (defined below);
- Power saws on ground-based operations;
- Rotary head saw feller-bunchers with a continuous Firewatch;
- Non-rotary head saw feller-bunchers;
- Tethered logging systems (defined below).

The following are permitted to operate between the hours of 8 P.M. and 1 P.M.:

- Power saws at loading sites;
- Loading or hauling of any product or material;
- Blasting;
- Welding, cutting, or grinding of metal;
- Any other spark emitting operation not specifically mentioned.

LEVEL IV. COMPLETE SHUTDOWN

All operations are prohibited.

NOTE: Where hauling involves transit through more than one shutdown/regulated use area, the precaution level at the woods loading site shall govern the level of haul restriction, unless otherwise prohibited by other than the IFPL system. Under IFPL III, all trucks must be loaded and leaving the loading site no later than 1 P.M.

IFPL Definitions:

- >Approved motorized carriage: a cable yarding system employing a motorized carriage with two fire extinguishers, each with at least a 2A:10BC rating, mounted securely on opposite sides of the carriage, an emergency motor cutoff, and an approved exhaust system.

- >Cable yarding system: a yarding system employing cables, and winches in a fixed position.
- >Fire Season: that season of the year when a fire hazard exists as declared by the responsible agency official.
- >Ground-based operations: mobile and stationary equipment operations other than cable yarding systems, including but not limited to tractor/skidder, feller-buncher, forwarder, processor, and shovel operations.
- >Loading sites: a place where any product or material (including, but not limited to logs, firewood, slash, soil, rock, poles, etc.) is placed in or upon a truck or other vehicle. Loading site shall govern the level of haul restriction, unless otherwise prohibited by other than the industrial precaution level system.
- >Tethered logging system: winch-assisted, cable-assisted, traction-assisted, etc., which enable ground-based timber harvesting machines to operate on steep slopes.

Waivers:

Advance written waiver of the above precautions may be issued by the Contracting Officer or Forest Service Representative for any and all activities. Activities for which waivers may be issued include, but are not limited to:

- >Mechanized loading and hauling.
- >Road maintenance such as sprinkling, graveling, grading and paving.
- >Cable yarding using gravity systems or suspended lines and blocks, or other yarding systems where extra prevention measures will significantly reduce the risk of fire.
- >Power saws at loading sites or in felling and bucking where extra prevention measures will significantly reduce the risk of fire.
- >Maintenance of equipment (other than metal cutting and welding) or improvements such as structures, fences and powerlines.

Purchaser shall submit written waiver, or substitute precautions under BT7.21, with specific measures to be taken by Purchaser to reduce the risk of ignition, and/or the spread of fire. The Contracting Officer or Forest Service Representative shall consider site specific weather factors, fuel conditions, and specific operations that result in less risk of fire ignition and/or spread than contemplated when precaution level was predicted. Consideration shall also be given to measures that reduce the precaution levels above. Purchaser shall assure that all conditions of such waivers or substitute precautions are met.

Forest Service will inform Purchaser when changes in restrictions or industrial precautions are indicated.

CT8.13 - DISCLAIMER OF EXPRESSED OR IMPLIED WARRANTY (09/2004)

Purchaser and Forest Service hereby agree, acknowledge, and accept that there is no expressed or implied warranty provided by the Forest Service that guarantees the Purchaser will be allowed to complete the removal of products sold under the terms of the contract. Upon execution of the contract, Purchaser hereby acknowledges the acceptance of the risk that this contract is subject to interruption or termination as a result of litigation associated with the environmental analysis process used by the Forest Service in the planning of this timber sale. If such interruption or termination occurs due to litigation, Purchaser agrees to accept as full compensation for such interruption remedies pursuant to BT8.33, or for termination remedies pursuant to BT8.34.

CT8.212 - MARKET-RELATED CONTRACT TERM ADDITION (11/2008)

The term of this contract may be adjusted when a drastic reduction in wood product prices has occurred in accordance with 36 CFR 223.52. The Producer Price Index used to determine when a drastic reduction in price has occurred is stated in AT17. Purchaser will be notified whenever the Chief determines that a drastic reduction in wood product prices has occurred. If the drastic reduction criteria specified in 36 CFR 223.52 are met for 2 consecutive calendar quarters, after contract award date, Contracting Officer will add 1 year to the contract term, upon Purchaser's written request. For each additional consecutive quarter such a drastic reduction occurs, Contracting Officer will, upon written request, add an additional 3 months to the term during Normal Operating Season, except that no single 3-month addition shall extend the term of the contract by more than one year. Contracting Officer must receive Purchaser's written request for a market-related contract term addition before the expiration of this contract.

No more than 3 years shall be added to a contract's term by market-related contract term addition unless the following conditions are met:

(i) The sale was awarded after December 31, 2006; and

(ii) A drastic reduction in wood product prices occurred in at least ten of twelve consecutive quarters during the contract term, but not including the quarter in which the contract was awarded.

For each qualifying quarter meeting the criteria in paragraphs (i) and (ii) of this provision, the Forest Service will, upon the Purchaser's written request, add an additional 3 months during the normal operating season to the contract, except no single 3-month addition shall extend the term of a contract by more than 1 year.

In no event shall a revised contract term exceed 10 years as a result of market-related contract term addition.

Additional contract time may not be granted for those portions of the contract that have a required completion date or for those portions of the contract where Contracting Officer determines that the timber is in need of urgent removal or that timber deterioration or resource damage may result from delay.

CT8.64 - DEBARMENT AND SUSPENSION CERTIFICATION (03/2018)

Pursuant to 2 CFR 180 and 2 CFR 417, Purchaser shall certify and obtain certifications from its Subcontractors regarding debarment, suspension, ineligibility, and voluntary exclusion, including additional Subcontractors obtained after award of this contract. 'Subcontractors' are participants in lower tier covered transactions.

Purchaser may rely upon a certification of a prospective Subcontractor that it is not proposed for debarment under 48 CFR 9.4, debarred, suspended, ineligible, or voluntarily excluded from participating in covered transactions or timber sales, unless Purchaser knows that the certification is erroneous.

Purchaser shall keep the certifications of its Subcontractors on file until timber sale Termination Date and any extensions thereof, and will provide a copy at the written request of Contracting Officer. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this Subsection. The knowledge and information of Purchaser is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

If Purchaser knowingly enters into a timber sale transaction with a person who is proposed for debarment under 48 CFR 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in covered transactions or timber sales, in addition to other remedies available to the Government, Forest Service may pursue available remedies, including suspension and/or debarment.

Contracting Officer shall provide a copy of Forms AD-1047, Certification Regarding Debarment, Suspension and Other Responsibility Matters-Primary Covered Transactions, and AD-1048, Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions to the Purchaser.

Purchaser shall complete form AD-1047 and provide to the Contracting Officer upon request.

Purchaser shall require each Subcontractor to complete form AD-1048 and provide to the Contracting Officer upon request.

CT8.66# (Option 1) - USE OF TIMBER (04/2004)

(a) This contract is subject to the Forest Resources Conservation and Shortage Relief Act of 1990, as amended (16 USC 620, et seq.).

(b) Except for NONE determined pursuant to public hearing to be surplus, unprocessed Included Timber shall not be exported from the United States nor used in direct or indirect substitution for unprocessed timber exported from private lands by Purchaser or any person as defined in the Act (16 USC 620e).

(c) Timber in the following form will be considered unprocessed:

(i) Trees or portions of trees or other roundwood not processed to standards and specifications suitable for end product use;

(ii) Lumber, construction timbers, or cants intended for remanufacturing not meeting standards defined in the Act (16 USC 620e); and

(iii) Aspen or other pulpwood bolts exceeding 100 inches in length.

(d) Unless otherwise agreed in writing, unprocessed Included Timber shall be delivered to a domestic processing facility and shall not be mixed with logs intended for export.

(e) Prior to award, during the life of this contract, and for a period of 3 years from Termination Date, Purchaser shall furnish to Forest Service, upon request, records showing the volume and geographic origin of unprocessed timber from private lands exported or sold for export by Purchaser or affiliates.

(f) Prior to delivering unprocessed Included Timber to another party, Purchaser shall require each buyer, exchangee, or recipient to execute an acceptable agreement that will:

(i) Identify the Federal origin of the timber;

(ii) Specify domestic processing for the timber involved;

(iii) Require the execution of such agreements between the parties to any subsequent transactions involving the timber;

(iv) Require that all hammer brands and/or yellow paint must remain on logs until they are either legally exported or domestically processed, whichever is applicable; and

(v) Otherwise comply with the requirements of the Act (16 USC 620d).

(g) No later than 10 days following the execution of any such agreement between Purchaser and another party, Purchaser shall furnish to Forest Service a copy of each such agreement. Purchaser shall retain, for 3 years from Termination Date, the records of all sales, exchanges, or dispositions of all Included Timber.

(h) Upon request, all records dealing with origin and disposition of Included Timber shall be made available to Contracting Officer.

(i) For breach of this Subsection, Forest Service may terminate this contract and take such other action as may be provided by statute or regulation, including the imposition of penalties. When terminated by Forest Service under this Subsection, Forest Service will not be liable for any Claim submitted by Purchaser relating to the termination.

<u>Attachment Title</u>		<u>Pages</u>
A.	T-Specifications	1-27
B.	Invasive Species of Concern List	1-1
C.	Specified Road Reconstruction Cost Summary and Schedule of Items	1-2
D.	Specified Road Reconstruction Design Plans	1-12
E.	Specified Road Reconstruction Supplemental Specifications	1-36

FOREST SERVICE
SPECIFICATIONS FOR
MAINTENANCE OF
ROADS IN
TIMBER SALES

PACIFIC NORTHWEST REGION

EM 7730-20

JUNE 2020

TIMBER SALE CONTRACT**ROAD MAINTENANCE SPECIFICATIONS**

SPEC. #	DESCRIPTION	Date
T-803	Snow Removal	06/2020
T-805	Bridge Maintenance	06/2020
T-811	Blading	06/2020
T-812	Dust Abatement	06/2020
T-813	Surfacing	06/2020
T-815	Paved Surface Cleaning	06/2020
T-831	Ditch Maintenance	06/2020
T-832	Remove and End Haul Materials	06/2020
T-834	Drainage Structure Maintenance	06/2020
T-835	Roadway Drainage Maintenance	06/2020
T-836	Maintenance for Limited Use	06/2020
T-838	Maintenance for High Clearance Vehicle Use	06/2020
T-839	Maintenance for Project Use	06/2020
T-841	Vegetation Establishment	06/2020
T-842	Cutting Roadway Vegetation	06/2020
T-851	Logging Out	06/2020
T-854	Treatment and Disposal of Danger Trees	06/2020
T-891	Water Supply and Watering	06/2020
T-892	Bituminous Products	06/2020

SUPPORTING DOCUMENTS FOR MAINTENANCE SPECIFICATIONS

DESCRIPTION	DATE
Cover Content Preface	06/2020
Cover Pages	06/2020
Intent and Use Guide	06/2020

NO DRAWINGS ACCOMPANY THESE SPECIFICATIONS.

T-803 - SNOW REMOVAL (06/2020)

803.01 Description

This section provides for removal of snow from roads to facilitate logging operations and safe use.

803.02 Maintenance Requirements

1. Erect signs required by the Sign Plan in the SUPPLEMENTAL SPECIFICATIONS.
2. Perform work in a manner to preserve and protect roads and appurtenances, and prevent erosion damage to roads, streams, and other Forest values.
3. Do not undercut banks. Do not blade gravel or other surfacing material off the road.
4. Keep roadbed, drainage ditches, drain dips, and culverts functional during operations and upon completion of operations.
5. Control snow removal to identify the usable traveled way and roadbed support. Reshape over-width plowing as necessary to define the usable width.
6. Space, construct, and maintain drainage holes in the dike of snow or berm caused by snow removal operations. Place drain holes to obtain surface drainage without discharging on erodible fills.
7. Close roads to wheeled vehicles at times and in the manner specified in C(T)5.12# or the Road Rules document.
8. Upon seasonal completion of Purchaser/Contractor's Operations, effectively block the road by a snow barricade, unless otherwise approved by the Contracting Officer.
9. Remove snow for either public access or project use as established in the SUPPLEMENTAL SPECIFICATIONS and meet the following requirements:
 - a. Removal for Public Access (Method JU) - Remove snow from all the traveled way, including turnouts, for safe and efficient use for both timber haul and the public. Remove intruding windfalls, debris, or slough and slide material for the full width of the traveled way and deposit out of drainages at locations designated by the Contracting Officer.
 - b. Removal for Project Use (Method TS) - Remove snow from all or part of the traveled way, including enough turnouts for safe and efficient use for timber haul and to protect the road. Remove intruding windfalls, debris or slough and slide material and dispose of only as necessary to provide passage for timber transportation. Removed materials may be deposited off the traveled way or outside the traveled way at locations designated by the Contracting Officer.
 - c. When directed by the Contracting Officer, replace surfacing which has been bladed off the road with in-kind material within 60 days of notification. Contracting Officer will notify Purchaser/Contractor in writing as to the cubic yard equivalent of bladed off material by the start of the Normal Operating Season.

803.03 Equipment

Purchaser/Contractor may use any type of equipment to remove snow, providing:

1. Type or use of equipment is not restricted in C(T)5.12# or Road Rules document.
2. Equipment is of the size and type commonly used to remove snow and will not cause damage to the road.
3. The use of plows or dozers to remove snow requires written approval by the Contracting Officer. Equip plows or dozers with shoes or runners to keep the dozer blade a minimum of 2 inches above the road surface unless otherwise approved by the Contracting Officer.

803.04 Ice Control

Ice control may be performed by Purchaser/Contractor when approved by the Contracting Officer in writing. Such approval will include ice control materials, application rates, and any specific requirements of use.

T-805 - BRIDGE MAINTENANCE (06/2020)

805.01 Description

This section provides for routine maintenance of bridge decks and minor approach maintenance. All approaches to be maintained will be marked in the field and approved by the Contracting Officer prior to the start of work on any bridge.

805.02 Maintenance Requirements

1. General

a. Deck Cleaning

Clean deck, running planks, caps and scuppers of curbs by sweeping, washing and/or air-blasting so that the bridge is free of debris and dirt and all drainage openings on the bridge are clear and operating as intended. Do not allow any debris or dirt into the stream. All material shall be disposed of in accordance with T-832; sites designated by the Contracting Officer and at least 100 feet from any stream, in a location that will not contribute sediment back into the stream. Smooth out and blend with adjacent area. Do not block ditches.

b. Approach and Drainage Blading

All approaches designated by the Contracting Officer shall be bladed in accordance with T-811.

c. Invasive Species

Where DESIGNATED ON THE GROUND, included in C(T)5.31#, SHOWN ON THE DRAWINGS, or as ordered by the Contracting Officer, invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
Refer to Attachment B for invasive species of concern; prevention practices included in B(T)6.35 and C(T)6.6# or as specified by the Forest Service.

T-811 - BLADING (06/2020)

811.01 Description

This work consists of surface blading the traveled way to a condition that facilitates traffic and provides proper drainage. Blading includes shaping the crown or slope of travel way, berms, and drainage dips in accordance with this specification. Compaction is required when shown on C(T)5.31#

811.02 Maintenance Requirements

1. Timing - Perform surface blading during the contract period as often as needed to provide conditions stated for the maintenance level of the road.
2. General
 - a. Blade and shape the existing traveled way and shoulders, including turnouts, to produce a surface which is uniform, consistent to grade, and crowned or cross-sloped as indicated by the character of the existing surface, unless otherwise shown in C(T)5.31#, to at least ½ inch per 1 foot of width, but not more than ¾ inch per 1 foot of width. Thoroughly loosen surfacing material to no less than 2 inches depth or the depth of potholes or corrugations. Scarification to facilitate cutting to the full depth of potholes or corrugations may be elected but will be considered incidental to blading. Do not scarify to a depth that will cause contamination of the surfacing.
 - b. Apply water during blading when sufficient moisture is not present to prevent segregation. Supply, haul, and apply water in accordance with Section T-891.
 - c. Shape existing native rock or aggregate surfaced drainage dips to divert surface runoff to existing outlet devices, ditches, or discharge locations.
 - d. Establish a blading pattern which provides a uniform driving surface, retains the surfacing on the roadbed, and provides a thorough mixing of the materials within the completed surface width. Upon final blading, no disturbed rock shall protrude more than 2 inches above the adjacent surface unless otherwise provided in the contract. Remove material not meeting this dimension and place outside the roadbed; do not to obstruct drainage ways or structures. This material may be scattered off the roadbed if there is free drainage.
 - e. Where DESIGNATED ON THE GROUND, included in C(T)5.31#, SHOWN ON THE DRAWINGS, or as ordered by the Contracting Officer, invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
Refer to Attachment B for invasive species of concern; prevention practices included in B(T)6.35 and C(T)6.6# or as specified by the Forest Service.

3. Routine Blading
 - a. Conform to the dimensions SHOWN ON THE DRAWINGS or designated in the SUPPLEMENTAL SPECIFICATIONS upon completion of blading.
 - b. Shape roadbed width in excess of the dimensions shown only as needed to provide drainage away from the traveled way. Do not remove established grasses and other vegetation from the excess width except as incidental to providing drainage or unless otherwise provided in the contract.
4. Compaction

Roads requiring compaction will be included in the C(T)5.31#. Unless Compaction Method B is designated in the C(T)5.31#, all traveled ways requiring compaction may be compacted by Method A. Compaction shall commence immediately following blading.

Compaction Method A: Breaking track over full width of traveled way while operating equipment.

Compaction Method B: 7-10 ton pneumatic, steel, or equivalent vibratory roller, operated to cover the full width two (2) times.
5. Undercutting

Undercutting roadway back slope is not permitted.

T-811 - BLADING (06/2020)

6. Intersections

At intersections, blade the roadbeds of side roads which are not closed or restricted from vehicular use to ensure smooth transitions.

- a. Signing, cross ditching in the road surface (traveled way), earth berms, or other devices placed to discourage or eliminate use by passenger cars, are field evidence of road closure or restriction. Roads listed for work under Sections T-835, T-836, T-838, or T-839 are considered restricted.
- b. Side roads listed for work under this Section are not restricted.

7. Cleaning of Structures

Do not allow materials resulting from work under this Section to remain on or in structures, such as bridges, culverts, cattle guards, or drainage dips.

8. Berms

Maintain existing berms to the condition of adjacent segments. Do not create new berms.

9. Smooth Blading

Smooth blading may be used as an interim measure to remove loose surfacing material from the wheel paths. Store removed materials in a recoverable windrow until blade processing as described in this section is feasible. Watering will not be required for smooth blading. Accomplish smooth blading without distorting the existing cross-slope or crown of the traveled way.

Move and store loose surfacing materials on the high side of super-elevated curves and sections with uniform inslope or outslope. In crowned sections, store the material on either or both sides as elected. Windrow and place stored materials to provide not less than 12 feet of smooth traveled way on one-lane segments, or 20 feet of smooth traveled way on two-lane segments, or segments with turnouts. Place holes through windrows for drainage every 500 feet or less to provide drainage

T-812 - DUST ABATEMENT (06/2020)

812.01 Description

This work consists of applying dust palliatives on roads shown in the C(T)5.31# Road List.

812.02 Materials

The dust palliative materials are shown in C(T)5.31#, unless shown as Optional for Purchaser/Contractor's election. If Optional is shown the Purchaser/Contractor may use any of the products listed below. Dust palliative materials shall meet the following requirements:

1. Water (H₂O): will be obtained from sources displayed on the SALE AREA MAP or listed in SPECIFICATION T-891 Water Supply, unless otherwise approved by the Contracting Officer.
2. Lignosulfonate: Provide certification that material meets the requirements of Subsection 725.02 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-14)" and the Forest Service Supplemental Specification 725.02.
3. Magnesium Chloride (MgCl₂): Provide certification that material meets the requirements of Subsection 725.02 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-14)" and the Forest Service Supplemental Specification 725.02.
4. Calcium Chloride Liquid (CaCl₂B): Provide certification that material meets the requirements of Subsection 725.02 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-14)" and the Forest Service Supplemental Specification 725.02.
5. Calcium Chloride Mass (CaCl₂F): Provide certification that material meets the requirements of Subsection 725.02 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-14)" and the Forest Service Supplemental Specification 725.02.
6. Bituminous dust palliatives: Materials manufactured specifically for dust abatement purposes which conform to the requirements of Section T-892 for each listed road in C(T)5.31#.

812.03 Methods

As shown in the SUPPLEMENTAL SPECIFICATIONS, Purchaser/Contractor may utilize a variety of methods to decrease or eliminate the need for dust abatement.

812.04 Equipment

1. Design, equip, and operate application equipment for spreading dust palliatives so that the material is uniformly applied at the rate and traveled way widths shown in C(T)5.31#.
2. For bituminous palliatives, provide equipment that heats and applies the bituminous material. Provide a bituminous distributor that is self-powered and mounted on pneumatic tires and equipped with a pump and circulating spray bar, a tachometer, pressure gauges, accurate volume measuring devices such as visual volume dial or gauge calibrated to the tank, and a thermometer. Provide equipment which is a standard commercial type of proven performance.
3. Accomplish dilution of dust palliatives within the application vehicle with the water source protected from contamination. Circulate the resulting mixture at least five (5) minutes to ensure uniform mixing prior to application.

812.05 Maintenance Requirements

1. Limit water applications to abatement for hauling vehicles and provide at a frequency and rate which controls dust such that vehicle taillights and turn signals remain visible. Vary rates of application as needed but remain low enough to avoid forming rivulets. Accomplish the abatement by enough frequency of application without saturating and softening the traveled way. Compacted or glazed road surface or wheel tracks may be loosened as needed for water penetration.
2. Apply all other dust palliatives at the rates and times approved by the Contracting Officer. C(T)5.31# shows the expected average application rate and may be varied to meet field conditions. Lignosulfonate, Magnesium Chloride, and Calcium Chloride Brine are listed as gallons per square foot of the undiluted product at fifty (50), thirty-three (33), and thirty-eight (38) percent respectively. Calcium Chloride Mass is listed in pounds per square foot at seventy-seven (77) percent concentration.

T-812 - DUST ABATEMENT (06/2020)

3. Apply bituminous dust palliatives only when the surface to be treated contains enough moisture to obtain uniform distribution of the dust palliative unless noted differently in the SUPPLEMENTAL SPECIFICATIONS.
4. Prior to initial application, when needed, the road will be bladed and shaped under Section T-811-Blading.
5. Required subsequent applications may be applied to the existing road surface without blading.
6. Dust palliatives will not be applied in a manner that spatters or mars adjacent structures or trees or placed on or across cattleguards or bridges. Discharge dust abatement material only on roads approved by the Contracting Officer.

T-813 - SPOT SURFACING (06/2020)

813.01 Description

This work consists of placing surface aggregate as DESIGNATED ON THE GROUND, or as ordered by the Contracting Officer. It includes preparing the area, furnishing, hauling, and placing all necessary materials and other work necessary to blend with the adjacent road cross section.

813.02 Materials

1. Materials will be Government-furnished when stated in the SUPPLEMENTAL SPECIFICATIONS.
2. Materials furnished by the Purchaser/Contractor shall conform to the gradation and quality requirements of Section 703 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects FP-14 U.S. Customary Units" and FS supplements to the FP-14.
3. All materials transported onto National Forest System land shall be free of invasive species of concern. Written documentation of methods used to determine the invasive species of concern free status of any and all materials furnished by the Purchaser/Contractor shall be submitted for approval to the Contracting Officer before transport of any materials onto NFS System land.

The Contracting Officer shall have 5 days, excluding weekends and Federal holidays, to review the methods and inspect the materials after the required written documentation is provided by the Purchaser/Contractor. After satisfactory review and inspection or after 5 days without review and inspection, the Purchaser/Contractor may transport the material onto National Forest System land. Material receiving unsatisfactory review and inspection shall not be transported onto National Forest System land.

Material or methods appropriate for establishing invasive species of concern free status for the invasive species of concern are listed below.

Invasive Species of Concern
Refer to Attachment B for invasive species of concern.
Appropriate Prevention Practices
Prevention practices included in B(T)6.35 and C(T)6.6# or as specified by the Forest Service.

813.03 Maintenance Requirements

1. Thoroughly loosen the area to be surfaced to a minimum depth of 1 inch prior to placement of aggregate.
2. Mixing and Placing

When scheduled coincidentally with work under Section T-811, and included in the SUPPLEMENTAL SPECIFICATIONS, mix surfacing and existing aggregate with water until a uniform mixture is obtained prior to final shaping and compaction.

Otherwise, spread the material on the prepared area in layers no more than 4 inches in depth. When more than one (1) layer is required, shape and compact each layer before the succeeding layer is placed. Upon completion, the surfacing shall reasonably conform to the adjacent cross section and provide smooth transitions in the road profile.

3. Compaction Methods

Compaction Method A: Breaking track while operating equipment on the traveled way.

Compaction Method B: 7-10 ton pneumatic, steel, or equivalent vibratory roller, operated to cover the full width two (2) times.

Either Method A or B may be used unless Method B is designated in C(T)5.31#.

T-815 - Paved Surface Cleaning (06/2020)

815.01 DESCRIPTION

This work consists of removing loose material from paved traveled way, including bridge decks, paved shoulders, and paved turnouts.

815.02 MAINTENANCE REQUIREMENTS

1. The surface shall be cleaned to the existing pavement width including bridge decks and paved shoulders and paved turnouts.
2. Materials shall be moved away from road centerline on double-lane roads.
3. Bridge deck cleaning shall require all materials to be moved longitudinally off the deck. If hauling of material is required it will be ordered under T-832.

815.03 EQUIPMENT

1. Equipment shall have the capability of removing all loose material from paved surfaces without damage to the surface. Surface damage includes but is not limited to:
 - a. "Divots" in the paved surface;
 - b. Peeling of surface material;
 - c. Cracking or breaking of pavement edges.
2. Use of hydraulic flushing equipment will not be permitted within a horizontal distance of three hundred and fifty (350) feet from a live stream, unless approved by the Contracting Officer.

T-831 - DITCH MAINTENANCE (06/2020)

831.01 Description

This Section provides for routine maintenance of various types of ditches to provide drainage which is unobstructed, as shown on C(T) 5.31# or as Designated on the ground by the Contracting Officer.

831.02 Maintenance Requirements

1. Maintain ditches by removing rock, soil, wood, and other materials. Maintained ditches shall function to meet the intent of the original design.
2. Undercutting backslopes during ditch maintenance operations is not permitted.
3. Suitable material up to 4 inches in greatest dimension removed from the ditches may be blended into existing native road surface and shoulder or placed in designated berm.
4. Do not blend material from ditch cleaning operations into aggregate surfaced roads. Do not blade material across aggregate or bituminous surfaced roads, unless approved in writing by the Contracting Officer.
5. Remove excess materials temporarily stored on the ditch slope or edge of the shoulder daily. Haul excess material to designated waste area under Section T-832.
6. Remove limbs and wood chunks in excess of 12 inches in length or 3 inches in diameter from ditches and place outside the roadway.
7. Clean paved surfaces of all materials resulting from ditch maintenance work.
8. Shape lead-off ditches to drain away from the traveled way.
9. Invasive species of concern prevention practices shall be followed as listed below, and where:
 - a. Designated on the Ground by the Contracting Officer,
 - b. Included in C(T)5.31#,
 - c. Shown on the Drawings, or
 - d. As ordered by the Contracting officer.

Invasive Species of Concern Prevention Practices
Refer to Attachment B for invasive species of concern; prevention practices included in B(T)6.35 and C(T)6.6# or as specified by the Forest Service.

T-832 - REMOVE AND ENDHAUL MATERIALS (06/2020)

832.01 Description

Work consists of loading, hauling, and placing of slide, slough, or excess materials such as rock, soil, vegetation, and other materials to designated disposal sites.

832.02 Maintenance Requirements

1. Remove, end haul, and dispose of excess materials generated by work under other Sections of this contract.
2. Remove the slide and slough materials to a height of approximately 6 feet vertically above the road surface, upslope from the roadbed, and not more than 3 feet vertically below the road surface down slope from the roadbed. Dispose of material at designated sites as shown on the SALE/CONTRACT AREA MAP, identified in SUPPLEMENTAL SPECIFICATIONS, or as ordered by the Contracting Officer.
3. Reshape the slope which generated the slide material as nearly as practical to its original condition by equipment operating from road surface. Reshaping of roadside ditches in slide area shall be in accordance with Section T-831.
4. When approved by the Contracting Officer, fill slumps by compacting selected materials into roadway depressions. Compaction is by Placement Method 2.
5. Place all materials in disposal sites as specified in the SUPPLEMENTAL SPECIFICATIONS, as shown on the SALE/CONTRACT AREA MAP, or as ordered by the Contracting Officer.
 - a. Placement Method 1 - Side Casting and End Dumping: Material may be placed by side casting and end dumping. Where materials include large rocks, provide a solid fill by working smaller pieces and fines into voids. Shape the finished surfaces to drain.
 - b. Placement Method 2 - Layer Placement: Step or roughen surfaces on which materials are to be placed prior to placing any material. Place materials in approximately horizontal layers no more than 12 inches thick. Compact each layer by operating hauling and spreading equipment over the full width of each layer.
6. Repair any damage to existing aggregate or pavement surfaces.

T-834 - DRAINAGE STRUCTURE MAINTENANCE (06/2020)

834.01 Description

This work consists of cleaning and reconditioning culverts and other drainage structures.

834.02 Maintenance Requirements

1. Clean drainage structures, inlet structures, culverts, catch basins, and outlet channels specified in the SUPPLEMENTAL SPECIFICATIONS. Clean catch basins by removing the material within the area SHOWN ON THE DRAWINGS.
2. Clean the transition from the ditch line to the catch basin 10 feet or more from the catch basin. Clean outlet channels and lead-off ditches 6 feet or more. Remove and place debris and vegetation to not enter the channel or ditch, or obstruct traffic or haul debris and vegetation to a designated disposal area in accordance with Section T-832 when shown on the SALE/CONTRACT AREA MAP, when specified in the SUPPLEMENTAL SPECIFICATIONS, or as ordered by the Contracting Officer,
3. Hydraulic flushing of drainage structures is not allowed unless provided for in the SUPPLEMENTAL SPECIFICATIONS.
4. Cleaning and reconditioning are limited to the first 3 feet of inlet and outlet, determined along the top of the structure. Recondition culvert inlet and outlet by field methods such as jacking out or cutting away damaged metal which obstructs flow. Treat cut edges with a zinc rich coating, in accordance with AASHTO M 36M and ASTM A 849.
5. Where DESIGNATED ON THE GROUND, included in C(T)5.31#, shown on the SALE/CONTRACT AREA MAP, or as ordered by the Contracting Officer, invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
Refer to Attachment B for invasive species of concern; prevention practices included in B(T)6.35 and C(T)6.6# or as specified by the Forest Service.

T-835 - ROADWAY DRAINAGE MAINTENANCE (06/2020)

835.01 Description

This work consists of providing post-haul drainage on roads.

835.02 Maintenance Requirements

1. Drainage

- a. Upon completion of work, shape the roadway to provide for the removal of surface water. The roadway need not be passable to vehicles. Repair and reinstall water bars, barriers or berms existing prior to the Purchaser/Contractor's operation. Areas where water is ponded by existing centerline profile sags in through cuts may be left untreated.
- b. Continuous blade shaping of the roadbed is not required under this specification.
- c. Work to be done at staked locations shall be as indicated on the stake and/or stated in SUPPLEMENTAL SPECIFICATIONS:
- d. Any of the following methods are acceptable for use at eroded or rutted locations:
Method A: Outsloping the roadbed at not less than $\frac{1}{2}$ inch per foot of width.
Method B: Insloping the roadbed at not less than $\frac{1}{2}$ inch per foot of width.
Method C: Water bar roadbed at locations staked on the ground and construct as SHOWN ON THE DRAWINGS or as included in SUPPLEMENTAL SPECIFICATIONS.
- e. Drainage structures located in through-fills and natural watercourses shall be fully functional without obstructions, including inlet and outlet channel within 20 feet of the structure.
- f. Either clean culverts and other fabricated structures to provide drainage from road ditches and make the ditch functional or provide water bar(s) across the roadbed. Removed structures shall become Purchaser/Contractor's property to be removed from NFS land. Remove and replace any Purchaser/Contractor-installed temporary drainage structures with a water bar.

2. Slides, Slumps and Slough

- a. Slides and slough may be left in place, provided they do not potentially impound water or divert water from watercourses. Reshape the various surfaces to provide drainage.
- b. Provide drainage to effectively decrease or eliminate the entry of surface water into slides, slumps, and roadbed surface cracks. Place berms, waterbars or ditches as needed to intercept and remove runoff water from the roadbed. Surface seal cracks by covering over with native soil materials to prevent additional water entry and compact with equipment tires.

3. Entrance Devices

Upon completion of work, replace entrance devices to effectively eliminate access by motorized vehicles having four (4) wheels and a width in excess of 50 inches or by all motorized wheeled vehicles, as directed by the Contracting Officer.

4. Seeding

Seed and fertilize all disturbed areas in accordance with requirements in Section T-841.

T-836 - MAINTENANCE FOR LIMITED USE (06/2020)

836.01 Description

This work consists of making limited use roads passable for joint use by Purchaser/Contractor and high clearance vehicles while providing drainage from the traveled way and roadbed.

836.02 Maintenance Requirements

1. Traveled Way

Purchaser/Contractor may smooth or fill existing cross ditches and water bars and, as approved by the Contracting Officer, modify existing road junctions to enable vehicle access. Prior to beginning haul and resumption of haul after an extended stoppage:

a. Remove brush, fallen trees, rocks, and other debris from traveled way, including turnouts, turnarounds, and other locations that interfere with needed maintenance as follows:

i. No object extending over 4 inches above the road surface shall remain within the 12 feet usable traveled way and 10 feet turnout widths. Center the usable width on the roadbed or position away from the fill slope.

ii. Cut and remove standing or down trees, logs, brush, and limbs from the traveled way, including turnouts and turnarounds. Remove encroaching limbs to a height of 14 feet above the traveled way surface. Scatter material not meeting utilization standards outside and below the roadbed on the fill side. Limb and remove timber meeting utilization standards or deck at agreed locations.

iii. Place all removed materials away from drainages.

iv. During use, maintain drainage structures, including dips, ditches and culverts, in a useable condition.

b. Clean and recondition drainage facilities in accordance with Section T-831 and T-834.

2. Slough and Slides

a. Slough and slides may be left in place, provided surface drainage is provided and at least 12 feet of width is available for vehicle passage.

b. Purchaser/Contractor may reposition or ramp over slides and slough when the traveled way width is less than 12 feet, providing the material is capable of supporting vehicles. Limit outslope to no more than six percent.

c. Reposition slough or slide materials on the roadbed which are not capable of supporting a vehicle to provide the 12-foot width. When directed by the Contracting Officer, slough or slide material shall be removed under Section T-832.

3. Slumps and Washouts

a. Drain the roadbed immediately upgrade of slumps and longitudinal cracks to prevent water from entering slump area.

b. Slumps and longitudinal cracks at the edge of the roadbed shall not be considered a part of the usable width. Usable width may be reduced to 10 feet in the area of the slump.

c. Unless the Contractor Officer agrees to material being placed on slumps, ramp the slumps on both ends into undisturbed roadbed to provide at least 10 feet usable width. Use removed materials to guide vehicles to the ramp location or to aid in draining the area.

d. Washouts may be filled with suitable material.

4. Post haul

At the end of hauling or prior to entering seasonal shutdowns or a period of extended inactivity:

a. Shape the traveled way and disturbed roadbed to provide functional drainage.
T-836 - MAINTENANCE FOR LIMITED USE (06/2020)

b. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.

c. Leave roads useable for high clearance vehicles. Remove or reshape Purchaser/Contractor modifications at road junctions to leave the entrance as it was before use, or as agreed at the time of improvement.

T-838 - MAINTENANCE FOR HIGH CLEARANCE VEHICLE USE (06/2020)**838.01 Description**

This work consists of making limited use roads passable for project use by Purchaser/Contractor and providing drainage from the traveled way and roadbed.

838.02 Maintenance Requirements

1. Traveled Way

Purchaser/Contractor may smooth or fill existing cross ditches and water bars and, as approved by the Forest Service, modify existing road junctions to enable vehicle access. Prior to beginning haul and resumption of haul after an extended stoppage:

- a. Remove rocks, standing or down trees, and other debris from the 12-foot traveled way. No object extending over 4 inches above the road surface shall remain within the 12 feet usable traveled way. Center the usable width on the roadbed or position away from the fill slope.
- b. Place all removed materials away from drainages.
- c. During use, maintain drainage structures including dips, ditches and culverts in a usable condition.
- d. Clean and recondition drainage facilities in accordance with Section T-831 and T-834.

The Purchaser/Contractor may perform the following work prior to beginning haul and resumption of haul after an extended stoppage:

- a. Remove rocks, standing or down trees, logs, brush, limbs and other debris from turnouts, turnarounds, or other locations that interfere with maintenance.
- b. Remove encroaching limbs to a height of 14 feet above the traveled way surface.
- c. Scatter material not meeting utilization standards outside and below the roadbed on the fill side. Limb and remove timber that meets utilization standards or deck at locations approved by the Forest Service.

2. Slough and Slides

- a. Slough and slides may be left in place when surface drainage is provided and at least 12 feet of width is available for vehicle passage.
- b. Purchaser/Contractor may reposition or ramp over slides and slough when the traveled way width is less than 12 feet providing the material is capable of supporting vehicles. Limit outslope to no more than six percent.
- c. Reposition slough or slide materials, which are not capable of supporting a vehicle, on the roadbed to provide the 12 feet width. When directed by the Forest Service, slough or slide material will be removed under Section T-832.

3. Slumps and Washouts

- a. Drain the roadbed immediately upgrade of slumps and longitudinal cracks to prevent water from entering slump area.
- b. Slumps and longitudinal cracks at the edge of the roadbed shall not be considered a part of the usable width. Usable width may be reduced to 10 feet in the area of the slump.
- c. Unless the Forest Service approves material being placed on slumps, ramp the slumps on both ends into undisturbed roadbed to provide at least 10 feet usable width. Use removed materials to guide vehicles to the ramp location or to aid in draining the area.
- d. Washouts may be filled with suitable material.

4. Post -haul

At the end of hauling or prior to seasonal shutdowns or a period of extended inactivity:

- a. Shape the traveled way and disturbed roadbed to provide functional drainage.
- b. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.
- c. Leave roads useable for high clearance vehicles. Remove or reshape Purchaser/Contractor modifications at road junctions to leave the entrance as it was before use, or as agreed at the time of improvement.

T-839 - MAINTENANCE FOR PROJECT USE (06/2020)

839.01 Description

Work consists of providing minimum access required for Purchaser/Contractor's operations and associated Forest Service contract administration while preventing unacceptable resource or road damage.

839.02 Maintenance Requirements

1. Purchaser/Contractor is authorized to perform the following maintenance to provide vehicle passage and drainage:
 - a. Removing log, earth, and rock barriers and/or improving existing road junctions to enable vehicle access as mutually agreed.
 - b. Smoothing or filling existing cross ditches and water bars.
 - c. Installing Purchaser/Contractor-furnished culverts or other temporary drainage structures for shallow stream crossings, as approved by the Contracting Officer.
 - d. Removing brush, fallen trees, rocks, and other materials from the traveled way and other locations that interfere with needed maintenance:
 - i. Place all removed materials away from drainages.
 - ii. Limb and remove timber which meets utilization standards or deck at locations approved by the Contracting Officer. Scatter other woody materials, including limbs, off and below the roadbed without creating concentrations.
 - e. Clean and recondition drainage structures in accordance with Section T-831 and Section T-834.
 - f. Reposition or ramp over slough and slides to provide adequate width of traveled way material.
 - g. Provide traveled way drainage above slumps and seal cracks in slump area. Ramp the slumps on both ends into undisturbed roadbed to provide usable width unless otherwise ordered by the Contracting Officer.
2. During use, the traveled way shall not channel water along the road. Prior to periods of anticipated rains and runoff, perform the following work:
 - a. Shape the traveled way and roadbed to drain.
 - b. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes through use and maintenance.
 - c. Perform work outlined in 839.02 1 (e), (f), and (g).
 - d. During periods of non-use, replace original barrier or provide and maintain standard MUTCD Type 3 barricades unless alternate barriers are approved by the Contracting Officer.

839.03 Post Haul Requirements

1. Upon completion of project use, perform work described in the requirements of 839.02 2 and in accordance with 839.03 2 and 3 or as otherwise provided for in the SUPPLEMENTAL SPECIFICATIONS or C(T)5.31#.
2. Roads designated in C(T)5.31# to be blocked shall conform to the requirements of Section T-835. Unless otherwise approved by the Contracting Officer, remove Purchaser/Contractor-installed temporary structures from National Forest System land. Associated commercially obtained materials shall remain the property of the Purchaser/Contractor.
3. Remove or reshape Purchaser/Contractor improvements at road junctions, as approved by the Contracting Officer at the time of improvement.

T-841 - VEGETATION ESTABLISHMENT (06/2020)

841.01 Description

This work consists of applying seed, fertilizer, mulch, and planting containerized or bare root plant stock singularly or in specified combinations to roadways and disposal areas. Work area may be limited to designated portions of the roadway and roadside or include treatment of the entire area bounded by the outer limits of the roadsides.

841.02 Materials and Application Rates

Provide the following listed materials:

1. Fertilizer: Fertilizer shall be a standard commercial grade and provide the following minimum percentage of available nutrients designated:

% Nitrogen	% Phosphorous	% Potassium	% Sulfur

Furnish fertilizer in sealed containers with the composition, weight, and guaranteed analysis of contents clearly marked. Apply at the rate of _____ pounds per acre.

2. Seed: This work consists of furnishing and placing required seed mix on all areas disturbed under this contract and on any other areas specified.
 - a. Apply the seed in the following amounts and mixtures:

Species	Application Rate Pounds per Acre

- b. Use hand-operated seeding devices, or other devices approved by the Contracting Officer, to apply seed.
 - c. Furnish weed-free seed, with additional requirement that no seed containing any prohibited noxious weed seed, or any restricted noxious weed seed in excess of current state standards. Weeds are defined in the current publication commonly referred to as the "All States Noxious Weed List" while the standards for prohibited and restricted noxious weeds are to be found in the appropriate state law or regulations.

Furnish seed separately or in mixture in standard containers with:

- i. Seed name
 - ii. Lot number
 - iii. Net weight
 - iv. Percentages of purity and of germination. In case of legumes, percentage of germination to include hard seed.
 - v. Percentage of maximum weed seed content clearly marked for each kind of seed
 - vi. Certification that the seed lot meets applicable State and Federal laws regarding prohibited and restricted noxious weeds clearly marked for each kind of seed.
 - d. Furnish the Contracting Officer duplicate signed copies of a certification signed by a Registered Seed Technologist or Seed Analyst certified through either the Association of Official Seed Analysts or the Society of Commercial Seed Technologists. Certification shall state that each lot of seed has been tested in accordance with the Association of Official Seed Analysts standards within 12 months prior to the date of application. This certification shall include:
 - i. name and address of laboratory
 - ii. date of test
 - iii. lot number for each kind of seed
 - iv. name of seed
 - v. percentage of germination
 - vi. percentage of purity
 - vii. percentage of weed content
 - viii. certification that the seed lot meets applicable State and Federal laws regarding prohibited and restricted noxious weeds
 - ix. in the case of a mixture, the proportions of each kind of seed.

T-841 - VEGETATION ESTABLISHMENT (06/2020)

Legume seed shall be inoculated with approved cultures in accordance with the instructions of the manufacturer. No seed may be applied without prior written approval from the Contracting Officer.

- 3. Mulch: Apply mulch materials as follows:

Mulch Type	Application Rate Pounds per Acre

- 4. Plant Stock: Furnish the following listed plant materials:

Stock	Size	Bare Root	Containerized

841.03 Schedules and Applications

- 1. Schedule

- a. Seeding may not be done until all other ground-disturbing work on the road has been completed and accepted. Complete seeding as soon as other ground-disturbing work is accepted, unless a specific seeding season is listed below.

Seeding season 1: _____ to _____ , inclusive. Seeding

Season 2: to _____ , inclusive.

- b. Do not apply the treatment when the ground is frozen or excessively wet. Terminate application during periods when there is too much wind to allow consistent treatment rates and control of the treatment area to the designated limits.

- 2. Roadside and Slope Treatment

- a. Roadsides will not require advance preparation unless required in the SUPPLEMENTAL SPECIFICATIONS.
- b. Apply the designated treatment by hand-operated machine. When both roadbed (under 841.03C) and slopes are shown in the SUPPLEMENTAL SPECIFICATIONS for treatment, application may be done at the same time.
- c. The Contractor will not be required to operate self-propelled equipment beyond the defined roadbed. Do not apply treatment materials to the foreslope of ditches unless roadbed treatment (841.03C) is also required.

- 3. Roadbed Treatment

- a. Scarify portions of the roadbed not previously disturbed and left loose under Section T-835 to a minimum depth of 4 inches, unless bedrock is encountered at a lesser depth. The maximum distance between furrows formed by scarification is 12 inches.
- b. Treat barrier mounds placed under Section T-835 while in a roughened condition.

- 4. Planting

- a. Plant designated woody plant materials at the staked locations or designated spacings.
- b. Place containerized plant stock in an appropriately sized hole formed by a dibble or other device to place the roots at the proper depth.
- c. Place bare root plant stock in a slotted cut formed by a dibble, mattock, Pulaski, or other edged tool. Place the crown at ground level. Do not bend or break the roots.
- d. Compress the area adjacent to the hole by foot or special tool to form a depression up and down slope from the stem and force the soil against the container or roots with no air voids.
- e. Hold the plantings firmly in place by the soil. When checked by pulling upward on the top 1/2 inch of the plant stem, the planting shall either break at the hold point or the area compressed against the roots show evidence of movement. Remove and replace with fresh stock plantings that are not held firmly by the soil.

T-841 - VEGETATION ESTABLISHMENT (06/2020)

841.04 Government Provided Materials

The Government will provide the following listed materials. At least ten (10) calendar days' notice must be given to the Contracting Officer prior to actual date material will be picked up.

Materials will be provided at:

Material	Location

T-842 - CUTTING ROADWAY VEGETATION (06/2020)

842.01 Description

This work consists of cutting all vegetative growth on roadway surfaces and roadsides, including trees and other vegetation less than 4 inches in diameter measured 6 inches above the ground.

842.02 Maintenance Requirements

1. General

- a. Cut brush, trees, and other vegetation within each area treated to a maximum height of 6 inches above the ground surface or obstruction such as rocks or existing stumps. When work is performed under this Section, remove all limbs which extend into the treated area, or over the roadbed, to a height of 14 feet above the traveled way surface elevation.
- b. Items to remain will be DESIGNATED ON THE GROUND.
- c. Work may be performed either by hand or mechanically unless specifically shown in C(T)5.31#. Self-propelled equipment is not allowed on cut and fill slopes or in ditches.
- d. Correct damage to boles of standing trees caused by Purchaser/Contractor's operation either by treatment with a commercial nursery sealer or by removing the tree as directed by the Contracting Officer.
- e. Limb trees within the cutting limits which are over 4 inches in lieu of cutting, measured at 6 inches above the ground.
- f. When trees are limbed, cut limbs within 4 inches of the bole.

2. Cutting Side Vegetation

- a. Show the width of vegetation to be removed in (C(T)5.31#.
- b. Unless otherwise included in the SUPPLEMENTAL SPECIFICATIONS or DESIGNATED ON THE GROUND:
 - i. Commence work at the edge of the traveled way and proceed away from the road centerline.
 - ii. Roads without a defined traveled way: The starting point for cutting will be marked on the ground or defined in the SUPPLEMENTAL SPECIFICATIONS.
- c. The points for establishing cutting limits are as follows:
 - i. Fill and daylighted (wide roadbed) section cutting commences at the edge of the traveled way and proceeds away from the road center line.
 - ii. Drainage ditched section cutting commences at the bottom of the existing ditch and proceeds away from the road center line. Cutting on ditch foreslopes is not required.
 - iii. Unditched section cutting commences at the intersection of the cutbank and the roadbed and proceeds away from center line.
- d. Provide transitions between differing increments of cutting width. Accomplish transitions in a taper length of not less than 50 feet nor more than 70 feet.

3. Debris

- a. Materials resulting from the cutting operation in excess of 12 inches in length or 3 inches in diameter is not allowed to remain on roadway slopes within the treated area, in ditches, or within water courses.
- b. Remove limbs and chunks in excess of 3 inches in any dimension from the traveled way and shoulders.
- c. Materials may be scattered down slope from the roadbed, outside of the work area and drainages unless otherwise listed in D. Invasive Species of Concern.

4. Invasive Species of Concern

Where DESIGNATED ON THE GROUND, included in C(T)5.31#, shown on SALE/CONTRACT AREA MAP or as ordered by the Contracting Officer invasive species of concern prevention practices shall be followed as listed below.

Invasive Species of Concern Prevention Practices
Refer to Attachment B for invasive species of concern; prevention practices included in B(T)6.35 and C(T)6.6# or as specified by the Forest Service.

T-851 - LOGGING OUT (06/2020)

851.01 Description

This work consists of removal of fallen trees and snags which encroach within 3 feet of the roadbed on both sides.

851.02 Maintenance Requirements

1. Limb and remove timber which meets Utilization Standards in A(T)2 or deck at locations designated by the Contracting Officer.
2. Limb non-merchantable material and cut into lengths for handling. Deck outside ditches and drainages, off the traveled way and turnouts or at staked locations. The clearing width is to the edge of the roadbed for public use roads, except limited use roads. The clearing width for limited use roads is shown in T-836, T-838, or T-839, as applicable.
3. Notwithstanding B(T)2.3, blowdown timber outside Sale/Contract Area required to be removed, which meets Utilization Standards in A(T)2, when designated by the Contracting Officer is Included Timber subject to requirements of B(T)2.2.
4. Do not leave woody debris and slash in excess of 12 inches in length or 3 inches in diameter, or concentrations which may plug ditches or culverts, in ditches, drainage channels, or on backslopes, traveled way, shoulders, or turnouts.

T-854 TREATMENT AND DISPOSAL OF DANGER TREES (06/2020)

854.01 Description

This work consists of felling and disposal of live or dead danger trees sufficiently tall to reach roads used by the Purchaser/Contractor. Any removal of logs is subject to prior agreement between the Contractor Officer and the Purchaser/Contractor.

854.02 Requirements

1. Designation of danger trees.
 - a. Danger trees to be felled will be documented in advance by the Contracting Officer. Trees authorized to be removed will be Marked for removal.

2. Falling, bucking and treatment for disposal.
 - a. Use controlled felling to ensure the direction of fall and prevent damage to property, structures, roadway, residual trees, and traffic. Stump heights measured on the side adjacent to the highest ground shall meet requirements of A(T)6. Higher stump heights are permitted when necessary for safety.
 - b. Felled snags and trees, which are not Marked for removal, will be left in a stable condition such that they will not roll or slide. Position logs away from standing trees so they will not roll, are not on top of one another, and are located out of roadway and drainage structures.
 - c. Fell, limb and remove trees which are Marked for removal and are equal or exceed the utilization standards as listed in A(T)2 or SUPPLEMENTAL SPECIFICATIONS. Dispose of merchantable timber designated for removal in accordance with B(T)2.32 Construction Clearing or as described in SUPPLEMENTAL SPECIFICATIONS.

3. Slash treatment.
 - a. Within the roadway, remove limbs, chunks, and debris in excess of 12 inches in length and 3 inches in diameter, and concentrations that may plug ditches or culverts, and water courses.
 - b. Dispose of slash by scattering outside the roadway limits without damaging trees, or improvements.
 - c. Haul large accumulations of slash in accordance with T-832.

T-891 - WATER SUPPLY AND WATERING (06/2020)

891.01 Description

This work consists of providing facilities to furnish an adequate water supply, hauling, and applying water.

891.02 Materials

1. If the Purchaser/Contractor elects to provide water from other than designated sources, the Purchaser/Contractor is responsible to obtain the right to use the water, including any cost for royalties involved.
 - a. Suitable and adequate water sources available for Purchaser/Contractor's use under this contract are designated as follows:

Map Key No.	Location - Road	Location - Milepost	Use Restrictions
	Road 4613 00	crossing of North Fork Clackamas River	water withdrawal would be limited to 50 percent or less of the stream flow at the point of withdrawal
	Road 4610 000	crossing of Boyer Creek	water withdrawal would be limited to 50 percent or less of the stream flow at the point of withdrawal
<p>Drafting from occupied Listed Fish Habitat (LFH) stream reaches would not occur. Water withdrawal in unoccupied LFH, and within 1500' of any LFH (occupied or unoccupied) would be limited to 10 percent or less of the stream flow at the point of withdrawal, by visual estimation. In non-LFH streams greater than 1500' from LFH, water withdrawal would be limited to 50 percent or less of the stream flow at the point of withdrawal. Where multiple drafting operations occur, they would be dispersed in space and time. Pipe intakes would be screened; woven wire screens would have a maximum 1.75 mm gap, and perforated plate screens would have a maximum opening of 3/32nd inch.</p>			

891.03 Equipment

1. Positive control of water application is required. Equipment shall provide uniform application of water without ponding or washing.
2. An air gap or positive anti-siphon device shall be provided between the water source and the vehicle being loaded if the vehicle has been used for other than water haul, if the source is a domestic potable water supply, or the water is used for tank-mixing with any other materials.
3. The designated water sources may require some work prior to their use. Such work may include cleaning ponded areas, installing temporary weirs or sandbags, pipe repair, pump installation, or other items appropriate to the Purchaser/Contractors's operations. Flowing streams may be temporarily sandbagged or a weir placed to pond water, provided a minimum flow of ___ cu. ft/sec is maintained. Obtain approval from the Contracting Officer on improvements for sandbags or weirs prior to placement.
4. Juvenile fish protection. The Purchaser/Contractor shall utilize (1) one of the following methods of screening on any draft hoses used unless otherwise approved by Contracting Officer.
 - a. Perforated Plate: Screen openings shall not exceed 3/32 or 0.0938-inches (2.38mm).
 - b. Profile Bar Screen: The narrowest dimension in the screen openings shall not exceed 0.0689-inches (1.75-mm).
 - c. Woven Wire Screen: Screen openings shall not exceed 3/32 or 0.0938-inches (2.38 mm).
 - d. All screening methods shall be cleaned frequently either with wire brushing, flushing, or any other acceptable method.

T-892 - BITUMINOUS PRODUCTS (06/2020)

892.01 Description

This work consists of furnishing bituminous material to be used for dust abatement performed in accordance with T-812 - Dust Abatement.

892.02 Materials

1. For cutback asphalts and emulsified asphalts, meet the requirements and application temperatures of Section 702 of the "Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-14)".
2. Meet the bituminous dust palliatives requirements listed in Table T-892-2 or listed in the SUPPLEMENTAL SPECIFICATIONS.

892.03 Certificate of Compliance

1. Provide a Certificate of Compliance in the following format:

Consignee: _____	Designation: _____
Contract Number: _____	Date: _____
Vehicle Identification: _____	
Type and Grade: _____	With Additive(%, Brand): _____
Loading Temperature: _____	Net Weight: _____
Net Liters: _____	

The shipment of bituminous material identified above and covered by the bill of lading complies with Government Standard Specification as modified by SUPPLEMENTAL SPECIFICATIONS applicable to this project.

Producer: _____

Signed: _____
Purchaser/Contractor Representative

892.04 Application Temperatures

1. Apply bituminous materials within the temperature ranges indicated in Table T-892-2.

TABLE T-892-1 - Application Temperatures

Application Temperature Range (Degrees C)		
Type & Grade of Material	Spray Min./Max.	Mix Min./Max.
MC 30	21-63	16-40
MC 70	40-85	32-68
DO-1-2-3	27-52	
DO-4	27-80	
DO-6-7-8	10-60	

T-892 - BITUMINOUS PRODUCTS (06/2020)

TABLE 892-2.- Bituminous Dust Palliatives

General Requirements	ASTM Method	DO-1	DO-2	DO-3	DO-4	DO-6	DO-6P	DO-8
Flash Point								
Tag Open-Cup, □C, Min.	D 1310	52	52	52	93	66	66	
Cleveland Open-Cup, □C, Min.	D 92							100
Viscosity:								
Kinematic, @ 38 □C, cSt	D 2170	40-70	90-125	135-200	20-100			
Saybolt Furol, @ 25 □ C SFS Max.	D 88					75-150	25-50	50
Water, % Max.	D 95	0.	0.5	0.5	0.			
Asphaltenes, %s	D 2006-70	3-6	4-8	5-10	0-5	5-15	5-15	5-10
Saturates, % Min.	D 2006-70	25	25	25	10	25	25	8
24-Hour Settlement, %	D 244					2.0	2.0	2.0
Sieve Test, % Max.	D 244							0.1
Distillation Tests								
Total Distillate to 288 □C, Max.% by Volume	D 244	35	30	30	5			50
Total Distillate to 360 □C, Max.% by Volume	D 402							
Oil Distillate, % by Volume	D 244						10-20	5
Total Residue, % by Weight	D 244					60	55	45
Test on Residue from Distillate								
Viscosity, Kenmatic, @ 38 □C ,cST	D 2170	75-250	200-600	500-1500	20-150			
Viscosity, Kenmatic, @ 50 □C, cST	D 2170					200-600	150-450	250-1200
Solubility in Trichloroethylene, % Min.	D 2042	98	98	98	98	96	96	98
Ductility, CM Min.	D 113							

Invasive Species of Concern on the Mt. Hood National Forest (MHNH)

Common name	Scientific name	Priority for MHNH
black locust	<i>Robinia pseudoacacia</i>	
Bohemian knotweed	<i>Polygonum * bohemicum</i> (synonym <i>Polygonum cuspidatum x sachalinense</i>)	Yes
brownray knapweed	<i>Centaurea jacea</i>	Yes
bull thistle	<i>Cirsium vulgare</i>	Yes
yellow toadflax (butter and eggs)	<i>Linaria vulgaris</i>	Yes- east side
Canada thistle	<i>Cirsium arvense</i>	Yes
cheatgrass	<i>Bromus tectorum</i>	Yes- east side
common dandelion	<i>Taraxacum officinale</i>	
common hawkweed	<i>Hieracium lachenalii</i>	Yes
common plantain	<i>Plantago major</i>	
false brome	<i>Brachypodium sylvaticum</i>	
Dalmatian toadflax	<i>Linaria dalmatica</i>	Yes- east side
diffuse knapweed	<i>Centaurea diffusa</i>	Yes
English holly	<i>Ilex aquifolium</i>	Yes- west side
English ivy	<i>Hedera helix</i>	Yes- west side
English laurel	<i>Prunus laurocerasus</i>	
English plantain	<i>Plantago lanceolata</i>	
field bindweed	<i>Convolvulus arvensis</i>	
hairy cat's-ear	<i>Hypochaeris radicata</i>	
herb Robert	<i>Geranium robertianum</i>	Yes- west side
Himalayan blackberry	<i>Rubus armeniacus</i>	Yes- west side
Houndstongue (gypsyflower)	<i>Cynoglossum officinale</i>	Yes- east side
Japanese sweet coltsfoot (Japanese butterbur)	<i>Petasites japonicus</i>	Yes- west side
Japanese/Bohemian knotweed	<i>Fallopia x bohémica</i>	Yes
meadow knapweed (Tyrol knapweed)	<i>Centaurea nigrescens</i>	Yes
medusahead	<i>Taeniatherum caput-medusae</i>	Yes- east side
North African wiregrass	<i>Ventenata dubia</i>	Yes- east side
orange hawkweed	<i>Hieracium aurantiacum</i>	Yes
ornamental jewelweed (policeman's-helmet)	<i>Impatiens glandulifera</i>	Yes- west side
Queen Anne's lace	<i>Daucus carota</i>	Yes
reed canarygrass	<i>Phalaris arundinacea</i>	Yes
rush skeletonweed	<i>Chondrilla juncea</i>	Yes
Scotch broom	<i>Cytisus scoparius</i>	Yes
shiny leaf geranium, shiny geranium	<i>Geranium lucidum</i>	Yes- west side
spotted knapweed	<i>Centaurea stoebe</i>	Yes
St. John's-wort	<i>Hypericum perforatum</i>	Yes
sulphur cinquefoil	<i>Potentilla recta</i>	Yes
tansy ragwort	<i>Senecio jacobaea</i>	Yes- west side
whitetop	<i>Cardaria draba</i>	Yes- east side
yellow star-thistle	<i>Centaurea solstitialis</i>	Yes- east side
Common foxglove	<i>Digitalis purpurea</i>	North Clack EA
oxeye daisy	<i>Leucanthemum vulgare</i>	North Clack EA
wall lettuce	<i>Lactuca muralis</i>	North Clack EA

**United States Department of Agriculture
Forest Service**



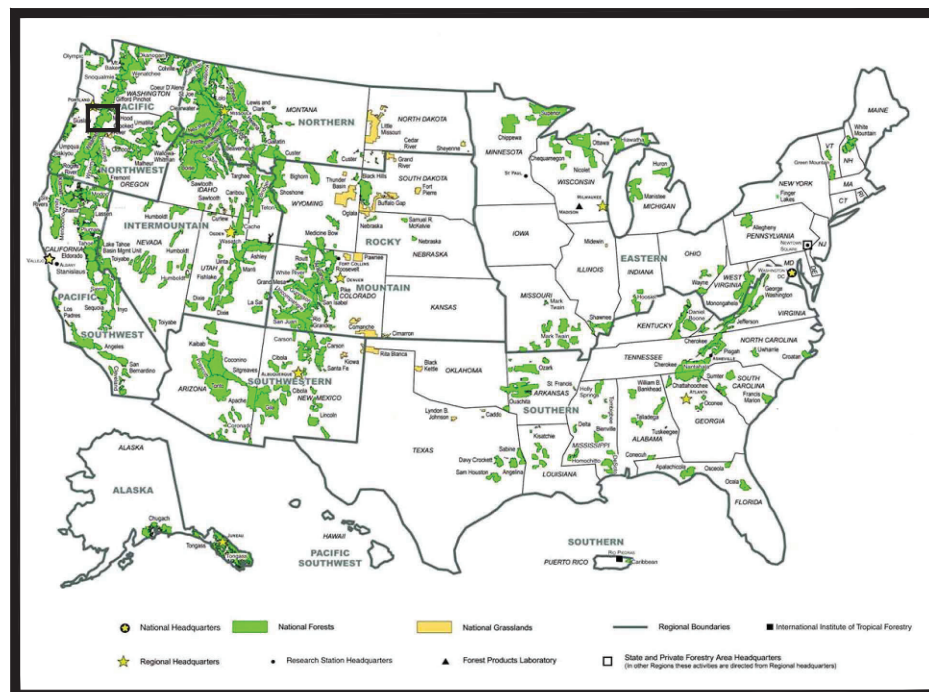
**(R06) PACIFIC NORTHWEST REGION
MT. HOOD NATIONAL FOREST
CLACKAMAS RIVER RANGER DISTRICT**



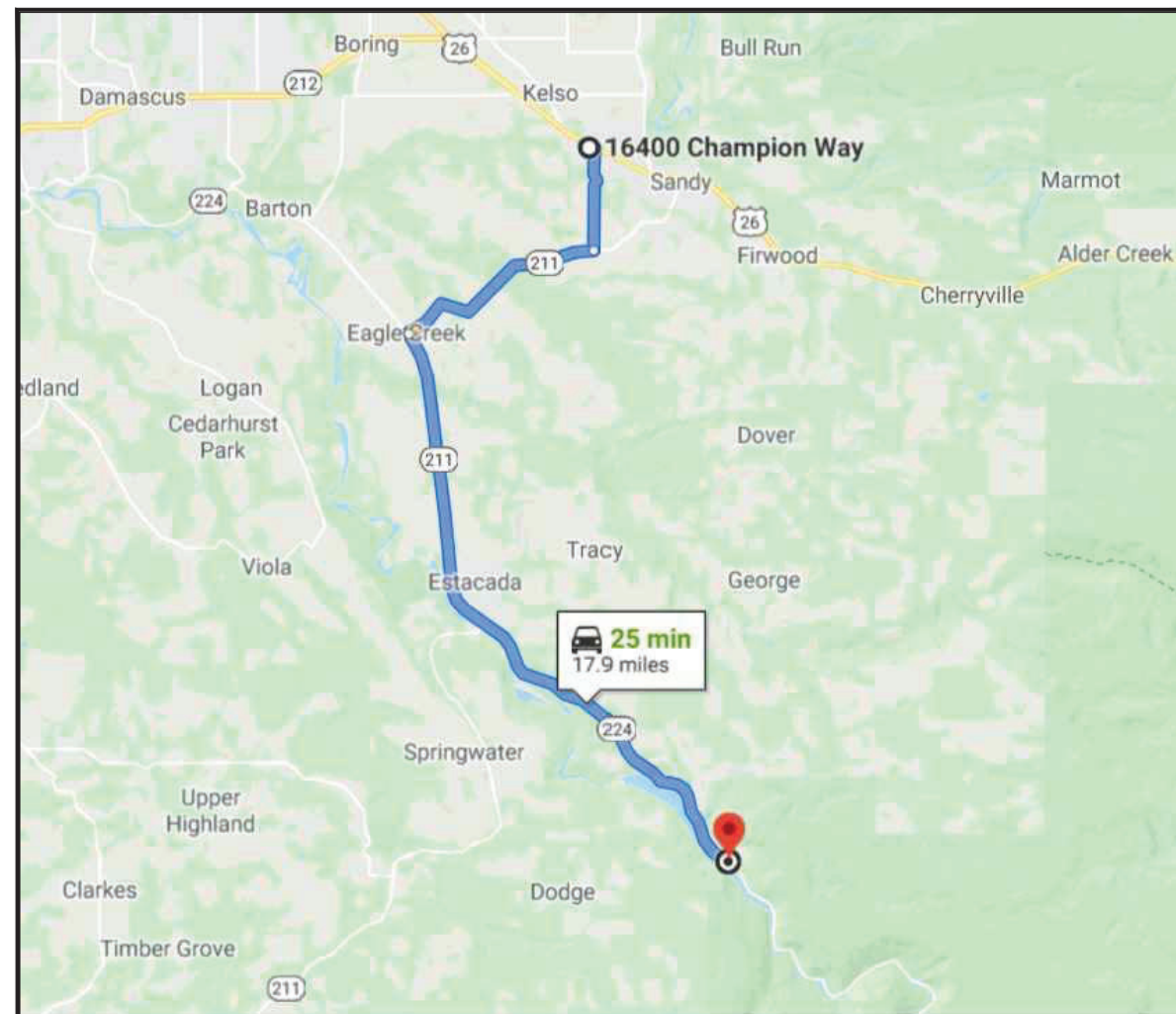
**CLACKAMAS COUNTY
OREGON
SPECIFIED ROADS FOR
RAIL TIMBER SALE**

INDEX OF SHEETS	
SHEET	SHEET TITLE
1	TITLE SHEET
2	VICINITY MAP
3	GENERAL NOTES
4	ESTIMATE OF QUANTITIES
5	ROAD RECONSTRUCTION SUMMARY
6	ROAD RECONSTRUCTION TYPICAL DETAILS
7	DRAINAGE LISTING
8-9	DRAINAGE INSTALLATION TYPICALS
10	APHALT REPAIR TABLE
11	FILL REPAIR METHOD B TYPICAL
12	DISPOSAL TYPICALS

SPECIFIED ROADS			
ROAD NUMBER	ROAD NAME	LENGTH	TYPE OF WORK
4610 000	ABBOT ROAD	7.25	RECONSTRUCTION



PROJECT LOCATION



VICINITY MAP

TRAVEL DIRECTIONS:
FROM CLACKAMAS RIVER RANGER STATION/MT HOOD NATIONAL FOREST SUPERVISORS OFFICE (16400 CHAMPION WAY, SANDY OR, 97055), HEAD EAST ON US-HIGHWAY 26 FOR 0.2 MILES. TURN RIGHT ONTO 362nd AVE FOR 1.8 MILES. TURN RIGHT ON OR-211 S FOR 3.9 MILES. TURN LEFT ONTO OR-211 S/OR-224 E FOR 11.9 MILES TO REACH THE JUNCTION OF ROAD 4610 000 AND OR-224 E.

Digitally signed by Peter Huppi
Date: 2020.08.11 10:31:49 -07'00'

Peter Huppi
DESIGNED BY
PETE HUPPI - (PROJECT ENGINEER)

Digitally signed by KYLE YEE
Date: 2020.08.12 07:15:41 -07'00'

KYLE YEE
PEER REVIEWED BY
KYLE YEE - (CIVIL ENGINEER)

Digitally signed by MICHAEL HOWARD
Date: 2020.08.11 10:54:44 -07'00'

MICHAEL HOWARD
RECOMMENDED BY (ZONE ENGINEER)
MICHAEL HOWARD

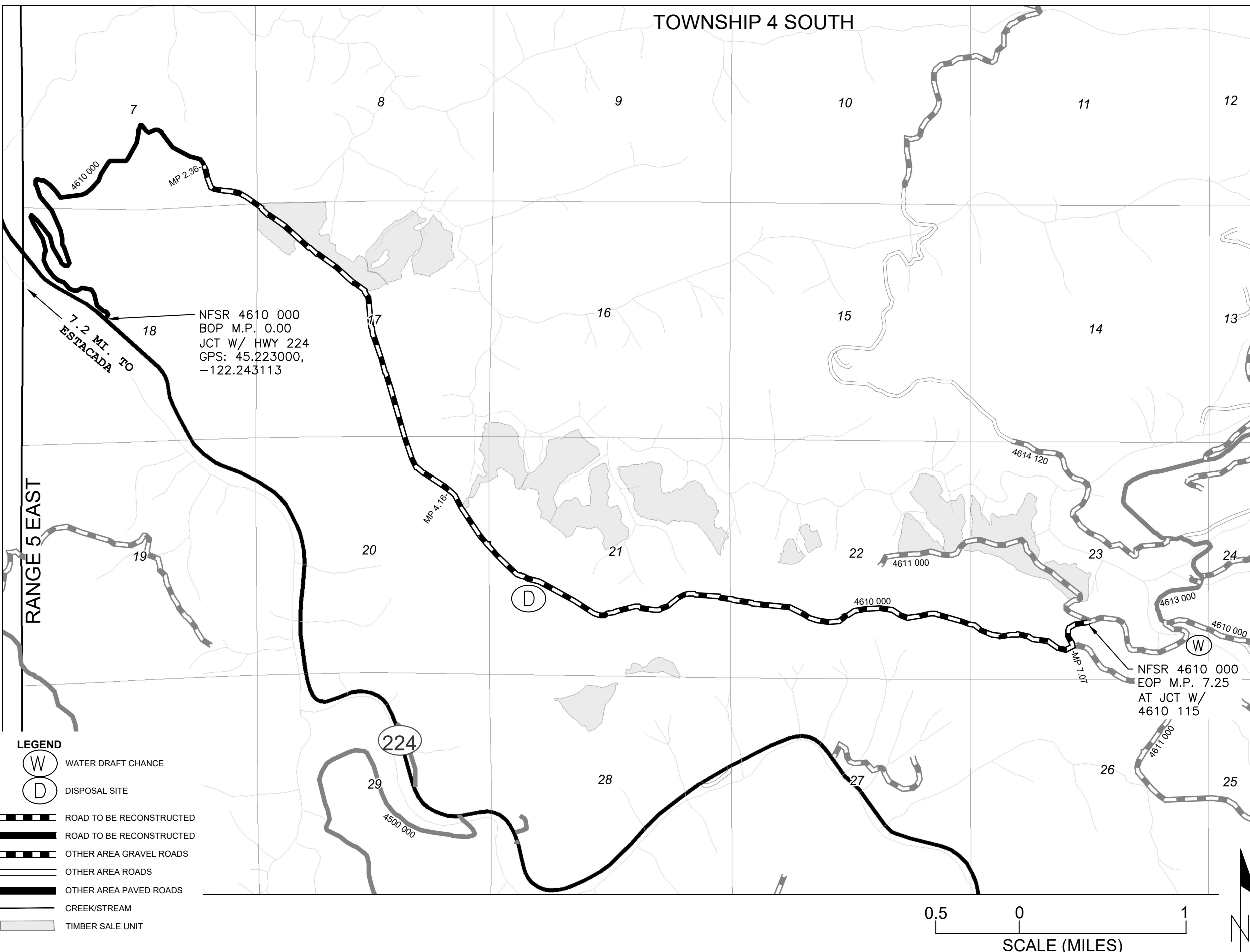
Digitally signed by JACQUELINE GROCE
Date: 2020.08.12 08:17:43 -07'00'










JACQUELINE GROCE
APPROVED BY (DISTRICT RANGER)
JACQUELINE GROCE

Digitally signed by KRISTIN AUSTIN
Date: 2020.08.12 12:14:39 -07'00'

KRISTIN AUSTIN
APPROVED BY (FOREST ENGINEER)
KRISTIN AUSTIN

TOWNSHIP 4 SOUTH



- LEGEND**
-  WATER DRAFT CHANCE
 -  DISPOSAL SITE
 -  ROAD TO BE RECONSTRUCTED
 -  ROAD TO BE RECONSTRUCTED
 -  OTHER AREA GRAVEL ROADS
 -  OTHER AREA ROADS
 -  OTHER AREA PAVED ROADS
 -  CREEK/STREAM
 -  TIMBER SALE UNIT



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

VICINITY MAP

DATE

8/6/2020

ARCHIVE NO.

FS090523_R102013_L1-002.dwg

DESIGNER

P. HUPPI

DRAWN

P. HUPPI

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PROJECT NO.

TIMBER SALE

DWG SHEET NO.

X-01

SHEET 2 OF 12

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SPECIFIED ROADS GENERAL NOTES

1. SALVAGE AND STOCKPILE EXISTING AGGREGATE DURING CULVERT INSTALLATIONS AND USE AS BEDDING AND INITIAL BACKFILL MATERIAL.
2. SPREAD WEED FREE MULCH OVER DISTURBED SOIL AND ALL CULVERT INSTALLATIONS, DIPOSAL AREA, CULVERT LEAD OFF DITCHES AND OTHER DISTURBED SOIL SITES AS DIRECTED BY THE CONTRACTING OFFICER. ALL DISTURBED/CONSTRUCTED SLOPES FLATTER THAN 1V:1H SHALL BE COVERED WITH MULCH. RECONDITIONED DITCHES AND CULVERT CATCH BASINS DO NOT REQUIRE MULCH UNLESS THE GROUND IS WET. MULCH SHALL BE APPLIED MINIMUM 2" THICK SO NO GAPS EXISTS BETWEEN SOIL AND MATRIX.
3. DESIGNATED DISPOSAL SITE(S) ARE IDENTIFIED ON THE PLANS. THE CONTRACTING OFFICER WILL IDENTIFY THE DISPOSAL AREAS PRIOR TO PLACEMENT OF MATERIAL. SMOOTH, SHAPE, AND COMPACT TO DRAIN WITH CONSTRUCTION EQUIPMENT AS SHOWN ON THE DISPOSAL TYPICALS.
4. ALL CULVERT INSTALLATIONS REQUIRE PARTIAL BEVEL CUT TO THE INLET AS SHOWN ON THE DRAINAGE CONSTRUCTION TYPICALS. REMOVE BEVEL CUT PIECES FROM FOREST SERVICE LANDS.
5. CULVERT INSTALLATIONS/REPLACEMENTS INCLUDES ALL NECESSARY TREE REMOVAL AND CULVERT REMOVAL AND DISPOSAL. LIMB TREES AND REMOVE STUMPS (SCATTER LIMBS AND STUMPS OUTSIDE OF EXISTING CLEARING LIMITS). DECK TREES AT LOCATIONS APPROVED BY THE CONTRACTING OFFICER. REMOVE EXISTING CULVERTS FROM FOREST SERVICE LANDS.
6. CONSTRUCTION TOLERANCE CLASS D FOR ALL ROADS.
7. THE SUBMITTED TRAFFIC CONTROL PLAN SHALL INCLUDE METHODS TO WARN PUBLIC TRAFFIC OF ROAD WORK ACTIVITIES. ALL CONSTRUCTION SIGNS SHALL COMPLY WITH MUTCD.
8. ALL FOREST SERVICE BRIDGES: USE OF ROADS BY COMMERCIAL USERS WITH LOADS EXCEEDING OREGON STATE LEGAL LOADING FOR A STP (SINGLE TRIP PERMIT) AND THAT WILL CROSS BRIDGES UNDER FOREST SERVICE JURISDICTION SHALL APPLY FOR A BRIDGE OVERLOAD PERMIT (FSM 7736.05). PROCESSING APPLICATIONS FOR BRIDGE OVERLOAD PERMITS MAY TAKE 30 DAYS OR LONGER. CONTACT THE CONTRACTING OFFICER FOR THE BRIDGE OVERLOAD USE PERMIT.
9. PERFORM CONSTRUCTION IN CONFORMANCE WITH STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES ON FEDERAL LANDS - FP03 U.S. CUSTOMARY UNITS.
10. CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY LOCATES (PUBLIC AND PRIVATE) PRIOR TO BEGINNING EXCAVATION, CALL "OREGON UTILITY NOTIFICATION CENTER" AT 811 OR 1-800-332-2344. DAMAGES RESULTING FROM OPERATIONS ARE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR.
11. STORAGE OF CONTRACTORS EQUIPMENT ON GOVERNMENT LANDS WILL BE AT THE CONTRACTORS RISK AND AT LOCATIONS APPROVED BY THE CONTRACTING OFFICER.
12. DEPTH OF SOIL AND AGGREGATE GIVEN AS FINAL COMPACTED DEPTH.
13. **NFSR 4610 000 MUST BE OPEN AND PASSABLE BY PASSENGER VEHICLES ON WEEKENDS.**



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(R06)
PACIFIC NORTHWEST REGION

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RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

GENERAL NOTES

DATE

8/6/2020

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PROJECT NO.

TIMBER SALE

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X-01

SHEET 3 OF 12

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	PAY UNIT	QUANTITY BY ROAD	REMARKS
NATIONAL FOREST SYSTEM ROAD:			4610 000	
15101	MOBILIZATION	LUMP SUM	ALL	FIRE PROTECTION, WEED PREVENTION, AND EQUIPMENT CLEANING ARE INDIRECT TO THIS PAY ITEM.
15713	SOIL EROSION & POLLUTION CONTROL	LUMP SUM	ALL	INCLUDES ALL EROSION AND POLLUTION CONTROL MEASURES. DEWATERING, SETTING DITCH CHECKS, AND SEEDING & MULCHING OF ALL DISTURBED AREAS IS INDIRECT TO THIS PAY ITEM.
20302	REMOVAL OF CULVERT, DISPOSAL METHOD (a), COMPACTION METHOD (N/A)	EACH	5	INCLUDES REMOVAL & DISPOSAL OF EXISTING CULVERTS. THIS ITEM INCLUDES THE FIRST 10 CY OF EXCAVATION NEEDED; EXCAVATION IN EXCESS OF 10 CY WILL BE PAID UNDER 20419.
20304	REMOVAL OF ASPHALT, DISPOSAL METHOD (a)	SQUARE FOOT*	3812.0	INCLUDES REMOVAL OF EXISTING ASPHALT AND SAW CUTTING WHERE NEW ASPHALT WILL BE PLACED ADJACENT TO EXISTING.
20411	UNCLASSIFIED BORROW	CUBIC YARD*	100	GOVERNMENT FURNISHED, LOCATED AT MP 10.62 FOR NFSR 4610 000 (GPS: 45.206799, -122.108753). INCLUDES LOADING, HAULING, AND PLACING MATERIAL AS SPECIFIED. SPECIFIC LOCATION IN QUARRY TO BE STAKED BY CO IN THE FIELD.
20419	DRAINAGE EXCAVATION, TYPE 1	CUBIC YARD*	86	INCLUDES END-HAUL AND DISPOSAL OF ALL UNSUITABLE AND/OR EXCESS MATERIAL, EXCEPTING ASPHALT, PER SECTION 204.14. LOCATIONS OF APPROVED DISPOSAL SITES ON FOREST ARE SHOWN ON PROJECT VICINITY MAP, SHEET 2, AND NOTED IN THE RECONSTRUCTION SUMMARIES.
20701	EARTHWORK GEOSYNTHETICS, GEOGRID TYPE IV	SQUARE YARD*	560.6	THIS WORK CONSISTS OF FURNISHING AND INSTALLING GEOGRID IN STABILIZATION APPLICATIONS. EXCAVATION AND EMBANKMENT WORK IS INDIRECT TO THIS PAY ITEM.
30103	AGGREGATE BASE, GRADING C, COMPACTION METHOD B	CUBIC YARD*	214	CONTRACTOR FURNISHED AGGREGATE. WATERING IS CONSIDERED INDIRECT TO THIS PAY ITEM.
30301	ROAD RECONDITIONING, DITCH RECONDITIONING	MILE	2.36	RECONDITION DITCHES AS SHOWN ON TYPICAL DITCH RECONDITIONING SECTION DETAIL.
40304	ASPHALT CONCRETE OREGON STATE DOT, TYPE 1/2-INCH DENSE GRADED HMAC, LEVEL II, ASPHALT CEMENT PG 64-22	TON	90.15	INCLUDES ALL MATERIALS AND LABOR FOR PAVING AS SHOWN ON PLANS. COMMERCIAL SOURCE MATERIAL.
60201	24 INCH PIPE CULVERT, CORRUGATED HDPE, GAGE N/a, COMPACTION METHOD (b)	FOOT	190	INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR INSTALLATION OF EACH CULVERT AS SHOWN ON THE DRAINAGE LISTING. ALL MATERIALS TO BE COMMERCIAL SOURCE.
63501	TEMPORARY TRAFFIC CONTROL	LUMP SUM	All	INCLUDES BARRICADES, WARNING SIGNS, TRAFFIC CONTROL FLAGGERS, AND DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLAN.

* DENOTES CONTRACT QUANTITY



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

**ESTIMATE OF
QUANTITIES**

DATE

8/6/2020

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TIMBER SALE

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SHEET 4 OF 12

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NSFR 4610 000 RECONSTRUCTION SUMMARY

M.P.	PAY ITEM	UNIT	QTY	DESCRIPTION
0.00	JCT WITH OR-224			
	30301	MILE	2.36	ROAD RECONDITIONING, DITCH RECONDITIONING
0.10	20302	EACH	1	REMOVE EXISTING CULVERT.
	20304	SQ FT*	96.0	SAW CUT AND REMOVE EXISTING ASPHALT/CONCRETE.
	20419	CY*	30	EXCAVATION IN ADDITION TO 20302.
	30103	CY*	7	PLACE 12" DEPTH OF AGGREGATE OVER APPROVED ROADBED CENTERED OVER CULVERT TO CREATE SMOOTH TEMPORARY TRANSITIONS UNTIL PAVING OCCURS.
	40304	TON	2.40	PLACE 4" DEPTH ASPHALT.
	60201	FOOT	36	INSTALL 24" CORRUGATED PLASTIC PIPE. INSTALL WITH NEW OUTLET 1' LOWER.
0.26	SUMMARY: FILL REPAIR METHOD B, FULL WIDTH, 75 FEET			
	20302	EACH	1	REMOVE EXISTING CULVERT.
	20304	SQ FT*	1200.0	SAW CUT AND REMOVE EXISTING ASPHALT/CONCRETE.
	20411	CY*	30	UNCLASSIFIED BORROW TO BE USED WHERE UNSUITABLE MATERIAL WILL NEED TO BE REPLACED.
	20419	CY*	23	EXCAVATION IN ADDITION TO 20302
	20701	SQ YD*	190.6	INSTALL GEOGRID, TYPE IV.
	30103	CY*	50	PLACE CRUSHED AGGREGATE FOR FILL REPAIR B.
	30103	CY*	7	PLACE 12" DEPTH OF AGGREGATE OVER APPROVED ROADBED CENTERED OVER CULVERT TO CREATE SMOOTH TEMPORARY TRANSITIONS UNTIL PAVING OCCURS.
	40304	TON	29.00	PLACE 4" DEPTH HOT ASPHALT CONCRETE MIXTURE.
	60201	FOOT	28	INSTALL 24" CORRUGATED PLASTIC PIPE. RECONNECT TO EXISTING DOWNSPOUT.
0.57	20302	EACH	1	REMOVE EXISTING CULVERT.
	20304	SQ FT*	96.0	SAW CUT AND REMOVE EXISTING ASPHALT/CONCRETE.
	30103	CY*	7	PLACE 12" DEPTH OF AGGREGATE OVER APPROVED ROADBED CENTERED OVER CULVERT TO CREATE SMOOTH TEMPORARY TRANSITIONS UNTIL PAVING OCCURS.
	40304	TON	2.32	PLACE 4" DEPTH ASPHALT
	60201	FOOT	30	INSTALL 24" CORRUGATED PLASTIC PIPE. INSTALL WITH NEW OUTLET 1' LOWER.
1.43	20419	CY*	3	EXCAVATION, CONSTRUCT LEAD OFF DITCH.

NSFR 4610 000 CONTINUED

1.56	SUMMARY: FILL REPAIR METHOD B, FULL WIDTH, 150 FEET			
	20304	SQ FT*	2250.0	SAW CUT AND REMOVE EXISTING ASPHALT/CONCRETE.
	20411	CY*	70	UNCLASSIFIED BORROW TO BE USED WHERE UNSUITABLE MATERIAL WILL NEED TO BE REPLACED.
	20701	SQ YD*	370.0	INSTALL GEOGRID, TYPE IV.
	30103	CY*	112	PLACE CRUSHED AGGREGATE FOR FILL REPAIR B.
	40304	TON	54.38	PLACE 4" DEPTH HOT ASPHALT CONCRETE MIXTURE.
2.06	20304	SQ FT	170.0	SAW CUT AND REMOVE EXISTING DAMAGED ASPHALT/CONCRETE. INTENT IS TO HAVE CLEAN EDGES WHERE THE TWO LAYERS OF EXISTING ASPHALT HAVE SEPARATED IN ORDER TO PATCH CLEANLY.
	40304	TON	2.05	PLACE 2" LIFT HOT ASPHALT CONCRETE MIXTURE.
2.36	END 30301.			
	(FOR INFORMATION ONLY) END OF PAVEMENT, BEGIN GRAVEL			
4.16	(FOR INFORMATION ONLY) OFF ROAD VEHICLE STAGING AREA			
4.60	(FOR INFORMATION ONLY) POTENTIAL WASTE AREA, SPECIFIC LOCATIONS TO BE STAKED BY CO.			
5.46	20302	EACH	1	REMOVE EXISTING CULVERT.
	30103	CY*	10	PLACE 12" DEPTH OF AGGREGATE OVER APPROVED ROADBED CENTERED OVER CULVERT.
	60201	FOOT	26	INSTALL 24" CORRUGATED PLASTIC PIPE.
6.40	20419	CY*	30	EXCAVATION
	30103	CY*	12	PLACE 12" OF AGGREGATE OVER APPROVED ROADBED CENTERED OVER CULVERT.
	60201	FOOT	40	INSTALL 24" CORRUGATED PLASTIC PIPE.
6.79	20302	EACH	1	REMOVE EXISTING CULVERT.
	30103	CY	9	PLACE 12" DEPTH OF AGGREGATE OVER APPROVED ROADBED CENTERED OVER CULVERT.
	60201	FOOT	30	INSTALL 24" CORRUGATED PLASTIC PIPE.
7.25	TEMP ROAD LEFT - END OF RECONSTRUCTION			
7.81	(FOR INFORMATION ONLY - WATER SOURCE (BOYER CREEK))			



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Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

**ROAD
RECONSTRUCTION
SUMMARY**

DATE

9/14/2018

ARCHIVE NO.

FS090523_R102013_L1-002.dwg

DESIGNER

P. HUPPI

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PROJECT NO.

TIMBER SALE

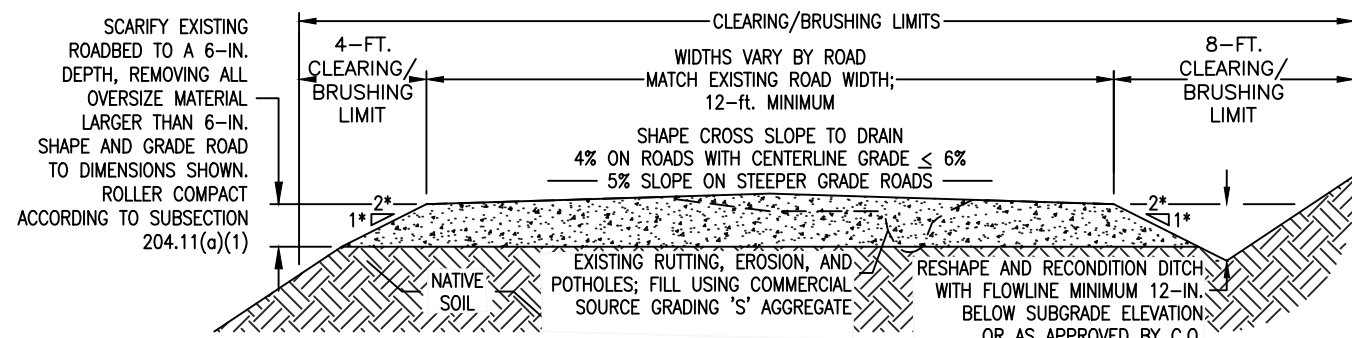
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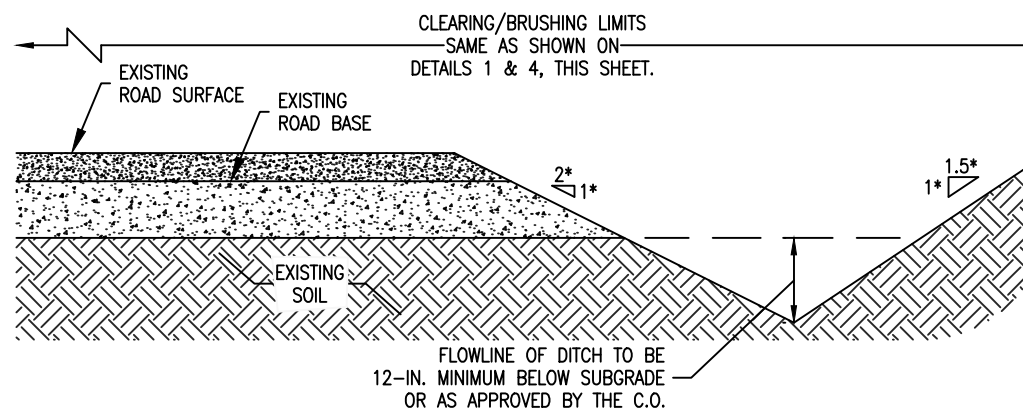
SHEET 5 OF 12

NOTES:

1. RECONDITION ROADS AS SHOWN IN ACCORDANCE WITH SECTION 303.
2. WHERE RUTTING, EROSION, AND POTHOLES EXIST, SCARIFY TO MINIMUM 1-IN. BELOW BOTTOM OF THE RUTTING, EROSION, OR POTHOLE.
3. ADD GOVERNMENT PROVIDED AGGREGATE AS SHOWN ON WORK SUMMARIES AND AS-NEEDED TO GRADE ROAD AS SHOWN.
4. * - DIMENSIONS MARKED WITH AN ASTERISK MAY BE ADJUSTED TO FIT FIELD CONDITIONS AND EXISTING SITE GEOMETRY, AS APPROVED BY THE C.O.



1 TYPICAL ROADBED RECONDITIONING SECTION
NOT TO SCALE



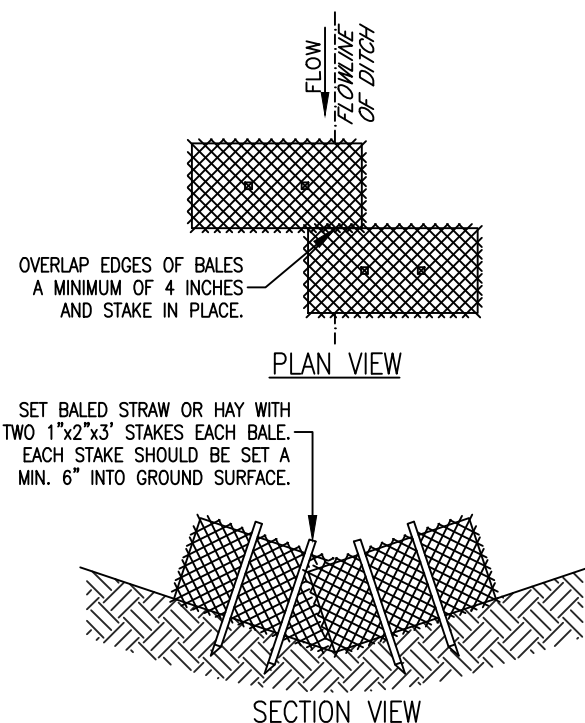
NOTES:

1. * - DIMENSIONS MARKED WITH AN ASTERISK MAY BE MODIFIED TO FIT FIELD CONDITIONS AS DIRECTED BY THE C.O.
2. PURCHASER TO REMOVE ALL SLIDE MATERIAL, SEDIMENT, VEGETATION, AN OTHER DEBRIS FROM THE EXISTING DITCH LINE AND RECONSTRUCT DITCH TO DIMENSIONS SHOWN. ALL EXCAVATED MATERIAL SHALL BE END-HAULED AND DISPOSED OF AT APPROVED DISPOSAL SITE AS NOTED ON THE PROJECT VICINITY MAP (SEE SHEET 2).
3. END-HAUL AND DISPOSAL OF ALL UNSUITABLE MATERIAL IS INDIRECT TO PAY ITEM 30301.
4. CLEAN AND/OR RECONDITION ALL CULVERT INLETS & OUTLETS AND SHAPE CATCH BASINS ACCORDING TO THE TYPICAL CATCH BASIN DETAIL (SEE DETAIL 3, SHEET 10).
5. CONSTRUCT TEMPORARY DITCH CHECKS PER DETAIL 3 OF THIS SHEET FOR 90-ft. DISTANCE EACH SIDE OF ROAD-STREAM CROSSINGS AT 30-ft. INTERVALS WHEREVER DITCH RECONDITIONING WORK CROSSES A STREAM. CONSTRUCT 1 TEMPORARY DITCH CHECK 10-FT UPSTREAM OF ALL OTHER CULVERTS COVERED UNDER DITCH RECONDITIONING WORK. CONSTRUCTION OF TEMPORARY DITCH CHECKS IS CONSIDERED INDIRECT TO PAY ITEM 15713 - SOIL EROSION AND POLLUTION CONTROL.

2 TYPICAL DITCH RECONDITIONING SECTION
NOT TO SCALE

NOTES:

1. DITCH CHECKS MAY BE CONSTRUCTED OF BIO-BAGS, WATTLES THAT HAVE BEEN CUT & TIED, BALES OF STRAW OR HAY, OR OTHER BIO-DEGRADABLE MATERIALS AS APPROVED BY THE CONTRACTING OFFICER.
2. IF STRAW OR HAY BALES ARE USED, ONLY CERTIFIED SEED & WEED FREE MATERIAL MAY BE USED ON THE FOREST.
3. COSTS FOR TEMPORARY DITCH CHECKS ARE INDIRECT TO PAY ITEM 15713 - SOIL EROSION AND POLLUTION CONTROL.



3 TYPICAL TEMPORARY DITCH CHECK DAM DETAIL
NOT TO SCALE



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

**ROAD
RECONSTRUCTION
TYPICAL DETAILS**

DATE

8/6/2020

ARCHIVE NO.

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PROJECT NO.

TIMBER SALE

DWG SHEET NO.

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SHEET 6 OF 12

MILE POST	FILL REPAIR TYPE	AVG. ASPHALT CUT DIMENSIONS (FT)		AVG. EXCAVATION DIMENSIONS (FT)			ASPHALT EXCAVATION (SF)	GEOGRID (SY*)	CRUSHED AGGREGATE (CY*)			HOT A.C. PLANT MIX		REMARKS
		LENGTH	AVG. WIDTH	LENGTH	WIDTH {REW}	DEPTH {ED}			LEVELING COURSE	BASE	TOTAL	DEPTH (INCHES)	TOTAL (TONS)	
0.10	N/A-CULVERT REPLACEMENT	6	16	4	16	6	96.0	--	--	--	--	4	2.40	REPLACE ASPHALT SURFACING (4" DEPTH) AFTER CULVERT INSTALLATION. BASE AGGREGATE PAID UNDER 30103.
0.26	B	75	16	73	16	4	1200.0	190.6	21	29	50	4	29.00	75' FILL REPAIR (METHOD B), FULL WIDTH. REMOVE AND REPLACE EXISTING CULVERT AS STAKED BY CO. INSTALL BELOW FILL REPAIR EXCAVATION.
0.57	N/A-CULVERT REPLACEMENT	6	16	4	16	6	96.0	--	--	--	--	4	2.40	REPLACE ASPHALT SURFACING (4" DEPTH) AFTER CULVERT INSTALLATION. BASE AGGREGATE PAID UNDER 30103.
1.56	B	150	15	148	15	4	2250.0	370.0	41	72	112	4	54.38	150' FILL REPAIR (METHOD B), FULL WIDTH.
2.06	N/A-CULVERT REPLACEMENT	10	17	--	--	--	170.0	--	--	--	--	2	2.05	REPAIR ASPHALT SURFACE WITH 2" DEPTH ASPHALT.



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

MT. HOOD NATIONAL FOREST

CLACKAMAS RANGER DISTRICT

DRAWING TITLE

DRAINAGE LISTING

DATE
8/6/2020

ARCHIVE NO.
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PROJECT NO.
TIMBER SALE

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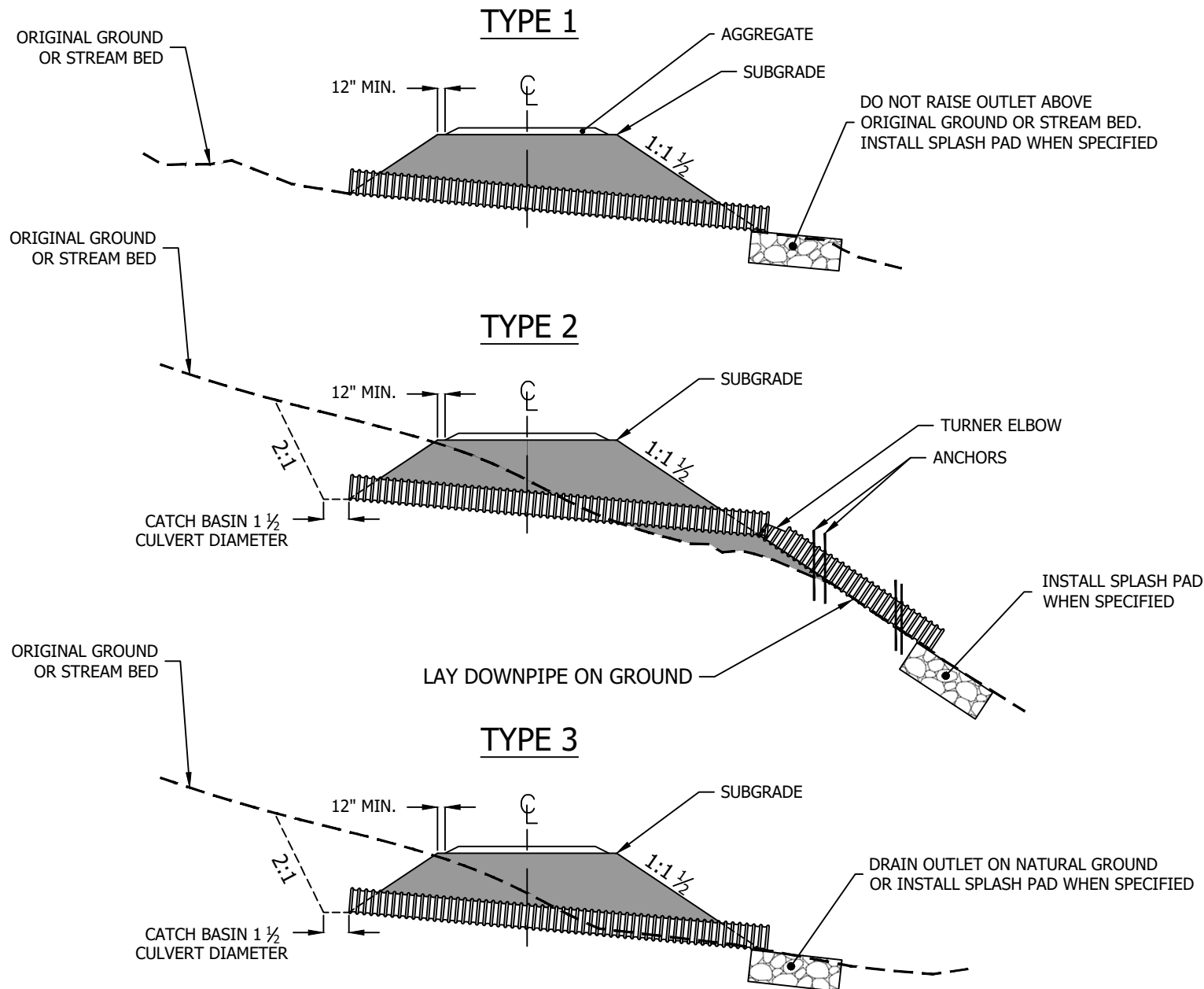
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SHEET 7 OF 12

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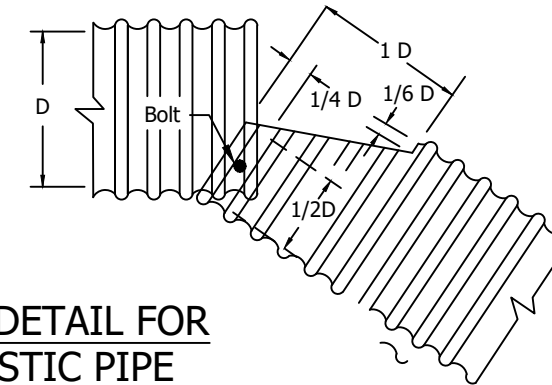
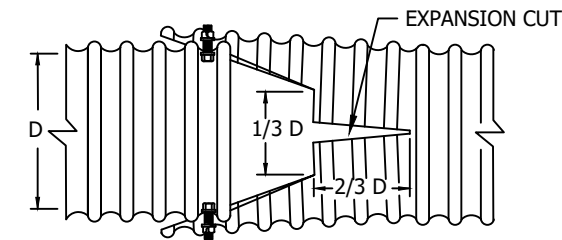
UNLESS OTHERWISE NOTED, SKEW, GRADE, AND TYPE SHALL MATCH REMOVED DRAINAGE STRUCTURES.
NOTES FROM DRAINAGE LISTING, ROAD DRAINAGE INSTALLATION TYPICAL, AND ROAD DRAINAGE INSTALLATION TYPICAL (2) APPLY TO ALL DRAINAGE FEATURES TO BE CONSTRUCTED.

CULVERT TYPES

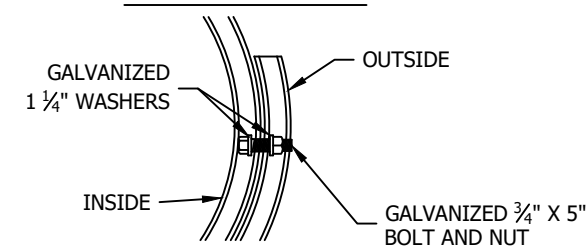


DO NOT RAISE OUTLET ABOVE ORIGINAL GROUND OR STREAM BED. INSTALL SPLASH PAD WHEN SPECIFIED

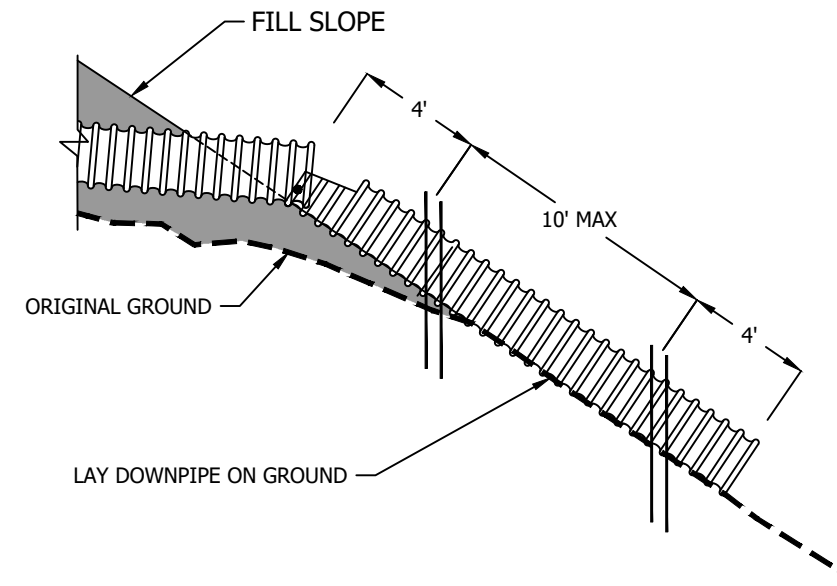
TURNER ELBOW DETAILS FOR PLASTIC PIPE



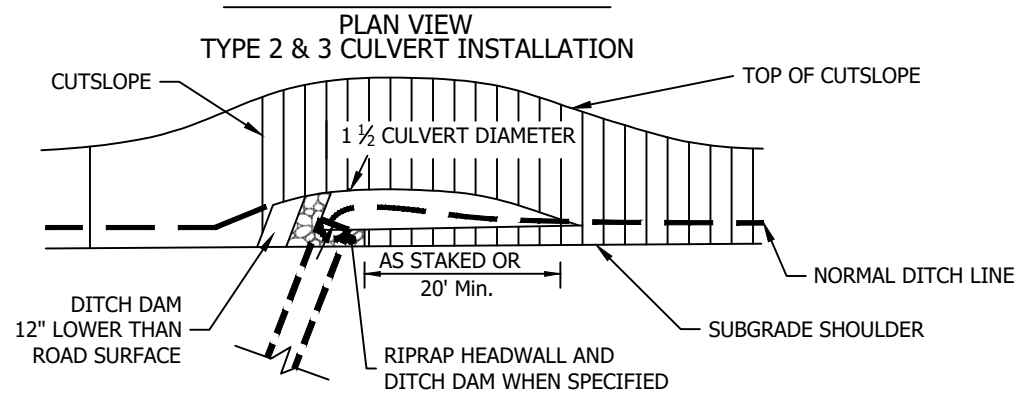
BOLT DETAIL FOR PLASTIC PIPE



ANCHOR DETAILS



CATCH BASIN DETAIL



NOTES:
 ELBOWS AND ANCHORS ARE INDIRECTLY INCLUDED IN THE PAY ITEM FOR THE CORRESPONDING OUTLET PIPE. ANCHORS SETS CONSIST OF TWO STEEL 6 FT FENCE POSTS (AASHTO M 281) AND NO. 9 GALVANIZED WIRE. DRIVE POSTS A MINIMUM 2 FT INTO THE GROUND. PROVIDE 3 STRANDS OF WIRE TWISTED TOGETHER AND ENCOMPASS THE ENTIRE CIRCUMFERENCE OF THE PIPE AND FENCE POSTS.

NOTES:
 1. DRAWING NOT TO SCALE.
 2. SOME INSTALLATIONS OF CULVERTS MAY REQUIRE ADDITIONAL EXCAVATION BELOW GRADE LINE.
 3. ALL CULVERT INSTALLATIONS REQUIRE 12" MINIMUM COVER TO SUBGRADE.



United States Department of Agriculture
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(R06)
 PACIFIC NORTHWEST REGION

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RAIL TIMBER SALE

MT. HOOD NATIONAL FOREST

CLACKAMAS RANGER DISTRICT

DRAWING TITLE

DRAINAGE INSTALLATION TYPICALS

DATE
 8/6/2020

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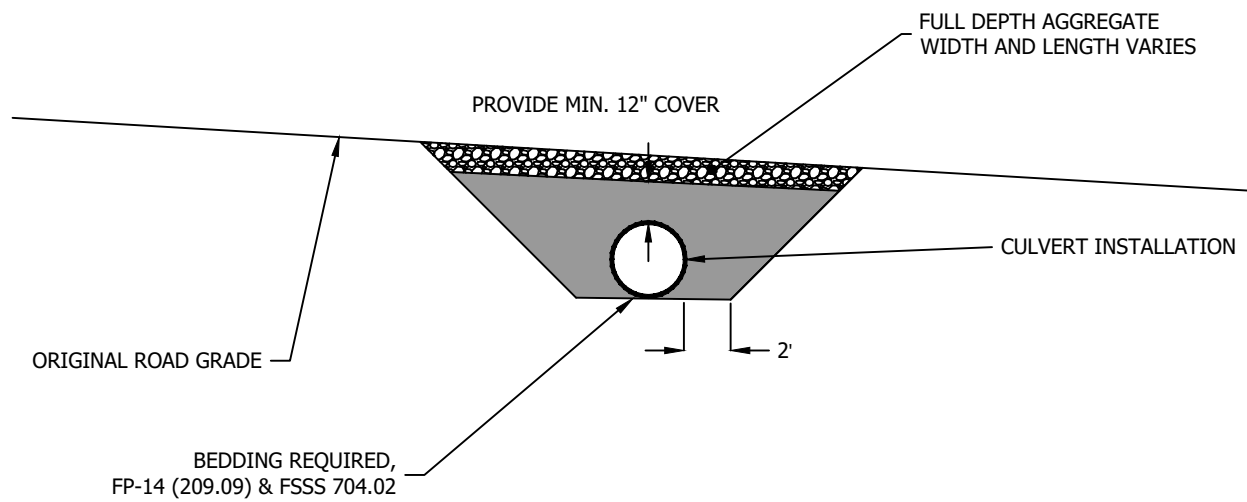
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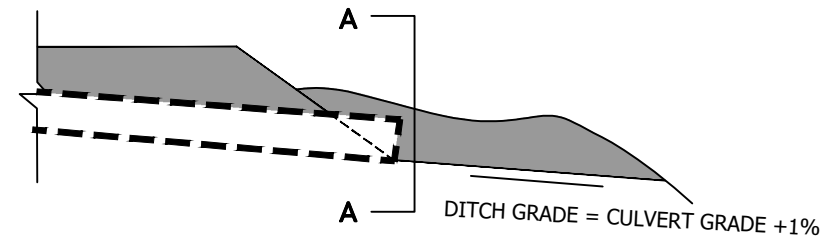
SHEET 8 OF 12

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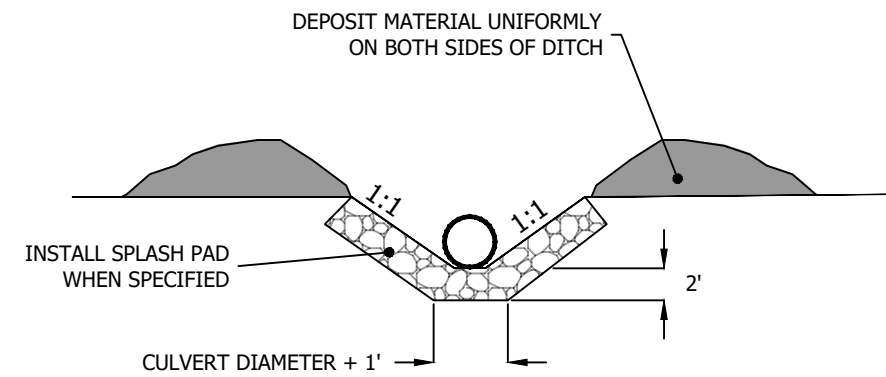
CULVERT SURFACE ROCK REPLACEMENT



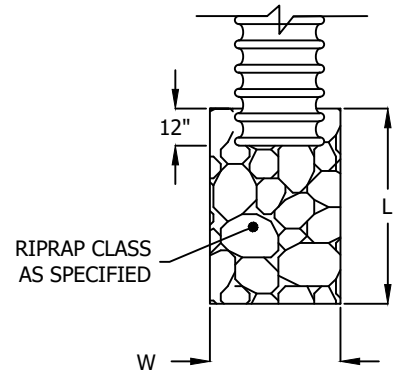
CULVERT OUTLET DITCH



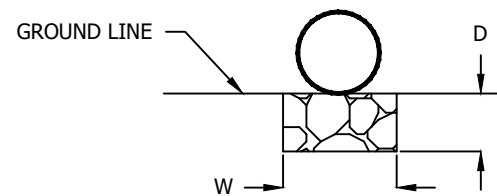
CULVERT OUTLET DITCH SECTION A-A



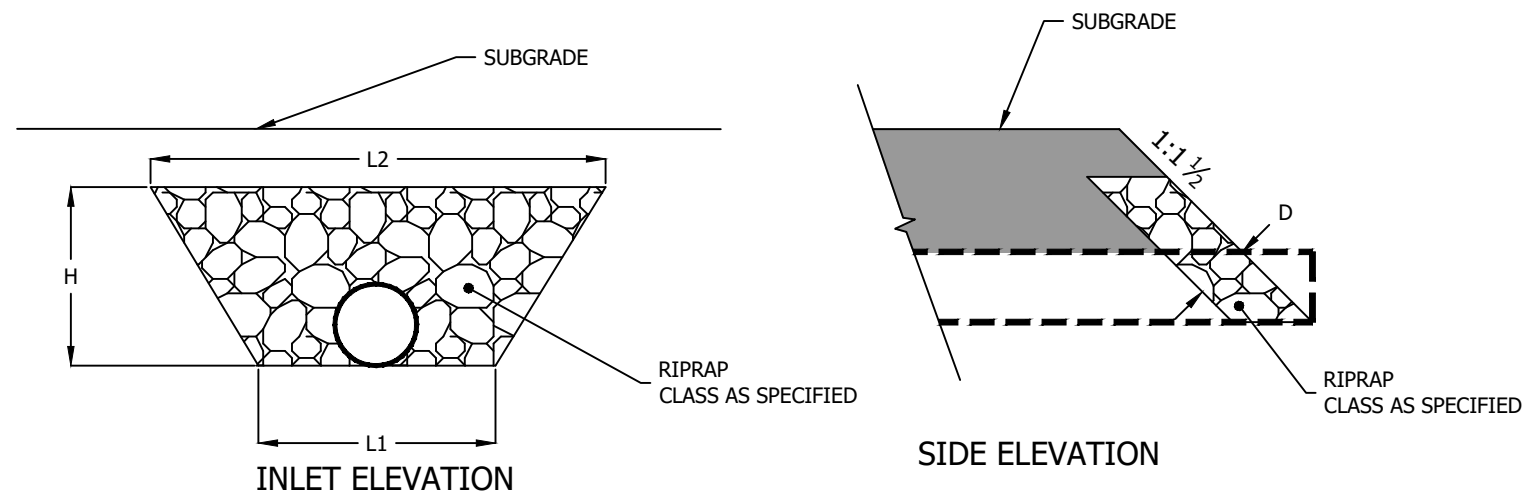
SPLASH PAD PLAN VIEW



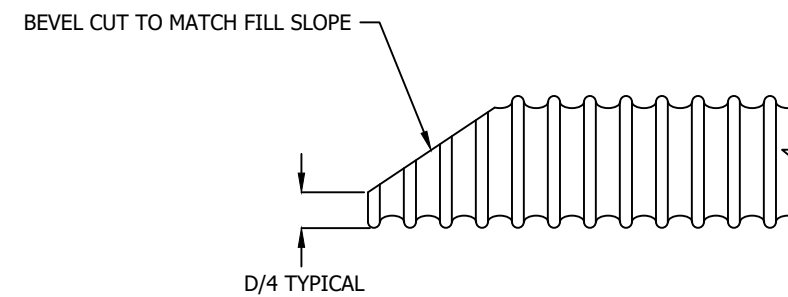
SPLASH PAD ELEV. VIEW



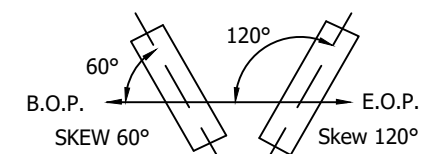
RIPRAP HEADWALL



PARTIAL BEVELED INLET DETAIL



SKEW DIAGRAM



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

**DRAINAGE
INSTALLATION
TYPICALS**

DATE

8/6/2020

ARCHIVE NO.

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DESIGNER

P. HUPPI

DWG SHEET NO.

X-01

DRAWN

P. HUPPI

CHECKED

X.XXX

PROJECT NO.

TIMBER SALE

SHEET 9 OF 12

NOTES:
1. DRAWING NOT TO SCALE.

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MILE POST	FILL REPAIR TYPE	AVG. ASPHALT CUT DIMENSIONS (FT)		AVG. EXCAVATION DIMENSIONS (FT)			ASPHALT EXCAVATION (SF)	MECHANICALLY STABILIZED EARTH WALL			GEOGRID (SY*)	CRACK SEALING (FT)	CRUSHED AGGREGATE (CY*)			HOT A.C. PLANT MIX		REMARKS
		LENGTH	AVG. WIDTH	LENGTH	WIDTH {REW}	DEPTH {ED}		WALL FACE AREA (SF)	LENGTH (FT)	MAT BASE DEPTH (FT)			LEVELING COURSE	BASE	TOTAL	DEPTH (INCHES)	TOTAL (TONS)	
BASE ITEMS																		
0.10	--	6	16	4	16	6	96.0									4	2.40	REPLACE ASPHALT SURFACING (4" DEPTH) AFTER CULVERT INSTALLATION. BASE AGGREGATE PAID UNDER 30103.
0.26	B	75	16	73	16	4	1200.0				190.6		21	29	50	4	29.00	75' FILL REPAIR (METHOD B), FULL WIDTH. REMOVE AND REPLACE EXISTING CULVERT AS STAKED BY CO. INSTALL BELOW FILL REPAIR EXCAVATION.
0.57	--	6	16	4	16	6	96.0									4	2.32	REPLACE ASPHALT SURFACING (4" DEPTH) AFTER CULVERT INSTALLATION. BASE AGGREGATE PAID UNDER 30103.
1.56	B	150	15	148	15	4	2250.0				370.0		41	72	112	4	54.38	150' FILL REPAIR (METHOD B), FULL WIDTH.
2.06	--	10	17	--	--	--	--									2	2.05	REPAIR ASPHALT SURFACE WITH 2" DEPTH ASPHALT.



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

MT. HOOD NATIONAL FOREST

CLACKAMAS RANGER DISTRICT

DRAWING TITLE

ASPHALT REPAIR TABLE

DATE
8/6/2020

ARCHIVE NO.
FS090523_R102013_L1-002.dwg

DESIGNER
P. HUPPI

DRAWN
P. HUPPI

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PROJECT NO.
TIMBER SALE

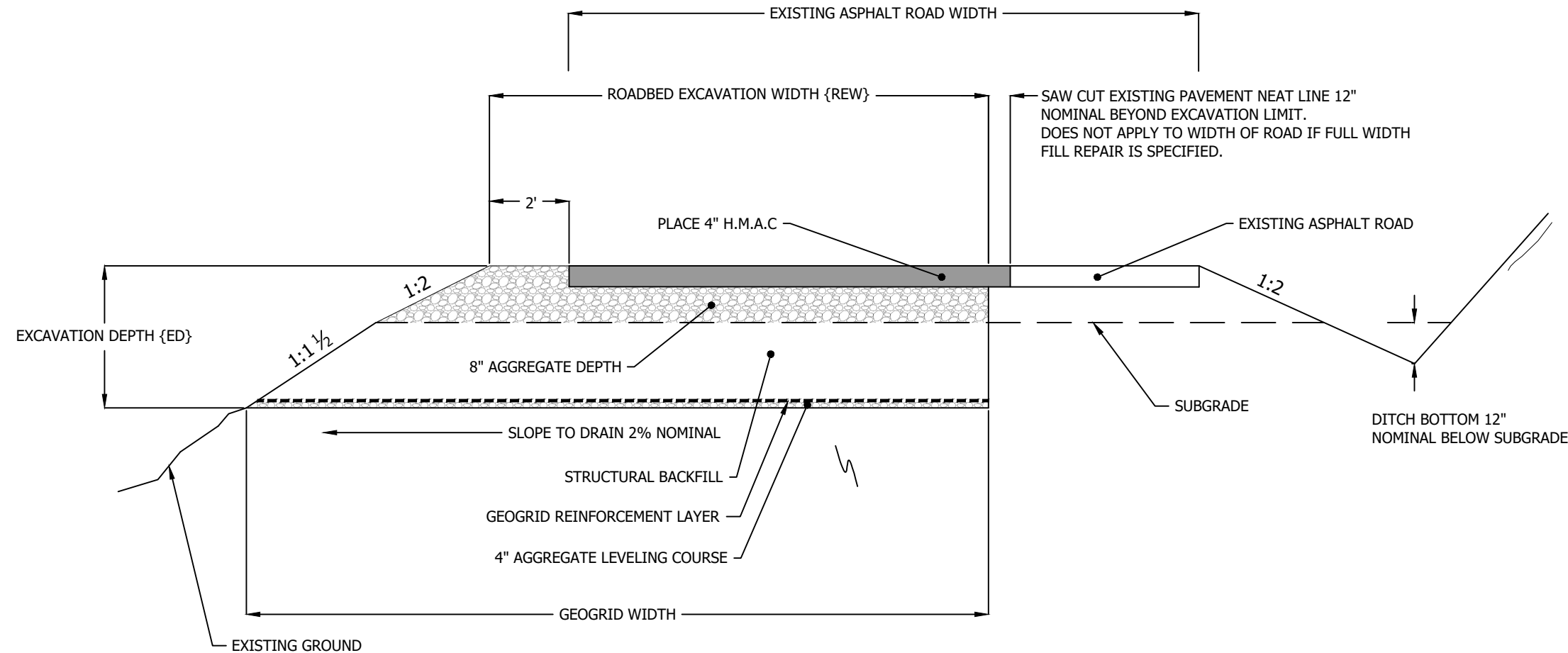
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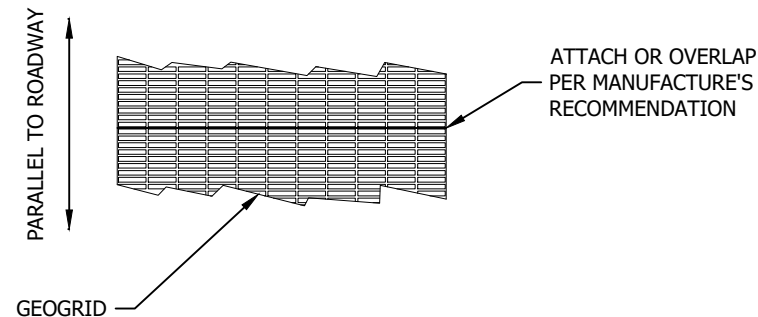
SHEET 10 OF 12

METHOD B FILL REPAIR

SECTION VIEW



PLAN VIEW GEOGRID DETAIL



NOTES:

1. {REW} - ROADBED EXCAVATION WIDTH (INCLUDES EXISTING ROAD SHOULDER) - SEE ASPHALT REPAIR TABLE.
2. {ED} - EXCAVATION DEPTH - SEE ASPHALT REPAIR TABLE
3. DIMENSIONS MAY BE ADJUSTED BY THE CONTRACTING OFFICER IN ORDER TO FIT THE EXISTING SITE GEOMETRY.
4. STRUCTURAL BACKFILL SHALL COMPLY WITH THE REQUIREMENTS OF THE SUBSECTION 704.04.
5. SEGMENTS OF FILL REPAIRS THAT CANNOT BE ROLLER COMPACTED SHALL BE COMPACTED BY MECHANICAL WACKERS TO OBTAIN LIKE COMPACTION.
6. MAINTAIN EXISTING SUPER ELEVATION, CROWN AND SLOPE OF ROAD. CREATE SMOOTH TRANSITIONS TO EXISTING ROAD SURFACE AND PRISM.
7. GEOGRID SHALL COMPLY WITH FP-14, 714.03, PHYSICAL STRENGTH CATEGORY IV.



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

**FILL REPAIR
METHOD B TYPICAL**

DATE

8/6/2020

ARCHIVE NO.

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DESIGNER

M. HOWARD

DRAWN

M. HOWARD

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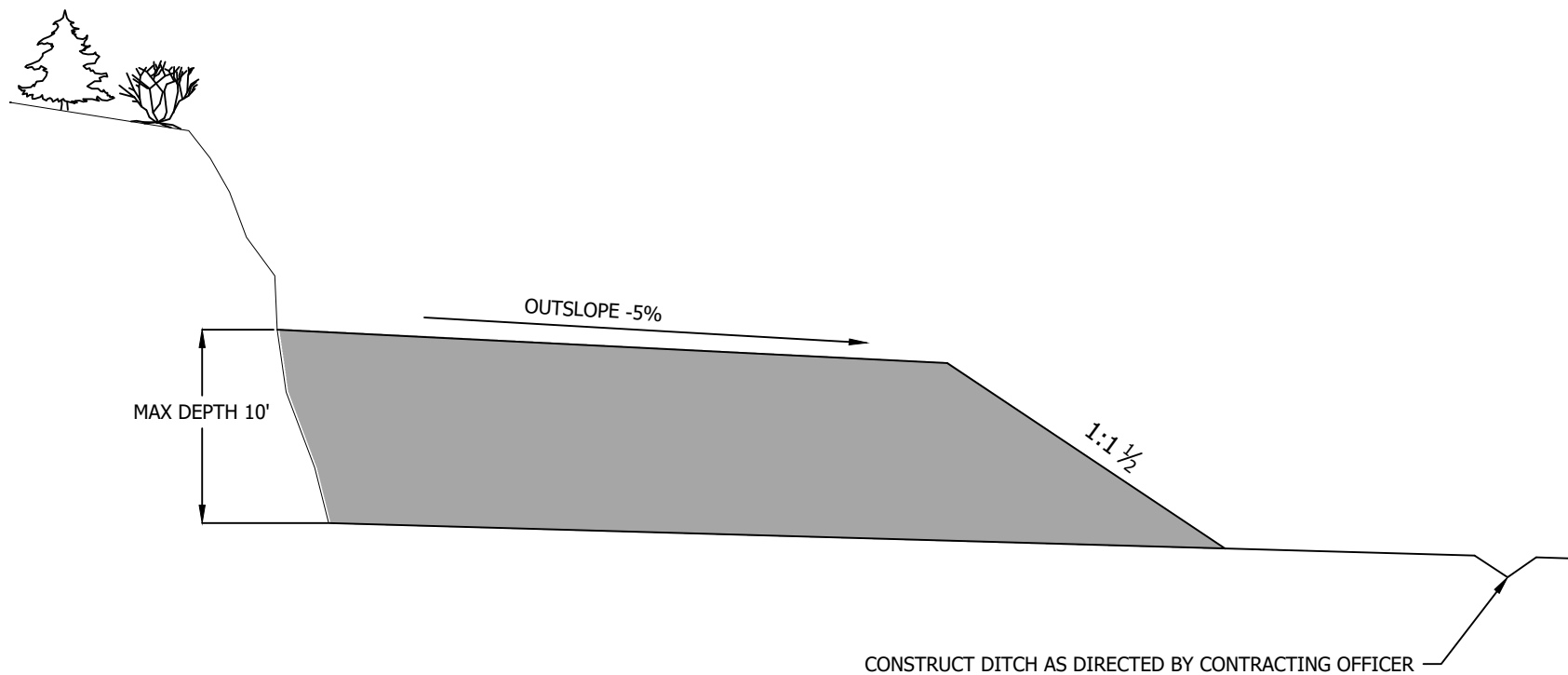
PROJECT NO.

TIMBER SALE

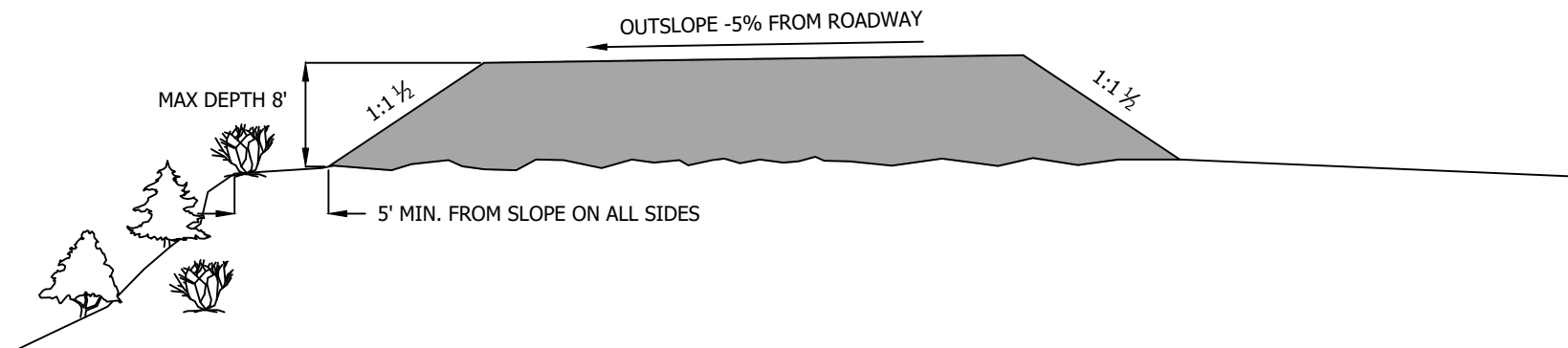
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SHEET 11 OF 12



TYPICAL DISPOSAL AREA WITH OPEN AREA



United States Department of Agriculture
Forest Service

(R06)
PACIFIC NORTHWEST REGION

PROJECT NAME

RAIL TIMBER SALE

**MT. HOOD
NATIONAL FOREST**

**CLACKAMAS RANGER
DISTRICT**

DRAWING TITLE

**DISPOSAL
TYPICALS**

DATE

8/6/2020

ARCHIVE NO.

FS090523_R102013_L1-002.dwg

DESIGNER

P. HUPPI

DRAWN

P. HUPPI

CHECKED

X.XXX

PROJECT NO.

TIMBER SALE

DWG SHEET NO.

X-01

SHEET 12 OF 12

NOTES:

1. DISPOSAL AREA LIMITS TO BE STAKED BY THE CONTRACTING OFFICER.
2. MULCH THE DISPOSAL AREA.

RECONSTRUCTION COSTS

Road Reconstruction Total Estimated Costs

Project Number	Estimated Costs		
NFSR 4610 000	\$61,839.70		
Total:	\$61,839.70		
Engineering Services (DRES)	\$ 12,343.00	<-	CT5.32# Deposit for Reconstruction Engineering Services
TOTAL RECONSTRUCTION =	\$74,182.70		
Public Works Cost =	\$ 87,909.25	<-Includes	DRES

Schedule of Items - Timber Sale Rate
Rail Timber Sale
 NFSR 4610 000

Mt. Hood National Forest
Clackamas River Ranger District
Clackamas County, OR

ESTIMATE OF QUANTITIES

PAY ITEM NUMBER	DESCRIPTION	UNIT OF MEASURE	QUANTITY	UNIT PRICE	COST
15101	Mobilization	Lump Sum	All	\$5,621.00	\$5,621.00
15713	Soil Erosion & Pollution Control	Lump Sum	All	\$410.00	\$410.00
20302	Removal Of Culvert, Disposal Method (A), Compaction Method (N/A)	Each	5	\$810.00	\$4,050.00
20304	Removal Of Asphalt, Disposal Method (A)	Square Foot*	3812.0	\$1.25	\$4,765.00
20411	Unclassified Borrow	Cubic Yard*	100	\$20.00	\$2,000.00
20419	Drainage Excavation, Type 1	Cubic Yard*	86	\$22.00	\$1,892.00
20701	Earthwork Geosynthetics, Geogrid Type IV	Square Yard*	560.6	\$19.50	\$10,931.70
30103	Aggregate Base, Grading C, Compaction Method B	Cubic Yard*	214	\$40.00	\$8,560.00
30301	Road Reconditioning, Ditch Reconditioning	Mile	2.36	\$950.00	\$2,242.00
40304	Asphalt Concrete Oregon State Dot, Type 1/2-Inch Dense Graded HMAc, Level II, Asphalt Cement Pg 64-22	Ton	90.15	\$120.00	\$10,818.00
60201	24 Inch Pipe Culvert, Corrugated Hdpe, Compaction Method (B)	Foot	190	\$45.00	\$8,550.00
63501	Temporary traffic control	Lump Sum	All	\$2,000.00	\$2,000.00

Total: \$61,839.70

* Denotes contract quantity

Table of Contents

Preface.....	3
101 - Terms, Format, and Definitions	4
101.01 Meaning of Terms	4
101.03 Abbreviations	4
101.04 Definitions.....	4
102 - Bid, Award, and Execution of Contract	7
Delete Section 102	7
103 - Scope of Work.....	7
Delete Subsections 103.02, 103.03, 103.04, 103.05.....	7
104 - Control of Work.....	7
Delete Subsections 104.01, 104.02, 104.04.....	7
104.06 Use of Roads by Contractor	7
105 - Control of Material.....	7
105.05 Use of Material Found in the Work	7
106 - Acceptance of Work.....	8
106.01 Conformity with Contract Requirements.....	8
106.02 Visual Inspection	9
106.07 Partial and Final Acceptance.....	9
107 - Legal Relations and Responsibility to the Public	10
Delete Subsection 107.05	10
108 - Prosecution and Progress	10
Delete Section 108	10
109 - Measurement and Payment	10
Delete Subsections 109.06, 109.07, 109.08, 109.09.....	10
109.01 Measurement of Work.....	10
109.02 Measurement Terms and Definitions	11
155 - Schedules for Construction Contracts	11
Delete Section 155	11
156 - Public Traffic	11
Section 156. – PUBLIC TRAFFIC	11
157 - Soil Erosion and Sediment Control	13
157.04 General.....	13
203 - Removal of Structures and Obstructions.....	14

203.04 (b) General. 14

203.05 Disposing of Material. 14

204 - Excavation and Embankment 15

Section 204. — EXCAVATION AND EMBANKMENT 15

207.04(c)(1) First layer placement and compaction. 28

209 - Structure Excavation and Backfill 28

209.09 Backfill. 28

209.10 Compacting. 29

301 - Untreated Aggregate Courses 31

301.03 General. 31

301.05 Compacting. 31

703 - Aggregate 32

703.05 Subbase, Base, Surface Course, and Screened Aggregate. 32

704 - Soil 36

704.02 Bedding Material. 36

Preface

Preface_wo_07_28_2020

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-14 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.01_National_3_15_2017

Add the following paragraph to Subsection 101.01:

101.01 Meaning of Terms.

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

101.03_National_11_9_2016

Add the following to Subsection 101.03:

101.03 Abbreviations.

(a) Acronyms.

- AGAR — Agriculture Acquisition Regulations
- AFPA — American Forest and Paper Association
- FSAR — Forest Service Acquisition Regulations
- MSHA — Mine Safety and Health Administration
- NESC — National Electrical Safety Code
- WCLIB — West Coast Lumber Inspection Bureau

(f) Miscellaneous unit abbreviations.

- | | | | |
|-----|---|-------------------|----------|
| MP | — | milepost | location |
| ppm | — | parts per million | volume |
| STA | | station | location |

101.04_National_1_22_2020

Make the following changes to Subsection 101.04:

101.04 Definitions.

Delete these definitions and replace the following:

Bid Schedule — The Schedule of Items.

Bridge — A structure, including supports, erected over a depression or an obstruction such as water along a road, a trail, or a railway and having a deck for carrying traffic or other loads.

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 — Any structure with a bottom, regardless of fill depth, depth of invert burial, or presence of horizontal driving surface, or any bottomless (natural channel) structure with footings that will not have wheel loads in direct contact with the top of the structure.

Drawings — (Public Works Contracts) Design sheets or fabrication, erection, or construction details submitted to the CO by the Contractor according to FAR Clause 52.236-21 Specifications and Drawings for Construction. Also refers to submissions and submittals.

Notice to Proceed — (Public Works Contracts) Written notice to the Contractor to begin the contract work.

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.

Solicitation—(Public Works Contracts) The complete assembly of documents (whether attached or incorporated by reference) furnished to prospective bidders.

Add the following definitions:

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.

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.

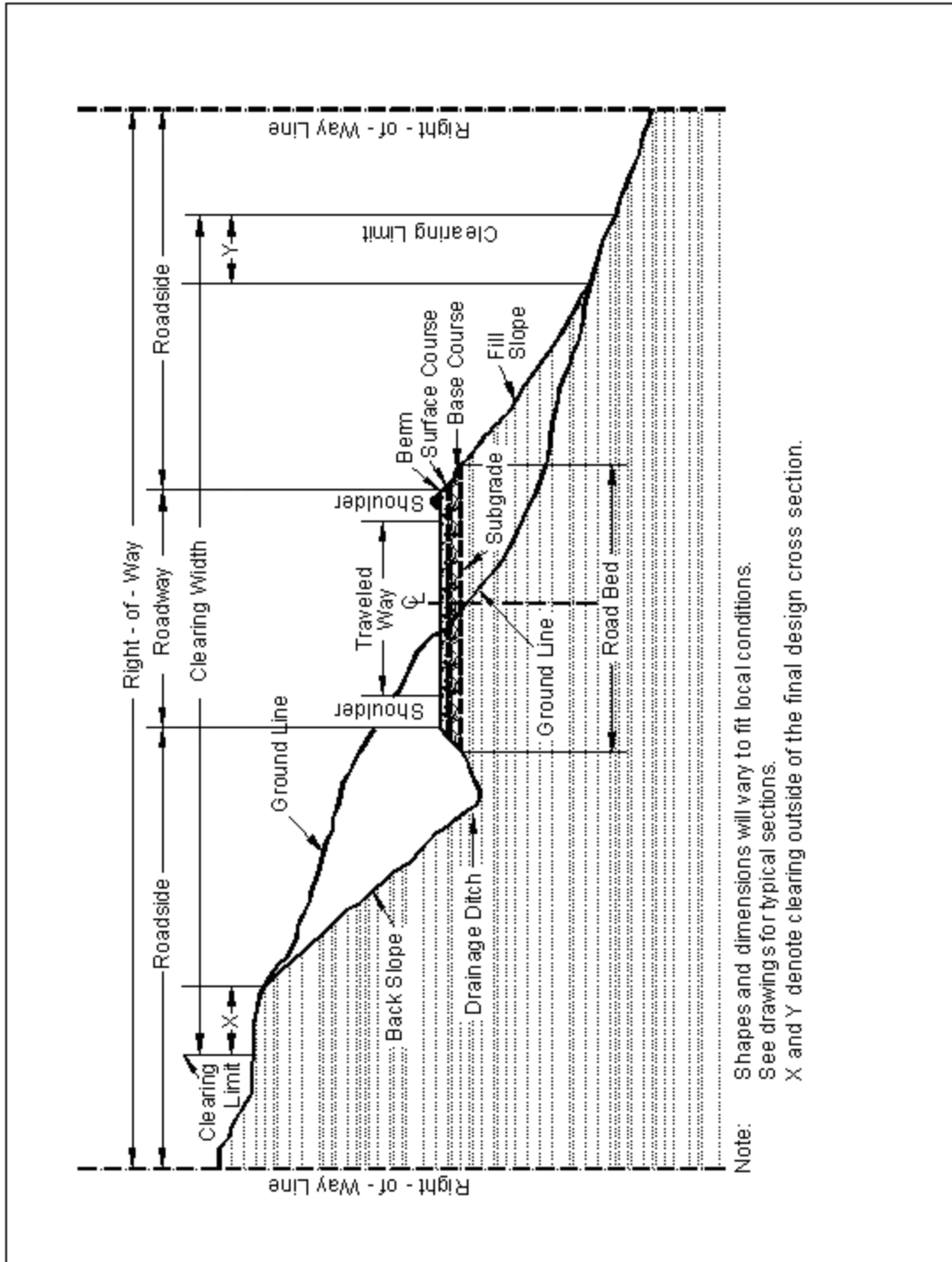
Shop Drawings — (Timber and Stewardship Contracts) Referred to as “Drawings” in FP-14, include drawings, diagrams, layouts, schematics, descriptive literature, illustrations, lists or tables, performance and test data, and similar materials furnished by Purchaser to explain in detail specific portions of the work required by the contract.

Utilization Standards —

The minimum size and percent soundness of trees described in Public Works contract specifications or Timber Sale and IRTC contract provisions 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_National_11_9_2016

Delete Section 102 in its entirety.

Delete Section 102.

103 - Scope of Work

103.00_National_11_9_2016

Delete all of Section 103 except Subsection 103.01 Intent of Contract.

Delete Subsections 103.02, 103.03, 103.04, 103.05.

104 - Control of Work

104.00_National_11_9_2016

Delete Subsections 104.01, 104.02, and 104.04.

Delete Subsections 104.01, 104.02, 104.04.

104.06_National_11_9_2016

Add the following to Subsection 104.06:

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_National_11_1_2016

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. Place excess material safely at government-approved location, at no additional cost to government.

106 - Acceptance of Work

106.01_National_7_18_2017

Delete Subsection 106.01 and replace with the following:

106.01 Conformity with Contract Requirements.

Follow the requirements of FAR Clause 52.246-12 Inspection of Construction.

References to standard test methods of AASHTO, ASTM, GSA, and other recognized standard authorities refer to the methods in effect on the date of solicitation for bids.

Perform all work to the lines, grades, cross-sections, dimensions, and processes or material requirements shown on the plans or specified in the contract.

Incorporate manufactured materials into the work according to the manufacturer's recommendations or to these specifications, whichever is more strict.

Plan dimensions and contract specification values are the values to be strived for and complied with as the design values from which any deviations are allowed. Perform work and provide material that is uniform in character and reasonably close to the prescribed value or within the specified tolerance range. The purpose of a tolerance range is to accommodate occasional minor variations from the median zone that are unavoidable for practical reasons.

When standard manufactured items are specified (such as fence, wire, plates, rolled shapes, pipe conduits, etc., that are identified by gauge, unit mass, section dimensions, etc.), the identification will be considered to be nominal masses or dimensions. Unless specific contract tolerances are noted, established manufacturing tolerances will be accepted.

The Government may inspect, sample, or test all work at any time before final acceptance of the project. When the Government tests work, copies of test reports are furnished to the Contractor upon request. Government tests may or may not be performed at the work site. If Contractor testing and inspection is verified by the Government, the Contractor's results may be used by the Government to evaluate work for acceptance. Do not rely on the availability of Government test results for process control.

Acceptable work conforming to the contract will be paid for at the contract unit bid price. Four methods of determining conformity and accepting work are described in Subsections 106.02 to 106.05 inclusive. The primary method of acceptance is specified in each Section of work. However, work may be rejected at any time it is found by any of the methods not to comply with the contract.

Remove, repair, or replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted. Removing, repairing, or replacing work; providing temporary traffic control; and any other related work to accomplish conformity will be at no cost to the Government.

(a) Disputing Government test results. If the accuracy of Government test results is disputed, promptly inform the CO. If the dispute is unresolved after reasonable steps are taken to resolve the dispute, further evaluation may be obtained by written request. Include a narrative describing the dispute and a proposed resolution protocol that addresses the following:

1. Sampling method;
2. Number of samples;
3. Sample transport;

4. Test procedures;
5. Testing laboratories;
6. Reporting;
7. Estimated time and costs; and
8. Validation process.

If the evaluation requires additional sampling or testing be performed, mutually agree with the Government on witnessing procedures and on sampling and testing by a third party laboratory. Use a third party laboratory accredited by the AASHTO accreditation program. Provide proof of the laboratory's accreditation for the test procedures to be used. Do not use the same laboratory that produced the disputed Government test results or that produced the test results used as a basis for the dispute.

The CO will review the proposed resolution protocol and may modify it before final approval and execution.

The Government will use the approved resolution protocol test results to determine the validity of the disputed testing. If the Government test results are validated, the Contractor will be responsible for all costs associated with developing and performing the resolution protocol. If the Government test results are not validated, the Government will be responsible for all costs associated with developing and performing the resolution protocol. If the validity of the Government test results cannot be determined, the Contractor and Government will equally share all costs associated with developing and carrying out the resolution protocol.

(b) Alternatives to removing and replacing non-conforming work. As an alternative to removal and replacement, the Contractor may submit a written request to:

1. Have the work accepted at a reduced price; or
2. Be given permission to perform corrective measures to bring the work into conformity.

The request must contain supporting rationale and documentation. Include references or data justifying the proposal based on an evaluation of test results, effect on service life, value of material or work, quality, aesthetics, and other tangible engineering basis. The CO will determine disposition of the nonconforming work.

106.02_National_11_9_2016

Delete Subsection 106.02 and replace with the following:

106.02 Visual Inspection.

Acceptance is based on visual inspection of the work for compliance with the specific contract requirements. Use prevailing industry standards in the absence of specific contract requirements or tolerances.

106.07_National_11_1_2016

Delete Subsection 106.07.

106.07 Partial and Final Acceptance.

107 - Legal Relations and Responsibility to the Public

106.07_National_11_1_2016

Delete Subsection 107.05.

Delete Subsection 107.05.

108 - Prosecution and Progress

108.00_National_11_9_2016

Delete Section 108 in its entirety.

Delete Section 108.

109 - Measurement and Payment

109.00_National_11_9_2016

Delete Subsections 109.06, 109.07, 109.08, and 109.09:

Delete Subsections 109.06, 109.07, 109.08, 109.09.

109.01_National_2_22_2019

Delete the third paragraph and Table 109-1 of Subsection 109.01 and replace with the following:

109.01 Measurement of Work.

Take measurements as described in Subsection 109.02 unless otherwise modified by the Measurement Subsection of the section controlling the work being performed. Table 109-1 indicates the accuracy required for quantities of the various pay units used in the Schedule of Items. Use this guide to determine the decimal placement in the final payment.

Table 109-1

Decimal Accuracy of Quantities for Final Payment

Pay Item	Level of Precision
Linear Foot	1
Exception--Timber, Steel, and concrete Piles	0.1
Station	0.1
Mile	0.01
Square Foot	0.1
Square Yard	0.1
Each	1
Acre	0.01
Gallon	1
M-Gals.	0.1
Cubic Yard	1
Exception--Structure Excavation; Sheathing Materials; Bedding, Bed Course, and Backfill Materials; Gabions;	0.1
Exception--Concrete; Masonry	0.01

Pound	1
Ton	0.1
Exception--Calcium Chloride; Sodium Chloride; Hydrated Lime; Bituminous Materials; Pavements; Bed Course Materials	0.01
Hour	0.1
MFBM	0.01
Station Yard	1
Cubic Yard Mile	1
Ton Mile	1

109.02_National_11_9_2016

Add the following sentence to Subsection 109.02(b):

109.02 Measurement Terms and Definitions.

(b) Contract quantity.

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

155 - Schedules for Construction Contracts

155.00_National_11_9_2016

Delete Section 155 in its entirety.

Delete Section 155.

156 - Public Traffic

156.00_National_2_5_2019

Delete Section 156 in its entirety and replace with the following:

Section 156. – PUBLIC TRAFFIC

Description

156.01 This work consists of controlling and protecting public traffic adjacent to and within the project.

Material

156.02 Conform to the MUTCD and the following Sections and Subsections:

Permanent Traffic Control	633
Traffic Signing and Marking Material	718

Concrete Barriers and Precast Guardwalls	618
Temporary plastic fence	710.11

Construction Requirements

156.03 General. Accommodate traffic according to MUTCD, approved traffic control plan and this section. Perform work in a manner that ensures safety and convenience of the public. Unless otherwise provided for in Table 156-1, keep existing roads open to all traffic during road improvement work, and maintain them in a condition that will adequately accommodate traffic. Delays may not exceed **180** minutes at any one time followed by an open period of no less than **20** minutes. Accommodate public traffic on roads adjacent to and within the project until the project is accepted according to Subsection 106.07(b).

Submit traffic control plan at least 30 days prior to intended use. Perform no work that interferes or conflicts with traffic or existing access to the roadway surface until a traffic control plan has been approved.

Post construction signs and traffic control devices in conformance with MUTCD and Forest Service EM 7100-15. All required signs will be in place and approved prior to beginning work on project.

If the Contractor agrees in writing to allow public traffic to use a new road being constructed prior to completion, it will be considered an existing road for traffic control purposes.

156.04 Temporary Traffic Control. Install and maintain temporary traffic control devices adjacent to and within the project as required by the approved traffic control plan and the MUTCD. Install and maintain traffic control devices as follows:

- (a) Furnish and install traffic control devices before the start of construction operations.
- (b) All detours outside of clearing limits will be approved in writing by the Contracting Officer as part of the traffic control plan.
- (c) Install only those traffic control devices needed for each stage or phase.
- (d) Relocate temporary traffic control devices as necessary.
- (e) Remove devices that no longer apply to the existing conditions.
- (f) Immediately replace any device that is lost, stolen, destroyed, or inoperative.
- (g) Keep temporary traffic control devices clean.
- (h) Remove all temporary traffic control devices upon contract completion or when approved.
- (i) When required, use flaggers certified by the American Traffic Safety Services Association, the National Safety Council, the International Municipal Signal Association, a state agency, or other acceptable organization. Perform the work described under MUTCD Part 6. Use type III, VII, VIII, or IX retroreflective sheeting on flagger paddles. Do not use flags. Flaggers must wear high visibility safety apparel as required by MUTCD 6E.02.

156.05 Temporary Closures. Road segments may be closed as shown in Table 156-1. The maximum consecutive days of closure shall be followed by a minimum number of consecutive days open to traffic as shown. Maintain traffic control devices during closure period(s). Appropriate barricades and signs will be erected and maintained as shown in the traffic control plan or as otherwise designated.

Prior to closing roads during construction, give written notice to the Contracting Officer at least 10 days in advance.

**Table 156-1
Temporary Road Closures**

Road Number	From Terminus	To Terminus	Maximum Consecutive Days of Closure	Minimum Consecutive Days Open
4610 000	0.00	2.36	2	1

156.06 Acceptance. Public traffic work will be evaluated under Subsection 106.02.

Measurement and Payment

156.07 Do not measure Public Traffic for payment. Payment for contract work is provided indirectly. See Subsection 109.05.

157 - Soil Erosion and Sediment Control

157.04_National_11_1_2016

Delete Subsection 157.04 and replace with the following:

157.04 General.

Thirty (30) days prior to the start of construction, submit a written plan according to subsection 104.03 with all necessary permits that provides permanent and temporary erosion control measures to minimize erosion and sedimentation during and after construction. Do not begin work until the necessary controls for that particular phase of work have been implemented. Do not modify the type, size, or location of any control without approval.

When erosion control measures are not functioning as intended, take corrective action to eliminate or minimize pollutants in storm water discharges from the project.

203 - Removal of Structures and Obstructions

203.04_National_11_2_2016

Make the following changes to Subsection 203.04(b):

203.04 (b) General.

Delete the fifth paragraph of Subsection 203.04(b) and replace with the following:

Remove structures and obstructions in the roadbed to 12 inches (300 millimeters) below subgrade elevation. Remove structures and obstructions outside the roadbed to 12 inches (300 millimeters) below finished ground or to the natural stream bottom.

Delete the seventh paragraph of Subsection 203.04(b) and replace with the following:

When abandoning an existing culvert pipe, remove the upstream and downstream portion of the culvert to within 12 inches (300 millimeters) of the subgrade or embankment slope. Ensure the abandoned pipe is at least 48 inches (1200 millimeters) from a new culvert or structure. Seal the abandoned culvert ends with a tight-fitting plug of concrete at least 6 inches (150 millimeters) thick. Ensure the structure does not entrap water.

203.05_National_9_10_2018

Add the following to Subsection 203.05:

203.05 Disposing of Material.

(e) Windrowing Construction Slash. Place construction slash outside the roadway in neat, compacted windrows approximately parallel to and along the toe line of embankment slopes. Do not permit the top of the windrows to extend above subgrade. Use construction equipment to matt down all material in a windrow to form a compact and uniform pile. Construct breaks of at least 15 feet at least every 200 feet in a windrow. Do not place windrows against trees.

(f) Scattering. Scatter construction slash in designated areas without damaging trees. Limb all logs. Place logs and stumps away from trees, positioned so they will not roll, and are not on top of one another. Limb and scatter other construction slash to reduce slash concentrations. When scattering for erosion control, place construction slash as flat as practicable on the completed slope.

(g) Chipping. Use an approved chipping machine to chip slash longer than 3 feet. Deposit chips on embankment slopes or outside the roadway to a loose depth less than 6 inches. Minor amounts of chips or ground woody material may be permitted within the roadway if they are thoroughly mixed with soil and do not form a layer.

(h) Debris Mat. Use tree limbs, tops, cull logs, split stumps, wood chunks, and other debris to form a mat upon which construction equipment is operated. Place stumps upside down and blend stumps into the mat.

(i) Decking. Remove brush from designated log deck areas. Limb and top logs.

Logs not meeting the Utilization Standards described in Subsection 201.04(c) shall be cut to lengths less than <number> feet and decked in designated log deck location.

Merchantable timber not associated with an existing timber sale shall be cut to length meeting the Utilization Standards described in Subsection 201.04(c).

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.

(j) Removal to designated locations. Remove construction slash to designated locations.

(k) Piling. Pile construction slash in designated areas. Place and construct piles so that if the piles are burned, the burning will not damage remaining trees. Keep piles free of dirt from stumps.

204 - Excavation and Embankment

204.00_National_11_4_2016

Delete Section 204 in its entirety and replace with the following.

Section 204. — EXCAVATION AND EMBANKMENT

Description

204.01 This work consists of excavating material and constructing embankments. This work also includes furnishing, hauling, stockpiling, placing, disposing, sloping, shaping, compacting, and finishing earthen and rocky material.

204.02 Definitions.

(a) Excavation. Excavation consists of the following:

(1) Roadway excavation. Material excavated from within the right-of-way or easement areas, except subexcavation covered in Subsection 204.02(a)(2) and structure excavation covered in Sections 208 and 209. Roadway excavation includes all material encountered regardless of its nature or characteristics.

(2) Subexcavation. Material excavated from below subgrade elevation in cut sections or from below the original ground-line in embankment sections. Subexcavation excludes the work required by Subsection 204.05 or 204.06.

(3) Borrow excavation. Material used for embankment construction that is obtained from outside the roadway prism. Borrow excavation includes unclassified borrow, and topping.

(b) Embankment construction. Embankment construction consists of placing and compacting roadway or borrow excavation. This work includes:

(1) Preparing foundation for embankment;

(2) Constructing roadway embankments;

(3) Benching for side-hill embankments;

(4) Constructing dikes, ramps, mounds, and berms; and

(5) Backfilling subexcavated areas, holes, pits, and other depressions.

(c) Conserved topsoil. Excavated material conserved from the roadway excavation and embankment foundation areas that is suitable for growth of grass, cover crops, or native vegetation.

(d) Waste. Excess and unsuitable roadway excavation and subexcavation that cannot be used.

Material

204.03 Conform to the following Subsections:

Topping	704.05
Unclassified borrow	704.06
Water	725.01(c)

Construction Requirements

204.04 Preparation for Roadway Excavation and Embankment Construction. Clear the area of vegetation and obstructions according to Sections 201 and 203.

Road pioneering, slash disposal, and grubbing of stumps may proceed concurrently with excavation and embankment. Maintain drainage during pioneering operations.

204.05 Conserved Topsoil. When designated, conserve topsoil from roadway excavation and embankment foundation areas. Stockpile conserved topsoil in low windrows immediately beyond the rounding limits of cut and embankment slopes or in other approved locations. Separate conserved topsoil from other excavated material. When designated, place conserved topsoil on completed slopes according to Section 624.

204.06 Roadway Excavation. Excavate as follows:

(a) Rock cuts. Blast rock according to Section 205. Excavate rock cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Backfill to subgrade with topping or other suitable material. Compact the material according to Subsection 204.11.

(b) Earth cuts. Scarify earth cuts to 6 inches (150 millimeters) below subgrade within the roadbed limits. Compact the scarified material according to Subsection 204.11.

(c) Pioneer Roads. Conduct excavation and placement operations so material to be treated under Section 201 will not be incorporated into the roadway unless specified in the slash treatment method. Maintain drainage during pioneering operations.

Remove snow and ice in advance of the work and deposit beyond the roadway limits in a manner that will not waste material or generate sediment. Do not incorporate snow and ice into embankments. Place snow or ice in a manner to prevent resource damage.

(d) Drainage Feature. Drainage feature includes construction of all ditches, minor channel changes, drainage dips, catch basins, surface water deflectors, and other minor drainage structures. Compact the material according to Subsection 204.11. Excavate on a uniform grade between control points.

Do not disturb material and vegetation outside the construction limits. Retrieve material deposited outside the construction limits. Dispose of unsuitable or excess excavation material according to Subsection 204.14. Replace shortage of suitable material caused by premature disposal of roadway excavation.

Shape to drain and compact the work area to a uniform cross-section at the end of each day's operations.

204.07 Subexcavation. Excavate material to the required limits. Dispose of unsuitable material according to Subsection 204.14. Take cross-sections according to Section 152. Backfill subexcavated area with suitable material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness and compact according to Subsection 204.11. Prevent unsuitable material from mixing with suitable backfill material.

204.08 Borrow Excavation. Use suitable roadway excavation in embankment construction. Do not use borrow excavation when it results in excess roadway excavation. Deduct excess borrow excavation from the total borrow excavation quantity.

Obtain borrow source approval according to Subsection 105.02. Develop and restore borrow sources according to Subsections 105.03 and 105.06. Do not excavate beyond the established limits. When applicable, shape the borrow source to permit accurate measurements when excavation is complete.

204.09 Preparing Foundation for Embankment Construction. Prepare foundation for embankment construction as follows:

(a) Embankment over natural ground. Remove topsoil and break up the ground surface to a minimum depth of 6 inches (150 millimeters) by plowing or scarifying. Compact the ground surface according to Subsection 204.11.

(b) Embankments over an existing asphalt, concrete, or gravel road surface. Scarify gravel roads to a minimum depth of 6 inches (150 millimeters). Scarify or pulverize asphalt and concrete roads to 6 inches (150 millimeters) below the pavement. Reduce particles to a maximum size of 6 inches (150 millimeters) and produce a uniform material. Compact the surface according to Subsection 204.11.

(c) Embankment across ground not capable of supporting equipment. Dump successive loads of embankment material in a uniformly distributed layer to construct the lower portion of the embankment. Limit the layer thickness to the minimum depth necessary to support the equipment.

(d) Embankment on an existing slope steeper than 1V:3H. Cut horizontal steps in the existing slope to a sufficient width to accommodate placement and compaction operations and equipment. Step the slope as the embankment is placed and compacted in layers. Begin each step at the intersection of the original ground and the vertical cut of the previous step.

204.10 Embankment Construction. Incorporate only suitable roadway excavation material into the embankment. When the supply of suitable roadway excavation is exhausted, furnish unclassified borrow to complete the embankment. Obtain written approval before beginning construction of embankments over 6 feet (2 meters) high at subgrade centerline. Construct embankments as follows:

(a) General. At the end of each day's operations, shape to drain and compact the embankment surface to a uniform cross-section. Eliminate ruts and low spots that could hold water.

During all stages of construction, route and distribute hauling and leveling equipment over the width and length of each layer of material.

Compact embankment side slopes with a tamping foot roller, by walking with a dozer, or by over-building the fill and then removing excess material to the final slope line. For slopes 1V:1¾H or steeper, compact the slopes as embankment construction progresses.

(b) Embankment within the roadway prism. Place embankment material in horizontal layers not exceeding 12 inches (300 millimeters) in compacted thickness. Incorporate oversize boulders or rock fragments into the

12-inch (300-millimeter) layers by reducing them in size or placing them individually as required below. Compact each layer according to Subsection 204.11 before placing the next layer.

Material composed predominately of boulders or rock fragments too large for 12-inch (300-millimeter) layers may be placed in layers up to 24 inches (600 millimeters) thick. Incorporate oversize boulders or rock fragments into the 24-inch (600-millimeter) layer by reducing them in size or placing individual rock fragments and boulders greater than 24 inches (600 millimeters) in diameter as follows:

- (1) Reduce rock to less than 48 inches (1200 millimeters) in the largest dimension;
- (2) Distribute rock within the embankment to prevent nesting;
- (3) Place layers of embankment material around each rock to a depth not greater than that permitted above. Fill voids between rocks; and
- (4) Compact each layer according to Subsection 204.11(a) before placing the next layer.

(c) Embankment outside of roadway prism. When placing embankment outside the staked roadway prism, place material in horizontal layers not exceeding 24 inches (600 millimeters) in compacted thickness. Compact each layer according to Subsection 204.11.

204.11 Compaction. Compact the embankment using one of the following methods as specified.

(a) Placement Method 1. Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve. Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

- (a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;
- (b) Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or
- (c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(a), by four passes; or
- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 204.11(a)(1)(b) and (c), by eight passes.

(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of

material passing a No. 4 (4.75-millimeter) sieve, and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width according to Subsection 204.11(a)(1).

(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C.

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width 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. When required, use AASHTO T 224 to correct for coarse particles.

(b) Placement Method 2. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

(1) Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.

(2) Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, 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 (550 Kilopascals).

(4) Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

(c) Placement Method 3. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

(d) Placement Method 4. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

(e) Placement Method 5. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18

metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by $\frac{1}{2}$ width of bucket.

(f) Placement Method 6. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes.

204.12 Drainage Features. Slope, grade, and shape all drainage features. Remove projecting roots, stumps, rock, or similar matter. Maintain all drainage features in an open condition and without sticks, and other debris.

Form furrow ditches by plowing or using other acceptable methods to produce a continuous furrow. Place excavated material on the downhill side so the bottom of the ditch is approximately 18 inches (450 millimeters) below the crest of the loose material. Clean the ditch using a hand shovel or other suitable method. Shape to provide drainage without overflow.

204.13 Sloping, Shaping, and Finishing. Complete subgrade, slopes, drainage features, culverts, riprap, and other underground minor structures before placing aggregate courses. Slope, shape, and finish to the designated tolerance class as defined in Table 204-2 as follows:

(a) Sloping. Leave earth slopes with uniform roughened surfaces, except as described in Subsection 204.13(b), with no noticeable break as viewed from the road. Except in solid rock, round tops and bottoms of slopes including the slopes of drainage ditches. Round material overlaying solid rock to the extent practical. Scale rock slopes. Slope rounding is not required on tolerance class D through M roads.

If a slide or slipout occurs on a cut or embankment slope, remove or replace the material and repair or restore damage to the work. Bench or key the slope to stabilize the slide. Reshape the cut or embankment slope to an acceptable condition.

(b) Stepped slopes. Where required, construct steps on slopes of $1\frac{1}{2}V:1H$ to $1V:2H$. Construct the steps approximately 18 inches (450 millimeters) high. Blend the steps into natural ground at the end of the cut. If the slope contains non-rippable rock outcrops, blend steps into the rock. Remove loose material found in transitional area. Except for removing large rocks that may fall, scaling stepped slopes is not required.

(c) Shaping. Shape the subgrade to a smooth surface and to the cross-section required. Shape slopes to gradually transition into slope adjustments without noticeable breaks. At the ends of cuts and at intersections of cuts and embankments, adjust slopes in the horizontal and vertical planes to blend into each other or into the natural ground.

(d) Finishing. Ensure that the subgrade is visibly moist during shaping and dressing; smooth and uniform, and shaped to conform to the typical sections. Remove material larger than 6 inches (150 millimeters) from the top 6 inches (150 millimeters) of the roadbed. Remove unsuitable material from the roadbed, and replace it with suitable material. Scarify to 6 inches (150 millimeters) below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material.

Maintain proper ditch drainage.

204.14 Disposal of Unsuitable or Excess Material. Dispose of unsuitable or excess material at designated sites or according to Subsection 203.05(a)

When there is a pay item for waste, shape and compact the waste material in its final location. Do not mix clearing or other material not subject to payment with the waste material.

204.15 Acceptance. See Table 204-1 for sampling, testing, and acceptance requirements.

Material for embankment and conserved topsoil will be evaluated under Subsections 106.02 and 106.04.

Excavation and embankment construction will be evaluated under Subsections 106.02 and 106.04.

Subexcavation will be evaluated under Subsections 106.02 and 106.04.

Measurement

204.16 Measure the Section 204 pay items listed in the bid schedule according to Subsection 109.02 and the following as applicable:

(a) Roadway excavation. Measure roadway excavation in its original position as follows:

(1) Include the following volumes in roadway excavation:

- (a) Roadway prism excavation;
- (b) Rock material excavated and removed from below subgrade in cut sections;
- (c) Unsuitable material below subgrade and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;
- (d) Ditches, except furrow ditches measured under a separate pay item;
- (e) Conserved topsoil;
- (f) Borrow material used in the work when a pay item for borrow is not listed in the bid schedule;
- (g) Loose scattered rocks removed and placed as required within the roadway;
- (h) Conserved material taken from pre-existing stockpiles and used in Section 204 work, except topsoil measured under 624; and
- (i) Slide and slipout material not attributable to the Contractor's method of operation.

(2) Do not include the following in roadway excavation:

- (a) Overburden and other spoil material from borrow sources;
- (b) Overbreakage from the backslope in rock excavation;
- (c) Water or other liquid material;
- (d) Material used for purposes other than required;
- (e) Roadbed material scarified in place and not removed;
- (f) Material excavated when stepping cut slopes;
- (g) Material excavated when rounding cut slopes;
- (h) Preparing foundations for embankment construction;

- (i) Material excavated when benching for embankments;
 - (j) Slide or slipout material attributable to the Contractor's method of operation;
 - (k) Conserved material taken from stockpiles constructed at the option of the Contractor;
 - (l) Material excavated outside the established slope limits; and
 - (m) Road pioneering for the convenience of the Contractor.
- (3)** When both roadway excavation and embankment construction pay items are listed in the bid schedule, measure roadway excavation only for the following:

- (a) Unsuitable material below subgrade in cuts and unsuitable material beneath embankment areas when a pay item for subexcavation is not listed in the bid schedule;
- (b) Slide and slipout material not attributable to the Contractor's method of operations; and
- (c) Drainage ditches, channel changes, and diversion ditches.

(b) Unclassified borrow, and topping. When measuring by the cubic yard (cubic meter) measure in its original position. If borrow excavation is measured by the cubic yard (cubic meter) in-place, take initial cross-sections of the ground surface after stripping overburden. Upon completion of excavation and after the borrow source waste material is returned to the source, retake cross-sections before replacing the overburden. Do not measure borrow excavation until suitable roadway excavation is depleted.

(c) Embankment construction. Measure embankment construction in its final position. Do not make deductions from the embankment construction quantity for the volume of minor structures.

(1) Include the following volumes in embankment construction:

- (a) Roadway embankments;
- (b) Material used to backfill subexcavated areas, holes, pits, and other depressions;
- (c) Material used to restore obliterated roadbeds to original contours; and
- (d) Material used for dikes, ramps, mounds, and berms.

(2) Do not include the following in embankment construction:

- (a) Preparing foundations for embankment construction;
- (b) Adjustments for subsidence or settlement of the embankment or of the foundation on which the embankment is placed; and
- (c) Material used to round fill slopes.

(d) Rounding cut slopes. If a pay item for slope rounding is included in the bid schedule measure rounding cut slopes horizontally along the centerline of the roadway. If a pay item is not included for slope rounding is not included in the bid schedule payment will be considered indirect to roadway excavation.

(e) Waste. Measure waste by the cubic yard (cubic meter) in its final position. Take initial cross-sections of the ground surface after stripping overburden. Upon completion of the waste placement, retake cross-sections before replacing overburden.

(f) Slope scaling. Measure slope scaling by the cubic yard (cubic meter) in the hauling vehicle.

(g) Subexcavation. Measure subexcavation by the cubic yard (cubic meter) in its original position.

(h) Drainage features. Measurement includes all excavation, embankment, shaping, and grading necessary for a completed drainage feature.

Payment

204.17 The accepted quantities will be paid at the contract price per unit of measurement for the Section 204 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 204-1
Sampling, Testing, and Acceptance Requirements**

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Source								
Topping (704.05)	Measured and tested for conformance (106.04 & 105)	Classification ⁽¹⁾	–	AASHTO M 145	1 per soil type and source of material	Processed material	Yes	Before using in work
Unclassified borrow (704.06)	"	"	–	"	"	"	"	"
Production								
Topping (704.05) and (204.11(a))	Measured and tested for conformance (106.04)	Moisture-density	–	T 99, Method C ⁽²⁾	1 per soil type, but not less than 1 per each 13,000 yd ³ (10,000 m ³)	Processed material	Yes	Before using in work
		Density	–	AASHTO T 310 or other approved procedures	1 per 3500 yd ² (3000 m ²), but not less than 3 per layer	In-place	No	Before placement of next layer
Unclassified borrow (704.06) and (204.11(a))	"	Moisture-density	–	T 99, Method C ⁽²⁾	1 per soil type, but not less than 1 per each 13,000 yd ³ (10,000 m ³)	Processed material	Yes	Before using in work

**Table 204-1
Sampling, Testing, and Acceptance Requirements**

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
		Density	-	AASHTO T 310 or other approved procedures	1 per 3500 yd ² (3000 m ²), but not less than 3 per layer	In-place	No	Before placement of next layer
Production (continued)								
Earth embankment (204.11(a))	Measured and tested for conformance (106.04)	Classification	-	AASHTO M 145	1 per soil type	Source of material	Yes	Before using in work
		Moisture-density	-	T 99, Method C ⁽²⁾	1 per soil type, but not less than 1 per each 13,000 yd ³ (10,000 m ³)	"	"	"
		Density	-	AASHTO T 310 or other approved procedures	1 per 3500 yd ² (3000 m ²), but not less than 3 per layer	In-place	No	Before placement of next layer
Top of subgrade (204.11(a))	"	Density	-	AASHTO T 310 or other approved procedures	1 per 2500 yd ² (2000 m ²), but not less than 3 per layer	In-place	No	Before placement of next layer
Finished Product								

**Table 204-1
Sampling, Testing, and Acceptance Requirements**

Material or Product (Subsection)	Type of Acceptance (Subsection)	Characteristic	Category	Test Methods Specifications	Sampling Frequency	Point of Sampling	Split Sample	Reporting Time
Roadbed (204.13)	Measured and tested for conformance (106.04)	Final line & grade	-	Field measured	Determined by the CO	Determined by the CO	No	Before placement of next layer

- (1) Not required when using Government-provided source.
- (2) Minimum 5 points per proctor.

Table 204-2 Construction Tolerances													
Location Description	Tolerance Class (a)												
	A	B	C	D	E	F	G	H	I	J	K	L	M
Roadbed width (ft)	+0.5	+0.5	+1.0	+1.0	+1.0	+1.0	+1.5	+1.0	+2.0	+2.0	+2.0	+2.0	+2.0
Subgrade elevation (ft)	±0.1	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±2.0	±3.0	±2.0	±3.0	(c)
Centerline alignment (ft)	±0.2	±0.2	±0.5	±0.5	±1.0	±1.0	±1.5	±1.5	±2.0	±3.0	±3.0	±5.0	(c)
Slopes, excavation, and embankment (% slope ^(b))	±3	±5	±5	±5	±5	±5	±10	±10	±10	±10	±20	±20	±20

(a) Maximum allowable deviation from construction stakes and drawings.

(b) Maximum allowable deviation from staked slope measured from slope stakes or hinge points.

(c) Unless otherwise shown the centerline alignment and subgrade elevation, as built, have no horizontal curves with a radius of less than 80 feet, and no vertical curves with a curve length of less than 80 feet when the algebraic difference in the grade change is less than 10 percent, or a curve length of less than 100 feet when the algebraic difference of the grade change is greater than or equal to 10 percent. The centerline grade is not to exceed 20 percent in 100 feet of length.

207 - Earthwork Geotextiles

207.04_National_11_8_2016

Delete third sentence of Subsection 207.04 and replace with the following:

207.04(c)(1) First layer placement and compaction.

Spread the end-dump pile of cover material maintaining **8** inch(es) lift over the geosynthetic.

209 - Structure Excavation and Backfill

209.09_National_7_18_2017

Make the following Changes to Subsection 209.09:

209.09 Backfill.

Add the following to Subsection 209.09(a):

(a) General.

Backfill without damaging or displacing the culvert or structural plate structure. Replace any pipe that is distorted by more than 5 percent of nominal dimensions, or that is ruptured or broken.

Add the following to Subsection 209.09(b)

(b) Pipe culverts.

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 stream course.
- Round pipe with a diameter of 48 inches or greater.
- Pipe arches with a span of 50 inches or greater.
- Any box culvert or structure other than pipe culverts.

209.10_National_7_17_2017

Delete Subsection 209.10 and replace with the following:

209.10 Compacting.

Compact the embankment using one of the following methods as specified.

(a) Compaction Method 1. Use AASHTO T 27 to determine the quantity of material retained on a No. 4 (4.75-millimeter) sieve. Compact as follows:

(1) More than 80 percent retained on a No. 4 (4.75-millimeter) sieve. Adjust the moisture content to a level suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width with one of the following and until there is no visible evidence of further consolidation:

(a) Four roller passes of a vibratory roller having a minimum dynamic force of 40,000 pounds (180 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute;

(b) Eight roller passes of a 20-ton (20-metric ton) compression-type roller; or

(c) Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches (300 millimeters) as follows:

- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(a), by four passes; or
- For each additional 6 inches (150 millimeters) or fraction thereof, increase the number of roller passes in Subsection 209.10(a)(1)(b) and (c), by eight passes.

(2) 50 to 80 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content. Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 (4.75-millimeter) sieve. Multiply this number by the percentage of material passing a No. 4 (4.75-millimeter) sieve, and add 2 percent to determine the optimum moisture content of the material.

Use nonvibratory rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Compact each layer of material full width according to Subsection 209.10(a)(1).

(3) Less than 50 percent retained on a No. 4 (4.75-millimeter) sieve. Classify the material according to AASHTO M 145. For material classified A-1 or A-2-4, determine the maximum density according to AASHTO T 99, Method C..

Adjust the moisture content of material classified A-1 through A-5 to a moisture content suitable for compaction. Adjust the moisture content of material classified A-6 and A-7 to within 2 percent of the optimum moisture content.

Use compression-type or vibratory rollers. Compact each layer of material full width 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. When required, use AASHTO T 224 to correct for coarse particles.

(b) Compaction Method 2. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate roller compaction equipment over the full width of each layer until there is no visible evidence of further consolidation or, if when a sheepsfoot roller is used, the roller “walks out” of the layer. Make at least three complete passes. Use compression-type rollers at speeds less than 6 feet (1.8 meters) per second and vibratory rollers at speeds less than 3 feet (1 meter) per second. Ensure rollers meet the following requirements:

- (1)** Steel wheeled rollers, other than vibratory, capable of exerting a force of not less than 250 pounds per inch (4.5 kilogram/millimeter) of width of the compression roll or rolls.
- (2)** Vibratory steel wheeled rollers equipped with amplitude and frequency controls with a minimum dynamic force of 30,000 pounds (130 kilonewtons) impact per vibration, 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 (550 Kilopascals).
- (4)** Sheepsfoot, tamping, or grid rollers capable of exerting a force of 250 pounds per inch (4.5 kilogram/millimeter) of width of roller drum.

(c) Compaction Method 3. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer until there is no visible evidence of further consolidation. Make at least three complete passes.

(d) Compaction Method 4. Adjust the moisture content of the material to a moisture content suitable for compaction. Fill the interstices around rock with earth or other fine material as practical. Operate hauling and spreading equipment uniformly over the full width of each layer.

(e) Compaction Method 5. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact the complete surface with a bucket of an excavator larger than 39,000 pounds (18 metric ton) Gross Vehicle Weight using a minimum of three blows. Overlap compaction by $\frac{1}{2}$ width of bucket.

(f) Compaction Method 6. Adjust the moisture content of the material to a moisture content suitable for compaction. Compact using an approved mechanical tamper for a minimum of three complete passes.

When compacting with rollers or hauling and spreading equipment is not practical, use approved mechanical tampers for a minimum of three complete passes.

301 - Untreated Aggregate Courses

301.03_National_7_17_2017

Add the following to Subsection 301.03:

301.03 General.

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 will be required otherwise. After processing on the road, remove all oversize material from the road and dispose 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 stockpile according to Section 314.

301.05_National_7_17_2017

Delete Subsection 301.05 and replace with the following:

301.05 Compacting.

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:

- (a) **Compaction A.** Operating spreading and hauling equipment over the full width of the travelway.
- (b) **Compaction B.** Operate rollers and compact as specified in Subsection 204.11(a)(1).

- (c) **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).
- (d) **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.
- (e) **Compaction E.** Compact to a density of at least 95 per-cent of the maximum density, as determined by AASHTO T 180, method C or D.

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.

703 - Aggregate

703.05_National_1_23_2020

Delete Subsection 703.05(c)(3) and Replace with the following:

703.05 Subbase, Base, Surface Course, and Screened Aggregate.

(a) Subbase or base aggregate. Furnish hard, durable particles or fragments of crushed stone, crushed slag, or crushed gravel conforming the following:

(1) Gradation	Table 703-2
(2) Liquid limit, AASHTO T 89	25 max.
(3) Plastic limit, AASHTO T 90	Nonplastic
(4) Los Angeles abrasion, AASHTO T 96	40% max.
(5) Sodium sulfate soundness loss (5 cycles), AASHTO T 104	12% max.
(6) Durability index (coarse), AASHTO T 210	35 min.
(7) Durability index (fine), AASHTO T 210	35 min.
(8) Fractured faces, ASTM D 5821	50% min.
(9) Free from organic matter and lumps or balls of clay	

Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary. Fine aggregate, material passing the No. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.

(b) Surface course aggregate. Furnish hard, durable particles or fragments of crushed stone, crushed slag, or crushed gravel conforming the following:

(1) Gradation	Table 703-3
(2) Liquid limit, AASHTO T 89	35 max.
(3) Plastic Index, AASHTO T 90	
a) If the percent passing the No. 200 sieve is less than 12%	2 to 9
b) If the percent passing the No. 200 sieve is greater than 12%	Less than 2

- | | |
|---|----------|
| (4) Los Angeles abrasion, AASHTO T 96 | 40% max. |
| (5) Sodium sulfate soundness loss (5 cycles),
AASHTO T 104 | 12% max. |
| (6) Durability index (coarse), AASHTO T 210 | 35 min. |
| (7) Durability index (fine), AASHTO T 210 | 35 min. |
| (8) Fractured faces, ASTM D 5821 | 75% min. |
| (9) Free from organic matter and lumps or balls of clay | |

Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Do not furnish material that contains asbestos fibers.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary. Fine aggregate, material passing the No. 4 sieve, shall consist of natural or crushed sand and fine mineral particles.

(c) Screened aggregate – Furnish hard, durable particles or fragments of stone, slag, or gravel conforming the following:

- | | |
|--|--------------|
| (1) Gradation | Table 703-16 |
| (2) Plastic Index, AASHTO T 90 | Less than 9 |
| (3) Los Angeles abrasion, AASHTO T 96 | 55% max. |
| (4) Free from organic matter and lumps or balls of clay. | |

Do not use material that breaks up when alternately frozen and thawed or wetted and dried.

Obtain the aggregate gradation by crushing, screening, and blending processes as necessary.

Delete Table 703-2 and replace with the following:

**Table 703-2
Target Value Ranges for Subbase and Base Gradation**

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)				
	A (Subbase)	B (Subbase)	C (Base)	D (Base)	E (Base)
2½ inch	100				
2 inch	97 – 100	100	100		
1½ inch		97 – 100			
1 inch	65 – 79 (6)		80 – 100 (6)	100	
¾ inch			64 – 94 (6)	86 – 100 (6)	100
½ inch	45 – 59 (7)				
⅜ inch			40 – 69 (6)	51 – 82 (6)	62 – 90 (6)
No. 4	28 – 42 (6)	40 – 60 (8)	31 – 54 (6)	36 – 64 (6)	36 – 74 (6)
No. 40	9 – 17 (4)			12 – 26 (4)	12 – 26 (4)
No. 200	4.0 – 8.0 (3)	4.0 – 12.0 (4)	4.0 – 7.0 (3)	4.0 – 7.0 (3)	4.0 – 7.0 (3)

() The value in the parentheses is the allowable deviation (±) from the target values..

Delete Table 703-3 and replace with the following:

**Table 703-3
Target Value Ranges for Surface Gradation**

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)							
	Grading Designation							
	F	G	H	S	T	U		
1 1/2 inch	100			100				
1 inch	97-100	100		72 - 92 (6)	100			
3/4 inch	76-89 (6)	97 - 100	97 - 100			100		
1/2 inch					71 - 91 (6)			
3/8 inch	56-68 (6)	70 - 80 (6)	80 - 92 (6)	51 - 71 (6)		71 - 90 (6)		
No. 4	43-53 (7)	51 - 63 (7)	58 - 70 (7)	36 - 53 (7)	43 - 60 (7)	50 - 68 (7)		
No. 8				26 - 40 (6)	30 - 46 (6)	34 - 51 (6)		
No. 16	23-32 (6)	28 - 39 (6)	28 - 40 (6)					
No. 40	15-23 (5)	19 - 27 (5)	16 - 26 (5)	14 - 25 (5)	16 - 28 (5)	19 - 30 (5)		
No. 200	10.0-16.0 (4)	10.0 - 16.0 (4)	9.0 - 14.0 (4)	8.0 - 15.0 (4)	8.0 - 15.0 (4)	8.0 - 15.0 (4)		

() The value in the parentheses is the allowable deviation (\pm) from the target values. If the plasticity index (PI) is greater than 0, the TV range for the No. 200 sieve size is 8-12 (4).

Add Table 703-13:

**Table 703-13
Gradation Requirements for Screened Aggregate**

Sieve Size	Percent by Mass Passing Designated Sieve (AASHTO T 27 and T 11)						
	Grading Designation						
	L	M	N	O	P	Q	R
6 inch	100	100					
4 inch			100	100			
3 inch					100	100	
2 inch							100
No. 4		15-45		15-45		15-45	

704 - Soil

704.02_National_7_18_2017

Delete Subsection 704.02(a) and replace with the following:

704.02 Bedding Material.

- | | |
|---------------------------|---|
| (a) Maximum particle size | 3 in (75 millimeters) or half the corrugation depth, whichever is smaller |
|---------------------------|---|