| U.S. DEPARTMENT OF AGRICULTURE<br>FOREST SERVICE<br><br>**INTEGRATED RESOURCE CONTRACT**<br>(Applicable to Contracts with Measurement before Harvest) | | **Name of Contractor** | |
|---|---|---|---|
| **National Forest**<br>Gifford Pinchot | **Ranger District**<br>Mt St Helens NVM | **Region**<br>Pacific N-West | **Contract Number** |
| **Contract Name**<br>Curly Stewardship | | **Award Date** | **Termination Date**<br>03/31/2018 |

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 Contractor.

Unless provided otherwise herein, Forest Service agrees to sell and permit Contractor to cut and remove Included Timber and Contractor agrees to purchase, cut, and remove Included Timber and complete required stewardship projects.

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

**UNITED STATES OF AMERICA**

By: _____
Contracting Officer

_____
(Title)

By: _____
(Contractor) 3/

_____

_____
(Title)

_____
(Business Address)

Two Witnesses:2/

_____
(Name)

_____
(Address)

_____
(Name)

_____
(Address)

I, 4/_____, certify that I am the _____ Secretary of the corporation named as Contractor herein; that _____ who signed this contract on behalf of Contractor, 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** 5/

## INSTRUCTIONS:

1/ If Contractor is a corporation, state a "corporation organized and existing under the laws of the State of _____" and specify the State; if Contractor is a partnership, state a "partnership consisting of _____" and specify the names of each partner; and if Contractor is a sole proprietor doing business under an assumed name, state "(n) individual doing business under the name of _____ City of _____, State of _____."

2/ The signatures and addresses of two witnesses are required if Contractor is other than a corporation.

3/ If Contractor is a co-partnership, the signatures should be: XYZ Company, by John Doe, a member of the firm. If Contractor 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.

4/ The certificate must be completed if Contractor is a corporation.

5/ For companies incorporated in States that require a corporate seal, 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

Contract 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 contract 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 Contractor'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.

**AT.0 - SPECIFIC CONDITIONS.** The following conditions apply to the indicated portions of Division BT - Standard Provisions issued September 2004.

**AT.1 - Location and Area,** applicable to BT.1

This Contract Area of 2000 acres more or less is located in:

T. 7 N., R. 6 E., Sections 12 and 13, T. 7 N., R. 7 E., Sections 5, 6, 7, 8, 17, 18, 19, 20, 29, 30, and 32, T. 8 N., R. 7 E., Section 31, W.M., Unsurveyed, Skamania County, Washington

**AT.2 - Volume Estimate and Utilization Standards,** applicable to CT.1, CT.2, CT.4, and GT.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 and Other Coniferous Species | Sawtimber | 11,724.00 | CCF | 7.0 | 1 | 8 | 5.0 | 40 |
| All Coniferous Species | Grn Bio Cv | 680.00 | CCF | 5.0 | 1 | 8 | 4.0 | N/A |
| **Total Quantity** | | 12,404.00 | CCF | | | | | |

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

**AT.3- Timber Designations,** applicable to CT.3; acres are approximate:

| | Number | Acres |
|---|---|---|
| Clearcutting Units (CT.3.1) | | |
| Specified Road Clearing (CT.3.2) | | |
| Overstory Removal Units (CT.3.3) | | |
| Understory Removal Units (CT.3.4) | | |
| Individual Trees (CT.3.5) | | 429 |
| Incompletely Measured Payment Units (CT.3.6) | | |

**AT.4 - Timber Payment Rates,** applicable to DT.1 and ET.0

**AT.4.1 - Escalated Rates**, applicable for Species and Products to be Paid for at Rates Escalated under DT.2

| Species | Product | Unit of Measure | Rates per Unit of Measure | | | | | Base Index |
|---|---|---|---|---|---|---|---|---|
| | | | Base $ | Advertised $ | Bid Premium $ | Bid (Tentative) $ | Required Deposits Slash Disposal $ | |
| Douglas-fir and Other Coniferous Species | Sawtimber | CCF | 1.00 | 48.95 | | | 3.88 | 164.92 |

**AT.4.2- Flat Rates,** applicable for Species and Products to be Paid for at Flat Rates

| Species | Product | Unit of Measure | Rates per Unit of Measure | | | | |
|---|---|---|---|---|---|---|---|
| | | | Base $ | Advertised $ | Bid Premium $ | Bid (Flat) $ | Required Deposits Slash Disposal $ |
| All Coniferous Species | Grn Bio Cv | CCF | .25 | .25 | | | 3.88 |

For purposes of convenience in collection and bookkeeping, Bid Rates stated in AT.4 include payment of deposits for contract area betterment required pursuant to 16 USC 576b. Such deposits are not included as Required Deposits defined hereunder.

## AT.4.3 - Schedule of Payment Units

| Pay-ment Unit No. | App rox. Acres | To be Escalated under AT.4.1 | | | | Total Tentative Payment $ | To be Paid for at Flat Rates under AT.4.2 | | | | Total Flat Rate Payment $ | Total Required Deposits for Slash Disposal $ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Species | Product | Qty | UOM | | Species | Product | Qty | UOM | | |
| 4 | 10 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 273.00 | CCF | | All Coniferous Species | Grn Bio Cv | 16.00 | CCF | | 1,121.32 |
| | | **Total PU Quantity And Value** | | 273.00 | CCF | | **Total PU Quantity And Value** | | 16.00 | CCF | | |
| 5 | 32 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 874.00 | CCF | | All Coniferous Species | Grn Bio Cv | 51.00 | CCF | | 3,589.00 |
| | | **Total PU Quantity And Value** | | 874.00 | CCF | | **Total PU Quantity And Value** | | 51.00 | CCF | | |
| 6 | 37 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 1,011.00 | CCF | | All Coniferous Species | Grn Bio Cv | 59.00 | CCF | | 4,151.60 |
| | | **Total PU Quantity And Value** | | 1,011.00 | CCF | | **Total PU Quantity And Value** | | 59.00 | CCF | | |
| 7 | 22 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 601.00 | CCF | | All Coniferous Species | Grn Bio Cv | 35.00 | CCF | | 2,467.68 |
| | | **Total PU Quantity And Value** | | 601.00 | CCF | | **Total PU Quantity And Value** | | 35.00 | CCF | | |
| 8 | 11 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 301.00 | CCF | | All Coniferous Species | Grn Bio Cv | 17.00 | CCF | | 1,233.84 |
| | | **Total PU Quantity And Value** | | 301.00 | CCF | | **Total PU Quantity And Value** | | 17.00 | CCF | | |
| 9 | 24 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 656.00 | CCF | | All Coniferous Species | Grn Bio Cv | 38.00 | CCF | | 2,692.72 |
| | | **Total PU Quantity And Value** | | 656.00 | CCF | | **Total PU Quantity And Value** | | 38.00 | CCF | | |
| 16 | 10 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 273.00 | CCF | | All Coniferous Species | Grn Bio Cv | 16.00 | CCF | | 1,121.32 |
| | | **Total PU Quantity And Value** | | 273.00 | CCF | | **Total PU Quantity And Value** | | 16.00 | CCF | | |
| 17 | 2 | Douglas-fir and Other Coniferous Species | *Sawtimber* | 55.00 | CCF | | All Coniferous Species | Grn Bio Cv | 3.00 | CCF | | 225.04 |
| | | **Total PU Quantity And Value** | | 55.00 | CCF | | **Total PU Quantity And Value** | | 3.00 | CCF | | |

**Contract Name:** Curly Stewardship **Contract No:**

| Payment Unit No. | Approx. Acres | To be Escalated under AT.4.1 | Total Tentative Payment $ | To be Paid for at Flat Rates under AT.4.2 | Total Flat Rate Payment $ | Total Required Deposits for Slash Disposal $ |
|---|---|---|---|---|---|---|
| 18 | 25 | Douglas-fir and Other Coniferous Species *Sawtimber* 683.00 CCF | | All Coniferous Species Grn Bio Cv 40.00 CCF | | 2,805.24 |
| | | **Total PU Quantity And Value** 683.00 CCF | | **Total PU Quantity And Value** 40.00 CCF | | |
| 19 | 16 | Douglas-fir and Other Coniferous Species *Sawtimber* 437.00 CCF | | All Coniferous Species Grn Bio Cv 25.00 CCF | | 1,792.56 |
| | | **Total PU Quantity And Value** 437.00 CCF | | **Total PU Quantity And Value** 25.00 CCF | | |
| 20 | 48 | Douglas-fir and Other Coniferous Species *Sawtimber* 1,312.00 CCF | | All Coniferous Species Grn Bio Cv 76.00 CCF | | 5,385.44 |
| | | **Total PU Quantity And Value** 1,312.00 CCF | | **Total PU Quantity And Value** 76.00 CCF | | |
| 21 | 50 | Douglas-fir and Other Coniferous Species *Sawtimber* 1,366.00 CCF | | All Coniferous Species Grn Bio Cv 79.00 CCF | | 5,606.60 |
| | | **Total PU Quantity And Value** 1,366.00 CCF | | **Total PU Quantity And Value** 79.00 CCF | | |
| 23 | 2 | Douglas-fir and Other Coniferous Species *Sawtimber* 55.00 CCF | | All Coniferous Species Grn Bio Cv 3.00 CCF | | 225.04 |
| | | **Total PU Quantity And Value** 55.00 CCF | | **Total PU Quantity And Value** 3.00 CCF | | |
| 46 | 15 | Douglas-fir and Other Coniferous Species *Sawtimber* 410.00 CCF | | All Coniferous Species Grn Bio Cv 24.00 CCF | | 1,683.92 |
| | | **Total PU Quantity And Value** 410.00 CCF | | **Total PU Quantity And Value** 24.00 CCF | | |
| 47 | 81 | Douglas-fir and Other Coniferous Species *Sawtimber* 2,214.00 CCF | | All Coniferous Species Grn Bio Cv 128.00 CCF | | 9,086.96 |
| | | **Total PU Quantity And Value** 2,214.00 CCF | | **Total PU Quantity And Value** 128.00 CCF | | |
| 48 | 10 | Douglas-fir and Other Coniferous Species *Sawtimber* 273.00 CCF | | All Coniferous Species Grn Bio Cv 16.00 CCF | | 1,121.32 |
| | | **Total PU Quantity And Value** 273.00 CCF | | **Total PU Quantity And Value** 16.00 CCF | | |

| Pay-ment Unit No. | App rox. Acres | To be Escalated under AT.4.1 | Total Tentative Payment $ | To be Paid for at Flat Rates under AT.4.2 | Total Flat Rate Payment $ | Total Required Deposits for Slash Disposal $ |
|---|---|---|---|---|---|---|
| 49 | 5 | Douglas-fir and Other Coniferous Species *Sawtimber* 137.00 CCF | | All Coniferous Species Grn Bio Cv 8.00 CCF | | 562.60 |
| | | **Total PU Quantity And Value** 137.00 CCF | | **Total PU Quantity And Value** 8.00 CCF | | |
| 50 | 24 | Douglas-fir and Other Coniferous Species *Sawtimber* 656.00 CCF | | All Coniferous Species Grn Bio Cv 38.00 CCF | | 2,692.72 |
| | | **Total PU Quantity And Value** 656.00 CCF | | **Total PU Quantity And Value** 38.00 CCF | | |
| 51 | 5 | Douglas-fir and Other Coniferous Species *Sawtimber* 137.00 CCF | | All Coniferous Species Grn Bio Cv 8.00 CCF | | 562.60 |
| | | **Total PU Quantity And Value** 137.00 CCF | | **Total PU Quantity And Value** 8.00 CCF | | |

**AT.4.4 - Stewardship Credits**, applicable to ET.2.2 and KT-GT.9#

**Mandatory Stewardship Projects**

| Project Number | Project Description | Units of Measure | Quantity | Bid Rate $ | Total Credits |
|---|---|---|---|---|---|
| 1 | Snag Creation | Each | 350.00 | | |
| 2 | Down Log Creation | Each | 350.00 | | |
| 3 | Tree Planting | Acres | 8.00 | | |

**Optional Stewardship Projects**

| Priority | Project Number | Project Description | Units of Measure | Quantity | Bid Rate $ | Total Credits |
|---|---|---|---|---|---|---|
| 4 | 4 | Precommercial Thinning | Acres | 205.00 | | |

The following definitions are established for the terms used in AT.4:

**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 DT.3.1, DT.3.2, or DT.3.3.

**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 AT.7, but are never less than Base Rates.

**Bid Premium Rates** are the amounts by which Contractor's bid is in excess of Advertised Rates. The Bid Premium Rates are constant during this contract, except as provided in DT.3.1, DT.3.2, and DT.3.3.

**Bid Rates** are the rates bid by Contractor (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 AT.4.1 is the Tentative Rate that is subject to quarterly adjustment under DT.2; for species and products in AT.4.2, the Bid Rate is the Flat Rate.

**Required Deposits** are deposits that Contractor 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 KT-FT.3.2#.

**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 DT.2.

## AT.5 - Indices Used in Quarterly Adjustment, applicable to DT.2

| Species | Index Name and Date |
|---|---|
| Douglas-fir and Other Coniferous Species | WWPA, PNW Douglas Fir (07-08 Basis), (PNWCC) |

## AT.6 - High Stumps, applicable to GT.4.1.2

| Species | Product | Maximum Stump Height (inches) |
|---|---|---|
| All | All | 12 |

## AT.7 - Specified Roads, applicable to FT.2

Name and Date of Governing Road Specifications: Federal Highway Administration Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects(2003)-english

| Project | | Design Class | Approx. Length (mi./km.) | Sheet Numbers and Approval Date | Performance Responsibility | | |
|---|---|---|---|---|---|---|---|
| Road No. | Name | | | | Survey | Design | Construction Staking 1/ |
| 9000000 | LEWIS RIVER (R) (segment 19.7 to 20.6) | Single Lane - 35 mph | .9 / 1.45 | 1-4 11/10/2011 | FS | FS | FS BC |
| 9039316 | None (R) (segment .1 to .11) | Single Lane - 15 mph | .01 / .02 | 1-4 11/10/2011 | FS | FS | FS BC |
| 9039377 | None (R) (segment .18 to .19) | Single Lane - 15 mph | .01 / .02 | 1-4 11/10/2011 | FS | FS | FS BC |
| 9039000 | PEPPER CR (R) (segment 3.82 to 5.9) | Single Lane - 15 mph | 2.08 / 3.35 | 1-4 11/10/2011 | FS | FS | FS BC |
| 9300000 | SPENCER (R) (segment 2.67 to 3.05) | Single Lane - 15 mph | .38 / .61 | 1-4 11/10/2011 | FS | FS | FS BC |

1/ Indicate timing, i.e., before clearing (BC) or after clearing (AC). Applicable to FT.2.1.2

## AT.8 - Forest Service Engineering Completion Schedule, applicable to FT.2.1

| Road No. | Road Name | Type of Work | Completion Date |
|---|---|---|---|
| | **Not Applicable** | | |

## AT.9 - Fire Precautionary Period, applicable to HT.2

April 01 to October 31, inclusive

## AT.10 - Contractor Responsibility to Furnish Crews and Equipment for:

**Initial Fire Supression**, applicable to HT.3

Within 5 road miles

**Fire Suppression Reinforcement**, applicable to HT.3.1.2 and HT.3.1.3

Within 100 road miles

## AT.11 - Contractor's Obligation per Operations Fire, applicable to HT.4.1

**Maximum Amount: $** $300,000

## AT.12 - Termination Date, applicable to IT.2

March 31, 2018

## AT.13 - Normal Operating Season, applicable to GT.3.1, GT.6.6, IT.2.1, and JT.3

**First Period:** July 01 to September 30, inclusive

**Second Period:** _____ to _____, inclusive

## AT.14 - Performance Bond, applicable to JT.1

**Performance Bond Amount:** N/A

## AT.15 - Downpayment, applicable to E.T.2.1.1

**Downpayment Amount:** Not Applicable

## AT.16 - Periodic Payment Amount, applicable to ET.2.1.3

| | Periodic Payment Determination Date | Amount |
|---|---|---|
| **Initial Payment:** | N/A | N/A |
| **Additional Payment:** | N/A | N/A |

## AT.17 - Market-Related Contract Term Addition Producer Price Index, applicable to IT.2.1.2

**Index Name:** Softwood Lumber **Index Number:** 0811

## AT.18 - Inapplicable Provisions

The following listed provisions are hereby made inapplicable. (Instructions: List by reference number and title.)

| | |
|---|---|
| BIT.2.1.2 | MARKET-RELATED CONTRACT TERM ADDITION |

## AT.19 - List of Special Provisions in Part KT

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

| | |
|---|---|
| KT-CT.3.5.7# | INDIVIDUAL TREE DESIGNATION (OPTION 1) (06/2008) |
| KT-ET.2.2 | CHANGES IN STEWARDSHIP CREDITS (06/2008) |
| KT-FT.1.0.1# | TEMPORARY ROAD AND LANDING CONSTRUCTION (OPTION 1) (06/2008) |
| KT-FT.1.2# | USE OF ROADS BY CONTRACTOR (09/2004) |
| KT-FT.1.3# | ROAD COMPLETION DATE (09/2004) |
| KT-FT.2.2.1# | MATERIAL SOURCES (09/2004) |
| KT-FT.3.1# | ROAD MAINTENANCE REQUIREMENTS (09/2004) |
| KT-FT.3.2# | ROAD MAINTENANCE DEPOSIT SCHEDULE (09/2004) |
| KT-GT.3.1.5# | PROJECT OPERATION SCHEDULE (05/2005) |
| KT-GT.4.0.5 | ALTERNATE REMOVAL OF INCLUDED TIMBER (05/2005) |
| KT-GT.4.1# | SPECIFIC REQUIREMENTS (05/2005) |
| KT-GT.4.2# | YARDING/SKIDDING REQUIREMENTS (05/2005) |
| KT-GT.6.0# | EROSION CONTROL AND SOIL TREATMENT BY CONTRACTOR (05/2005) |
| KT-GT.7 | SLASH DISPOSAL (06/2008) |
| KT-GT.7.4.2# | SLASH TREATMENT REQUIREMENTS (OPTION 2) (06/2010) |
| KT-GT.8 | MEASURING (05/2005) |
| KT-GT.8.1.1 | ACCOUNTABILITY (05/2005) |
| KT-GT.8.4 | USE OF PAINT BY CONTRACTOR (OPTION 1) (06/2006) |
| KT-GT.9# | STEWARDSHIP PROJECTS (09/2004) |
| KT-HT.1 | PLANS (05/2005) |
| KT-HT.2 | SPECIFIC FIRE PRECAUTIONS (05/2005) |
| KT-HT.2.0.1 | BURNING BY CONTRACTOR (06/2006) |
| KT-HT.2.2 | EMERGENCY FIRE PRECAUTIONS (05/2005) |
| KT-HT.3.1 | ADDITIONAL AREA OF FIRE RESPONSIBILITY (05/2005) |
| KT-IT.1.0 | DISCLAIMER OF EXPRESSED OR IMPLIED WARRANTY (05/2005) |

| | |
|---|---|
| KT-IT.2.1.2 | MARKET-RELATED CONTRACT TERM ADDITION (11/2008) |
| KT-IT.6.8#(Option 1) | USE OF TIMBER (09/2004) |

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**BT.0—CONTRACT AREA**

**BT.1 Contract Area Map.** The boundaries of "Contract Area" and any Payment Unit thereof, are as shown on the attached "Contract Area Map" that is made a part hereof, and were, before contract advertisement, designated on the ground by Forest Service to meet the anticipated needs of the parties. The location of Contract Area and its approximate acreage are stated in AT.1. Payment Units may be revised and additional ones may be established only by written agreement. Upon Contractor's request, Forest Service shall subdivide Payment Units to reduce them to a size that can be logged within 60 days at Contractor'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 and stewardship project areas may be eliminated from Contract Area under conditions described in GT.3.6. Catastrophically Damaged areas may be removed from Contract Area under IT.3.2.

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

(a) Identified claims limiting Contractor's rights under BT.2;

(b) Payment Units where timber is to be Measured or Marked after date of contract advertisement and approximate location of sample Marked timber under CT.3.6 and CT.4;

(c) Boundaries of Clearcutting Units, Overstory Removal Units, and Understory Removal Units under CT.3;

(d) Diameter limits for Overstory Removal Units and Understory Removal Units under CT.3.3 and CT.3.4;

(e) Areas where leave trees are Marked to be left uncut under CT.3.5;

(f) Specified Roads listed in AT.7;

(g) Sources of base course, surface rock, and rock riprap listed in the Schedule of Items;

(h) Roads where log hauling or use is prohibited or restricted under FT.1.2;

(i) Roads and trails to be kept open under GT.2.2;

(j) Improvements to be protected under GT.2.2;

(k) Locations of known wildlife or plant habitat and cave resources to be protected under GT.2.4;

(l) Locations of areas known to be infested with specific invasive species of concern under GT.3.5;

(m) Maximum stump heights when more than one height is listed by areas in AT.6 under GT.4.1.2;

(n) Skidding or yarding methods specified under GT.4.2;

(o) Streamcourses to be protected under GT.5;

(p) Locations of meadows requiring protection under GT.6.1;

(q) Locations of wetlands requiring protection under GT.6.2;

(r) Locations of temporary roads to be kept open under GT.6.3.1; and

(s) Other features required by Parts A through K.

**BT.2 Claims.** Valid claims are excluded from Contract 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 Contractor's rights to operate under this contract and that Forest Service has been able to identify are shown on Contract Area Map. Contractor 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.

**CT.0—TIMBER SPECIFICATIONS**

**CT.1 Included Timber.** "Included Timber" consists of:

**CT.1.1 Standard Timber.** Live and dead trees and portions thereof that meet Utilization Standards under CT.2 and are designated for cutting under CT.3.

**CT.1.2 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.

**CT.1.3 Damaged Timber.**

**CT.1.3.1 Damaged by Contractor.** Undesignated live trees meeting Utilization Standards:

(a) Within 200 feet slope distance from centerline of roads constructed hereunder that are damaged by Contractor'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 Contractor in logging or stewardship project operations and are subsequently Marked before Contractor has completed work in the immediate area.

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

**CT.1.3.2 Negligent or Willful Damage.** Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Contractor, if included by Contracting Officer.

**CT.1.3.3 Damage by Catastrophe.** As provided under IT.3.2, undesignated live and dead timber within Contract Area, meeting Utilization Standards, and affected by Catastrophic Damage. "Catastrophic Damage" as used

hereunder is major change or damage to Included Timber on Contract Area, to Contract Area, to access to Contract Area, or a combination thereof:

(a) Caused by forces, or a combination of forces, beyond control of Contractor, 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 Contract Area and estimated to total either:

(i) More than half of the estimated timber quantity stated in AT.2 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.

**CT.1.3.4 Minor Damage by Natural Causes.** Undesignated trees within Contract Area and meeting Utilization Standards, in amounts less than specified in CT.1.3.3, that become insect infested, windthrown, suffer serious damage, or die, as designated by agreement.

**CT.1.4 Unintentionally Cut Timber.** Trees, within or immediately adjacent to Contract Area or to road construction or other authorized clearing outside Contract Area, not designated for cutting under CT.3 but that are cut through mistake by Contractor, when included by Contracting Officer.

**CT.1.5 Construction Timber.** Trees to be used for construction under FT.1.

**CT.1.6 Other Material.** Species or products not listed in AT.2, upon written approval of Contracting Officer under DT.4.1.

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

(a) Meet minimum piece standards in AT.2 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.

**CT.3 Timber Designations.** Timber designated for cutting shall be confined to Contract Area, except as provided in CT.1.3.1, CT.1.4, CT.1.5, CT.3.2, and FT.1. Contract Area Map indicates Payment Units, if any, where Marking under CT.3.5 is to be done after contract advertisement, except for construction clearing under CT.3.2, designation changes under CT.37, and damaged timber.

The boundaries of Clearcutting Units, Overstory Removal Units, and Understory Removal Units were plainly Marked on ground before contract advertisement and are shown on Contract Area Map. Boundary trees shall not be cut. Such units where Measuring is to be completed after date of contract advertisement are also shown. The number of units and approximate acreage of timber designations are stated in AT.3.

**CT.3.1 Clearcutting Units.** All trees that meet Utilization Standards within "Clearcutting Units" are designated for cutting.

**CT.3.2 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 Contractor's landings, work areas, or the roadbed of Specified and Temporary Roads when Marked in advance of work in the immediate area. 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 FT.2.

**CT.3.2.1 Specified Road Clearings.** Timber within the clearing limits of Specified Roads is within separate Payment Units, as shown on Contract Area Map, and the quantities are in AT.2. These Payment Units are subject to revision, as specified in CT.37. The quantities of dead or unstable trees designated outside the clearing limits are not included in AT.2.

**CT.3.2.2 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 AT.2.

**CT.3.3 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 Contract Area Map.

**CT.3.4 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 Contract Area Map.

**CT.3.5 Individual Trees.** All trees to be cut, other than in the units described in CT.3.1, CT.3.2, CT.3.3, and CT.3.4, are Marked or designated by description. Trees are "Marked" when individually designated by Forest Service with paint marks above and below stump height.

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

**CT.3.6 Incompletely Measured Payment Units.** Live trees within incompletely Measured Payment Units shown on Contract Area Map at time of contract advertisement shall be designated in accordance with KT-CT.3.6. A

representative sample of the timber to be designated has been Marked prior to contract advertisement in accordance with such rules. The approximate locations of the representative sample areas are shown on Contract Area Map.

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

In event Contracting Officer accepts alternate facilities under FT.2.6, Contracting Officer shall revise the affected Payment Units and adjust estimated quantities.

In the event Contractor 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.

**CT.4 Quantity Estimate.** The estimated quantities of timber by species designated for cutting under CT.3 and expected to be cut under Utilization Standards are listed in AT.2. Estimated quantity in AT.2 does not include the following:

(a) Damaged timber under CT.1.3;

(b) Unintentionally cut timber under CT.1.4;

(c) Construction timber under CT.1.5 cut outside of Payment Units and removed from construction use for utilization by Contractor;

(d) Timber within clearing limits of Temporary Roads or other authorized clearings and that is not designated under CT.3.1, CT.3.3, CT.3.4, or CT.3.5; or

(e) Dead or unstable live trees that are sufficiently tall to reach Contractor's landings, work areas, or the roadbed of Specified Roads under CT.3.2.

Estimated quantities for such timber not included in AT.2 shall be determined as stated in KT-GT.8.

If Contract Area Map shows Payment Units where Marking or Measuring is to be completed after date of contract advertisement, the objective of Forest Service shall be to designate for cutting in such Payment Units sufficient timber so that Contract Area shall yield the approximate estimated quantities by species or species groups stated in AT.2. However, the estimated quantities stated in AT.2 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 IT.3.2.

**CT.4.1 Adjustment for Quantity Deficit.** If Contract Area Map shows Payment Units where Marking or Measuring is to be completed after the date of contract 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 AT.2, Forest Service, upon request by Contractor, shall designate additional timber within Contract Area. Such additional timber shall be limited to that estimated to be necessary to reach approximately the estimated quantities by species listed in AT.2. Any such additional designation shall be consistent with land and resource management plans.

**CT.4.2 Adjustment for Excess Quantity.** If Contract Area Map shows Payment Units where Marking or Measuring is to be completed after date of contract advertisement and if Contracting Officer determines that the quantity designated will be more than 120 percent of the total estimated quantity listed in AT.2, Forest Service, upon request by Contractor, 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 AT.2. Such adjustments in quantities shall be confined to (a) Marking adjustments on Contract Area and (b) reduction in area to be cut over. Such adjustments or reductions shall not conflict with the silvicultural treatment being applied on Contract 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 BT.1 and CT.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 AT.2, Contractor, after cutting 120 percent of the total estimated quantity listed in AT.2, may elect to have Contract Area reduced to eliminate Payment Units where felling has not begun.

**CT.4.3 Adjustment for Quantity Errors.** An estimated quantity shown in AT.2 shall be revised by correcting identified errors made in determining estimated quantity that result in a change in total contract 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 AT.4.3 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.

## DT.0—RATES OF PAYMENT

**DT.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 DT.2. Flat Rates and Tentative Rates shall be those listed in AT.4, unless superseded by rates redetermined under DT.3 or established for Contract Term Extension.

Current Contract Rates, based on rates redetermined under DT.3 or established under IT.2.3, shall apply to all Payment Units from which removal of timber from Contract 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 Contract 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 AT.4.3 for those units. In addition, Required Deposits shall be made as listed in AT.4 and KT-FT.3.2, or established under DT.3 or IT.2.3.

In the event Termination Date is adjusted under IT.2.1 or IT.2.1.2, 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, less the bid rate for mandatory stewardship projects that have not been completed.

**DT.2 Escalation Procedure.** Tentative Rates for those species and products listed in AT.4.1 are subject to quarterly escalation in accordance with the following procedures: The calendar quarter index average for each price index described in AT.5 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 AT.4.1 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 IT.2.3 for the extension period.

**DT.2.1 Unavailable Index.** If an index described in AT.5 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 contract shall be a Flat Rate. Flat Rates will be Tentative Rates adjusted by the arithmetic average of the index described in AT.5 for a 12-month period prior to its becoming unavailable using the quarterly adjustment procedure outlined in DT.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.

**DT.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 DT.3.1, DT.3.2, and DT.3.3.

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 AT.4, except for reduction under DT.3.1, DT.3.2, or DT.3.3. Required Deposits shall be redetermined. Redetermined Specified Road construction cost is subject to the limitations of FT.2.6.

**DT.3.1 Rate Redetermination for Environmental Modification.** In the event of a contract modification under IT.3.3 or partial termination under IT.3.4, 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 DT.2, and Required Deposits shall be considered established under DT.1 for Included Timber removed subsequent to the contract revision.

**DT.3.2 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 IT.3.2. Potential Included Timber is any that would be added under IT.3.2.

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 IT.3.2. 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 IT.3.2, redetermined rates and Required Deposits shall be considered established under DT.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.

**DT.3.3 Rate Redetermination for Market Change.** In the event of delay or interruption, exceeding 90 days, under IT.3.3, 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 DT.3.1, using remaining volumes.

Tentative Rates and Flat Rates in effect at the time of delay or interruption or established pursuant to DT.3.1 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 DT.1 Included Timber removed subsequent to the delay or interruption.

**DT.3.4 Emergency Rate Redetermination.** Forest Service shall redetermine rates if, upon Contractor's application, Forest Service determies 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 AT.17 has declined by 25 percent. Rates shall be redetermined under DT.3 and shall be considered established under DT.1 for timber Scaled subsequent to Contractor’s application. This Subsection shall not apply during Contract Term Extension.

**DT.4 Other Payment Rates.**

**DT.4.1 Material and Quantities Not in AT.2.** Incidental amounts of products or portions of trees of species listed on AT.2 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 AT.2 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.

When any material suitable for use in a product form included in AT.2 is removed in another product form, the rates of payment shall be not less than but approximately equivalent to Current Contract Rates and Required Deposits.

**DT.4.2 Timber Cut Through Mistake.** Undesignated timber meeting Utilization Standards, cut by Contractor through mistake and included by Contracting Officer under CT.1.4, shall be removed and paid for at Current Contract Rates and Required Deposits, unless such material is not listed in AT.2. In such event, Contracting Officer, in accord with standard Forest Service methods, shall establish rates to be paid.

**DT.4.3 Undesignated Timber Damaged Without Negligence.** Undesignated timber meeting Utilization Standards, damaged without negligence by Contractor and designated by Forest Service under CT.1.3.1, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits.

**DT.4.4 Undesignated Timber Unnecessarily Damaged or Negligently or Willfully Cut.** Undesignated timber meeting Utilization Standards and unnecessarily damaged or negligently or willfully cut by Contractor, if included by Contracting Officer under CT.1.3.2, shall be cut, removed, and paid for at Current Contract Rates and Required Deposits that are in addition to liquidated damages under DT.4.5.

If such timber is of a species or size not listed in AT.2 or is of a quality different from designated timber, Contracting Officer shall establish payment rates in accord with standard Forest Service methods.

**DT.4.5 Liquidated Damages.** Unnecessary damage to or negligent or willful cutting of undesignated timber, as described in DT.4.4, on portions of Contract 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, Contractor shall pay as fixed, agreed, and liquidated damages an amount equivalent to the amount payable at Current Contract Rates. If designated by Contracting Officer, Contractor shall remove such damaged or cut timber and pay for it at Current Contract Rates.

**ET.0—PAYMENTS**

**ET.1 Amount Payable for Timber.** Except as provided in DT.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 Contractor shall pay. A "Payment Unit" is a portion of Contract Area established for payment purposes.

**ET.2 Integrated Resource Account.** "Integrated Resource Account" is an account maintained by Forest Service of all Contractor'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 ET.2.1.8;
(d) Stewardship Credits established; and
(e) 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 Contractor periodic statements of quantity and value of such timber. Charges subject to escalation under DT.2 shall be made initially on the basis stated in ET.2.1.4 and shall be adjusted at the end of each calendar quarter, as provided in DT.2.

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

**ET.2.1 Cash Deposits.** Within the limitations of this Subsection, Contractor shall make cash deposits to meet Contractor'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.

**ET.2.1.1 Downpayment.** The downpayment amount shown in AT.15 may not be applied toward any other payment required under the provisions of this contract, except damages determined pursuant to JT.4, transferred to other contracts, or refunded until stumpage value representing 25 percent of the total bid value of the contract is shown on Integrated Resource Account to have been cut, removed, and paid for or the estimated value remaining to be cut and removed, as shown on Integrated Resource Account, is equal to or less than the amount of the downpayment. For lump sum contracts, the downpayment may be applied to payment for release of the single payment unit.

**ET.2.1.2 Advance Deposits.** Contractor agrees to make cash deposits in advance of cutting to meet charges under ET.2.

Forest Service billings for advance cash deposits shall be in such amounts that Integrated Resource Account will maintain an unobligated balance that covers the applicable charges for Payment Units Released for Cutting and designated material not included in AT.2 expected to be cut within the next 60 days. This advance cash deposit may be reduced to a smaller amount by the terms of ET.2.1.1, ET.2.1.3, ET.2.1.5, and/or ET.2.1.7. Except for amounts required pursuant to ET.2.1.1, ET.2.1.3, and ET.2.1.7, Contractor shall not be required to make advance deposits above those required under this Item.

When the credit balance in Integrated Resource 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 AT.2, Contracting Officer will suspend all or any part of Contractor's Operations until payment or acceptable payment guarantee is received.

**ET.2.1.3 Periodic Payment Schedule.** Contractor shall make periodic payments for stumpage value, as shown in AT.16.

In the event Contractor has not paid the amount(s) stated in AT.16 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 Contractor. 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 Integrated Resource Account billing date.

The amount of the periodic payment(s) will be reduced if the payment(s) would result in Contractor'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 ET.2.1.2.

Except for Contract Term Extensions under I.2.3, periodic payment determination date(s) that have not been reached shall be adjusted one day for each additional day of contract time granted.

**ET.2.1.4 Deposits for Charges Subject to Escalation.** Deposits requested to cover estimated charges for timber subject to escalation under DT.2 shall be based upon Current Contract Rates and related deposits in effect during previous calendar quarter.

**ET.2.1.5 Deposits When Payment Guaranteed.** To the extent payment guarantee is provided under ET.3, requirements for advance cash deposits under ET.2.1.2 shall be waived for the value of timber on Contract Area that has been Released for Cutting, but not removed, and for the estimated value of products removed from Contract Area for not more than a monthly billing period, subject to the provisions of ET.4.

**ET.2.1.6 Blanket Cash Deposits.** Contractor may make cash deposits under a written agreement to cover charges made under this and other contracts within the same National Forest. Forest Service shall allocate such deposits to such contracts. 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 contract shall be reallocated to other contracts within the same National Forest at Contractor's request. Contractor shall not start cutting until allocation has again been made to this contract.

**ET.2.1.7 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 ET.2.1.3 by the number of whole months remaining in Normal Operating Season(s) within the extension period to determine the amount of each "Extension Deposit."

Contractor shall make the initial Extension Deposit prior to Forest Service executing the contract modification. In response to Forest Service billing under ET.2.1, Contractor 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 Contractor earns Contract Term Adjustment if Termination Date, as adjusted, results in one or more additional complete months within Normal Operating Season(s).

**ET.2.1.8 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 Contractor 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, Contractor shall make one or more deposits to cover the estimated cost of the work. On request of Contractor, Forest Service shall render monthly accounts, as may be specified in such agreement.

**ET.2.2 Stewardship Credits.** "Stewardship Credits" are credits that are earned and established when work described in KT-GT.9 has been performed and accepted. Stewardship Credits shall be earned at the rate as shown in AT.4.4. Earned Stewardship Credits may be used to pay for Included Timber value in excess of Base Rates and Required Deposits. Base Rates and Required Deposits must be paid in cash.

**ET.2.2.1 Progress Estimates.** Forest Service shall make timely estimates of Contractor's progress on stewardship projects. On the basis of such progress estimates, Forest Service shall credit Integrated Resource Account each month as such work proceeds.

**ET.2.2.2 Excess Stewardship Credits.** In the event there are unused established Stewardship Credits when all of the Included Timber has been cut and removed, Forest Service, at its option, shall either add more timber or make cash payment for the unused Stewardship Credits.

**ET.2.2.3 Excess Timber Value.** In the event the value of Included Timber exceeds the total value of all of the mandatory projects shown in AT.4.4, plus the optional projects shown in AT.4.4 that Contractor has been authorized to perform:

(a) Contracting Officer shall authorize additional optional projects shown in AT.4.4 if the excess timber value exceeds 10 percent of the total timber value, or

(b) Contracting Officer shall authorize additional optional projects shown in AT.4.4 or require cash payment if the excess timber value is less than 10 percent of the total timber value, or

(c) Contractor shall make cash payment for the excess timber value if there are no remaining optional projects shown in AT.4.3.

**ET.2.2.4 Cash Payment for Stewardship Projects.** In lieu of providing timber for established Stewardship Credits, Forest Service may elect to provide a cash payment to Contractor.

**ET.2.3 Temporary Reduction of Downpayment.** When, under IT.3.3, Contracting Officer requests Contractor to delay or interrupt Contractor's Operations for more than 90 days, the downpayment amount being held on deposit may be temporarily reduced upon the written request of Contractor or at the discretion of 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 AT.15, whichever is larger.

Any downpayment amount temporarily reduced pursuant to this Subsection may be refunded or transferred at the request of Contractor. However, if Contractor has outstanding debt owing 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 Contractor's receipt of bill for collection and written notice from Contracting Officer that the basis for the delay or interruption no longer exists, Contractor shall restore the downpayment to the full amount shown in AT.15 within 15 days after the date the bill for collection is issued, subject to the provisions of ET.4. Contractor shall not resume contract operations until the downpayment amount is fully restored.

**ET.2.4 Refund of Excess Cash.** If at any time the credit balance of Integrated Resource Account exceeds the charges for timber within Payment Units Released for Cutting and for designated material not included in AT.2 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 Contractor, unless deposited under ET.2.1.1, ET.2.1.3, or ET.2.1.7. If Contractor 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 AT.2 that is cut before operations cease. After a refund for a shutdown, deposits shall be made to meet the requirements of ET.2.1.2 before additional timber may be cut.

**ET.2.5 Refund after Final Charges for Released Timber.** Any cash deposit, in excess of that required to meet charges under ET.2, shall be refunded or transferred within 15 days of Contractor's request after final charges for Included Timber have been made, except for amounts estimated to be required under JT.5.

**ET.3 Payment Guaranteed by Bond or Deposited Securities.** To guarantee payment, Contractor 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 JT.1.

**ET.3.1 Blanket Bond.** If Contractor furnishes an acceptable bond, or deposits securities, in accordance with ET.3, to guarantee payment for timber from this and other contracts within the same National Forest, the amount of such bond or deposited securities shall be allocated to such contracts 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 contract shall be reallocated to other contracts at Contractor's request. Contractor shall not start cutting hereunder until this contract receives an allocation that will meet the obligation for payment guarantee.

**ET.3.2 Letters of Credit for Payment Bond.** Notwithstanding the provisions of ET.3, Contractor may use letters of credit in lieu of a surety bond for payment bond purposes when approved by Contracting Officer.

**ET.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 Contractor'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 ET.2.1.8;
(iii) Damages pursuant to JT.4;
(iv) Road use fees;
(v) Restoration of downpayment pursuant to ET.2.2;
(vi) Periodic payments pursuant to ET.2.1.3;
(vii) Extension Deposits pursuant to ET.2.1.7; 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 JT.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 Contractor'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 Contractor's Operations, and administrative offset, shall be stayed for so long as:

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

(ii) Contractor files and prosecutes a timely Claim.

**FT.0—TRANSPORTATION FACILITIES**

**FT.1 Authorization.** Contractor is authorized to construct and maintain roads, bridges, and other transportation facilities, as needed for harvesting Included Timber and completing stewardship projects 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 FT.2. Unless otherwise provided herein, construction may be progressive during this contract. Maintenance shall be governed by FT.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 Contractor for the purpose of harvesting Included Timber or completing stewardship projects.

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

**FT.1.1 Requirements of Rights-of-Way.** Contractor's road construction and use of rights-of-way identified in attached list or KT-FT.1.1 shall be confined to rights-of-way and limited by the related easements and stipulations, if any, unless Contractor 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.

**FT.1.2 Use of Roads by Contractor.** Except as provided herein, Contractor is authorized to use existing National Forest system roads and Specified Roads listed in AT.7, when Forest Service determines that such use will not cause damage to the roads or National Forest resources.

If Contractor's use of an existing temporary or National Forest system road, not listed in AT.7, cannot be satisfactorily accommodated without reconstruction, Contractor shall be authorized to use such road upon agreement as to the minimum reconstruction work that Contractor shall perform before hauling. When appropriate, such road shall be included in AT.7 as an alternate facility under FT.2.6.

KT-FT.1.2 lists existing roads shown on Contract 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.

**FT.2 Specified Roads.** "Specified Roads" are roads, including related transportation facilities and appurtenances, shown on Contract Area Map and listed in AT.7. Contractor shall construct Specified Roads used under this contract. Construction initiated by Contractor on any such Specified Road shall be completed to an agreed terminus that meets Contractor's needs and prevents unnecessary impact on National Forest resources. Construction to such terminus shall be in full accordance with Plans and specifications identified in AT.7 or specifications and the Schedule of Items attached hereto, except for agreed adjustments needed to accommodate such terminus. For each pay unit, the "Schedule of Items" itemizes quantity of work and materials and cost, with method of measurement and basis for payment. 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 FT.2.1.2, FT.2.5, FT.2.6, or KT-FT.2.1.5, AT.7 shall be modified. If Contractor does not need a Specified Road or a portion of a Specified Road for harvesting Included Timber or completing stewardship projects and the Specified Road is not constructed, the deletion of the road or road segment will be a mutually agreed Design Change and Integrated Resource Account will be adjusted for the reduction in cost, as provided in FT.2.5.

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 contract advertisement.

**FT.2.1 Engineering.** Forest Service completed survey and design for Specified Roads prior to contract advertisement, unless otherwise shown in AT.8 or Contractor survey and design are specified in AT.7. 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 Integrated Resource Account.

Forest Service engineering shall be completed according to the schedule in AT.8. Should Forest Service be unable to perform the designated survey and design by the completion date or other agreed to time, upon written agreement, Contractor shall assume responsibility for such work. In such event, Contracting Officer shall revise:

(a) AT.7 to show Contractor's performance responsibility.

(b) The Schedule of Items to include costs of survey and design, as provided under FT.2.4, and adjust Integrated Resource Account, as provided in FT.2.5. Forest Service shall calculate such costs, using unit rates comparable with those used in the Schedule of Items.

Contractor 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. Contractor's construction schedule shall reflect Forest Service survey and design completion dates. Forest Service may agree to Contractor's request for an alternate date for starting construction.

Contractor shall perform survey, design, and construction staking of Specified Roads to be engineered by Contractor 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 Integrated Resource 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 contract advertisement.

**FT.2.1.1 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 Contractor to explain in detail specific portions of the work required by the contract. Contractor 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, Contractor 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 AT.7 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, Contractor shall make corrections pursuant to FT.2.5.3.

**FT.2.1.2 Construction Staking.** Contractor shall avoid careless or negligent damage to construction stakes, flags, or marks. If such damage occurs, Contractor shall be required to replace stakes necessary to construction. Contractor's replacement staking shall be approved by Forest Service. Alternatively, upon Contractor's request, Contracting Officer may agree to perform such work under ET.2.1.8.

When AT.7 shows that construction stakes are to be set by Forest Service after clearing, Contractor 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 Contractor's clearing and other construction activity to proceed without hindrance or delay, provided Contractor's construction activity is reasonably consistent with needs identified in Contractor's Operating Schedule or amendments thereto.

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

(a) AT.7 to show Contractor's performance responsibility.

(b) The Schedule of Items to include costs of construction staking, as provided under FT.2.4, and adjust Integrated Resource Account, as provided in FT.2.5. Forest Service shall calculate such costs, using unit rates comparable with those used in the Schedule of Items.

**FT.2.2 Material Delivery.** Within 60 days after award date, Contractor 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 Contractor 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 Contractor, Contractor is responsible for installation of needed material and for any loss of or damage to such material due to Contractor's negligence prior to installation or return of unused material to Forest Service.

At Contractor's option, Forest Service deliveries shall be to Contractor'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.

**FT.2.3 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, unless Contracting Officer determines that physical conditions make it impractical or ground conditions permit hauling without undue damage.

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.

**FT.2.4 Estimated Cost.** Estimated costs by construction phases for Specified Roads listed in AT.7 are stated by segments in the Schedule of Items. Such estimated costs are subject to adjustment under DT.3, FT.2, FT.2.1, FT.2.1.2, FT.2.5, and FT.2.6. Appropriately adjusted costs shall be made a part of a revised Schedule of Items and shown as adjustments to Integrated Resource 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 Contractor.

**FT.2.5 Construction Cost Adjustment.** Contracting Officer, as provided in FT.2.1, FT.2.1.2, FT.2.5.1, FT.2.5.2, and FT.2.5.3, shall adjust Specified Road construction cost estimates in the Schedule of Items and show the adjustments as credits or debits to Integrated Resource Account in the month when the road segment is accepted.

**FT.2.5.1 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 FT.2.5.2 or FT.2.5.3. Only changes in quantities where other than contract quantities 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 AT.7, except that:

(i) When quantity of authorized work performed or material furnished by Contractor, 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 Contractor, 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 contract. 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.

**FT.2.5.2 Physical Change.** (a) Forest Service shall adjust the Specified Road construction cost if, prior to acceptance under GT.3.6, a physical change, caused by a single event and not due to negligence of Contractor, results in an increase or decrease in work and/or materials furnished by Contractor 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 contract when quantities decrease.

(e) When quantity of authorized work to be performed or material furnished by Contractor, 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 contract. The revised estimate shall take into account any increase or decrease in unit rates that results from a reduction in quantity of work.

**FT.2.5.3 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 FT.2.5.1, 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 Contractor 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 contract when quantities decrease.

(h) When quantity of authorized work to be performed or material furnished by Contractor, 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 contract. The revised estimate shall take into account any increase or decrease in unit rates that results from a reduction in quantity of work.

**FT.2.6 Alternate Facilities.** If under Contractor's Operating Schedule, roads needed for the removal of Included Timber differ substantially from Specified Roads, other roads may be added to AT.7. 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. Contractor 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 Contractor does not construct, Integrated Resource Account shall be adjusted by Forest Service to reflect the reduction in costs. In event of rate redetermination under DT.3, such allowed costs shall be the redetermined estimated costs of facilities listed in the original Schedule of Items that Contractor does not construct.

**FT.2.7 Temporary Credit for Unamortized Specified Road Construction Cost.** When, under IT.3.3, Contracting Officer requests Contractor to delay or interrupt Contractor's Operations for more than 90 days, the unamortized cost of Specified Roads shall be credited to Contractor's Integrated Resource Account upon the written request of Contractor or at the discretion of Contracting Officer. The amount credited to Contractor shall be limited to stumpage paid above Base Rates.

Any Specified Road construction cost credited to Contractor pursuant to this Subsection may be refunded or transferred at the request of Contractor. However, if Contractor has outstanding debt owing 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, as amended.

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

**FT.3 Road Maintenance.** Contractor shall maintain roads, commensurate with Contractor's use, in accordance with Road Maintenance Requirements in KT-FT.3.1 and the Road Maintenance Specifications. Performance of road maintenance work by Contractor may be required prior to, during, or after each period of use. The timing of work accomplishment shall be based on Contractor's Operating Schedule under GT.3.1.

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 Contractor elects to use different roads than those listed in KT-FT.3.1, Forest Service shall determine Contractor's commensurate share of road maintenance and revise road maintenance deposits in KT-FT.3.2.

If Forest Service cannot perform its full commensurate share of road maintenance, Forest Service shall make a cash payment to Contractor 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.

**FT.4 Use by Others.** Forest Service shall have the right to use any road constructed by Contractor 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 Contractor hereunder when Contracting Officer determines that such use will not materially interfere with Contractor'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 KT-FT.4, Forest Service shall authorize other uses of roads constructed by Contractor hereunder only if:

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

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

Where Contractor reconstructs a road having established use, Contractor'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 Contractor's right to use such reconstructed road.

## GT.0—OPERATIONS

**GT.1 Representatives.** Unless otherwise agreed, Contractor 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 Contractor designate any representative to this contract who is currently debarred, proposed for debarment, or suspended by the Federal Government. Contractor's representative shall provide a copy of the contract to Contractor'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, Contractor's representative shall notify Forest Service 2 days, excluding weekends and Federal holidays, before any operations begin on Contract Area.

Contractor's representative shall designate, in writing, a field supervisor, one of whose responsibilities shall be on-the-ground direction and supervision of Contractor'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 perform-

ance 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. Contractor 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 Contractor's annual Operating Schedule under GT.3.1.

Unless Contracting Officer designates another Forest Service representative and notifies Contractor 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, stewardship project work, 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 60 days of contract award.

**GT.1.1 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.

**GT.2 Improvements.** Contractor is authorized to construct on National Forest land, buildings, facilities, and other improvements needed to log Included Timber and complete stewardship projects. 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.

Contractor 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, Subcontractor or their employees or agents working on the stewardship project for Contractor. Such permission, if granted, shall be without charge to Contractor.

**GT.2.1 Removal.** Unless Forest Service authorizes continued use, Contractor shall remove or dispose of all improvements when no longer needed. Should Contractor fail to remove or dispose of improvements within 6 months after Termination Date, Forest Service may dispose of improvements at Contractor's expense under JT.5 or may, upon written notice to Contractor, assume title to improvements in the name of the United States. In the latter event, Contractor shall not be required to remove such improvements.

**GT.2.2 Protection of Improvements.** So far as practicable, Contractor 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 Contract Area Map.

Contractor shall keep roads and trails needed for fire protection or other purposes and designated on Contract Area Map reasonably free of equipment and products, slash, and debris resulting from Contractor's Operations. Contractor shall make timely restoration of any such improvements damaged by Contractor's Operations and, when necessary because of such operations, shall move such improvements, as specified in KT-GT.2.2.

**GT.2.2.1 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 Contractor's Operations.

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

Contractor 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, Contractor 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. Contractor shall make arrangements for use of alternate crossings. All construction work to be performed by Contractor on the railroad right-of-way shall not damage railroad company's property.

**GT.2.2.2 Protection of Property.** In construction and reconstruction of Specified Roads, Contractor shall not unnecessarily remove, deface, injure, or destroy trees, shrubs, or other natural features, unless specifically authorized. To the extent practicable, Contractor 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.

**GT.2.3 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 perpetuative action that does not cause unnecessary delay to Contractor 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.

Contractor shall protect all known survey monuments, witness corners, reference monuments, and bearing trees against avoidable destruction, obliteration, or damage during Contractor's Operations. If any known monuments, corners, or accessories are destroyed, obliterated, or damaged by Contractor's Operations, Contractor 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. Contractor shall record such survey in appropriate county records.

**GT.2.4 Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources.** Locations of known areas needing special measures for the protection of plants, animals, cultural resources, and/or cave resources are shown on Contract Area Map and/or identified on the ground. Special protection measures needed to protect such known areas are identified in KT-GT.2.4.

In addition to any special protection measures noted, Contractor has a general duty to protect all known and identified resources referenced in this Subsection from damage or removal during Contractor's Operations. Discovery of additional areas, resources, or members of species needing special protection shall be promptly reported to the other party, and operations shall be delayed or interrupted at that location, under IT.3.3, if Contracting Officer determines there is risk of damage to such areas, resources, or species from continued operations.

Wheeled or track-laying equipment shall not be operated in areas identified as needing special measures for the protection of cultural resources, except on roads, landings, tractor roads, or skid trails approved under FT.1 or GT.4.2.2. Unless agreed otherwise, trees will not be felled into such areas. Contractor may be required to backblade skid trails and other ground disturbed by Contractor's Operations within such areas in lieu of cross ditching required under GT.6.

Contractor shall immediately notify Forest Service if disturbance occurs to any area identified as needing special protection measures and shall immediately halt operations in the vicinity of the disturbance until Forest Service authorizes Contractor to proceed. Contractor shall bear costs of resource evaluation and restoration to identified sites. Such payment shall not relieve Contractor from civil or criminal liability otherwise provided by law.

Nothing in this Subsection shall be interpreted as creating any warranty that all locations and special measures for the protection of plants, animals, cultural resources, and cave resources have been described herein, elsewhere in the contract, or designated on the ground.

**GT.3 Control of Operations.** Under this contract, "Contractor's Operations" shall include activities of or use of equipment of Contractor, Contractor's employees, agents, 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).

Contractor'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 Contractor.

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

(a) Give tentative approval and bill Contractor as necessary under ET.2.1 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. Contractor shall not cut timber in any Payment Unit until it is Released for Cutting.

**GT.3.1 Operating Schedule.** Contractor shall, before commencing operations, provide in writing an annual Operating Schedule of anticipated major activities and needs for logging Included Timber and completing stewardship projects, such as logging, road maintenance, and construction, including construction staking under FT.2.1.2 and material delivery under FT.2.2. Upon reasonable notice to Forest Service, such schedule shall be subject to modifications necessitated by weather, markets, or other unpredictable circumstances.

Subject to GT.6 and when the requirements of GT.6.6 are met, Contractor's Operations may be conducted outside Normal Operating Season. "Normal Operating Season" is the period(s) beginning and ending on the dates stated in AT.13 of any year.

**GT.3.1.1 Inclusion of Technical Proposal.** Upon execution of the contract, all elements of the Technical Proposal accepted by Forest Service become binding parts of the contract, including, but not limited to, planned peri-

ods for and methods of road construction, timber harvesting, performance of stewardship projects, slash disposal, erosion control measures, and other contractual requirements. In addition, Contractor may not substitute a Subcontractor that has been accepted in the Technical Proposal with an alternate Subcontractor, unless Contracting Officer agrees to substitution.

Contractor may revise this Technical Proposal when necessitated by weather, markets, or other unforseen circumstances beyond the Contractor's control, subject to approval of Contracting Officer. In the event of delays beyond the control of Contractor that qualify for Contract Term Adjustment, the Technical Proposal shall be adjusted by mutual agreement to accommodate the adjusted contract period.

**GT.3.1.2 Plan of Operations for Road Construction.** Annually, prior to start of construction, Contractor shall submit a supplement to the Technical Proposal 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. Contractor shall submit a revised schedule when Contractor proposes a significant deviation from the progress schedule.

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

**GT.3.2 Protection of Residual Trees.** Contractor's Operations shall not unnecessarily damage young growth or other trees to be reserved.

**GT.3.3 Safety.** Contractor's Operations shall facilitate Forest Service's safe and practical inspection of Contractor's Operations and conduct of other official duties on Contract Area. Contractor has all responsibility for compliance with safety requirements for Contractor'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 Contractor may request an adjustment in Current Contract Rates to compensate for the changed conditions.

Unless otherwise agreed in writing, when Contractor's Operations are in progress adjacent to or on Forest Service controlled roads and trails open to public travel, Contractor shall furnish, install, and maintain all temporary traffic controls that provide the user with adequate warning of hazardous or potentially hazardous conditions associated with Contractor's Operations. Contractor 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, Contract Area Map, Traffic Control Plan, or in specifications attached hereto.

**GT.3.4 Sanitation and Servicing.** Contractor shall take all reasonable precautions to prevent pollution of air, soil, and water by Contractor's Operations. If facilities for employees are established on Contract Area, they shall be operated in a sanitary manner. In the event that Contractor's Operations or servicing of equipment result in pollution to soil or water, Contractor shall conduct cleanup and restoration of the polluted site to the satisfaction of Forest Service.

Contractor shall maintain all equipment operating on Contract Area in good repair and free of abnormal leakage of lubricants, fuel, coolants, and hydraulic fluid. Contractor shall not service tractors, trucks, or other equipment on National Forest lands where servicing is likely to result in pollution to soil or water. Contractor 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. Contractor shall remove from National Forest lands all contaminated soil, vegetation, debris, vehicle oil filters (drained of free-flowing oil), batteries, oily rags, and waste oil resulting from use, servicing, repair, or abandonment of equipment.

**GT.3.4.1 Prevention of Oil Spills.** If Contractor maintains storage facilities for oil or oil products on Contract Area, Contractor 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, Contractor 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.

Contractor 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 Contract Area that are caused by Contractor's employees, agents, Subcontractors, or their employees or agents, directly or indirectly, as a result of Contractor's Operations. Contractor will take whatever initial action may be safely accomplished to contain all spills.

**GT.3.4.2 Hazardous Substances.** Contractor shall notify the National Response Center and Contracting Officer of all releases of reportable quantities of hazardous substances on or in the vicinity of Contract Area that are caused by Contractor's employees, agents, Subcontractors or their employees or agents, directly or indirectly, as a result of Contractor's Operations, in accordance with 40 CFR 302.

**GT.3.5 Equipment Cleaning.** (a) Areas, known by Forest Service prior to contract advertisement, that are infested with invasive species of concern are shown on Contract 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.

(b) Contractor shall not move any Off-Road Equipment, which last operated in an area that is infested with one or more invasive species of concern onto Contract Area without having first taken reasonable measures to make each such piece of equipment free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds. Contractor shall identify the location of the equipment's most recent operations. If the prior location of the Off-Road Equipment cannot be identified, Forest Service will assume that it is infested with seeds of invasive species of concern. In addition, prior to moving Off-Road Equipment from an area on this contract that is shown on Contract Area Map to be infested with invasive species of concern to any other area that is indicated on Contract Area Map as being free of invasive species of concern, Contractor shall again take reasonable measures to make each such piece of equipment free of soil, seeds, vegetative matter, or other debris that could contain or hold seeds.

(c) Contractor must advise Forest Service of measures taken to clean Off-Road Equipment and arrange for Forest Service inspection prior to such equipment being placed in service or moved from areas infested with invasive species of concern to areas that are free of such invasive species. Forest Service shall have 2 days, excluding weekends and Federal holidays, to inspect equipment after it has been made available for inspection. After inspection or after 2 days, Contractor may proceed with operations. Reasonable measures shall not require the disassembly of equipment components or use of any specialized inspection tools. Equipment shall be considered free of soil, seeds, and other such debris when a visual inspection does not disclose such material.

(d) "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.

(e) If Contractor desires to clean Off-Road Equipment on National Forest land, such as at the end of a project or prior to moving to a new area that is free of invasive species of concern, Contractor and Forest Service shall agree on locations for the cleaning and control of off-site impacts, if any.

(f) New infestations of invasive species of concern to Forest Service, identified by either Contractor or Forest Service on Contract Area, shall be promptly reported to the other party and operations shall be delayed or interrupted at that location, under IT.3.3, until Contractor and Forest Service agree on treatment methods.

(g) Nothing in this Subsection shall be interpreted as creating any warranty that all locations of invasive species of concern have been described herein, elsewhere in the contract, or designated on the ground.

**GT.3.6 Acceptance of Work.** Upon Contractor'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 Contractor'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, stewardship project operations, 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 Contractor.

Within 2 days of inspection, excluding weekends and Federal holidays, Forest Service shall furnish Contractor 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 Contractor's request, Contractor 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 Contractor's construction period on any completed portion of road.

When all contractual work of Contractor has been accepted for any Payment Unit or stewardship project area, it shall be eliminated from Contract Area on written notice of either party to this contract.

**GT.3.6.1 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 Contractor, 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 Contractor, such as seasonal limitations. Contractor 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. Contractor 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 Contractor in connection with Contractor's Operations, shall be cleared of all rubbish, excess materials, and temporary structures.

**GT.4 Conduct of Logging.** Unless otherwise specifically provided herein, Contractor shall fell trees designated for cutting and shall remove the portions that meet Utilization Standards, as provided in CT.2, prior to acceptance of Payment Unit for completion of logging and stewardship projects under GT.3.6. 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 KT-GT.4 provisions set forth requirements to meet special or unusual logging conditions:

**GT.4.1 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 AT.2. Contractor 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 AT.2. If necessary to assess extent of defect, Contractor shall make sample saw cuts or wedges.

**GT.4.1.1 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.

**GT.4.1.2 Stump Heights.** Stumps shall not exceed, on the side adjacent to the highest ground, the maximum heights set forth in AT.6, except that occasional stumps of greater heights are acceptable when Contractor determines that they are necessary for safe and efficient conduct of logging. Unless otherwise agreed, Contractor shall re-cut high stumps so they will not exceed heights specified in AT.6 and shall dispose of severed portions in the same manner as other logging debris. The stump heights shown in AT.6 were selected with the objective of maximum reasonable utilization of the timber, unless Contract Area Map shows special areas where stump heights are lower for aesthetic, land treatment, or silvicultural reasons.

**GT.4.1.3 Limbing.** When Forest Service determines it is necessary to minimize damage to the residual stand during skidding, Contractor shall cut exposed limbs from products prior to skidding. Contractor may leave uncut those limbs that cannot be cut with reasonable safety.

**GT.4.2 Skidding and Yarding.** Methods of skidding or yarding specified for particular areas, if any, are indicated on Contract 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.

**GT.4.2.1 Rigging.** Insofar as practicable, needed rigging shall be slung on stumps or trees designated for cutting.

**GT.4.2.2 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.

**GT.4.2.3 Skidding on Roads.** Products may be skidded on permanent roads authorized for hauling under FT.1.2 only by prior written agreement.

**GT.4.2.4 Arches and Dozer Blades.** Unless otherwise specified in KT-GT.4.2.4, 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.

**GT.5 Streamcourse Protection.** “Streamcourses” that are subject to provisions of this Section are shown on Contract Area Map. Unless otherwise agreed, the following measures shall be observed to protect Streamcourses:

(a) Contractor’s Operations shall be conducted to prevent debris from entering Streamcourses, except as may be authorized under paragraph (d). In event Contractor causes debris to enter Streamcourses in amounts that may adversely affect the natural flow of the stream, water quality, or fishery resource, Contractor 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 Contractor’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.

**GT.6 Erosion Prevention and Control.** Contractor’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. Contractor 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 Contractor 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, Contractor shall make additional deposits on request by Forest Service. Any money deposited or used for this purpose shall be treated as cooperative deposits under ET.2.1.8.

**GT.6.1 Meadow Protection.** Reasonable care shall be taken to avoid damage to the cover, soil, and water in meadows shown on Contract Area Map. Vehicular or skidding equipment shall not be used on meadows, except where roads, landings, and tractor roads are approved under FT.1 or GT.4.2.2. 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.

**GT.6.2 Wetlands Protection.** Wetlands requiring protection under Executive Order 11990 are shown on Contract Area Map. Vehicular or skidding equipment shall not be used in such wetlands, except where roads, landings, and tractor roads are approved under FT.1 or GT.4.2.2. Additional measures needed to protect such areas are provided in KT-GT.6.2.

**GT.6.3 Temporary Roads.** As necessary to attain stabilization of roadbed and fill slopes of Temporary Roads, Contractor shall employ such measures as outsloping, drainage dips, and water-spreading ditches.

After a Temporary Road has served Contractor's purpose, Contractor shall give notice to Forest Service and shall remove bridges and culverts, eliminate ditches, outslope 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.

**GT.6.3.1 Temporary Roads to Remain Open.** To maintain short term access to portions of Contract Area for post-contract treatments and other purposes after a Temporary Road has served Contractor's purpose, pursuant to GT.6.3, Contractor agrees, that on Temporary Roads designated on Contract 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.

**GT.6.4 Landings.** After landings have served Contractor's purpose, Contractor 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.

**GT.6.5 Skid Trails and Fire Lines.** Contractor 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 Contractor-built fire lines prior to or during construction. By agreement, Contractor may use other comparable erosion control measures, such as backblading skid trails, in lieu of cross ditching.

**GT.6.6 Current Operating Areas.** Where logging, road construction, or other stewardship project work is in progress but not completed, unless agreed otherwise, Contractor 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, Contractor shall keep such work on any additional disturbed areas as up to date as practicable.

**GT.6.7 Erosion Control Structure Maintenance.** During the period of this contract, Contractor shall provide maintenance of soil erosion control structures constructed by Contractor until they become stabilized, but not for more than 1 year after their construction. Contracting Officer may agree to perform such structure maintenance under ET.2.1.8, if requested by Contractor, subject to agreement on rates. Contractor shall not be responsible for repair of such structures damaged by other National Forest users whose activities are not a part of Contractor's Operations.

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

**GT.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 KT-GT.8.

**GT.8.1 Product Identification.** For contracts west of the 100th meridian, before removal from Contract Area, unless Contracting Officer determines that circumstances warrant a written waiver or adjustment, Contractor 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 Contract Area is within a State that maintains a log brand register, brands shall be registered with the State. Contractor shall use assigned brand exclusively on logs from this contract until Contracting Officer releases brand. Contractor 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. Contractor shall replace identifying marks if they are lost, removed, or become unreadable. Contractor 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 contract 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 contract brand.

**GT.9 Stewardship Projects.** Performance of stewardship projects shall be in accordance with the specifications in KT-GT.9.

All of the mandatory stewardship projects, as shown in AT.4.4, shall be performed. Optional stewardship projects, as shown in AT.4.4, shall be performed when authorized in writing by Contracting Officer. Such authorization may be for all or a portion of the quantity shown. Optional stewardship projects may be selected and authorized in any order by the Contracting Officer. Upon written request of Contractor, additional optional stewardship projects shall be authorized; however, Contracting Officer shall not be obligated to authorize additional stewardship projects if three or more authorized optional stewardship projects or any of the mandatory stewardship projects remain uncompleted. Contracting Officer shall not be obligated to authorize additional optional stewardship projects at any time if Contracting Officer determines that there is insufficient value of remaining designated timber to cover the value of additional stewardship projects.

**GT.9.1 Refund of Unused Stewardship Credits.** When, under IT.3.3, Contracting Officer requests Contractor to delay or interrupt Contractor's Operations for more than 60 days, unused Stewardship Credits may be refunded upon the written request of Contractor or at the discretion of Contracting Officer.

Contractor agrees that when unused Stewardship Credits are refunded that Contractor shall remit, release, and forever discharge the United States from any and all Claims arising from any delay in using Stewardship Credits under this contract, including, but not limited to, any Claims of interest or other costs.

If Contractor has outstanding debt owing the United States, Contracting Officer must apply the amount of Stewardship Credit that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended.

**HT.0—FIRE PRECAUTIONS AND CONTROL**

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

**HT.2 Fire Precautions.** Specific fire precautionary measures listed in KT-HT.2 shall be applicable during Contractor's Operations in "Fire Precautionary Period" described in AT.9. 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 Contractor's Operations in Fire Precautionary Period.

**HT.2.1 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.

**HT.2.2 Emergency Precautions.** Forest Service may require the necessary shutting down of equipment on portions of Contractor's Operations, as specified by the emergency fire precautions schedule of KT-HT.2.2. Under such conditions, after Contractor ceases active operations, Contractor shall release for hire by Forest Service, if needed, Contractor's shutdown equipment for fire standby on Contract Area or other areas of Contractor's Operations and personnel for fire standby or fire patrol, when such personnel and equipment are not needed by Contractor 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 Contractor requests, shall be operated only by personnel approved by Contractor. 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.

**HT.3 Fire Control.** Contractor shall, both independently and in cooperation with Forest Service, take all reasonable and practicable action to prevent and suppress fires resulting from Contractor's Operations and to suppress any

forest fire on Contract Area. Contractor's independent initial fire suppression action on such fires shall be immediate and shall include the use of all necessary personnel and equipment at Contractor's disposal on Contract Area or within the distance of Contract Area stated in AT.10.

**HT.3.1 Contractor's Reinforcement Obligations.** Whenever an Operations Fire or Negligent Fire, whether on or off Contract Area, or any other forest fire on Contract Area, has not been suppressed by initial action and appreciable reinforcement strength is required, Forest Service may require further actions by Contractor 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:

**HT.3.1.1 Suspend Operations.** To suspend any or all of Contractor's Operations.

**HT.3.1.2 Personnel.** To release for employment by Forest Service any or all of Contractor's personnel engaged in Contractor's Operations or timber processing within the distance of Contract Area stated in AT.10. Any organized crew so hired shall include Contractor's supervisor, if any. Personnel so employed shall be paid at Forest Service standard emergency fire fighting rates.

**HT.3.1.3 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 Contractor's equipment suitable for fire fighting and currently engaged in Contractor's Operations within the distance of Contract Area stated in AT.10. Equipment shall be operated only by personnel approved by Contractor, if so requested by Contractor.

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

**HT.4.1 Operations Fire.** An "Operations Fire" is a fire caused by Contractor's Operations other than a Negligent Fire.

Forest Service, except as provided in HT.3, shall use cooperative deposits under ET.2.1.8 to perform fire suppression activities on Operations Fires. Contractor agrees to reimburse Forest Service for such cost for each Operations Fire, subject to a maximum of the dollar amount stated in AT.11. The cost of Contractor's actions, supplies, and equipment on any such fire provided pursuant to HT.3, or otherwise at the request of Forest Service, shall be credited toward such maximum. If Contractor's actual cost exceeds Contractor's obligation stated in AT.11, Forest Service shall reimburse Contractor for the excess.

**HT.4.2 Negligent Fire.** A "Negligent Fire" is a fire caused by negligence or fault of Contractor's Operations, including, but not limited to, one caused by smoking by persons engaged in Contractor's Operations during the course of their employment, or during rest or lunch periods; or if Contractor's failure to comply with the requirements of HT.2 and HT.3 results in a fire starting or permits a fire to spread. Damages and the cost of suppressing Negligent Fires shall be borne by Contractor.

**HT.4.3 Other Fires on Contract Area.** Forest Service shall pay Contractor, at fire fighting rates common in the area or at prior agreed rates, for equipment or personnel furnished by Contractor pursuant to HT.3, or otherwise at the request of Forest Service, on any fire on Contract Area other than an Operations Fire or a Negligent Fire.

**HT.5 State Law.** Contractor 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 Contractor for fire fighting expenditures in accordance with HT.4.1 shall not be withheld pending settlement of any such claim or action based on State law.

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

## IT.0—OTHER CONDITIONS

**IT.1 Title and Liability.**

**IT.1.1 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 Contract Area or other authorized cutting area, and paid for, at which time title shall vest in Contractor. For purposes of this Subsection, timber in Payment Units Released for Cutting covered by cash deposit or payment guarantee under ET.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 Contract Area or other authorized cutting area by Contractor on or prior to Termination Date, shall remain in Forest Service.

**IT.1.2 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 Contractor, unless Contractor 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 IT.3.3.

In the event Included Timber to which Forest Service holds title is destroyed, Contractor 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 Contractor 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.

**IT.2 Period of Contract.** All obligations of Contractor shall be discharged not later than "Termination Date" stated in AT.12, unless it is adjusted pursuant to IT.2.1 or IT.2.1.2 or extended pursuant to IT.2.3 or IT.3.2, 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 Contractor completing performance of obligations covered by such permission.

**IT.2.1 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, Contractor 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) Contractor experiences delay in starting scheduled operations or interruptions in active operations, either of which stops removal of Included Timber from Contract Area through curtailment in felling and bucking, yarding, skidding and loading, hauling, or road construction, as scheduled under GT.3.1, for 10 or more consecutive days during a Normal Operating Season due to causes beyond Contractor'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 Contractor, in writing, to delay or interrupt operations during the normal operating season for any purpose other than suspension under ET.4 or JT.3 or

(ii) Contractor suffers a delay or interruption of Contractor'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 IT.2.3, 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.

**IT.2.1.1 Delay in Reconstruction of Processing Facilities.** Notwithstanding the 12-month limitation in IT.2.1, if Contractor demonstrates a diligent effort has been made to replace primary timber processing facilities and that delays in doing so have been beyond Contractor's control, Contracting Officer may authorize Contract Term Adjustment up to a total of 24 months.

**IT.2.1.2 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 AT.17. Contractor 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 Contractor'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 Contractor'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.

**IT.2.2 Termination for Catastrophe.** In event of Catastrophic Damage, this contract may be modified under IT.3.2, following rate redetermination under DT.3.2, or terminated under this Subsection. Such termination shall not be considered a termination under IT.3.4.

**IT.2.2.1 Termination by Contractor.** This contract shall be terminated, upon election and written notice by Contractor, if Catastrophic Damage rate redetermination under DT.3.2 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.

**IT.2.2.2 Termination by Forest Service.** This contract may be terminated by written notice from Contracting Officer, if there is Catastrophic Damage and Contractor does not agree, under IT.3.2, within 30 days of receipt from Contracting Officer of contract modifications proposed to permit the harvest of the catastrophe-affected timber.

**IT.2.3 Contract Term Extension**. "Contract Term Extension" means an extension of the term of this contract, at the request of Contractor, under this Subsection. This Subsection does not obligate Contracting Officer to grant Contract Term Extension.

An extension can only be granted when Contracting Officer has determined that Contractor has diligently performed under the terms of this contract and when such extension is determined to be in the best interest of Forest Service.

**IT.2.3 Contract Term Extension**. "Contract Term Extension" means an extension of the term of this contract, at the request of Contractor, under this Subsection. This Subsection does not obligate Contracting Officer to grant Contract Term Extension. An extension can only be granted when Contracting Officer has determined that Contractor has diligently performed under the terms of this contract and when such extension is determined to be in the best interest of Forest Service.

Contracting Officer may not grant Contractor's written request for Contract Term Extension, unless Contractor's Operations to date have been in reasonable compliance with contract terms and the approved Technical Proposal under GT.3.1.1 and all contractual requirements have been met by Contractor and accepted by Forest Service in active stewardship project areas and on areas cut over at time of Contractor's request, except for areas where work is in progress at time of Contractor's request. Contractor'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.

Contract Term Extension shall not become effective unless the initial Extension Deposit required by ET.2.1.7 has been made by the effective date of any 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.

**IT.3.1 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 Contract 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 Integrated Resource Account.

**IT.3.2 Modification for Catastrophe.** In event of Catastrophic Damage, Forest Service, in consultation with Contractor, shall outline on Contract 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 Contract Area.

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

After Contract Area Map has been outlined under this Subsection, Forest Service may propose contract modification to permit the harvest of catastrophe-affected timber. If Contractor accepts Forest Service proposed modifications, this contract shall be modified to include rates redetermined under DT.3.2 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.

**IT.3.3 Contract Suspension and Modification.** (a) Contracting Officer may, by written order, delay or interrupt authorized operations under this contract or 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 request is required by a court order or this contract is named in such a proceeding.

(v) Upon a change in law if performance of the contract, as determined by the Forest Service, would not be in compliance, in whole or in part, with such law.

(b) In the event of a request delaying or interrupting Contractor's Operations under this Subsection, Contractor's remedy shall be: (i) Contract Term Adjustment pursuant, (ii) reimbursement for Out-of-Pocket Expenses, (iii) rate redetermination to measure any decline in the market pursuant to DT.3.3, (iv) temporary reduction of downpayment pursuant to ET.2.3, (v) temporary credit for unamortized Specified Road construction cost pursuant to FT.2.7, and (vi) temporary bond reduction pursuant to JT.1.3.

(c) In addition to the compensation scheme set forth in subparagraph (b), Contractor may seek termination pursuant to IT.3.6 or, at any time prior to authorization to resume work suspended under this Subsection, demand termination under IT.3.4. If Contractor elects termination under IT.3.4 or IT.3.6, Contractor is nonetheless required, prior to contract termination, to fulfill all contract obligations for areas not affected by the delay or interruption under this Subsection and all compliance obligations for areas affected by the delay or interruption, including, but not limited to, erosion control, brush disposal, and road maintenance. To the extent Contractor is unable to fulfill such obligations, any compensation due to Contractor will be reduced by the cost of completing the unfulfilled obligations, as determined by Contracting Officer. If Contractor seeks damages pursuant to subparagraph (b) and termination pursuant to this subparagraph, Contractor is not entitled to duplicative recovery of any damages.

(d) In cases of modification under this Subsection, Contractor shall receive a rate redetermination pursuant to DT.3.1.

(e) Contractor will only be eligible for the remedies listed in this Subsection if the delay or interruption occurs when operations were in progress or would have been proceeding, had there been no delay or interruption under this Subsection

(f) The applicability of this Subsection shall be unaffected by a finding during administrative appeal or litigation that this sale or a similarly situated sale was awarded or operated without properly complying with any statute, regulation, or policy.

**IT.3.4 Contract Termination.** (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 IT.3.3.

(b) Contractor agrees that compensation for termination of this contract, in whole or in part, under this Subsection shall be: (i) refund or release of advanced deposits under ET.2.1.2 for timber cut but not removed, (ii) reimbursement for Out-of-Pocket Expenses, and (iii) one of the following except when termination, pursuant t I.3.3(v), is based upon a change of law which is public and general in nature: replacement volume under subparagraph (c) or liquidated damages under subparagraph (d).

(c) Forest Service and Contractor shall make good faith efforts to identify within Contract Area replacement timber of similar volume, quality, access, and topography. Stumpage price shall be adjusted under DT.3.1 to account for differences between replacement timber and timber deleted. If Forest Service and Contractor cannot reach agreement on satisfactory replacement volume or the proper stumpage of such timber, either party may opt to end the search and Contractor shall be compensated under paragraph (d) of this Subsection.

(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 Contracting Officer as of Termination Date, using Forest Service methods in use as of Termination Date.

(e) When Contractor elects termination under this Subsection as a remedy for a delay or interruption pursuant to IT.3.3, Contractor shall only be entitled to damages pursuant to subparagraph (d) if the IT.3.3 delay or interruption is greater than one year, and the delay or interruption was not initially caused by wind, flood, earthquake, landslide, fire, forest pest epidemic, or other major natural phenomenon.

(f) In cases of partial termination under this Subsection, Contractor's sole and exclusive remedy for the remaining volume shall be a rate redetermination pursuant to DT.3.1.

(g) The applicability of this Subsection shall be unaffected by a finding during administrative appeal or litigation that this sale, or a similarly situated sale, was awarded or operated without properly complying with any statute, regulation, or policy.

(h) Contractor is required to fulfill all contract obligations not affected by a termination or partial termination under this Subsection. To the extent Contractor is unable to fulfill such obligations, any compensation due to Contractor will be reduced by the cost of completing the unfulfilled obligations, as determined by Contracting Officer.

**IT.3.5 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 IT.3.3 or IT.3.4. An expenditure is unrecovered within the meaning of this Subsection where Contractor was precluded

from gaining the benefit of the expenditure during a given period because operations were not permitted. Forest Service will reimburse Contractor only for the following Out-of-Pocket Expenses:

(a) Out-of-Pocket Expenses for maintenance of the contract 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;

(b) 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 Contractor;

(c) Out-of-Pocket Expenses for move-in and move-out;

(d) Out-of-Pocket Expenses for felling, bucking, lopping, skidding, yarding, and decking any products so processed, but not removed from Contract Area because: (i) the contract was terminated or (ii) the products no longer meet Utilization Standards because of delay or interruption;

(e) If terminated in whole or in part, Out-of-Pocket Expenses for unused Temporary Roads;

(f) 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

(g) If the contract is terminated, in whole or in part, Out-of-Pocket Expenses for bid preparation, including review of contract offering.

Contractor shall submit documentation of claimed expenditures and supporting analysis to Contracting Officer to assist in Contracting Officer's calculation of reimbursement. Expenses related to paragraphs (a), (b), and (g) may be based on interest at the Prompt Payment Rate established by the Secretary of the Treasury. Contracting Officer shall determine the amount of reimbursement under this Subsection using information from Contractor and/or Forest Service methods in use on the date that operations were delayed, interrupted, or terminated at Contracting Officer's sole discretion.

Contractor shall make all reasonable efforts to minimize Out-of-Pocket Expenses.

**IT.3.6 Termination for Market Change.** In the event of delay or interruption under IT.3.3, exceeding 90 days, this contract may be:

(a) Modified to include rates redetermined under DT.3.3 or

(b) Terminated upon election and written notice by Contractor, if a rate redetermination for market change under DT.3.3 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 weighted average Current Contract Rate.

Contractor agrees that damages caused by termination of contract by either party will be limited to Out-of-Pocket Expenses.

**IT.4 Performance by Other than Contractor.** The acquisition or assumption by another party, under an agreement with Contractor, of any right or obligation of Contractor 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 Contractor of the responsibilities or liabilities Contractor has assumed hereunder or

(b) Be given unless such other party:

(i) Is acceptable to Forest Service as a contractor 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.

**IT.5 Sale of Other Materials.** Forest Service reserves the right to sell from Contract 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 Contractor's Operations. Contractor shall not be obligated to do any work made necessary by the action of others.

**IT.6 Provisions Required by Statute.**

**IT.6.1 Covenant against Contingent Fees.** Contractor 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 Contractor 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 Contractor to pay, in addition to the contract price or consideration, the full amount of such commission, percentage, brokerage, or contingent fee.

**IT.6.2 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).

**IT.6.3 Nondiscrimination in Employment.** If the total value of this contract is in excess of $10,000, Contractor agrees during its performance as follows:

(a) Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. Contractor 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. Contractor 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) Contractor will, in all solicitations or advertisements for employees placed by or on behalf of Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(c) Contractor will send to each labor union or representative of workers with which Contractor has a collective bargaining agreement or other contract or understanding, a notice to be provided by Forest Service, advising the labor union or worker's representative of Contractor's commitments under this Subsection, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(d) Contractor 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) Contractor 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 Contractor'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 Contractor 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) Contractor 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. Contractor 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 Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or vendor as a result of such direction by Forest Service, Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**IT.6.4 Debarment and Suspension Certification.** Pursuant to 7 CFR Part 3017, Contractor 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.

Contractor 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 contracts, unless Contractor knows that the certification is erroneous.

Contractor shall keep the certifications of its Subcontractors on file until contract 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 Contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

If Contractor knowingly enters into a contract 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 contracts, in addition to other remedies available to the Government, Forest Service may pursue available remedies, including suspension and/or debarment.

The Subcontractor for a contract shall complete a "Subcontractor Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion." An example of this certification is shown following the instructions for page 2 of this contract.

**IT.6.5 Contract Consistency With Other Laws.** The contract shall govern if State and local environmental quality laws conflict with or preclude performance of contractual requirements.

**JT.0—PERFORMANCE AND SETTLEMENT**

**JT.1 Performance Bond.** As a further guarantee of the faithful performance of the provisions of this contract, Contractor delivers herewith and agrees to maintain a surety bond in the dollar amount stated in AT.14, unless the

amount is adjusted as provided in JT.1.1. In lieu of surety bond, Contractor may deposit into a Federal Depository, as directed by Forest Service under ET.2.1, and maintain therein, cash in the dollar amount stated in AT.14 or negotiable securities of the United States having market value at time of deposit of not less than the dollar amount stated in AT.14.

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, Contractor shall, within 30 days of receipt of demand, furnish a new bond with surety satisfactory to Forest Service.

**JT.1.1 Bond Reduction.** Upon Contractor's written request, Contracting Officer shall redetermine the amount of Contractor's performance bond to an amount not less than Contractor's remaining obligations, including the value of Included Timber remaining on Contract Area, plus the estimated cost of uncompleted work required of Contractor and any unpaid billings due on the contract. Contracting Officer shall provide written notice of the redetermined amount to Contractor and to Contractor's surety. Similarly, Contracting Officer shall report to Contractor 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 Contractor, subject to the conditions in JT.5.

**JT.1.2 Letters of Credit.** Notwithstanding the provisions of JT.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.

**JT.1.3 Temporary Bond Reduction.** When, under IT.3.3, Contracting Officer requests Contractor to delay or interrupt Contractor's Operations for more than 90 days, the performance bond amount required may be temporarily reduced upon the written request of Contractor 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 Contractor and any unpaid billings due on the contract.

Upon Contractor's receipt of written notice from Contracting Officer that the basis for the delay or interruption no longer exists, Contractor shall restore the performance bond to the full amount shown in AT.14 within 15 days. Contractor shall not resume contract operations until the performance bond amount is fully restored.

**JT.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 Contractor shall be made in writing and submitted to Contracting Officer for decision. A Claim by the Government against Contractor shall be subject to a decision by Contracting Officer.

For Contractor Claims of more than $100,000, Contractor 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 Contractor's knowledge and belief; and the amount requested accurately reflects the contract adjustment for which Contractor believes the Government is liable. Contractor, if an individual, shall execute the certification. When Contractor is not an individual, the certification shall be executed by a senior company official in charge at Contractor's plant or location involved or by an officer or general partner of Contractor having overall responsibility for the conduct of Contractor's affairs.

For Contractor Claims of $100,000 or less, Contracting Officer must render a decision within 60 days. For Contractor Claims in excess of $100,000, Contracting Officer must decide the Claim within 60 days or notify Contractor of the date when the decision will be made.

Contracting Officer's decision shall be final unless Contractor 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 Contractor'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 Contractor arising under the contract, Contractor shall proceed diligently with the performance of the contract in accordance with Contracting Officer's decision.

**JT.2.1 Time Limits for Submission of Claim.** Failure by Contractor 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. Contractor shall file such Claim within the following time limits:

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

(c) For Payment Units, cutting units and stewardship project areas, Contractor must file any Claim not later than 60 days after receipt of Forest Service written notification that such area has been accepted; and

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

**JT.2.2 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 in Part KT
(b) Contract Area Map
(c) Specific Conditions in Part AT and Schedule of Items
(d) Standard Provisions in Parts BT through JT
(e) Special project specifications
(f) Plans, such as slash, erosion control, and dust abatement
(g) Agreements between Contractor 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

**JT.3 Breach.** In event Contractor breaches any of the material provisions of this contract, Forest Service shall give Contractor 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 Contractor's Operations. Such notice of breach and notice to suspend Contractor'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 GT.1, such oral suspension notice may be given to Contractor'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 Contractor.

Suspension under this section shall not entitle Contractor to any remedies arising under I.3.3.

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, Contractor shall remedy the breach as follows:

(a) If remedying such breach requires on-the-ground action by Contractor, Contractor 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 Contractor, such breach shall be remedied within 30 days.

**JT.3.1 Termination for Breach.** Contracting Officer, with the concurrence of the Regional Forester, may terminate this contract for breach in the event Contractor:

(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 Contractor; 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 GT.0.1;

(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 JT.3, causing undesignated timber meeting Utiliza-

tion 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 JT.3.

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

**JT.4 – Damages for Failure to Complete Contract or Termination for Breach.** (a) In event of Contractor's failure to cut designated timber on portions of Contract Area by Termination Date; Contractor's failure to complete required stewardship projects by Termination Date; or termination for breach under JT.3.1; Forest Service shall appraise remaining Included Timber and stewardship projects, unless termination is under IT.2.2 or IT.3.4. Such appraisal shall be made with the standard Forest Service method in use at time of termination.

(b) If the contract is reoffered and awarded, damages due shall be the amount by which Current Contract Value decreases at new Bid Rates, plus costs described in paragraph (d) of this Section, less any unused established Stewardship Credits.

(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 decreases, based on the value determined by appraisal, plus costs described in paragraph (d) of this Section, less any unused established Stewardship Credits.

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

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

(ii) If Contractor has failed to cut individual trees in the portions of Contract Area cut over and there is no resale of such individual trees, Contractor 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 GT.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 Contractor's failure to harvest Included Timber by Termination Date.

**JT.5 Settlement.** If obligations of Contractor have not been fully discharged by Termination Date, any money advanced or deposited hereunder shall be retained and applied toward unfulfilled obligations of Contractor without prejudice to any other rights or remedies of Forest Service. Such funds may be treated as cooperative deposits under ET.2.1.8 for uncompleted work 30 days after receipt of written notice from Contracting Officer to Contractor of work to be done and Contractor's failure to deny the obligation or to do the work.

**JT.6 Contract Closure.** Contracting Officer shall give appropriate written notice to Contractor when Contractor has complied with the terms of this contract. Contractor shall be paid refunds due from Integrated Resource Account under ET.2.4 and excess cooperative deposits under ET.2.1.8.

## KT.0—SPECIAL PROVISIONS

In accordance with AT.19, the Sections, Subsections, and Items therein listed are attached and made a part hereof. The identifier after the K indicates the Part, Section, Subsection, or Item that is being supplemented or modified by each particular provision included in this Part.

TRAFFIC CONTROL PLAN AND SPECIFICATIONS PURSUANT TO GT.3.3 SAFETY

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

Part I. Signing and Other Warning Methods:

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

| *MINIMUM LETTER SIZE AND LEGEND* | *MINIMUM SIZE AND SHAPE* | *WHEN AND WHERE REQUIRED* |
|---|---|---|
| 1. LOGGING OPERATIONS NEXT <> MILES (4" letters) | 24" (rectangle) 36" | Min. 100 ft. outside of any continuous work areas, on roads listed in KT-FT.3.1# and trails listed in Part II. |
| 2. LOGGING OPERATIONS (3" letters) | 24" (diamond) 24" | To be used in conjunction with "Logging Operations Next <> Miles" and where work area is not continuous. |
| 3. FOR LOGGING USE ONLY (3" letters) | 24" (diamond) 24" | Required where roads listed in KT-FT.3.1# and temporary roads intersect with KT-FT.3.1# roads. Install a cross ditch to discourage use when sign is covered or removed for extended periods. |
| 4. TRUCKS (4" letters) | 24" (diamond) 24" | At critical intersections on roads listed in KT-FT.3.1# 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) | 24" (rectangle) 36" | Use in conjunction with "Logging Operations Next <> Miles" and "Logging Operations." |
| 6. TREE FELLING AHEAD (3" letters) | 24" (diamond) 24" | 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 (3" letters) | 24" (diamond) 24" | Required at least 200 feet in advance of Contractor road maintenance operations on roads listed in Schedule KT-FT.3.1#. |

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

Sign borders and lettering shall be black. Borders are 1/2 inch wide, inset 1/2 inch from outside edge of sign. All sign backgrounds shall be orange, except signs #1 and 5 which shall be reflectorized orange.

Signs shall be installed on posts, with a 5 foot minimum ground clearance, or on temporary supports complying with MUTCD standards.

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

Contractor shall furnish flag personnel 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. On roads listed in KT-FT.3.1# and temporary roads, Contractor may temporarily block the road in lieu of furnishing flag personnel.

TRAFFIC CONTROL PLAN AND SPECIFICATIONS PURSUANT TO GT.3.3 – SAFETY (CONTINUED)

(b) Barricades. On roads listed in KT-FT.3.1#, if Contractor'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, 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 VI. 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 KT-FT.3.1#, 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 Payment Unit being served by the road.

Part II. Specific Requirements:

Signs in Part I will be installed and maintained by Contractor at locations indicated by the Forest Service prior to the start of operations.

Public use restriction applies to Forest Roads 9300151, 9300153, 9300154, 9039310, 9039315, 9039316, 9039317, 9039370, 9039377, and 9039622. Sign as “Logging Use Only”.

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

| Name | | Name |
|---|---|---|
| | | |
| Title | | Title |
| | | |
| Date | | Date |

KT-CT.3.5.7# - INDIVIDUAL TREE DESIGNATION (OPTION 1) *(06/2008)*

All **trees meeting the attached designation description** which meet the minimum tree diameter stated in AT.2 are designated for cutting. Additional timber to be cut, if any, will be designated for cutting in accordance with CT.3.7.

Leave trees, Marked with **NA** , or identified by **the description in the attached table** , are not to be cut, unless designated by the Forest Service.

KT-ET.2.2 - CHANGES IN STEWARDSHIP CREDITS *(06/2008)*

The Contracting Officer may at any time, by written order, make changes within the general scope of this contract in any one or more of the following:

(1) Specifications for Stewardship Projects listed in KT-GT.9#.

(2) Quantities of Stewardship Projects listed in AT.4.4.

(3) Prices for Stewardship Projects listed in AT.4.4.

(4) Place of performance of the Stewardship Projects as shown on the Contract Area Map.

If a written change order causes an increase in the time required for performing any part of the work under this contract, the Contracting Officer shall make an adjustment in the Contract Termination Date and shall modify the contract accordingly.

The Contractor must assert their right to equitable adjustments under this provision within 30 days from receipt of the written order. However, if the Contracting Officer decides that the facts justify it, the Contracting Officer may receive and act upon a proposal submitted before contract closure.

If the Contractor's proposal includes the cost of property made obsolete or excess by the change, the Contracting Officer shall have the right to prescribe the manner of the disposition of the property.

Failure to agree to an adjustment under this provision shall be considered a dispute under JT.2. However, nothing in this provision shall excuse the Contractor from proceeding with the contract as changed.

In addition, by written modification of the contract, new Stewardship Projects may be added to KT-GT.9# and AT.4.4, with or without expanding the Contract Area, as long as they are within the general scope of this contract.

DESCRIPTION PURSUANT TO KT-CT.3.5.7# – INDIVIDUAL TREE DESIGNATION (06/2008)

*DESIGNATION DESCRIPTION*

*All Payment Units*

1. External boundaries are designated on the ground with blue boundary tags labeled “Curly” and orange paint through the tag and on the stump. Boundary trees are not included timber and shall not be cut. These trees shall be considered in spacing.
2. Cut only live Douglas-fir trees (Designated Species). All other species are not to be cut and shall not be considered in spacing.
3. Minimum stump diameter for cut trees is 7.0 inches. Trees less than 7.0 inches are not included timber and shall not be cut. These trees shall not be considered in spacing.
4. Maximum stump diameter for cut trees is 24.0 inches. Trees greater than 24.0 inches are not included timber and shall not be cut. These trees shall not be considered in spacing.
5. Cut trees shall be cut at or above stump height.

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*Payment Unit 4*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 16 feet of a Designated Species tree that has a larger stump. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 5*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Cut all Designated Species trees, except those identified in 1 and 2 above, if it is within 15 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
4. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 6*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Cut all Designated Species trees, except those identified in 1 and 2 above, if it is within 16 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
4. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 7*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 18 feet of a Designated Species tree that has a larger stump. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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DESCRIPTION PURSUANT TO KT-CT.3.5.7# – INDIVIDUAL TREE DESIGNATION (06/2008)

*DESIGNATION DESCRIPTION*

*Payment Unit 8*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 16 feet of a Designated Species tree that has a larger stump. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 9*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Cut all Designated Species trees, except those identified in 1 and 2 above, if it is within 14 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
4. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 16*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 16 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 17*

1. Cut all Designated Species trees if it is within 16 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.

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*Payment Unit 18*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Cut all Designated Species trees, except those identified in 1 and 2 above, if it is within 15 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
4. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 19*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 13 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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DESCRIPTION PURSUANT TO KT-CT.3.5.7# – INDIVIDUAL TREE DESIGNATION (06/2008)

*DESIGNATION DESCRIPTION*

*Payment Unit 20*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Cut all Designated Species trees, except those identified in 1 and 2 above, if it is within 15 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
4. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 21*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Cut all Designated Species trees, except those identified in 1 and 2 above, if it is within 14 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
4. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 23*

1. Cut all Designated Species trees if it is within 16 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.

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*Payment Unit 46*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 14 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 47*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Leave Tree Mark(LTM) Area: Cut All trees except those designated with a diagonal stripe of pink paint. LTM boundaries are designated on the ground with white boundary tags labeled “LTM”, pink ribbon with Timber Harvest Boundary, and orange paint through the tag and on the stump. Boundary trees are not included timber and shall not be cut. Boundary trees shall be considered in spacing.
4. Cut all Designated Species trees, except those identified in 1, 2, and 3 above, if it is within 16 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
5. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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DESCRIPTION PURSUANT TO KT-CT.3.5.7# – INDIVIDUAL TREE DESIGNATION (06/2008)

*DESIGNATION DESCRIPTION*

*Payment Unit 48*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 14 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 49*

1. Do not cut any tree designated with pink paint.
2. Cut all Designated Species trees, except those identified in 1 above, if it is within 14 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
3. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 50*

1. Do not cut any tree designated with orange or pink paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Leave Tree Mark(LTM) Area: Cut ALL trees except those designated with a diagonal stripe of pink paint. LTM boundaries are designated on the ground with white boundary tags labeled “LTM”, pink ribbon with Timber Harvest Boundary, and orange paint through the tag and on the stump. Boundary trees are not included timber and shall not be cut. Boundary trees shall be considered in spacing.
4. Cut all Designated Species trees, except those identified in 1, 2, and 3 above, if it is within 16 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.
5. Treatment Area: Cut all Designated Species trees within 59 feet of a tree designated with a band of pink paint.

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*Payment Unit 51*

1. Do not cut any tree designated with orange paint.
2. No Cut Area: Do not cut any tree within 59 feet of a tree designated with a band of orange paint.
3. Cut all Designated Species trees, except those identified in 1 and 2 above, if it is within 15 feet of a Designated Species tree that has a larger stump diameter. Leave the tree with the larger stump diameter.

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*Definitions*

Stump height is measured at 6 inches on high side of tree.

Distances are measured slope distance, outside bark stump height to outside bark stump height (face of tree).

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KT-FT.1.0.1# - TEMPORARY ROAD AND LANDING CONSTRUCTION (OPTION 1) *(06/2008)*

In addition to the requirements of FT.1 and GT.6.3, Contractor 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 Contract Area Map shall be in accordance with the attached plans or criteria.

Unless otherwise agreed, if Contractor's Operations require more than **NA** cubic yards of rock for Temporary Roads, landings, or other temporary uses, such rock shall be obtained from commercial sources.

See attached Plans or Criteria. **NA** of rock for Temporary Roads, landings, or other temporary uses, such rock shall be obtained from commercial sources.

See attached Plans or Criteria.

**See attached Plans or Criteria.**

PLANS AND/OR CRITERIA PURSUANT TO KT-FT.1.0.1# -
TEMPORARY ROAD AND LANDING CONSTRUCTION (OPTION 1) (06/2008)

CONSTRUCTION: A light on the land approach will be utilized. Use rock only when necessary to reduce erosion, puddling and compaction. Use only rock that is judged to be weed free by Forest Service weed specialists. Whenever possible, reestablish at previous locations rather than constructing new unless a new location would cause less resource damage. When praticial, save topsoil on site from disturbed areas and replace over disturbed soil before replanting. Road work on temporary roads close to streams shall be completed during the dry season (July 1 - September 15). Submit a Hazardous Spill Plan before starting instream work. Limit instream work at stream crossings to low flow or dry periods. Grade in a manner to reduce the potential for water runoff to enter streams. Install dips to direct water off road surface. Design drainage structures to comply with standards and guidelines for permanent structures. If a seasonal restriction is in place, design temporary road structures to accommodate a range of summer flows. Prior to wet season, remove drainage structures and install cross drains/grade breaks as required in KT-GT.6.0#. After all activities are complete, remove all temporary stream crossing structures, any road fill and rock from within a bankfull width of streamcourse. The intent is to construct, use, and close/subsoil in the same operating season unless otherwise agreed to by the Forest Service.

CLOSURE: Remove applied rock and/or incorporate into the roadbed by ripping or scarification. Roadbed and/or landing will be subsoiled as required in KT-GT.6.0#. Recontour road segments to mimic natural slopes and gradients. Special attention shall be given road entrances to prevent any further use of road. Construct an approved closure device (i.e. construction of a 4-foot high berm at the entrance to the road or landing). Following subsoiling, all areas of exposed soil shall be covered shall be seeded and mulched as required in KT-GT.6.0#.

KT-FT.1.2# - USE OF ROADS BY CONTRACTOR *(09/2004)*

Contractor's use of existing roads identified on Contract 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. Contractor's use of roads coded R, A, or W shall be in accordance with the following restrictions:

**See Restricted Road List Table.**

TABLE PURSUANT TO KT-FT.1.2# - USE OF ROADS BY CONTRACTOR (09/2004)

*Restricted Road List*

| *Road Number* | *Road Name* | *Termini* | | *Map Legend* | *Description of Restrictions* |
|---|---|---|---|---|---|
| | | *From* | *To* | | |
| 9000000 | -- | Curly Creek Rd | 9039000 | R, U | 1/ |
| 9039000 | -- | 9000000 | 9300000 | R, U | 1/ |
| | | | | | |
| | | | | | |
| | | | | | |

1/ Loads over state legal limit require written permit.

Title and Date of Governing Road Rules Document:

| Gifford Pinchot National Forest Commercial Road Rules | 4/2001 Effective Date |
|---|---|

KT-FT.1.3# - ROAD COMPLETION DATE *(09/2004)*

Construction of Specified Roads shall be completed no later than **09/30/2014** ; except for earlier construction completion dates for roads listed below:

| Road Number | Road Name | Station From | Station To | Completion Date |
|---|---|---|---|---|
| **N/A** | | | | |

Completion date is binding on the party that constructs road, whether Contractor or Forest Service. Contracting Officer may modify the completion date in writing to conform to the Technical Proposal under GT.3.1.1 at the request of Contractor.

When Contractor elects Forest Service construction of Specified Roads shown in contract 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 Contractor on request. Promptly after the end of Normal Operating Season in which qualifying days occur, Forest Service shall give Contractor 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, Contractor may request a rate redetermination under DT.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 Contract 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 Contractor 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 Contractor desires to construct an alternate facility under FT.2.6, Forest Service and Contractor 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 Contractor 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) Contractor constructs Specified Roads and Forest Service furnishes Contractor with written notice of acceptance under GT.3.6 or

(b) Forest Service constructs road and furnishes Contractor with written notice authorizing use of road.

Notwithstanding FT.1, Contractor shall not use a road that Contractor has elected for Forest Service to construct, until construction is completed and Forest Service furnishes Contractor with written notice authorizing use of road.

KT-FT.2.2.1# - MATERIAL SOURCES *(09/2004)*

Sources of local materials are designated on Plans and Contract Area Map. Forest Service assumes responsibility for the quality and quantity of material in designated sources. Contractor 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 Contractor to use certain area(s) for plant site, stockpiles, and haul roads.

Should the designated source, due to causes beyond the control of Contractor, contain insufficient acceptable material, Forest Service will provide another source with adjustment in accordance with FT.2.5.3.

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

When Contractor elects not to use designated sources and Schedule of Items lists pit development separately, cost allowance will be reduced under FT.2.5.3 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 **NA** , Source II **NA** , and Source III **NA** .

Contractor 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. Contractor 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. Contractor 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 **NA** :

**See Material Source Table.**

Should quantity vary from that estimated, payment to owners shall be for units actually obtained. Contractor 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 contracts. Forest Service is not obligated to reimburse Contractor 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 Contractor¿s plant equipment. All storage sites provided by Forest Service shall be restored at Contractor¿s expense.

Contractor 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.

TABLE PURSUANT TO KT-FT.2.2.1# - MATERIAL SOURCES (09/2004)

*Material Source Table*

| *Material* | *Type of Purchase* | *Owner(s)* | *Unit of Measure* | *Unit Price* | *Estimated Quantity* | *Total* |
|---|---|---|---|---|---|---|
| None | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS *(09/2004)*

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

**See Contract Road Maintenance Requirements Summary Table.**

*Contract Name: Curly Stewardship*

CONTRACT ROAD MAINTENACE REQUIREMENTS SUMMARY PURSUANT TO
KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS (09/2004)

*CONTRACT ROAD MAINTENANCE REQUIREMENTS SUMMARY*

| *Road* | *Termini* | | *Miles* | *Applicable Prehaul Road Maintenance Specifications* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *From* | *To* | | *T-811* | *T-835* | *T-836* | *T-838* | *T-839* | *T-842* | *T-854* | |
| 9000000 | Curly Creek | 9039000 | 0.9 | | | D | | | | P | |
| 9039000 | 9000000 jct | 9300000 jct | 6.5 | P | | P | | | P | P | |
| 9039310 | 9039000 | 9039316 | 1.4 | | | | | P | | P | |
| 9039315 | 9039310 | Unit 46 | 0.3 | | | | | P | | P | |
| 9039316 | 9039310 | Unit 47 | 0.6 | | | | | P | | P | |
| 9039317 | 9039316 | Unit 47 | 0.3 | | | | | P | | P | |
| 9039370 | 9039310 | 9039377 | 0.2 | | | | P | | | P | |
| 9039377 | 9039370 | Unit 50 | 0.3 | | | | | P | | P | |
| 9039620 | 9039000 | Unit 21 | 2.3 | | | | P | | | P | |
| 9039622 | 9039620 | Unit 19 | 0.2 | | | | | P | | P | |
| 9300000 | 9039000 | 9310000 | 1.8 | | | D | | | P | P | |
| 9300150 | 9300000 | 9300154 | 1.0 | | | | | P | | P | |
| 9300151 | 9300150 | Unit 4 | 0.4 | | | | | P | | P | |
| 9300153 | 9300150 | Unit 5 | 0.3 | | | | | P | | P | |
| 9300154 | 9300150 | Unit 9 | 0.3 | | | | | P | | P | |
| 9310000 | 9300000 | Quarry | 1.2 | | | P | | | | P | |

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

| *Road* | *Termini* | | *Miles* | *Applicable During Haul Road Maintenance Specifications* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *From* | *To* | | *T-811* | *T-835* | *T-836* | *T-838* | *T-839* | *T-842* | *T-854* | |
| 9000000 | Curly Creek | 9039000 | 0.9 | | | D | | | | P | |
| 9039000 | 9000000 jct | 9300000 jct | 6.5 | | | P | | | | P | |
| 9039310 | 9039000 | 9039316 | 1.4 | | | | | P | | P | |
| 9039315 | 9039310 | Unit 46 | 0.3 | | | | | P | | P | |
| 9039316 | 9039310 | Unit 47 | 0.6 | | | | | P | | P | |
| 9039317 | 9039316 | Unit 47 | 0.3 | | | | | P | | P | |
| 9039370 | 9039310 | 9039377 | 0.2 | | | | P | | | P | |
| 9039377 | 9039370 | Unit 50 | 0.3 | | | | | P | | P | |
| 9039620 | 9039000 | Unit 21 | 2.3 | | | | P | | | P | |
| 9039622 | 9039620 | Unit 19 | 0.2 | | | | | P | | P | |
| 9300000 | 9039000 | 9310000 | 1.8 | | | D | | | | P | |
| 9300150 | 9300000 | 9300154 | 1.0 | | | | | P | | P | |
| 9300151 | 9300150 | Unit 4 | 0.4 | | | | | P | | P | |
| 9300153 | 9300150 | Unit 5 | 0.3 | | | | | P | | P | |
| 9300154 | 9300150 | Unit 9 | 0.3 | | | | | P | | P | |
| 9310000 | 9300000 | Quarry | 1.2 | | | P | | | | P | |

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

CONTRACT ROAD MAINTENACE REQUIREMENTS SUMMARY PURSUANT TO
KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS (09/2004)

*CONTRACT ROAD MAINTENANCE REQUIREMENTS SUMMARY(CONTINUED)*

| *Road* | *Termini* | | *Miles* | *Applicable Post Haul Road Maintenance Specifications* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | *From* | *To* | | *T-811* | *T-835* | *T-836* | *T-838* | *T-839* | *T-842* | *T-854* | |
| 9000000 | Curly Creek | 9039000 | 0.9 | | | D | | | | | |
| 9039000 | 9000000 jct | 9300000 jct | 6.5 | P | | P | | | | | |
| 9039310 | 9039000 | 9039316 | 1.4 | | P | | | | | | |
| 9039315 | 9039310 | Unit 46 | 0.3 | | P | | | | | | |
| 9039316 | 9039310 | Unit 47 | 0.6 | | P | | | | | | |
| 9039317 | 9039316 | Unit 47 | 0.3 | | P | | | | | | |
| 9039370 | 9039310 | 9039377 | 0.2 | | | | P | | | | |
| 9039377 | 9039370 | Unit 50 | 0.3 | | P | | | | | | |
| 9039620 | 9039000 | Unit 21 | 2.3 | | | | P | | | | |
| 9039622 | 9039620 | Unit 19 | 0.2 | | P | | | | | | |
| 9300000 | 9039000 | 9310000 | 1.8 | | | D | | | | | |
| 9300150 | 9300000 | 9300154 | 1.0 | | P | | | | | | |
| 9300151 | 9300150 | Unit 4 | 0.4 | | P | | | | | | |
| 9300153 | 9300150 | Unit 5 | 0.3 | | P | | | | | | |
| 9300154 | 9300150 | Unit 9 | 0.3 | | P | | | | | | |
| 9310000 | 9300000 | Quarry | 1.2 | | | P | | | | | |

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

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

CONTRACT ROAD MAINTENACE REQUIREMENTS SUMMARY TABLE PURSUANT TO
KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS (09/2004)

*CONTRACT ROAD MAINTENANCE REQUIREMENTS SUMMARY (CONTINUED)*

| 1 | 2 | 3 | | | 4 | 5 | 6 | | | 7 | 8 | 9 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Road No. and Termini* | Special *Project Specifi-cation* | *Travel Way* | | | *Brush And Log Out* | *Surfac-ing* | Dust *Abatement* | | | *Seasonal Mainte-nance* | *Snow Removal* | Post *Haul* | |
| | | *Width* | *X Slope* | *Comp* | | | *Product* | *Applic Rate* | *Width* | | | *Block* | *Treat* |
| *9000000* Curly CR-9039000 | T-854 | DEPOSIT | | | | DEPOSIT | | | | | | | P |
| *9039000* 9000000-9300000 | T-811 T-836 T-842 T-854 | EX | AI | A | L&R 5′ Mechanical | | | | | | | | P |
| *9039310* 9039000-9039316 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W,B | | P | P |
| *9039315* 9039310-Unit 46 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W | | P | P |
| *9039316* 9039310-Unit 47 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W | | P | P |
| *9039317* 9039316-Unit 47 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W | | P | P |
| *9039370* 9039310-9039377 | T-838 T-854 | EX | AI | | Mechanical | | | | | W,B | | | P |
| *9039377* 9039370-Unit 50 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W | | P | P |
| *9039620* 9039000-Unit 21 | T-838 T-854 | EX | AI | | Mechanical | | | | | W | | | P |
| *9039622* 9039620-Unit 19 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W,B | | P | P |
| *9300000* 9039000-9310000 | T-836 T-854 | EX | AI | | L&R 5′ Mechanical | | | | | | | | P |
| *9300150* 9300000-9300154 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W | | | P |
| *9300151* 9039150-Unit 4 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W,B | | P | P |
| *9300153* 9039150-Unit 5 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W,B | | P | P |
| *9300154* 9039150-Unit 9 | T-835 T-839 T-854 | EX | AI | | Mechanical | | | | | W,B | | P | P |
| *9310000* 9300000-Quarry | T-836 T-854 | EX | AI | | Mechanical | | | | | | | | P |

Forest Road 9300154: Prehaul and post-haul maintenance limited to existing road prism.

All Roads: Minimize road maintenance clearing zones, as much as safety regulations will allow, to maintain shady conditions.

All Roads: All active gravel, fill, sand, stockpiles, quarry sites, and borrow material must be inspected for invasive plants prior to transport and use. Infested sources will require treatment prior to transport/use. Only gravel, sand, fill, and rock that is determined to be weed free by Forest Service may be used.

Post Haul: Treat = Waterbar; Block = Earth Mound. Refer to diagrams on pages 54e and 54f.

*Contract Name: Curly Stewardship*

ROAD MAINTENANCE REQUIREMENTS SPECIFICATION CODES TABLE
PURSUANT TO KT-FT.3.1# ROAD MAINTENANCE REQUIREMENTS (09/2004)

| *Column No.* | *Heading* | *Entry* | *Explanation* |
|---|---|---|---|
| | Any | Blank | Except as otherwise described, no entry indicates Contractor is not authorized or required to perform the work item(s). |
| | Any | RC | This work requirement applies only when haul of sale related construction materials occurs. |
| 2 | Special Project Specification | Number | Entry indicates Special Project Specification which applies. |
| 3 | Travel Way | EX | Contractor shall maintain the traveled way to the width existing upon entry, or at the completion of Specified Road work. |
| | | Numbers | Contractor 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. |
| | | IS, C, OS, F, or AI | Cross slopes are designated as: IS (Inslope), C (Crown), OS (Outslope), F (Flat), AI (As Is). |
| | | A or B | If compaction is required. |
| 4 | Brush and Log Out | Numeric & R and or L | Contractor shall remove brush for specified width on either or both the right (R) side or left (L) side of road. |
| | | As Staked | Limits of brushing are as staked or marked in the field. |
| | | OPT | Contractor may use hand or mechanical means of brushing. |
| | | H | Only hand brushing may be used. |
| 5 | Surfacing | Aggregate Grading | Contractor shall place surfacing on roads listed according to the grading indicated. |
| | | D | Contractor is to make deposits for listed road maintenance, including surface rock replacement. |

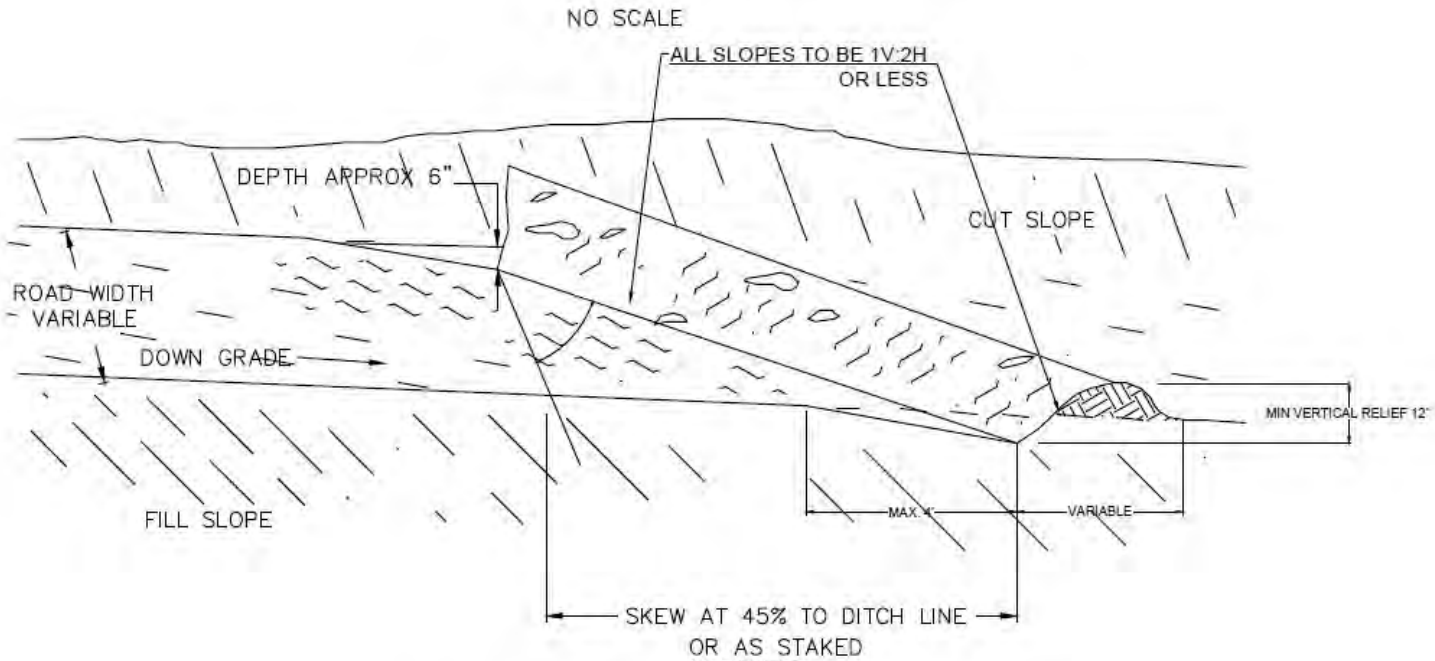
ROAD MAINTENANCE REQUIREMENTS SPECIFICATION CODES TABLE
PURSUANT TO KT-FT.3.1# ROAD MAINTENANCE REQUIREMENTS (09/2004)

| *Column No.* | *Heading* | *Entry* | *Explanation* |
|---|---|---|---|
| 6 | Dust abatement | OPT | Product selection is Contractor's choice from those listed in Section T-812. |
| | | Product Abbr. | Unless otherwise agreed, Contractor is restricted to product listed corresponding to the abbreviation shown in Section T-812; (i.e., LigS = Lignon Sulfonate) Application rates are estimated amounts. |
| | | EX | Contractor shall abate dust on the existing width. |
| | | Numbers | Contractor shall abate dust to the width indicated by entry. |
| 7 | Seasonal Maintenance | W | Waterbars and/or crossditching shall be required prior to expected seasonal precipitation. |
| | | B | Entrance barriers shall be installed by Contractor prior to nonuse periods. |
| 8 | Snow Removal | TS | Snowplowing authorized for Contractor's Operations without recreation access being provided per Section T-803 requirements. |
| | | JU | Snowplowing authorized, but must provide for recreation joint use per Section T-803 requirements. |
| | | Blank | 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 Contractor's Responsibility to perform. |

*Contract Name: Curly Stewardship*

CONTRACT ROAD MAINTENACE REQUIREMENTS PURSUANT TO
KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

# WATER BAR DETAIL




## NOTES

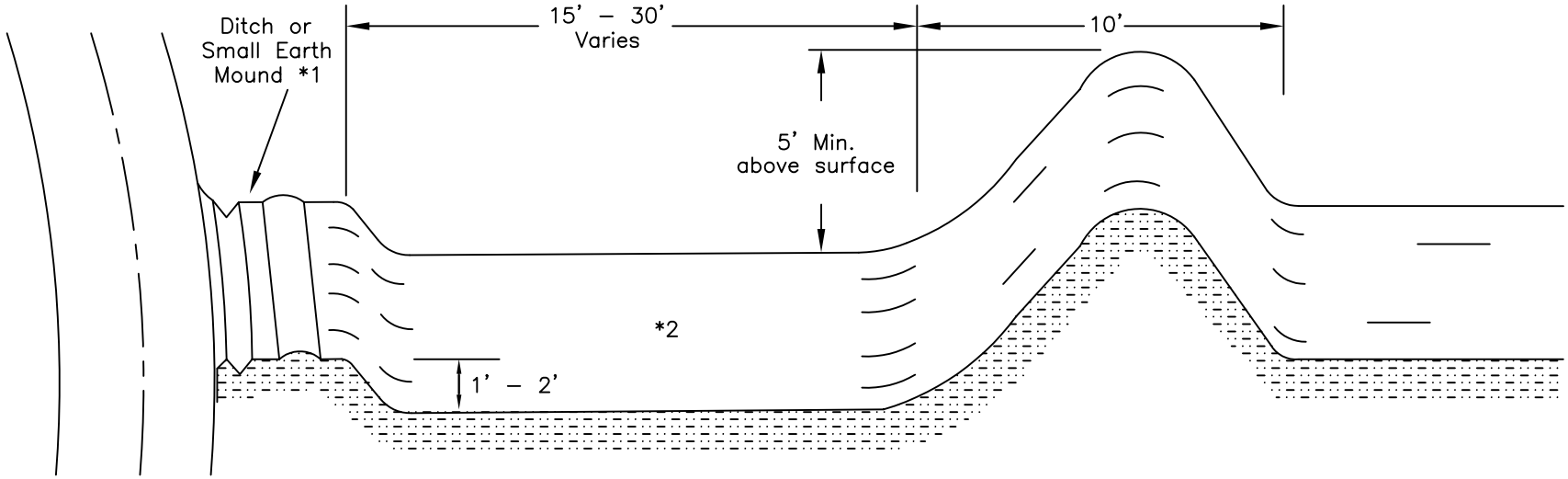
1. ALL WATER BARS SHALL BEGIN AT THE INTERSECTION OF THE ROADBED AND CUT SLOPE AND RUN ACROSS THE ENTIRE WIDTH OF THE ROADBED.
2. ALL WATER BARS SHALL HAVE FREE FLOWING OUTLETS.
3. WHEN STAKES ARE USED, THEY SHALL DESIGNATE THE OUTLET LOCATION.

Purchaser to field mark locations of existing waterbars and berms prior to beginning work, reconstruct at same locations post haul. Additional berm and waterbar locations to be marked in field by Forest Service. Typical waterbar spacing will be 250 feet for grades up to 10% and 150 feet for grades greater than 10%.

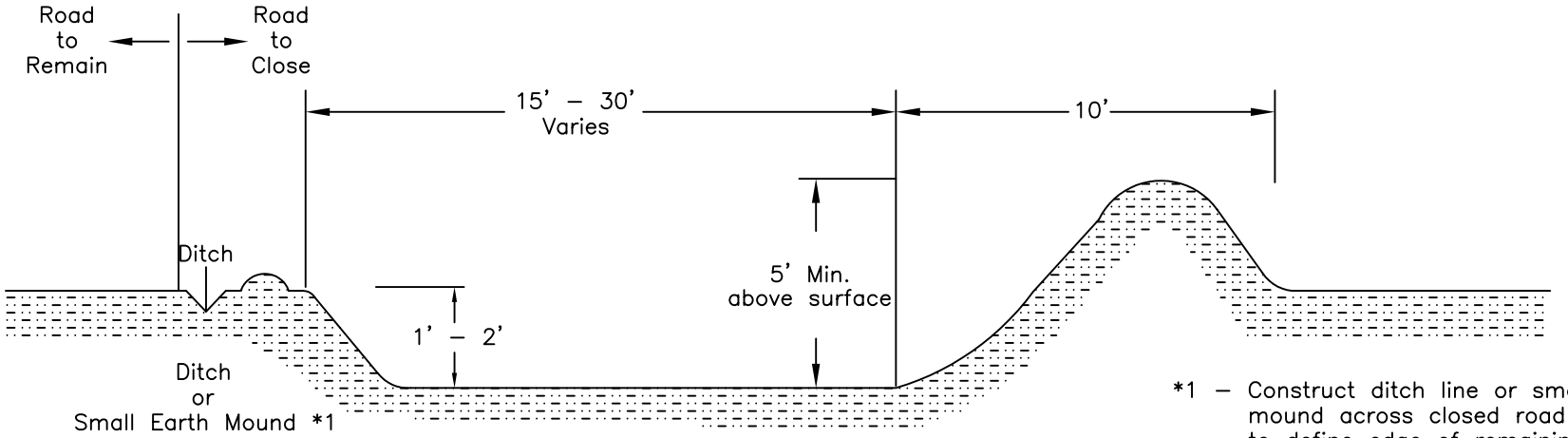
Where brushing width is specified as 5’, brush shall be removed to a distance 5 feet beyond the shoulder of the road, edge of the traveled way, or 2 feet beyond the bottom of the ditch whatever is greater.

# ROAD CLOSURE – EARTH MOUND TYPICAL

| PROJECT | SHEET | TOTAL SHEETS |
|---|---|---|
| Curly | 1 | 1 OF 1 |




## ISOMETRIC VIEW




*1 – Construct ditch line or small earth mound across closed road entrance to define edge of remaining road.

*2 – Slope Excavation area to drain

## PROFILE VIEW

6–15–05

KT-FT.3.2# - ROAD MAINTENANCE DEPOSIT SCHEDULE *(09/2004)*

Other provisions herein notwithstanding, when Forest Service requests payment in lieu of Contractor's performance of road maintenance, Contractor 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 Contractor's commensurate use of each road listed in the Road Maintenance Plan in KT-FT.3.1#.

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

The Required Deposits for Forest Service work in lieu of Contractor performance and for deferred maintenance is: **$.84** per **CCF** .

The following table lists who Contractor 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.

| Deposit Made To | Rate | Unit of Measure |
|---|---|---|
| **N/A** | | |

KT-GT.3.1.5# - PROJECT OPERATION SCHEDULE *(05/2005)*

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

**See attached schedule.**

SCHEDULE PURSUANT TO KT-GT.3.1.5# - PROJECT OPERATION SCHEDULE (05/2005)

| *PAYMENT UNIT* | *OPERATION CONDITIONS* | *PURPOSE* |
|---|---|---|
| All | All operations shall take place from July 1 through September 30. | Spotted Owl 07/01 – 02/28<br>Winter Range 04/01 – 11/30<br>Soils/Hydrology 07/01 – 09/30 |
| Roads | Road brushing shall take place prior to July 31. | To prevent formation and release of viable seeds. |
| Road Maintenance, Reconstruction, Haul | All operations shall take place from July 1 through September 30. | Spotted Owl 07/01 – 02/28<br>Winter Range 04/01 – 11/30<br>Soils/Hydrology 07/01 – 09/30<br>Engineering 07/01 – 09/30 |
| Project Number 4 | All operations shall take place from July 1 through February 28. | Spotted Owl 07/01 – 02/28 |
| Project Numbers 1 & 2 | All operations shall take place from July 1 through November 30. | Spotted Owl 07/01 – 02/28<br>Winter Range 04/01 – 11/30 |

KT-GT.4.0.5 - ALTERNATE REMOVAL OF INCLUDED TIMBER *(05/2005)*

Contractor and Forest Service may agree to alternate removal requirements of Included Timber contained in AT.2. Alternate removal requirements are to be set forth in an agreement signed by both Contractor and Contracting Officer. The terms of the agreement binds both parties and becomes part of the stewardship 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 Contractor has no ready market for such logs in the tributary area. A tributary area is defined as the area in which the Contractor and competitors regularly deliver saw logs, or 200 miles from the Contract 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 designated in the agreement.

Volumes of material with alternate removal requirements will be determined from the National Cruise report for the project. Contractor 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 Contractor associated with alternate removal requirements.

Charges will be debited to the Contractor's Integrated Resource Account.

Upon acceptance of the alternate removal requirements, the Payment Unit will be removed from the Contract Area under GT.3.6.

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

KT-GT.4.1# - SPECIFIC REQUIREMENTS *(05/2005)*

Notwithstanding GT.4.1, GT.4.1.1, GT.5 and GT.6.1, 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, Contractor shall submit a cutting plan for Forest Service acceptance, prior to the start of felling operations.

**See attached Table.**

TABLE PURSUANT TO KT-GT.4.1# - SPECIFIC REQUIREMENTS

| *FELLING METHODS & EQUIPMENT* | *PAYMENT UNIT* |
|---|---|
| If accepted by the Forest Service as part of the Contractor's Technical Proposal, mechanical harvester/feller buncher will be allowed on slopes of 45% and less.<br><br>If accepted by the Forest Service as part of the Contractor's Technical Proposal, locations allowed for pre-bunching shall be agreed to upon prior to felling.<br><br>In areas where pre-bunching allowed, limb and top trees prior to yarding. Keep corridor widths as narrow possible (less than 11 feet whenever possible). | 4, 5, 9, 17, 18, 21, 23, 48, 49, 50, 51 |
| If accepted by the Forest Service as part of the Contractor's Technical Proposal, mechanical harvester/feller buncher will be allowed on slopes of 35% and less.<br><br>If accepted by the Forest Service as part of the Contractor's Technical Proposal, locations allowed for pre-bunching shall be agreed to upon prior to felling.<br><br>In areas where pre-bunching allowed, limb and top trees prior to yarding. Keep corridor widths as narrow possible (less than 11 feet whenever possible). | 6, 7, 8, 16, 19, 20, 46, 47 |
| Directionally fall all trees away from boundaries, trees designated with orange or pink paint, no cut areas, meadows, streamcourses, wetlands, other riparian features, Forest Roads, or as directed by Forest Service.<br><br>Exceptions include trees leaning towards these features or conditions that are not safe for felling. | All |

KT-GT.4.2# - YARDING/SKIDDING REQUIREMENTS *(05/2005)*

Contractor 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 Contract 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 harvestor trails, forwarder roads, and other log skidding facilities, shall be approved prior to their use or construction.

**See attached table for requirements.**

TABLE PURSUANT TO KT-GT.4.2# - YARDING/SKIDDING REQUIREMENTS (05/2005)

| *YARDING/SKIDDING REQUIREMENTS* | *PAYMENT UNIT* |
|---|---|
| If Contractor specifies in their technical proposal to use ground based equipment to meet the end results, the yarding system is to maintain one-end suspension of logs during in-haul. Site-specific terrain features may require pulling line at least 100 feet from designated skid trails.<br><br>Skid trails shall be spaced a minimum of 150 feet apart. Locate outside no cut buffers. When feasible, use existing skid trails except where existing skids trails from prior entry are causing detrimental soil or hydrologic conditions that could be avoided with alternative skid trail location.<br><br>Confine equipment to approved areas. Skidding not allowed across streamcrouses. Operate on slash beds that are as thick and continuous as possible. | 4, 5, 6, 7, 8, 9, 17, 18, 19, 20, 21, 23, 46, 47, 48, 49, 50, 51 |
| If Contractor specifies in their technical proposal to use skyline yarding equipment to meet the end results, the yarding system is to have the capacity to keep logs one-end suspended above the ground during in-haul. Suspension is not required during lateral yarding.<br><br>Skyline corridors allowed through no harvest buffers on intermittent streams if full suspension can be achieved within the entire no harvest buffer width and less than 10% of buffer is affected by corridor. | 16, 46 |
| If Contractor specifies in their technical proposal to use a mechanical harvester or feller buncher, machine will be allowed to operate outside approved areas. Limited to slopes of **45% and less**, including short, steep pitches. Shall avoid traveling across the slope and turning on steep slope and operate on slash beds that are as thick and continuous as possible. Shall plan as few trips as possible. Machine shall not be used for skidding purposes.<br><br>Minimize excavation of road prism for access and restore when prebunching activities are completed. | 4, 5, 9, 17, 18, 21, 23, 48, 49, 50, 51 |
| If Contractor specifies in their technical proposal to use a mechanical harvester or feller buncher, machine will be allowed to operate outside approved areas. Limited to slopes of **35% and less**, including short, steep pitches. Shall avoid traveling across the slope and turning on steep slope and operate on slash beds that are as thick and continuous as possible. Shall plan as few trips as possible. Machine shall not be used for skidding purposes.<br><br>Minimize excavation of road prism for access and restore when prebunching activities are completed. | 6, 7, 8, 16, 19, 20, 46, 47 |
| Location of skid trails, skyline corridors, temporary roads, and landings shall be located outside no harvest buffers, no cut areas, and approved by the Forest Service prior to felling operations. | All |
| Ground-based machinery shall not operate where soil water content is high enough to cause rutting that exceeds 6 inches in depth for a length of 10 feet or more. | All |
| Any portion of a felled tree that lands in a no cut buffer shall be left on the ground. | All |
| Ground based equipment will not operate on subsoiled portions of roads and landings after subsoiling is completed. | All |

KT-GT.6.0# - EROSION CONTROL AND SOIL TREATMENT BY CONTRACTOR *(05/2005)*

Erosion prevention and control work required by GT.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 Contractor's Operations due to causes beyond Contractor'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 Contractor's Operations due to failure to perform required work shall be repaired by Contractor.

On slopes greater than **30** percent, erosion control measures will be done with methods other than mechanized equipment, unless otherwise agreed.

Where soil has been disturbed or displaced on Contract Area by Contractor's Operations and where measures described in GT.6 will not result in satisfactory erosion control or where subsoiling is shown on Contract 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 **September 1** to **October 15** unless otherwise agreed to. Applications shall be done only during favorable conditions. If Contractor 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 Contract Area Map, landings, Temporary Roads and/or skidtrails/roads shall be scarified to a depth of **NA** 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 Contract Area Map, landings, Temporary Roads, and skid trails/roads used by Contractor shall be subsoiled to a minimum depth of 20 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 18 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 36 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, Contractor 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 contractor 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.

**See attached application schedule.**

APPLICATION SCHEDULE PURSUANT TO KT-GT.6.0# - EROSION CONTROL
AND SOIL TREATMENT BY THE CONTRACTOR (05/2005)

| | *Areas* | *Seed* | | *Mulch* | |
|---|---|---|---|---|---|
| *PAYMENT UNIT* | *A) Skid Trails*<br>*B) Skyline Corridors*<br>*C) Temp. Roads*<br>*D) Landings*<br>*E) Other* | *Application* | | *Application* | |
| | | *Species Mixture* | *LBS/AC* | *Type 1/* | *LBS/AC* |
| All | C, D 1/ | | | Slash | Scattered |
| All | A, C, D | 2/ | 40 | Weed Free Straw | 2000 |
| All | D 3/ | | | Weed Free Straw Bales | 3/ |
| All | E 4/ | | | Slash | Scattered |

1/ De-compacted surface.

2/ Seed required for erosion control will be provided by the Forest Service. Regardless of the amount required, Contractor's account will be charged monthly as Included Timber is removed. Rate is $0.29 per CCF.

3/ Locate straw bales or silt fences to intercept runoff from the landing prior to reaching any road or ditch and when temporary roads are close to streams. Sediment that is captured shall be deposited on the forest floor away from streams prior to the wet season. Remove these catchments after one wet season.

4/ Areas of gouging or soil displacement: Treatment may include, but is not limited to, repositioning displaced soil to re-contour disturbed sites, creating small ditches or diversions or redirect surface water movement, and scattering slash material.

KT-GT.7 - SLASH DISPOSAL *(06/2008)*

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 Contractor'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 Contractor is subject to KT-HT.2.0.1.

Forest Service may enter into a written agreement with Contractor for the Contractor to remove slash from landings, subject to DT.4.1. Brush disposal deposits paid by the Contractor for the Forest Service to burn landing piles will be credited to the Contractor's integrated resource account in the amount shown in the brush disposal plan, less the amount needed by the Forest Service for final cleanup of the landings following removal of the landing slash piles by the Contractor. The credit will be made following the final removal of all Included Timber, and slash piles, from the Contract Area.

KT-GT.7.4.2# - SLASH TREATMENT REQUIREMENTS (OPTION 2) *(06/2010)*

Contractor shall pile, burn, yard, construct firelines or otherwise treat slash defined in KT-GT.7, within designated areas. Work required of Contractor shall be in accordance with the following slash plan and specifications, and the Contract Area Map.

**See following slash plan and specifications.**

*Contract Name: Curly Stewardship*

SPECIFICATIONS PURSUANT TO KT-GT.7.4.2# - SLASH TREATMENT REQUIREMENTS

*CONTRACTOR SLASH PLAN & SPECIFICATIONS*

**CONTRACT NAME:** Curly Stewardship

**DISTRICT:** Mt St Helens NVM

| | | UNIT # | 4 | 5 | 6 | 7 | 8 | 9 | 16 | 17 | 18 | 19 | 20 | 21 | 23 | 46 | 47 | 48 | 49 | 50 | 51 | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ACRES | 10 | 32 | 37 | 22 | 11 | 24 | 10 | 2 | 25 | 16 | 48 | 50 | 2 | 15 | 81 | 10 | 5 | 24 | 5 | 429 |
| | | LOG SYS | GB | GB | GB | GB | GB | GB | S | GB | GB | GB | GB | GB | GB | GB/S | GB | GB | GB | GB | GB | X |
| 6701 | Time of Preparation of Slash for Disposal | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 6702# | Firelines, Machine-Constructed, (Tractor) | (MI) | | | | | | | | | | | | | | | | | | | | |
| 6703# | Firelines, Extra-wide, Machine-Constructed | (MI) | | | | | | | | | | | | | | | | | | | | |
| 6704# | Firelines, Hand-Constructed | (MI) | | | | | | | | | | | | | | | | | | | | |
| 6705# | Firelines, Extra-wide, Hand-Constructed | (MI) | | | | | | | | | | | | | | | | | | | | |
| 6706# | Whip Felling | (MI) | | | | | | | | | | | | | | | | | | | | |
| 6707# | Lop and Scattering of Slash | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6708# | Piling of Slash, Machine/Tractor | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6709# | Piling of Slash, Machine/Loader | (AC) | | 3.8 | 3.4 | 3.4 | | | 2.3 | 0.3 | 2.8 | | 5.3 | | | | 7.1 | 0.7 | | | | 29.1 |
| 6710# | Piling of Slash, Hand | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6711# | Piling of Slash at Landings | (AC) | 0.5 | 1.0 | 1.3 | 1.0 | 0.5 | 1.0 | 0.3 | 0.3 | 0.8 | 1.0 | 1.8 | 1.8 | 0.3 | 0.9 | 2.5 | 0.3 | 0.3 | 1.0 | 0.5 | 17.1 |
| 6712# | Loading, Hauling, & Decking Slash | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6713# | Sorting & Piling of Slash at Landing | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6714# | Covering Piles-Machine, Hand, Landing | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6715# | Piling of Tops of Trees | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6716# | Machine Pile Temp Road Slash Outside Unit | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6717# | Treat/Temp. Rd Slash Outside/Unit-Scattering | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6718# | Piling & Burn Temporary/Road Slash | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6719# | Disposal of Slash by Burning | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6720# | Helicopter Water Supply Areas | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6721# | Helispot Construction | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6722# | Purchaser Assistance | (AC) | | | | | | | | | | | | | | | | | | | | |
| 6723# | Mandatory Disposal of Slash | (AC) | | | | | | | | | | | | | | | | | | | | |

SPECIFICATIONS PURSUANT TO KT-GT.7.4.2#-SLASH TREATMENT REQUIREMENTS (OPTION 2)

*SPECIFICATION 6701 - TIME OF PREPARATION OF SLASH FOR DISPOSAL*

In accordance with Special Provision KT-GT.7.4.2#, and Standard Provision GT.7, Contractor shall accomplish slash disposal obligations in a sequence of work and/or timing of work that is in accordance with the items listed below:

1. Time of year when hand, machine piling and/or covering must be approved by Contractor Administrator before work starts.

2. As stated in GT.7, Contractor shall not unnecessarily delay slash disposal by the Forest Service. Contractor's delay of such slash disposal work is hereby defined as the failure to fully complete and have accepted slash disposal work on a Payment Unit beyond 30 days after the majority of included timber on that unit has been removed, unless otherwise agreed in writing.

*SPECIFICATION 6709# - PILING OF SLASH, MACHINE*

This Specification applies to Payment Unit(s): 5, 6, 7, 16, 17, 18, 20, 47, 48

In accordance with Special Provision KT-GT.7.4.2#, Contactor shall pile slash in areas designated by Contract Administrator. The method of designation shall be in a manner agreed to with the Contractor Representative.

Unless otherwise agreed in writing between Contractor and Forest Service, the piling of slash shall be accomplished as listed below:

1. Equipment Operations - While piling slash, machine shall approach no closer than 60 feet to designated streamcourses.

2. Slash to be Piled - Contractor shall pile all slash meeting any of the following sizes:

   a. All unutilized material over 2 feet in length and between 1 and 5 inches in diameter shall be piled.

   b. Slash within 3 feet of any pieces (logs) are to be left. The intent is to leave small islands of slash and residual vegetation associated with the pieces (logs) required to be left.

3. Location of Piles - Piles will be located so that burning will not cause damage to standing trees. This is construed to be at least 15 feet from the base or crown of any live tree. Piles will be located at least 20 feet from any adjacent pile. All piles in cutting units will be a minimum of 25 feet from the unit boundary. Remnant logs shall not be incorporated into slash piles.

4. Machine will be restricted to the same designated skid trails that were used during the yarding of the included timber. Machine will only travel in areas where the slash is or was 6 inches deep before the first pass. The intent is to move slash into the area where the tracks will be traveling before the machine moves into an area to work thus protecting the ground surface from disturbance.

5. Construction and Size of Piles - Prior to commencement of piling operations, down trees and logs to be piled will be bucked into lengths not exceeding 20 feet. Piles shall be compact as possible and shall be free of dirt. Wind rowing of slash is not permitted.

   Construction of piles shall be accomplished to these specified dimensions: In cutting units the height shall be not less than 6 feet nor greater than 13 feet; diameter shall be not less than 10 feet nor greater than 15 feet.

6. The intent is to pile approximately the percentage or acres of each Payment Unit as shown below. These areas will be designated by the Contract Administrator:

| *Payment Unit* | *Approximate % of Unit Area to Pile* | *Approximate Acres to Pile* | *Payment Unit* | *Approximate % of Unit Area to Pile* | *Approximate Acres to Pile* |
|---|---|---|---|---|---|
| 5 | 12% | 3.8 | 18 | 11% | 2.8 |
| 6 | 9% | 3.4 | 20 | 11% | 5.3 |
| 7 | 15% | 3.4 | 47 | 9% | 7.1 |
| 16 | 23% | 2.3 | 48 | 7% | 0.7 |
| 17 | 15% | 0.3 | | | |

SPECIFICATIONS PURSUANT TO KT-GT.7.4.2#-SLASH TREATMENT REQUIREMENTS (OPTION 2)

*SPECIFICATION 6711# - PILING OF SLASH AT LANDINGS*

This Specification applies to Payment Unit(s): All

In accordance with Special Provision KT-GT.7.4.2#, Contractor shall pile slash on landings and other loading areas. Unless otherwise agreed in writing between Contractor and Forest Service, the piling of landings shall be accomplished as listed below:

1. Equipment Requirements - Equipment that is used in removal of Included Timber.

   A tractor may be used to pile landings **only by prior written agreement**.

2. Slash to be Piled - Contractor shall pile all slash and unutilized material which is located on and within 30 feet of landings or loading areas. This includes slash resulting from landing construction and any unutilized material yarded to landings, and that which is cleared away.

3. Location of Piles - Piles will be located on flat surface at landing site and such that burning will not cause damage to standing trees. This is construed to be at least 25 feet from the base or crown of any live tree.

4. Construction and Size of Piles - Prior to commencement of piling operations, down trees and logs will be bucked into lengths not exceeding 20 feet. All logs will be placed in piles parallel to each other. Piles shall be as compact as possible and shall be free of dirt.

KT-GT.8 - MEASURING *(05/2005)*

The estimated quantity of timber in AT.2 was determined in advance of advertisement. Any timber subsequently added or deleted under CT.1.3, CT.1.4, CT.1.5, CT.3.1, CT.3.2, CT.3.3, CT.3.4, CT.3.5, or CT.3.7 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.

KT-GT.8.1.1 - ACCOUNTABILITY *(05/2005)*

The following requirements are applicable to product removal permits:

1. Forest Service will issue to Contractor or designated representative(s) serially numbered Product Removal Permit Books for use only on this contract. 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.

3. Contractor 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.

KT-GT.8.4 - USE OF PAINT BY CONTRACTOR (OPTION 1) *(06/2006)*

Notwithstanding GT.8.1, use of paint by the Contractor within the Contract Area in the same color(s) as 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.

KT-GT.9# - STEWARDSHIP PROJECTS *(09/2004)*

Performance of stewardship projects shall be in accordance with the following specifications.

**Stewardship Projects**

PROJECTS AND SPECIFICATIONS PURSUANT TO KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 1: Snag Creation. See attached requirements and specifications.

Project Number 2: Down Log Creation. See attached requirements and specifications.

Project Number 3: Tree Planting. See attached requirements and specifications.

Project Number 4: Precommercial Thinning. See attached requirements and specifications.

KT-HT.1 - PLANS *(05/2005)*

The plan shall state how Contractor'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. Contractor shall certify compliance with specific fire precautionary measures included as Subsections under KT-HT.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 Contractor costs incurred toward meeting Contractor's obligations under AT.14, or for paying for helicopters controlled by Contractor and used under Forest Service direction for suppressing Operations Fires or other fires on Contract Area, excluding Negligent Fires.

KT-HT.2 - SPECIFIC FIRE PRECAUTIONS *(05/2005)*

When the industrial fire precaution level is I or higher, unless waiver is granted under KT-HT.2.2, specific required fire precautionary measures are as follows:

A. Fire Security.

Contractor shall designate in writing a person or persons who shall perform fire security services listed below on Contract Area and vicinity. The designated person will be capable of operating Contractor's communications and fire fighting equipment specified in the contract, excluding helicopters, and of directing the activities of Contractor'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, Contractor may provide another person meeting the qualifications stated above to direct the activities of Contractor's personnel and equipment during all fire fighting activities.

Services described shall be for at least 1 hour from the time Contractor'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 Contract Area.

Contractor shall furnish fire security services based on the predicted industrial precaution level, obtained by Contractor 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 Contractor when changes in fire security services are indicated.

B. Fire Extinguisher 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 Contractor 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 O 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 O 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 Contract 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-la 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.

Contractor 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.

Contractor 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 HT.2.1.

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 poly or rubber 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 hose 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 Contract Area Map, Contractor 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, Contractor may provide a suitable helicopter water bucket with a 300 gallon capacity. When Contractor provides a water bucket, a water source shall be provided within 5 minutes round trip flight time from operating side.

F. Communications.

During Contractor's Operations, excluding powersaw falling and bucking, Contractor 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 Contractor. Contractor shall not permit open fires on Contract 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 Contractor in any way from compliance with State fire laws covering fire prevention and suppression equipment, applicable to Contractor's Operations.

J. Aircraft Communications.

Every aircraft used in conjunction with Contractor'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 Contract Area, all aircraft pilots controlled by Contractor

shall monitor VHF frequency 122.85 MHz when within 5 miles of a fire and broadcast their intentions.

K. Logging Block Equipment.

Contractor 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.

Contractor shall avoid line-rub on rocks or woody material which may result in sparks or sufficient heat to cause ignition of fire.

KT-HT.2.0.1 - BURNING BY CONTRACTOR *(06/2006)*

Notwithstanding the Fire Precautionary Period limitation of HT.2, Contractor is required to obtain written permission from Forest Service prior to any burning on the National Forest Lands.

KT-HT.2.2 - EMERGENCY FIRE PRECAUTIONS *(05/2005)*

Contractor 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 Contractor, the revised Industrial Fire Precaution Levels will supersede the attached levels.

LEVEL INDUSTRIAL FIRE PRECAUTION
I. Closed Season - Fire precaution requirements are in effect. A Fire Watch/Fire Security is required at this and all higher levels unless otherwise waived.

II. Partial Hootowl - The following may operate only between the hours of 8 p.m. and 1 p.m. local time:

power saws, except at loading sites;
cable yarding;
blasting;
welding or cutting of metal.

III. Partial shutdown - The following are prohibited:

cable yarding - except that gravity operated logging systems employing non-motorized carriages may be operated between the hours of 8 p.m. and 1 p.m. local time when all blocks and moving lines are 10 feet or more above the ground, excluding the line between the carriage and the choker.

power saws - except at loading sites and on tractor/skidder operations between the hours of 8 p.m. and 1 p.m. local time.

In addition, the following are permitted between the hours of 8 p.m. and 1 p.m. local time:

tractor, skidder, feller-buncher, forwarder, or shovel logging operations where tractors, skidders or other equipment with a blade capable of constructing fireline are immediately available to quickly reach and effectively attack a fire start;
mechanized loading and hauling;
blasting;
welding or cutting of metal;
any other spark-emitting operation not specifically mentioned.

IV. General Shutdown - All operations are prohibited.

The following definitions shall apply to these Industrial Fire Precaution Levels:

Cable yarding systems: A yarding system employing cables and winches in a fixed position.

Closed Season (Fire Precautionary Period): That time period each year when a fire hazard exists and as described in AT.12.

Hauling: Where hauling involves transit through more than one shutdown zone/regulated use area, the precaution level at the woods site shall govern the level of haul restrictions, unless prohibited by other than the Industrial Fire Precaution Level system.

Loading sites/woods site: A place where any product or material (including but not limited to logs, firewood, slash, soil, rock, poles, posts, etc.) is placed in or upon a truck or other vehicle.

Advance written waiver of the above precautions may be issued by the Contracting Officer or Forest Service Representative.

Such waiver, or substitute precautions under HT.2.1, shall prescribe measures to be taken by Contractor 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. Contractor shall assure that all conditions of such waivers or substitute precautions are met.

Contractor shall obtain the predicted Industrial Fire Precaution Level 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 Contractor when changes in restrictions or industrial precautions are indicated.

KT-HT.3.1 - ADDITIONAL AREA OF FIRE RESPONSIBILITY *(05/2005)*

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 Contract Area shall be considered as a part of Contract Area in connection with responsibilities under HT.3 and HT.4 until the road has been accepted in writing by Forest Service.

KT-IT.1.0 - DISCLAIMER OF EXPRESSED OR IMPLIED WARRANTY *(05/2005)*

Contractor and Forest Service hereby agree, acknowledge, and accept that there is no expressed or implied warranty provided by the Forest Service that guarantees the Contractor will be allowed to complete the removal of products sold under the terms of the contract. Upon execution of the contract, Contractor 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 project. If such interruption or termination occurs due to litigation, Contractor agrees to accept as full compensation for such interruption remedies pursuant to IT.3.3, or for termination remedies pursuant to IT.3.4.

KT-IT.2.1.2 - 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 AT.17. Contractor 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 Contractor'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 Contractor'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 contract 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 Contractor¿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.

KT-IT.6.8#(Option 1) - USE OF TIMBER *(09/2004)*

(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 Contractor 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, Contractor 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 Contractor or affiliates.

(f) Prior to delivering unprocessed Included Timber to another party, Contractor 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 Contractor and another party, Contractor shall furnish to Forest Service a copy of each such agreement. Contractor 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 Contractor relating to the termination.

*Contract Name: Curly Stewardship*

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-811 BLADING

*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 the ROAD LISTING.

*811.02 Maintenance Requirements*

A. Timing - Perform surface blading during the contract period as often as needed to provide conditions stated for the maintenance level of the road.

B. General

1. 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 the ROAD LISTING, 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.

2. Apply water during blading when sufficient moisture is not present to prevent segregation. Supply, haul, and apply water in accordance with Section T-891.

3. Shape existing native rock or aggregate surfaced drainage dips to divert surface runoff to existing outlet devices, ditches, or discharge locations.

4. 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 and place outside the roadbed, material not meeting this dimension so as not to obstruct drainage ways or structures. This material may be scattered off the roadbed if there is free drainage.

5. Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, 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** |
|---|
| *To be filled in by local FS invasive plant specialist, if applicable.* |

C. Routine Blading

1. Conform to the dimensions SHOWN ON THE DRAWINGS or designated in the SUPPLEMENTAL SPECIFICATIONS upon completion of blading.

2. 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.

D. Compaction

Roads requiring compaction will be included in the ROAD LISTING. Unless Compaction Method B is designated in the ROAD LISTING, all traveled ways requiring compaction may be compacted by Method A. Compaction shall commence immediately following blading.

Compaction methods are:
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.

E. Undercutting - Undercutting roadway back slope is not permitted.

## T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

### T-811 BLADING (CONTINUED)

F. Intersections

1. At intersections, blade the roadbeds of side roads which are not closed or restricted from vehicular use to ensure smooth transitions.

2. 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.

3. Side roads listed for work under this Section are not restricted.

G. 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.

H. Berms - Maintain existing berms to the condition of adjacent segments. Do not create new berms.

I. Smooth Blading - Smooth blading may be used as an interim measure to remove loose surfacing material from the wheel paths, and 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. Cut holes through windrows, which may collect water on the road, for drainage at least every 500 feet.

### T-831 DITCH MAINTENANCE

*831.01 Description*

This Section provides for routine maintenance of various types of ditches to provide a waterway which is unobstructed, as shown on the ROAD LISTING or DESIGNATED ON THE GROUND.

*831.02 Maintenance Requirements*

A. Maintain ditches by removing rock, soil, wood, and other materials. Maintained ditches shall function to meet the intent of the original design.

B. Undercutting backslopes during removal operations is not permitted.

C. 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.

D. 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.

E. Haul material in excess of 831.02 D or subject to 831.02 E to a designated waste area under Section T-832. Remove excess materials temporarily stored on the ditch slope or edge of the shoulder daily.

F. Remove limbs and wood chunks in excess of 12 inches in length or 3 inches in diameter from ditches and place outside the roadway.

G. Clean paved surfaces of all materials resulting from ditch maintenance work.

H. Shape lead-off ditches to drain away from the traveled way.

I. Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, 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** |
|---|
| *To be filled in by local FS invasive plant specialist, if applicable.* |

## T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

### T-832 REMOVE AND END HAUL MATERIALS

*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*

A. Remove, end haul, and dispose of excess materials generated by work under other Sections of this contract.

B. Remove the slide and slough materials in the area extending approximately 6 feet vertically above the road surface and not more than 3 feet down slope from the roadbed. Dispose of material at designated sites as SHOWN ON THE DRAWINGS, identified in SUPPLEMENTAL SPECIFICATIONS, or as ordered by the Contracting Officer.

   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.

C. When approved by the Contracting Officer, fill slumps by compacting selected materials into roadway depressions. Compaction is by Method 2.

D. Place all materials in disposal sites as specified in the SUPPLEMENTAL SPECIFICATIONS, as SHOWN ON THE DRAWINGS, or as ordered by the Contracting Officer.

   1. 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.

   2. 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.

E. Repair any damage to existing aggregate or pavement surfaces.

### T-834 DRAINAGE STRUCTURE MAINTENANCE

*834.01 Description*

This work consists of cleaning and reconditioning culverts and other drainage structures.

*834.02 Maintenance Requirements*

A. 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.

B. Clean the transition from the ditch line to the catch basin a distance of 10 feet from the catch basin. Clean outlet channels and lead-off ditches a distance of 6 feet. Remove and place debris and vegetation so as to not enter the channel or ditch, or obstruct traffic. Haul debris and vegetation to a designated disposal area in accordance with Section T-832.

C. Hydraulic flushing of drainage structures is not allowed unless provided for in the SUPPLEMENTAL SPECIFICATIONS.

D. 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.

E. Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, 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** |
|---|
| *To be filled in by local FS invasive plant specialist, if applicable.* |

## T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

### T-835 ROADWAY DRAINAGE MAINTENANCE

*835.01 Description*

This work consists of providing post haul drainage on roads.

*835.02 Maintenance Requirements*

A. Drainage

1. 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's operation. Areas where water is ponded by existing centerline profile sags in through cuts may be left untreated.

2. Continuous blade shaping of the roadbed is not required under this specification.

3. Work to be done at staked locations shall be as indicated on the stake and/or stated in SUPPLEMENTAL SPECIFICATIONS:

4. Any of the following methods are acceptable for use at eroded or rutted locations:

   Method A: Outsloping the roadbed at not less than ½ inch per yard of width.

   Method B: Insloping the roadbed at not less than ½ inch per yard 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.

5. 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.

6. 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's property to be removed from National Forest System land. Remove and replace any purchaser-installed temporary drainage structures with a water bar.

B. Slides, Slumps and Slough

1. Slides and slough may be left in place, provided they do not potentially impound water or divert water from watercourses. As necessary, reshape the various surfaces to provide drainage.

2. 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.

C. 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.

D. Seeding

Seed and fertilize all disturbed areas in accordance with requirements set forth in Section T-841.

### T-836 - MAINTENANCE FOR LIMITED USE

*836.01 Description*

This work consists of making limited use roads passable for joint use by Purchaser and high clearance vehicles, and providing drainage from the traveled way and roadbed.

836.02 Maintenance Requirements

A. Traveled Way

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-836 - MAINTENANCE FOR LIMITED USE (CONTINUED)

Purchaser may smooth or fill existing cross ditches and water bars and by agreement modify existing road junctions to enable vehicle access. Prior to beginning haul and resumption of haul after an extended stoppage:

1. Remove brush, fallen trees, rocks, and other debris from traveled way, including turnouts, turnarounds, and other locations that interfere with needed maintenance as follows:

   a. 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.

   b. Cut and remove standing or down trees, logs, brush, and limbs from within the area described in 1 a. above. 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 which meets utilization standards or deck at agreed locations.

   c. Place all removed materials away from drainages.

   d. During use, maintain drainage structures, including dips, ditches and culverts in a useable condition.

2. Clean and recondition drainage facilities in accordance with: Section T-831 and T-834.

B. Slough and Slides

1. 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.

2. Purchaser 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 out slope to no more than six percent.

3. 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 will be removed under Section T-832.

C. Slumps and Washouts

1. Drain the roadbed immediately upgrade of slumps and longitudinal cracks to prevent water from entering slump area.

2. 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.

3. 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.

4. Washouts may be filled with suitable material.

D. Post haul

At the end of hauling or prior to entering into seasonal shutdowns or a period of extended inactivity:

1. Shape the traveled way and disturbed roadbed to provide functional drainage.

2. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.

3. Leave roads useable for high clearance vehicles. Remove or reshape purchaser modifications at road junctions to leave the entrance as it was before use, or as agreed at the time of improvement.

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-838 MAINTENANCE FOR HIGH CLEARANCE VEHICLE USE

*838.01 Description*

This work consists of making limited use roads passable for project use by Purchaser and providing drainage from the traveled way and roadbed.

*838.02 Maintenance Requirements*

A. Traveled Way

Purchaser 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. The Purchaser may perform the following work prior to beginning haul and resumption of haul after an extended stoppage:

1. Remove brush, fallen trees, rocks, and other debris from traveled way, including turnouts, turnarounds, and other locations that interfere with needed maintenance as follows:

   a. 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. Cut and remove standing or down trees, logs, brush, and limbs from within the area described in 1(a). 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 that meets utilization standards or deck at locations approved by the Contracting Officer.

   c. Place all removed materials away from drainages.

   d. During use, maintain drainage structures including dips, ditches and culverts in a usable condition.

2. Clean and recondition drainage facilities in accordance with Section T-831 and T-834.

B. Slough and Slides

1. 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.

2. Purchaser 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 out slope to no more than six percent.

3. 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 Contracting Officer, slough or slide material will be removed under Section T-832.

C. Slumps and Washouts

1. Drain the roadbed immediately upgrade of slumps and longitudinal cracks to prevent water from entering slump area.

2. 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.

3. Unless the Contracting Officer 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.

4. Washouts may be filled with suitable material.

D. Post haul

At the end of hauling or prior to entering into seasonal shutdowns or a period of extended inactivity:

1. Shape the traveled way and disturbed roadbed to provide functional drainage.

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-838 MAINTENANCE FOR HIGH CLEARANCE VEHICLE USE (CONTINUED)

2. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes caused through use and maintenance.

3. Leave roads useable for high clearance vehicles. Remove or reshape purchaser 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

*839.01 Description*

Work consists of providing minimum access required for Purchaser's Operations and associated Forest Service contract administration and preventing unacceptable resource or road damage.

*839.02 Maintenance Requirements*

A. Purchaser is authorized to perform the following maintenance to provide vehicle passage and drainage:

1. Removing log, earth, and rock barriers and/or improving existing road junctions to enable vehicle access as mutually agreed.

2. Smoothing or filling existing cross ditches and water bars.

3. Installing Purchaser-furnished culverts or other temporary drainage structures for shallow stream crossings as approved by the Contracting Officer.

4. Removing brush, fallen trees, rocks, and other materials from the traveled way and other locations that interfere with needed maintenance:

   a. Place all removed materials away from drainages.

   b. Limb and remove timber which meets utilization standards or deck at locations approved by the Contracting Officer. Scatter other woody materials, including limbs, off of and below the roadbed without creating concentrations.

5. Clean and recondition drainage structures in accordance with Section T-831 and Section T-834.

6. Reposition or ramp over slough and slides to provide adequate width of traveled way material.

7. 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.

B. During use, the traveled way shall not channel water along the road. Prior to seasonal periods of anticipated rains and runoff, perform the following work:

1. Shape the traveled way and roadbed to drain.

2. Reinstall removed cross ditches and water bars and provide any additional drainage structures necessary to offset changes through use and maintenance.

3. Perform work outlined in 839.02 A (5), (6), and (7).

4. During periods of non use, replace original barrier or provide and maintain standard MUTCD, Type 3, barricades unless alternate type barriers are approved by the Contracting Officer.

*839.03 Post Haul Requirements*

A. Upon completion of project use perform such work as needed to reasonably conform to the character of the existing road prior to Purchaser's maintenance for project use, unless otherwise provided in the SUPPLEMENTAL SPECIFICATIONS or the Road Listing. Work shall be in addition to requirements of 839.02 B and in accordance with 839.03 B and C.

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-839 MAINTENANCE FOR PROJECT USE (CONTINUED)

B. Roads designated in the Road Listing to be blocked shall conform to the requirements of Section T-835. Unless otherwise approved by the Contracting Officer, remove Purchaser-installed temporary structures from National Forest System land. Associated commercially-obtained materials shall remain the property of the Purchaser.

C. Remove or reshape Purchaser improvements at road junctions, as approved by the Contracting Officer at the time of improvement.

T-841 VEGETATION ESTABLISHMENT

*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:

A. Fertilizer: Fertilizer shall be a standard commercial grade and provide the minimum percentage of available nutrients designated.

| % Nitrogen | % Phosphorus | % 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.

B. Seed:

1. This work consists of furnishing and placing required seed mix on all areas disturbed under this contract and on any other areas specified.

2. Apply the seed in the following amounts and mixtures:

| Species | Application Rate (lbs/acre) |
|---|---|

3. Use hand-operated seeding devices, or other devices approved by the Contracting Officer, to apply seed.

4. 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, for those weeds as 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 (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), and (5) percentage of maximum weed seed content clearly marked for each kind of seed; (6) certification that the seed lot meets applicable State and Federal laws with regard to prohibited and restricted noxious weeds clearly marked for each kind of seed. Furnish the Contracting Officer duplicate signed copies of a certificate 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) certifying 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 (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 content, (8) certification that the seed lot meets applicable State and Federal laws with regard to prohibited and restricted noxious weeds, and (9) in the case of a mixture, the proportions of each kind of seed. Legume seed shall be inoculated with approved cultures in accordance with the instructions

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-841 VEGETATION ESTABLISHMENT (CONTINUED)

of the manufacturer. No seed may be applied without prior written approval from the Contracting Officer.

C. Mulch: Apply mulch materials as follows:

| Mulch Type | Application Rate |
|---|---|

D. Plant Stock: Furnish the following listed plant materials:

| Stock | Size | Bare Root | Containerized |
|---|---|---|---|

*841.03 Schedules and Applications*

A. Schedule

1. 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: to .

2. 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.

B. Roadside and Slope Treatment

1. Roadsides will not require advance preparation unless required in the SUPPLEMENTAL SPECIFICATIONS or as SHOWN ON THE DRAWINGS.

2. 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.

3. 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.

C. Roadbed Treatment

1. 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.

2. Treat barrier mounds placed under Section T-835 while in a roughened condition.

D. Planting

1. Plant designated woody plant materials at the staked locations or designated spacings.

2. Place containerized plant stock in an appropriately sized hole formed by a dibble or other device to place the roots at the proper depth.

3. Place bare root plant stock in a slotted cut formed by a mattock, pulaski, or other edged tool. Place the crown at ground level. Do not bend or break the roots.

4. 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.

5. Hold the plantings firmly in place by the soil. When checked by pulling upward on the top ½ 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-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-841 VEGETATION ESTABLISHMENT (CONTINUED)

*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:

T-842 CUTTING ROADWAY VEGETATION

*842.01 Description*

This work consists of cutting all vegetative growth, including trees and other vegetation less than 4 inches in diameter measured 6 inches above the ground, on roadway surfaces and roadsides.

*842.02 Maintenance Requirements*

A. General

1. 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.

2. Items to remain will be DESIGNATED ON THE GROUND.

3. Work may be performed either by hand or mechanically unless specifically shown in the Road Listing. Self-propelled equipment is not allowed on cut and fill slopes or in ditches.

4. Correct damage to trunks of standing trees caused by Purchaser's operation either by treatment with a commercial nursery sealer or by removing the tree as directed by the Contracting Officer.

5. Limb trees within the cutting limits which are over 4 inches -measured at 6 inches above the ground in lieu of cutting.

6. When trees are limbed, cut limbs within 4 inches of the trunk.

B. Cutting Side Vegetation

1. Show the width of vegetation to be removed in the Road Listing.

2. Unless otherwise included in the SUPPLEMENTAL SPECIFICATIONS or DESIGNATED ON THE GROUND:

   a. Commence work at the edge of the traveled way and proceed away from the road centerline.

   b. Roads without a defined traveled way: The starting point for cutting will be marked on the ground or defined in the SUPPLEMENTAL SPECIFICATIONS.

3. The points for establishing cutting limits are as follows:

   a. Fill and daylighted (wide roadbed) section cutting commences at the edge of the traveled way and proceeds away from the road center line.

   b. 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.

   c. Unditched cut section cutting commences at the intersection of the cutbank and the roadbed and proceeds away from center line.

4. 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.

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-842 CUTTING ROADWAY VEGETATION

C. Debris

1. 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.

2. Remove limbs and chunks in excess of 3 inches in any dimension from the traveled way and shoulders.

3. 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.

D. Invasive Species of Concern

Where DESIGNATED ON THE GROUND, included in the ROAD LISTING, 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** |
|---|
| *To be filled in by local FS invasive plant specialist, if applicable.* |

T-851 LOGGING OUT

*851.01 Description*

This work consists of removal of fallen trees and snags which encroach into the roadway or the 3 feet of roadside abutting the roadway on the cut side.

*851.02 Maintenance Requirements*

A. Limb and remove timber which meets Utilization Standards, or deck at locations designated by the Contracting Officer.

B. Limb other material 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 roadway for public use roads, except limited use roads. The clearing width for limited use roads is shown in the specifications.

C. Notwithstanding CT.3, blowdown timber outside Sale Area required to be removed, which meets Utilization Standards in AT.2, when designated by the Contracting Officer is Included Timber subject to requirements of CT.2.

D. 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

*854.01 Description*

This work consists of felling and disposal of designated live or dead danger trees sufficiently tall to reach roads used by the Purchaser. Any removal of logs is subject to prior agreement between the Contractor Officer and the Purchaser.

*854.02 Requirements*

A. Designation of danger trees.

Danger trees to be felled will be designated in advance by the Contracting Officer. Trees to be removed will be Marked.

T-SPECIFICATIONS PURSUANT TO KT-FT.3.1# - ROAD MAINTENANCE REQUIREMENTS

T-854 – TREATMENT AND DISPOSAL OF DANGER TREES (CONTINUED)

B. Falling, bucking and treatment for disposal.

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, must not exceed 12 inches or 1/3 of the stump diameter, whichever is greater. Higher stump heights are permitted when necessary for safety.

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.

Fell, limb and, remove trees, which are Marked for removal, that equal or exceed the utilization standards as listed in the Timber Sale contract or SUPPLEMENTATAL SPECIFICATIONS. Dispose of merchantable timber designated for removal in accordance with CT.3.2 Construction Clearing, of the Timber Sale Contract, or as described in SUPPLEMENTAL SPECIFICATIONS.

C. Slash treatment.

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.

Dispose of slash by scattering outside the roadway limits without damaging trees, or improvements.

Large accumulations of slash may be ordered hauled under T-832.

T-891 WATER SUPPLY AND WATERING

*891.01 Description*

This work consists of providing facilities to furnish an adequate water supply, hauling and applying water.

*891.02 Materials*

If the Purchaser elects to provide water from other than designated sources, the Purchaser is responsible to obtain the right to use the water, including any cost for royalties involved. Suitable and adequate water sources available for Purchaser's use under this contract are designated as follows:

*891.03 Equipment*

A. Positive control of water application is required. Equipment shall provide uniform application of water without ponding or washing.

B. 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.

C. 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's operations. Flowing streams may be temporarily sandbagged or a weir placed to pond water, provided a minimum flow is maintained. Obtain approval from the Contracting Officer on improvements for sandbags or weirs prior to placement.

*Contract Name: Curly Stewardship*

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 1: Snag Creation

*Description of Project*

This project call for creating specified levels of snags. Half of the snags will be created by topping live trees. The remaining snags may be existing dead trees or trees that are girdled near ground level. All credited snags will be tagged. Snags in item Curly Stewardship Unit 46 are to be located at four specific GPS coordinates. Snags in the other items should be distributed across unit, but may be clumped in groups of 4.

| *Unit Name* | *Snag Count* | *Snag Dimensions* |
|---|---|---|
| Curly Stewardship Unit 46 | 20 | 14-18 in dbh<br>50+ ft height |
| Curly Stewardship Unit 47 | 243 | 15-20 in dbh<br>50+ ft height |
| Curly Stewardship Unit 49 | 15 | |
| Curly Stewardship Unit 50 | 72 | |
| *Total* | *350** | |

*Half of the snags need to be created by topping live trees, the rest may be existing snags or trees girdled near ground level.

Refer to Contract Area Map, Projects 1-3.

*Technical Specifications*

A. Contractor Equipment

1. Provide tags (tyvek or similar) and nails/stapes, flagging, and GPS unit. This is in addition to saws and hand tools.

B. Selecting Trees for Snag Treatment

1. Contractor is responsible for selecting and creating snags at levels and dimensions specified in Table 1. Half of the specified snags, on a unit basis, need to be topped trees.

2. Created snags need to be located 100 feet away from open, system roads.

3. Credited snags can be in a clump of up to four (4) snags.

4. Credited snags should be well distributed across the cut unit, except for Curly Stewardship Unit 46.

5. Credited snags will not be located within any tagged no-cut area, no-cut skip, or LTM area. Exceptions for Curly Stewardship Unit 46.

6. Curly Stewardship Unit 46 Exceptions – Five (5) snags will be created at very close proximity at each of the following UTM coordinates (NAD 83). These locations are just outside of the cutting unit boundary.

   Location 1: 10T 581780 5107489
   Location 2: 10T 581768 5107495
   Location 3: 10T 581736 5107786
   Location 4: 10T 581680 5107495

C. Existing Snags

1. Existing snags may counted and tagged, if they are a conifer species that meet the minimum dimensions listed in Table 1.

D. Snags Created by Girdling

1. Live trees may be girdled near ground level to create snags.

2. Girdled trees will be Douglas-fir, only.

3. Girdling shall be accomplished by cutting and removing a circular band around the entire bole of the tree. The band shall be at least four inches (4″) wide at all points and the cut shall completely remove the bark and cambium layer. Removal of underlying sapwood should not exceed ½ inch.

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 1: Snag Creation (Continued)

E. Snags Created by Topping

1. Half of the specified levels of snags on a per unit basis need to be created by topping live trees.

2. Topped trees will be Douglas-fir, only.

3. Trees will be topped at a height of 50 feet minimum. All live branches should be removed below top height.

4. Do not top trees in pockets of laminated root rot disease. These areas are evidenced by snags of different age and windthrow. These trees could topple when climbed.

F. Tagging, Flagging, and Records

1. Each credited snag needs to be tagged, flagged, and recorded via GPS and map.

2. Forest Service will provide contractor with unit maps.

3. Nail or staple the tag about 5 feet above ground with at least two nails or staples at the corners. Number each tag/snag sequentially. Tie flagging around the tree near the tag leaving a foot of flagging hanging down from the knot. The tag numbers need to remain visible.

4. The location of each group of snags is to be documented on a list with the GPS coordinates. Relative locations of each group will be shown on the maps provided by placing a dot and writing the group number. Contractor shall keep accurate and legible records of the trees treated in the work unit. These coordinates records and maps are to be turned into the COR or inspector soon after the unit has been completed, and will be used to facilitate inspection.

   Example Records Table:

| Group | Coordinates (NAD 83) | | Snag Composition | | |
|---|---|---|---|---|---|
| | North | West | Natural | Girdled | Topped |
| 1 | 46° 56′ 12″ | 121° 36′ 01″ | 1 | 1 | 2 |
| 2 | 46° 56′ 17″ | 121° 37′ 15″ | 0 | 2 | 2 |
| 3 | 46° 56′ 25″ | 121° 36′ 34″ | 0 | 2 | 2 |

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 2: Down Log Creation

*Description of Project*

This project calls for leaving the specified levels of downed logs. Down logs may be left from logging operations, created from felled trees. Down logs must be hard logs (decay class 1 or 2). All credited downed logs will be tagged. Downed logs in item Curly Stewardship Unit 46 are to be located at four specific GPS coordinates. Downed logs in the other items should be distributed across unit, but may be clumped in groups of 4.

| *Unit Name* | *Downed Log Count* | *Downed Log Dimensions* |
|---|---|---|
| Curly Stewardship Unit 46 | 20 | 14-18 in diameter large end<br>40+ ft length |
| Curly Stewardship Unit 47 | 243 | 15-21 in diameter large end<br>40+ ft length |
| Curly Stewardship Unit 49 | 15 | |
| Curly Stewardship Unit 50 | 72 | |
| *Total* | *350* | |

Refer to Contract Area Map, Projects 1-3.

*Technical Specifications*

A. Contractor Equipment

1. Provide tags (tyvek or similar) and nails/stapes, flagging, and GPS unit. This is in addition to saws and hand tools.

B. Selecting Trees for Downed Logs

1. Contractor is responsible for selecting and creating downed logs at levels and dimensions specified in Table 1.

2. Created downed logs need to be located 100 feet away from open, system roads.

3. Credited downed logs can be in a clump of up to four (4) logs.

4. Credited downed logs should be well distributed across the cut unit, except for Curly Stewardship Unit 46.

5. Credited downed logs will not be located within any tagged no-cut area, no-cut skip, or LTM area. Exceptions for Curly Stewardship Unit 46.

6. Curly Stewardship Unit 46 Exceptions – Five (5) downed logs will be created at very close proximity at each of the following UTM coordinates (NAD 83). These locations are just outside of the cutting unit boundary.

   Location 1: 10T 581780 5107489
   Location 2: 10T 581768 5107495
   Location 3: 10T 581736 5107786
   Location 4: 10T 581680 5107495

C. Existing Downed Logs

1. Existing downed logs may counted and tagged, if they are a conifer species, a hard log (decay class 1 or 2), and meet the minimum dimensions listed in Table 1.

D. Downed Logs Created by Felling Live Trees

1. Live trees may be felled to create downed logs.

2. Felled trees will be Douglas-fir, only.

E. Tagging, Flagging, and Records

1. Each credited downed log needs to be tagged, flagged, and recorded via GPS and map.

2. Forest Service will provide contractor with unit maps.

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 2: Down Log Creation (Continued)

3. Nail or staple the tag on top and near the large end of the downed log. Use at least two nails or staples at the corners. Number each tag/snag sequentially. Tie flagging around the tree near the tag leaving a foot of flagging hanging down from the knot. The tag numbers need to remain visible.

4. The location of each group of downed logs is to be documented on a list with the GPS coordinates. Relative locations of each group will be shown on the maps provided by placing a dot and writing the group number. Contractor shall keep accurate and legible records of the trees treated in the work unit. These coordinates records and maps are to be turned into the COR or inspector soon after the unit has been completed, and will be used to facilitate inspection.

   Example Records Table:

| Group | Coordinates (NAD 83) | | Downed Log Composition | |
|---|---|---|---|---|
| | North | West | Natural | Felled |
| 1 | 46° 56′ 12″ | 121° 36′ 01″ | 1 | 3 |
| 2 | 46° 56′ 17″ | 121° 37′ 15″ | 2 | 2 |
| 3 | 46° 56′ 25″ | 121° 36′ 34″ | 3 | 1 |

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 3: Tree Planting

*Description of Project*

Plant trees within specified project units (LTM areas of Curly Stewardship Units 47 and 50). Seedlings are to be a minimum of 1.5 years old and of seed from the appropriate seed zone and elevation. Seedlings are to be provided by Contractor. Tree planting will occur during appropriate season and weather conditions. Tree planting is to occur within "LTM" areas that are shown in cross hatch on the map. On the ground boundaries are marked with flagging and "LTM" tags.

| *Unit Name* | *Acres* | *Planting Density* | *Species Mix* |
|---|---|---|---|
| Curly Stewardship Unit 47 | 6 | 200 trees/ac at 15′ x 15′ (spacing may vary by 20%) | Western hemlock (25%)<br>Western red cedar (25%<br>Grand fir (25%)<br>Bigleaf maple (25%) |
| Curly Stewardship Unit 50 | 2 | | |
| *Total* | *8* | | |

Refer to Contract Area Map, Projects 1-3.

*Technical Specifications*

A. Accessibility

1. Work areas may be reached by Forest roads that are accessible by standard two-wheel drive pickup equipped with snow tires and chains, if needed, during normal operating seasons, unless otherwise indicated on the planting data sheets.
2. Inaccessibility due to snow, fallen trees, slides or washouts on roads my or may not be corrected at the option of the Government. If road access is blocked, the Government may: (1) provide an alternate access route; (2) delete the inaccessible sub-item(s); (3) substitute similar sub-items(s).
3. Roads shown on unit maps indicate access to units and are not to suggest the roads are open within units or for any further travel.

*B. Contract Definitions*

1. Plantable Spot – An area from which vegetation, ash, duff, snow and debris has been or can be removed, and a tree seedling can be planted as specified elsewhere herein.
2. Unplantable Spot – An area within the specified spacing limits in which it is not possible to plant a seedling according to specifications. Berms and mounds of soil as well as standing water are examples of unplantable spots.
3. Satisfactory Planted Seedling – A seedling planted in full accordance with all planting specifications set forth in this contract.
4. Unsatisfactorily Planted Seedling – A planted seedling which fails to meet one or more of the specifications for a satisfactorily planted seedling.
5. Wasted Seedling – Seedlings which are lost, damaged, destroyed or handled contrary to the specifications for care of seedlings. Planted seedlings in excess of the maximum number of seedlings creditable as specified elsewhere herein are also considered to be wasted seedlings.
6. Cotyledon Scar – Lowest point on stem from which branches will grow and is marked by a distinct ring in the bark on most species of tree seedlings.
7. Root Length – Root length will be measured from the root tips to the cotyledon scar.
8. Replanting – Any planting work done in a sub-item, ether voluntarily by the Contractor or directed by the Contracting Officer, after the Contractor has given the planting inspection sheets to the Government.
9. Microsite Planting – the planting of tree seedlings in a plantable spot most favorable to seedling survival and growth. Examples of favorable microsite features that provide protection from sun, wind, animals, and other damaging agents are spots located adjacent to logs, stumps, brush, and rock. Refer to Exhibit B.
10. Prepared Sites – An area from which logging slash and competing vegetation has been removed to allow a seedling to be planted in full accordance with all specifications set forth in this contract.

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Project Number 3: Tree Planting (Continued)

11. Suitable Tree – A tree of good form and vigor which shows no physical damage and which conforms to the size, characteristics and species specified in the planting data sheets. Refer to Exhibits B, E, G, H, & J.

C. Contractor Provided Seedlings

1. The Contractor will provide all seedlings for planting.
2. Seedlings may be bare root or container stock. Seedlings need to be a minimum of 1.5 years old.
3. Seedlings will be from the following seed zones and elevations:

| Species | Seed Zone | Elevation Range |
|---|---|---|
| Western Hemlock | Toutle (Zone 4) | 0 – 2000 ft |
| Western Red Cedar | Toutle (Zone 4) | 1200 – 2400 ft |
| Grand Fir | Cowlitz (Zone 6) | 1000 – 2000 ft |
| Big Leaf Maple | Not specified | Not specified |

D. Planting Equipment

1. Planting Tools – Contractor’s planting tools shall meet the following minimum requirements: (1) Planting tools shall be capable of making a planting hole the width and depth needed to satisfactorily plant the seedlings furnished by the Contractor.

E. Seedling Handling Equipment

1. Planting Bags – Planting bags shall be light in color, shall not retain heat, shall have a minimum dept of 15 inches and shall be free of defects or contaminants. When adverse weather conditions warrant, as determined by the Government, insulated planting bags shall be used. Insulated planting bag inserts will be acceptable. Insulated bag inserts shall be available for use at all times during the planting period. Insulated planting bag inserts shall be dipped in water prior to each bag up.

F. Care of Seedlings

1. Seedlings shall be protected at all times from drying, heating, smothering, freezing, crushing drowning, abrasion, rapid temperature fluctuations or contact with injurious substances.
2. Seedlings stored in boxes, bags or bundles shall not be exposed to direct sunlight. Punctured or torn bags shall be promptly resealed. Containers of seedlings shall be opened only in full shade. Bundles, bags, or boxes shall be separated to provide free air movement.
3. Seedlings shall not be removed from shipping containers until needed for preparation for planting.
4. Seedlings shall be planted without further root or top pruning or culling. If pruning or culling seems necessary, or if mold, dry roots, evidence of injury or drying is seen, the condition shall immediately be reported to the Contracting Officer.
5. Frozen seedlings shall not be handled until completely thawed. They shall be thawed in full shade.
6. Seedlings removed from cold storage facilities shall not be allowed to stand or lay in water.
7. Seedlings shall not be removed from a planting bag until immediately before planting in a prepared hole.
8. Seedlings shall be gently removed, one at a time, to prevent stripping or other injury and quickly and gently inserted into the planting hole.
9. Seedlings carried in planting bags shall not exceed the amount that can be carried or removed without injury, or which can be planted before critical heating or drying occur. Seedlings placed in planting bags shall be planted out and not returned to storage. Trees in planting bags shall be planted out before extended breaks such as lunch. The number of seedling in the planting bag shall not normally exceed 200 and may be further decreased depending on severity of drying conditions, size of the bag and/or duration in planting bag which shall not normally exceed 2 hours.
10. Unplanted seedlings shall be returned to the Contractors storage facility at the end of each working day in sealed and proper container.

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Project Number 3: Tree Planting (Continued)

G. Contractor Transportation of Seedlings

1. Contractor shall transport seedlings from storage to the planting unit, and back to storage. Appropriate storage facilities are the responsibility of the contractor. Government storage facilities may or may not be available.

2. Contractor shall not crush seedlings.

3. Contractor shall maintain air temperature at or below 45 degrees Fahrenheit within the bags. Seedlings within bags which have an inside air temperature above 45 degrees Fahrenheit, may be considered wasted seedlings with the Contractor responsible for replacing seedlings.

H. Preparation of Seedlings

1. The Contractor shall dip roots of bareroot seedlings in water to wet them prior to placing seedlings in planting bags. Seedlings shall remain in the water for at least 1 minute but not longer than 10 minutes.

I. Seedling Spacing Requirement

1. Seedlings shall be planted to the boundary of all planting areas and around the perimeter of unplantable areas in spots distributed at intervals prescribed in the planting data sheets. For individual seedlings, the specified average spacing may be varied no more than 20 percent in any direction to find a suitable planting spot.

2. Where an unplantable spot is encountered the planter shall plant in the closest plantable spot; however, average spacing shall be maintained.

J. Planting Spot Selection

1. Brush patches containing planting spots shall be planted even though this may require spreading stems aside or working around the stems. Landings, road cuts, and fill banks shall be planted where planting spots exist.

2. Contractor shall consider standing trees greater than 5 inches DBH as nonexistent when selecting planting spots.

3. Whenever possible, within the 20 percent variance in average spacing, planting spots shall be prepared where stumps, logs, dead brush, and terrain features provide partial protection from sun, wind, animals, loose debris, and other agents detrimental to seedlings. Refer to Exhibit B.

K. Planting Spot Preparation

1. Prior to preparing the planting hole, contractor shall clear the planting spot of all limbs, logs, snow, bark, rotten wood, rocks and other loose debris and shall scalp as, duff, sod, crowns of living plants, and roots down to moist mineral soil. Clearing and scalping dimensions shall be as shown on the planting data sheets. If slash prohibits the specific diameter of scalp, a smaller scalp will be acceptable.

L. Preparing the Planting Hole

1. Planting holes shall be located near the center of the prepared planting spot and shall be between perpendicular to the ground surface and true vertical.

2. For Handtools: An open hole, broken out as shown as an example in Exhibit E, shall be wide and deep enough to fully accommodate the roots of the seedlings to be planted and breaking loose the soil surrounding the root system.

M. Seedling Placement

1. Bareroot seedlings – the barefoot seedling shall be suspended near the center of the hole with the roots in a near natural arrangement at a depth such that after filling, firming and leveling, the soil comes to a point at or above the cotyledon scar of the tree. No portion of the roots shall be exposed nor shall needles or branches be covered with soil. Roots shall not be doubled up, twisted, spiraled, or bunched. The root system shall be aligned with the axis of the planting hole with all roots extending downward. See Exhibit G.

2. The soil level after filling and firming the soil around the planted seedling shall be no higher than the base of live needles. When there is less than 1 inch between the roots and the lowest

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Project Number 3: Tree Planting (Continued)

whorl of branches it is permissible to cover the lowest whorl with uncompacted soil. Refer to Exhibits G & H.

3. Containerized Seedlings – Seedlings shall be planted in the center of the prepared hole at a depth at which after filling, firming and leveling, the soil comes to a point even with the lowest needles of green foliage. Plug growing media shall not be distorted or broken from the root system during the planting process. Root system shall be aligned with the axis of the planting hole with all roots extending downward. See Exhibit J.

N. Filling and Firming

1. Moist mineral soil shall be filled in and formed around seedling roots. Dry soil ash, organic matter, rock and other foreign material shall be kept out of the holes. Soil shall be filled in to prevent air pockets. The contractor shall not wedge the sides of the hole. Firming the soil around the roots shall be accomplished in a manner that assures the seedling and root system is not damaged. After the soil is firmed around the roots, it shall be smoothed out to the level of the surrounding mineral soil surface. After planting, the seedling stem shall be erect and free to grow. The seedling shall not be weighted down with mud or debris. Refer to Exhibits G, H & J.

2. After planting the seedling stem position shall not exceed a 13-degree from true vertical and the top of the tree. Refer to Exhibits G & J.

3. Planting tool may be used to firm the soil in the manner shown in Exhibit E. Soil firming shall be accomplished while the seedling is held suspended near the center of the hole.

O. Mixture of Planting Stock

1. In sub-items where more than one species is to be planted, the seedlings shall be evenly distributed throughout the unit unless otherwise directed by the Contracting Officer.

P. Other Technical Specifications

1. Empty seedling bags are to be removed from National Forest and disposed appropriately.

2. Contractor shall supply dipping buckets and water for dipping tree seedlings.

3. Contractor Inspection shall be 2% sample of planting unit, identified on the ground with ribbon and plot number recorded on the ribbon and recorded for submission to the Contracting officer. The completed and legible inspection sample is to be turned over to Contracting Officer at completion of each planting unit, also verifying that tree handling was completed in accordance with the contract provision stated elsewhere in this contract.

4. Inspection shall be maintained concurrent with contract work.

5. In the event the Contractor falsifies inspection results, as determined by the Contracting Officer, the Government may declare the contract to be in default.

Q. Government Verification Procedures

The Government will conduct verification inspection to determine compliance with specification. Determination of the quality of the work performed will be based on these verifications and will be considered conclusive. The Government will:

1. Observe tree handling.

2. Install a series of circular plots with slope correction. Plots shall be located throughout the planting areas to obtain a representative sample of Contractor’s work. The inspection sample shall be 20% of Contractor’s inspection plots.

3. Mark inspection plots on the ground with flagging.

4. Inspect planting procedures and examine the planted seedlings to ensure and measure compliance with the specifications. Will utilize the following codes for recording above and below ground compliance on the planting cards:

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Project Number 3: Tree Planting (Continued)

| CODE | Above-Ground Inspection | Clause |
|---|---|---|
| A | Planting Spot Selection | I,J |
| B | Planting Spot Preparation | K |
| C | Tree Location on Site | I,M |
| D | Planting Depth and Exposed Roots | M |
| E | Stem Position or Damage | N |
| F | Firming | N |
| G | Shade | J |
| H | Spacing | I |
| AA | Microsite Planting | J |
| I | Planting Hole Preparation | L |
| J | Root Configuration & Orientation | L,M |
| K | Planting Hold Orientation | L |
| L | Altered Root Length & Damage | F |
| M | “Foreign” Material in Planting Hole | N |
| N | Air Pockets | N |

R. Inspection Within Each Plot

1. Determine from Exhibit 1 the average number of planting spots for the plot based on the specified average spacing. From this subtract the number of suitable trees and number of unplantable spots. Record the difference as the number of plantable spots.

2. Determine and record the maximum number of allowable seedlings from Exhibit 2.

3. Record the number of seedlings planted on the plot.

4. Record the number of planted seedlings meeting the above-ground specifications. The maximum number of satisfactory seedlings to be credited shall not exceed that shown in Exhibit 2.

5. Dig and Record the number of seedlings meeting the below-ground specifications. Refer to Exhibit 3 for number to be dug.

6. Compute the planting quality by the following formula:

*Planting Quality =*

$$\frac{\textit{(No. of Sat. Trees Above-Ground)}}{\text{(No. of Plantable Spots)}} \times \frac{\textit{(No. of Sat. Dug Trees)}}{\text{(No. of Dug Seedlings)}} \times 100$$

a) Divide the total satisfactory seedlings above-ground by the total number of plantable spots.

b) Divide the total satisfactory seedlings below-ground by the total dug:

c) Multiply the two totals to get the planting quality percentage.

d) When the number of satisfactory seedlings above ground is zero or one, and the number of plantable spots is zero, the result shall be 1.

e) Add the total plot percentage of all plots in the sub-item and divide by the total number of plots to get the average percentage and planting quality.

f) Planting quality will be rounded to the nearest whole percent.

S. Work Period

1. Because tree survival and growth are dependent upon proper soil and weather conditions at the time of planting and because these conditions will only prevail for a limited length of time, it is imperative work be started promptly after conditions for planting become suitable. Work shall commence no later than 3 days after the effective date of the notice to proceed. Sub-items shall be planted in accordance with the order of preference established by the Contracting Officer. The Contractor shall maintain progress at a rate which will assure completion within the contract time indicated below.

| Item | Estimated Beginning Date | Contract Time |
|---|---|---|
| 1 | April 1 | 6 Calendar Days |
| 2 | April 7 | 2 Calendar Days |

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Project Number 3: Tree Planting (Continued)

2. Whenever weather conditions unsuitable for planting are present (air temperature in degrees Fahrenheit, wet bulb depression in degrees Fahrenheit and the maximum wind speed; frozen soil 3 inches or deeper, air temperature 30 degrees F or below, 75 degrees F or higher, soil temperature 40 degrees F or below; or a combination of these, the Contractor shall suspend work and contract time will stop for that item. When conditions are again favorable, the Contracting Officer will issue a verbal resume work order. Contract time will resume on the effective work resumption date. In all cases, the Contractor shall resume work within 3 days after the effective work resumption date. It is the contractor’s responsibility to keep the Contracting Officer currently advised as to where the Contractor or the Contractor’s Representative may be reached by phone during periods of work suspension. If the Contractor cannot be reached at the phone number provided, or if the Contractor fails to leave a number, a written resume work order will be mailed and the contract time will resume on the date specified on the resume work order.

T. Government-Furnished Property

1. The Government may provide storage facilities for seedling if space is available.

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Project Number 3: Tree Planting (Continued)

Exhibit 1

| Average Number of Planting Spots on 1/50th Acre Plots | |
|---|---|
| Spacing (Feet) | Plot |
| 9x9 | 11 |
| 10x10 | 9 |
| 11x11 | 7 |
| 12x12 | 6 |
| 13x13 | 5 |
| 14x14 | 4 |
| 15x15 | 4 |
| 17x17 | 3 |
| 20x20 | 2 |

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Project Number 3: Tree Planting (Continued)

Exhibit 2

| Maximum Allowable Seedlings | |
|---|---|
| Plantable Spot | Maximum No. of Seedlings |
| 1 | 1 |
| 1 | 2 |
| 2 | 3 |
| 3 | 4 |
| 4 | 5 |
| 5 | 6 |
| 6 | 7 |
| 7 | 8 |
| 8 | 10 |
| 9 | 11 |
| 10 | 12 |
| 11 | 13 |

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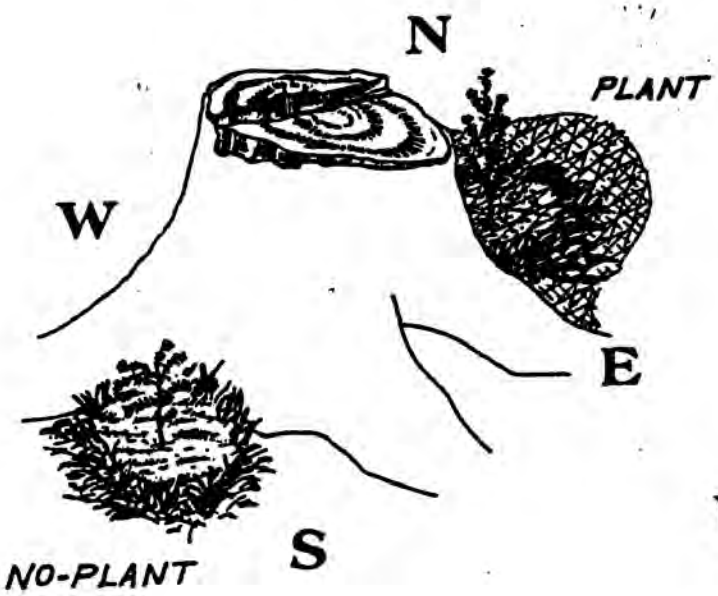
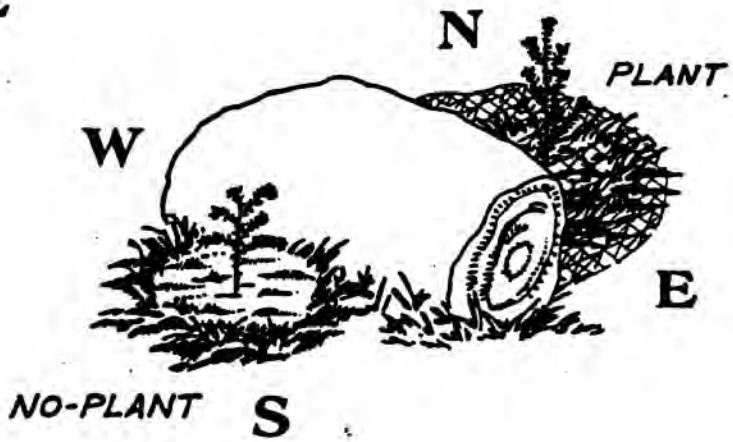
Project Number 3: Tree Planting (Continued)

Exhibit 3

| Number of Satisfactorily Planted Seedlings on Plot Above Ground | Number of Seedlings to be Dug |
|---|---|
| 1 | 1 |
| 2-6 | 2 |
| 7-9 | 3 |
| 10+ | 4 |

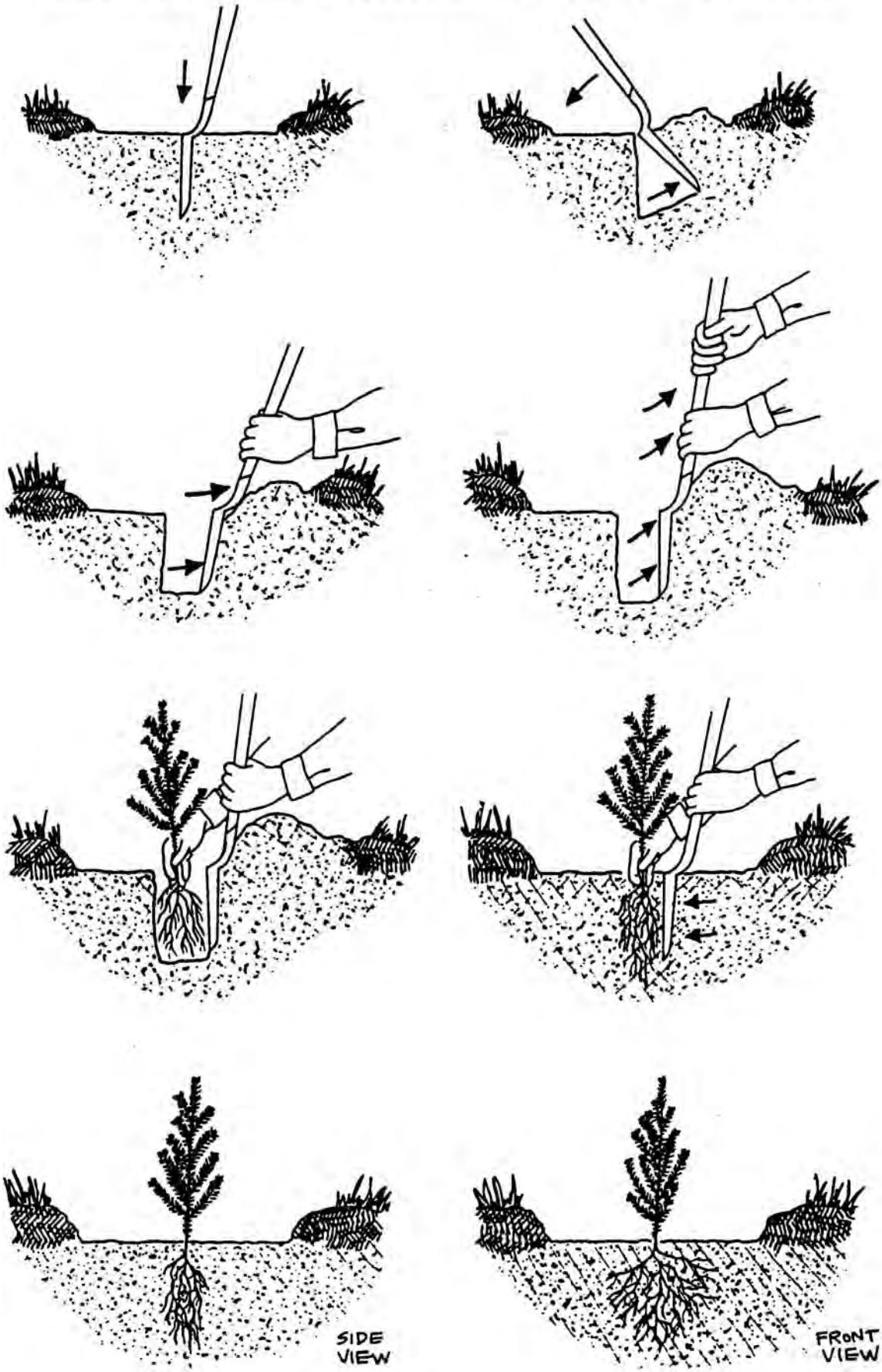
# Exhibit B
## *Natural Objects for Shade*



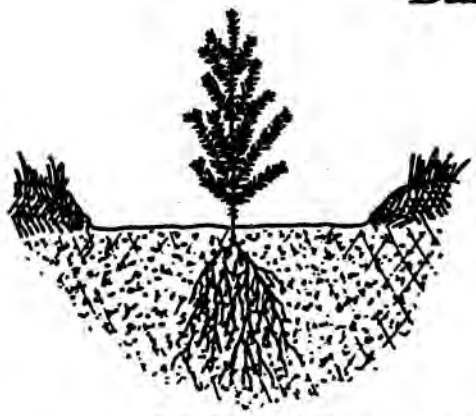
# Exhibit E

## *Shovel Planting – Hole Broken on Three Sides*

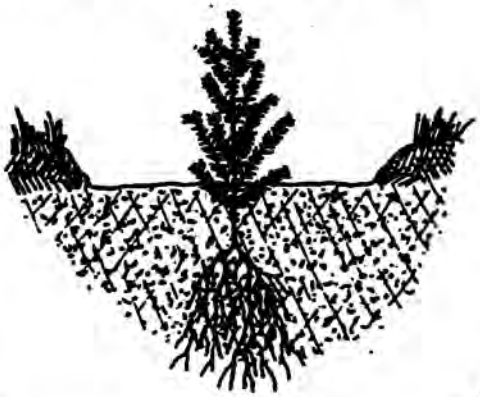


# Exhibit G

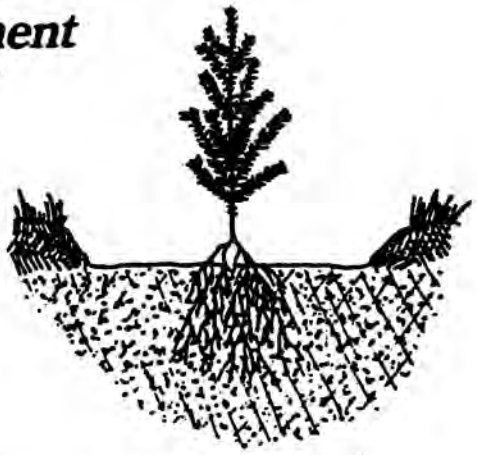
## *Bareroot Seedling Placement*



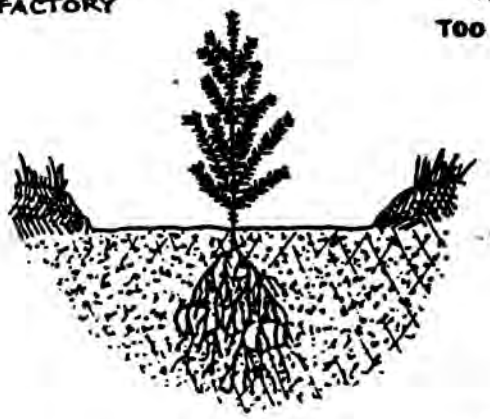
SATISFACTORY



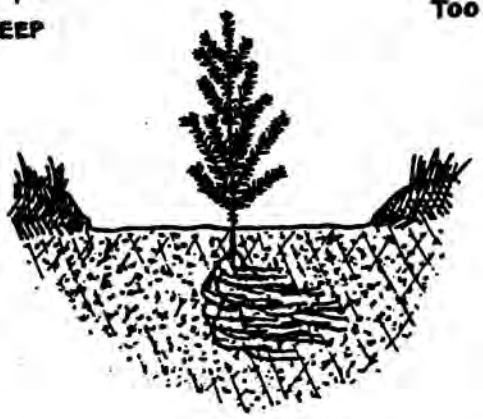
TOO DEEP



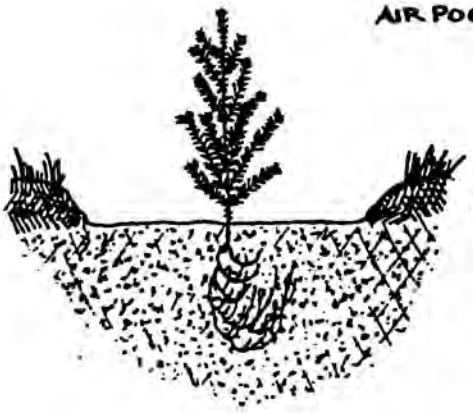
TOO HIGH



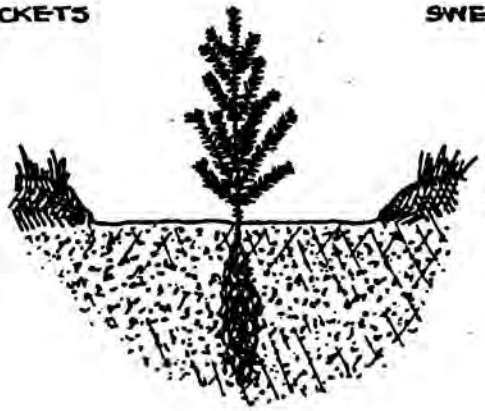
AIR POCKETS



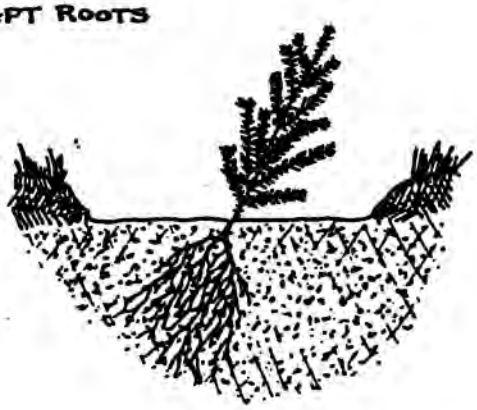
SWEPT ROOTS



"J" ROOTS

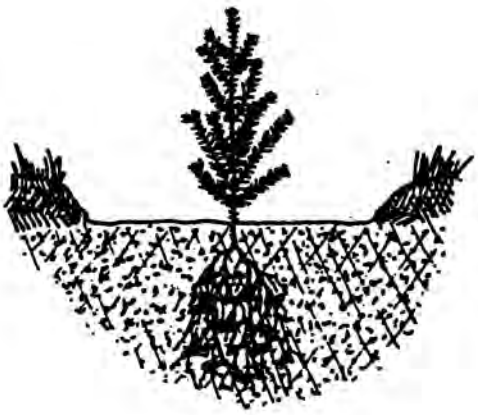


BUNCHED ROOTS

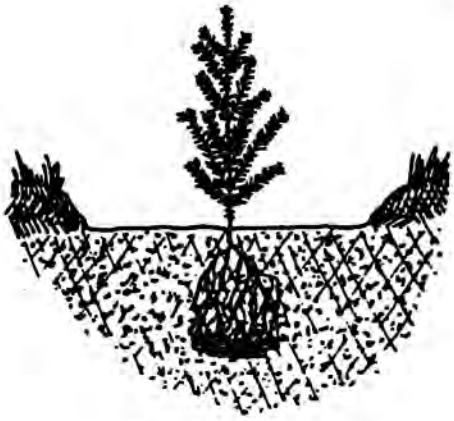


LEANER

TOO LOOSE



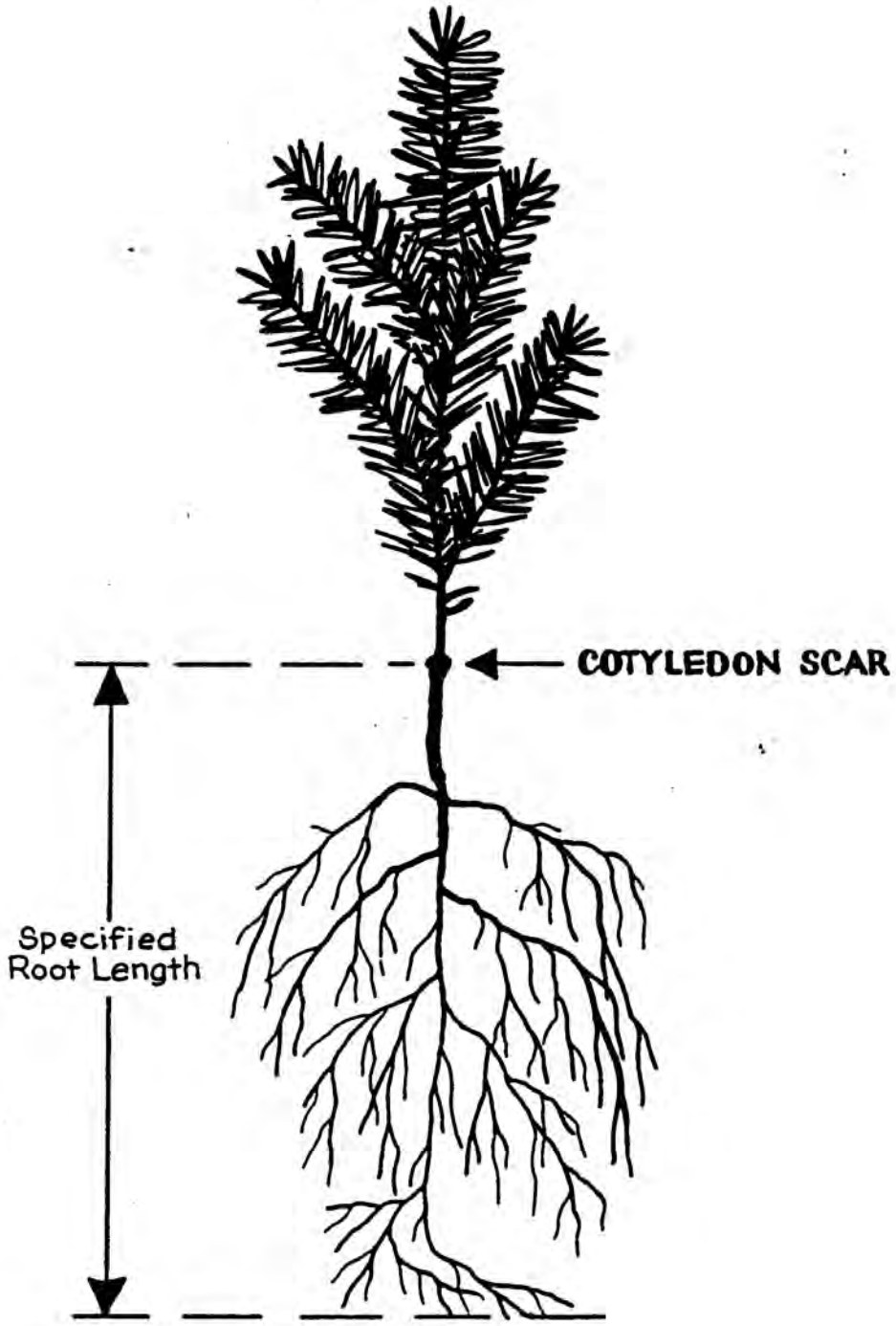
DEBRIS



SHALLOW HOLE

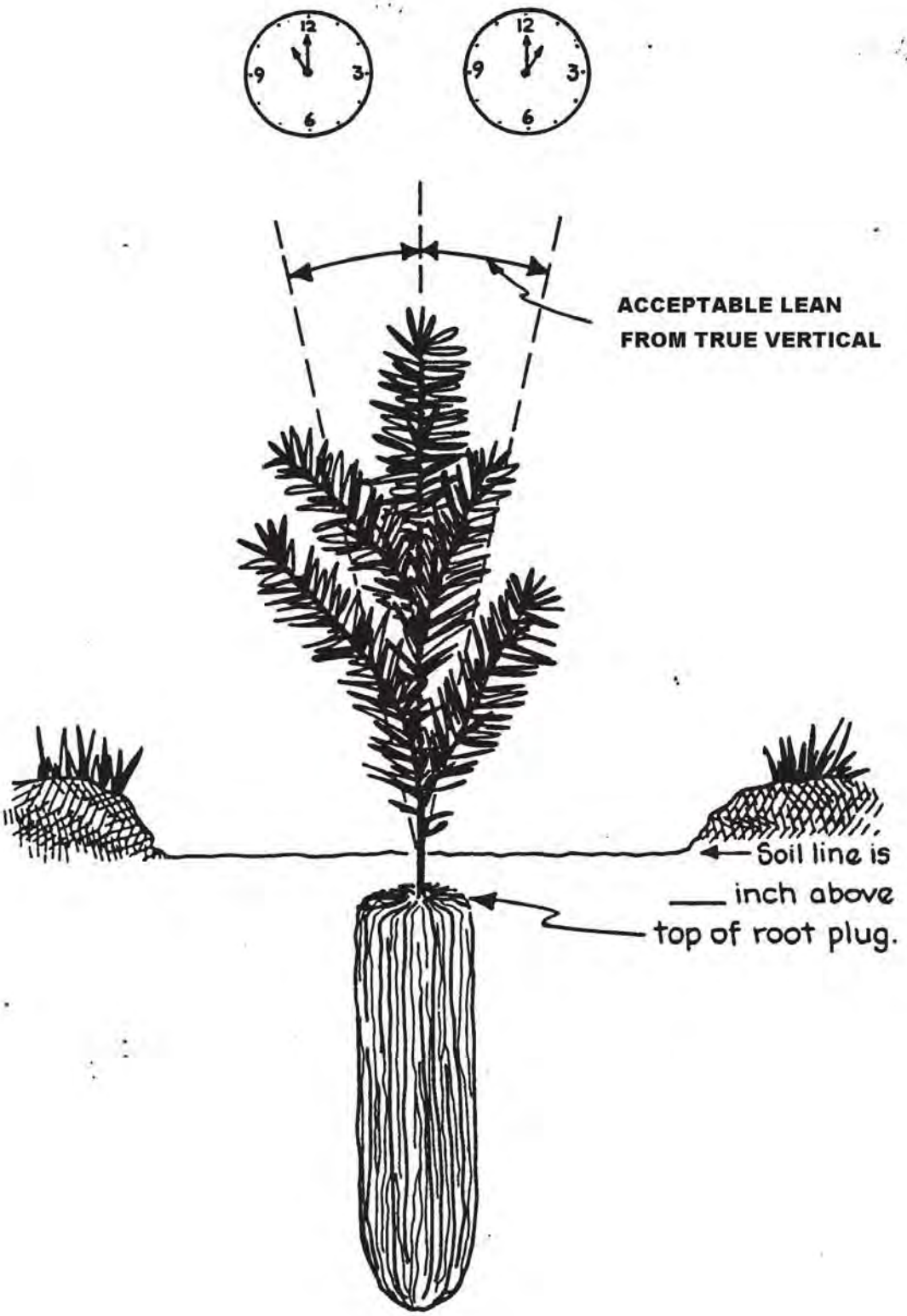
# Exhibit H

## *Bareroot Seedling Root Measurements*

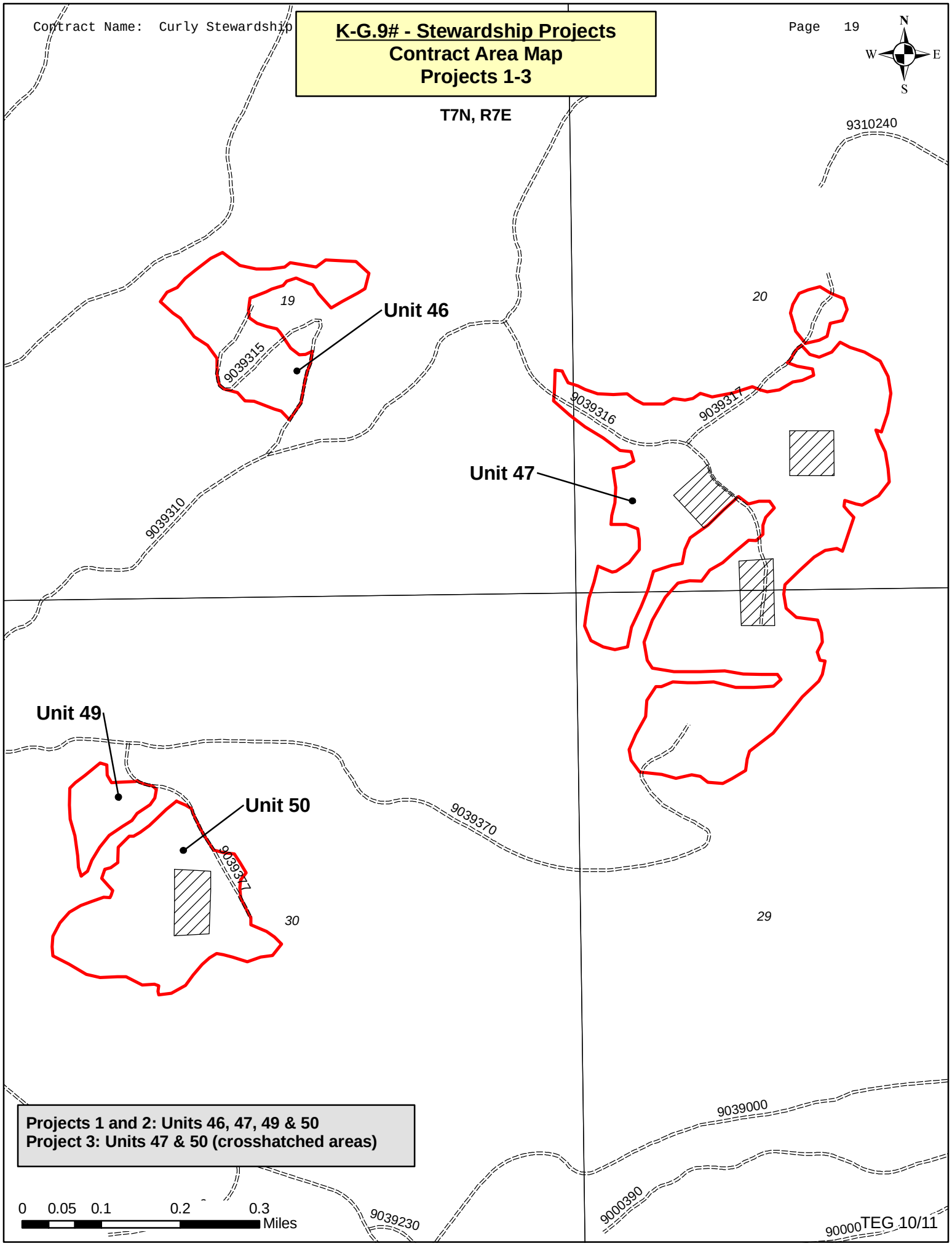


# Exhibit J

## *Container Seedling Planting Depth and Alignment*



# K-G.9# - Stewardship Projects
## Contract Area Map
## Projects 1-3




**Projects 1 and 2: Units 46, 47, 49 & 50**
**Project 3: Units 47 & 50 (crosshatched areas)**

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 4: Precommercial Thinning

*Description of Project*

This project requires tree thinning and related work in compliance with its terms, specifications and provisions. This includes furnishing labor, equipment, supervision, transportation, operating supplies and incidentals except those items listed as Government-furnished property. All units are signed with a yellow “PROJECT” sign highlighted with fluorescent pink flagging.

| *Unit Name* | *Stand Id* | *Area* | | *Spacing* | *Cut Tree Size* | | *Species Preference (No Pacific Yew)* |
|---|---|---|---|---|---|---|---|
| | | *Acres* | *Slope* | | *Min Ht* | *Max DBH* | |
| CBC #1 | 102175 | 41 | 14% | 16 X 16 | 2′ | 7″ | None |
| CBC #2 | 102176 | 9 | 17% | 16 X 16 | 2′ | 7″ | None |
| CBC #3 | 102177 | 11 | 19% | 18 X 18 | 2′ | 7″ | None |
| CBC #4 | 102192 | 15 | 18% | 18 X 18 | 2′ | 7″ | None |
| CBC #5 | 102178 | 63 | 3% | 16 X 16 | 2′ | 7″ | None |
| CBC #6 | 102196 | 13 | 27% | 16 X 16 | 2′ | 7″ | None |
| CLEARVIEW #7 | 101861 | 9 | 7% | 16 X 16 | 2′ | 7″ | None |
| NUTMEG #1 | 101923 | 18 | 11% | 18 X 18 | 2′ | 7″ | None |
| NUTMEG #7 | 101924 | 10 | 33% | 16 X 16 | 2′ | 7″ | None |
| OREGANO#5 BB | 101827 | 11 | 26% | 16 X 16 | 2′ | 7″ | None |
| SALT #4 | 101074 | 5 | 21% | 16 X 16 | 2′ | 7″ | None |
| *Total* | | *205* | | | | | |

Refer to Contract Area Map, Project 4.

*Technical Specifications*

A. Accessibility

Most units may be reached by Forest roads that are accessible by standard pickup during the normal working season. The Government assumes no obligation to plow snow or do special maintenance to keep roads open. Due to deteriorating road conditions, partial decommissions or complete decommissions, some units may require walking from Forest Service Roads across country or along closed, decommissioned or deteriorated road. Contractor shall assume responsibility for determining best access.

A portion of the units may be located behind gates locked for a variety of management reasons. Contractor will be allowed access behind these gates by arrangement with the COR and during the periods of the year that access is allowed if there is a seasonal access restriction relevant to the gate. In the case of gated access, it will be necessary for Contractor to secure from the Contract Administrator the combination for the gate lock or a key for the gate, whichever is applicable. For gated roads Contractor vehicle(s) shall display in the windshields official Forest Service embossed gated/closed road permits to be issued by CONTRACT ADMINISTRATOR. These permits shall only be valid for purposes of perfoming work on this contract and within the period of the contract.

B. Boundaries

In some cases boundaries or portions of boundaries have been marked with pink plastic ribbon. Many boundaries are easily delineated by roads, adjacent stands of different ages, streams or other geographical features. Contractor shall mark with fluorescent pink flagging any boundary that Contractor feels is needed to assure accurate following of boundaries by their employees.

C. Density.

The density of trees on units may vary to a large degree from unit to unit and within units. Only by on-the-ground examination can prospective Contractors determine the work entailed in thinning and slash disposal. Stand examination data, if available, may be reviewed at the National Volcanic Monument Headquarters upon request.

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 4: Precommercial Thinning(Continued)

D. Motorized Equipment

1. Use of motorized equipment other than hand held equipment such as powersaws and brush cutters will not be permitted off designated roads in the project area without approval of the Contracting Officer.

E. Selection of Leave Trees

1. The Contractor shall select leave trees in the following order of priority:

   a) Tree Diameters. Leave all trees (both conifer and hardwood), which exceed the maximum dbh cut limit as specified on the project map/unit information sheet.

   b) Tree Health. Leave the healthiest tree. Leave trees shall generally be those tallest in height, largest crown and straightest stems that are free of damage due to insects, disease, physical, or mechanical causes.

   c) Tree Height. Leave the tallest tree.

   d) Minor Damage. If no healthy undamaged tree exists at the required spacing interval, leave a tree with minor damage.

   e) If no healthy tree with minor damage exists, leave the most healthy tree present, within spacing limits.

2. Leave Tree Spacing. Spacing may be varied up to 25 percent to select the most desired tree. However, leave trees per acre, using spacing guides, shall not be materially increased or decreased.

3. Overtopping Brush Cutting Required. Cut only that brush which is within the specified average spacing distance from the bole (trunk) of the nearest leave tree, measured horizontally, whose height exceeds the top whorl of branches of the nearest leave tree.

4. Red Alder and Black Cottonwood

   a) Red Alder and Black Cottonwood are to be considered as a possible leave trees.

F. Streams and Wet Areas

Streams and wet areas require a fifteen foot (15') riparian buffer. No thinning is allowed within riparian buffers. The Contractor shall establish the boundaries using horizontal measurement.

1. Identified Riparian Areas. Location of known streams and wet areas are shown on the project maps. Units with known riparian areas are designated on the unit information sheet.

2. Unidentified Riparian Areas. Location of known streams and wet areas are shown on unit information sheets. Discovery of additional streams or wet areas by the Contractor shall be promptly reported to the Forest Service.

   a) Contractor shall immediately notify the Forest Service if disturbance occurs to any site, and immediately buffer the stream or wet area fifteen feet (15').

   b) If other such streams or wet areas are discovered, the Forest Service may modify this contract to provide additional protection regardless of when such facts become known.

3. Riparian Buffer Boundaries Riparian buffer boundaries are not flagged. All riparian buffer distances shall be established using horizontal measurement.

   a) Stream Buffer - The riparian buffer consists of the stream and the area on each side of the stream extending from the edge of the active stream channel to a horizontal distance of fifteen feet (15').

   b) Wet Area Buffers - Riparian buffers consist of the body of wetland and the area to the edge of the standing water to a horizontal distance of fifteen feet (15').

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 4: Precommercial Thinning (Continued)

G. Cutting Methods

1. Stump Height - Removal of Live Limbs. All trees other than leave trees shall be cut below the lowest live limb, except when prevented by natural obstacles. All live limbs below the cutting point shall be removed. Trees shall be completely severed from the stump. Stump height shall not exceed 8 inches above ground level or 4 inches above natural obstacles.

2. Felling. Cut trees shall be felled away from unit boundaries, roads, telephone lines, established trails, stock driveways, fence lines, established land corners, road buffers, streams, and riparian buffers. Any trees falling in such areas shall be removed.

3. Thinning slash shall be placed on or near the ground surface, so that it will not lean against or be suspended by an uncut tree.

H. Girdling

1. The Contractor may as an option girdle any cut tree over 6 inches dbh rather than cutting except as specified in subitem photo/unit information sheets. Girdle cuts shall be below maximum stump height and all live limbs. A girdle consists of cutting through the bark and cambium to the sapwood at least 1/2 inch wide, completely around the trunk of the tree. Girdling will not be permitted within the slash disposal areas.

I. Road Buffers

1. No cutting of trees is permitted 25 feet from selected roads as identified in the unit information sheet. Units requiring road buffers are designated on the detailed unit information sheet as "Road buffer required."

2. Road Buffer Boundaries

   a. Road buffer boundaries are not flagged. The Contractor shall establish the boundaries as indicated on project maps.

   b) All road buffer distances shall be established using horizontal measurement.

   c) Buffer distances from roads shall be established from the driveable edge of roads and turnouts.

J. Slash Disposal

1. Slash disposal includes treatment of cut materials as prescribed in the unit information sheet. Units may require pullback, chipping or a combination thereof. See unit information sheet for unit specific information.

K. Contractor Obligations

1. Furnish all supplies, materials, tools and equipment, plus labor, supervision and travel to do the required work.

2. Immediately notify the Contracting Officer of any conditions encountered that are either beyond the scope of the contract or that prevent normal progress of work.

3. Keep the Contracting Officer currently informed of the work schedule and physical location of his work force to permit ready location and timely inspection of accomplished work.

4. The Contractor shall not cut or disturb trees or markers used to identify property lines, property corners, or boundaries.

L. Definitions

1. Average Spacing - The average of the distance between all leave trees necessary to provide the desired number of leave trees per acre.

2. Cull Trees - Those conifers and hardwoods, not selected as leave trees, having serious disease, insect, weather, animal, or mechanical damage and evidenced by such things as dead or broken tops, bark damage extending 2/3 or more of the circumference, excessive crooks or lean.

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 4: Precommercial Thinning (Continued)

3. Damage - Includes any defect or deformity of a tree resulting from agents such as wind, snow, animals, insects, disease, and equipment, and evidenced by such things as dead or broken tops or trunks, crooks, and deep scars.

4. dbh (Diameter Breast Height) - Diameter of the trunk measured at a point 4-1/2 feet above the ground level on the uphill side of tree.

5. Excess Trees - Uncut trees that do not meet specifications and should have been cut. Trees not severed from the stump, hangup trees, stumps with live limbs, stumps higher than specified, trees not girdled or not girdled properly if required are also considered excess trees.

7. Girdling - A cut through the bark and cambium tissue completely encircling the tree trunk for the purpose of killing the tree.

8. Hangup Tree - Any cut tree suspended more than 3 feet off ground.

9. Healthy Tree - The greenest, tallest, straightest stem which is free of disease, insect, weather, animal, or mechanical damage.

10. Leave Trees - Any tree that is selected or required to be left standing as provided in the specifications.

11. Minor Damage - Crooks in the trunk which are offset less than 3 inches from the long axis and within 13 feet of the ground, no forks, broken top, or bark damage extending more than 1/4 the circumference of the tree.

12. Missing Leave Trees - Those trees cut that should have been left.

13. Slash - Limbs and trunks of downed trees.

14. Spacing - The horizontal distance from the trunk of one leave tree to the trunk of the next nearest leave tree.

M. Thinning Inspection Procedure

1. The Contract Administrator will make periodic inspections. The Contractor or his representative is encouraged to observe the inspection and will receive inspection summaries upon request.

2. A series of 1/50th acre plots distributed over all units sufficient to yield at least a one percent sample of each unit will be taken. Plot centers will be marked and numbered where plots are taken.

3. When plots are taken each plot will be examined to record findings on the items listed below:

   a) Number of leave trees that should have been left.

   b) Number of trees that were left.

   c) Number of missing leave trees.

   d) Number of satisfactory leave trees.

   e) Number of excess trees.

4. Upon inspection of all plots for a unit, the quality of thinning shall be calculated as follows:

$$1.00 - \frac{(\text{\# of deficient trees} + \text{\# of excess trees})}{(\text{\# of leave trees that should have been left})} \times 100 = \text{Quality \%}$$

N. Rework and Reinspection After Rework

1. When inspection results are below 90 percent and excess trees constitute any part of the deficiency, payment will not be made until the excess tree deficiency has been corrected. Inspections after rework will be made in the same manner as the first inspection but on different plot lines. The Contractor shall bear the cost of inspections necessitated by the rework.

KT-GT.9# - STEWARDSHIP PROJECTS

Project Number 4: Precommercial Thinning (Continued)

0. Reinspection of Thinning Upon Contractor Request

   1. If the original inspection results are unacceptable to the Contractor and a second inspection is requested without rework, the same inspection procedure will be used. However, the inspection pattern will be shifted. If the second inspection shows less than 5 percent variance from the first inspection, the Contractor shall bear the cost of the second inspection. The result of the second inspection will be used in determining payment. Requests for reinspection shall be made in writing.

   2. If the second inspection shows more than 5 percent variance from the first inspection, the Government will bear the cost of the second inspection. The result of the second inspection will be used in determining payment.

P. Inspection of Slash Treatment

   1. Slash treatment will be visually inspected for the appropriate treatment specified on the project photo/unit information sheets. Treatment will be determined by lineal horizontal (slope corrected) distance to determine if prescribed area was covered. Slash treatment must be fully completed to unit specifications prior to issuance of payment.

Q. Measurement

   1. Measurement. The acreages have been measured on a horizontal plane within the established boundaries.

   2. Remeasurement

      a) The Contractor may at any time after award request remeasurement of any treatment area. The request shall be made in writing. Remeasurement will be made within the established boundaries.

      b) If remeasurement indicates a variance of 5 percent or less, the Contractor shall bear the cost of remeasurement and payment will be based on the remeasured acreage.

      c) If remeasurement indicates a variance greater than 5 percent, payment will be based on the remeasured acreage and the Government will pay the cost of remeasurement.

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

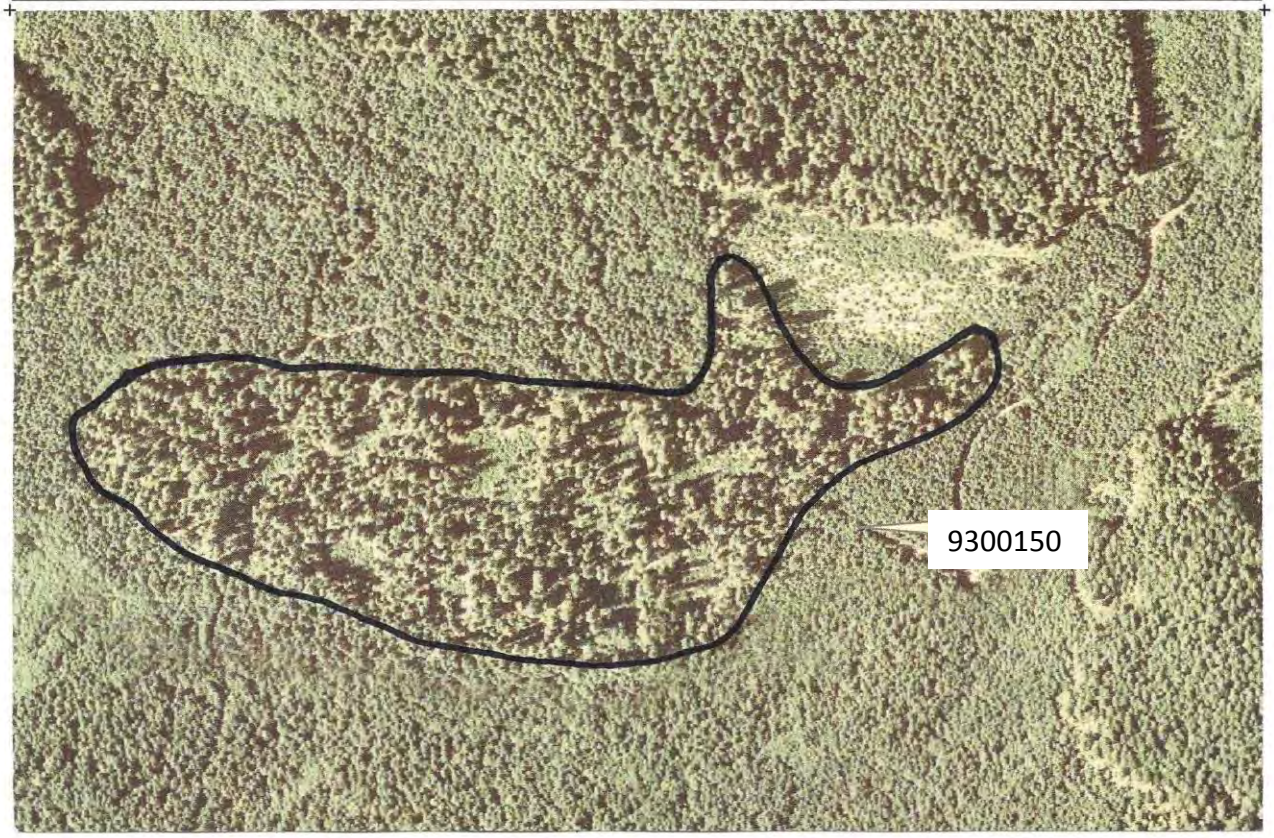
**Unit Name:** CBC #1 Subitem Number: 4.01 Stand Tag: 102175

Township: 7N Range: 7E Section(s): 5 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 0.00 | 00' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 2316 | 14 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9300150 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

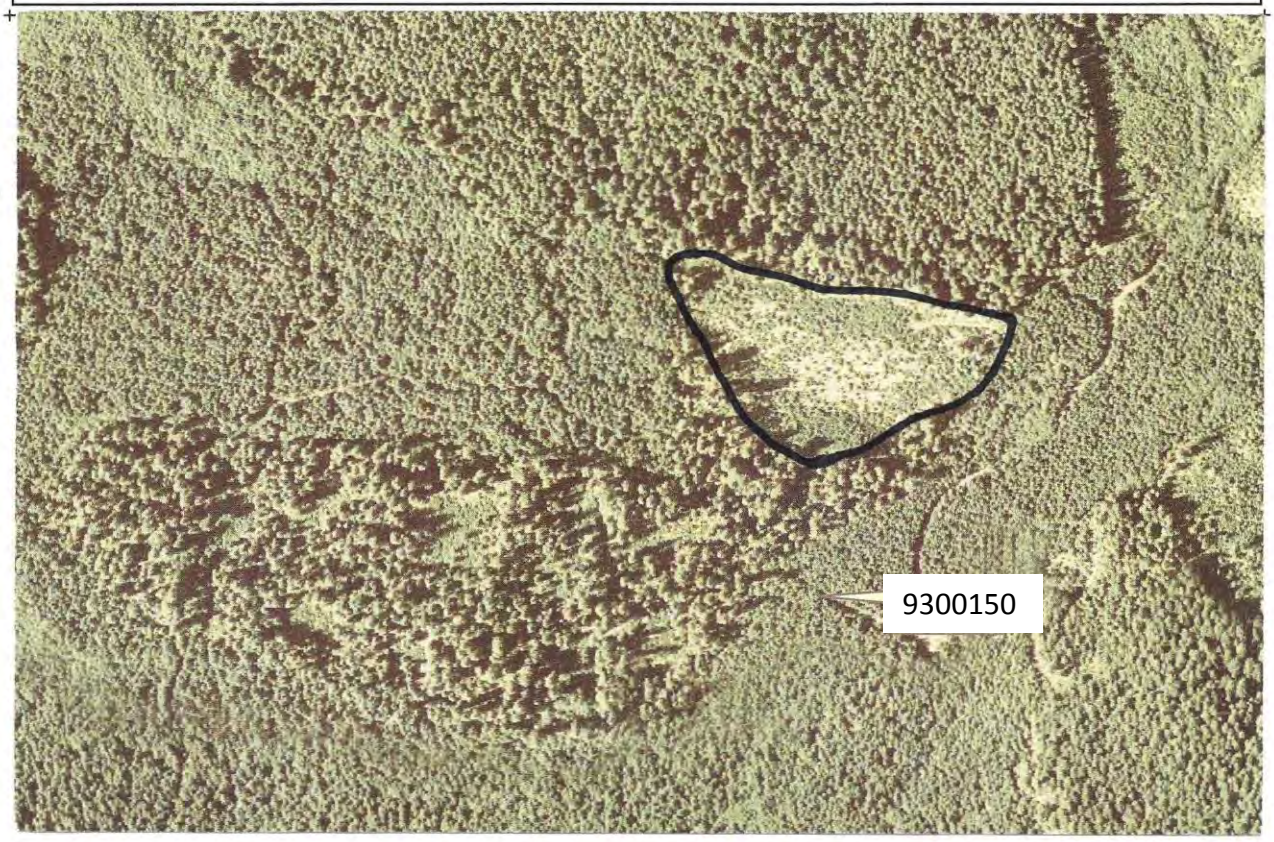
**Unit Name:** CBC #2 Subitem Number: 4.02 Stand Tag: 102176

Township: 7N Range: 7E Section(s): 5 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.00 | 00' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 2451 | 17 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9300150 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

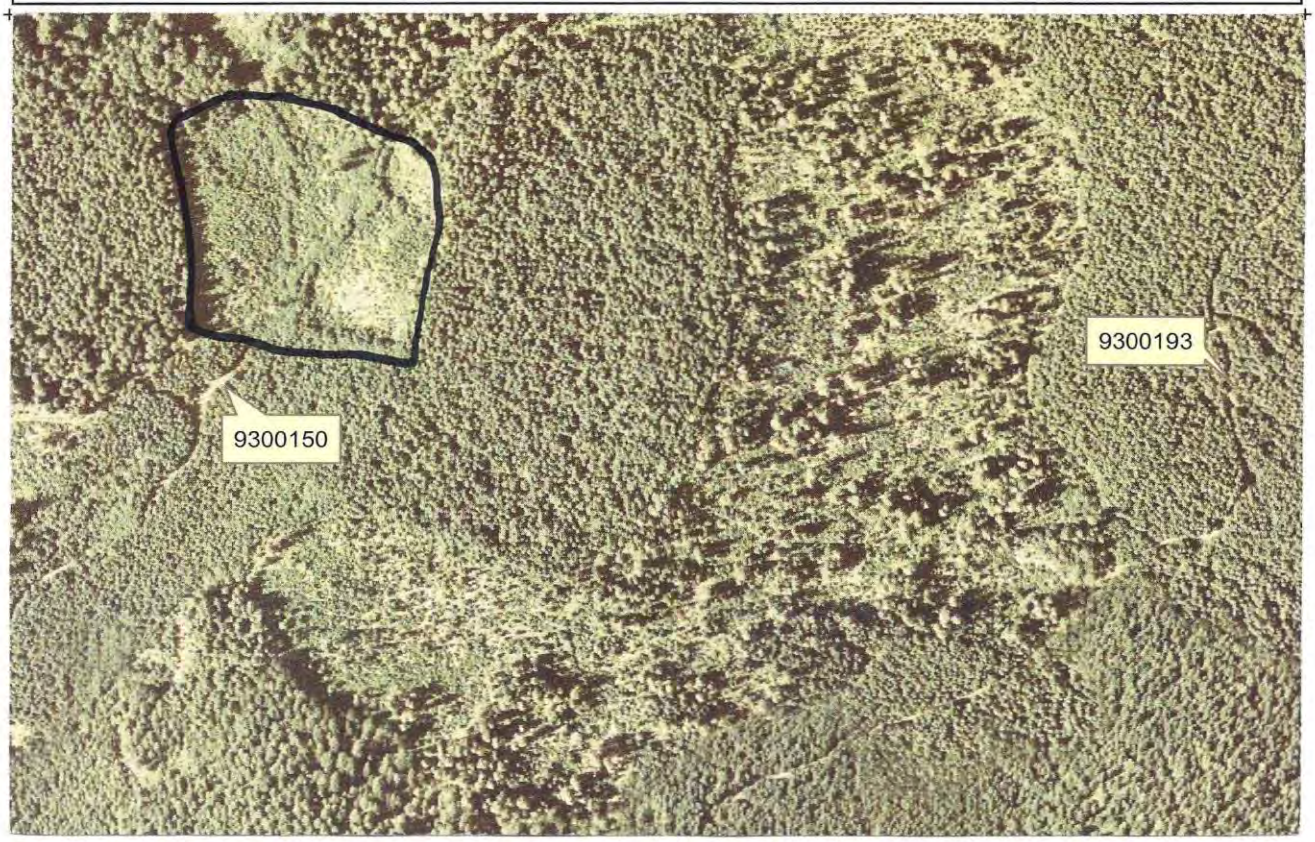
**Unit Name:** CBC #3 Subitem Number: 4.03 Stand Tag: 102177

Township: 7N Range: 7E Section(s): 5 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 0.00 | 00' | 2 | 7 | 18 X 18 | NONE | CUT NO PACIFIC YEW | 0* | 2567 | 19 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9300150 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

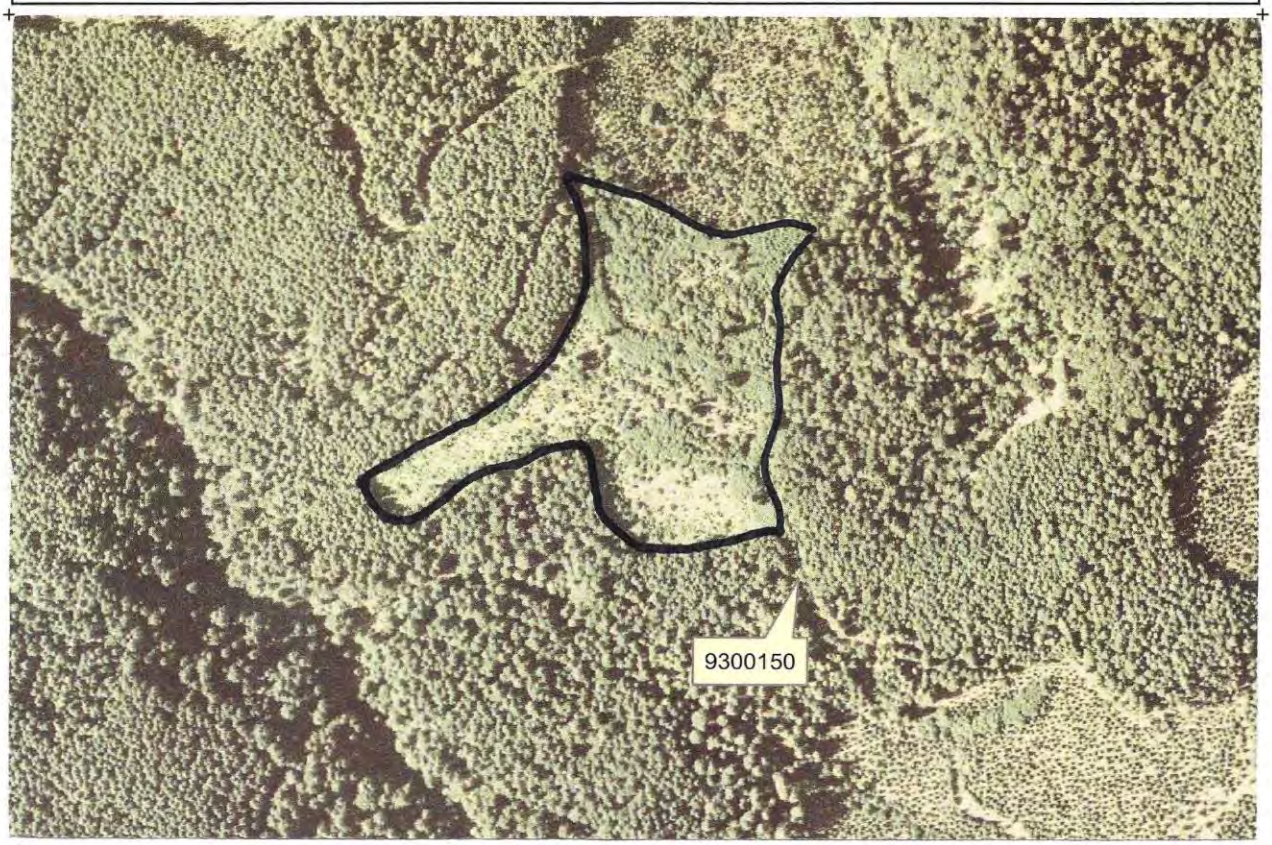
**Unit Name:** CBC #4 Subitem Number: 4.04 Stand Tag: 102192

Township: 7N Range: 7E Section(s): 5 Quad ID: SPBU

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 15 | 0.00 | 00' | 2 | 7 | 18 X 18 | NONE | CUT NO PACIFIC YEW | 0* | 2329 | 18 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9300150 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

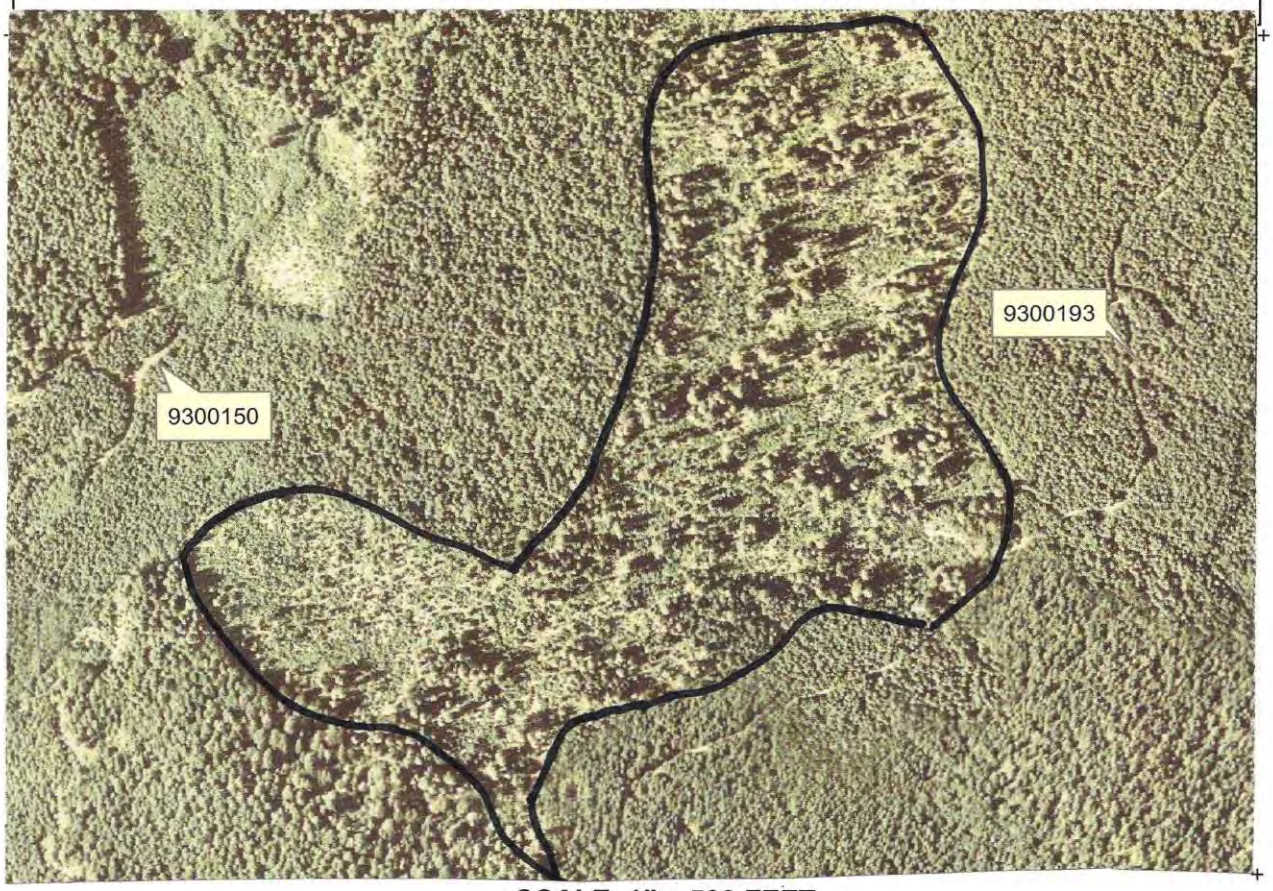
**Unit Name:** CBC #5 Subitem Number: 4.05 Stand Tag: 102178

Township: 7N Range: 7E Section(s): 5 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 63 | 0.00 | 00' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 2711 | 3 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9300193 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

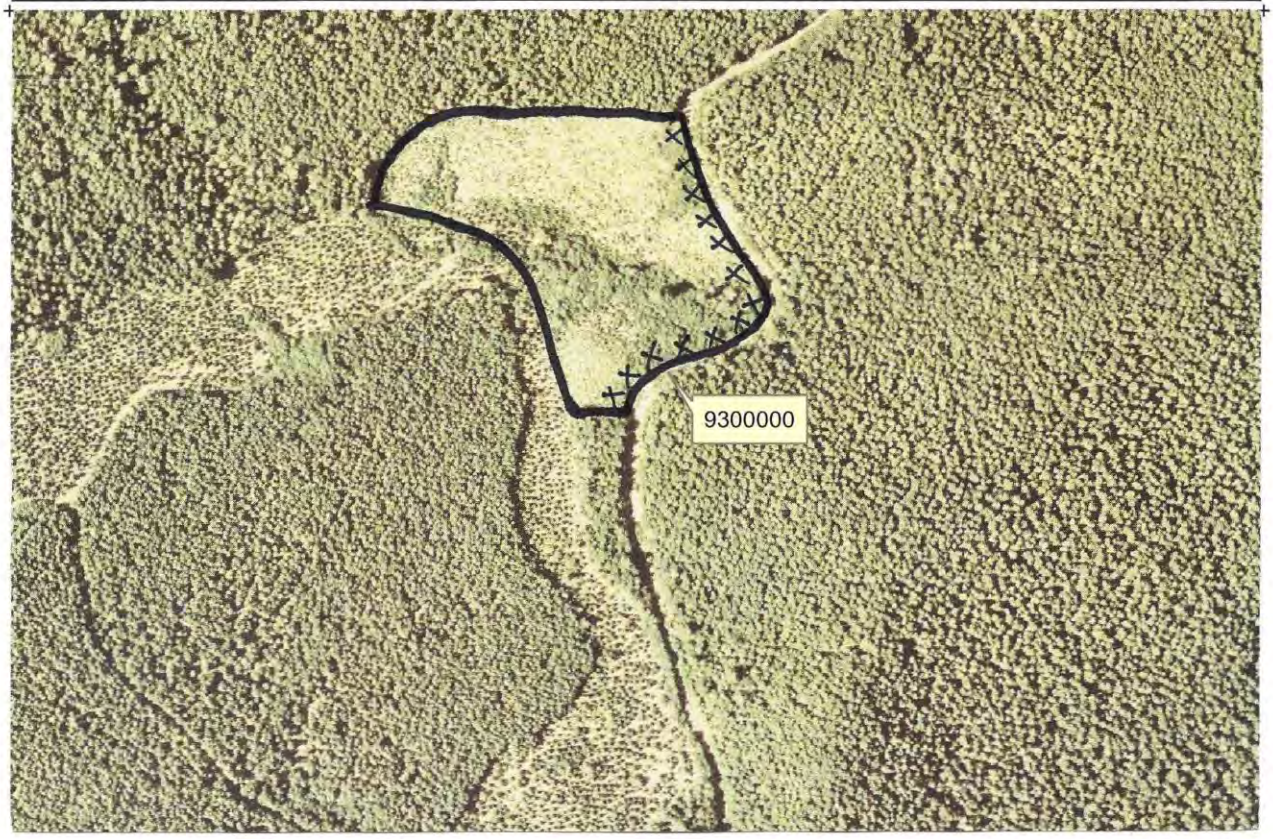
**Unit Name:** CBC #6 Subitem Number: 4.06 Stand Tag: 102196

Township: 7N Range: 7E Section(s): 4 Quad ID: SPBU

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 13 | 0.71 | 25' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 2911 | 27 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9300000 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.** Thinning slash shall be pulled back into unit 25 feet from drivable edge of Forest road 9300000.




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

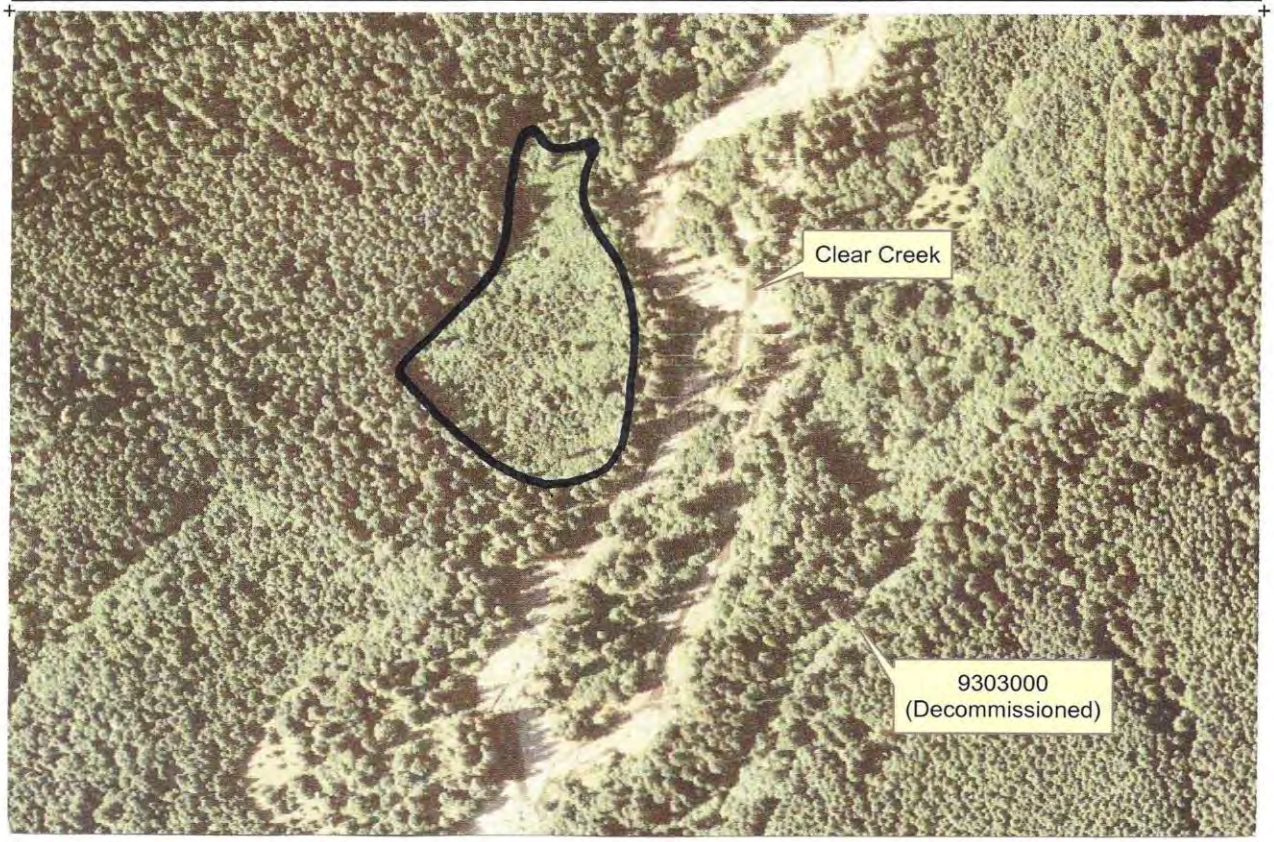
**Unit Name:** CLEARVIEW #7 Subitem Number: 4.07 Stand Tag: 101861

Township: 8N Range: 7E Section(s): 31 Quad ID: SPBU

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | 0.00 | 00' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 1304 | 7 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9300070 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

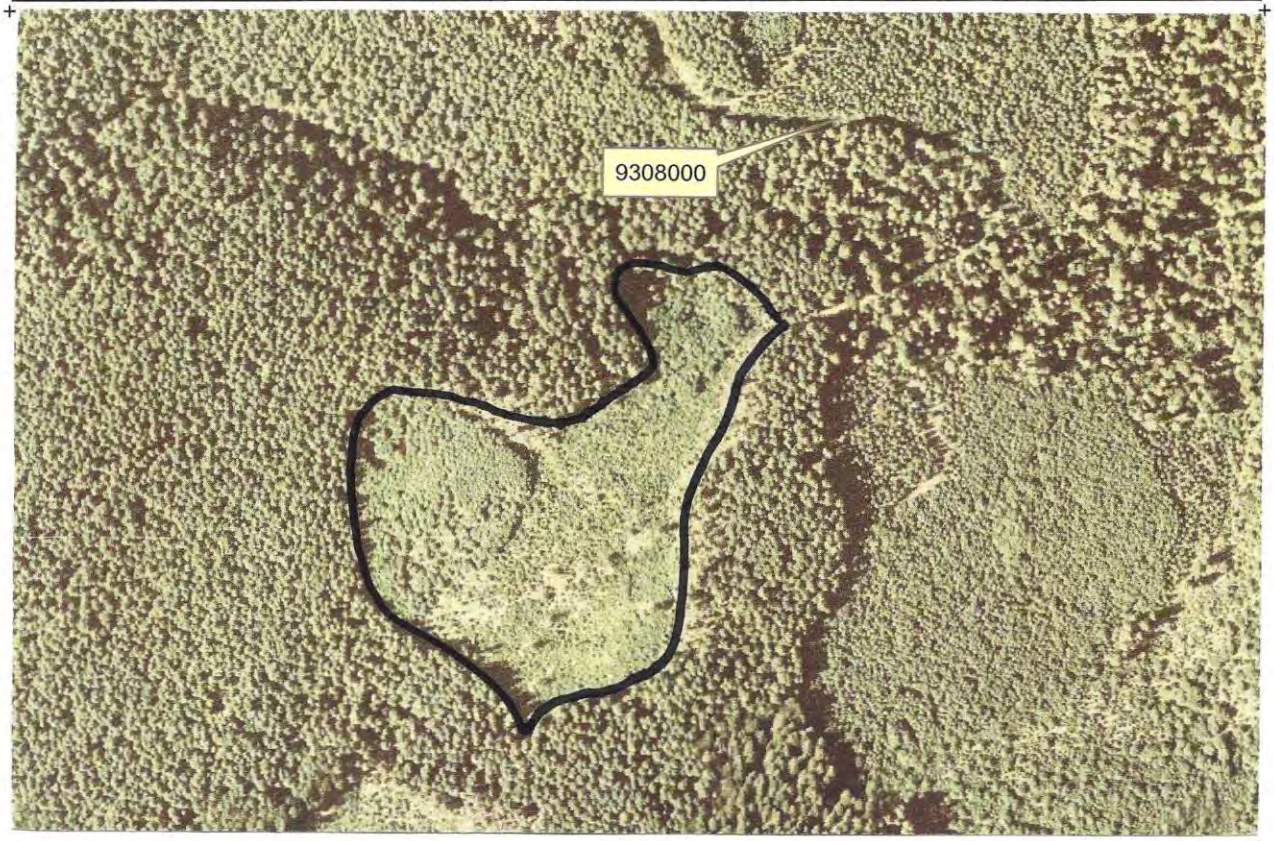
**Unit Name:** NUTMEG #1 Subitem Number: 4.08 Stand Tag: 101923

Township: 7N Range: 7E Section(s): 17 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 18 | 0.00 | 00' | 2 | 7 | 18 X 18 | NONE | CUT NO PACIFIC YEW | 0* | 2056 | 11 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9039310 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

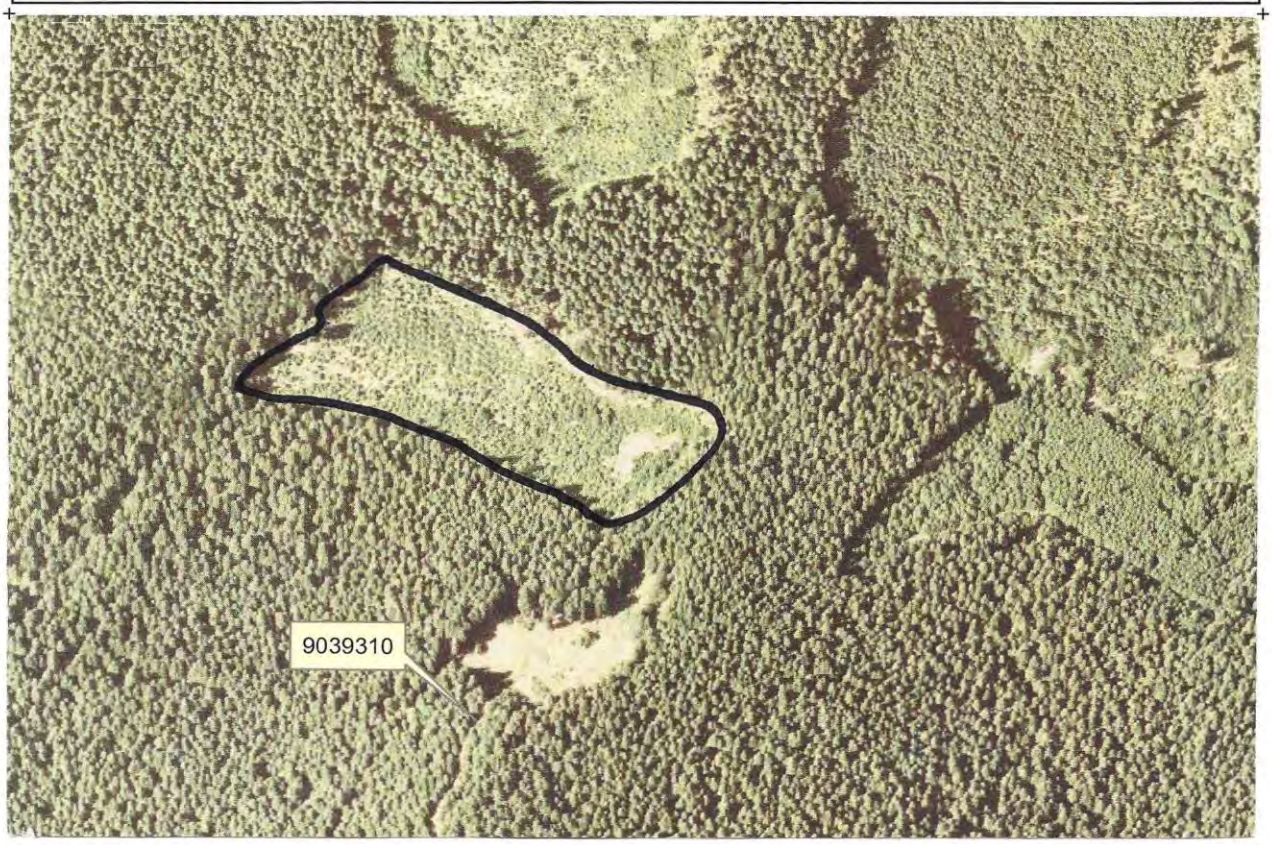
**Unit Name:** NUTMEG #7 Subitem Number: 4.09 Stand Tag: 101924

Township: 7N Range: 7E Section(s): 17 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 10 | 0.00 | 00' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 2105 | 33 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9039310 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

N

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

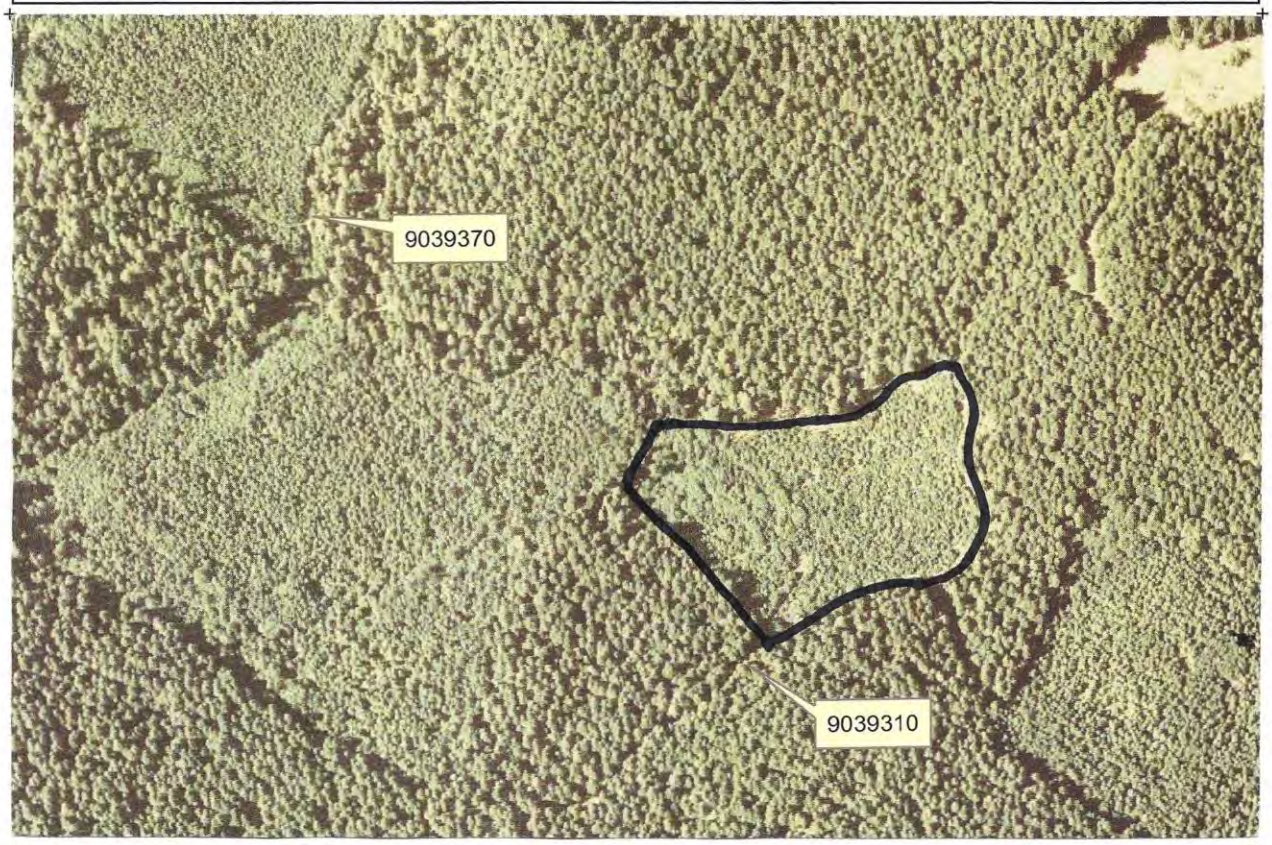
**Unit Name:** OREGANO #5 BB Subitem Number: 4.10 Stand Tag: 101827

Township: 7N Range: 7E Section(s): 20 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 0.00 | 00' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 2000 | 26 % |

Remarks:

*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9039310 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

# Gifford Pinchot National Forest

## MSHRD Vegetation Operations

***Subitem Photo & Information Sheet***

**Project:** **Thinning** **Item No.:** **4**

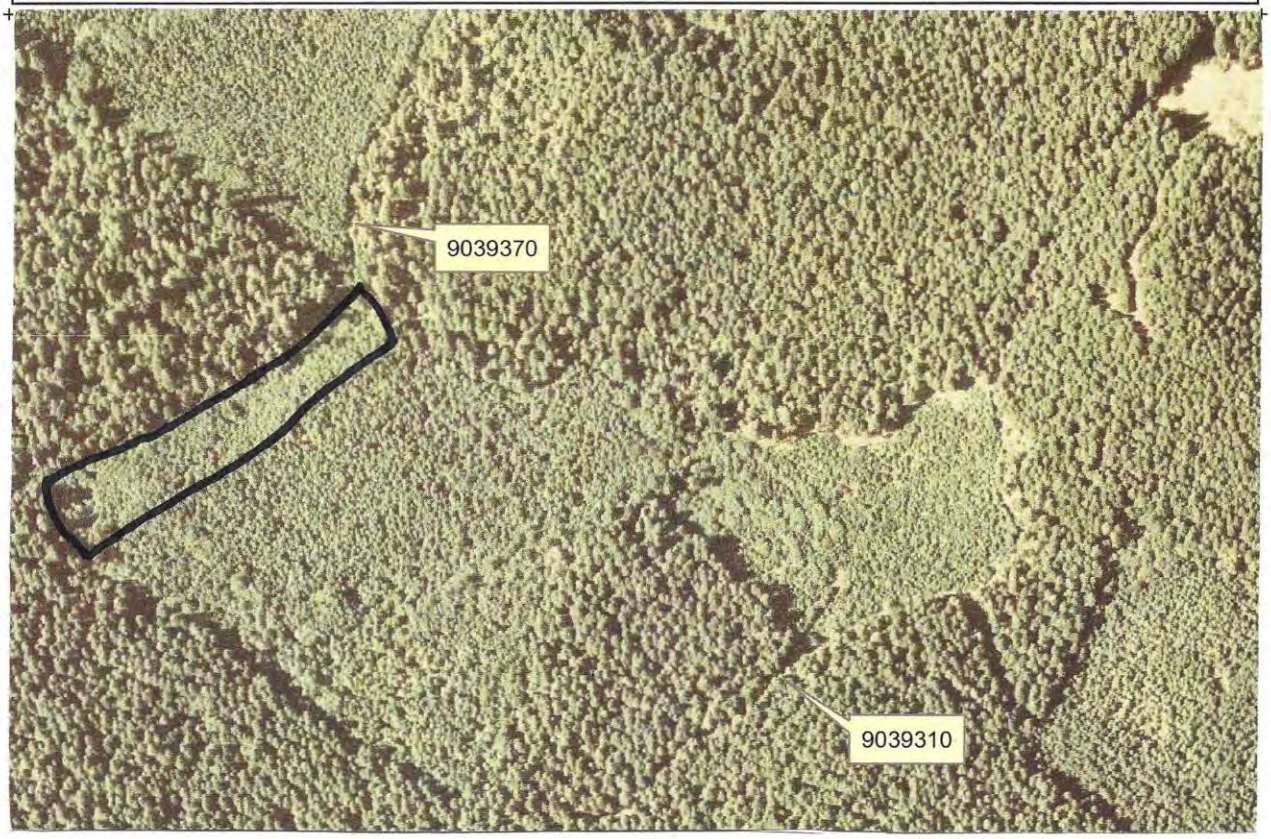
**Unit Name:** SALT #4 Subitem Number: 4.11 Stand Tag: 101074

Township: 7N Range: 7E Section(s): 20 Quad ID: BUPK

| Project Acres | Slash Disposal Acres | Slash Disposal Width | Cut Tree Size Min. Feet Height | Cut Tree Size Max. Inches DBH | Spacing | Brush Treatment | Species Preference | Riparian Buffer Width | Elevation | Slope |
|---|---|---|---|---|---|---|---|---|---|---|
| 5 | 0.00 | 0' | 2 | 7 | 16 X 16 | NONE | CUT NO PACIFIC YEW | 0* | 1526 | 21 % |

Remarks:

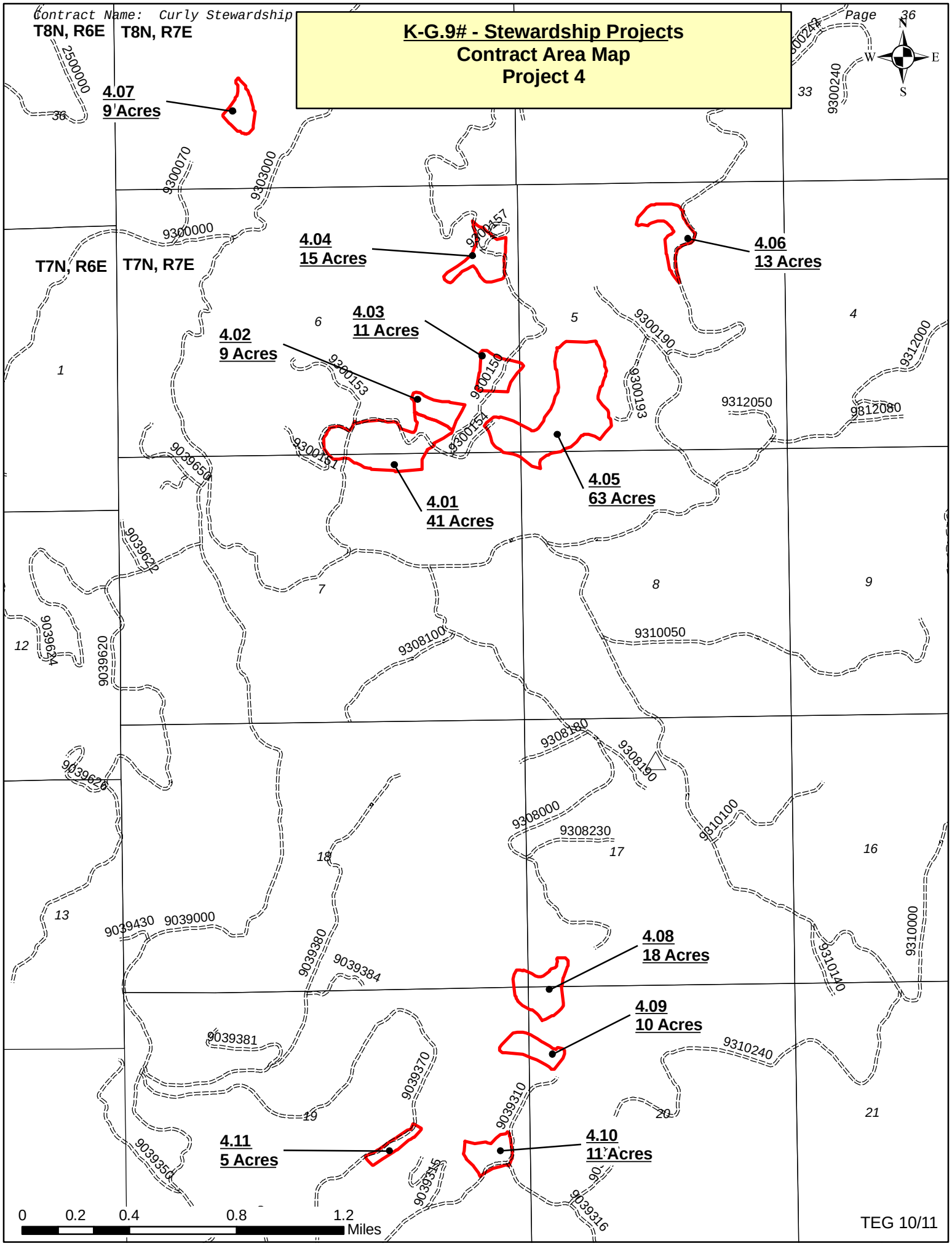
*Streams or wet areas found by the contractor shall be immediately buffered fifteen feet (15'). No thinning is allowed within riparian buffers. Access is 9039370 road. Red Alder & Black Cottonwood shall be considered as a crop tree. **Seasonal operating restrictions March 1-July 1.**




***SCALE: 1" = 500 FEET***

| | | | | | |
|---|---|---|---|---|---|
| Project Area | | Slash Disposal Area | XXXXXX | Riparian Buffer | |
| Driveable Road | 2500000 | Closed Road | | Stream | |

# K-G.9# - Stewardship Projects
## Contract Area Map
## Project 4




TEG 10/11

# CURLY STEWARDSHIP

SPECIFIED ROAD WORK PACKAGE
CONTENTS
MT ST. HELENS NATIONAL VOLCANIC MONUMENT


1. Schedule of Items 1 page
2. Specifications 48 pages
3. Drawings 5 pages

# SCHEDULE OF ITEMS
# CURLY STEWARDSHIP

MT ST. HELENS NATIONAL VOLCANIC MONUMENT

*USFS ROAD 9000000*

| ITEM NO. | DESCRIPTION | PAY UNIT | EST. QTY. | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|
| 15101 | Mobilization | Lump Sum | 1 | $1,116.60 | $1,116.60 |
| 43007 | Skin patch hot asphalt concrete mixture | Ton | 445 | $165.72 | $73,745.31 |

*USFS ROAD 9039000*

| ITEM NO. | DESCRIPTION | PAY UNIT | EST. QTY. | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|
| 15101 | Mobilization | Lump Sum | 1 | $1,116.60 | $1,116.60 |
| 25101(1) | Placed riprap, class 2, source Upper House Rock Quarry | Cubic Yard | 14 | $27.78 | $388.99 |
| 25101(2) | Placed riprap, class 4, source Upper House Rock Quarry | Cubic Yard | 10 | $27.78 | $277.85 |
| 20404 | Unclassified borrow, compaction method C, finishing method C-Source Upper House Rock Quarry | Cubic Yard | 110 | $40.96 | $4,506.00 |

*USFS ROAD 9039316*

| ITEM NO. | DESCRIPTION | PAY UNIT | EST. QTY. | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|
| 15101 | Mobilization | Lump Sum | 1 | $1,116.60 | $1,116.60 |
| 60201A | 18 inch plastic culvert (compaction method A) Type 1 | Foot | 28 | $37.61 | $1,052.98 |

*USFS ROAD 9039377*

| ITEM NO. | DESCRIPTION | PAY UNIT | EST. QTY. | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|
| 15101 | Mobilization | Lump Sum | 1 | $1,116.60 | $1,116.59 |
| 60201B | 36 inch plastic culvert (compaction method A) Type 1 | Foot | 32 | $112.49 | $3,599.82 |

*USFS ROAD 9300000*

| ITEM NO. | DESCRIPTION | PAY UNIT | EST. QTY. | UNIT PRICE | TOTAL PRICE |
|---|---|---|---|---|---|
| 15101 | Mobilization | Lump Sum | 1 | $1,116.60 | $1,116.60 |
| 43007 | Skin patch hot asphalt concrete mixture | Ton | 33 | $165.72 | $5,468.75 |
| 32228 | Furnishing and applying aggregate base, compaction method A. (Gradation C gov furnished aggregate) | Cubic Yard | 6 | $34.41 | $206.46 |
| 41703 | Minor cold asphalt mix | Lump Sum | 1 | $874.54 | $874.54 |

*GRAND TOTAL $95.703.49*

# CURLY STEWARDSHIP

SPECIFIED ROAD WORK PACKAGE
SPECIFICATIONS

## Preface

Preface_wo_03_15_2004_m

Delete all but the first paragraph and add the following:

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

## 101 - Terms, Format, and Definitions

101.00_nat_us_07_25_2005

### *101.01 Meaning of Terms*

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

101.03_nat_us_06_16_2006

### *101.03 Abbreviations.*

Add the following to (a) Acronyms:

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

.

Add the following to (b) SI symbols:

| | |
|---|---|
| mp | Milepost |
| ppm | Part Per Million |

101.04_nat_us_03_29_2007

### *101.04 Definitions.*

Delete the following definitions and substitute the following:

**Bid Schedule**--The Schedule of Items.
**Bridge**--No definition.

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

**Culvert**--No definition.

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

Add the following:

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

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

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

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

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

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

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

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

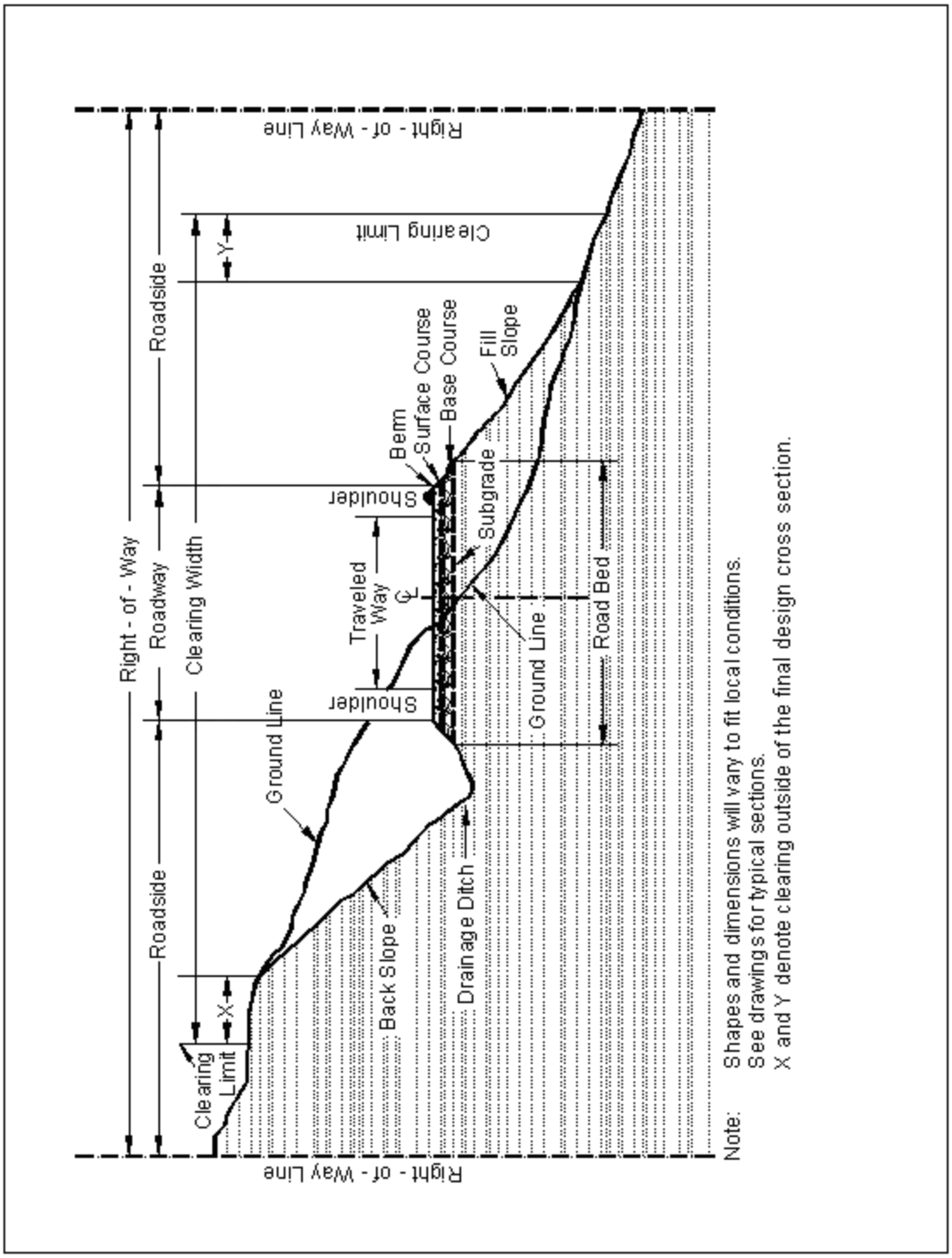
**Road Order**--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

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

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

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

Figure 101-1—Illustration of road structure terms.




# 102 - Bid, Award, and Execution of Contract

102.00_nat_us_02_16_2005

## *102 Bid, Award, and Execution of Contract*

Delete Section 102 in its entirety.

# 103 - Scope of Work

103.00_nat_us_02_16_2005

### *Deletions*

Delete all but subsection 103.01 Intent of Contract.

## 104 - Control of Work

104.00_nat_us_06_16_2006

### *Deletions*

Delete Sections 104.01, 104.02, and 104.04.

104.03_nat_us_01_22_2009

### *104.03* Specifications and Drawings.

Delete 104.03.

104.06_nat_us_02_17_2005

Add the following subsection:

### *104.06 Use of Roads by Contractor*

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

## 105 - Control of Material

105.02_nat_us_01_18_2007

### *105.02 Material Sources.*

#### *105.02(a) Government-provided sources.*

Add the following:

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

105.05_nat_us_05_12_2004

### *105.05 Use of Material Found in the Work.*

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

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

## 106 - Acceptance of Work

106.01_nat_us_07_31_2007

### *106.01 Conformity with Contract Requirements.*

Delete Subsection 106.01 and substitute the following:

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 and replace work that does not conform to the contract, or to prevailing industry standards where no specific contract requirements are noted, 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.

106.07_nat_us_05_11_2004

## *106.07 Delete*

Delete subsection 106.07.

# *107 - Legal Relations and Responsibility to the Public*

## *107.02 Protection and Restoration of Property and Landscape.*

Add the following:

**MEMORANDUM OF UNDERSTANDING**

**Between**
**Washington State Department of Fish and Wildlife**
**And**
**USDA Forest Service, Pacific Northwest Region**
**Regarding**
**Hydraulic Projects Conducted by**
**USDA Forest Service, Pacific Northwest Region**

This Memorandum of Understanding (MOU) is hereby entered into by and between the Washington State Department of Fish and Wildlife, hereinafter referred to as WDFW, and the USDA Forest Service, Pacific Northwest Region, hereinafter referred to as the Forest Service.

### *PURPOSE*

The purpose of this MOU is to set forth the understanding reached between the WDFW and the Forest Service for Forest Service hydraulic projects on lands administered by the Forest Service

within the State of Washington. There are differing legal views regarding the jurisdiction of WDFW over Forest Service activities that may affect waterbodies within the State of Washington. The WDFW maintains that hydraulic projects conducted within the State of Washington require the approval of WDFW prior to the start of the project pursuant to Chapter 77.55 RCW. The Forest Service maintains that there has not been a waiver of Federal sovereign immunity requiring such authorization for its projects.

## *SCOPE*

Hydraulic projects subject to this MOU are those projects that involve work that will use, divert, obstruct, or change the natural flow, bed, or banks of any perennial or intermittent fresh or salt waters (waterbodies) and where the design and implementation are under the direct control of the Forest Service. Projects that are designed and implemented on National Forest System lands by other entities, where the Forest Service is not primarily responsible for implementation or contract administration, are not covered by this MOU.

## *STATEMENT OF MUTUAL BENEFITS AND INTERESTS*

The WDFW has been established by the laws of the State of Washington to provide an adequate and flexible system for the management and protection of fish and aquatic resources of the state, and for the protection, maintenance, and enhancement of viable habitat for the perpetuation of these species;

The Forest Service, under the laws of the United States and regulations of the Secretary of Agriculture, is responsible for the protection, maintenance, and enhancement of water quality and aquatic habitat on National Forest System lands;

The WDFW and Forest Service share a common objective to protect, maintain, and enhance water, fish, and aquatic resources, and recognize their mutual desire to continue a long-standing working relationship;

The WDFW and Forest Service share the common purpose of developing, maintaining, and managing all of the natural resources in the best interests of the citizens of Washington and of the United States;

Therefore, in consideration of the above premises, the agencies agree to work in a cooperative spirit while carrying out their respective programs for the good of fish, water, and aquatic resources as follows:

## *FOREST SERVICE AGREES:*

1. To recognize the WDFW is responsible for the protection, perpetuation, and management of fish life in the State of Washington. Fish life means all fish species, including but not limited to food fish, shellfish, game fish, and other nonclassified fish species and all stages of development of those species.

2. To coordinate and collaborate with WDFW on Forest Service hydraulic projects that may have an impact on fish and fish habitat in the State of Washington.

3. To encourage holders of special use permits, easements, rights-of-way or other occupancy authorities on National Forest System lands to acquire individual HPAs, as necessary, for their non-Forest Service projects.

## *WDFW AGREES:*

1. To recognize the Forest Service as being responsible for the protection and enhancement of aquatic resources on National Forest System lands.
2. To recognize the Forest Service has multiple statutory requirements, regulatory direction, and authorities that provide a substantial amount of protection to aquatic resources.

## *IT IS MUTUALLY AGREED AND UNDERSTOOD BY AND BETWEEN THE SAID PARTIES THAT:*

1. Both WDFW and the Forest Service possess substantial expertise in fish and fish habitat, engineering, and hydraulic project design and implementation.

2. The Forest Service's objective is to meet or exceed the intent of WDFW's standards and guidelines for fish and fish habitat for all Forest Service hydraulic projects.

3. The Forest Service shall notify WDFW of proposed Forest Service hydraulic projects by sending a National Environmental Policy Act (NEPA) scoping letter to the appropriate WDFW Regional Habitat Program Manager to for those hydraulic projects for which a scoping letter is issued. The scoping letter shall include project name, location, proposal description, and anticipated decision date in sufficient detail to enable WDFW to identify possible impacts to fish and fish habitats.

4. Communication and collaboration between the Forest Service and WDFW regarding Forest Service hydraulic projects will be critical to the successful implementation of this MOU. Forest Service aquatics personnel and WDFW Area Habitat Biologists are encouraged to discuss Forest Service projects, to work cooperatively on project designs, and to review ongoing or completed projects.

5. Appendix A of this MOU provides design and implementation standards for common types of Forest Service hydraulic projects.

6. Appendix B of this MOU provides a process for implementing types of Forest Service hydraulic projects that are not described in Appendix A, or for projects that do not meet both the general provisions and the project specific provisions specified in Appendix A. For these projects the Forest Service shall collaborate with WDFW to develop appropriate project designs and implementation provisions on a site-specific basis.

7. Appendix C of this MOU provides a process for implementing hydraulic projects conducted in response to emergency situations where immediate action is required to protect life, public or private property, or prevent serious environmental degradation arising from weather, high stream flows, other natural conditions, or fire.

8. Appendix D describes work periods for Forest Service hydraulic projects in this MOU.

9. Disputes regarding hydraulic projects within the scope of this MOU shall be resolved at the field level in a cooperative and professional manner. In the event that issues cannot be resolved by field personnel in consultation with technical experts within the two agencies, the parties agree to elevate the issues of concern through equivalent levels of each organization until the conflict is resolved. Unless the conflict involves an emergency action per Appendix C, or a project delay may cause substantial damage to

public resources or risk to public safety the Forest Service will consider delaying any disputed hydraulic projects until conflicts are resolved. If the Forest Service makes the decision to proceed with a disputed project without reaching agreement with WDFW, the rationale for the decision shall be documented in a letter from the Forest Service Line Officer to the WDFW Regional Habitat Program Manager.

10. By March 31st of each year the Forest Service shall submit an annual report to WDFW summarizing the Forest Service hydraulic projects that were completed under this MOU within the preceding calendar year. The report shall include general project types, amount of activity, and project locations. Data will be developed from existing databases such as Interagency Restoration Database (IRDA), National Resources Information System (NRIS) and Information Infrastructure Project (INFRA).

11. This agreement is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between the parties to this agreement will be handled in accordance with applicable laws, regulations, and procedures including those for Government procurement. Such endeavors will be outlined in separate agreements that shall be made in writing by representatives of the parties and shall be independently authorized by appropriate statutory authority. This agreement does not provide such authority. Specifically, this MOU does not establish authority for noncompetetive award to the cooperator of any contract or other agreement. Any contract or agreement for training or other services must fully comply with all applicable requirements for competition.

12. This agreement in no way restricts the Forest Service or WDFW from participating in similar activities with other public or private agencies, organizations, and individuals.

13. Any information furnished to the Forest Service under this MOU is subject to the Freedom of Information Act (5 U.S.C. 552).

14. This MOU is executed as of the last signature and is effective through January 31, 2010, at which time it will expire unless extended.

15. Modifications within the scope of the MOU shall be made by mutual consent of the parties, by issuance of a written modification, signed and dated by all parties, prior to any changes being performed.

16. Either party, in writing, may terminate this MOU in whole, or in part, at any time before the date of expiration.

17. The principal contacts for this MOU are:

Assistant Director
Habitat Program
Washington Department of Fish and Wildlife
600 Capitol Way N.
Olympia, WA 98502
(360) 902-2534

Director
Natural Resources
USDA Forest Service
Pacific Northwest Region
PO Box 3623
Portland, OR 97208
(503) 808-2955

18. The Forest Service and WDFW are currently engaged in settlement negotiations related to United States v. Washington, No. C70-9213, Subproceeding No. 01-1 (W.D. Wash.). If a settlement is reached, the terms of this MOU may need to be amended to reflect the terms of the settlement, and, it may affect the management of Forest Service culverts within Water Resource Inventory Areas 1-23 as defined in Section 173-500-040 of the Washington Administrative Code.

**APPENDIX A. PROVISIONS AND STANDARDS FOR COMMON TYPES OF FOREST SERVICE HYDRAULIC PROJECTS**

## *HYDRAULIC PROJECTS COVERED BY APPENDIX A*

Hydraulic project types which are included in Appendix A and which adhere to all applicable general and project-specific provisions may be implemented without further input on project design or implementation standards by WDFW Area Habitat Biologist and without further documentation, except annual reporting, by the Forest Service. Projects which include minor modifications of the provisions in this appendix may also be implemented under Appendix A so long as the modifications have been coordinated with and agreed to by WDFW. Minor modifications are defined as changes that are unlikely to cause adverse effects to fish life. WDFW shall complete the coordination and transmit written documentation of agreements on minor modifications to project provisions to the Forest Service within 45 days of a request for collaboration.
Freshwater hydraulic projects conducted under Appendix A shall normally be implemented only during the work periods outlined in Appendix D. Because we recognize that local information may shift appropriate work windows, other timing will be allowed on a site-specific basis if Forest Service fisheries personnel and the WDFW Area Habitat Biologist agree that implementing the activity outside of the normal work period would be unlikely to cause negative impacts to fish and fish habitat. Agreed upon adjustments to work periods will be considered a ―minor modification" to project provisions and will not exclude the project from being implemented under Appendix A.

The Forest Service shall immediately notify the appropriate WDFW Regional Habitat Program Manager if it becomes aware that project activities occur that do not adhere to Appendix A provisions. Additionally, the Forest Service shall immediately notify the appropriate WDFW Regional Habitat Program Manager of project activities that do adhere to these provisions but that may result in unanticipated fish or fish habitat damage.

## *GENERAL PROVISIONS APPLICABLE TO ALL APPENDIX A PROJECTS*

### Timing

1. Freshwater hydraulic projects shall normally be implemented only during the work periods outlined in Appendix D. Other timing will be allowed on a site-specific basis if the Forest Service fish biologist and the WDFW Area Habitat Biologist agree that implementing the activity outside of the normal period would be unlikely to cause negative impacts to fish. Any agreements to modify the work periods in Appendix D for specific projects or specific sites shall be documented by WDFW.

2. Those portions of hydraulic project work that occur outside or above the bankfull channel and have little or no potential to negatively affect fish or fish habitat are not subject to the work periods specified in Appendix D. Examples of such work include replacing bridge decking, constructing a bridge superstructure after footings are in place, and building up the fill over a culvert that is in place. These projects are still bound by the other provisions in Appendix A. The Forest Service shall notify the appropriate WDFW Regional Habitat Program Manager prior to implementing work on these hydraulic projects outside of the work periods specified in Appendix D.

3. Hydraulic projects conducted in intermittent non-fish-bearing streams that are dry during the

proposed work are not subject to the work periods specified in Appendix D unless USFS fish biologists determine the activities are likely to negatively affect fish life, in which case the work periods specified in Appendix D apply.

4. Hydraulic projects conducted in wetted non-fish-bearing streams that are greater than ¼ mile from fish-bearing waters are not subject to the work periods specified in Appendix D unless the USFS fish biologist determines the activities are likely to negatively affect fish life, in which case the work periods specified in Appendix D apply.

## Fish Protection

5. Any pump used for diverting water from a fish-bearing waterbody shall be equipped with a fish guard to prevent passage of fish into the pump. The pump intake shall be screened with 3/32 inch or smaller mesh. Screen maintenance shall be adequate to prevent injury or entrapment to juvenile fish and shall remain in place whenever water is withdrawn from the waterbody through the pump intake.

6. Fish within construction sites that will be dewatered or isolated from the main waterbody shall be captured and safely moved from the job site. Fish capture and transportation equipment shall be available on the job site during all inwater activities.

7. If at any time, as a result of project activities, a fish kill occurs, fish are observed in distress, or water quality problems develop that may present a threat to fish life, the Forest Service shall immediately notify the appropriate WDFW Regional Habitat Program Manager. Outside of business hours, notification shall be made to the Washington State Emergency Management Division of the Department of Ecology at 1-800-258-5990.

## Erosion and Wastewater Control

8. Alteration or disturbance of the bed, banks, and bank vegetation of waterbodies shall be minimized and limited to that necessary to construct the project.

9. Erosion prevention and control methods shall be used as necessary during and immediately after project implementation to minimize loss or displacement of soils and to prevent delivery of sediment into waterbody. These may include, but are not limited to, operational techniques, straw bales, silt fencing, erosion control blankets, temporary sediment ponds, and/or immediate mulching of exposed areas. Disturbed ground with the potential to deliver sediment into waterbodies shall be revegetated or protected from surface erosion by seeding, mulching, other methods prior to the fall rainy season.

10. After project completion, disturbed streambanks and lakeshores shall be revegetated with site-appropriate vegetation to maintain soil stability and provide shade and future sources of large wood.

11. Wastewater from project activities shall be routed to an area outside the bankfull channel to allow removal of fine sediment and other contaminants prior to infiltrating back into waterbodies.

## Heavy Equipment

12. The use of heavy equipment within the bankfull channel in streams and below the ordinary high water line in lakes is discouraged. If such work is necessary, operation of heavy equipment in these areas shall be minimized.

13. Accumulations of soil or debris shall be removed from drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of all heavy equipment prior to its working within the bankfull channel in streams or below the ordinary high water line in lakes.

14. To prevent contamination, equipment used around waterbodies shall be free of external petroleum-based products. Equipment shall be checked daily for leaks and any necessary repairs shall be completed prior to commencing work activities. All machinery fueling and maintenance involving petroleum products shall occur at a sufficient distance from stream channels, waterbodies, or wetlands to prevent delivery of potential contaminants. Spill containment equipment and material shall be on site.

## Concrete and Treated Wood

15. Fresh concrete, concrete by-products, or other chemical contaminants shall not be allowed to enter waterbodies. Structures containing concrete shall be sufficiently cured to prevent leaching prior to contact with the waterbody.

16. Treated wood used for hydraulic projects shall meet or exceed the standards established in the most current edition of "Best Management Practices For the Use of Treated Wood in Aquatic Environments" developed by the Western Wood Preservers Institute. At the time of the signing of this MOU, the most current version is the July 1996 edition.

## Other

17. A copy of this MOU shall be available on site at all times when work is conducted under the provisions of Appendix A.

### Permanent Culvert Installation and Replacement

NOTE: Permanent culvert installation and replacement projects include installation of new culverts that are installed for more than one year and replacement of existing culverts with similar or larger structures.

In addition to the General Provisions Applicable to All Projects, the following project-specific provisions apply when conducting permanent culvert installation or replacement projects.

1. In non fish-bearing waters, Provisions 2-6 (highlighted with a *) are not required.

2. *Culverts in fish-bearing streams shall be designed, installed, and maintained to provide passage for all fish species and all life stages that are likely to be encountered at the site.

3. *Culverts in fish-bearing streams shall be designed and installed based on the stream simulation approach. Stream simulation designs are intended to mimic the natural stream characteristics and processes.

4. *Site investigations and selections of appropriate stream simulation culvert designs should be guided by Washington State "Design of Road Culverts for Fish Passage", R-6 Training Manual, or an equivalent process.

5. *Forest Service shall notify WDFW when they begin the design process for a fish passage culvert. Collaboration is encouraged on these projects and can be initiated by either agency when there are concerns about any of these projects.

6. *A Forest Service staff with expertise in stream processes and fish habitat shall be on-site during initial culvert placement and placement of streambed materials inside the pipe for all culverts in fish-bearing streams.

7. *Installation of baffled culverts in fish-bearing streams is not included under Appendix A.

8. Culverts shall be designed, installed and maintained to accommodate the 100-year peak flow with consideration of the sediment load and large wood likely to be encountered.

9. Culverts shall be designed, installed and maintained to avoid negative channel changes such as inlet scouring or erosion of the streambed or banks downstream of the project.

10. The crossing structure shall consist of a single culvert.

11. Construction sites shall be dewatered or isolated from flowing waters to prevent generation of sediment and minimize turbidity.

12. Every effort shall be made to avoid stream crossings with heavy equipment. A single round-trip equipment crossing of the stream channel shall be allowed, if necessary. Equipment operation within the stream channel inside of the approximate culvert footprint is permissible so long as the stream has been dewatered.

## APPENDIX D. WORK PERIODS FOR HYDRAULIC PROJECTS

Freshwater hydraulic projects conducted under this MOU will normally be implemented only during the work periods outlined in Table 1. Other timing will be allowed on a site-specific basis if the Forest Service fish biologist and the WDFW Area Habitat Biologist agree that implementing the activity outside of the normal period would be unlikely to cause negative impacts to fish and fish habitat. Any agreements to modify the work periods in Table 1 for specific projects or specific sites shall be documented by WDFW. Agreed-upon adjustments to work periods will be considered a “minor modification” to project provisions and will not exclude the project from being implemented under Appendix A.

Table 1 is subject to change by WDFW as warranted by new biological information. Revised versions of Table 1 shall be forwarded to the Forest Service by WDFW and shall be immediately incorporated into this MOU.

Those portions of hydraulic project work that occur outside or above the bankfull channel and have little or no potential to negatively affect fish or fish habitat are not subject to the work periods specified in Table 1. Examples of such work include replacing bridge decking, constructing a bridge superstructure after footings are in place, and building up the fill over a culvert that is in place. The Forest Service shall notify the appropriate WDFW Regional Habitat Program Manager prior to implementing work on these hydraulic projects outside of the work periods specified in Appendix D. These projects are still bound by the other provisions within this MOU.

Hydraulic projects conducted in intermittent streams that are dry and are anticipated to remain dry during project activities are not subject to the work periods specified in Appendix D unless USFS fish biologists determine the activities are likely to negatively affect fish life. In that case the work periods specified in Appendix D apply.

Hydraulic projects conducted in wetted non-fish-bearing streams that are greater than ¼ mile from fish-bearing waters are not subject to the work periods specified in Appendix D unless USFS fish

biologists determine the activities are likely to negatively affect fish life. In that case the work periods specified in Appendix D apply.

Work periods for hydraulic projects conducted in saltwater shall be established collaboratively with WDFW on a site-by-site basis.

| | | | |
|---|---|---|---|
| Skamania | July 1 - September 30 | Cispus River (26.0668)<br>- mouth to Walupt Creek (26.1010)<br>- Yellowjacket Creek (26.0757)<br>- McCoy Creek (26.0766) - mouth to lower falls<br>- McCoy Creek (26.0766) - above lower falls<br>East Fork Lewis River (27.0173) - below Sunset Falls<br>- Copper Creek (27.0275)<br>East Fork Lewis River (27.0173) - above Sunset Falls<br>North Fork Lewis River (27.0168) - Merwin Dam to Lower Falls<br>North Fork Lewis River (27.0168) - above Lower Falls<br>Little White Salmon River (29.0131)<br>Washougal River (28.0159)<br>White Salmon River (29.0160)<br>Wind River (29.0023) | August 1 - August 15<br>August 1 - August 15<br>August 1 - August 15<br>August 1 - October 31<br>July 15 - September 30<br>July 15 - October 31<br>July 15 - October 31<br>July 1 - July 31<br>July 15 - October 31<br>July 1 - August 31<br>August 1 - August 31<br>July 1 - August 15<br>August 1 - August 15 |

NOTE – CHECK WITH FS FOR ANY REVISONS TO WORK WINDOWS PRIOR TO WORK

107.05_nat_us_05_11_2004

## *107.05 Responsibility for Damage Claims.*

Delete the entire subsection.

107.06_nat_us_06_16_2006

## *107.06 Contractor's Responsibility for Work.*

Delete the following from the first paragraph.
"except as provided in Subsection 106.07".

107.09_nat_us_06_16_2006

## *107.09 Legal Relationship of the Parties.*

Delete the entire subsection.

107.10_nat_us_06_16_2006

## *107.10 Environmental Protection.*

Add the following:

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

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

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.

- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

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

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

# 108 - Prosecution and Progress

108.00_nat_us_02_16_2005

### *108 Delete.*

Delete Section 108 in its entirety.

# 109 - Measurement and Payment

109.00_nat_us_02_17_2005

### *109 Deletions*

Delete the following entire subsections:

**109.06 Pricing of Adjustments.**
**109.07 Eliminated Work.**
**109.08 Progress Payments.**
**109.09 Final Payment.**

109.02_nat_us_06_16_2006

### *109.02 Measurement Terms and Definitions.*

**(b) Contract quantity**.

Add the following:

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

Change the following:

~~(~~b) Cubic yard" to ~~(~~c) Cubic yard".

Add the following definition:

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

# 153 - Contractor Quality Control

153.04_nat_us_10_24_2007

### *153.04 Records.*

Delete all but the first sentence

# 155 - Schedules for Construction Contracts

155.00_nat_us_05_11_2004

## *155 Delete.*

Delete Section 155 in its entirety.

# 156 - Public Traffic

156.00_nat_us_04_17_2007

Delete Section 156 in its entirety and replace with the following:

### 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:

| | |
|---|---|
| Construction sign panels | 633 |
| Retro-reflective sheeting | 718.01 |
| Temporary concrete barrier | 618 |
| Temporary plastic fence | 710.11 |
| Temporary traffic control devices | 718.22 |

**156.03 General.** 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 __15_ minutes at any one time followed by an open period of no less than _10__ minutes.

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. 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 |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

**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. Compensation is made as an indirect payment.

# 157 - Soil Erosion Control

157.03_nat_us_02_24_2005

## *157.03 General*

Delete the entire subsection and replace with the following:
Prior to the start of construction, submit a written plan 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. An alternate erosion control plan with all necessary permits may be submitted 30 days before intended use.
Incorporate all permanent erosion control features into the project at the earliest practicable time, as outlined in the approved plan.
When erosion control measures are not functioning as intended, immediately take corrective action.

# 171 - Weed and Disease Prevention

171.00_nat_us_03_30_2005

**Description**

**171.01** This work consists of washing and treating construction equipment to remove seeds, plants, and plant fragments from the equipment before the equipment is used on National Forest System lands.

### Material

**171.02** Conform to the following Subsection:

| | |
|---|---|
| Water | 725.01 |

### Construction Requirements

**171.03 General .** Notify the CO in writing at least 15 days before moving any construction equipment onto National Forest System lands. Construction equipment does not include cars, pickup trucks, and other vehicles that regularly travel between the construction site and areas outside of National Forest System lands.

Perform all work at a location designated on the plans or other locations approved in writing. Provide the CO with an opportunity to monitor the washing and inspection.

**171.04 Equipment.** Use a high pressure washing system.

For work on National Forest System lands, use a washing system that traps all wash water and either stores it for removal from National Forest System lands or recycles the water for continued use. If the equipment recycles the water, provide adequate filters for seed removal. Dispose of the filter material and removed seeds in an approved manner. Do not mix soaps, detergents, or other chemicals with the wash water.

For work at a commercial washing facility, use an approved facility.

**171.05 Washing.** Wash the sides, tops, and undercarriages of all construction equipment. Remove all seeds, plants, plant fragments, dirt, and debris from the construction equipment.

**171.06 Inspection.** Inspect the washed construction equipment, including the undercarriage, to ensure that the washing removed the dirt, debris, and seeds from the construction equipment. Rewash the construction equipment as necessary or as directed.

**171.07 Acceptance.** Weed prevention will be evaluated under Subsection 106.02.

### Measurement

**171.**08 Do not measure weed prevention for payment.

### Payment

**171.09** Include all costs associated with the Section 171-Weed Prevention in the unit price for Section 151-Mobilization.

## 203 - Removal of Structures and Obstructions

## *203.01 Description.*

Delete and replace with the following:

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

203.04_nat_us_02_18_2005

## *203.04 Removing Material.*

Replace the fourth and fifth paragraphs with the following:

Where part of an existing culvert is removed, remove the entire culvert upstream from the removal. The remaining downstream culvert may be left in place if no portion of the culvert is within 12 inches of the subgrade, embankment slope, or new culvert or structure; and the culvert ends are sealed with concrete.

Remove structures and obstructions in the roadbed to 12 inches below subgrade elevation. Remove structures and obstructions outside the roadbed to 12 inches below finished ground or to the natural stream bottom.

## *203.05 Disposing of Material.*

Add the following:

**(e) Windrowing Construction Slash**. Place construction slash outside the roadway in neat, compacted windrows approximately parallel to and along the toeline 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. Obtain approval for pioneer roads. A pioneer road may be constructed to provide an area for placement of windrows, provided the excavated material is kept within the clearing limits and does not adversely affect the road construction.

**(f) Scattering.** Scatter construction slash outside the clearing limits 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.

**(g) Chipping or Grinding.** Use an approved chipping machine to grind slash and stumps greater than 3 inches in diameter and longer than 3 feet. Deposit chips or ground woody material 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 Firewood Material.** Remove brush from decks. Limb and deck logs that do not meet Utilization Standards according to Subsection 201.04 as directed by the CO. Cut logs to lengths less than 30 feet. Ensure that logs stacks are stable and 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. Cut unmerchantable logs into lengths of less than 20 feet.

**(l) Placing Slash on Embankment Slopes**. Place construction slash on completed embankment slopes to reduce soil erosion. Place construction slash as flat as practicable on the completed slope. Do not place slash closer than 2 feet below subgrade. Priority for use of available slash is for: (1) through fills; (2) insides of curves; and (3) ditch relief outlets.

**(m) Hydrological Sensitive Placement**. Where required use this method in combination with other designated methods to dispose of material to reduce erosion and to aid in re-vegetation:

1. Place windrow segments on contours, wrap in type I geotextile.
2. Place logs as log erosion barriers on contours. Place logs so that 80% of their length is on the ground surface.
3. Scatter slash on bare or disturbed areas within or outside the clearing limits as directed.
4. Scatter chips or ground woody material on bare or disturbed areas within or outside the clearing limits as directed.

Place stumps in swales or on sites to form planting pockets. Place windrow segments on contours, wrap in type I geotextile.

# 204 - Excavation and Embankment

204.00_nat_us_03_26_2009

**Replace Section 204 in its entirety with the following:**

**Description**

**204.01** This work consists of excavating material and constructing embankments. This 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.** All material excavated from within the right-of-way or easement areas, except subexcavation covered in (2) below 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 groundline in embankment sections. Subexcavation does not include the work required by Subsections 204.05, 204.06(b), and 204.06(c).

**(3) Borrow excavation.** Material used for embankment construction that is obtained from outside the roadway prism. Borrow excavation includes unclassified borrow, select borrow, and select 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:

| | |
|---|---|
| Backfill material | 704.03 |
| Select borrow | 704.07 |
| Select topping | 704.08 |
| Topping | 704.05 |
| Unclassified borrow | 704.06 |
| Water | 725.01 |

## Construction Requirements

**204.04 Preparation for Roadway Excavation and Embankment Construction.** Clear the area of vegetation and obstructions according to Sections 201 and 203.

**204.05 Reserved.**

**204.06 Roadway Excavation.** Excavate as follows:

**(a) General.** Do not disturb material and vegetation outside the construction limits.
Incorporate only suitable material into embankments. Replace any shortage of suitable material caused by premature disposal of roadway excavation. Dispose of unsuitable or excess excavation material according to Subsection 204.14.

At the end of each day's operations, shape to drain and compact the work area to a uniform cross-section. Eliminate all ruts and low spots that could hold water.

Retrieve material deposited outside of the clearing limits as directed by the CO. Place unsuitable material in designated areas.

**(b) Rock cuts.** Blast rock according to Section 205. Excavate rock cuts to 6 inches below subgrade within the roadbed limits. Backfill to subgrade with topping or with other suitable material. Compact the material according to Subsection 204.11

**(c) Earth cuts.** Scarify earth cuts to 6 inches below subgrade within the roadbed limits. Compact the scarified material according to Subsection 204.11.

**(d) Pioneer Roads**. Road pioneering, slash disposal, and grubbing of stumps may proceed concurrently with excavation. 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.

**204.07 Subexcavation.** Excavate material to the limits designated by the CO. Take cross-sections according to Section 152. Prevent unsuitable material from becoming mixed with the backfill. Dispose of unsuitable material according to Subsection 204.14. Backfill the subexcavation with topping, or other suitable material. Compact the material according to Subsection 204.11.

**204.08 Borrow Excavation.** Use all suitable roadway excavation in embankment construction. Do not use borrow excavation when it results in excess roadway excavation. Deduct excess borrow excavation from the appropriate borrow excavation quantity.

Obtain borrow source acceptance according to Subsection 105.02. Develop and restore borrow sources according to Subsection 105.03. 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 less than 4 feet high over natural ground.** When designated, remove topsoil and break up the ground surface to a minimum depth of 6 inches 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. Scarify or pulverize asphalt and concrete roads to 6 inches below the pavement. Reduce all particles to a maximum size of 6 inches 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 benches in the existing slope to a sufficient width to accommodate placement and compaction operations and equipment. Bench the slope as the embankment is placed and compacted in layers. Begin each bench at the intersection of the original ground and the vertical cut of the previous bench.

**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 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 all 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 flatter than 1V:1.75H with a tamping type roller or by walking with a dozer. For slopes 1V:1.75H or steeper, compact the slopes as construction of the embankment progresses.

Where placing embankment on one side of abutments, wing walls, piers, or culvert headwalls, compact the material using methods that prevent excessive pressure against the structure.

Where placing embankment material on both sides of a concrete wall or box structure, conduct operations so compacted embankment material is at the same elevation on both sides of the structure.

Where structural pilings are placed in embankment locations, limit the maximum particle size to 4 inches.

**(b) Embankment within the roadway prism**. Place embankment material in horizontal layers not exceeding 12 inches in compacted thickness. Incorporate oversize boulders or rock fragments into the 12-inch layers by reducing them in size or placing them individually as required by (c) 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 layers may be placed in layers up to 24 inches thick. Incorporate oversize boulders or rock fragments into the 24-inch layer by reducing them in size or placing them individually according to (c) below. Place sufficient earth and smaller rocks to fill the voids. Compact each layer according to Subsection 204.11 before placing the next layer.

**(c) Individual rock fragments and boulders.** Place individual rock fragments and boulders greater than 24 inches in diameter as follows:

**(1)** Reduce rock to less than 48 inches 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 by (b) above. Fill all the voids between rocks.
**(4)** Compact each layer according to Subsection 204.11 before placing the next layer.

**(d) Embankment outside of roadway prism.** Where placing embankment outside the staked roadway prism, place material in horizontal layers not exceeding 24 inches 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) <u>Compaction A.</u>** Use AASHTO T 27 to determine the amount of material retained on a Number 4 sieve. If there is more than 80 percent retained on the No. 4 sieve use procedure (1). If there is 50 to 80 percent retained on the No. 4 sieve use procedure (2). If there is less than 50 percent retained on the No. 4 sieve use procedure (3).

**(1)** 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 6feet per second and vibratory rollers at speeds less than 3 feet 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 impact per vibration and a minimum frequency of 1000 vibrations per minute.
*(b)* Eight roller passes of a 20-ton compression-type roller.
*(c)* Eight roller passes of a vibratory roller having a minimum dynamic force of 30,000 pounds impact per vibration and a minimum frequency of 1000 vibrations per minute.

Increase the compactive effort for layers deeper than 12 inches as follows:

- For each additional 6 inches or fraction thereof, increase the number of roller passes in (a) above by four passes.
- For each additional 6 inches or fraction thereof, increase the number of roller passes in (b) and (c) above, by eight passes.

**(2)** Use AASHTO T 99 to determine the optimum moisture content of the portion of the material passing a No. 4 sieve. Multiply this number by the percentage of material passing a No. 4 sieve, and add 2 percent to determine the optimum moisture content of the material. 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 rollers at speeds less than 6 feet per second and vibratory rollers at speeds less than 3 feet per second. Compact each layer of material full width according to (1) above.

**(3)** 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 180, method D. For other material classifications, determine the optimum moisture content and 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 B.** Place material by end dumping to the minimum depth needed for operation of spreading equipment. Adjust the moisture content of the material to obtain a mass that will not visibly deflect under the load of the hauling and spreading equipment. Operate 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.

**(c) Compaction C.** Place material by end dumping to the minimum depth needed for operation of spreading equipment. Level and smooth each embankment layer before placing the next layers. Operate hauling and spreading equipment uniformly over the full width of each layer. Construct a solid embankment with adequate compaction by working smaller rock and fines in with the larger rocks to fill the voids, and by operating hauling and spreading equipment uniformly over the full width of each layer as the embankment is constructed.

**204.12 Ditches.** Slope, grade, and shape ditches. Remove all projecting roots, stumps, rock, or similar matter. Maintain all ditches in an open condition and free from leaves, sticks, and other debris.

Form furrow ditches by plowing or using other acceptable methods to produce a continuous furrow. Place all excavated material on the downhill side so the bottom of the ditch is approximately 18 inches below the crest of the loose material. Clean the ditch using a hand shovel, ditcher, or other suitable method. Shape to provide drainage without overflow.

**204.13 Sloping, Shaping, and Finishing.** Complete slopes, ditches, culverts, riprap, and other underground minor structures before placing aggregate courses. Slope, shape, and finish as follows:

**(a) Sloping.** Leave all earth slopes with uniform roughened surfaces, except as described in (b) below, with no noticeable break as viewed from the road. Except in solid rock, round tops and bottoms of all slopes including the slopes of drainage ditches. Round material overlaying solid rock to the extent practical. Scale all rock slopes. Slope rounding is not required on tolerance class D though M roads.

If a slide or slipout occurs on a cut or embankment slope, remove or replace the material, and repair or restore all 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 by the contract, construct steps on slopes of 1⅓V:1H to 1V:2H. Construct the steps approximately 18 inches high. Blend the steps into natural ground at the end of the cut. If the slope contains nonrippable 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.** Finish the roadbed to be smooth and uniform, and shaped to conform to the typical sections. Remove unsuitable material from the roadbed and replace it with suitable material. Finish roadbeds to the tolerance class shown in table 204-2.Ensure that the subgrade is visibly moist during shaping and dressing. Scarify to 6 inches below the bottom of low sections, holes, cracks, or depressions and bring back to grade with suitable material. Maintain proper ditch drainage.

For surfaced roads, remove all material larger than 6 inches from the top 6 inches of the roadbed.

For unsurfaced roads, use one of the following methods to finish the roadbed:

**(1)** **Method A**. Remove all material larger than 6 inches from the top 6 inches of the roadbed and replace with suitable material.
**(2)** **Method B**. Use a vibratory grid roller or approved equal with a minimum weight of 10 tons. Roll at least 5 full-width passes or until there is no visible evidence of further consolidation.
**(3)** **Method C**. For roads designated as Construction Tolerance Class K, L, or M, finish the roadbed by spreading the excavation. Eliminate rock berms.

**204.14 Disposal of Unsuitable or Excess Material.** Dispose of unsuitable or excess material at designated sites or legally off of the project.

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 and testing 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.

Clearing and removal of obstructions will be evaluated under Sections 201 and 203.

## Measurement

**204.16** Measure the Section 204 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 shown in the bid schedule;
*(d)* Ditches, except furrow ditches measured under a separate bid item;
*(e*Topsoil;
*(f)* Borrow material used in the work when a pay item for borrow is not shown in the bid schedule;
*(g)* Loose scattered rocks removed and placed as required within the roadway;

*(h)* Conserved material taken from stockpiles and used in Section 204 work; 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; and
*(l)* Material excavated outside the established slope limits.

**(3)** When both roadway excavation and embankment construction pay items are shown in the bid schedule, measure the following as roadway excavation only:
*(a)* Unsuitable material below subgrade in cuts and unsuitable material beneath embankment areas when a pay item for subexcavation is not shown 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, select borrow, and select topping.** When measuring by the cubic yard measure in its original position. If borrow excavation is measured by the cubic yard 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 used in place of excess roadway excavation.

**(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**. Measure rounding cut slopes horizontally along the centerline of the roadway if a pay item for slope rounding is included in the bid schedule. If a pay item for slope rounding is not included in the bid schedule slope rounding will be considered subsidiary to excavation.

**(e) Waste.** Measure waste by the cubic yard in its final position. Take initial cross-sections of the ground surface after stripping over burden. Upon completion of the waste placement, retake cross-sections before replacing overburden.

**(f) Slope scaling.** Measure slope scaling by the cubic yard in the hauling vehicle.

## 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 (continued)**
**Sampling and Testing Requirements**

| Split Sample | Reporting Time |
|---|---|
| Yes, when requested | Before using in work |
| — | — |
| — | Before placing next layer |
| — | Before placing next layer |

(1) Minimum of 5 points per proctor

**Table 204-1**
**Sampling and Testing Requirements**

| Material or Product | Type of Acceptance (Subsection) | Characteristic | Category | Test Methods Specifications | Sampling Frequency | Point of Sampling | Split Sample | Reporting Time |
|---|---|---|---|---|---|---|---|---|
| Topping (704.05) & unclassified borrow (704.06) | Measured and tested for conformance (106.04) | Classification | — | AASHTO M 145 | 1 per soil type | Processed material before incorporating in work | Yes, when requested | Before using in work |
| | | Moisture-density | — | AASHTO T 180, method D[(1)] or T 99, method C[(1)] | 1 per soil type but not less than 1 per 13,000 $yd^3$ | " | " | " |
| | | Compaction | — | AASHTO T 310 or other approved procedures | 1 per 6000 $yd^2$ but not less than 1 per layer | In-place | — | Before placing next layer |
| Select borrow (704.07 & Select topping (704.08) | Measured and tested for conformance (106.04) | Classification | — | AASHTO M 145 | 1 per soil type but not less than 1 for each day of production | Processed material before incorporating in work | Yes, when requested | Before using in work |
| | | Gradation | — | AASHTO T 27 & T 11 | " | " | " | " |
| | | Liquid limit | — | AASHTO T 89 | " | " | " | " |
| | | Moisture-density | — | AASHTO T 180, method D[(1)] or T 99, method C[(1)] | 1 per soil type but not less than 1 per 13,000 $yd^3$ | " | " | " |
| | | Compaction | — | AASHTO T 310 or other approved procedures | 1 per 6000 $yd^2$ but not less than 1 per layer | In-place | — | Before placing next layer |

(1) Minimum of 5 points per proctor

| Material or Product | Type of Acceptance (Subsection) | Characteristic | Category | Test Methods Specifications | Sampling Frequency | Point of Sampling |
|---|---|---|---|---|---|---|
| Earth embankment (204.11, Compaction A) | Measured and tested for conformance (106.04) | Classification | — | AASHTO M 145 | 1 per soil type | Source of Material |
| | | Moisture-density | — | AASHTO T 180, method D[1] or T 99, method C[1] | 1 per soil type but not less than 1 per 13,000 $yd^3$ | — |
| | | Compaction | — | AASHTO T 310 or other approved procedures | 1 per 3500 $yd^2$ but not less than 1 per layer | In-place |
| Top of subgrade (204.11 Compaction A) | Measured and tested for conformance (106.04) | Compaction | — | AASHTO T 310 or other approved procedures | 1 per 2500 $yd^2$ | In-place |

**Table 204-2**
**Construction Tolerances**

| | 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.

# 209 - Structure Excavation and Backfill

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## *209.10 Backfill.*

**(a) General.**

Add the following:

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

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

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

**(b) Pipe culverts.**

**(1) Pipe culverts with compacted backfill.**

Add the following:

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

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## *209.11 Compacting.*

Delete the subsection and add the following:

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

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

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

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

## *Table 209-1 Sampling and Testing Requirements*

Add the following:

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

# 251 – Riprap

## *251.01 Description*

Delete the first sentence and add the following:

This work consists of furnishing, hauling, and placing of riprap for bank protection, slope protection, drainage structures, erosion control, and other features shown on the plans.

## *251.02 Material.*

Add the following:
When shown on the plans stone from the project site may be utilized.

**251.03 General.**

Add the following:

Place riprap under or adjacent to structures before placing prefabricated superstructure units or constructing superstructure falsework unless otherwise approved by the CO.

## *251.07 Acceptance*

Delete sampling and testing requirements of Table 251-1 and certification requirements of Subsection 106.03.

**251.08 Measurement.**

Add the following:

Payment for excavation and embankment required for placement of riprap is indirectly included in the pay item for riprap.

# 322 - Minor Aggregate Courses

**Description**

**322.01** This work consists of constructing one or more courses of aggregate on a prepared surface. Work includes producing aggregate by grid rolling, screening, or crushing methods, or placing pit-run or Government-furnished aggregate.

Surface aggregate grading is designated as shown in Table 703-3.

Subbase and base aggregate grading is designated as shown in Table 703-2.

Screened aggregate grading is designated as shown in Table 703-16.

**Material**

**322.02** Conform to the following Subsections:

| | |
|---|---|
| Aggregate | 703.05 |
| Water | 725.01 |

## Construction Requirements

**322.03 General.** Prepare the surface on which the aggregate course is placed according to Section 204 or 303 as applicable.

Request approval of the roadbed in writing before placing aggregate.

Develop, haul, and apply water in accordance to Section 170.

Submit target values within the gradation ranges shown in Table 703-2 or 703-3 for the required grading. After reviewing the proposed target values the CO will determine the final values for the gradation and notify the Contractor in writing.

No quality requirements or gradation other than maximum size will be required for pit run and grid-rolled material. For grid rolling, use all suitable material that can be reduced to maximum size.
After processing on the road, remove all oversize material from the road and dispose of it as directed by the CO.
If the aggregate is produced and stockpiled before placement, handle and stockpiled according to Section 320. Establish stockpile sites at approved locations.

**322.04 Mixing and Spreading.** Mix the aggregate and adjust the moisture content to obtain a uniform mixture with a moisture content suitable for the specified compaction method. Spread and shape the mixture on the prepared surface in a uniform layer with no segregation of size, and to a loose depth that will provide the required compacted thickness.

Do not place in layers exceeding 6 inches in compacted thickness for aggregate base and surface courses or twice the maximum particle size for screened aggregate. When more than one layer is necessary, compact each layer according to Subsection 322.05 before placing the next layer. Route hauling and leveling equipment uniformly over the full width.

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

**322.05 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:

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

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

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

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

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

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

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

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

**322.06 Construction Tolerance.** If grade finishing stakes are required, finish the surface to within ±0.10 feet from staked line and grade elevation.

If grade finishing stakes are not required, shape the surface to the required template and check the surface with a 10-foot straightedge. Defective areas are surface deviations in excess of 1/2 inch in 10 feet between any two contacts of the straightedge with the surface.

Correct all defective areas by loosening the material, adding or removing material, reshaping, and compacting.

Ensure that the compacted thickness is not consistently above or below the specified thickness. The maximum variation from the compacted specified thickness is ½ inch.

Ensure that the compacted width is not consistently above the specified width. The maximum variation from the specified width will not exceed +12 inches at any point.

**322.07 Maintenance.** Maintain the aggregate course to the correct line, grade, and cross-section by blading, watering, rolling, or any combination thereof until placement of the next course. Correct all defects according to Subsection 322.06.

**322.08 Acceptance.** See Table 322-1 or Table 322-2 as applicable, for sampling and testing requirements.

Aggregate gradation and surface course plasticity index will be evaluated under Subsection 106.04. If the aggregate is obtained from a Government stockpile then the above characteristics will be evaluated under Subsection 106.02. Other aggregate quality properties will be evaluated under Subsections 106.02 and 106.04. Placement of aggregate courses will be evaluated under Subsections 106.02 and 106.04.

The allowable upper and lower aggregate gradation limits are the Target Value plus or minus the allowable deviations shown in Tables 703-2 and 703-3.

The allowable upper and lower Plasticity index limits for surface courses are stated in 703.05(b).

Preparation of the surface on which the aggregate course is placed will be evaluated under Section 204 or 303 as applicable.

## Measurement

**322.09** Measure the Section 322 items listed in the bid schedule according to Subsection 109.02 and the following as applicable.

Measure square yard width horizontally to include the top of aggregate width including designed widening. Measure the square yard length horizontally along the centerline of the roadway.

If the measurement for aggregate is by cubic yard using contract quantities then measure aggregate by the cubic yard in-place once compacted, otherwise measurement for aggregate by the cubic yard is measured by the cubic yard in the hauling vehicle.
Measure thickness perpendicular to the grade of the travelway.
Measure width perpendicular to the centerline.

## Payment

**322.10** The accepted quantities will be paid at the contract price per unit of measurement for the Section 322 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

**Table 322-1**
**Sampling and Testing Requirements**

| Material or Product | Type of Acceptance (Subsection) | Characteristic | Category | Test Methods Specifications | Sampling Frequency | Point of Sampling | Split Sample | Reporting Time |
|---|---|---|---|---|---|---|---|---|
| Aggregate source quality 703.05 | Measured and tested for conformance (106.04 & 105) | LA abrasion (coarse) | — | AASHTO T 96 | 1 per type & source of material | Source of material | Yes, when requested | Before using in work |
| | | Sodium sulfate soundness loss (coarse & fine) | — | AASHTO T 104 | — | — | — | — |
| | | Durability index (coarse & fine) | — | AASHTO T 210 | — | — | — | — |
| | | Fractured faces | — | ASTM D 5821 | — | — | — | — |
| Subbase, Base, and Surface courses | Measured and tested for conformance (106.04) | Sample | — | AASHTO T 2 | 2 per day | From windrow or roadbed after processing or from approved crusher sampling device | Yes | 48 hours |

**Table 322-2 Samplin**

| Reporting Time |
|---|
| 48 hours |

## Table 322-1 (continued)
## Sampling and Testing Requirements

| Material or Product | Type of Acceptance (Subsection) | Characteristic | Category | Test Methods Specifications | Sampling Frequency | Point of Sampling | Split Sample | Reporting Time |
|---|---|---|---|---|---|---|---|---|
| Subbase, Base, and Surface | Measured and tested for conformance (106.04) | Moisture-density Method D | — | AASHTO T 99 (1) | 1 per type and source of material | Source of material | Yes, when requested | Before using in work |
| | | Moisture-density Method E | — | R-1 Marshall | — | — | — | — |
| | | Moisture-density Method F | — | AASHTO T 180(1) | — | — | — | — |
| | | Moisture-density Method G | — | R-1 Marshall | — | — | — | — |
| | | In-place density & moisture content | — | AASHTO T 310 or other approved procedures | 3 per day | In-place | — | Before placing next layer |

(1) Minimum of 5 points per proctor.

| Material or Product | Type of Acceptance (Subsection) | Characteristic | Category | Test Methods Specifications | Sampling Frequency | Point of Sampling | Split Sample |
|---|---|---|---|---|---|---|---|
| Screened Aggregate | Measured and tested for conformance (106.04 ) | Sample | — | AASHTO T 2 | 2 per day | From windrow or roadbed after processing or from approved crusher sampling device | Yes |

# *Section 417. — MINOR COLD ASPHALT MIX*

**Description**

**417.01** This work consists of furnishing and placing one or more courses of cold asphalt mix. This work also consists of furnishing and placing cold asphalt mix as a patching material for temporary roadway maintenance.

**Material**

**417.02** Conform to the following Subsection:

| | |
|---|---|
| Cold asphalt mix | 702.10 |

**Construction Requirements**

**417.03 Composition of Mix (Job-Mix Formula).** Submit the strength, quality, and gradation specifications for the cold asphalt mix. Include copies of laboratory test reports that demonstrate the properties of the aggregates, asphalt binder, additives, and mix meet Federal or State agency specifications.

**417.04 Surface Preparation.** Prepare the surface according to Subsection 303.05, 303.06, or 410.05 as applicable.

**417.05 Placing.** Place the mix with appropriate equipment to produce a uniform surface. For roadway paving, do not place lifts thicker than 4 inches. In areas where mechanical spreading and finishing is impractical, spread and finish each course by hand raking, screeding, or by other approved methods. Construct a surface that is uniform in texture and cross-section. Construct joints or tapers as required.

**417.06 Compacting.**

**(a) Roadway paving.** Compact by rolling with a steel-wheeled roller weighing at least 8 tons.

**(b) Non-roadway paving and patching.** Compact by rolling with a hand-operated roller weighing at least 300 pounds or with a small power roller.

Compact areas that are not accessible to rollers by other approved methods.

**417.07 Acceptance.** Minor cold asphalt mix will be evaluated under Subsections 106.02 and 106.03.

Minor cold asphalt mix construction work will be evaluated under Subsections 106.02 and 106.04.

**Measurement**

**417.08** Measure the Section 417 items listed in the bid schedule according to Subsection 109.02.

**Payment**

**417.09** The accepted quantities will be paid at the contract price per unit of measurement for the Section 417 pay item listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

# 430 - Asphalt Pavement Patching

430.00_nat_us_07_27_2007

## Description

**430.01** This work consists of performing full depth patching, patching with geotextiles, skin patching, spray-injection patching, and removal and replacement of asphalt berms.

## Material

**430.02** Conform to the following Subsections:

| | |
|---|---|
| Minor Hot Asphalt Pavement | 404.02 |
| Asphalt Binder | 702.01 |
| Cutback Asphalt | 702.02 |
| Emulsified Asphalt | 703.03 |
| Application Temperatures | 702.04 |
| Cold Asphalt Mix | 702.10 |
| Aggregate | 703.07 (a) and (b) |
| Choker Aggregate | 703.12 |
| Geotextile Type VI | 714.01 |
| Sand | 703.15 |

## Construction

430.03 Composition of Mix (Job-Mix Formula). Furnish either Minor Hot Asphalt Pavement or Minor Cold Asphalt Mix as approved by the CO.

430.04 Full Depth Patch.

Remove material to a minimum depth of 4 inches, or as necessary to reach firm support. If firm support for a patch is unavailable, notify the CO prior to placing any material.

Trim or mill the edges of the prepared hole to form a vertical face in un-fractured asphalt surfacing. Make the prepared hole rectangular, and clean it of all loose material. When the hole is dry, apply emulsified asphalt to the bottom and faces of the hole. Barricade prepared sites. Patch the sites immediately after the emulsified asphalt breaks. Place the asphalt concrete mixture in layers not exceeding 4 inches. Thoroughly compact each

layer with hand or mechanical tampers or rollers. For hot asphalt concrete mixtures, compact the mix while it is above 230 °F.

Compact the finished surface with a steel-wheel roller or vibratory plate compactor. Ensure that the compacted patch is approximately 1/8 to 1/4 inches above the level of the adjacent pavement. Seal the edges of the completed patch with emulsified asphalt, and blot with fine sand.

**430.05 Patching with Geotextile.** Prepare the surface by digging out and patching according to Subsection 430.04 or by cleaning the surface, removing vegetation, and filling all cracks more than 1/4 inch wide with an approved crack-filling material. Remove excess crack-filling material. Spray the prepared surface with asphalt cement or emulsified asphalt according to the geotextile manufacturer's direction. Immediately place the geotextile over the repaired area. Allow emulsified asphalt to break before placing geotextile. Extend the fabric a minimum of 6 inches beyond the repaired or patched area onto sound adjoining pavement. Use a minimum of 2 inches overlap where adjacent fabric panels are needed to cover the repaired area.

Do not place the asphalt concrete mixture until authorized by the CO. Uniformly distribute asphalt concrete mixture in layers not to exceed 2 inches compacted depth. Feather the edges of skin patches. When placing more than one layers, offset all joints at least 6 inches between layers. Compact each layer with an 8 to 10 ton steel roller. For hot asphalt concrete mixtures, compact the mix while it is above 230°F. Ensure that the completed patch does not have abrupt transitions that could adversely affect the steering of a passenger car traveling across the area. Provide transition tapers for skin patches that are 12 inches long per 1/4 inch thickness of patch in the direction on travel.

430.06 Skin Patches. Prepare the surface on which the skin patch is placed by cleaning the surface, removing vegetation, and filling all cracks more than 1/4 inch wide with an approved crack-filling material. Remove excess crack-filling material. Spray the surface with emulsified asphalt at the rate approved by the CO.

Apply the asphalt concrete mixture according to Subsection 430.05.

430.07 Spray-Injection Patching. Use an approved continuous process that cleans and dries the area to be patched, sprays a tack coat of binder on the sides and bottom of the pothole, place aggregate coated with emulsified asphalt, and covers the area with a choker aggregate.

430.08 Asphalt Berm. Remove damaged segments of berm and bevel exposed ends at approximately 45 degrees from vertical. Clean and patch the berm foundation as necessary. Coat the foundation and joining surfaces with emulsified asphalt. Place and compact asphalt mix to conform to the shape of the undamaged segment.

**430.09 Waste Material.** Dispose of all materials removed from potholes, patches, and berms in accordance with Subsection 203.05(a).

**430.10 Acceptance.** Asphalt concrete mixtures will be evaluated under Subsections 106.02 and 106.03. Geotextiles will be evaluated under Subsection 106.03. Spray-injection patching will be evaluated under Subsections 106.02 and 106.03.

**Measurement**

**430.11** Measure the Section 430 items listed in the bid schedule according to Subsection 109.02.

**Payment**

**430.12** The accepted quantities will be paid at the contract unit price per unit of measurement for Section 430 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05

# 602 - Culverts and Drains

602.03_nat_us_09_06_2005

## *602.03 General.*

Add the following:

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

by more than 2 percent of pipe center length or 1.0 feet, whichever is less.

## *602.06 Laying Plastic Pipe.*

Delete the second paragraph and substitute the following:

Provide soil-tight bell and spigot joints for plastic pipe culverts.

# 703 - Aggregate

703.05_nat_us_12_07_2006

**Delete 703.05 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)** Gradtion | 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) | | | | |
|---|---|---|---|---|---|
| | Grading Designation | | | | |
| | 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 | |
| 3/4 inch | | | 64 – 94 (6) | 86 – 100 (6) | 100 |
| 1/2 inch | 45 – 59 (7) | | | | |
| 3/8 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 (±) 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 703-16:**

**Table 703-16**
**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 | |

# 705 - Rock

## *705.02 Riprap Rock.*

Delete Table 705-1 and replace it with the following:

**Gradation Requirements for Riprap**

| Class | Percent of Rock by Mass | Mass (pounds) | Approximate Cubic Dimension [b,c] (inches) |
|---|---|---|---|
| 1 | 20 | 22 to 33 | 6 to 8 |
| | 30 | 11 to 22 | 5 to 6 |
| | 40 | 1 to 11 | 2 to 5 |
| | 10[a] | 0 to 1 | 0 to 2 |
| 2 | 20 | 55 to 110 | 8 to 10 |
| | 30 | 22 to 55 | 6 to 8 |
| | 40 | 2 to 22 | 3 to 6 |
| | 10[a] | 0 to 2 | 0 to 3 |
| 3 | 20 | 220 to 330 | 14 to 16 |
| | 30 | 110 to 220 | 10 to 14 |
| | 40 | 11 to 110 | 5 to10 |
| | 10[a] | 0 to 11 | 0 to 5 |
| 4 | 20 | 550 to 770 | 18 to 20 |
| | 30 | 220 to 570 | 14 to 18 |
| | 40 | 22 to 220 | 6 to 14 |
| | 10[a] | 0 to 22 | 0 to 6 |
| 4a | 20 | 770 to1353 | 20 to 24 |
| | 30 | 330 to 770 | 16 to 20 |
| | 40 | 33 to 330 | 7 to16 |
| | 10[a] | 0 to 33 | 0 to 7 |
| 5 | 20 | 1540 to 2200 | 26 to 28 |
| | 30 | 1100 to 1540 | 20 to 26 |
| | 40 | 55 to 1100 | 8 to 20 |
| | 10[a] | 0 to 55 | 0 to 8 |
| 6 | 20 | 1870 to 3520 | 28 to 34 |
| | 30 | 1100 to 1870 | 22 to 28 |
| | 40 | 110 to 1100 | 10 to 22 |
| | 10[a] | 0 to 110 | 0 to 10 |
| 7 | 20 | 4400 to 5940 | 35 to 39 |
| | 30 | 2200 to 4400 | 28 to 35 |
| | 40 | 220 to 2200 | 14 to 28 |
| | 10[a] | 0 to 220 | 0 to 14 |
| 8 | 20 | 7000 to 10000 | 42 to 47 |
| | 30 | 4000 to 7000 | 35 to 42 |
| | 40 | 400 to 4000 | 16 to 35 |
| | 10[a] | 0 to 400 | 0 to 16 |

(a) Furnish spall and rock fragments graded to provide a stable dense mass.

(b) The volume of a rock with these cubic dimensions has a mass approximately equal to the specified rock mass.
(c) Furnish rock with breadth and thickness at least one-third its length.

# 713 - Roadside Improvement Material

713.05_nat_us_03_02_2005

## *713.05 Mulch.*

Add the following:

Assure that mulch used on the project is certified noxious weed free by the appropriate authority in the jurisdiction of use.

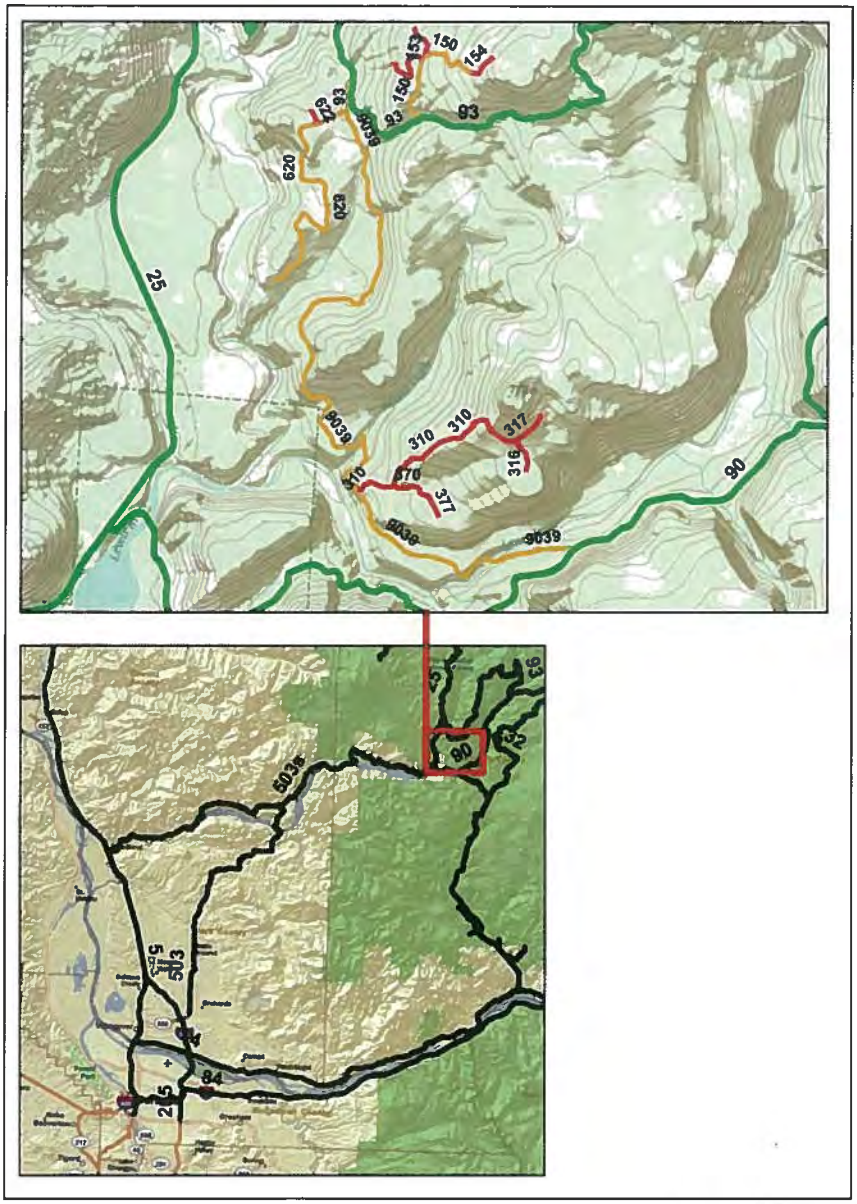
# UNITED STATES DEPARTMENT OF AGRICULTURE

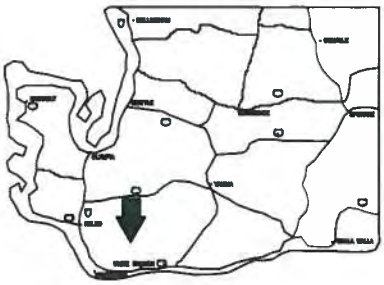
## FOREST SERVICE – REGION SIX

GIFFORD PINCHOT NATIONAL FOREST
Mt. St. Helens National Volcanic Monument

DRAWINGS FOR PROPOSED

# CURLY STEWARDSHIP SALE ROADS



KEY MAP OF WASHINGTON
SHOWING PROJECT LOCATION

INDEX TO SHEETS


0– TITLE SHEET–INDEX
1 – WORK LIST
2 – CULVERT DETAILS
3 – 9039 FILL REPAIR
4 – ASPHALT DETAILS


DISTRICT RANGER – RECOMMENDED BY

NAME DATE

PROJECT MANAGER – SUBMITTED BY: 11/10/2011
NAME DATE

FOREST ENGINEER – APPROVED BY: 11/10/2011
NAME DATE

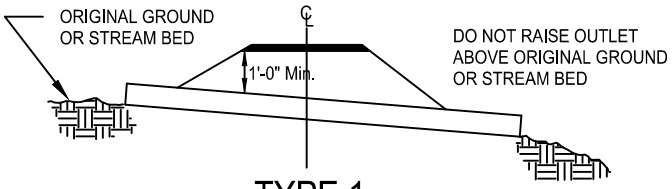
## CURLY STEWARDSHIP SPECIFIED ROAD WORKLIST

| Mile Post | Work Description |
|---|---|
| **90 Road** | |
| 19.7-20.6 | Asphalt patching as marked at multiple locations (445 tons) |
| **9039 Road** | |
| 3.82 | Construct splash apron of Class 2 rip rap at outlet of 24” pipe, (4cy) |
| 5.35 | Construct splash apron of Class 2 rip rap at outlet of 18” pipe, (10cy) |
| 5.90 | Repair fill failure (110cy), place Class 4 rip rap at inlet of 48” pipe (10cy) see dwg |
| **9039-316 Road** | |
| 0.10 | Replace culvert (failed log culvert with 18”x 28’ HDPE) place select native borrow salvaged from excavation around pipe. |
| **9039-377Road** | |
| 0.18 | Replace culvert (failed log culvert with 36””x 32’ HDPE) haul and place unclassified borrow from Upper House Quarry (75cy), place select native borrow salvaged from excavation around pipe |
| **93 Road** | |
| 2.67 | Asphalt patching as marked (6 tons), Place aggregate on fill slope shoulder (6cy) |
| 2.78 | Asphalt patching as marked (27 tons) |
| 2.95-3.05 | Place cold mix asphalt along shoulders to achieve 12’ travel way or turnout width as necessary (estimate 3 tons). |

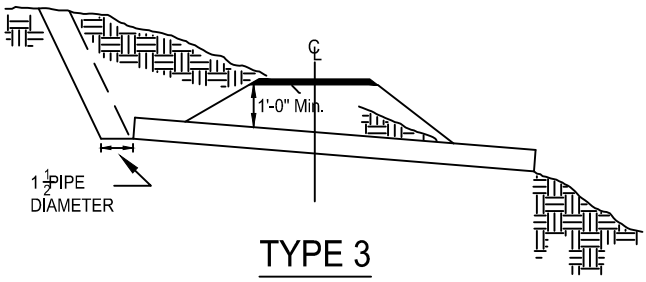
NOTES:

1. All culvert installations – conserve existing aggregate and replace after installation
2. Comply with the provisions of Washington State/Forest Service MOU covering culvert installations – see specification 107
3. Seed and mulch all culvert and excavation locations upon completion of work – Forest Service to provide seed –Contractor to provide certified weed free mulch. This work is incidental to culvert installations. Mulch application rate 1 ton/acre.
4. All new culverts to be HDPE plastic pipe
5. Unclassified borrow haul/placement/compaction for culvert replacement at MP 0.18 9039-377 is incidental to culvert pay item
6. For log culvert replacements scatter removed log material on forest floor outside of road template and existing drainage channels
7. Aggregate, Rip Rap and Unclassified Borrow source is Upper House Rock quarry
8. See road maintenance provisions for other road related work
9. Aggregate, borrow and rip rap quantity is measured in place.
10. Provide traffic control plan for approval by Forest Service
11. Provide and maintain necessary traffic control devices, signs or flaggers as necessary to comply with MUTCD throughout project

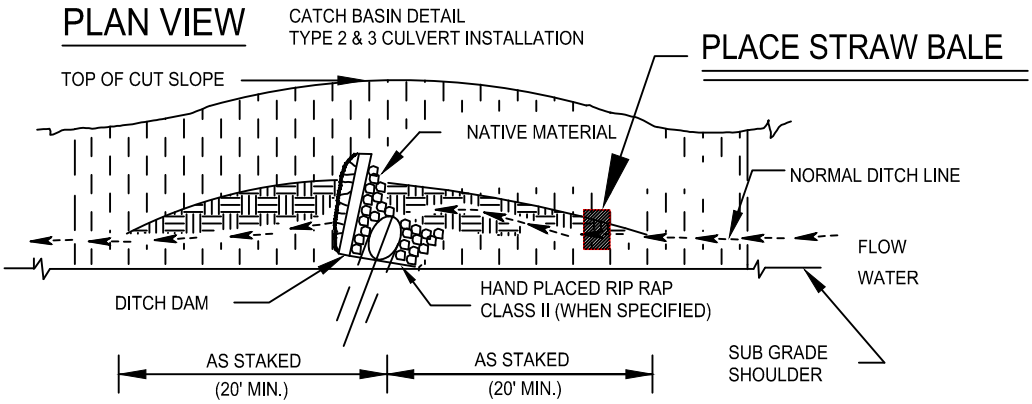
# DRAINAGE CONSTRUCTION DETAILS




TYPE 1

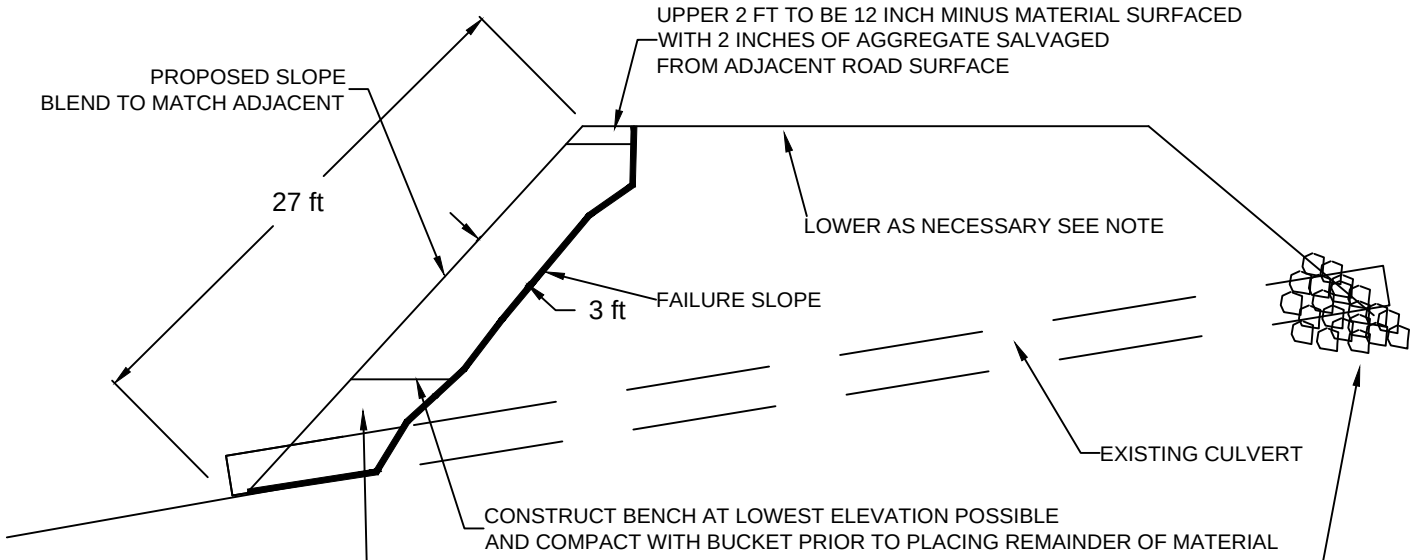


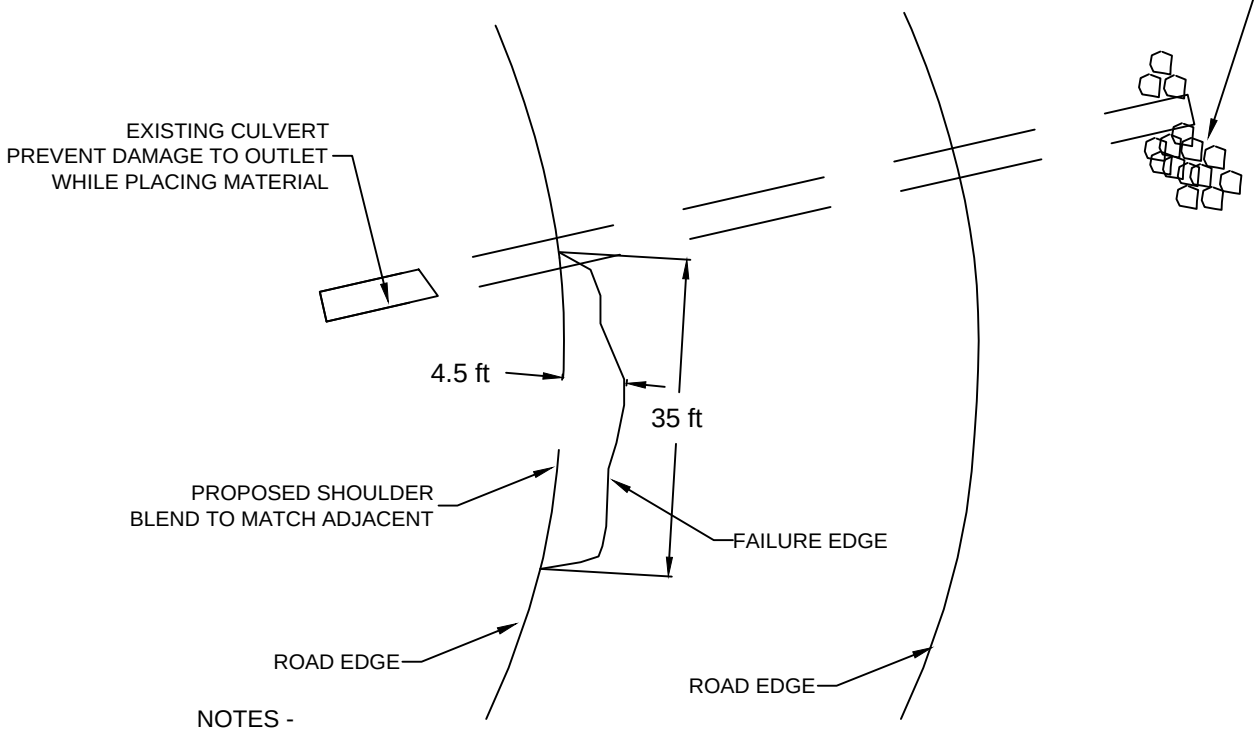

TYPE 3




Notes
Replace pipes in existing locations except as noted on work list.
Place straw bale or other approved sediment retention device in ditch line at catchbasin.

| | | |
|---|---|---|
| CULVERT DETAILS | DEPARTMENT OF AGRICULTURE<br>FOREST SERVICE<br>GIFFORD PINCHOT NATIONAL FOREST | SHEET 2<br>OF 4 |



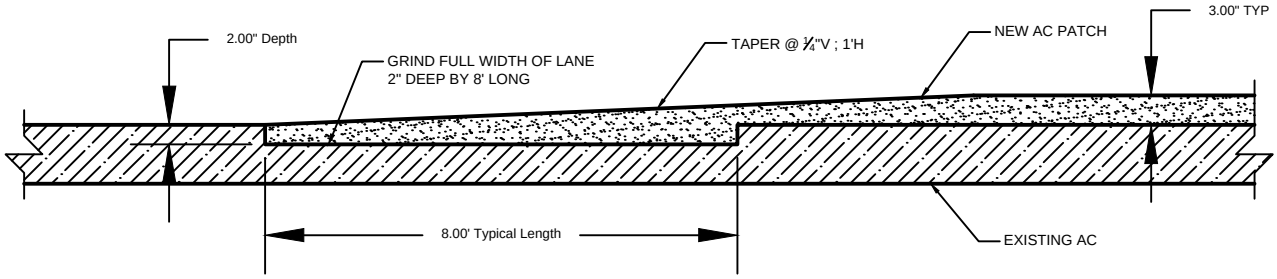

NOTES -

1. CLEAN ROAD SURFACE IN WORK AREA UPON COMPLETION OF WORK.
2. NECESSARY CLEARING IS INCIDENTAL TO WORK - SCATTER DEBRIS.
3. DIMENSIONS ARE APPROXIMATE.
4. PLACE MATERIAL IN 2 FT. LIFTS AND COMPACT WITH EQUIPMENT (BUCKET) UNTIL VISUAL DISPLACEMENT CEASES.
5. CONTRACTOR MAY LOWER ROAD GRADE OVER PIPE AS NECESSARY TO REACH PIPE INLET WITH EXC. BUCKET FOR PLACEMENT OF RIP RAP. REBUILD GRADE TO ORIGINAL ELEVATION FOLLOWING PLACEMENT OF RIP RAP. COMPACTION B PER SPEC 204
6. CONSERVE AND REPLACE SURFACE AGGREGATE UPON COMPLETION OF WORK

NOT TO SCALE

| | | |
|---|---|---|
| FILL REPAIR DETAIL MP 5.9 | DEPARTMENT OF AGRICULTURE<br>FOREST SERVICE<br>GIFFORD PINCHOT NATIONAL FOREST | SHEET 3<br>OF 4 |

# ASPHALT PATCH DETAILS




NOTES -

1. ALL ASPHALT SKIN PATCHES TO BE MILLED AT BEGINNING AND END ACCORDING TO DETAIL
2. GROUND ASPHALT IS TO BE REMOVED FROM EACH PATCH AND PLACED ALONG SHOULDER AS DIRECTED BY FS AT SEVERAL LOCATIONS WITHIN PROJECT
3. SEE WORKLIST FOR PROJECT TONNAGE. TONNAGE TO BE SPLIT BETWEEN APPROXIMATELY 15 SITES ALONG THE 90 AND 93 ROADS

| | | |
|---|---|---|
| ASPHALT PATCH DETAILS | DEPARTMENT OF AGRICULTURE<br>FOREST SERVICE<br>GIFFORD PINCHOT NATIONAL FOREST | SHEET 4<br>OF 4 |