C2.11# - TIMBER SUBJECT TO AGREEMENT *(09/2004)*

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

Species	Product
Ponderosa Pine	**Misc-Conv.**

that shall be Included Timber upon written agreement.

C2.355# - DESIGNATION BY PRESCRIPTION. *(07/2022)*

Within Subdivision(s) or cutting unit(s) **2D, 3B, 3C, 4B, 6, 6B, 6C, 9** , as shown on Contract Area Map, the following criteria describing the desired end results shall be used by Contractor to designate trees and other products for cutting and removal that meet Utilization Standards:

(a) **See Designation by Precription Table C2.355#. Within Designation by Prescription cutting units, the purchaser retains the option to mark cutting units to the desired conditions outlines in each prescription with contractor furnished paint in color approved by the Sale Administrator. The Sale Administrator will accept the final product NOT the mark.** .

(b) Additional trees to be cut, if any, are Marked by Forest Service with **Blue or Yellow** tracer paint.

(c) Other trees that shall be left uncut are Marked with **ORANGE** tracer paint.

Contractor is not required to mark cut or leave trees meeting the criteria in (a) in advance of felling.

As an operational convenience and upon approval of the Contracting Officer, Contractor may mark leave trees and/or cut trees Contractor identifies in criteria (a). Leave trees may be marked with Contractor's non-tracer **N/A** paint. Cut trees may be marked with Contractor's non-tracer **N/A** paint. Cut trees shall not be marked with paint applied below stump height. Contractor shall bear all costs associated with such marking.

Forest Service will not approve or accept Contractor's tree marking in advance of cutting.

C2.355# - DESIGNATION BY PRESCRIPTION. (7/22) Within Subdivision(s) or cutting unit(s) 2D, 3B, 3C, 4B, 6, 6B, 6C, 9, as shown on Contract Area Map, the following criteria describing the desired end results shall be used by Purchaser to designate trees and other products for cutting and removal that meet Utilization Standards:

Overall Guidelines: Applies to All Units

1) **Retain All Yellow/Old Age Pine, this supersedes all other specifications.**
2) **Remove all intermediate and suppressed trees from around old ponderosa pine and large oak trees.**
3) **Retained trees should be free of dwarf mistletoe (where possible), healthy, and well formed. Tree Quality standards are described in table C2.355.1 below.**

Cutting Unit 2D*: SI40: 45ac: Target Basal Area 70 ft²/acre

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
  - Thin From Below in groups where pre-treatment conditions are even aged.
  - Free Thin in groups where pre-treatment conditions are un-even aged.
- Create interspaces between tree groups ranging from 40-80ft.
  - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

		Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class[1]					**Typical Intra-Group (within-group) Densities[1]**
VSS	**DBH Range**	**1/10 acre group**	**¼ acre group**	**½ acre group**	**¾ acre group**	**1 acre group**	**Basal Area[2] (ft²/acre)**
4	12 - 17.9″	10	24	49	73	98	120
5	18 - 23.9″	5	12	25	37	50	120
6	24″+	3	8	15	23	30	120

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Cutting Unit 3B*: UEA40: 50ac: Target Basal Area 60 ft²/acre

Designation Guide (in order of priority)

Openings

- Create openings averaging 0.8ac but ranging from 0.3 to 2 ac in size in 10-20% of the unit
  - Openings will average 100 ft but may range from 60-200 ft.
  - Openings greater than 1 acre should have 1-5 residual trees retained as seed trees.

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
  - Thin From Below in groups where pre-treatment conditions are even aged.
  - Free Thin in groups where pre-treatment conditions are un-even aged.

- Create interspaces between tree groups ranging from 60-100ft.
    - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

	•	**Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class**[1]					**Typical Intra-Group (within-group) Densities**[1]
VSS	**DBH Range**	**1/10 acre group**	**¼ acre group**	**½ acre group**	**¾ acre group**	**1 acre group**	**Basal Area (ft^2/acre)**
3	5 - 11.9	15	38	76	114	152	60
4	12 - 17.9″	8	20	41	61	81	100
5	18 - 23.9″	4	10	21	31	42	100
6	24″+	3	6	13	19	25	100

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Cutting Unit 3C*: UEA25: 23ac: Target Basal Area 60 ft^2/acre

Designation Guide (in order of priority)

Openings

- Create openings averaging 0.8ac but ranging from 0.3 to 2 ac in size in 10-20% of the unit
    - Openings will average 100 ft but may range from 60-200 ft.
    - Openings greater than 1 acre should have 1-5 residual trees retained as seed trees.

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
    - Thin From Below in groups where pre-treatment conditions are even aged.
    - Free Thin in groups where pre-treatment conditions are un-even aged.
- Create interspaces between tree groups ranging from 40-80ft.
    - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

		Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class[1]					**Typical Intra-Group (within-group) Densities**[1]
VSS	**DBH Range**	**1/10 acre group**	**¼ acre group**	**½ acre group**	**¾ acre group**	**1 acre group**	**Basal Area**[2] **(ft^2/acre)**
3	5 - 11.9	15	38	76	114	152	60
4	12 - 17.9″	7	18	37	55	73	90
5	18 - 23.9″	4	10	21	31	42	100
6	24″+	3	6	13	19	25	100

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Cutting Unit 4B*: IT10/25: 54ac: Target Basal Area 70 ft²/acre

Designation Guide (in order of priority)

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
  - Thin From Below in groups where pre-treatment conditions are even aged.
  - Free Thin in groups where pre-treatment conditions are un-even aged.
- Create interspaces between tree groups ranging from 25-60ft.
  - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

		Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class[1]					Typical Intra-Group (within-group) Densities[1]
VSS	DBH Range	1/10 acre group	¼ acre group	½ acre group	¾ acre group	1 acre group	Basal Area[2] (ft²/acre)
4	12 - 17.9″	7	18	37	55	73	90
5	18 - 23.9″	4	10	21	31	42	100
6	24″+	3	6	13	19	25	100

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Cutting Unit 6*: UEA40: 143ac: Target Basal Area 60 ft²/acre

Designation Guide (in order of priority)

Openings

- Create openings averaging 0.8ac but ranging from 0.3 to 2 ac in size in 10-20% of the unit
  - Openings will average 100 ft but may range from 60-200 ft.
  - Openings greater than 1 acre should have 1-5 residual trees retained as seed trees.

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
  - Thin From Below in groups where pre-treatment conditions are even aged.
  - Free Thin in groups where pre-treatment conditions are un-even aged.
- Create interspaces between tree groups ranging from 60-100ft.
  - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

•		Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class[1]					Typical Intra-Group (within-group) Densities[1]
VSS	DBH Range	1/10 acre group	¼ acre group	½ acre group	¾ acre group	1 acre group	Basal Area (ft^2/acre)
3	5 - 11.9	15	38	76	114	152	60
4	12 - 17.9″	8	20	41	61	81	100
5	18 - 23.9″	4	10	21	31	42	100
6	24″+	3	6	13	19	25	100

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Cutting Unit 6B*: UEA40: 177ac: Target Basal Area 50 ft^2/acre

Designation Guide (in order of priority)

Openings

- Create openings averaging 0.8ac but ranging from 0.3 to 2 ac in size in 10-20% of the unit
  - Openings will average 100 ft but may range from 60-200 ft.
  - Openings greater than 1 acre should have 1-5 residual trees retained as seed trees.

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
  - Thin From Below in groups where pre-treatment conditions are even aged.
  - Free Thin in groups where pre-treatment conditions are un-even aged.
- Create interspaces between tree groups ranging from 60-100ft.
  - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

•		Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class[1]					Typical Intra-Group (within-group) Densities[1]
VSS	DBH Range	1/10 acre group	¼ acre group	½ acre group	¾ acre group	1 acre group	Basal Area (ft^2/acre)
3	5 - 11.9	15	38	76	114	152	60
4	12 - 17.9″	8	20	41	61	81	100
5	18 - 23.9″	4	10	21	31	42	100
6	24″+	3	6	13	19	25	100

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Cutting Unit 6C*: IT40: 61ac: Target Basal Area 80 ft²/acre

Designation Guide (in order of priority)

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
  - Thin From Below in groups where pre-treatment conditions are even aged.
  - Free Thin in groups where pre-treatment conditions are un-even aged.
- Create interspaces between tree groups ranging from 40-80ft.
  - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

		Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class[1]					Typical Intra-Group (within-group) Densities[1]
VSS	DBH Range	1/10 acre group	¼ acre group	½ acre group	¾ acre group	1 acre group	Basal Area[2] (ft²/acre)
4	12 - 17.9″	10	24	49	73	98	120
5	18 - 23.9″	5	12	25	37	50	120
6	24″+	3	8	15	23	30	120

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Cutting Unit 9*: UEA40: 177ac: Target Basal Area 60 ft²/acre

Designation Guide (in order of priority)

Openings

- Create openings averaging 0.8ac but ranging from 0.3 to 2 ac in size in 10-20% of the unit
  - Openings will average 100 ft but may range from 60-200 ft.
  - Openings greater than 1 acre should have 1-5 residual trees retained as seed trees.

Groups and Interspace

- Retain groups of trees averaging 0.5ac but ranging from 0.1-1ac in size with interlocking or nearly interlocking canopies.
  - Thin From Below in groups where pre-treatment conditions are even aged.
  - Free Thin in groups where pre-treatment conditions are un-even aged.
- Create interspaces between tree groups ranging from 60-100ft.
  - Interspaces will be free of all residual trees except for Yellow/Old Age Pine.

•		Typical Number of Trees Per Group at the Midpoint Diameter of the VSS Class[1]					Typical Intra-Group (within-group) Densities[1]
VSS	DBH Range	1/10 acre group	¼ acre group	½ acre group	¾ acre group	1 acre group	Basal Area (ft^2/acre)
3	5 - 11.9	15	38	76	114	152	60
4	12 - 17.9″	8	20	41	61	81	100
5	18 - 23.9″	4	10	21	31	42	100
6	24″+	3	6	13	19	25	100

[1] These are typical values for the desired condition; variation can occur and is desired. However, ranges should center on these values. If trees are larger than the midpoint diameter, less trees would be retained.

Table C2.355.1: Tree Quality Standards

	Guidelines for Choosing Leave Trees Within Groups (does not apply to trees left for wildlife habitat purposes such as future snag recruitment or nesting clumps)		
EVALUATION CRITERIA	**DESIRABLE (usually leave)**	**ACCEPTABLE (maybe leave, maybe cut) - always leave when VSS class is deficit**	**NON- DESIRABLE (usually cut)**
LIVE CROWN RATIO	>40% for ponderosa pine	25-40% for ponderosa pine	<25% for ponderosa pine
CROWN CLASS	dominants and co-dominants	co-dominates better intermediates	intermediates and suppressed/over-topped, poor form
INSECTS, ANIMAL, FIRE, MISC. DISEASE (see next row for mistletoe)	NONE	Minor insect or animal defoliation (< 25% live crown ratio). Barking of ponderosa pine < 50% of bole circumference. Fire kill of cambium < 50% of bole circumference or the scorch is on the lower 2/3 of the crown.	Any successful bark beetle attacks. Defoliation >25% of live crown. Barking of ponderosa pine >50% of bole circumference. Any significant top killing. Fire kill of cambium >50 % of bole circumference, or the scorch reaches into the upper 1/3 of the crown. Any conks on stem which indicate rot.
HAWKSWORTH DWARF MISTLETOE RATING (DMR)	NONE	None	Any
FORM DEFECTS	NONE	MINOR (no significant weakening of the tree	MAJOR (weakening of tree or

		anticipated. Minor crooks, sweeps, and tight forks which are <30% of total tree height are acceptable if the tree is dominant or co-dominant and otherwise has good vigor).	multiple tops)
SOUNDNESS DEFECTS	NONE	NONE	ANY
WILDLIFE TREES	Retain all snags greater than 18" DBH. Retain trees greater than 18" with fading crowns for wildlife tree recruitment (2 trees/acre)		

OldTree and Yellow Pine Descriptions and Illustrations

Old trees (approximately >150 years old) would be retained, with few exceptions, regardless of their diameter, within the 4FRI on the Coconino and Kaibab NF's EIS area. Removal of old trees would be rare. Exceptions would be made for threats to human health and safety, and those rare circumstances where the removal of an old tree is necessary in order to prevent additional habitat degradation. Old trees would not be cut for forest health issues or to balance age or size class distributions.

One example of a situation where the removal of an old tree is necessary in order to prevent additional habitat degradation is in the rare case of an old tree growing on the side of an existing curve in a road. Logging equipment may require a wider turning radius. The options are to relocate the road or cut the old tree and widen the curve to accommodate the larger turning radius. Relocating the road would result in a larger area of the forest being permanently disturbed, versus cutting the large tree and widening the curves radius. This is an example where cutting the old tree would result in less habitat degradation then relocating a road.

Old trees would be determined by the following characteristics described by Thomson (1940) as age class 3 (intermediate-mature) and age class 4 (mature-overmature).

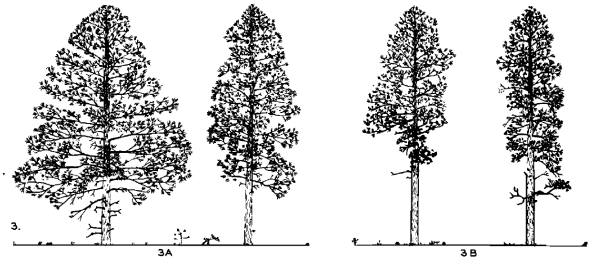
Age – Approximately 150 years and older.

D.B.H. – Site dependent.

Bark – ranging from reddish brown, shading to black in the top with moderately large plates between the fissures to reddish brown to yellow, with very wide, long, and smooth plates.

Tops – ranging from pyramidal or rounded (occasionally pointed) to flat (making no further height growth).

Branching – ranging from upturned in upper third of the crown, horizontal in the middle third, and drooping in the lower third of the crown to mostly large, drooping, gnarled, or crooked. Branch whorls range from incomplete and indistinct except at the top to completely indistinct and incomplete.



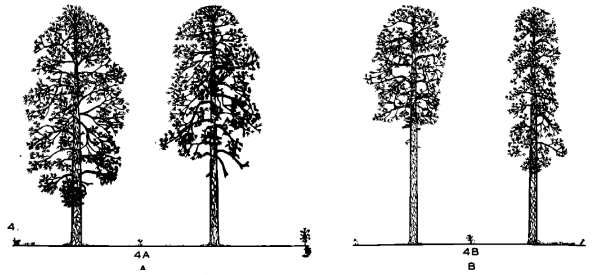
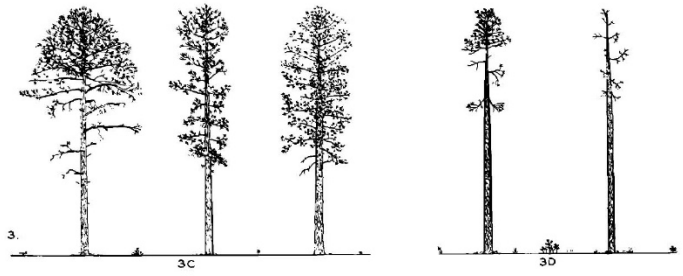


Figure 1. Old tree characteristics(Thompson 1940)



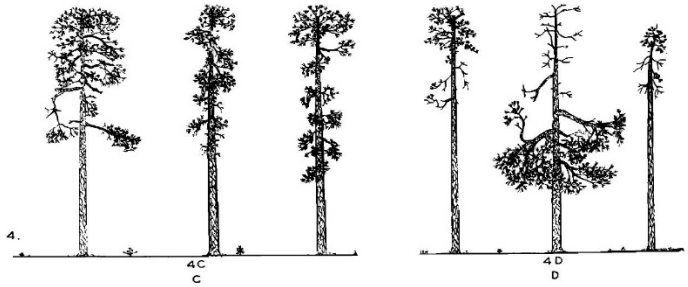


Figure 2. Old age tree characteristics continued (Thompson 1940)

(b) Additional trees to be cut, if any, are Marked by Forest Service with 2/ Blue tracer paint.

(c) Other trees that shall be left uncut are Marked with 2/Orange tracer paint.

Purchaser is not required to mark cut or leave trees meeting the criteria in (a) in advance of felling.

As an operational convenience and upon approval of the Contracting Officer, Purchaser may mark leave trees and/or cut trees Purchaser identifies in criteria (a). Leave trees may be marked with Purchaser's non-tracer 2/Red paint. Cut trees may be marked with Purchaser's non-tracer 2/Red paint. Cut trees shall not be marked with paint applied below stump height. Purchaser shall bear all costs associated with such marking.

Forest Service will not approve or accept Purchaser's tree marking in advance of cutting.

C2.357# - INDIVIDUAL TREES (LEAVE TREE MARKING) *(09/2015)*

In cutting unit(s) **1, 3, 4, 5, 7, 7B, 7C** shown on the Sale Area Map all live trees meeting minimum tree diameter specifications of A2 are designated for cutting except trees reserved from cutting. Trees reserved from cutting have been Marked with **ORANGE** The boundaries of areas where leave trees are Marked are identified by **ORANGE paint marked at the stump (with a vertical mark) and marked at or above DBH (with two horizontal bands). The bands are painted 3/4 around the tree and may be marked around the tree completely (this will be seen where adjacent units exist). These bands are facing into the unit with numbers designation the cutting unit number painted on approximatley every fourth tree.** .Trees used for boundary designation are not to be cut.

C3.34 - EMERGENCY RATE REDETERMINATION *(06/2022)*

Forest Service shall redetermine rates for each species if, upon Contractor's application, Forest Service determines that, because of changes in the timber market since the award date or the last rate redetermination under this provision, the Producer Price Index identified in A20 has declined by 25 percent or more. Rates shall be redetermined under B3.3 and for species where the rates declined, shall be considered established under B3.1 for timber Scaled after Contractor's application. Increases in species rates will not be considered. This provision shall not apply during the period of a Contract Term Extension.

C4.213 - PERIODIC PAYMENT SCHEDULE *(04/2023)*

Contractor shall make periodic payments for stumpage value, as shown in A19.

If Contractor has not paid the amount(s) stated in A19 as stumpage for volume 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 sum of the product value estimated remaining unscaled volumes of Included Timber meeting Utilization Standards.

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 B4.212.

Periodic payment amount(s) shown in A19 will be revised when periodic payment amount(s) have not been reached at time of rate redetermination under B3.3. When shown in A19, the initial payment amount will be equal to 1) or 2), whichever is greater:

1) 35 percent of the sum of:
    a) the Current Contract Value following the rate redetermination; and
    b) the total value of timber scaled prior to establishing redetermined rates. Or
2) 50 percent of the sum of estimated quantities at bid premium rates.

When shown in A19, the additional payment amount will be equal to 75 percent of the sum of:

1) the Current Contract Value following the rate redetermination; and
2) the total value of timber scaled prior to establishing redetermined rates.

Periodic payment determination date(s) that have not been reached shall be adjusted one day for each additional day of contract time granted, except when additional contract time is granted under C8.212, periodic determination date(s) that have not been reached shall be delayed 1-month for each month added to the contract's term. Periodic payment determination date(s) shall not be adjusted for Contract Term Extension under B8.23.

This provision shall be applicable where B4.213 is referenced elsewhere in the contract.

C4.215 - DEPOSITS WHEN PAYMENT GUARANTEED *(05/2010)*

To the extent payment guarantee is provided under B4.3, requirements for advance cash deposits under B4.212 shall be waived for the value of Included Timber removed except for:

(a) Base Rates,

(b) associated charges, and

(c) the value of Included Timber exceeding the sum of stewardship credits that have not been established under B4.22 for mandatory stewardship projects listed in A4c plus optional stewardship projects listed in A4c authorized by Contracting Officer.

Charges for (a), (b) and (c) shall be waived for not more than a monthly billing period, subject to the provisions of B4.4.

C4.3 - PAYMENT GUARANTEED BY BOND *(08/2021)*

To guarantee payment, Contractor may furnish and maintain an acceptable surety bond. The penal sum of such surety bond shall be the maximum amount of the payment guaranteed. For payment purposes, penal sum of the surety bond shall be in lieu of the performance bond furnished under C9.1.

C4.31# - BLANKET BOND *(06/2024)*

If Contractor furnishes an acceptable bond in accordance with C4.3 to guarantee payment for timber from this and other contracts within the same National Forest or geographic area as listed below, the amount of such bond 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 Forest Service estimates for payment guarantee needed under B4.212.

A geographic area as stated in this provision contains the following National Forests:
N/A

C4.4 - PAYMENTS NOT RECEIVED *(08/2012)*

(a) Payments are due and payable on the date of issue indicated on the bill for collection. When a payment for timber cut and other charges is not received at the location designated by Forest Service by the date specified in the bill for collection 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, road maintenance, and contract scaling deposits;

(ii) Cooperative work at rates established by specific agreement under B4.218;

(iii) Damages pursuant to B9.4;

(iv) Road use fees;

(v) Restoration of downpayment pursuant to B4.22;

(vi) Periodic payments pursuant to B4.213;

(vii) Extension Deposits pursuant to B4.217; and

(viii) Other mandatory deposits.

(b) Failure to pay amounts due by the date specified in the bill for collection for receipt of payment shall be considered a breach under B9.3. The 30-day notice period prescribed therein shall begin to run as of the end of business on the date specified for receipt of payments. If the performance or payment is guaranteed by surety bond, the surety will receive a copy of the written notification of breach. Demand will be made on the surety or other institution providing the guarantee or bond instrument for immediate payment 10 days after issuance of written notification of the breach.

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

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

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

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

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

(d) Forest Service remedies for 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.

C5.12# - 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 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.

C5.12# - USE OF ROADS BY CONTRACTOR

Restricted Road List

Road Number	Road Name	Termini		Code	Description of Restrictions
		From	To		
All		Beginning	End	See SAM	No hauling allowed on holiday weekends or weekdays (calendar year dependent) for the following holidays: *Memorial Day (5 PM Friday- 4 PM Monday) *Fourth of July (5 PM Thursday- 4 PM Monday) If the legal holiday falls on Tuesday, Wednesday or Thursday, no hauling will be permitted the day before beginning at 5 PM through the day after the legal holiday ending at 4PM *Labor Day (5 PM Friday- 4 PM Monday)
160 and 796		Beginning	End	See SAM	Use prohibited due to protection of buried natural gas line

C5.31# - 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.

Pre-Haul Road Maintenance Requirements Summary - Zero TS

Road	Road ML	Termini		Miles	Applicable Road Maintenance Specifications							Remarks
		From	To		T-803	T-804	T-805	T-806	T-809	T-810	T-811	
FSR 71	2	FSR 2082	FSR 2081	3.97	P							
FSR 71C	2	FSR 71	FSR 116A	0.74	P							
FSR 72	2	Old Route 66	FSR 2078	1.60	P			P				
FSR 116A	2	FSR 71	Old Route 66	2.59	P			P				
FSR 2010	2	FSR 160	FSR 71	0.89	P							
FSR 2079	2	Old Route 66	MP 0.29	0.29	P							
FSR 2081	2	FSR 71	FSR 116A	0.58	P							
FSR 2082	2	AZ-64	FSR 71	0.21	P							

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party, O = Optional Item, Road Maintenance Specification T-GEN is required on all road work.

During-Haul Road Maintenance Requirements Summary - Zero TS

Road	Road ML	Termini		Miles	Applicable Road Maintenance Specifications							Remarks
		From	To		T-803	T-804	T-805	T-806	T-809	T-810	T-811	
FSR 71	2	FSR 2082	FSR 2081	3.97	P							
FSR 71C	2	FSR 71	FSR 116A	0.74	P							
FSR 72	2	Old Route 66	FSR 2078	1.60	P							
FSR 116A	2	FSR 71	Old Route 66	2.59	P							
FSR 2010	2	FSR 160	FSR 71	0.89	P							
FSR 2079	2	Old Route 66	MP 0.29	0.29	P							
FSR 2081	2	FSR 71	FSR 116A	0.58	P							
FSR 2082	2	AZ-64	FSR 71	0.21	P							

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party, O = Optional Item, Road Maintenance Specification T-GEN is required on all road work.

Post-Haul Road Maintenance Requirements Summary - Zero TS

Road	Road ML	Termini		Miles	Applicable Road Maintenance Specifications							Remarks
		From	To		T-803	T-804	T-805	T-806	T-809	T-810	T-811	
FSR 71	2	FSR 2082	FSR 2081	3.97	P							
FSR 71C	2	FSR 71	FSR 116A	0.74	P							
FSR 72	2	Old Route 66	FSR 2078	1.60	P							
FSR 116A	2	FSR 71	Old Route 66	2.59	P							
FSR 2010	2	FSR 160	FSR 71	0.89	P							
FSR 2079	2	Old Route 66	MP 0.29	0.29	P							
FSR 2081	2	FSR 71	FSR 116A	0.58	P							
FSR 2082	2	AZ-64	FSR 71	0.21	P							

P = Purchaser Performance Item, D = Deposit to Forest Service, D3 = Deposit to Third Party, O = Optional Item, Road Maintenance Specification T-GEN is required on all road work.

SOUTHWESTERN REGION

Road Maintenance T-Specifications for
Timber Sale/Stewardship Contracts

ROAD MAINTENANCE REQUIREMENTS:
The Contractor shall maintain roads in accordance with road maintenance requirements in C/CT5.31# or K/KT-F/FT.3.1# and the following road maintenance specifications.

Specification	Specification Title
T-800	Definitions
T-801	Slide and Slump Repair
T-802	Ditch Cleaning
T-803	Surface Blading
T-804	Opening & Maintaining Roads
T-805	Opening & Maintaining Roads (High Blading)
T-806	Surface Repair
T-807	Surface Stabilization (Water)
T-808	*Obsolete* Surface Stabilization (Other Materials)
T-809	Minor Drainage Structures
T-810	Roadway Vegetation
T-811	Closing Roads
T-812	Miscellaneous Structures
T-813	Treatment and Disposal of Hazard Trees

SPECIFICATION T-800 DEFINITIONS

Wherever the following terms or pronouns are used in Specifications T-801 through T-GEN, the intent and meaning shall be interpreted as follows:

800-1.1 - Agreement. Maintenance projects require a mutually acceptable method to resolve the problems, which arise when incompatible situations arise between drawings and specifications and actual conditions on the ground to allow orderly and satisfactory progress of the maintenance.

These specifications have been developed in anticipation of those problem areas and have provided that such changes will be by Agreement.

It is intended that drawings and specifications will govern unless "on-the-ground" conditions warrant otherwise, when specifications call for "Agreement", "agreed", or "approval" such Agreement or approval shall be promptly confirmed in writing.

800-1.2 - Annual Road Maintenance Plan. A plan prepared by various users of one or several roads. The plan is an Agreement on maintenance responsibilities to be performed for the coming year.

800-1.3 - Base Course. Material used to reinforce Subgrade or, as shown on drawings, placed on Subgrade to distribute wheel loads.

800-1.4 - Berm. Curb or dike constructed to prevent uncontrolled Roadway runoff water from discharging onto embankment slope.

800-1.5 - Borrow. Select Material taken from designated borrow sites.

800-1.6 - Crown, Inslope, and Outslope. The cross slope of the Traveled Way to aid in drainage and traffic maneuverability.

800-1.7 - Culverts. A conduit or passageway under a road, trail, or other obstruction. A culvert differs from a bridge in that it is usually entirely below the elevation of the Traveled Way.

800-1.8 - Drainage Dip. A dip in the Traveled Way which intercepts surface runoff and diverts the water off the Traveled Way. A Drainage Dip does not block the movement of traffic.

800-1.9 - Drainage Structures. Manufactured structures which control the runoff of water from the Roadway including Inslope, overside drains, aprons, flumes, downdrains, downpipes, culverts, and the like.

800-1.10 - Dust Abatement Plan. A table which lists the road, dust palliative, application rates, and estimated number of subsequent applications.

800-1.11 - Lead-off Ditches. A ditch used to transmit water from a Drainage Structure or Drainage Dip outlet to the natural drainage area.

800-1.12 - Material. Any substances specified for use in the performance of the work.

800-1.13 – Pre-haul Maintenance. Road maintenance work which must be accomplished to maintain the roads to a satisfactory condition commensurate with the Purchaser's use, provided Purchaser's Operations do not damage improvements under B/BT6.22 or G/GT.2.2, or National Forest resources and hauling can be done safely. This work will be shown in the Annual Road Maintenance Plan as provided in C/CT5.31# or K/T-F/T3.1#. Pre-haul Maintenance work

the Purchaser elects to perform will be in compliance with the Road Maintenance T-Specifications.

800-1.14 - Roadbed. The portion of a road between the intersection of Subgrade and sideslopes, excluding that portion of the ditch below Subgrade.

800-1.15 - Road Maintenance Plan. A table which shows applicable road maintenance specifications to be performed by Purchaser on specific roads.

800-1.16 - Roadside. A general term denoting the area adjoining the outer edge of the Roadway.

800-1.17 - Roadway. The portion of a road within the limits of excavation and embankment.

800-1.18 - Shoulder. That portion of Roadway contiguous with Traveled Way for accommodation of stopped vehicles, for emergency use, and lateral support of base and Surface Course, if any.

800-1.19 - Slide. A concentrated deposit of Materials from above or on backslope extending onto the Traveled Way or Shoulders, whether caused by mass land movements or accumulated ravelling.

800-1.20 - Slough. Material eroded from the backslope which partially or completely blocks the ditch, but does not encroach on the Traveled Way so as to block passage of traffic.

800-1.21 - Slump. A localized portion of the Roadbed which has slipped or otherwise become lower than that of the adjacent Roadbed and constitutes a hazard to traffic.

800-1.22 - Special Project Specifications. Specifications which detail conditions and requirements peculiar to the individual project.

800-1.23 - Subgrade. Top surface of Roadbed upon which Base Course or Surface Course is constructed. For roads without Base Course or Surface Course, that portion of Roadbed prepared as the finished wearing surface.

800-1.24 - Surface Course. The Material placed on Base Course or Subgrade primarily to resist abrasion and the effects of climate. Surface Course may be referred to as surfacing.

800-1.25 - Surface Treatment Plan. A table which lists the roads and surface treatments to be applied.

800-1.26 - Traveled Way. That portion of Roadway, excluding Shoulders, used for the movement of vehicles.

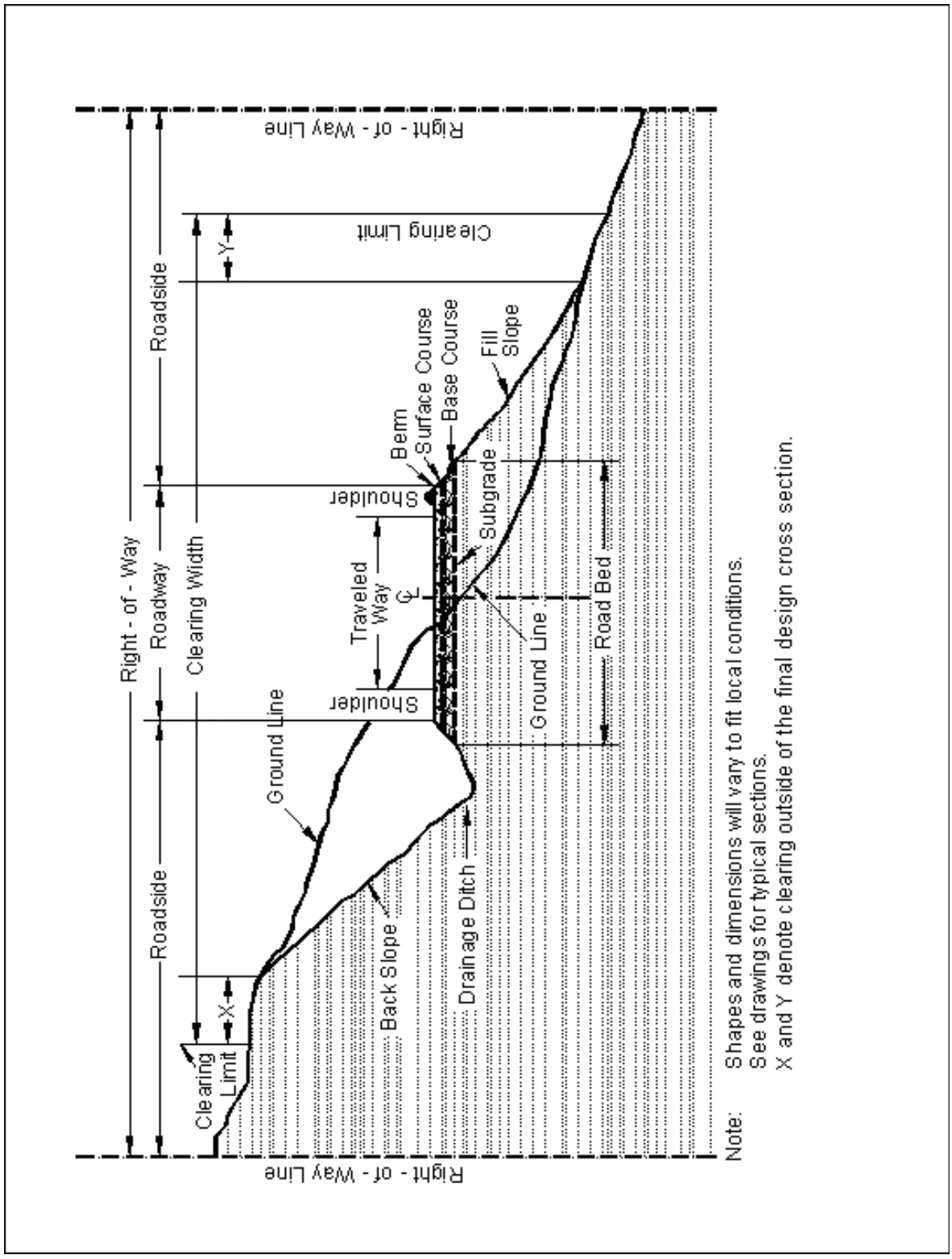
800-1.27 - Turnouts. That portion of the Traveled Way constructed as additional width on single lane roads to allow for safe passing of vehicles.

800-1.28 - Water Source. A place designated by the Contracting Officer for acquiring water for road maintenance purposes.

800-1.29 - Waterbar. A dip in the Roadbed which intercepts surface runoff and diverts the water off the Roadway. A Waterbar is not designed to be traversable by logging trucks.

T-800-2

Figure 800-1—Illustration of road structure terms.



SPECIFICATION T-801 SLIDE AND SLUMP REPAIR

DESCRIPTION

1.1 Slide removal consists of the removal from Roadway and disposal of any Material such as soil, rock, and vegetation that cannot be routinely handled by a motor grader during T-802 Ditch Cleaning, and T-803 Surface Blading operations.

Slump repair consists of the filling, with select material, of depressions or washouts in Roadway which cannot be routinely filled by a motor grader during T-803 Surface Blading operations.

Slide removal and Slump repair includes excavation, loading, hauling, placing, and compacting of waste or replacement Material and the development of disposal or borrow areas.

REQUIREMENTS

3.1 Slide removal and slump repair shall be performed whenever necessary during Purchaser's use to facilitate traffic, proper drainage, and to prevent resource damage.

3.2 Slide Material, including soil, rock and vegetative matter which encroaches into the Roadway, shall be removed. The slope which generated the Slide Material shall be reshaped during the removal of the Slide Material with the excavation and loading equipment. Slide Material deposited on the fill slope and below the Traveled Way will not be removed unless needed for slope stability or to protect adjacent resources.

Surface and Base Courses shall not be excavated during Slide removal operations.

Slide Material which cannot be used for other beneficial purposes shall be disposed of at disposal sites designated by the designated Forest Service official. Material placed in disposal sites will not require compaction unless compaction is shown on Road Maintenance Plan. Side casting may be approved by the designated Forest Service official. Side casting into streams, lakes, or water courses shall not be permitted.

3.3 When filling Slumps or washouts, Material shall be moved from agreed locations or borrow sites, placed in 6 inch layers, and compacted by operating the hauling and spreading equipment uniformly over the full width of each layer.

Existing aggregate surfacing shall be salvaged when practical and reinstalled after depressions have been filled. Damaged aggregate base, aggregate surfacing, and bituminous pavement shall be repaired under Specification T-806 Surface Repair.

3.4 The repaired areas of the Slump shall conform to the cross-section which existed prior to the Slump and shall blend with the adjacent undisturbed Traveled Way, unless otherwise agreed.

3.5 During repair, care shall be taken not to permanently foul aggregate or bituminous-surfaces through covering or mixing with earth or other debris from ditches, slides or other sources.

T-801-1

SPECIFICATION T-802 DITCH CLEANING

DESCRIPTION

1.1 Ditch cleaning, which includes outlet and lead-off ditches, consists of removing and disposing all material from Roadway drainage ditches to provide a free-draining waterway conforming to the previous lines, grades, and cross-sections.

REQUIREMENTS

3.1 Ditch cleaning shall be performed as often as necessary during use to facilitate proper drainage.

3.2 All Slough Material or other debris which might obstruct water flow in the Roadway ditch shall be removed. Material removed from the ditch, if suitable and agreed to **in writing** by the designated Forest Service official, may be blended into existing native road surface, Shoulder, or placed in designed Berms in conjunction with T-803 Surface Blading operations.

Material removed from ditches that is not by Agreement blended into existing roads or placed in Berms shall be loaded and hauled to the disposal site designated by the designated Forest Service official, placed in 6 inch layers and compacted by the hauling vehicle, or disposed of as otherwise agreed.

3.3 During ditch cleaning, care shall be taken not to permanently contaminate aggregate or bituminous-surfaces through covering or mixing with earth or other debris from the ditches.

3.4 Roadway backslopes or berms shall not be undercut.

SPECIFICATION T-803 SURFACE BLADING

DESCRIPTION

1.1 Surface blading consists of keeping a native or aggregate surface Roadbed in a condition to facilitate traffic and provide proper drainage. It includes maintaining the Crown or Slope of the Traveled Way, Shoulders, Drainage Dips, all drainage ditches, Turnouts, Berms, and approach road intersections; also cleaning bridge decks. It also provides a level of smoothness appropriate for the traffic served.

MATERIALS

2.1 *Water*. **When required**, water shall be applied according to the requirements in Specification T-807 during scarifying and/or blading if sufficient moisture is not present to cut, mix, or compact the surface Material. Water Sources will be shown on the project area map, or designated by the designated Forest Service official. The requirement will be listed in C/CT5.31# or K/KT-F/FT.3.1#, when applicable.

REQUIREMENTS

3.1 Surface blading shall be performed immediately before, during, and after Purchaser's use as often as necessary to facilitate traffic and proper drainage.

3.2 Surface irregularities shall be eliminated by scarification and/or blading, and the surface left in a free- draining state and to a smoothness needed to facilitate traffic. The surface blading shall preserve the existing cross-section. Surface Material which has been displaced to the Shoulders or Turnouts shall be returned to the Traveled Way. The blading operation shall be conducted to prevent the loss of surface Material and to provide for a thorough mixing of the Material being worked.

3.3 When directed by the designated Forest Service official, residual bituminous material from previous surface-stabilization treatments shall be scarified and reduced to produce material not exceeding 3 inches (76.2 mm) in greatest dimension.

3.4 Roadway backslopes or Berms shall not be undercut, nor shall new Berms be established unless agreed to, **in writing**, by the designated Forest Service official.

Berms shall be repaired by placing Material, as needed to restore the Berm, to reasonably blend with existing line, grade, and cross-section. Other berms, which are determined by the designated Forest Service official as unnecessary, shall be removed.

3.5 Intersecting roads shall be bladed for a reasonable distance to assure proper blending of the two riding surfaces.

3.6 Drainage Dips and all Ditches shall be cleaned and maintained to

reasonably blend with existing line, grade, and cross-section and to provide positive drainage.

T-803-1

3.7 On native surfaced roads, Material generated from backslope Sloughing, and ditch cleaning may be blended with the surface Material being worked. On aggregate surfaced roads this Material shall not be blended with Surface or Base Course Material unless agreed to, **in writing**, by the designated Forest Service official.

3.8 Rocks or other Material remaining on the Traveled Way after the final pass that are larger than 4 inches in diameter or are larger than the maximum size of imported surfacing shall be removed from the Traveled Way. Unless otherwise designated by the designated Forest Service official, the oversized Material shall be disposed of by sidecasting. Sidecasting into streams, lakes, or water courses shall not be permitted.

3.9 Material and/or debris resulting from work under this specification shall not remain on or in structures, such as Culverts, bridge decks, overside drains, cattleguards, ditches, Drainage Dips, and the like.

3.10 *Compaction.* **When required**, the roadbed shall be compacted according to one of the following compaction methods, as listed in C/CT5.31# or K/KT-F/FT.3.1#:

Compaction Method A - Operate equipment over the full-width until there is no visible evidence of further consolidation.

Compaction Method B - Use compression-type or vibratory rollers. Compact, 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 coarse particles.

3.11 *Grid Rolling.* **When required**, the roadbed shall be grid rolled as listed in C/CT5.31# or K/KT- F/FT.3.1#. Unless otherwise agreed by the designated Forest Service official, grid-rolling will continue until roadbed imported surfacing-materials are reduced to a size not exceeding 3 inches (76.2 mm) in greatest dimension or two-thirds of the depth of the existing surfacing, whichever is greater.

SPECIFICATION T-804 OPENING AND MAINTAINING ROADS

DESCRIPTION

1.1 Opening and Maintaining Roads consists of opening roads by removing closure devices, cleaning ditches and other drainage devices built into the roadway, removing berms, and blading the traveled-way. This work also consists of maintaining the roadway immediately before, during, and after the Purchaser's use as necessary to facilitate traffic and proper drainage.

REQUIREMENTS

3.1 Closure devices, such as waterbars, depressions, mounds of earth, or downed-trees, shall be removed and disposed of at locations designated by the designated Forest Service official.

3.2 All trees and logs on the roadbed, and trees and brush that overhang the traveled-way and interfere with vehicle travel shall be removed and scattered outside the roadway.

3.3 All drainage features including drainage-dips, ditches, roadway cross-slope, and other drainage devices built into the roadway shall be cleaned and maintained so they are functional.

3.4 Berms shall be removed as directed by the designated Forest Service official, and the traveled-way shall be bladed to produce a smooth rideable surface.

SPECIFICATION T-805 OPENING AND MAINTAINING ROADS (HIGH BLADING)

DESCRIPTION

1.1 Opening and Maintaining Roads (High Blading) consists of opening roads by removing closure devices, cleaning ditches and other drainage devices built into the roadway, removing berms, and blading the traveled-way. This work also consists of maintaining the roadway immediately before, during, and after the Purchaser's use as necessary to facilitate traffic and proper drainage. High blading is the removal of oversize material without removing surface vegetation. Oversize is that material 4 inches in diameter and larger, found loose upon the traveled-way.

REQUIREMENTS

3.1 Closure devices, such as waterbars, depressions, mounds of earth, or downed-trees, shall be removed and disposed of at locations designated by the designated Forest Service official.

3.2 All trees and logs on the roadbed, and trees and brush that overhang the traveled-way and interfere with vehicle travel shall be removed and scattered outside the roadway.

3.3 All features including drainage-dips, ditches, roadway cross-slope, and other drainage devices built into the roadway shall be cleaned and maintained so they are functional.

3.4 Berms shall be removed as directed by the designated Forest Service official, and the Traveled Way shall be high-bladed to produce a smooth rideable surface.

SPECIFICATION T-806 SURFACE REPAIR

DESCRIPTION

1.1 Surface repair consists of repairing potholes or small soft areas in the Traveled Way. It includes area preparation and furnishing and placing all necessary Materials, and other work necessary to repair the surface.

MATERIALS

2.1 *Aggregates*-The types and gradations of aggregate shall be similar to, and compatible with, the existing surface material, as determined by the designated Forest Service official.

a) Pit-run Aggregate: Pit-run aggregate shall consist of native materials of a size and gradation that can be taken directly from the source and placed on the road without crushing or screening. The maximum size shall be 3 inches (76.2 mm) in the greatest dimension.

b) Grid-rolled Aggregate: Grid-rolled aggregate shall consist of native materials of a quality that can be taken directly from the source, without crushing or screening, and broken-down on the road by grid-rolling. The material shall be broken-down to a maximum size of 3 inches (76.2 mm) in the greatest dimension.

c) Crushed Aggregate: Crushed-aggregate shall be crushed stone, slag, or gravel meeting current Forest Service or State DOT requirements.

2.2 Material used in the repair of soft areas on aggregate or native surfaced roads may be acquired from approved commercial sources, designated Forest Service Borrow areas, or Borrow sources agreed to, **in writing**, by the designated Forest Service official. The quality and quantity of the imported Material used in the repair will be limited to that needed to provide a stable Traveled Way for hauling and to minimize damage to the road and adjacent resources. The quantity of imported surface repair Material used in the appraisal estimate will be shown on Road Maintenance Plan. However, the magnitude of the work may vary depending on Purchaser's hauling schedule and ground conditions.

2.3 Material used in the repair of bituminous pavements may be acquired from local commercial sources.

If a mixing table is required, the location shall be approved by the designated Forest Service official. The bituminous mixture to be used by the Purchaser shall be approved by the designated Forest Service official prior to placement. The Purchaser's share of the quantity of bituminous mixture used in the appraisal estimate will be shown on Road Maintenance Plan. However, Purchaser's share of the work may vary depending on Purchaser's hauling schedule, ground conditions, other traffic, etc.

2.4 Water, when required, shall be applied according to the requirements in

Specification T-807 Surface Stabilization (Water), and will be specified on the project area map, or designated by the designated Forest Service official. The requirement will be listed in C/CT5.31# or K/KT-F/FT.3.1#, when applicable.

REQUIREMENTS

3.1 Work under this specification shall be performed as often as necessary, and in a timely manner during Purchaser's use to facilitate traffic and reduce further deterioration of the Traveled Way.

3.2 *Aggregate Surface Repair.* Existing aggregate, which has been contaminated with unsuitable material from the subgrade or from other activities shall be removed as directed by the designated Forest Service official. New aggregate shall be mixed until it is uniform throughout, at a moisture-content suitable to prevent segregation and to attain the desired compaction.

The aggregate shall be spread in a uniform layer, with no segregation of size, and to a loose depth that shall have the required thickness when compacted.

If the required compacted depth of any aggregate base or surface course exceeds six inches, it shall be placed in two or more layers of approximately equal thickness. The maximum compacted thickness of any layer shall not exceed 6 inches.

Hauling equipment shall be operated over the surface at the previously constructed layer in such a way as to minimize rutting or uneven compaction.

Compaction and grid-rolling, when required, will be as specified in Specification T-803 Surface Blading, and as listed in C/CT5.31# or K/KT-F/FT.3.1#.

All material removed from aggregate-surface repair shall be disposed of as designated by the designated Forest Service official.

3.3 *Bituminous Pavement Repairs*. The areas to receive bituminous pavement repairs will be marked on the road surface by the Forest Service prior to Purchaser performing the work.

3.4 *Potholes (deep patch).* Surface Course and Base Course materials shall be excavated to a depth necessary to reach firm, suitable material. The minimum depth of excavation shall be 2 inches and the maximum depth of excavation shall be to the top of the subgrade.

The edges of the prepared hole shall be extended to form a vertical face in unfractured asphalt surfacing. The prepared hole shall generally be circular or rectangular in shape, dry, and cleaned of all loose Material.

Prepared potholes shall be patched or barricaded immediately.

The faces of the prepared hole shall be tacked with a slow-setting emulsified asphalt.

The bituminous mixture shall be placed in layers not exceeding a compacted depth of 2 inches. Each layer shall be compacted thoroughly with hand or mechanical tampers or rollers. Compaction shall not be done with equipment wheels.

Upon completion, the compacted patch in the pothole shall be flush, with a tolerance or approximately ¼ inch to ½ inch above the level of the adjacent pavement.

3.5 *Skin Patches*. Bituminous mixture shall be distributed uniformly with

feathered edges in layers not to exceed 2 inches compacted depth. When multiple layers are ordered, joints shall be offset at least 6 inches between layers.

Each layer shall be compacted by two passes with a 7-10 ton steel roller or comparable vibratory roller.

3.6 *Asphalt Berm*. Damaged segments of Berm shall be removed and the exposed ends beveled at approximately 45 degrees from vertical. The Berm foundation shall be cleaned and patched as necessary. The foundation and joining surfaces shall be coated with a slow-setting emulsified asphalt. Asphalt mix shall be placed and compacted to conform to the shape and alignment of the undamaged segment.

3.7 *Disposal*. All Materials removed from potholes, patches, and Berms shall be disposed of at disposal sites designated by the designated Forest Service official.

SPECIFICATION T-807 SURFACE STABILIZATION (WATER)

DESCRIPTION

1.1 Surface stabilization (water) consists of applying water to the road surface as necessary to control road-surface loss, provide for road user safety, and minimize damage to adjacent resources.

May also be used to provide water for compaction of surface material(s), to prevent segregation, and for other work deemed necessary.

MATERIALS

2.1 Water is the specified-material for surface stabilization; however, Purchaser may use other materials if agreed to, **in writing**, by the designated Forest Service official. Water-source locations will be shown on the project area map, or designated by the designated Forest Service official.

REQUIREMENTS

3.1 The rate of application shall be such that the water will not run-off of the surface and cause erosion or unnecessary waste.

SPECIFICATION T-808 SURFACE STABILIZATION (BITUMINOUS)

DESCRIPTION

1.1 **This Specification has been removed.**

SPECIFICATION T-808-1 SURFACE STABILIZATION (OTHER MATERIALS)

DESCRIPTION

1.1 Surface stabilization (other materials) consists of preparing the roadbed and furnishing and applying surface-stabilization materials as necessary to abate dust, control road-surfacing loss, provide for user safety, and minimize damage to adjacent resources.

MATERIALS

2.1 The type of surface stabilization material to be used, the rates of application, and frequency of applications will be shown in C/CT5.31# or K/KT-F/FT.3.1#.

2.2 *Water.* Furnish water free of substances detrimental to the work.

2.3 *Magnesium Chloride liquid.* Furnish a water solution conforming to the following:

(1)	Magnesium Chloride by mass	28 percent min.
(2)	Specific Gravity, ASTM D1298	1.29 to 1.33

2.4 *Calcium Chloride liquid.* Furnish a water solution conforming to the following:

(1)	Calcium Chloride liquid	AASHTO M 144, Type L
(2)	Calcium Chloride by mass	35 percent min.

2.5 *Acceptance of Materials*. Certification, sampling, and acceptance of materials will be based upon manufacturer's certification. All proposed materials will be subject to the designated Forest Service official's approval **prior** to application.

REQUIREMENTS

3.1 *Preparation for Surface Stabilization Materials Other Than Water.* Prior to application of any material, the entire roadbed shall be prepared as required under Specification T-803 Surface Blading.

Bituminous and other residue from previous treatments shall be scarified and pulverized to produce loosened material not exceeding 3 inches in greatest dimension.

A light-application of water shall be applied just prior to applying the surface stabilizer, unless otherwise agreed to by the designated Forest Service official.

Application rates and methods shall adhere to the Manufacturer's recommendations.

3.2 *Application Methods of Surface Stabilization Materials*. One or more of the following methods shall be used as specified in C/CT5.31# or K/KT-F/FT.3.1#:

a). Direct Penetration –

1). Prepared Surface: The stabilizer application is made directly to the traveled-way and any shoulders prepared in accordance with Specification T-803 Surface Blading. The road shall be closed to traffic until penetration is complete or until excess material is blotted according to Subsection 3.4, or as approved by the CO.

2). No Surface Preparation: The stabilizer is applied directly to the existing surface, regardless of its condition. The road shall be closed to traffic until penetration is complete or until excess material is blotted according to Subsection 3.4, or as approved by the CO.

b). Penetration - The top 1 inch (25.4 mm) of roadway-surfacing is placed to the side in a windrow. The stabilizer application is made to the exposed roadway, and the windrow is pulled-back across the road as a blotter since penetration into the compacted-surface is minimal.

c). Enhanced Penetration - The top 1 inch (25.4 mm) is loosened and left in-place. The stabilizer application then penetrates the loose material.

3.3 *Weather Limitations*. Stabilizing materials shall not be applied when it is raining, when the surface is too wet to receive the material, or if rain is anticipated to occur within 24 hours of application.

Surface stabilizers shall be applied only when the surface temperature of the traveled-way is 50°F (10° C) in the shade, and rising.

3.4 *Blotter Material*. Blotter-material, when used, shall be spread in sufficient quantities to prevent tire pickup.

3.5 *Traffic.* Traffic shall be maintained in accordance with B/BT6.33 or G/GT.3.3.

SPECIFICATION T-809 MINOR DRAINAGE STRUCTURES

DESCRIPTION

1.1 Minor drainage structures consists of maintaining Drainage Structures and related items such as culverts, inlet and outlet channels, related ditches, existing riprap, trash racks, and drop-inlets. Minor drainage structures are those with waterway opening of less than 35 ft^2 (3.2 m^2) in a single installation, or a multiple installation in which the smallest opening is less than 19 ft^2 (1.7 m^2). This includes overside drains.

MATERIALS

2.1 All Materials used in the maintenance of Drainage Structures shall conform by type and specification to the Material in the structure being maintained.

REQUIREMENTS

3.1 During periods of Purchaser's operation, Purchaser shall keep ditches, culverts and other drainage facilities clear and functioning.

3.2 Drainage Structures and related items shall be cleared of all foreign Material which has been deposited above the bottom of the structure and all vegetative growth which interferes with the flow pattern.

Vegetative debris shall be scattered outside of the roadbed unless otherwise agreed. Debris shall be placed so as not to enter the stream-channels. Material removed that cannot be incorporated into maintenance work shall be hauled to a disposal site designated by the designated Forest Service official.

3.3 Perform maintenance to insure the proper functioning of the head walls, aprons, inlet assemblies, overside drains, riprap, trash racks, and other facilities related to the Drainage Structure.

If outlet or inlet riprap was installed by Purchaser as a construction item or existed prior to Purchaser's haul, it shall be maintained in good condition including the replacement of riprap if necessary to previous line, grade, and cross-section.

SPECIFICATION T-810 ROADWAY VEGETATION

DESCRIPTION

1.1 Roadway vegetation includes removal of brush and trees from within the Roadway limits, including around impaired signing, gates, bridges, and other areas that need visibility and/or increased sight distance.

REQUIREMENTS

3.1 Vegetative matter within the Roadway which impedes vehicular travel or interferes with road maintenance operations, such as surface blading and ditch and culvert cleaning shall be removed. Downed timber meeting utilization standards shall be cut in appropriate lengths and decked along the Roadside in locations where the Traveled Way or sight distances will not be impaired.

3.2 Brush and trees that obstruct proper sight-distance shall be removed. Low shrubs and brush, which do not restrict sight distance, provides ground cover or reduces erosion, shall not be removed.

Vegetative-material consisting of limbs, tops and brush shall be scattered outside of the roadway. Stumps and logs not meeting utilization standards may also be scattered outside of the roadway. Purchaser shall avoid placing vegetative material in concentrations. Disposal of vegetative material will not be permitted in meadows or drainage ways.

SPECIFICATION T-811 CLOSING ROADS

DESCRIPTION

1.1 Closing roads consists of closing roads by restoring or installing closure-devices and drainage-facilities on roads no longer needed by the Purchaser or when interim closures are required during periods of Purchaser's non-use.

Closure devices and drainage facilities may consist of cross-ditches, waterbars, drainage-dips, barriers or gates and restoring cross-sloped sections.

MAINTENANCE REQUIREMENTS

3.1 During periods of Contractor's/Purchaser's non-use, roads designated for interim closures shall be closed unless otherwise agreed to, **in writing**, by the designated Forest Service official.

The entire roadway shall be bladed and shaped to provide drainage during periods of closure or non-use.

Where possible, and still retaining appropriate surface-drainage characteristics, existing surface-vegetation shall be protected in accordance with the High Blading requirements found in Specification T-805 Opening and Maintaining Roads (High Blading).

3.2 All drainage-dips, out-sloped or in-sloped sections, or other drainage devices built into the roadbed and roadway ditches shall be restored and replaced. Existing culverts shall be maintained to provide unobstructed flow.

Waterbars and other cross-ditches shall be installed at locations designated by the designated Forest Service official.

3.3 All closure-devices and signs shall be constructed, located, installed, and maintained according to the standards contained in the most current version of the MUTCD.

3.4 Where existing surface-vegetation has been destroyed as a result of Purchaser's operation, the entire roadway will be seeded with a seed-mixture approved by the designated Forest Service official.

SPECIFICATION T-812 MISCELLANEOUS STRUCTURES

DESCRIPTION

1.1 Maintenance of miscellaneous structures includes cattleguards, gates, H-braces, fencing, guardrails, signage, and other similar structures that have been previously installed to insure safe and efficient operation of the road.

MATERIALS

2.1 Any Materials needed in the maintenance of miscellaneous structures shall be similar in type and quality to the Material in the structure being maintained.

REQUIREMENTS

3.1 *Cattleguards*. Loose rail or wing elements shall be straightened and welded or bolted back in place.

Excess Material carried into the cattleguard shall be removed when drainage is blocked or when it reaches 6 inches from the bottom of the cattleguard frame. Drainage into and from the cattleguard shall be kept open.

3.2 *Gates*. Gates shall be kept in good repair and made to swing easily. Hinges or latches shall be repaired if not operating properly and hinges shall be oiled. Brush and debris shall be removed from within the swinging radius.

Loose wire gate ends and internal stays shall be maintained in good condition. Gate wire shall be maintained as necessary to insure proper operation of the gate both as a vehicle passageway and as a barrier to cattle movement.

3.3 *H-braces.* Posts, horizontal braces, and diagonal struts or tie wires shall be maintained to provide for tightness of fence and gate or latch posts.

3.4 *Fencing.* Fencing which has no opening or provisions for gating shall be temporarily braced prior to cutting. Fencing shall be replaced upon completion of use and shall be stretched and securely fastened to conform to its original spacing before cutting.

3.5 *Signage.* Structure delineators, regulatory and warning signs determined by the designated Forest Service official as necessary, shall be maintained in good, clean condition.

3.6 *Guardrails.* Guardrails shall be maintained according to the most recent AASHTO standards and specifications.

SPECIFICATION T-813 TREATMENT AND DISPOSAL OF HAZARD TREES

DESCRIPTION

1.1 Treatment and disposal of hazard trees consists of felling and disposal of designated unstable live or dead trees. Any removal of timber is subject to prior agreement between the CO and the Purchaser.

REQUIREMENTS

3.1 *Designation of hazard trees.* Hazard trees to be felled will be designated in advance by the designated Forest Service official, and will be flagged and/or marked.

3.2 *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 contract or Supplemental Specifications. Dispose of merchantable timber designated for removal in accordance with Provision B/BT2.32 or C/CT.3.2 Construction Clearing, or as designated by the designated Forest Service official.

3.3 *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.

3.4 *Safety.* Adhere to the requirements in Provision B/BT6.33 or G/GT.3.3

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SPECIFICATION T-GEN GENERAL REQUIREMENTS

DESCRIPTION

1.1 General requirements consists of requirements that are mandatory for all T-Specs included in the contract.

REQUIREMENTS

3.1 *Equipment Specifications.* The equipment to be used to complete the work in this contract shall meet the following minimum standards:

Road Grader - Motor patrol, self-propelled, tandem drive, with a mold board not more than 14 feet or less than 12 feet with a 3 tooth ripper (scarifier) bar.

Crawler Tractor/Dozer - D4 with a 3 tooth ripper (scarifier) bar and an angle dozer blade (6 way tilt preferred).

3.2 *Equipment Cleaning.* Adhere to the requirements in provision B/BT6.35 or G/GT.3.5.

3.3 *Traffic Control.* Adhere to the requirements in provision B/BT6.33 or G/GT.3.3

3.4 *Bridges.* Clean the deck of any accumulated dirt or gravel and clean deck drains. Protect structures according to the requirements in Provision B/BT6.22 or G/GT.2.2.

C5.32# - ROAD MAINTENANCE DEPOSIT SCHEDULE *(08/2012)*

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 C5.31#.

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 are **N/A** per **Ton** for recurrent maintenance, and **$.00** per **Ton** for deferred maintenance.

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		

C5.41 - SNOW REMOVAL *(05/2008)*

Snow removal shall be done in a manner to preserve and protect the roads, to the extent necessary, to insure safe and efficient transportation of timber and to prevent erosion damage to roads, streams, and adjacent lands.

1. Description. Snow removal work by Contractor shall include:

a. Removal of snow from entire road surface width including turnouts.
b. Removal of snow slides, earth slides, fallen timber, and boulders that obstruct normal road surface width.
c. Removal of snow, ice, and debris from ditches and culverts so that the drainage system will function efficiently at all times.

2. Performance. All items of snow removal shall be done currently as necessary to ensure safe, efficient transportation. Work shall be done in accordance with the following minimum standards of performance. Waivers of standards will not be given where circumstances will cause unacceptable and unavoidable damage to the road or other resource.

a. Removal of material. All debris, except snow and ice, that is removed from the road surface and ditches shall be deposited away from stream channels at agreed locations.
b. During snow removal operations, banks shall not be undercut nor shall gravel or other selected surfacing material be bladed off the roadway surface.
c. Ditches and culverts shall be kept functional during and following roadway use.
d. Snow berms shall not be left on the road surface unless written waivers are made for specific locations for traffic safety. Berms left on the shoulder of the road shall be removed following hauling completion and/or drainage holes shall be opened and maintained. Drainage holes shall be spaced as required to obtain satisfactory surface drainage without discharge onto erodible fills.
e. Dozers shall not be used to plow snow on system roads without written approval of Forest Service.
f. Snow shall not be removed to the road surface. A minimum two-inch depth must be left to prevent loss of surfacing and protect the road bed during snow removal operations. Written waivers may be made by Forest Service for specific locations where snow may be completely removed during plowing for traffic safety. Locations receiving a waiver will have a written agreement prepared prior to plowing that prescribes the timing and method of damage repair or surface replacement.

C6.24# - SITE SPECIFIC SPECIAL PROTECTION MEASURES. *(07/2022)*

Unless agreed otherwise, the following special protection measures apply:

See Special Measures Areas (SMA) Table.

Designation methods:

(a) SMA boundary designated by **WHITE** .

(b) SMA is shown on Contract Area Map and SMA boundary designated by **WHITE** .

(c) SMA is only shown on Contract Area Map.

Unless agreed otherwise, sale operations listed below are not permitted during the period(s) specified:

See Contract Limited Operating Period(s) Table.

Areas subject to limited operating periods are not subject to special protection measures listed in B6.24(a)(i)-(iv) except where such areas overlap.

Special Measures Area (SMA) Table

A	Special Measure Area	Known Special Measure areas are marked on the ground using white bands around trees on the perimeter of the site and shall be protected in accordance with Standard Provision B6.24. If any other Cultural Resources, not identified on the ground, are identifies by either party, they shall be protected in accordance with Standard Provision B6.24.
B	Wildlife and Botanical Resources	Please view the Sale Area Map for Botany locations. Consult with Forest Service Botanist before designating skid trails, log landings, or slash piles to protect populations of native plant species.
C	Cave Resources	N/A

Protection Type	**Limited Operating Period**
Cultural Resources	N/A
Wildlife and Botanical Resources	Please reference C.6.313# Timing of Sale Operations No tree cutting activities or heavy equipment use within established goshawk nest areas and Post-Fledgling Family Area (PFA'a) between March 1st and September 30th, without proper analysis and approval from the District Biologist
Cave Resources	N/A

C6.313# - TIMING OF SALE OPERATIONS *(07/2009)*

Unless otherwise agreed to in writing Contractor's Operations shall be performed in accordance with the following table.

C6.313# - TIMING OF SALE OPERATIONS

Special Measures Area (SMA) Table

A	Special Measure Area	Known Special Measure areas are marked on the ground using white bands around trees on the perimeter of the site and shall be protected in accordance with Standard Provision B6.24. If any other Cultural Resources, not identified on the ground, are identifies by either party, they shall be protected in accordance with Standard Provision B6.24.
B	Wildlife and Botanical Resources	Please view the Sale Area Map for Botany locations. Consult with Forest Service Botanist before designating skid trails, log landings, or slash piles to protect populations of native plant species.
C	Cave Resources	N/A

Protection Type	**Limited Operating Period**
Cultural Resources	N/A
Wildlife and Botanical Resources	Please reference C.6.313# Timing of Sale Operations No tree cutting activities or heavy equipment use within established goshawk nest areas and Post-Fledgling Family Area (PFA'a) between March 1st and September 30th, without proper analysis and approval from the District Biologist
Cave Resources	N/A

C6.341 - PREVENTION OF OIL DISCHARGES. *(07/2022)*

If Contractor maintains storage facilities for oil or oil products on Contract Area, Contractor shall take appropriate preventative measures to ensure that any harmful discharge of such oil or oil products does not enter into or upon any navigable waters, adjoining shorelines, or other waters of the United States, as prescribed in 40 CFR 110. As soon as Contractor has knowledge that measures, as described in B6.34 fail to prevent a discharge into or upon navigable waters or adjoining shorelines of the United States, Contractor shall notify the Forest Service Representative the National Response Center and any other appropriate State agencies. In accordance with 40 CFR 110.6, all harmful discharges that occur as a direct or indirect result of Contractor's operations, regardless of whether such discharges are caused by Contractor's employees, agents, Subcontractors, or their employees or agents, directly or indirectly, as a result of Contractor's Operations must be reported.

Harmful discharges of oil are those that violate applicable State water quality standards, cause a film or sheen on the water's surface, or leave sludge or emulsion beneath the surface of the water or adjoining shorelines regardless of the amount of material discharged (40 CFR 110.3). As such reporting is not triggered by the amount of the discharge but by the presence of the criteria prescribed in 40 CFR 110.3. Harmful discharges meeting the criteria in 40 CFR 110 must be reported by Contractor. Contractor shall take whatever initial action may be safely accomplished to control all reportable discharges. Appropriate actions include but are not limited to containment, sorbents or dispersants as needed or as prescribed by the Spill Prevention Control and Countermeasures Plan pursuant to 40 CFR 112. Contractor shall prepare a Spill Prevention Control and Countermeasures (SPCC) Plan pursuant to EPA requirements as stated in 40 CFR 112 when the following conditions are met:

(a) Contractor maintains above ground storage facilities, including mobile storage, for oil or oil products on the Contract Area and the total storage capacity for these products exceeds 1,320 gallons in either a single container of greater than 1,320 gallons, or in multiple containers of 55 gallons or greater, and

(b) there is a reasonable expectation that a harmful discharge could reach navigable waters of the United States, adjoining shorelines or other waters as prescribed in 40 CFR 112.

Reasonable expectation for a discharge reaching navigable waters is based on the location of the storage facility to streams, ditches, gullies, or permanent water bodies that could be impacted as well as drainage patterns, soil conditions, precipitation runoff and the volume of material potentially spilled. The SPCC Plan shall outline measures which will prevent discharges from reaching navigable waters, adjoining shorelines, or other waters of the United States. According to Section 112.1(d)(1)(i), the determination of reasonable expectation for a harmful discharge must be based solely upon consideration of the geographical and locational aspects of the facility. If a Contractor makes a determination that, due to the location, the facility cannot reasonably be expected to discharge oil as described in Section 112.1(b), Contractor should be prepared to provide the rationale and any supporting documentation, if requested by the Contracting Officer, that explains why the facility does not have an SPCC Plan.

C6.36# - ACCEPTANCE OF WORK *(02/2021)*

In addition to the requirements and conditions found in B6.36-Acceptance of Work, upon Purchaser's written request and assurance that cutting to prescription has been completed in a cutting unit in accordance with C2.355#, and unless otherwise agreed in writing, procedures for inspecting Purchaser cutting under C2.355# are as follows:

C6.36# Acceptance of Work

R3-C6.36# - ACCEPTANCE OF WORK. (06/2021)

Within the subdivision(s)/unit(s) noted below and as identified on the sale area map, the following inspection procedures will be used to determine compliance and acceptance of work.

For those subdivisions/units listed below where Purchaser shall select cut trees without pre-harvest marking and inspections find that purchaser cut tree selection is not in compliance with contract specifications, purchaser shall be required to adjust cut tree selection as needed to achieve the required standard prior to completion. Unless otherwise agreed in writing, procedures for inspecting purchaser compliance under WO-C2.355# are as follows:

Subdivision/Unit

Cutting Units: 2D*, 3B*, 3C*, 4B*, 6*, 6B*, 6C*, and 9*

* Cut unit has digital prescription guide available.

Criteria

Criteria for acceptance for each cutting unit are displayed in the Tables 2a and 2b below.

For quality assurance, the government will conduct visual inspections, accompanied by random plots as needed, for each cutting unit to determine compliance with thinning treatment specifications. Inspections will consist of a review of the residual trees in terms of tree density, spatial distribution, and tree quality. The Forest Service will determine if the purchaser has met the desired conditions by visually assessing the following acceptance criteria:

All cutting units:

- Residual tree density (basal area) of ponderosa pine on a unit-wide basis
- Spatial Patterns
    - Distribution and size of groups
    - Distribution and width of interspaces and/or regeneration openings
- Residual tree quality

When work is satisfactory, it will be accepted. When work is unsatisfactory, the purchaser will be responsible for any rework to comply with contract requirements.

If the purchaser disagrees with the visual inspection results of the Forest Service, the purchaser may request a formal sample across the unit. The number of plots to assess formal compliance is based on Table 1 below.

Table 1. Minimum # of plots by cutting unit size.

Cutting Unit Size	Minimum Number of Plots
Up to 40 acres	20 plots
40 to 100 acres	30 plots
Over 100 acres	30 plots plus an additional plot for every 10 acres over 100 acres

Plot locations will be random and determined by a non-biased method. The sampling will evaluate the criteria specified for each respective cutting unit.

Where a cutting unit does not meet the required quality standard due to a re-workable items such as leaving too many trees, purchaser shall rework the unit. The unit will be re-inspected, and if deficient items are repaired, work will be accepted. Where 2 or

more cutting units do not meet the required quality standard due to too many trees cut, remedial actions including poor performance rating and/or contract termination may occur.

I. The following compliance inspection forms will be used to document compliance with the requirements listed in Contract Provision C2.355# - Designation By Prescription for each respective cutting unit. Table 2a applies for units where a Digital Prescription Guide is not provided or not used. Table 2b applies for units where a Digital Prescription Guide is provided and used. Refer to this information during the inspections to determine if the Purchaser is complying.

Table 2a. Criteria for acceptance - DxP without Digital Prescription Guide (or DPG not used)

		Tree Density	Spatial Pattern				Tree Quality		Weighted Score
			Groups		Interspace/Reg. Op.				
Cut Unit (CU)	**Type**	**Residual BA**	**% plots**	**Acceptable size**	**% plots**	**Average width**	**% Desirable/ Acceptable trees**		
2D SI40	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (0.1-1 ac)	Y/N (IS)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**
	Required	60-80 ft^2/acre	45-60% Y	≥90% Y	40-55% Y	40-80 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		
3B UEA40	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (0.1-1 ac)	Y/N (IS/ RO)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**
	Required	50-70 ft^2/acre	35-50% Y	≥90% Y	50-65% Y	60-100 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		
3C UEA25	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (0.1-1 ac)	Y/N (IS/ RO)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**
	Required	50-70 ft^2/acre	50-65% Y	≥90% Y	35-50% Y	40-80 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		
4B IT10/25	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (.1-1 ac)	Y/N (IS)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**
	Required	60-80 ft^2/acre	60-90% Y	≥90% Y	10-40% Y	25-60 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		
6 UEA40	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (0.1-1 ac)	Y/N (IS/ RO)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**

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		Tree Density	Spatial Pattern				Tree Quality		Weighted Score
			Groups		Interspace/Reg. Op.				
Cut Unit (CU)	Type	Residual BA	% plots	Acceptable size	% plots	Average width	% Desirable/ Acceptable trees		
	Required	50-70 ft^2/acre	35-50% Y	≥90% Y	50-65% Y	60-100 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		
6B UEA40	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (0.1-1 ac)	Y/N (IS/ RO)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**
	Required	40-60 ft^2/acre	35-50% Y	≥90% Y	50-65% Y	60-100 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		
6C IT40HE	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (0.1-1 ac)	Y/N (IS)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**
	Required	70-90 ft^2/acre	45-60% Y	≥90% Y	40-55% Y	40-80 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		
9 UEA 40	Plot Data	Measured BA (ft^2/ac)	Y/N (Group)	Y/N (0.1-1 ac)	Y/N (IS/ RO)	Measured width	# des/acc trees	# total trees	**Required: ≥85%**
	Required	50-70 ft^2/acre	35-50% Y	≥90% Y	50-65% Y	60-100 ft	≥75% trees des/acc		
	Actual	___ ft^2/acre	___% Y	___% Y	___% Y	___ ft	___% trees des/acc		**Actual: ___%**
	Weight	**40%**	**7.5%**	**7.5%**	**7.5%**	**7.5%**	**30%**		

Tree Density (residual BA): Basal area (all species combined) will be measured on each plot using a 10 BAF prism (assess at root collar when appropriate) to assess a unit average. Cutting unit will be accepted for this criteria if the average residual BA falls between xx-xx ft^2/acre.

Spatial Pattern:

- **Determining if plot is located within group or interspace / regeneration opening:** Plot considered to be within a group if it falls under the dripline of a tree separated by less than 15 feet from at least one adjacent tree, or in a small canopy gap where the immediately adjacent trees are less than 15 feet apart, measured dripline to dripline. Plot considered to be within an interspace / regeneration opening if it falls under the dripline of a tree separated by more than 15 feet from any adjacent tree, measured dripline to dripline, in a between-group opening (tree groups are distinguished from adjacent tree groups when the width between the outermost tree crowns exceeds 15 feet), or in a within-group opening more than 7.5 feet from the dripline of any adjacent tree crowns.
- **Determining if tree is located within group or interspace / regeneration opening:** Tree considered to be within a group if it is separated by less than 15 feet from at least one adjacent tree, measured dripline to dripline. Tree considered to be within an interspace / regeneration opening if it is separated by more than 15 feet from any adjacent tree, measured dripline to dripline.
- **Percent plots in groups:** If xx-xx% of the total # of plots in the cutting unit fall within groups, cutting unit will be accepted for this criteria.
- **Group size:** If a plot falls within a group, group size will be evaluated (using GPS as necessary), with the edge of the group defined by the dripline of the outermost trees (a straight line will be drawn between the outer dripline of adjacent trees within the same group when the gap between the driplines is <40 feet). Cutting unit will be accepted for this criteria if ≥xx% of groups evaluated are of an acceptable size.
- **Percent plots in interspaces / regeneration openings:** If xx-xx% of the total # of plots in the cutting unit fall within interspaces/regeneration openings, cutting unit will be accepted for this criteria.
- **Interspace / regeneration opening width:** If a plot falls within an interspace / regeneration opening, interspace/regeneration opening width will be measured, dripline to dripline, between the two trees nearest the plot center from adjacent groups. Cutting unit will be accepted if the average interspaces/regeneration opening width falls between xx-xx feet.

Tree Quality: Residual tree quality will be evaluated on a 1/10th acre circular plot. For each merchantable-sized tree on the plot (only species cut under the Rx), a determination will be made whether the tree was desirable/acceptable according to "Tree Quality Standards" table found within the cutting guide. Cutting unit will be accepted for this criteria if ≥xx% of individual trees evaluated are considered desirable/acceptable.

Weighted Score: The overall weighted score will equal the combined weights for each accepted element. The cutting unit will be accepted if the overall weighted score exceeds the required weighted score.

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Table 2b. Criteria for acceptance - DxP+ with Digital Prescription Guide

		Tree Density	Spatial Pattern	Tree Quality		Cut Matches DPG	Weighted Score
Cut Unit (CU)	**Type**	**Residual BA**	**% plots**	**% Desirable/ Acceptable trees**		**% plots**	
2D SI40	Plot Data	Measured BA (ft^2/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	60-80 ft^2/acre	≥75% Y	≥75% trees des/acc		≥75% Y for N	
	Actual	___ ft^2/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	
3B UEA40	Plot Data	Measured BA (ft^2/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	xx-xx ft^2/acre	≥75% Y	≥75% trees des/acc		≥75% Y for N	
	Actual	___ ft^2/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	
3C UEA25	Plot Data	Measured BA (ft^2/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	50-70 ft^2/acre	≥75% Y	≥75% trees des/acc		≥75% Y for N	
	Actual	___ ft^2/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	
4B IT10/ 25	Plot Data	Measured BA (ft^2/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	60-80 ft^2/acre	≥75% Y	≥75% trees des/acc		≥75% Y for N	
	Actual	___ ft^2/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	
6 UEA40	Plot Data	Measured BA (ft^2/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	50-70 ft^2/acre	≥75% Y	≥75% trees des/acc		≥75% Y for N	
	Actual	___ ft^2/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	
6B UEA40	Plot Data	Measured BA (ft^2/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	40-60 ft^2/acre	≥75% Y	≥75% trees des/acc		≥75% Y for N	

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		Tree Density	Spatial Pattern	Tree Quality		Cut Matches DPG	Weighted Score
Cut Unit (CU)	**Type**	**Residual BA**	**% plots**	**% Desirable/ Acceptable trees**		**% plots**	
	Actual	___ ft²/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	
6C IT40H E	Plot Data	Measured BA (ft²/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	70-90 ft²/acre	≥xx% Y	≥xx% trees des/acc		≥xx% Y	
	Actual	___ ft²/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	
9 UEA 40	Plot Data	Measured BA (ft²/ac)	Y/N (cut = DPG)	# des/acc trees	# total trees	Y/N/NA (cut = DPG)	**Required: ≥85%**
	Required	50-70 ft²/acre	≥75% Y	≥75% trees des/acc		≥75% Y for N	
	Actual	___ ft²/acre	___% Y	___% trees des/acc		___% Y	**Actual: ___%**
	Weight	**40%**	**20%**	**20%**		**15%**	

Tree Density (residual BA): Basal area (all species combined) will be measured on each plot using a 10 BAF prism (assess at root collar when appropriate). Cutting unit will be accepted for this criteria if residual BA falls between xx-xx ft^2/acre.

Spatial Pattern:

- **Determining if plot is located within group or interspace / regeneration opening:** Plot considered to be within a group if it falls under the dripline of a tree separated by less than 15 feet from at least one adjacent tree, or in a small canopy gap where the immediately adjacent trees are less than 15 feet apart, measured dripline to dripline. Plot considered to be within an interspace / regeneration opening if it falls under the dripline of a tree separated by more than 15 feet from any adjacent tree, measured dripline to dripline, in a between-group opening (tree groups are distinguished from adjacent tree groups when the width between the outermost tree crowns exceeds 15 feet), or in a within-group opening more than 7.5 feet from the dripline of any adjacent tree crowns.
- **Determining if tree is located within group or interspace / regeneration opening:** Tree considered to be within a group if it is separated by less than 15 feet from at least one adjacent tree, measured dripline to dripline. Tree considered to be within an interspace / regeneration opening if it is separated by more than 15 feet from any adjacent tree, measured dripline to dripline.
- **Cut matches DPG:** Each point will be evaluated to determine whether the cut on the ground matches the DPG on the tablet in terms of whether the point falls within a group or interspace / regeneration opening. If the cut matches the DPG on ≥xx% of the total # of plots, the cutting unit will be accepted for this criteria.

Tree Quality: Residual tree quality will be evaluated on a xx acre circular plot. For each merchantable-sized tree on the plot (only species cut under the Rx), a determination will be made whether the tree was desirable/acceptable according to "Tree Quality Standards" table found within the cutting guide. Cutting unit will be accepted for this criteria if ≥xx% of individual trees evaluated are considered desirable/acceptable.

Size Class Distribution:

- **Cut matches DPG:** For each point that falls within a polygon on the DPG, the polygon will be evaluated to determine whether the cut on the ground matches the DPG in terms of the silvicultural system used. The cutting unit will be accepted for this criteria if the cut matches the DPG on ≥xx% of the total # of plots that fall within polygons.

Weighted Score: The overall weighted score will equal the combined weights for each accepted element. The cutting unit will be accepted if the overall weighted score exceeds the required weighted score.

C6.4# - CONDUCT OF LOGGING *(07/2009)*

Unless otherwise agreed to in writing, Silvicultural prescriptions and land management objectives shall be conducted and accomplished by the requirements, methods and proceedures in accordance with the following table.

C6.4# - CONDUCT OF LOGGING

C6.4# - CONDUCT OF LOGGING *(07/2009)*

Unless otherwise agreed in writing, silviculture prescriptions and land management objectives shall be conducted and accomplished by the requirements, methods and procedures in accordance with the following table.

CONDUCT OF LOGGING	
TABLE-A	
Cutting Units	Conduct of Logging
All Cutting Units	The skid trail pattern shall be designated and approved by Forest Service in advance of felling and major trails, including go-back trails, shall be flagged on the ground in advance of felling.
All Cutting Units	Trees designated for cutting and/or logs will be left as rub trees along skid trails/skyline corridors as needed to protect young growth and leave trees.
All Cutting Units	Tractor skid roads will be located, approved, (and constructed) in advance of falling.
All Cutting Units	Trees shall be felled, insofar as safety permits, to angle in the direction of skidding.
All Cutting Units	Logs shall be skidded with the leading end free of the ground.
All Cutting Units	Whole trees shall be (skidded) to landings.
All Cutting Units	Purchaser shall remove from National Forest administered lands products meeting utilization standards within 30 calendar days after felling of trees, unless written authorization to delay such removal is obtained from the Forest Service.
All Cutting Units	Trees designated for cutting and/or logs will be left as rub trees along skid trails as needed to protect young growth and leave trees.

C6.43 - PROTECTION OF PUBLIC IN RECREATION AREAS *(05/2008)*

For protection of National Forest interests and safety of general public, Contractor's Operations shall be subject to the following restrictions:

a. When Contractor's Operations are in progress within safety zones, shown on Contract Area Map, and designated on the ground, Contractor may be required to post warning signs in the area or maintain a watchman whose sole duty shall be to warn and advise public of any hazards present in area as a result of this contract.

b. During periods of general recreation activity within Sale Area or vicinity, Forest Service may restrict hauling to days other than Saturdays, Sundays, and National holidays.

C6.6 - EROSION PREVENTION AND CONTROL *(05/2008)*

Unless waived in writing, erosion prevention and control work, required by G.6 shall be completed within 15 calendar days after skidding operations related to each landing are 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. Damage resulting from Contractor's operations, due to failure to perform required work, shall be repaired by Contractor.

When not adequately protected from erosion by treatments such as out-sloping and cross draining or grass seeding, place lopped slash and logging debris in temporary roads, landings and skid trails.

C6.601# - EROSION CONTROL SEEDING *(05/2008)*

Following completion of skidding and yarding operations in an area, Contractor shall seed areas of exposed soil on skid trails, landings, firebreaks, and Temporary Roads where other erosion control measures described in G.6 will not result in satisfactory control of soil movement. Seed bed preparation shall consist of surface scarification on roads and landings sufficient for retention of seed.

Seed shall be broadcast evenly at the rate of **5 pounds per acre** pounds of seed per acre. Application shall be during the period **April 15th to November 30th** unless otherwise approved. No application work shall be done during extremely windy or rainy weather, or when the ground is frozen or otherwise unsuitable.

The kinds and amounts of seed to be sown in terms of live pure seed shall be:

See Table A

C6.601# - EROSION CONTROL SEEDING (02/1987)

TABLE-A	
Species of Seed	Lbs per Acre quantity, in terms of pure live seed (PLS)
Desert globemallow (S. ambigua)	0.5 PLS lbs/acre
Western wheatgrass (GR)	1 PLS lbs/acre
Bottlebrush squirreltail (GR)	0.5 PLS lbs/acre
Sideoats grama (GR)	1 PLS lbs/acre
Sand dropseed (GR)	1.0 PLS lbs/acre
Common yarrow (FB)	0.5 PLS lbs/acre
White prairie clover (FB)	0.5 PLS lbs/acre
TOTAL	**5.0 lbs/ac**

(GR)= grass, (FB)= forb

Seed must be certified by a state agency to be free of Arizona Department of Agriculture Class A and B noxious weeds, and to contain no more than 0.1% by weight of other nonnative plant seeds (including Class C noxious weeds.)

If native species in the seed mix listed above are not available from the first two large native seed retailers consulted, other species native to northern Arizona (elevations 5500-8000 feet) may be substituted with approval of the contracting officer. The final mix should contain: Annual Quickguard at 1.5 lbs/acre; at least 3 native perennial grass species applied at 2.5 lbs/acre; and at least 1 forb species applied at 0.5 lb/acre.

This seed mix will perform best if incorporated into the top 1-2” of soil.

C6.602 - TEMPORARY ROAD AND LANDING SCARIFICATION *(05/2008)*

Unless waived in writing by Forest Service on specific roads or landings, all landings and Temporary Roads constructed or used by Contractor shall be scarified by Contractor following use. Scarification shall be done to a depth of not less than four inches and must effectively prepare the ground for seeding.

C6.7# - SLASH TREATMENT *(05/2008)*

All vegetative debris associated with construction of Specified Roads such as unutilized timber, brush and grubbed stumps is Construction Slash. Measures to be taken by Contractor for treatment of Construction Slash are set forth in the attached road construction specifications and in item (1) below.

Vegetative debris larger than 1 inch in diameter and 3 feet long resulting from Contractor?s Operations, other than Construction Slash, is Logging Slash. In Required Disposal Strip along permanent roads, in areas of Temporary Road construction outside of Clearcutting Units, and in fuelbreaks (C6.71), both hardwood trees and coniferous trees smaller than the minimum d.b.h. in A.2, over 3 feet in height and damaged beyond recovery by Contractors Operations shall be cut and treated as Logging Slash. Measures to be taken by Contractor for treatment of Logging Slash are set forth below and in following Subsections unless otherwise agreed in writing.

Forest Service and Contractor shall jointly develop a schedule for completion of slash treatment on the various portions of Sale Area prior to Contractors Operations. Slash treatment plan may be made a part of the annual operating plan required in C6.31.

Specified slash treatment methods for each cutting unit shall be shown on Contract Area Map and listed in the attached tables by the following symbols:

Slash Treatment Methods:

Method: BURYING Map Symbol: "Bury"

Definition and Specifications:

Logging Slash shall be buried where agreed in borrow areas, pits, trenches, or other locations reasonably near the area of origin. Logging Slash shall be matted down in layers and shall be covered with at least 2 feet of rock and soil so that the final surface is sloped to drain and relatively smooth.

Method: CHIPPING Map Symbol: "Chip"

Definition and Specifications:

Chippable Logging Slash up to 4 inches in diameter shall be processed through a chipping machine. Chips shall be scattered to a depth not exceeding 6 inches.

Method: REMOVING Map Symbol: "Remove"

Definition and Specifications:

Logging Slash shall be moved or hauled to locations shown on Sale Area Map and designated on the ground where it shall be piled.

Method: FELLING DAMAGED TREES Map Symbol: "Fell"

Definition and Specifications:

Damaged or destroyed trees are trees substandard because of size, which are over 3 feet in height, and/or species not included in A.2 over 3 feet in height, knocked down or damaged to the extent that mortality or serious deterioration will occur, and such trees partially pushed over so as to result in permanent lean and visible damage to the root system, all as a result of the Contractors operation. Such damaged or destroyed trees shall be felled and further treated by the slash treatment method specified for the area. Materials meeting the minimum piece specifications of A.2 will be utilized by the Contractor according to B2.1. Maximum stump height shall be that specified in A.6 or on the Contract Area Map.

Method: BUCKING & PILING (Small Material) Map Symbol: "Buck"

Definition and Specifications:

Logging Slash smaller than **N/A** inches and larger than 4 inches in large end diameter shall be bucked into lengths not to exceed **N/A** feet and left in place. Logging Slash 4 inches and smaller in large end diameter shall be hand Piled within Required Disposal Strip.

Method: DECKING LARGE MATERIAL Map Symbol: "Deck"

Definition and Specifications:

Logging Slash **N/A** feet or more in length shall be Decked free of other slash by piling pieces parallel to each other.

Method: HAND PILING Map Symbol: "Hpile"

Definition and Specifications:

Logging slash smaller than **N/A** feet long shall be hand piled in accordance with the following specifications:

HAND PILING SPECIFICATIONS

LOCATION OF PILES: Piles shall be located within cleared areas of landings and Temporary Roads or within natural openings. The minimum spacing between edge of each pile and crown edge of adjacent live trees shall not be less than the average diameter of the pile.

Contractor shall not be required to move slash more than 75 feet to meet the above pile location requirement.

Piles shall not be made below high water mark of perennial or intermittent stream courses designated to be protected in accordance with G.5. Slash shall not be piled on or allowed to remain in drainage ditches of permanent roads.

CONSTRUCTION OF PILES. Piles shall be compact and dirt-free, with most small slash on the bottom to facilitate consumption during burning. Piles shall not exceed 10 feet in average diameter and pile height shall not be less than one-third the average pile diameter. All slash which protrudes 4-feet or more from outer edge of the pile shall be bucked off and placed on pile.

Method: MACHINE PILING Map Symbol: "Mpile"

Definition and Specifications:

Concentrations of logging slash, excluding scattered individual pieces, shall be machine piled by tractor equipped with brush rake as per Machine Piling Specifications.

Method: MACHINE PILING & LOPPING Map Symbol: "Mpile/lop"

Definition and Specifications:

Concentrations of slash marked on the ground by the Forest Service shall be machine piled by a tractor equipped with a brush rake as per Machine Piling Specifications. The remaining slash, not in concentrations, shall be lopped and scattered as per specification for "Lopping."

Machine Piling Specifications

Acceptable Equipment. Piling will be accomplished with a crawler tractor not to exceed overall width of **N/A** feet. Tractor will be equipped with a brush blade having teeth extending a minimum of 11 inches below the frame. The teeth shall number at least **8 and no more than 14** . The teeth shall be of sufficient size and strength so that they shall not bend or break through normal slash piling.

Location of Piles. Piles shall be so located that burning will not damage standing live trees or physical improvements such as fences, poles, buildings, signs, tables, grills, and cattleguards. The minimum spacing between piles shall be equivalent to one and one-half the diameter of the adjacent pile.

If conditions make it impractical to locate piles where damage to live trees and physical improvements can be avoided, a space shall be cleared in a location designated by Forest Service.

Slash within partial cut areas and road construction clearings shall be moved to take advantage of previously constructed or natural clearings in order to minimize the construction of new clearings. Slash shall not be moved more than 120 feet to achieve the location requirement. Piles shall not be made on permanent roads, in drainage ditches, below high water marks of live streams, and in intermittent stream courses.

Piles shall not be constructed within a **N/A** foot strip along the remaining edges of the unit.

Construction of Piles. Machine piles shall be compacted by pushing slash from all sides towards the center of the pile. A machine pile will not exceed an average diameter of 25 feet and pile height shall not be less than one-third the average diameter of the pile. All slash which protrudes 4-feet or more from outer edge of the pile shall be bucked off and placed on pile.

Unmerchantable material may be left between piles to protect regeneration seedlings and for site protection purposes as specified in writing by Forest Service.

Piling shall be accomplished in a manner that will prevent the accumulation of dirt in the piles

Logs and tops from felled trees within leave groups of trees inside or outside the cutting unit shall be yarded out of such leave groups to approved locations and piled. Where there is danger of damaging leave trees, long material shall be end-lined out of leave groups.

Method: COVERING PILES Map Symbol: "Cover"

Definition and Specifications:

All slash piles shall be covered with a durable waterproof covering furnished by Contractor as approved by the Forest Service. The material shall be at least 6 feet in width. Piles shall not be less than one-third covered, with the covering extending not less than halfway down all sides. Pieces of burnable material shall be placed on top of the waterproof covering to keep it from blowing off the pile.

Method: SITE PREPARATION Map Symbol: "Mach"

Definition and Specifications:

In conjunction with machine slash piling, a minimum of **N/A** percent of the workable ground surface uniformly distributed over the unit area shall be scarified down to bare mineral soil. Scarified ground is here defined as bare mineral soil in patches exceeding **N/A** feet.

Method: SCATTERING Map Symbol: "Scat"

Definition and Specifications:

Contractor shall remove all slash greater than **N/A** feet long, a minimum of **N/A** inches d.b.h. and

larger. Slash shall be placed upslope from, or along the upslope from, or along the contour from, leave trees. Slash shall not be placed down slope from leave trees.

Method: LOPPING Map Symbol: "Lop"

Definition and Specifications:

Slash shall be treated by limbing or severing, or both, and scattered as necessary to place slash within **N/A** feet of the ground over entire area of cutting unit. Occasional slash which exceeds the maximum height, not to exceed 5 percent of slash to be lopped and scattered, is acceptable. When agreed in writing between Contractor and Forest Service, crushing or chopping with mechanized equipment is permissible, where residual trees will not be excessively damaged and ground conditions are suitable.

By agreement in writing, certain slash may be left for fuelwood. When the specified treatment is by a combination of methods, Logging Slash not treated by one of the methods shall be treated by the other(s).

(1) Treatment Along Permanent Roads. Permanent roads that require roadside slash treatment are listed in the attached table and shown on the Contract Area Map. All Logging and Construction Slash within Required Disposal Strips shall be treated by Contractor. "Required Disposal Strips" are those areas adjacent to permanent roads where slash treatment is required for resource objectives. The width of Required Disposal Strips is shown in the attached table and is measured in slope distance from Roadbed edges of permanent roads. By agreement, in Clearcutting Units, slash from Required Disposal Strips may be treated with other Logging Slash. By agreement, the location of Required Disposal Strips may be adjusted from side to side without materially changing the total work required.

Slash treatment in Required Disposal Strips shall be accomplished without affecting the proper functioning of channels leading to and from drainage structures.

(a) Slash shall be treated by Scattering, Removing, Burying, Chipping, Piling, Bucking and Piling, Machine Piling or a combination of these methods as shown in the attached table. Logging Slash larger than treatment size requirements of the specified method shall either be Scattered outside Required Disposal Strip, within Required Disposal Strip or Decked at agreed locations as shown in the attached table.

(b) Hardwood and coniferous trees within or extending over Required Disposal Strips and which have been partially knocked down by Contractor¿s Operations shall be felled and treated as Logging Slash. Damaged trees which cannot be felled with reasonable safety may be pushed or pulled down.

(2) Treatment Along Temporary Roads. Outside of Clearcutting Units, all hardwood and coniferous trees felled or pushed over and trees damaged beyond recovery by Temporary Road construction shall be felled, limbed to a stem diameter of approximately 3 inches, at which point the top shall be cut from the remainder of the stem, and stem shall be bucked into lengths not exceeding **N/A** feet. Such slash shall be Scattered free of soil to reduce concentrations unless treatment is required by another specified method.

(3) Landings and Disposal Sites. Unutilized logs accumulated at landings and disposal sites shall be Decked by Contractor. Other slash accumulated at landings and disposal sites shall be kept separate from unutilized logs and treated by the method shown in the attached table.

(4) View and Special Management Units. Areas identified as "VIEW" on the Contract Area Map are Travel and Water Influence Zones and Special Management Units which include roads, recreation trails, streamsides, lakeshores, and other view areas. The "VIEW" boundaries are identified on the ground or a distance limitation is specified on the Contract Area Map. Primary treatment shall be by Removing, Burying, Chipping, Hand Piling, Machine Piling, or a combination of these means unless a method is specified or prohibited on Sale Area Map. Logging Slash not readily treated by the selected or specified method shall be removed to designated areas or treated as agreed.

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The following tables, where applicable and filled in, summarize slash requirements:

TREATMENT ALONG PERMANENT ROADS (C6.7#)
SLASH TREATMENT

See Table A

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LANDING, DISPOSAL SITES AND OTHER SLASH (C6.7#)

See Table B

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CONTRACTOR UNIT SLASH RESPONSIBILITY (C6.7#)

See Table C

C6.7# - Slash Treatment			
Table-A Treatment along permanent roads			
Payment Unit No. Or Road Junctions Road No. (From To)	**Width Of Required Disposal Strip**	**Specified Method**	**Slash Larger Than Treatment Size, Requirements of Specified Method**
N/A			

C6.7# - Slash Treatment		
Table- B Landing, Disposal Sites and Other Slash		
Site	**Cutting Unit No.**	**Specified Method**
Landings	All Units	Machine Pile

C6.7# - Slash Treatment			
Table- C Purchaser Unit Slash Responsibility			
Description of Cutting Unit (s)	**Type of Treatment**	Acres	**Remarks**
All	Fell	1025	Fell damaged stems
All	Lop	1025	Lop material to 18 inch depth

C6.8 - SCALING *(02/2025)*

Volume estimators used for quantity estimates in A2 are listed below. Volume for trees added pursuant to B2.1 and B2.3, or other authorization hereunder, will be derived from the same volume estimators or from volume tables based on these estimators

Common Species Name	Species Code	Model/Equation
Ponderosa pine	PPP,BPP,NPP,PP	Flewelling Profile Model (4)(5)
Southwestern white pine	PWP,BWP,NWP,WP	Flewelling Profile Model (4)(5)
Douglas fir	PDF,BDF,NDF,DF	Flewelling Profile Model (4)(5)
White fir	PWF,BWF,NWF,WF	Flewelling Profile Model (4)(5)
Corkbark fir	PCF,BCF,NCF,CF	Flewelling Profile Model (4)(5)
Spruce	PES,BES,NES,ES	Hann and Bare Equation (3)
Aspen	PAS,BAS,NAS,AS	Hann and Bare Equation (3)
Juniper, pinyon pine, oaks	JA,JO,JX,PN,PE,PX,OK	Hann and Bare Equation (2)

(1) The Eager Mill Study is not available as a published document.

(2) Hann, David W, and B. Bruce Bare. 1978, Comprehensive tree volume equations for major species of New Mexico and Arizona: I Results and Methodology.USDA Forest Service Research Paper INT-209.

(3) As a result of the FY87 DF validation project, reduce Douglas-fir Scibner volume for the APS, COC, COR, GIL, LIN, PRE, and TON Forests by multiplying the gross merchantable volume by 0.932.

(4) Flewelling, James W. and Lawrence M. Raynes. 1993. Variable-shape stem profile predictions for western hemlock. Part I: Predictions from DBH and total height. & Part II: Predictions from DBH, total height, and upper stem measurements. Can. J. For. Res. Vol. 23. 1993. Attachment 1. R3 Ponderosa Pine Flewelling Profile Model Volume Equation Validation and Biomass Study; Attachment 2. R3 Santa Fe National Forest Biomass Study and Volume Validation. Attachment 3. R3 region-wide default for volume equation and weight factor.

(5) Westfall, et al. 2023. FIA developed national-scale volume and biomass equation. The equation's performance is similar to the profile model. The equation was selected for the Region 3 validation studies.

Weight/Biomass Equations
(For All Forest)

Species	Equation	Weight Factor	Moisture Content	Percent Removed(1)
PP	01	65.9	125.0	95 - Defect
WP	01	53.3	103.4	95 - Defect
DF	01	58.8	79.4	95 - Defect
WF	01	63.2	131.4	95 - Defect
CF	01	63.2	131.4	95 - Defect
ES	01	49.0	102.7	95 - Defect
AS	01	46.3	75.9	95 - Defect
JA/JO/JX	01	55.0	37	95 - Defect
PN,PE,PX	01	55.0	37	95 - Defect
OK	01	77.20	75	95 - Defect

(1) The use of 95% minus the defect associated with the species in the cruise (R301 or VSM1 Report to get the Avg. Defect).

C6.811 - USE OF SAMPLE FREQUENCY CARDS *(05/2008)*

If loads of logs are being sample scaled using sample frequency cards, procedures shall be as follows:

(a) Sample frequency cards shall be issued to Contractor by Forest Service. Contractor shall protect cards from loss, theft, or weather damage. Cards shall be placed in a location accessible to both Contractor and Forest Service. Sample frequency card locations and method(s) of protection shall be included in written agreements prepared pursuant to G.8.1.

(b) Sample frequency card tab number shall match log removal receipt stapled to load of logs.

(c) At sample yard scaling sites, Contractor shall lift sample frequency card tab after load arrives at card location. At sample weight scaling sites, Contractor shall lift sample frequency card tab after load is weighed and log removal receipt number is recorded on weight ticket.

(d) Sample frequency cards shall be returned to representative of issuing District Ranger when all log removal receipt numbers on frequency cards have been used, when log hauling ceases and is not expected to restart within 30 days, or when all logs to be sample scaled have been hauled to scaling site.

C6.841 (Option 1) - ROUTE OF HAUL. *(07/2022)*

As part of the annual Operating Schedule, Contractor shall furnish a map showing and designating the route of haul over which unscaled products will be transported from Contract Area to the approved Scaling location. A written description of the haul route will not be accepted as a substitute for a map. Such designated route of haul shall be the most economical haul route available between the points. The estimated average haul time from the Contract Area to the approved scaling location shall be documented on the map showing the route of haul.

Upon advance written agreement, other routes may be approved. All unscaled products removed from Contract Area shall be transported over the designated routes of haul.

Contractor shall notify Forest Service when a load of products, after leaving Contract Area, will be delayed in reaching Scaling location by more than 12 hours past the estimated average haul time documented on the map showing the route of haul.

Contractor shall require truck drivers to stop, if requested by Forest Service, for accountability checks when products are in transit from Contract Area to the designated Scaling location.

Contractor and Forest Service shall agree to locations for accountability checks in advance of haul. Such locations shall be established only in areas where it is safe to stop trucks. Forest Service shall notify Contractor of the methods to be used to alert truck drivers of an impending stop.

C6.9# - STEWARDSHIP PROJECTS *(09/2004)*

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

Stewardship Projects

C6.9 - Stewardship Projects

Mandatory Stewardship Items

The following acres will be thinned to provide for a full spectrum of treatment below 6”. Treatment of Precommercial Thinning (PCT) will be mechanical unless by written agreement. Noncommercial trees include any Ponderosa Pine less than 6” in Diameter, or any Ponderosa Pine tree less than 10’ in height that does not meet the merchantability specification for the contract. The noncommercial trees should be thinned according to the following prescription. Treatment shall be completed concurrently or within 30 days after the mandatory product is removed.

Thin ponderosa pine less than 6” DBH on a 15’x15’ spacing bole to bole, with a 5’ tolerance allowance in the following units.

Project Number	Unit	Merchantable Timber Removal Acres	TSI Acres
1	3	97	97
Total			97

All stumps must be 6” in height or less.

Slash generated from the pre commercial thinning should be concentrated in machine piles along with secondary slash generated from the removal of the merchantable product. Unless otherwise agreed to in writing per C6.7 Slash Treatment.

Optional Stewardship Items

The following acres will thinned to provide for full spectrum of treatment below 6". Treatment of Precommercial Thinning (PCT) will be mechanical unless by written agreement. Noncommercial trees include any Ponderosa Pine less than 6" in Diameter, or any Ponderosa Pine tree less than 10' in height that does not meet the merchantability specification for the contract. The noncommercial trees should be thinned according to the following prescription. Treatment shall be completed concurrently or within 30 days after the mandatory product is removed.

Thin ponderosa pine less than 6" DBH on a 15'x15' spacing bole to bole, with a 5' tolerance allowance in the following units.

Project Number	Unit	Timber Removal Acres	TSI Acres
2	4	49	49
3	5	42	42
4	4B	65	65
5	7C	91	91
6	7	138	138
7	9	178	178
8	2D	46	46
9	6	140	140
10	3B	85	85
11	3C	63	63
12	7B	49	49
13	6B	242	242
Total			1,188

All stumps must be 6" in height or less.

Slash generated from the pre commercial thinning should be concentrated in machine piles along with secondary slash generated from the removal of the merchantable product. Unless otherwise agreed to in writing per C6.7 Slash Treatment.

C7.2 - SPECIFIC FIRE PRECAUTIONARY MEASURES *(05/2008)*

Contractor shall provide the personnel, tools and equipment to take the following precautionary measures:

SMOKING AND LUNCH FIRE RESTRICTIONS

Contractor shall prohibit smoking and building of camp and lunch fires by persons engaged in Contractor¿s operations, except at established camps or in areas that Forest Service may designate. Smoking may be permitted at these designated areas only after all flammable material has been cleared to mineral soil. All fires and smoking materials shall be completely extinguished at end of lunch or smoking period.

FIRE TOOLS

Contractor shall furnish and maintain; i.e., cutting edges sharp, handles sanded and tightly fitted, clean of rust and foreign material; fires tools to be used only for suppressing forest fires. Each logging operation shall be provided with one firefighting tool per man to equip 100 percent of the personnel engaged in Contractors operations. Approved firefighting tools are: double-bit axe; brushhook; pulaski; McLeod; and round-pointed, size 0 or larger lady shovel. The proper tool mix will be stipulated in the Timber Sale Fire Plan. These tools are required separate from, and in addition to, the tools required in the section, "Fire Tools on Equipment," and in K-H.2.1 Fire Guards. Fire tools for firefighting purposes for use of personnel engaged in all phases of the logging operations shall be located in the active operating area of the contract or as stated in the fire plan.

BURNING OF REFUSE

No camp refuse of slash or other debris, such as that resulting from clearing around camps or on right-of-way, shall be burned without the written consent of the Forest Service.

SPARK ARRESTERS AND MUFFLERS

Each internal combustion engine shall be equipped with a spark arrester qualified and rated under USDA Forest Service Standard (Spark Arrester Guide) 5100-1a or the latest revision of Society of Automotive Engineers "medium size engine, SAE recommended practice J350" 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 purchased after 6/30/77 which must meet the performance levels set forth in the Society of Automotive Engineers "multi-positioned small engine exhaust fire ignition standard, SAE recommended practice J335B" as now or hereafter amended. Those purchased prior to the above date shall be equipped with an approved spark arrester/muffler containing a 0.023 inch mesh screen in good condition.

(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 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.

POWERSAWS

During periods of use, each powersaw operator shall have readily available for use one long-handled round-pointed shovel and one chemical-pressurized fire extinguisher of not less than 8-ounce capacity by weight.

Muffler, extinguisher, and shovel shall be maintained in good working order at all times. Any fueling or refueling of a powersaw shall be done in an area which has been cleared of material which will carry fire. Powersaws shall be moved at least 10 feet from the place of fueling or refueling before starting.

FIRE TOOLS ON EQUIPMENT

Each internal combustion fuel carrying truck, loader, skidder, heavy truck, and tractor shall be provided with one long-handled round-pointed shovel, and one 5-pound capacity ABC dry chemical fire extinguisher. Passenger carrying vehicles, including light pickup trucks shall be equipped with one (1) long-handled round-pointed shovel and one (1) ABC chemical fire extinguisher not less than 2 1/2 pounds capacity. Shovels and fire extinguishers shall be so mounted as to be readily reached from the ground.

INSPECTION REQUIREMENTS FOR INTERNAL-COMBUSTION ENGINES

Each internal-Combustion motor vehicle or item of equipment shall be inspected and approved in advance of use by Forest Service.

Contractor shall require that all persons engaged in Contractor¿s operations submit all internal-combustion motors and equipment for inspection and approval prior to use in Contractor¿s operations on National Forest lands. Vehicles and equipment not approved for use shall be repaired to meet existing standards, re-inspected, and approved by Forest Service prior to use.

BLASTING

Use of fuses in blasting shall not be permitted. A long-handled round-pointed shovel and 5-gallon backpack pump with attached hand pump filled with water shall be available at all times. During periods when Fire Precaution Plan B or C is in effect, a fire guard shall remain on duty for at least one hour after blasting is finished and shall be equipped with a shovel and backpack. Blasting is prohibited under Fire Precaution Plan D. (K-H.2.2)

TRACTOR LIGHTS

All crawler tractors and rubber-tired skidders suitable for fire suppression work, and with power source, shall be equipped with two (2) factory type headlights and one (1) backup light, or brackets mounted for portable self-contained battery operated lights. These portable lights shall be furnished and maintained by the Contractor at a location agreed by the Forest Service.

CABLE YARDING

Tail and corner blocks shall be located to prevent cables from rubbing against trees, snags, and down logs. Areas adjacent to tail and corner blocks shall be cleared of flammable material within a 5-foot radius. One 5-gallon standard backpack water container (filled at all times and with hand pump attached), one shovel, and one pulaski, shall be maintained within 10 feet of each block.

GAS AND OIL STORAGE AND SERVICE AREAS

The location of equipment service areas and gas and oil storage areas shall be approved in writing by Contracting Officer. All areas shall be cleared of brush, litter, grass or other flammable debris for a radius of 50 feet.

WELDING

An area within a 10 foot radius shall be cleared down to mineral soil before welding operations are started. Prior to welding, Contractor shall have available a round-pointed long-handled shovel, a 5-gallon backpack pump filled with water with attached hand pump, and a 5-pound fire extinguisher at each welding site. A fire guard will remain on duty for at least one (1) hour after welding is completed during periods when Fire Precaution Plan B or C is in effect. Welding is prohibited under Fire Precaution Plan D.

C7.21 - FIRE GUARDS *(05/2008)*

Contractor shall designate at least one representative to train and supervise each woodsworking group of men in fire prevention, detection, and suppression. Each such representative shall be named in the fire plan.

To prevent, detect, and suppress fire, Contractor shall provide a trained fire guard at each operating area where power-driven equipment has been operated during the day. The fire guards shall constantly perform their duties during operating hours and for three (3) hours after the woodswork stops for the day, when the Fire Precaution Plan is Plan B, C, or D (K-H.2.2).

Fire guard service on one operating area shall satisfy the requirements on adjacent areas if the travel time with available transportation is not in excess of ten (10) minutes to any of the other areas requiring such service.

Each fire guard shall be physically able, vigilant, and trained to prevent, detect, and report any fires and to promptly and efficiently take suppression action with available required firefighting equipment and men on any fire that starts on contract area. Each fire guard shall be equipped with a vehicle and a fire tool cache consisting of a cache box, 2 four-to-five gallon backpack pumps filled with water, 2 size 0 shovels, 2 Pulaskis, and 2 McLeod tools maintained in serviceable condition.

C7.22 - EMERGENCY FIRE PRECAUTIONS *(07/2020)*

Purchaser will restrict operations in accordance with the attached Emergency Fire Precaution Schedule. The Contracting Officer shall inform the Purchaser of any changes in the Industrial Fire Precaution Plan. The procedure for the Contracting Officer to notify the Purchaser of a change shall be stated in the Fire Prevention and Control Plan required by B7.1. The Contracting Officer may, after consultation with the Forest Supervisor, adjust the predicted Industrial Fire Precaution Plan for local weather conditions on Sale Area. Changes in the predicted Industrial Fire Precaution Plan shall be agreed to in writing.

See Table

Emergency Fire Precaution Schedule	
Fire Restriction/ Closure "Stage"	
Restriction Levels	Industrial Fire Precaution Plan
No Restrictions	A
Stage I	B
Stage II	C
Partial/ Forest Closure*	D
Red Flag Warning (Issues by National Weather Service)	D

INDUSTRIAL FIRE PRECAUTION PLAN – DESCRIPTION

Plan	Item	MST (Mtn. Standard Time)	MDT (Mtn. Daylight Time)
A	Normal Fire Precautions (CT7.2) No fire guard required.		
B	Normal Fire Precautions (CT7.2) except designated areas for smoking and warming or cooking fires requires a written permit. Purchaser will provide fire guard (CT7.21).		
C	No smoking, warming or cooking fires are permitted at any time. Purchaser will provide fire guard (CT7.21).		
	All power saws except for chainsaws used for limbing on landings cleared to mineral soil will shut down: Mechanical fellers except for mechanical fellers equipped with hydraulic shears will shut down:	9:00 am to 8:00 pm	10:00 am to 9:00 pm
	Shutdown all machine treatment of slash; mechanical equipment used for shearing, bunching or delimbing; skidding; cable yarding; blasting and clearing:	12:00 noon to 8:00 pm	1:00 pm to 9:00 pm
	Welding, metal cutting on cleared mineral soil will shut down:	12:00 noon to 8:00 pm	1:00 pm to 9:00 pm
	All chainsaws used for limbing on landings cleared to mineral soil will shut down:	2:00 pm to 8:00 pm	3:00 pm to 9:00 pm
	Loading on landings cleared to mineral soil will shut down:	2:00 pm to 8:00 pm	3:00 pm to 9:00 pm
	Log hauling trucks must be to a surfaced road by:	2:00 pm	3:00 pm
	Logging operation may continue after:	8:00 pm	9:00 pm
	Operations on mineral soil involving road excavation, watering, grading, surfacing, rock crushing, and/or other equipment maintenance may continue.		
D	Shutdown all operations; except operations on mineral soil involving road excavation, watering, grading, gravel surfacing, and rock crushing may continue with special Forest Service permit. Purchaser will provide fire guard (CT7.21).		

C7.23 - COMMUNICATIONS *(05/2008)*

Contractor shall furnish a serviceable telephone, radio-telephone or radio system connecting each operating side with Contractor's headquarters. A radio-equipped fire patrolman vehicle will satisfy this requirement if in operation during the time required. When such headquarters is at a location which makes communication to it clearly impractical, Forest Service shall accept a reasonable alternative location. The communication system shall provide prompt and reliable communications between Contractor's headquarters (or above stated alternative) and Forest Service via commercial or Forest Service telephone. The communications system shall be operable during Contractor's Operations in Fire Precautionary Period described in A.12 and during the time fire patrolman service is required.

In the event no other means of communications will provide for prompt and reliable reporting of a fire, the Contracting Officer may allow use of a Forest Service two-way radio or Forest Service frequencies for emergency use only. The use of Forest Service frequencies will be by a written memorandum of agreement between the Contracting Officer and Contractor.

C8.21 - CONTRACT TERM ADJUSTMENT *(07/2016)*

"Contract Term Adjustment" (CTA) 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 (2) in this subsection.

To qualify for such adjustment, contractor shall give written notice of the lost time not later than 30 days after the end of the 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 the Forest Service considers as qualifying for the adjustment. Lost parts of days shall be disregarded in computing time lost. The three circumstances qualifying for a CTA are:

(1) Contractor experiences delay in starting operations scheduled under B6.31 or interruptions in active operations, either of which stops such operations for 10 or more consecutive days during a normal operating season due to causes beyond the 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. Operations subject to these causes include:

(i) Removal of the included timber from contract area through curtailment in felling and bucking, yarding, skidding, loading, hauling, or road construction; or

(ii) Performance of stewardship projects shown in A4c.

(2) Causes described in paragraph (1) substantially affect the disposition or processing of included timber during the 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, the CTA shall not extend for more than 12 consecutive months.

(3) (i) Contracting officer requests the contractor, in writing, to delay or interrupt operations during the normal operating season for any purpose other than suspension under B4.4 or B9.3; or

(ii) Contractor suffers a delay or interruption of the contractor's operations described in paragraph (1)(i) or (ii) because of a fire emergency closure ordered by Forest Service (or another agency on its behalf), and the total of such lost time is 10 or more days during any normal operating season.

If the termination date is adjusted, as described in this subsection, and later extended under B8.23, the appraisal for the extension shall be made as of the unadjusted termination date, but the date on which the new rates become effective, if higher than current contract rates immediately prior to the termination date, shall be the adjusted termination date.

C8.64 - DEBARMENT AND SUSPENSION CERTIFICATION *(03/2018)*

Pursuant to 2 CFR 180 and 2 CFR 417, Contractor shall certify and obtain certifications from its Subcontractors regarding debarment, suspension, ineligibility, and voluntary exclusion, including additional Subcontractors obtained after award of this contract. 'Subcontractors' are participants in lower tier covered transactions.

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.

Contracting Officer shall provide a copy of Forms AD-1047, Certification Regarding Debarment, Suspension and Other Responsibility Matters-Primary Covered Transactions, and AD-1048, Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions to the Contractor.

Contractor shall complete form AD-1047 and provide to the Contracting Officer upon request.

Contractor shall require each Subcontractor to complete form AD-1048 and provide to the Contracting Officer upon request.

C8.66# (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.

C9.1 - PERFORMANCE BOND *(08/2021)*

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 A17, unless the amount is adjusted as provided in C9.11 or B9.13. In lieu of surety bond, Contractor may deposit into a Federal Depository, as directed by Forest Service under B4.21, and maintain therein, cash in the dollar amount stated in A17.

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.

C9.11 - BOND REDUCTION *(08/2021)*

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 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 B9.5.