

Table Pursuant to C2.35# (Option 1) - Individual Tree Designation, (06/2008)

Subdivision	D x D Spacing	<u>1/</u> Description of Included Timber (See Other Requirements)
1	16 feet	All live Douglas fir, Western Hemlock, and Incense Cedar that is within the specified spacing of a live Douglas fir, Western Hemlock, and Incense Cedar with a larger stump diameter. All other species are non-included timber.
2	20 feet	All live Douglas fir, Western Hemlock, and Incense Cedar that is within the specified spacing of a live Douglas fir, Western Hemlock, and Incense Cedar with a larger stump diameter. All other species are non-included timber.
12,13,14, 15,16	NA	All live Douglas-fir, Western Hemlock, and Incense Cedar not marked with orange tree marking paint above and below stump height.

Other Requirements

All	Purchaser agrees to the following measures: <ol style="list-style-type: none"> 1. Down timber from adjacent private land will be protected from cutting and kept separate from Included Timber. 2. Boundary trees are designated with orange tree marking paint and blue boundary cards. 3. Boundary trees with the larger stump diameter will be incorporated into the DXD spacing for each subdivision. 4. If purchaser premarks units, trees within 50 feet of Forest roads will be marked on the back side of the tree facing away from road, unless waived by Forest Service.
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Definitions:

1. D x D: Designation by Description.
2. D x D Stump Height: Measure at 4 inches above the ground on the uphill side of the tree. When obstacles are present on the uphill side of the tree measure 4 inches from the obstacles.
3. Minimum stump height left for inspection purposes will be 4 inches.
4. D x D Diameter: Measure at the DxD specified stump height 4 inches, outside the bark with a diameter tape that is perpendicular to the bole of the tree. Stumps missing all or part of their bark will be measured as presented. Measure to the nearest tenth of an inch.
5. D x D Spacing: Measure slope distance at 4 inches above the ground from the closest point between trees. This does not need to be measured on the uphill side of the tree.
6. Down Tree: a) An entire tree lying on the ground with an attached root wad; b) a root sprung tree with broken and exposed roots showing above the ground (root sprung trees must remain identifiable after logging).

In accordance with Contract Provision C3.47#, Abnormal Delay(09/2004)

Not withstanding Contract Provision

REMOVAL SCHEDULE

Included Timber	Time Limits
ALL.	60 days after felling is started.
All timber decked during construction clearing.	60 days after felling on each Specified Road constructed by Purchaser is initiated.
Timber decked during road construction.	60 days after Forest Service authorizes Purchaser to use roads pursuant to B5.2.

C5.12# - USE OF ROADS BY PURCHASER. (6/99) Purchaser's use of existing roads identified on Sale Area Map by the following codes is prohibited or subject to restrictive limitations, unless agreed otherwise:

Restricted Road List

Road Number	Road Name	Termini		Map Legend	Description of Restrictions
		From	To		
2653 ¹ /	Boulder Creek	Hwy 126	2653720	R	1/ Haul on Road 2653 is not allowed evenings or weekends, or during long holiday periods (Memorial Day, 4 th of July and Labor Day), unless waived by Contracting Officer.
2653720 ¹ /		2653	2653724	R	
2653724 ¹ /		2653720	Unit 2 Bdy	R	

**PLANS AND CRITERIA PURSUANT TO C5.1# (OPTION 1) -TEMPORARY ROAD AND LANDING
CONSTRUCTION (06/2008)**

1. The Forest Service and Purchaser shall agree to temporary road locations and clearing limits prior to construction.
2. Temporary roads shall be constructed to a minimum width to accommodate logging equipment and shall be located to minimize the number of trees cut while minimizing the extent of ground impacted by construction.
3. All trees to be cut by the purchaser shall be identified and designated for cutting by the Forest Service prior to cutting.
4. On native running surfaces, hauling shall be restricted to when dry conditions exist. Hauling would be restricted from October 15 thru May 31.
5. Clearing and grubbing debris shall be scattered in areas designated on the ground by the Forest Service.
6. Straw bales or other agreed upon erosion control devices shall be placed in ditches, as needed, to prevent sediment from entering stream courses. All straw bales will be certified weed free.
7. At the end of each season and/or when purchaser is done with the temporary road and/or termination of contract, purchaser shall install drivable drain dips and water bars and close the road to normal vehicular traffic, B6.63.
8. Purchaser shall effectively block temporary roads to normal vehicular traffic where feasible under existing terrain conditions and existing resource needs. Methods used, shall be determined based on existing conditions and needs.
9. Reopening of temporary roads may occur between May 31 and October 15.
10. Other erosion control measures, to stabilize the road and prevent erosion on slopes over 8%, may require a structure approximately every 100 feet. Seed and fertilizer for the road will be in accordance with C6.6.

PLANS AND CRITERIA PURSUANT TO C5.1# (OPTION 1) -TEMPORARY ROAD AND LANDING
CONSTRUCTION (06/2008)

(Continued)

11. Culverts shall be placed in all stream courses, along/across temporary roads. Culverts shall be corrugated metal pipe and shall not be less than 18" in diameter.
12. Culvert installation in live streams shall take place between July 1 and August 15, C6.315#. During culvert installation in live streams, the streams will be temporarily diverted around the site and biodegradable geo-textile cloth will be placed downstream from the site to minimize transport of sediment, unless other methods are agreed to in writing with the Forest Service.
13. Culverts shall not be left in place after purchasers operations are completed.
14. Landings and helicopter service landings shall be designed in accordance to B6.422, shall be as small as operationally feasible, and shall be agreed to in writing by the Forest Service.
15. All landings will be designed to provide adequate drainage to protect the adjacent resources.
16. Areas to be covered with fill material shall be cleared of logs and cull woody material over 4 inches in diameter and/or 8 feet long.
17. Where side slopes exceed 45 percent, waste material shall be end-hauled to locations authorized in writing by the Forest Service.
18. Placement of rock ballast shall not take place unless mutually agreed to in writing by the Forest Service.
19. Rock ballast shall not exceed 4 inches in depth, unless mutually agreed to in writing by the Forest Service. Landing cut and fill slopes shall be left at no steeper than 1 ½ to 1 upon completion of sale operations.
20. Any culverts replaced shall be removed and disposed of by Purchaser off of National Forest lands.

ROAD MAINTENANCE REQUIREMENTS SPECIFICATION CODES TABLE PURSUANT TO
C5.31# - ROAD MAINTENANCE REQUIREMENTS (7/01)

Column No.	Heading	Entry	Explanation
	Any	Blank	Except as otherwise described, no entry indicates Purchaser is not authorized or required to perform the work item(s).
	Any	RC	This work requirement applies only when haul of sale related construction materials occurs.
2	Special Project Specification	Number	Entry indicates Special Project Specification which applies.
3	Travel Way	EX	Purchaser shall maintain the traveled way to the width existing upon entry, or at the completion of Specified Road work.
		Numbers	Purchaser shall maintain the traveled way to the standard width indicated by the entry, plus curve widening, in accordance with Section T-811. If required, the road template shall be shaped to this width and to the designated cross slope before haul and during recurring maintenance.
		IS, C, OS, F, or AI	Cross slopes are designated as: IS (Inslope), C (Crown), OS (Outslope), F (Flat), AI (As Is).
		A or B	If compaction is required.
4	Brush and Log Out	Numeric & R and or L	Purchaser shall remove brush for specified width on either or both the right (R) side or left (L) side of road.
		As Staked	Limits of brushing are as staked or marked in the field.
		OPT	Purchaser may use hand or mechanical means of brushing.
		H	Only hand brushing may be used.

ROAD MAINTENANCE REQUIREMENTS SPECIFICATION CODES TABLE PURSUANT TO
C5.31# - ROAD MAINTENANCE REQUIREMENTS (7/01)

Column No.	Heading	Entry	Explanation
5	Surfacing	Aggregate Grading	Purchaser shall place surfacing on roads listed according to the grading indicated.
6	Dust Abatement	OPT	Product selection is Purchaser's choice from those listed in Section T-812.
		Product Abbr.	Unless otherwise agreed, Purchaser is restricted to product listed corresponding to the abbreviation shown in Section T-812; (i.e., LigS = Lignon Sulfonate) Application rates are estimated amounts.
		EX	Purchaser shall abate dust on the existing width
		Numbers	Purchaser shall abate dust to the width indicated by entry.
7	Seasonal Maintenance	W	Waterbars and/or crossditching shall be required prior to expected seasonal precipitation.
		B	Entrance barriers shall be installed by Purchaser prior to nonuse periods.
8	Snow Removal	TS	Snowplowing authorized for Purchaser's Operations without recreation access being provided per Section T-803 requirements.
		JU	Snowplowing authorized, but must provide for recreation joint use per Section T-803 requirements.
		Blank	Snowplowing is not authorized. Forest Service may authorize plowing by permit when not in conflict with other uses.
9	Post Haul	PR	PR denotes that work is Purchaser's Responsibility to perform.

C6.315# - SALE OPERATION SCHEDULE (06/94)

Subdivision	Operating Conditions	Purpose
ALL	Restrict groundbased yarding during wet weather. Operations could be allowed outside normal operating season if site conditions are met.	Minimize impacts to soil resource
ALL	Restrict all operations during approximately the 3 rd week in October, including the Friday before, through the end of the Friday following.	Quality Elk Hunt

TABLE PURSUANT TO C6.41# - SPECIFIC REQUIREMENTS (01/00)

<u>FELLING METHODS</u>	<u>Subdivision</u>
1. Directional Felling shall be utilized to protect by falling away from designated streams, buffers, and residual trees.	ALL
<u>FELLING EQUIPMENT</u>	<u>Subdivision</u>
The use of tree jacks, wedges or tree lining may be required, however, the required methods used shall not be limited to these options.	ALL
Mechanical felling and prebunching is permitted on slopes less than 30%. Mechanical felling and prebunching on slopes greater than 30% is permissible upon a written agreement with the Forest Service.	ALL

TABLE PURSUANT TO C6.42# - YARDING/SKIDDING REQUIREMENTS (04/2003)YARDING/SKIDDING REQUIREMENTSSubdivision

<p>A/. Prior to ALL operations commencing, purchaser shall submit a plan of operations, specifying, but, not limited to:</p> <ol style="list-style-type: none"> 1. haul road access to and from unit, 2. all proposed temporary spur roads, 3. landings, 4. skid trails and roads, 5. decking areas. 	ALL
<p>B/. <u>Ground based yarding permitted/restricted to predesignated and approved skidtrails in subdivisions and portions of subdivisions as designated on Sale Area Map.</u></p> <ol style="list-style-type: none"> 1. No more than 2 mainline skidtrails or skidroads shall radiate from landings. Secondary or feeder skidtrail or skidroad use will be maximized in order to minimize the number needed and to avoid excessive compaction and/or disturbance. 2. No ground based yarding across designated streamcourses. 3. Skid trails will be spaced no closer than 200 feet, from center line to center line. 4. Ground based yarding equipment will be equipped with an arch and a winch line, a minimum of 75 feet. 5. Yarding and skidding is restricted to slopes 30% or less. Short, isolated pitches up to 40% may be approved. 	ALL
<p>C/. A <u>ground based yarding system</u> capable of transporting logs 500 feet, utilizes an arch or equivalent system of elevating the lead end of the log and a cable drum system w/ a bull line. A track mounted skidder or yarding cat.</p>	ALL
<p>D/. Prebunching of the included timber is allowed.</p>	ALL
<p>E/. Yard tops attached is required for all subdivisions</p>	ALL
<p>F/. Ground based equipment will be restricted from operating within 60 feet of the stream.</p>	1

APPLICATION SCHEDULE PURSUANT TO C6.6# - EROSION CONTROL AND SOIL TREATMENT BY PURCHASER (7/01)

PAYMENT UNIT OR UNIT NUMBER	AREAS	SEED		FERTILIZER		MULCH	
	A) SKID TRAILS B) FIRELINES C) TEMP. ROADS D) LANDINGS E) OTHER	APPLICATION		APPLICATION		APPLICATION	
		SPECIES	LBS/AC	TYPE 2/	LBS/AC	TYPE 3/	LBS/AC
		1/ MIXTURE					
ALL	A, C, D.	1/		N/A	N/A	N/A	N/A

1/ Seed mixture will be any of the following: winter wheat, spring wheat, or triticale. Seed will be certified weed free (Blue tag). Application rate will be 30 lbs/acre. Purchaser or sub-contractor that does the actual purchase of the seed will coordinate the acquisition of the seed with the Forest Service.

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

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

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

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

For mixtures of seed, each ingredient in excess of 5 percent must be listed with its percentage by weight and its germination percentage. Legumes must be inoculated with nitrogen fixing bacteria before planting. The label must show the expiration date of the inoculant. All seed treated with a fungicide or pesticide must be labeled that it is "treated" giving the name of the chemical used, and an appropriate warning or a caution statement.

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

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

4/ Cable skid trails/roads used by Purchaser that have a mineral soil exposed for lineal distances of 100 or more feet and exceed a slope of 15% shall be water barred. Waterbars will be spaced every 100 feet on slopes less than 15% and 50 feet on slopes greater than 15%. Treated areas shall span the total width of compaction. Water barring shall be kept reasonably current and shall be done during Normal Operating Season unless otherwise agreed.

DETAILED SLASH DISPOSAL PLAN
Norse Timber Sale
Willamette National Forest, McKenzie River Ranger District

- In accordance with Contract Provisions C6.74, Slash Treatment Requirements and Detailed Slash Disposal Plan
- Not withstanding Contract Provision C6.74

Purchaser responsibilities are as follows:

A. Construction and size of landing piles

Substantially all created slash at least 1 inch in diameter on the small end and at least 3 feet in length shall be piled as compact as possible and free of soil and rocks. Landing piles shall be a minimum of 8 feet in height and 10 feet in diameter. Height of piles should not exceed 20 feet nor be greater than the pile diameter. The area around each pile shall be cleared of all created slash a minimum of 6 feet. All pieces extruding from piles shall be bucked off to facilitate covering after construction.

B. Location of all landing piles

Slash piles will be located to minimize damage of standing green trees and snags during burning. Unless otherwise agreed, this will be construed to be at least 15 feet from adjacent piles and any live tree dripline or equidistance from boles of standing green trees or snags. Piles should not be built on tree stumps or heat sinks. Piles should not be located in the bottom of draws, streams, or ditches and should not obstruct roadways.

C. Yarding tops attached to the last log: Subdivision #1, #12, #13, #14, #15, #16, and #2. Tops left attached to the last log pursuant to C6.42# will be yarded to the landing and shall be piled after being severed from the attached log. Pile created slash that is at least 1 inch in diameter on the small end and at least 3 feet in length. Unless otherwise agreed to in writing, piling of slash, including tops shall be done in the same normal operating season in which timber is yarded from the area. Location of piles and method of piling shall be in accordance with the previously mentioned specifications in sections A & B.

D. Forest Service shall cover and dispose of all piles.

TRAFFIC CONTROL PLAN AND SPECIFICATIONS PURSUANT TO B6.33 SAFETY

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

Part I. Signing and Other Warning Methods:

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

<u>MINIMUM LETTER SIZE AND LEGEND</u>	<u>MINIMUM SIZE AND SHAPE</u>	<u>WHEN AND WHERE REQUIRED</u>
1. LOGGING OPERATIONS NEXT <> MILES (4" letters)	24" (rectangle) 36"	Min. 100 ft. outside of any continuous work areas, on roads listed in C5.31# and trails listed in Part II.
2. LOGGING OPERATIONS (3" letters)	24" (diamond) 24"	To be used in conjunction with "Logging Operations Next <> Miles" and where work area is not continuous.
3. FOR LOGGING USE ONLY (3" letters)	24" (diamond) 24"	Required where roads listed in C5.31# and temporary roads intersect with C5.31# roads. Install a cross ditch to discourage use when sign is covered or removed for extended periods.
4. TRUCKS (4" letters)	24" (diamond) 24"	At critical intersections on roads listed in C5.31# when traffic is heavy or otherwise exceeds volumes stated in Part II below. Remove or cover when the sign is not applicable.
5. END LOGGING OPERATIONS (4" letters)	24" (rectangle) 36"	Use in conjunction with "Logging Operations Next <> Miles" and "Logging Operations."
6. TREE FELLING AHEAD (3" letters)	24" (diamond) 24"	Required 200 feet in advance of danger area where timber is being felled adjacent to all roads, including temporary roads, and trails.
7. ROAD MACHINERY AHEAD (3" letters)	24" (diamond) 24"	Required at least 200 feet in advance of Purchaser road maintenance operations on roads listed in Schedule C5.31#.

TRAFFIC CONTROL PLAN AND SPECIFICATIONS – BT6.33 Safety (continued)

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

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

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

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

Purchaser shall furnish flag personnel and advance warning signs when cable or helicopter logging above roads or trails, felling adjacent to roads or trails, where logs being bucked may roll into roads or trails, and in areas where fallout from blasting may occur. On roads listed in CT5.31# and temporary roads, Purchaser may temporarily block the road in lieu of furnishing flag personnel.

(b) Barricades. On roads listed in C5.31#, if Purchaser's Operations cause the traveled way or road shoulders to be constricted overnight, or longer, by such obstructions as decked logs, parked equipment, or piled slash, Purchaser shall place barricades on both sides of the encroaching obstruction to safely channel traffic around such obstructions. Barricades shall remain in place until the obstruction is removed.

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

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

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

On roads listed in C5.31#, Purchaser may be authorized to install temporary gates, barricades (except cables), or natural barriers. The devices must be installed with the necessary hazard markers, be reasonably passable by Forest Service, and be removed prior to acceptance of the subdivision being served by the road.

TRAFFIC CONTROL PLAN AND SPECIFICATIONS – BP6.33 SAFETY (continued)

Part II. Specific Requirements:

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

Name

Name

Title

Title

Date

Date