

PROSPECTUS

SCALE SALE

ORAL AUCTION

GRANTS PASS RESOURCE AREA
JOSEPHINE MASTER UNIT

Medford Sale # ORM07-TS-2025.0012
June 26, 2025 (SQ)

Rotors Up Timber Sale
Josephine County, P.D.

BID DEPOSIT REQUIRED: \$49,200.00

All timber designated for cutting in unnumbered lot NE $\frac{1}{4}$ NE $\frac{1}{4}$, unnumbered lot NW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, unnumbered lot NE $\frac{1}{4}$ NW $\frac{1}{4}$, unnumbered lot NW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$ SW $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, Sec. 4, T. 34 S., R. 5 W.; unnumbered lot NE $\frac{1}{4}$ SE $\frac{1}{4}$, unnumbered lot NW $\frac{1}{4}$ SE $\frac{1}{4}$, unnumbered lot SW $\frac{1}{4}$ SE $\frac{1}{4}$, unnumbered lot SE $\frac{1}{4}$ SE $\frac{1}{4}$, Sec. 5, T. 34 S., R. 5 W., Willamette Meridian.

Approx. Number Merch. Trees	Est. Volume MBF 32' Log	Species	Est. Volume MBF 16' Log	Appr. Price Per MBF*	Est. Volume Times Appraised Price
20,370	5,124	Douglas-fir	6,286	\$78.20	\$491,565.20
12	4	ponderosa pine	6	\$29.00+	\$174.00
35	3	Incense-cedar	5	\$25.50+	\$127.50
20,417	5,131	Totals	6,297		\$491,866.70

*Stumpage values have been determined by market value estimates and analytical appraisal methods were used to compute the appraised price. Additional information concerning the appraised price is available at the Medford District Office.

+Minimum Stumpage values were used to compute the Appraised Price/MBF (10% of Pond Value). Reduced Douglas fir value by \$0.63 per mbf to pay for deficit species ponderosa pine and incense-cedar.

TIMBER AUCTION LOCATION – The timber auction will be held at the Medford Inter-agency Office, located at 3040 Biddle Road, Medford, Oregon, at 9:00 a.m. on Thursday, June 26, 2025.

Bidders will be restricted to bidding on a unit (MBF) rate of the Douglas-fir volume. All other species will be sold at appraised price per unit (MBF). The minimum bid increment will be \$0.10 per MBF.

The Rotors Up timber sale was cruised using the PCMTRE and 3P cruise methods. The 268 acres of PCMTRE were cruised using a 40 BAF and a 1 in 8 sampling frequency on 137 plots installed on a grid pattern. The Douglas-fir had an average plot tree count of 3.1 and a VBAR of 188.2. The 2 acres of ROW were cruised using the 3P cruise method for all species.

Approximately 0 trees which are nonmerchantable are designated for cutting. Approximately 0% of the sale volume is salvage material. With respect to merchantable trees of all conifer species: the average tree is 17.4 inches DBHOB; the average gross merchantable log contains 83 bd ft.; the total gross volume is approximately 7305 M bd. ft; and 86% recovery is expected. (Average DF is 17.4 inches DBHOB; average gross merchantable log DF contains 83 bd. ft.)

LOG EXPORT AND SUBSTITUTION RESTRICTIONS - All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export under the United States in the form of unprocessed timber and is prohibited from use as a substitute for exported private timber.

All logs will be painted and branded at the landing and accounted for in accordance with Section 41 and 44 of the contract. If Sale Area is within a State that maintains a log brand register, brands shall be registered with the State. Purchaser shall use assigned brand(s) exclusively on logs from this sale until the Authorized Officer releases the brand(s). **The Purchaser shall be required to label with a permanent ink marker, each load ticket with the corresponding unit number, as directed by the Authorized Officer.**

CUTTING AREA – The sale contains a total of three (3) units totaling two hundred seventy (270) acres. Two (2) units containing two hundred sixty-eight (268) acres must be partial cut. One (1) right-of-way unit containing two (2) acres and one (1) helicopter log landing must be clear-cut.

CUTTING TIME - Contract duration will be thirty-six (36) months for cutting and removal of timber.

ACCESS - Access to the sale area is available via a public, state, and county road system to the contract area; and existing BLM roads.

ROAD MAINTENANCE – The Purchaser will be required to maintain 4.00 miles of existing BLM and private roads listed in Exhibit D6, which includes all permanent and temporary roads to be constructed. An allowance in the amount of \$24,601.52 has been made for the final maintenance of these roads. The Purchaser will be required to pay an estimated rockwear fee of \$19,108.25 for the use of the BLM rocked roads. BLM will maintain the 3.03 miles of the existing BLM (BST) roads listed in Exhibit D6. The Purchaser will be required to pay an estimated maintenance fee of \$15,645.53 for the use of the BLM maintained roads.

ROAD CONSTRUCTION – The Purchaser will be required to construct 15+54 stations permanent road. Additional information is available in the timber sale prospectus.

DECOMMISSIONING – An allowance in the amount of \$1,047.60 has been made for road decommissioning. Decommissioning work to be performed is described in Section 3500 of Exhibit D2, Decommissioning Worklist in Exhibit D4, Decommissioning Maps in Exhibit D5, and Estimate of Quantities in Exhibit D6.

SOIL DAMAGE PREVENTION - Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, mechanical ground based harvesting, ground based yarding, landing rehabilitation, machine piling, road and landing construction, and road decommissioning shall be restricted to periods of low moisture (dry conditions). Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks. Low soil moisture limits will be determined by the Authorized Officer.

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, log haul shall not be conducted on natural surface road 34-5-4.0 or rocked roads 34-5-2.1 and 34-5-3.2 that receive one-half (½) inch or more precipitation within a twenty four (24) hour period. Haul shall not resume for a minimum of forty eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. The Purchaser may elect, at their own expense, to apply rock surfacing to these roads to bring them up to wet weather haul standards, as approved by the Authorized Officer.

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, log haul shall not be conducted

on hydrologically connected natural surface or rocked roads during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud splash or tire slides, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer.

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, the Purchaser shall, prior to October 15 of the same operating season, winterize and rehabilitate landings, road construction, and other areas of exposed soils by properly installing and/or using water bars, berms, sediment basins, gravel pads, hay bales, small dense woody debris, seeding and/or mulching, to reduce sediment runoff and divert runoff water away from stream channels, headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes as directed by the Authorized Officer.

EQUIPMENT REQUIREMENTS - A helicopter equipped with a dropline with a minimum length of two hundred (200) feet. A piece of equipment capable of sub-soiling to a depth of twelve (12) inches will be required for fully decommissioning: all natural surface landings and constructed roads as shown on Exhibit A. A fire engine of three hundred (300) gallons or more capacity with five hundred (500) feet of 1½ inch hose (must be adequate length to reach two hundred (200) feet beyond active work sites), six (6) 1½ inch wyes, six (6) 1½ inch to 1 inch reducers, three (3) 1½ inch nozzles and three (3) 1 inch nozzles will be required for fire prevention and control. Each fire engine shall be equipped with a pump capable of delivering a minimum of forty (40) gallons per minute (gpm) water flow at one hundred fifty (150) pounds per square inch (psi) engine pressure through fifty (50) feet of 1½ inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable.

SLASH DISPOSAL - Slash disposal will consist of a combination of lop and scatter; hand pile, cover, and burn hand piles; pile, cover, and burn landing decks; and cover and burn roadside piles as described in SD-1 and SD-2 of the Special Provisions. A post logging assessment shall be conducted to determine treatment needs in all units. The initial slash disposal appraisal described in SD-5 prescribed two hundred twenty-eight (228) acres of lop and scatter; twenty-eight (28) acres of hand pile, cover, and burn; one and one-half (1.5) acres of machine pile, cover, and burn landing decks; and two (2) acres of cover and burn roadside piles.

CONTRACT TERMINATION - A Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to comply with the Endangered Species Act, or comply with a court order, or protect occupied marbled murrelet sites in accordance with the Standards and Guidelines of the Medford District Record of Decision (ROD) and Resource Management Plan (RMP). This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

BUYOUT SECURITIES - The purchaser will have the option of performing twenty-eight (28) acres of hand pile burn and mop up slash disposal requirements or contributing two thousand seven hundred fifty-one and 53/100 dollars (\$2,751.53) in lieu thereof. The option must be declared upon execution of the contract. The purchaser will have the option of performing three and one-half (3.5) acres of burn and mop up landing decks and roadside piles slash disposal requirements or contributing two hundred sixty and 05/100 dollars (\$260.05) in lieu thereof. The option must be declared upon execution of the contract. The optional contribution must be paid in installments payable in the same manner as and together with payments required in Section 3 of the contract.

PERFORMANCE BOND - A performance bond in the amount of 20% of the total purchase price will be required.

OTHER -

1. No extension of time beyond the normal 30 days will be granted for completing bonding and contract signing requirements.

2. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), or; (2) Comply with a stay or remedy issued by the Interior Board of Land Appeals or a court order, or; (3) Protect species which were identified for protection in accordance with management direction established in the ROD and RMP.
3. No harvesting, yarding, or road construction operations within units 4-1, 5-1, and 4.0 RW as shown on Exhibit A shall be conducted between March 1 and July 15 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest. This restriction may be extended if it can be shown from northern spotted owl protocol surveys that owls are nesting.
4. The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area between March 1 and September 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting northern spotted owls may not be allowed between March 1 and September 30, both days inclusive.

Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls have moved into harvest units. If northern spotted owls are detected in or adjacent to the units, operations would be restricted until northern spotted owl occupancy and nesting status has been determined. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations in writing. Without this approval, such operations are prohibited from March 1 through July 15 of each year.
5. No work in the stream channel shall be conducted between September 15 of one calendar year and July 1 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
6. No non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
7. In the Riparian Reserve portion of units 4-1 and 5-1 as shown on Exhibit E, the Purchaser shall create a total of thirty-two (32) snags via girdling. See Special Provision L-32 and Exhibit E for more details.
8. Directionally fall trees away from mining ditches, seeps, streams, plant sites, and other resource buffers as shown on Exhibit A.
9. Plant site requirements for road construction – Coordinate construction of Road 34-5-4.0 with the Authorized Officer and BLM Botanist at least two (2) weeks prior to ground disturbance.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA -

To access units: Take I-5 to exit 71 for Sunny Valley. Turn left onto Sunny Valley Loop. Turn

right onto Placer Rd., which turns into Grave Creek Rd and then turns into the 34-5-10 Rd. (from the initial turn onto Placer Rd, drive for about 7.3 miles). Turn left onto the 34-5-2.1 Rd. and drive for about 1.3 miles. Take a left onto the 34-5-3.0 Rd. and drive for about 0.8 miles. Take a left onto the 34-5-3.2 Rd. Before the end of the 34-5-3.2 Road, Unit 4.0 RW and the construction of Road 34-5-4.0 will be on the right side of the road. Unit 4.0 RW/34-5-4.0 road construction flagging leads to Unit 4-1 and the helicopter landing for Unit 4-1 and 5-1. Hike down and across the draw to access Unit 5-1.

ENVIRONMENTAL ASSESSMENT - An environmental assessment (DOI-BLM-ORWA-M070-2022-0007-EA) was prepared for this sale, and a Finding of No Significant Impact has been documented. This document is available for inspection as background for this sale at the Medford District Office.

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THIS IS A SALE PROSPECTUS ONLY. THESE ARE THE SPECIAL PROVISIONS AS THEY WILL BE WRITTEN IN THE CONTRACT. ATTACHMENTS MAY NOT INCLUDE ALL EXHIBITS REFERRED TO IN THE CONTRACT PROVISIONS. THE COMPLETE CONTRACT, INCLUDING ALL EXHIBITS, IS AVAILABLE FOR INSPECTION AT THE MEDFORD INTERAGENCY OFFICE.

Sec. 43. Wood Products Reserved from Cutting – The following wood products on this contract area are hereby reserved from cutting and removal under the terms of this contract and are retained as the property of Government.

- (A) AR-1 All timber on the Reserve Areas as shown on Exhibit A and all trees marked with a combination of orange paint, orange flagging, and/or posters which are on or mark the boundaries of the Reserve Areas.
- (B) AR-2 All timber on the Reserve Areas shown on Exhibit A and all blazed, painted, or posted trees which are on or mark the boundaries of the Reserve Areas, except approximately seventy-nine Douglas-fir, twelve ponderosa pine, and thirty-five incense-cedar trees marked for cutting heretofore by the Government with the absence of orange paint in Unit 4.0 RW shown on Exhibit A.
- (C) IR-1 Approximately five thousand sixty-four (5,064) Douglas-fir, nine hundred ninety-nine (999) ponderosa pine, five hundred ten (510) sugar pine, one thousand seven hundred four (1,704) incense-cedar, forty-eight (48) fir, thirty-two (32) oak, and one hundred thirty-four (134) other hardwood trees marked with yellow paint above and below stump height in units 4-1, and 5-1 as on Exhibit A.
- (D) IR-6 All ponderosa pine, sugar pine, incense-cedar, and Pacific yew trees in units 4-1 and 5-1 shown on Exhibit A.
- (E) IR-13 All trees greater than thirty-six (36) inches D.B.H.O.B that were established prior to 1850 in the contract as shown on Exhibit A that are cut for safety or operational purposes shall be retained on site as directed by the Authorized Officer.
- (F) IR-13 All existing snags and coarse woody debris in all units shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. All snags that are felled for safety reasons, and do not present a safety hazard on the ground, shall be retained on site.

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Sec. 44. Special Provisions – Purchaser shall comply with the special provisions which are attached hereto and made a part hereof unless otherwise authorized, in writing, by the Contracting Officer.

(A) LOGGING

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if he intends to cease operations for any period of seven (7) or more days.
- (2) L-2 Prior to the commencement of operations the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract, which shall include measures needed to ensure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan.
- (3) L-4 All trees designated for cutting shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.
- (4) L-5 All conifer trees eight (8) inches or larger D.B.H.O.B., which are not reserved shall be felled in all units shown on Exhibit A.
- (5) L-11 No trees may be felled into the seep, stream, wetland, mining ditch, or other resource buffers designated on Exhibit A.
- (6) L-12 In units 4-1, and 5-1, directionally fall trees away from the mining ditches shown on Exhibit A. During yarding, no trees shall be dragged into or across the ditches, unless approved by the Authorized Officer. Following yarding, if dirt is displaced into the mining ditches or if the banks of the mining ditches are disturbed, than any dirt displaced into the ditch shall be removed, and the banks of the mining ditch shall be recontoured if needed.
- (7) L-12 In units 4-1, 5-1, and 4.0 RW, directionally fall trees away from plant sites flagged with yellow and black striped flagging, and other resource buffers flagged

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with orange and black striped flagging, as shown on Exhibit A. Road construction and landings shall not be located within 100 feet of plant sites shown on Exhibit A, except as the helicopter landing and 34-5-4.0 road construction clearing limits are currently designated in the field. Changes to the designated road construction and/or helicopter landing clearing limits shall be approved by the BLM botanist and Authorized Officer prior to use. Notify the BLM botanist and Authorized Officer at least two (2) weeks prior to road and helicopter landing construction.

- (8) L-12 In the units shown on Exhibit A, felling and yarding shall be done in accordance with the requirements for the designated area listed below.

<u>Ground Based Harvest & Ground Based (Tractor) Yard Unit 4.0 RW</u>	<p>Mechanized felling operations are optional. All ground-based harvest units may be manually felled.</p> <p>Directional falling to lead and away from streams, seeps, unit boundaries, plant sites, and resource buffers shown on Exhibit A will be required.</p> <p>Mechanized felling operations shall be limited to slopes of thirty-five (35) percent or less.</p> <p>Mechanized felling operations are subject to seasonal operating restrictions as described in Section 44(A)(11)(L-19) and Section 44(A)(13)(L-20) of this contract.</p> <p>In unit 4.0 RW, the only cut trees that were cruised and appraised were those outside of the thinning unit boundaries. Any trees that need to be cut for landing and road construction rights-of-ways inside the thinning unit boundaries shall be modified into the sale, as approved by the Authorized Officer.</p>

<u>Helicopter Yard Units 4-1, 5-1</u>	All yarding will be done with an aerial system.

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<u>CONTINUED</u> <u>Helicopter Yard</u> <u>Units</u> 4-1, 5-1	<p>Log landing size shall not exceed one (1) acre, and all landings are to be approved by the Authorized Officer prior to construction. Potential landing locations are shown on Exhibit A, however alternative landing locations may be used with prior approval from the Authorized Officer.</p> <p>A dropline with a minimum length of one hundred fifty (150) feet is required.</p> <p>Logs to be yarded will be lifted vertically to a height above the adjacent leave trees without horizontal movement.</p> <p>All multiple log turns will be vertically lifted from a small enough radius to result in minimal damage to the residual forest stand as determined by the Authorized Officer.</p>
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- (9) L-19 No work in the stream channel shall be conducted between September 15 of one calendar year and June 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
- (10) L-19 No non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
- (11) L-19 No mechanical ground based harvesting, ground based yarding, machine piling, road and landing construction, landing rehabilitation, or non-emergency road maintenance shall be conducted in units 4-1, 5-1, and 4.0 between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
- (12) L-19 No haul on natural surface road 34-5-4.0 and rocked roads 34-5-2.1 and 34-5-3.2 shall be conducted on the Contract Area between October 15 of one calendar

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year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction and/or The Purchaser may elect to rock these roads at their own expense, as approved by the Authorized Officer, to bring them up to all season haul standards. If the Authorized Officer determines that hauling would not result in road damage or the transport of sediment to nearby stream channels based on soil moisture conditions or rain events, Contracting Officer may approve a conditional waiver for hauling. If soil moisture conditions or rain events are anticipated to cause impacts to roads or stream water quality resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

- (13) L-20 No harvesting, yarding, or road construction operations within units 4-1, 5-1, and 4.0 RW as shown on Exhibit A shall be conducted between March 1 and July 15 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest. This restriction may be extended if it can be shown from northern spotted owl protocol surveys that owls are nesting.
- (14) L-24 Before cutting and removing any trees necessary to facilitate logging in the harvest units shown on Exhibit A, the Purchaser shall identify the location of the road construction clearing limits, landings, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:
 - (a) All roads and landings upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees.
 - (b) The Purchaser may immediately cut and remove additional timber to clear roads and landings; and clear danger trees when the trees have been marked with pink paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed

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procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.(b). of the contract or sufficient bonding has been provided in accordance with Section 3.(d). of the contract.

- (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract; or, the Authorized Officer determines that the species of trees are not listed in Exhibit B of this contract shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.
 - (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.
 - (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.
- (15) L-32 In harvest units 4-1 and 5-1 the Purchaser shall create snags via girdling, or other method as approved by the Authorized Officer, within two hundred (200) feet of streams (the Riparian Reserve land use allocation) as shown on Exhibit E. The

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total number of snags to create in the Riparian Reserve (RR) per unit is as follows: 4-1 (2 snags) and 5-1 (30 snags). A total of total of thirty-two (32) snags shall be created in the RR land use allocation portion of units. Of this total, one-half ($\frac{1}{2}$) of the snags required in each unit shall be greater than ten (10) inches diameter at breast height outside bark and one-half ($\frac{1}{2}$) of the snags required in each unit shall be greater than twenty (20) inches diameter at breast height outside bark. All snags created shall come from reserve marked trees as described in Section 43(C)(IR-1), Section 43(D)(IR-6), or Section 43(E)(IR-13) and shall be distributed in a variety of spatial patterns including aggregated groups and individual trees. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all girdled trees by diameter class and species per unit. At the end of girdling operations, a completed tree tally shall be submitted to the Authorized Officer. Any species of tree available could be used to meet this requirement. The Purchaser shall not create snags in locations that may be hazardous to roads, private property lines, or powerlines.

- (16) L-33 Purchaser's operations shall facilitate BLM's safe and practical inspection of Purchaser's operations and BLM's conduct of other official duties on Contract Area. Purchaser has all responsibility for compliance with safety requirements for Purchaser's employees, contractors and subcontractors.

In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified. If the cost of such contract modification is of a substantial nature (\$2,000.00 or more), the Purchaser may request, in writing, an adjustment in the Total (Actual [include the word "Actual" for all scale for payment contracts using forms 5450-4/26]) Purchase Price specified in Section 2 of the timber sale contract, as amended, to compensate for the changed conditions.

Unless otherwise specified in writing, when operations are in progress adjacent to or on roads and/or trails in the harvest unit area, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the road or trail user with adequate warning of and protection from hazardous or potentially hazardous conditions associated with its operations. Purchaser shall prepare a Traffic Control Plan, which the Purchaser has determined is compliant with state and local OSHA and Transportation standards no later than the pre-work meeting and prior to commencing operations. Traffic control devices shall be appropriate to current operating and/or weather conditions and shall be covered or removed when not needed., Flagmen and devices shall be as specified in state OSHA and

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Transportation standards for logging roads or the “Manual on Uniform Traffic Control Devices for Streets and Highways” (MUTCD) published by the U.S. Department of Transportation - Federal Highway Administration. Included in the Traffic Control Plan, Purchaser shall note traffic control device locations on a Purchaser produced copy of the contract Exhibit “A” Map.

(B) ROAD CONSTRUCTION, MAINTENANCE, AND USE

- (1) R-1 The Purchaser shall construct, renovate, and/or, decommission all roads and landing described in Section 44 (B)(2) (R-2) in strict accordance with the plans and specifications shown on Exhibits C and D, which are attached hereto and made a part hereof.
 - (a) R-1a Any required construction, or renovation of structures and roads shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.
 - (b) R-1b The Purchaser shall construct Road No. 34-5-04.00 (new) and landing in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof. The Purchaser shall not commence any road construction work until receipt of written notice to do so from the Authorized Officer.
 - (c) R-1d Prior to completion and approval of sub-grade construction from all proposed road construction, as shown on Exhibit C, all logs shall be removed from the designated right-of-way.
- (2) R-2 The Purchaser is authorized to use the roads listed below and shown on Exhibit D for the removal of Government timber sold under the terms of this contract, provided the Purchaser pay the required maintenance and rockwear obligations described in Section 44 (B)(4)(R-2d). Any roads listed on Exhibit D, and requiring construction, improvement, or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the construction, improvement, or renovation from the Contracting Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber hauled over BLM maintained roads, as well as pay current rockwear fees for the sale of additional timber hauled over Purchaser maintained rocked roads under a modification to the contract.

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Road No. and Segment	Length Miles Used	Road Control	Road Surface Type	Maintenance Responsibility
34-5-02.01 A-B	2.87	BLM	AGG	Purchaser
34-5-03.02	0.84	BLM	AGG	Purchaser
34-5-04.00	0.29	BLM	NAT	Purchaser
34-5-10.00 A1	3.03	BLM	BST	BLM
Total miles	7.03			

- (3) R-2a With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of roads included in Section 44(B)(6)(R-2f) of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.
- (4) R-2d The Purchaser shall pay a road maintenance fee of \$0.82 per thousand board feet log scale per mile for the use of road 34-5-10.01 A1 maintained by the Bureau of Land Management. The Purchaser shall also pay a rockwear fee of \$0.85 per thousand board feet log scale per mile for the use of all aggregate surfaced roads maintained by the Purchaser within the sale area. **The Purchaser will be required to label, with a permanent ink marker, each load ticket with the corresponding unit number as directed by the Authorized Officer.** The total maintenance fee due shall be based upon volumes determined pursuant to Exhibit B of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. The Authorized Officer shall establish an installment schedule of payment of the maintenance obligation. If it is determined by the Authorized Officer, after all merchantable timber has been cut and scaled, that the total maintenance payments made under this contract exceed the total maintenance and rockwear payment due, such excess shall be returned to the Purchaser after such determination is made.
- (5) R-2e The Contracting Officer may at any time, by written notice, terminate the Purchaser's operator road maintenance obligations and require instead payment of current Bureau of Land Management road maintenance and rockwear fees for the

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particular surface type of the roads involved. These fees will be applied to the remaining contract volume on the sale area, as determined by the Authorized Officer, to be transported over the roads listed in Section 44(B)(2)(R-2). If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligation(s).

- (6) R-2f The Purchaser shall perform any required road repair and maintenance work on roads identified as Purchaser maintenance, under the terms of Exhibit D, Road Maintenance Specifications, of this contract, which is attached hereto and made a part hereof.
- (7) R-3c The Purchaser agrees that if they elect to use any other private road, which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.
- (8) R-4 The Purchaser shall be required to secure written approval to use vehicles or haul (forest products) (and equipment) over Government owned or controlled roads when such vehicles or equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit or if vehicles meet allowable non-permitted State vehicle weights, but the haul route crosses a structure or segment of road that is posted for reduced weights. The Purchaser agrees to abide by any special requirements included in said written approval.

Details of such equipment shall be furnished to the Authorized Officer for evaluation of load characteristics at least fifteen (15) days prior to proposed move in.

Details shall include:

- 1. Axle weights when fully loaded.
- 2. Axle spacing.
- 3. Transverse wheel spacing.
- 4. Tire size.

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5. Outside width of vehicle.
6. Operating speed.
7. Frequency of use.
8. Special features (e.g., running tracks, overhang loads, etc.).

The Purchaser shall be responsible for repair of any damage to roads or structures caused by the use of overweight or over-dimension vehicles or equipment: (1) without written approval; (2) in violation of the conditions of a written approval; or, (3) in a negligent manner. The amount of actual damage shall be determined by the Authorized Officer following a technical inspection and evaluation.

- (9) **R-5 Tracked type equipment shall not be allowed to cross over concrete bridge decks, other concrete surfaced structures or asphalt surfaced roads without the proper protection of that surface.** Prior approval shall be obtained from the Authorized Officer when crossing with protective devices.

The Purchaser shall be responsible for repair of any damage to roads or structures caused by the use tracked vehicles or equipment: (1) without written approval; (2) in violation of the conditions of a written approval; or, (3) in a negligent manner. The amount of actual damage shall be determined by the Authorized Officer following a technical inspection and evaluation.

(C) ENVIRONMENTAL PROTECTION

- (1) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall restrict non-road, in unit, ground-based equipment used for harvesting, yarding, machine piling, and rehabilitation operations to periods of low soil moisture (dry conditions). Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks. Low soil moisture limits will be determined by the Authorized Officer. Ground-based equipment shall be allowed to operate when the ground is frozen or adequate snow exists to prevent soil compaction and displacement, as determined by the Authorized Officer.
- (2) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on hydrologically connected natural surface road 34-5-4.0 or rocked roads 34-5-2.1 and 34-5-3.2 during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud

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splash or tire slide, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer.

- (3) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on all natural surface roads that receive one-half (½) inch or more precipitation within a twenty-four (24) hour period. Haul shall not resume for a minimum of forty-eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. The Purchaser may elect, at their own expense, to apply rock surfacing to these roads to bring them up to wet weather haul standards, as approved by the Authorized Officer.
- (4) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:
- (a) In order to prevent the potential spread of noxious weeds into the Medford District BLM, the operator would be required to clean all logging, construction, chipping, grinding, shredding, rock crushing, and transportation equipment prior to entry on BLM lands.
 - (b) Cleaning shall be defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds into BLM lands. Cleaning prior to entry onto BLM lands may be accomplished by using a pressure hose.
 - (c) Only equipment inspected by the BLM would be allowed to operate within the Analysis Area. All subsequent move-ins of equipment as described above shall be treated the same as the initial move-in.
 - (d) Prior to initial move-in of any equipment, and all subsequent move-ins, the operator shall make the equipment available for BLM inspection at an agreed upon location off Federal lands.
 - (e) Equipment would be visually inspected by the Authorized Officer to verify that the equipment has been reasonably cleaned.
- (5) E-1 In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:

Upon decommissioning and prior to fall rains, the Purchaser shall scarify landings (outside of the driving surface) within two hundred (200) feet of streams and waterbodies as shown on Exhibit A, then stabilize and revegetate all bare soil with

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certified weed free straw mulch and a native seed mixture approved by the Authorized Officer. Landings on roads and rocky areas that lack soil for seed germination need not be scarified, seeded or mulched, as determined by the Authorized Officer. The BLM may provide the seed mixture and straw mulch if the purchaser is unable to locate and buy the approved materials from a commercial source. The Purchaser shall reimburse the government for the cost of seed and straw, if provided by the government. The Purchaser shall furnish the specific seed mixture prescribed by the Authorized Officer, which will include up to 3 grasses and 2 forbs from the following list, but may include substitutions approved by the Authorized Officer:

Grasses: *Achnatherum lemmonii*, *Bromus carinatus*, *Brumus vulgaris*, *Elymus glaucus*, *Festuca californica*, *Festuca roemerii*, *Koeleria macrantha*, *Poa secunda*, *Vulpia microstachys*

Forbs: *Achillea millefolium*, *Clarkia purpurea*, *Clarkia homboidea*, *Collinsia grandiflora*, *Eriophyllum lanatum*, *Lupinus bicolor*, *Madia elegans*, *Madia gracilis*

The proportion of each species in the mixture shall be prescribed by the Authorized Officer. The Purchaser shall apply prescribed seed and straw mulch to acres designated for treatment, as directed by the Authorized Officer, at the following rates of application:

Grass seed	20 to 25 lbs/acre (cumulative, all species)
Forb seed	0.5 to 2 lbs/acre (cumulative, all species)
Straw mulch	1000 lbs/acre

The Purchaser shall apply seed and straw mulch between September 1 of one calendar year and March 31 of the following year. Deviations from that timing must be approved by the Authorized Officer. The Purchaser shall notify the Authorized Officer at least 5 days in advance of the date that he/she intends to commence revegetation and soil stabilization work.

If the Purchaser furnishes seed from any source other than the BLM, that seed shall meet the following minimum test standards:

<u>Test</u>	<u>Grasses (%)</u>	<u>Forbs (%)</u>
Purity:	95	80
Germination:	85	70
Other species/weed content (max):	0.2	0.2
Noxious weed content:	Prohibited	Prohibited

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Furnished seed shall meet the minimum requirements for either Yellow Tag Source Identified Seed or Blue Tag Certified Class Seed, as defined by the Association of Official Seed Certifying Agencies. Seed source shall be approved by the Authorized Officer and shall be from the EPA Level III Ecoregion in which the project occurs. For each lot of seed, the Purchaser shall furnish the Authorized Officer a Seed Test result from a certified seed testing lab (e.g., Oregon State University), which shall include: test date; lot number; seed source; and results of test for purity, germination, and weed content. All seed lots must have been tested within the previous 12 months to be accepted. Seed that has become wet, moldy, or otherwise damaged shall not be accepted. Seed must be available to the Authorized Officer for inspection at least 5 days in advance of commencing revegetation work. If the Purchaser furnishes straw mulch from any source other than the BLM, the material must be from native grass or other approved sterile grain crops that are certified weed free and free of mold or other objectionable materials. Straw mulch shall be in an air-dry condition and suitable for spreading in a uniform manner. Straw mulch must be available to the Authorized Officer for inspection at least 5 days in advance of commencing revegetation work.

- (6) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan (SPCC) for all hazardous substances to be used in the contract area, as directed by the Authorized Officer. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements. All operators shall have a Spill Containment Kit (SCK) as described in the SPCC plan on-site during any operation with potential for run-off to adjacent waterbodies. The SCK shall be appropriate in size and type for the oil or hazardous material carried by the Purchaser.
- (7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not refuel equipment, store, or cause to have stored, any fuel or other petroleum products within one hundred fifty (150) feet of all riparian management or wet areas. All Petroleum products shall be stored in durable containers and located so that any accidental releases will be contained and not drain into any stream system. Hydraulic fluid and fuel lines on heavy mechanized equipment would be in proper working condition in order to minimize potential for leakage into streams. Absorbent materials shall be onsite to allow for immediate

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containment of any accidental spills. Spilled fuel and oil shall be cleaned up and disposed of at an approved disposal site.

- (8) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall prevent the delivery of chemical retardant foam or additives to waterbodies, and wetlands. Ignition devices/materials shall be stored and disposed of at least one hundred fifty (150) feet away from streams and wetlands.
- (9) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not locate new landings in areas that contribute eroded fines to streams, wet areas, dry draws and swales. If these landing locations cannot be avoided, ensure that properly installed sediment control measures are placed and maintained, as needed, to keep eroded material onsite.
- (10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use when utilizing landings or natural surface roads that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines. Any project-related activity would be suspended if conditions develop that cause a potential for sediment laden runoff to enter a wetland, floodplain or waters of the state. Operations can resume when sediment control devices are in place and conditions allow turbidity standards to be met.
- (11) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, prior to October 15 of the same operating season, winterize and rehabilitate areas of exposed soils by properly installing and/or using water bars, berms, sediment basins, gravel pads, hay bales, small dense woody debris, seeding and/or mulching, to reduce sediment runoff and divert runoff water away from stream channels, headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes as directed by the Authorized Officer. Portions of road 34-5-4.0 that do not have surface rock in place shall be blocked or barricaded to prevent vehicular traffic.
- (12) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall decommission: natural surface landings outside of the road prism, as directed by the Authorized Officer, by one of the following methods:
 - (a) If the Authorized Officer deems subsoiling will not cause unacceptable damage to the root systems of residual trees the Purchaser shall

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discontinuously subsoil, simultaneously water bar, seed, mulch, and barricade. Subsoil to a depth of twelve (12) inches, and no further than thirty six (36) inches apart. If the Authorized Officer deems subsoiling to this depth will cause an unacceptable amount of damage to the root system of residual trees, the Purchaser shall scarify to a depth of up to six (6) inches and simultaneously water bar, seed, mulch, and barricade.

- (b) All rehabilitation shall occur within eighteen (18) months of harvest, during dry conditions, and after pile burning is complete.
 - (c) The Purchaser shall simultaneously water bar, seed, mulch, and barricade natural surface portions of road 34-5-4.0.
- (13) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall place material removed during excavation in locations where it cannot enter streams or other water bodies.
- (14) E-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the specifications shown on Exhibits C-11-1 and D7 which is attached hereto and made a part hereof.
- (15) E-5 The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area between March 1 and September 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting northern spotted owls may not be allowed during this time period.

Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls are nesting within 0.25 miles of the harvest units. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations in writing. Without this approval, such operations are prohibited from March 1 through July 15 of each year.

(D) FIRE PREVENTION

- (1) F-1 Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season

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or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the of the Authorized Officer.

- (2) F-1a Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall comply with the following provisions:

(a) At least three (3) days prior to the operation of power-driven equipment during any operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer and the State of Oregon Department of Forestry.

(b) Provide and maintain on the contract area in good working order, and immediately available, the following equipment for use during closed fire season or periods of fire danger:

1. F-2a Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever employees are working on the contract area. All fire fighting tools shall be kept in a sturdily constructed box which shall be painted red and lettered on the front or top in large letters, "For Fire Only." The box shall have a hinged lid and a hasp by which the lid can be sealed. One box may serve two landings not over six hundred (600) feet apart. When filled, the box shall not weigh over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and have sharp cutting edges. There shall be not less than four (4) tools in each box nor less than one (1) tool for each employee working on the contract area. Three-fourths (3/4) of all fire tools shall be shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire.

2. F-2b At each landing or such other place as the Authorized Officer shall designate during periods of operation one (1) tank truck of three hundred (300) gallons or more capacity with a minimum of five hundred (500) feet of 1½ inch hose (must be adequate length to reach 200 feet beyond active work sites), six (6) 1½ inch wyes, six (6) 1½ inch to 1 inch reducers, three (3) 1½ inch nozzles and three (3) 1 inch nozzles. One (1) three hundred (300) gallon fire engine may be substituted for each required 300-gallon tank truck, provided that the total capability to pump and deliver water remains

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unchanged. Each fire engine / tank truck shall be equipped with a pump capable of delivering a minimum of forty (40) gallons per minute (gpm) water flow at one hundred fifty (150) pounds per square inch (psi) engine pressure through fifty (50) feet of 1½ inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable. All equipment shall be acceptable to and approved by the Authorized Officer and shall conform to the standards set forth in Oregon Revised Statutes 477.645 through 477.670. All hose couplings shall have the standard thread adopted by the BLM (1 ½ inches National Hose Thread (NH), 1 inch National Pipe Straight Hose Thread (NPSH) or be provided with suitable adapters. At the close of each working day, all bulldozers and fire/tank trucks shall be filled with fuel and made ready for immediate use. All fire/tank trucks shall be filled with water and made available for immediate use.

3. F-2c Serviceable cell phone or radio equipment able to provide prompt and reliable communication between the contract area, Medford BLM District Office, and Oregon Department of Forestry. Such communication shall be available during periods of operation including the time watchman service is required.
4. F-2d A pair of headlights capable of being quickly attached to each bulldozer used on the contract area. The headlights shall be adequate to provide illumination sufficient to allow use of the bulldozers for fire fighting and construction of fire lines at night.
5. F-2f A headlamp for each employee in the woods crew adequate to provide sufficient illumination for night firefighting. A headlight shall be of the type that can be fastened to the head so as to allow independent use of the hands. At least one extra set of batteries shall be provided for each such headlight.
6. F-2f Two (2) back-pack pumps at each landing and one (1) at each tail block, all to be kept full of water and in good operating condition.
7. F-2g A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Authorized Officer and a size 0 or larger shovel shall be carried during the closed fire season

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or periods of fire danger by each falling crew and each buckner using a power saw on the contract area. Such fire extinguisher shall be filled and in effective operating condition and shall at all times be immediately available to the operator when the saw is being fueled or the motor of the saw is running. Any fueling of a power saw shall be done in an area which has first been cleared of all flammable material. Power saws shall be moved at least twenty (20) feet from the place of fueling before the engine is started. Each power saw shall be equipped with an exhaust system and a spark arresting device which are of types approved by the Authorized Officer.

- (c) F-5 Where blocks and cables are used on the contract area during periods of fire danger, the Purchaser shall remove all flammable material at least ten (10) feet from the place where the tail or any other block will hang when the cable is tight. Such clearings shall be inspected periodically by the Purchaser and shall be kept free of flammable material.

- (3) F-9 During Oregon Department of Forestry regulated use closure, no smoking shall be permitted outside of closed vehicles.

(E) SLASH DISPOSAL

- (1) SD-1 Fire Hazard Reduction. In addition to the requirements of Sec. 15 of this contract, and notwithstanding the Purchaser's satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following hazard reduction measures required by this contract:

- (a) SD-1a Lop and scatter all slash situated outside of skips in unit 5-1; and lop and scatter all slash situated outside of skips and outside of the hand pile area in unit 4-1 as shown on Exhibit S. All top and side branches must be free of the central stem so that such stem is reduced to the extent that it is within eighteen (18) inches of the ground at all points. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract. Lop and scatter shall be completed in accordance with Exhibit S as directed by the Authorized Officer.

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1. All slash shall be arranged in a discontinuous pattern across the forest floor.
 2. All slash shall be loped to no more than eight (8) feet in length.
- (b) SD-1c Hand pile, cover, and burn all slash situated outside of lop and scatter treatment area in unit 4-1 as shown on Exhibit S. Slash shall be piled by hand. Finished piles shall be tight and free of earth.
1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.
 2. Slash includes woody material (brush, limbs, tops, unmerchantable stems, or chunks severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract.
 3. Hand pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds two (2) feet in length, or as directed by the Authorized Officer.
 4. Hand piles shall be covered with a large enough piece of four (4) mil polyethylene sheeting to ensure a dry ignition spot, generally five (5) feet by five (5) feet or large enough to cover eighty (80) percent of the pile.
 5. Hand piles shall not be placed adjacent to or within ten (10) feet of leave trees or large woody debris.
 6. Hand piles shall not be located on roadways, turnouts, shoulders, or cut banks, unless authorized by the Authorized Officer.
- (c) SD-1f Machine pile, cover, and burn all slash in the 34-5-4.0 road construction clearing limits as shown on Exhibit S. Within twenty (20) feet of the edge of each helicopter log landing pile, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than two (2) feet in length shall be piled within fourteen (14) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located off of the driving surface of roads and at least fifteen

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feet (15) from any Reserve Tree and/or as directed by the Authorized Officer.

Upon completion of piling, the Purchaser shall remove flammable material around each landing pile down to bare mineral soil to prevent escaped fire. Landing piles shall be less than sixteen (16) feet in height and width. Cover piles with large enough piece of four (4) mil polyethylene sheeting to ensure a dry ignition spot, **at least** ten (10) foot by ten (10) foot. The Purchaser is required to furnish the covering materials. The timing of this covering work shall be in accordance with instructions from the Authorized Officer. If the structure of the landing piles will not permit adequate consumption of piled debris by burning, the Purchaser shall re-pile them at the direction of the Authorized Officer.

1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.
 2. Landing and roadside piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 3. Landing and roadside piles will be burned within twenty-four (24) months of harvest completion.
- (2) SD-2 Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and mop up assistance as required herein, and measures required in Sections 44(E)(1)(SD-1) and 44(E)(2)(SD-2). In accordance with written instruction to be issued by the Authorized Officer at least ten (10) days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at his own expense, the services of personnel and equipment on each unit as shown below.

All crews shall arrive on the project area with radios capable of inter-crew communications and communication with a BLM representative at a ratio of one (1) radio per every five (5) crew members.

- (a) For igniting and burning hand piles in unit 4-1 as shown on Exhibit S:

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1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.
5. Ten (10) drip torches.
6. Hand ignition with drip torches is required in pile burn units.
7. All ignition personnel will be directly supervised by a BLM representative.

(b) For mop-up of hand piles in in unit 4-1 as shown on Exhibit S:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.

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4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

(c) For igniting and burning roadside and landing piles:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

(d) For mop-up of roadside and landing piles:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.

ROTORS UP TIMBER SALE

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2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

Aircraft and pilots used for Logging Residue Reduction or the suppression of escaped fires from Logging Residue Reduction operations, shall be acquired from a list of aircraft and pilots approved (i.e., carded for these specific activities) by the Office of Aircraft Services or the U.S. Forest Service. This list is available from BLM District Offices upon request.

All listed personnel shall be physically fit, experienced and fully capable of functioning as required. All personnel shall arrive at the project area(s) with the following personal safety equipment: long sleeve natural fabric shirt, full length natural fabric trousers, minimum eight (8)-inch top leather boots, hardhat, and leather gloves. All personnel shall wear long pants and long sleeve shirts, lug-soled leather boots with minimum eight (8)-inch tall uppers that provide ankle support, approved hardhat, and leather gloves. On the day of ignition, clothing shall be of approved aramid fabric, Nomex™ or equivalent. Clothing shall be free of diesel fuel oil.

All listed tools and equipment shall be in good usable condition. All power-driven equipment shall be fully fueled and available for immediate use. During periods of use under this subsection, the Purchaser shall provide fuel and maintenance for all such power- driven equipment.

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop up on each hand/machine piled unit and landing decks,

ROTORS UP TIMBER SALE

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four hundred fifty (450) hours as directed by the Authorized Officer within 10 days beginning 8:00 a.m. the day following completion of ignition in that unit or until released from such services by the Authorized Officer, whichever occurs first.

In the event of a fire escapement, Purchaser's personnel and equipment shall, under supervision of the Authorized Officer, take action to suppress, including control and mop-up, the escaped fire until released from such service by the Government. If it becomes necessary to suppress a fire which escapes from the prescribed fire area for a period beyond midnight of ignition day, then the Government shall, at its option:

- (a) reimburse Purchaser for such additional use of personnel and equipment at wage rates shown in the current Administratively Determined Pay Rates for Western Area and at equipment rates shown in current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule, until the Purchaser is released from such service by the Government, or
- (b) release the Purchaser from additional suppression work and assume responsibility for suppressing the escaped fire.

In situations where an escaped fire is controlled and contained by an adequate fire break (e.g., trail, road, stream, rock formation), the Government may permit the Purchaser to remove personnel for that day; provided that, all mop up work on the escaped fire area is included with mop up work on the prescribed fire area. In such an event, the Purchaser must sign a statement of agreement to complete mop up work on all escaped fire areas concurrently with mop up work on the prescribed fire area.

In case of injury to personnel or damage to equipment furnished by the Purchaser as required by this subsection, liability shall be borne by the Purchaser, unless such injury or damage is caused by Government negligence.

Time is of the essence in complying with this provision. In the event the Purchaser fails to provide personnel and equipment required herein, the Purchaser shall be responsible for all additional costs incurred by the Government in disposing of slash, including but not limited to the wages and other costs of providing federal employees and others as substitute labor force, the cost of providing substitute equipment, and appropriate additional overhead expenses. If the Purchaser's failure results in deferral of burning and new conditions necessitate additional site

ROTORS UP TIMBER SALE

SPECIAL PROVISIONS

preparation work and/or use of additional personnel and equipment to accomplish planned burning, the Purchaser also shall be responsible for such additional costs.

- (3) SD-5 The Purchaser shall perform logging residue reduction and site preparation work on approximately two hundred fifty-nine and one-half (259.5) acres of harvest area located in all units as shown on Exhibit A.

- (a) The required work shall consist of any treatment or combination of treatments listed in the table below, as determined by the Authorized Officer and specified in writing by the Contracting Officer. The number of acres of each treatment shall be determined by the Authorized Officer.

Treatment	Treatment Description	Cost/Acre
Lop and Scatter	0-12 tons/acre	\$52.00
Hand Pile and Cover	0-25 piles/acre	\$599.00
Hand Pile Burn and Mop-up	0-25 piles/acre	\$82.00
Cover and Burn Landing Decks	Cost per acre	\$62.00
Cover and Burn Roadside Piles	Cost per acre	\$62.00

- (b) The following treatments were assumed for appraisal purposes on this contract:

Appraised Treatment	Acres	Cost/Acre	Total Cost Per Treatment
Lop and Scatter	228.00	\$52.00	\$11,856.00
Hand Pile and Cover	28.00	\$599.00	\$16,772.00
Hand Pile Burn and Mop-up	28.00	\$82.00	\$2,296.00
Cover and Burn Landing Decks	1.50	\$62.00	\$93.00
Cover and Burn Roadside Piles	2.00	\$62.00	\$124.00
Total Appraised Cost	259.50		\$31,141.00

- (c) The Total Purchase Price set forth in Section 2 shall be adjusted in a unilateral modification executed by the Contracting Officer by the amount that the total cost of the site preparation treatments designated pursuant to Section 44(E)(3)(SD-5)(a) differs from thirty one thousand one hundred

ROTORS UP TIMBER SALE

SPECIAL PROVISIONS

forty-one and 00/100 dollars (\$31,141.00), as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 44(E)(3)(SD-5)(a).

- (d) Lop and scatter shall be done in accordance with Section 44(E)(1)(a)(SD-1a); Machine piling (roadside and landing piles) shall be done in accordance with Section 44(E)(1)(c)(SD-1f); Hand piling shall be done in accordance with Section 44(E)(1)(b)(SD-1c).

(F) BUYOUT SECURITIES

- (1) B-1 The Purchaser shall perform hand pile burning and mop up in accordance with Section 44(E)(2)(SD-2)(a & b). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of two thousand seven hundred fifty-one and 53/100 dollars (\$2,751.53), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in these subsections. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Authorized Officer shall establish a required schedule of payments.
- (2) B-1 The Purchaser shall perform roadside pile and landing pile cover, burning, and mop up in accordance with Section 44(E)(2)(SD-2)(c & d). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of two hundred sixty and 05/100 dollars (\$260.05), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in these subsections. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Authorized Officer shall establish a required schedule of payments.

(G) LOG EXPORTS

- (1) LE-1 All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters ($8\frac{3}{4}$) inches in thickness; (3) split or round bolts or other

ROTORS UP TIMBER SALE

SPECIAL PROVISIONS

roundwood not processed to standards and specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better. Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timber, regardless of size, manufactured to standards and specifications suitable for end-product uses; (2) chips, pulp, and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacturing of eight and three quarters (8¾) inches in thickness or less; (6) shakes and shingles.

Substitution will be determined under the definition found in 43 CFR 5400.0-5(n).

The Purchaser is required to maintain and upon request to furnish the following information:

- (a) Date of last export sale.
- (b) Volume of timber contained in last export sale.
- (c) Volume of timber exported in the past twelve (12) months from the date of last export sale.
- (d) Volume of Federal timber purchased in the past twelve (12) months from the date of last export sale.
- (e) Volume of timber exported in succeeding twelve (12) months from date of last export sale.
- (f) Volume of Federal timber purchased in succeeding twelve (12) months from date of last export sale.

In the event the Purchaser elects to sell any or all of the timber sold under this contract in the form of unprocessed timber, the Purchaser shall require each party buying, exchanging, or receiving such timber to execute a Form 5460-16 (Certificate as to Nonsubstitution and the Domestic Processing of Timber). The original of such certification shall be filed with the Authorized Officer. Additionally, when the other party is an affiliate of the Purchaser, the Purchaser will be required to update information under item (2) of Form 5450-17 (Export Determination) and file the form with the Authorized Officer.

ROTORS UP TIMBER SALE

SPECIAL PROVISIONS

In the event an affiliate of the Purchaser has exported private timber within twelve (12) months prior to purchasing or otherwise acquiring Federal timber sold under this contract, the Purchaser shall, upon request, obtain from the affiliate information in a form specified by the Authorized Officer and furnish the information to the Authorized Officer.

Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer Form 5460-15 (Log Scale and Disposition of Timber Removed Report) which shall be executed by the Purchaser. In addition, the Purchaser is required under the terms of this contract to retain for a three-year period from the date of termination of the contract the records of all sales or transfer of logs involving timber from the sale for inspection and use of the Bureau of Land Management.

Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over 10 inches, prior to the removal of timber from the contract area. All loads of 11 logs or more will have a minimum of 10 logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of 10 logs or less. One end of all branded logs to be processed domestically will be marked with a 3 square inch spot of highway yellow paint. The purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer.

If multiple trailers (mule trains) are used, each bunked load shall be considered an individual load, and these guidelines will apply to each bunked load. If a flatbed stake trailer is used, each bundle will be treated as a separate load.

At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. Any increased costs for log branding and painting shall be the responsibility of the Purchaser.

In the event of the Purchaser's noncompliance with this subsection of the contract, the Authorized Officer may take appropriate action as set forth in Section 10 of this contract. In addition, the Purchaser may be declared ineligible to receive future awards of Government timber for a period of one year.

Rotor's Up Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2025.0012

	Unrestricted Period
	Operations Restricted To Dry Condition, Waiver Required
	Operations Restricted While NSO Surveys Occur, Restriction May Be Extended IF Owls Are Nesting
	Operations Restricted

* Operations will be suspended if unacceptable damage to residual trees occur.

** In-stream work periods for culvert cleaning are June 15th - September 15th.

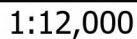
*** All road maintenance and improvements must be completed before wet season haul can occur on the roads. The Purchaser may elect to make improvements to Dry Condition Haul Roads listed to allow for All Season Haul, at their own expense, as approved by the Authorized Officer. Haul will be suspended if the roads begin to show damage or conditions develop that could cause damage to the road as described in Sec. 44(C)(2&3)(E-1).

Dry Condition Yarding and Temporary Route work- Ground-based harvesting and yarding, temporary route work, and rehabilitation activities would not occur when soil moisture at a depth of 4-6 inches is wet enough to maintain form when compressed, or when soil moisture at the surface would readily displace, causing ribbons and ruts along equipment tracks. These conditions are generally found when soil moisture at a depth of 4-10 inches is between 15-25% depending on soil type.

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Ground Based Yard Unit with Road Construction, Northern Spotted Owl Seasonal Restrictions, and Dry Condition Haul & All Season Haul: 4.0 RW	Manual Felling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Piling and Burning Slash																								
	Road Maintenance**																								
	Loading and Hauling on Roads 34-5-4.0, 34-5-3.2, and 34-5-2.1.***																								
	Hauling on all Paved Rds***																								

Rotors Up Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2025.0012

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
<u>Helicopter Yard</u> <u>Units with Road</u> <u>Construction,</u> <u>Northern Spotted</u> <u>Owl Seasonal</u> <u>Restrictions, and</u> <u>Dry Condition Haul</u> <u>& All Season Haul:</u> 4-1 and 5-1	Manual Felling and Bucking*																								
	Helicopter Yarding*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Lopping Slash and Burning Hand, Roadside, and Landing Piles																								
	Road Maintenance**																								
	Loading and Hauling on Roads 34-5- 4.0, 34-5-3.2, and 34-5-2.1.***																								
	Hauling on all Paved Rds***																								



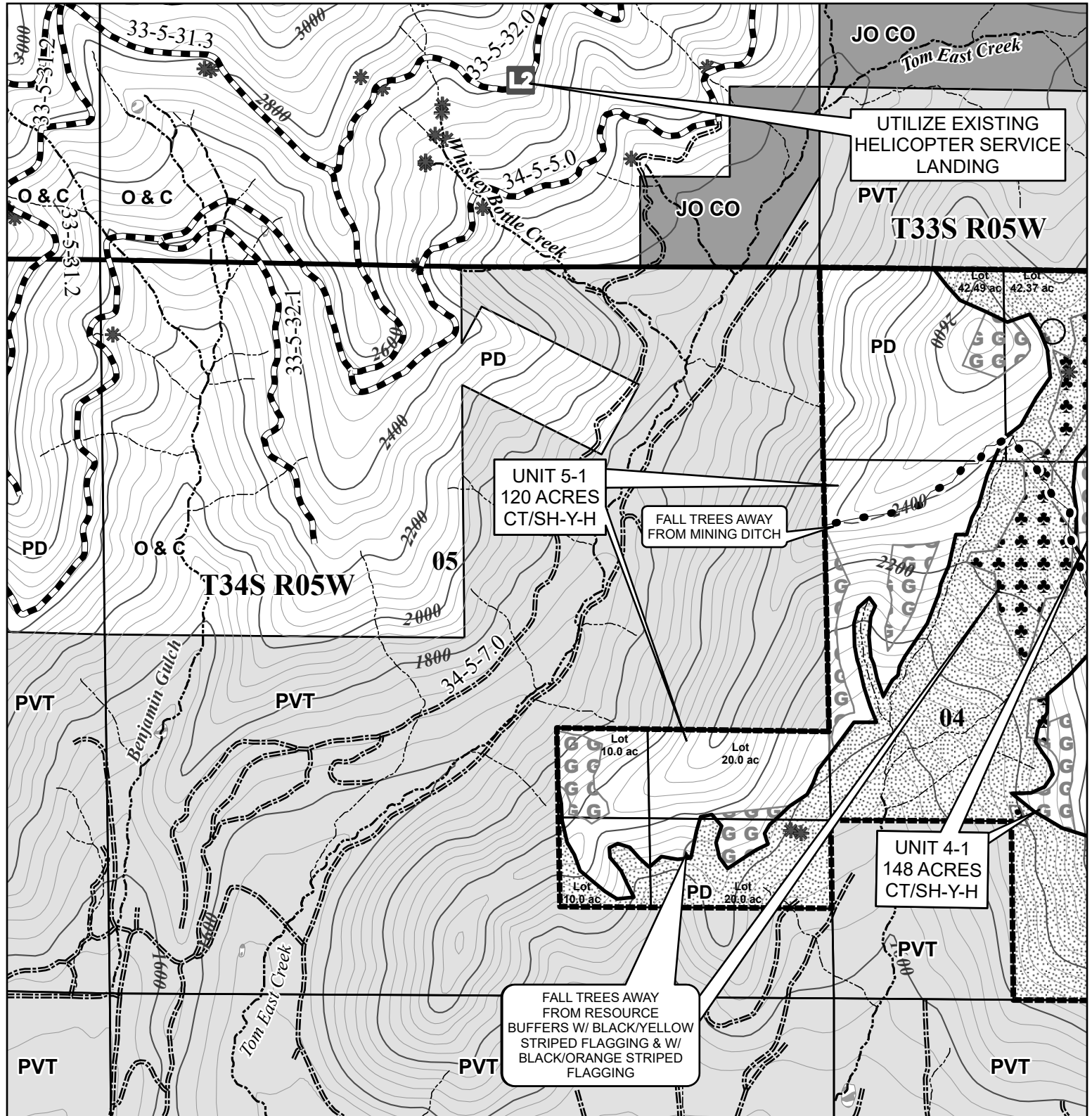
0 500 1,000 2,000 Feet

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

40 FOOT CONTOUR INTERVAL





1:12,000

0 500 1,000 2,000 Feet

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40 FOOT CONTOUR INTERVAL




Legend

Rotors Up TS Potential
Helicopter Landings

 Log Landing

 Service Landing


Rotors Up TS


 Permanent Road
Construction

 Rotors Up Timber
Sale Units

Rotors Up TS Unit Rx
Features

 Group Selection
Opening

 Skip and Resource
Buffer

 Mining Ditch -
Resource Buffer

 Reserve Area

 Contract Area
Boundary

* Springs

 Intermittent
Stream

 Perennial Stream


 Waterbodies

 Intermediate 40-ft
Contour

 Index 200-ft
Contour

 Paved Road

 Rocked Road

 Natural Surface
Road

 Township &
Range

 Section

 Lots


Ownership

 Josephine County


 Private

 Bureau of Land
Management -

 O&C Lands

 Bureau of Land
Management - PD
Lands

1:12,000

 Feet
0 500 1,000 2,000

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40 FOOT CONTOUR INTERVAL



LEGEND

UNIT	UNIT ACRES	PRESCRIPTION-PAINT COLOR-LOGGING SYSTEM
4-1	148	CT/SH/GS-Y-H
5-1	120	CT/SH/GS-Y-H
4.0 RW	2	RW-O-GB
TOTAL	270	

* BOUNDARIES OF HARVEST UNITS ARE
POSTED AND PAINTED IN ORANGE

SH = SELECTION HARVEST

CT = COMMERCIAL THIN

RW = RIGHT OF WAY CLEARING




GB = GROUND BASE YARD

H = HELICOPTER YARD


O = ORANGE MARK LEAVE TREE

Y = YELLOW MARK LEAVE TREE

SUMMARY

CT/SH/GS-Y-H	COMMERCIAL THIN, SELECTION HARVEST & GROUP SELECTION - YELLOW MARK LEAVE TREE - HELICOPTER YARD (UNITS 4-1 AND 5-1)	268 ACRES
RW-O-GB	RIGHT OF WAY CLEARING - ORANGE MARK LEAVE TREE - GROUND BASE YARD (UNIT 4.0 RW)	2 ACRES
	TOTAL TIMBER SALE UNIT AREA	270 ACRES
	RESERVE AREA	279.22 ACRES
	TOTAL CONTRACT AREA	549.22 ACRES

1:12,000

 Feet
0 500 1,000 2,000

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40 FOOT CONTOUR INTERVAL





**United States
Department of the Interior
Bureau of Land Management**

Timber Appraisal

Sale Name:	Rotors Up	Sale Date:	Thursday, June 26, 2025
BLM District:	Medford DO	Unit of Measure:	16' MBF
Contract #:	ORM07-TS-2025.0012	Contract Term:	36 months
Sale Type:	Advertised	Contract Mechanism:	5450-004
Scale Sale of Timber and other Wood Products			

Content

Timber Appraisal Summary
Stumpage Summary
Unit Summary
Stump to Truck
Transportation
Engineering Allowances
Other Allowances

Prepared By: Cannon, Grant P - 4/22/2025

Approved By: Worman, Aaron S - 4/23/2025

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
PD	Josephine	34S	5W	4	unnumbered lot NE1/4NE1/4, unnumbered lot NW1/4NE1/4, SW 1/4NE1/4	Willamette
PD	Josephine	34S	5W	4	unnumbered lot NE1/4NW1/4, unnumbered lot NW1/4NW1/4	Willamette
PD	Josephine	34S	5W	4	S1/2NW1/4, N1/2SW1/4, SE1/4SW1/4, W1/2SE1/4	Willamette
PD	Josephine	34S	5W	5	unnumbered lot NE1/4SE1/4, unnumbered lot NW1/4SE1/4	Willamette
PD	Josephine	34S	5W	5	unnumbered lot SW1/4SE1/4, unnumbered lot SE1/4SE1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	6,286.0	6,937.0	7,293.0	83,655	4,245	20,370
Ponderosa Pine	6.0	6.0	6.0	41	0	12
Incense-cedar	5.0	6.0	6.0	66	0	35
Totals	6,297.0	6,949.0	7,305.0	83,762	4,245	20,417

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	268.0	2.0	270.0	23.3

Comments:

Scale for payment sale. ***** See Deficit Surplus pricing that was applied to sale.*****

Logging Costs

Stump to Truck	\$3,068,731.52
Transportation	\$359,332.79
Road Construction	\$90,864.71
Maintenance/Rockwear	\$60,402.90
Road Use	\$0.00
Other Allowances	\$33,101.00
Total:	\$3,612,432.92
Total Logging Cost per MBF:	\$573.68

Utilization Centers

Location	Distance	% of Net Volume
Glendale	25.0 miles	100%

Profit & Risk

Profit	11%
Risk	1%
Total Profit & Risk	12%

Tract Features

Quadratic Mean DBH	17.4 in
Average GM Log	83 bf
Average Volume per Acre	23.3 mbf
Recovery	86%
Net MBF volume:	
Green	6,297.0 mbf
Salvage	0 mbf
Export	0 mbf
Ground Base Logging:	
Percent of Sale Volume	1%
Average Yarding Slope	0%
Average Yarding Distance	0 ft
Cable Logging:	
Percent of Sale Volume	0%
Average Yarding Slope	0%
Average Yarding Distance	0 ft
Aerial Logging:	
Percent of Sale Volume	99%
Average Yarding Slope	0%
Average Yarding Distance	2797 ft

Cruise

Cruise Completed	August 2024
Cruised By	Cannon/Darner
Cruise Method	

The Rotors UP Timber Sale was cruised using the PCMTRE and 3P cruise methods. The 268 acres of PCMTRE were cruised using a 40 BAF and a 1 in 8 sampling frequency on 137 plots installed on a grid pattern. The 2 acres of ROW were cruised using the 3P cruise method for DF, IC and PP.

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Stumpage Adjustment	Appraised Price/MBF	Appraised Value (\$)
Douglas Fir	20,370	6,286.0	\$741.50	\$88.98	\$573.68	\$0.00	(\$0.63)	\$78.20	\$491,565.20
Ponderosa Pine	12	6.0	\$290.01	\$34.80	\$573.68	\$0.00	\$0.00	\$29.00 *	\$174.00
Incense-cedar	35	5.0	\$255.00	\$30.60	\$573.68	\$0.00	\$0.00	\$25.50 *	\$127.50
Totals	20,417	6,297.0							\$491,866.70

* Minimum Stumpage values were used to compute the Appraised Price/MBF (10.00% of Pond Value)

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir			1.0%	66.0%	30.0%	3.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Ponderosa Pine				66.0%	34.0%		

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Incense-cedar				53.0%	38.0%	9.0%	

Rotors Up**Unit Summary****ORM07-TS-2025.0012****Unit: 4-1**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	3,465.0	3,824.0	4,014.0	11,205
Totals:	3,465.0	3,824.0	4,014.0	11,205

Net Volume/Acre: 23.4 MBF

Regeneration Harvest	0.0
Partial Cut	148.0
Right of Way	0.0
Total Acres:	148.0

Unit: 4.0-RW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	11.0	13.0	24.0	79
Ponderosa Pine	6.0	6.0	6.0	12
Incense-cedar	5.0	6.0	6.0	35
Totals:	22.0	25.0	36.0	126

Net Volume/Acre: 11.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	2.0
Total Acres:	2.0

Unit: 5-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	2,810.0	3,100.0	3,255.0	9,086
Totals:	2,810.0	3,100.0	3,255.0	9,086

Net Volume/Acre: 23.4 MBF

Regeneration Harvest	0.0
Partial Cut	120.0
Right of Way	0.0
Total Acres:	120.0

Total Stump To Truck	Net Volume	\$/MBF
\$3,068,731.52	6,297.0	\$487.33

Stump to Truck: Falling, Bucking, Yarding, & Loading

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Helicopter	GM MBF	6,924.0	\$442.48	\$3,063,731.52	Appraised for a heavy helicopter
Shovel	GM MBF	25.0	\$200.00	\$5,000.00	
Subtotal				\$3,068,731.52	

Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Subtotal				\$0.00	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Subtotal				\$0.00	

Total	Net Volume	\$/MBF
\$359,332.79	6,297.0	\$57.06

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
Glendale	25.0	All Species	GM MBF	6,949.0	\$51.71	\$359,332.79	100%

Engineering Allowances

Total	Net Volume	\$/MBF
\$151,267.61	6,297.0	\$24.02

Cost Item	Total Cost
Road Construction:	\$90,864.71
Road Maintenance/Rockwear:	\$60,402.90
Road Use Fees:	\$0.00

Total	Net Volume	\$/MBF
\$33,101.00	6,297.0	\$5.26

Environmental Protection

Cost item	Total Cost
Snag Creation	\$960.00
Subtotal	\$960.00

Slash Disposal & Site Prep

Cost item	Total Cost
Lop & Scatter	\$11,856.00
Cover & Burn Landing Decks	\$93.00
Cover & Burn Roadside Piles	\$124.00
Handpile Burn & Mop-up	\$2,296.00
Handpile & Cover	\$16,772.00
Machine Pile Landing	\$1,000.00
Subtotal	\$32,141.00

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

**Contract No.: ORM07-TS-
2025.0012**

Sale Name: Rotors Up TS

Issuing Office: Medford

**EXHIBIT B
SCALE SALE**

PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS

- I. **Timber and Other Wood Products Sold** - In accordance with Section 2 and 3, the Purchaser agrees to pay the Government for the timber and other wood products sold under the contract in accordance with the following schedule, measurement standards, and requirements. Wood products sold is comprised of Timber, Other Wood Products, and Timber and Other Wood Products Remaining as defined below. In the event an Extension of Time is approved, the prices per measurement unit may be subject to readjustment in accordance with Section 9 of the contract.

Timber Schedule

Species	Unit of Measure	Price Per Measurement Unit
Douglas-fir	MBF	\$
Incense-cedar	MBF	\$25.50
Ponderosa pine	MBF	\$29.00

Other Wood Products Schedule

Product/Species	Unit of Measure	Price Per Measurement Unit

The Authorized Officer shall establish unit of measure and price per measurement unit, in accordance with standard Bureau of Land Management (BLM) procedures, for any species or products not listed in this Exhibit that are cut or removed from the contract area.

- II. **Timber** – Includes standing trees, downed trees or logs, or portions thereof, which can be cut into logs that equal or exceed the specifications below.

All logs defined below, which have not been reserved to Government in Section 43 of the contract, shall be designated as timber under this contract. Logs or portions of logs which

equal or exceed all the following minimum log specifications shall be considered timber sold. The Purchaser shall pay for all timber removed in accordance with Section 3 of the contract at the price per measurement unit shown in Section I of this Exhibit.

- Log or portion of a log that is:
 - One third (1/3) sound.
 - Small End Diameter Inside Bark (DIB) – Five (5) inches
 - Length – Eight (8) feet four (4) inches

III. Other Wood Products – Includes timber and other woody material not meeting the timber specifications above (i.e., pulp, biomass, chips, hog fuel).

If Purchaser removes any products or species which do not meet the minimum log specifications for timber in Section II, such material shall be considered other wood products. Purchaser shall pay for other wood products in accordance with Section 3 of the contract at the price per measurement unit shown in Section I of this Exhibit.

IV. Timber and Other Woods Products Remaining - The remaining volume of any timber or other wood products, which have not been reserved to Government in Section 43 of the contract, shall be determined as provided in Section 3(g) of the contract using specifications set forth in the table below. The Purchaser shall pay for the sum of all remaining volume in accordance with Section 3 of the contract at the unit prices shown in Section I of this Exhibit.

Left Standing Timber	Felled Timber Not Removed
Diameter at Breast Height (DBH): 8"	Small End DIB: 6"
Log Height: 24'	Log Length: 8'
% Sound: 33.3	% Sound: 33.3
Net Tree Volume: 10 bd.ft.	Net Log Volume: 10 bd.ft.

V. Measurement Standards

1. **Log Scaling Loads:** All species or products in Section I, with MBF as the Unit of Measure shall be designated as log scaling loads.
 - a. Log scaling services shall be provided and performed by BLM Certified Scalers or BLM-authorized Third-Party Scaling Organizations (TPSO), as determined by the Authorized Officer. The Purchaser's employees or contractors may not perform log scaling.
 - b. All logs shall be scaled in Eastside Scribner Log Rules according to the Official Log Scaling and Grading Bureaus, Northwest Log Rules Eastside and Westside Log Scaling Handbook, as amended or supplemented, at the time the logs are scaled.

- c. All logs shall be scaled using an authorized BLM log scaling method approved by the Authorized Officer in accordance with BLM prescribed procedures. A list of authorized BLM log scaling methods is available upon request.
- d. Purchaser shall ensure all logs are presented so that they may be scaled in an economical and safe manner.
- e. Scaling deductions made for rot, check or other defect resulting from abnormal delay in scaling caused by Purchaser shall be recorded separately and charged to the Purchaser in accordance with Section 3(g) of the contract when applicable. Avoidable delay in log scaling caused by the Purchaser that results in a measurable reduction in timber volume or quality would generally be considered abnormal delay, as determined by the Authorized Officer.
- f. Mechanical damage to logs that occurs during unloading identified by the TPSO will not be considered a deductible defect.
- g. The BLM will conduct check scaling using the following standards:
 Gross Scale - A variance of one and ½ percent (1.5%) in gross scale is the standard unless otherwise justified.
 Net scale - The allowable variance is as follows:

Check scaler's percent defect in logs	Scalers allowable variance
0-10 percent	2 percent
over 10 percent	0.2 * percent defect to a maximum of 5 percent

Determinations as to volume of timber made by a BLM check scaler in conformance with the standards as set forth herein shall be final. When such checks show a variance in scale more than acceptable standards, in two or more consecutive check scales, an adjustment to the volume reported as scaled will be made by BLM. Such adjustments will be made based on the difference between available BLM check scales and the original scale during the period covered by the unsatisfactory check scales. Unless otherwise approved in writing by the Authorized Officer, the volume to which this difference will be applied will be fifty (50) percent of the volume scaled between the last satisfactory check and the first unsatisfactory check, one hundred (100) percent of the volume scaled during the unsatisfactory check, and fifty (50) percent of the volume between the last unsatisfactory check scale and the next satisfactory check scale.

- 2. **Weight Loads:** All species or products in Section I, with Tons as the Unit of Measure shall be designated as weight loads.
 - a. All weight loads shall be weighed on State certified scales.
 - b. Scales must have a current inspection tag or seal posted which shows the date of the most recent test by the State weights and measures agency.

- c. No load shall be presented for weighing that exceeds the certified capacity of the scales in use.
- d. Each load shall be weighed as a single unit. Gross and tare weight must be machine printed on a weight receipt. Average tare weights shall not be used, unless approved by the Authorized Officer. In addition to the gross and tare weight, the following shall be recorded with each weight receipt:
 - Contract name and number
 - Load Ticket number
 - Date, time, and location the load was weighed

VI. Accountability

1. Purchaser shall notify the Authorized Officer seven (7) business days prior to starting or stopping of hauling operations performed under the contract.
2. The Purchaser must provide the following information to the Authorized Officer seven (7) business days prior to the commencement of haul: log scaling and weighing location(s), planned beginning haul dates, anticipated number of loads per day to each scaling or weighing location, logger name and contact information, and log brands to be used, and the log brand registration number(s).
3. A Scaling Authorization Form(s) must be completed and approved by the Contracting Officer prior to beginning of hauling operations. The Scaling Authorization(s) will include approved measurement methods, merchantability standards, sort descriptions, and authorized delivery locations for all loads hauled from the contract area. For log scale loads, all log scaling locations on the Scaling Authorization(s) are required to have a Log Yard Authorization with the BLM. Approved Scaling Authorizations will be provided to the Purchaser upon request.
4. All loads will be scaled and/or weighed at locations listed on the Scaling Authorization as approved by the Authorized Officer.
5. Purchaser shall notify the Authorized Officer seven (7) business days in advance to request additional log scaling and/or weighing locations for approval on the Scaling Authorization(s).
6. Purchaser shall not intermingle BLM timber and other wood products with any other timber or wood products before log scaling and/or weighing occurs.
7. All logs on timber loads will be painted and branded at the landing and accounted for accordance with Section 44 of the contract. If contract area is within a State that maintains a log brand register, brands shall be registered with the State and Purchaser shall use assigned brand(s) exclusively on logs from this contract until the Authorized Officer releases the brand(s).
8. The Authorized Officer shall issue the Purchaser serially numbered load ticket books prior to any haul operations. The Purchaser shall sign a receipt for all ticket books

received. The Purchaser shall accurately complete all load receipts in accordance with the instructions on the front of the ticket books, or as directed by the Authorized Officer. Separate load ticket books will be used for timber and other wood products. Mule train timber loads will be treated as two separate loads with a ticket for each load. All load tickets will be marked with the cutting area number using a permanent marker or as directed by the Authorized Officer. The Purchaser shall deliver all loads to the log scaling or weighing location on the Scaling Authorization and listed on the BLM receipt. The load receipt and BLM receipt shall remain attached to the log load until it is scaled and/or weighed. For log scale loads, attach on the bunk or wing log at the front of the load on the driver's side, and surrender the load receipt and BLM receipt to the TPSO or Authorized Officer at the scaling location. For weight loads, either attach at the front of the load on the driver's side or place on the driver's side dashboard, attach the load receipt and BLM receipt to the weight receipt and deliver to the BLM weekly, unless otherwise directed by the Authorized Officer. The Purchaser will return all used load ticket books with woods receipts still attached to the BLM at the time new books are being issued. All unused and partial load ticket books, with receipts still attached, must be returned to the BLM upon completion of the contract and prior to final payment, or at the request of the Authorized Officer.

9. The Purchaser must account for all load receipts from each load ticket book. For all load receipts not accounted for, the Contracting Officer, at their sole discretion, will determine if the receipts are void or if the Purchaser shall pay damages for lost products. The value of lost products shall be equal to the highest value load for the month in which the receipt is lost. If no loads have been hauled in that month, value will be determined from the closest month in which loads were hauled. In the event a load receipt or load ticket book is lost or stolen, the Purchaser must immediately notify the Authorized Officer, and provide a complete explanation.
10. The Purchaser shall furnish BLM a map showing the route which shall be used to haul loads from the timber sale area to the log scaling/weighing location. Upon loading timber or other wood products in the contract area, all loads shall be hauled directly to the authorized scaling or weighing location as stated on the load receipt. The route of haul may be changed only with advance notice to and approval by BLM.
11. The Purchaser shall notify the Authorized Officer and receive advance authorization if any loads will arrive at an authorized scaling or weighing locations outside of their normal operating hours. No loads will be left on the truck for overnight storage without advance permission from the Authorized Officer.
12. If scaling or weighing services are unavailable, delayed or interrupted for any reason, hauling operations will cease immediately until services resume or an alternate scaling or weighing location is approved by the Authorized Officer.
13. Any removal of wood products from loaded trucks before being accounted for as required by the contract shall be considered a trespass and render the Purchaser liable for damages under applicable law in accordance with Section 13 of the contract. Any payment made for purchase of such loads shall be deducted from amount due because of trespass.

VII. Total Estimated Purchase Price – For administrative purposes, the following will be used for determining (1) when payments are due and (2) the value of timber or other wood products subject to any special bonding provisions in accordance with Section 3(f) of the contract.

1. When payments are made under Section 3 of the contract, the Authorized Officer shall determine the value of removed timber and other wood products using the Government's records of log scale and/or weight volumes removed from the contract area.
2. The estimated value of timber and other wood products not yet removed from the contract area will be determined by subtracting the Government's records for value of removed timber and other wood products from the estimated total purchase price as shown in the table below. The estimated Total Purchase price is calculated by multiplying the estimated volume or weight for all species/products, listed below, by the bid prices in Section 1.

Total Estimated Purchase Price for Timber and Other Wood Products

Species/Product	Estimated Volume (MBF or Tons)	Bid Price (\$/MBF or \$/Ton)	Estimated Value
Douglas-fir	6,286 MBF		\$
Incense-cedar	5 MBF	\$25.50	\$127.50
Ponderosa pine	6 MBF	\$29.00	\$174.00

Total Estimated Purchase Price: \$

MEMORANDUM OF AGREEMENT FOR YARD SCALING

DISTRICT: Medford_____ AREA: _Grants Pass_____

Scale Site Owner: _____

Scale Site Location: _____

Scale Site Authorized Representative/Phone #: _____

Purchaser: _____

Timber Sale Name: _Rotors Up Timber Sale

BLM Contract No.: _ORM07-TS-2025.0012_____

BLM Authorized Officer(s) and Check Scaler(s)/Phone #s:_____

This Agreement covers the conditions necessary for an authorized yard scaling site. Unless otherwise agreed in writing by the Purchaser, Scale Site Owner, and the Bureau of Land Management (BLM), the following yard scaling requirements will be met and maintained. The BLM will periodically inspect the yard scaling facility for compliance. Approval of this Agreement does not automatically authorize scaling of BLM logs at this site. This Agreement, upon approval, will become part of the Approved Logging Plan as specified in Sec. 41 (____) of the contract. This Agreement will be reviewed annually.

1. Scaler's Office

- a. Suitable office space for the scaler's exclusive use shall be provided by the Scale Site Owner immediately adjacent to the scaling site. The office shall be equipped with adequate lights, heat, and a desk.
- b. Sanitary facilities, such as a chemical toilet, shall be provided by Scale Site Owner. The facility shall be readily available to the designated scaling area.

2. Safety

- a. Sufficient yard space shall be provided to prevent crowded, unsafe working conditions in and around the scaling area. The face of cold decks, truck and machine traffic, adjacent to scaling area, shall be no closer than forty (40) feet.
- b. Scaling bays shall allow a minimum safety margin of ten (10) feet between log ends of adjacent scaling bays.
- c. Log stackers shall not work in scaling bays that are currently being scaled by the scaler or check scaler. Log stackers shall keep a safe distance from scaler(s) when operating in adjacent scaling bays.
- d. Safe and suitable all-weather parking adjacent to the scaling area shall be provided for scalers and check scalers use.

3. Log Accountability

- a. It is the intent, by all parties to this Agreement, that all loads will be scaled the same day as delivered. Nevertheless, at least two loads will remain in place in the designated scaling bays until replaced by other loads or until released by a BLM Authorized officer.
- b. Unscaled loads of BLM logs shall only be spread for scaling within a designated scaling area as agreed upon by the BLM Authorized Officer.
- c. Each load requiring scaling shall be identified by its respective Load Receipt until scaled and removed from the scaling bay. Logs arriving during off hours shall be left on the truck, in which case the truck must remain in the yard overnight. Alternatively, the logs may be off loaded to the designated area, and shall remain in place until released by the BLM scaler or contract scaler. The outermost logs of the load must be identified with painted arrows on the face of the logs pointing into the load, and a strip must be painted over the entire load from one end log to the other end log.
- d. In other than single load bays, the outermost logs of the load must be identified with painted arrows on the face of the logs pointing into the load, to eliminate the possibility of logs being credited to an adjacent load.
- e. There shall be no bucking of BLM logs in the log yard prior to scaling. Logs to be rebucked after scaling will be removed to a specified location away from the designated scaling area prior to bucking. The bucking area will be designated on the yard map.
- f. If remanufactured pieces are transported out of the yard to other destinations, the Scale Site Owner will register and use a BLM approved catch brand or the original brand on all remanufactured log ends, and apply yellow paint in accordance with the Timber Sale Contract.
- g. In the event a BLM load is unaccompanied by a Load Receipt, or unidentified by log brand, the scaler shall scale the load and retain the original and all copies of the scale ticket, and immediately notify the BLM Authorized Officer. The load shall remain in place.

4. Operations

- a. The Scale Site Owner has designated above a Scale Site Authorized Representative to receive notices in regard to performance under this Agreement and to take related action.
- b. The Scale Site Owner shall provide a diagram (yard map) that shows yard layout, traffic flows, location of cold decks, designated scaling bays, loading and unloading areas, scaler's office, bucking area, and the designated parking area for the BLM vehicle. The yard map shall be attached to this Agreement.
- c. Logs shall be unloaded by a mechanical stacker, and spread in the scaling bay in a manner allowing the scaler to see defect indicators and measure individual logs safely and accurately. Logs shall not be bunched or jack-strawed in the bays.
- d. There shall be no permanent decking of logs within designated scaling area so as to infringe upon required space for scaling. If logs are pushed (decked) to the rear of scaling bay(s), they shall be removed from bays before the next work day. Subsequent loads spread for scaling shall be placed a safe distance from

the temporary deck.

e. Scaling under artificial lights will not be accepted.

f. BLM Authorized Officers and check scalers, whose duties include timber accountability and log export surveillance, are to be provided access to the yard to conduct inspections of the BLM timber at any time. Any visit to the yard scaling site by additional U.S. Government employees shall first be arranged through the Scale Site Authorized Representative.

g. Attempts to alter or influence a scaler's judgment and/or decision by persons other than the scaler's immediate supervisor may result in termination of this Agreement.

5. **Maintenance**

a. Scaling area shall be surfaced and treated with oil or water for the satisfactory control of dust and drainage for the control of mud.

b. Bark shall not be allowed to accumulate in the designated scaling area to the extent that accurate diameter measurement and/or scaler safety is jeopardized.

6. **Miscellaneous Clauses**

a. The BLM reserves the right to disapprove this yard scaling site at any time the above conditions are not being met. Loads shall then be scaled at other approved sites listed on the Scaling Authorization (Form OR 5300-18).

IN WITNESS WHEREOF, the parties hereto have signed this Agreement this _____ day of _____ 20____.

SCALE SITE OWNER: _____

BY: _____

TITLE: _____

TIMBER SALE PURCHASER: _____

BY: _____

TITLE: _____

BLM

BY: _____

TITLE: _____ Contracting Officer

USDI - BUREAU OF LAND MANAGEMENT - OSO
SCALING AUTHORIZATION
(Scaling - Contract Information)

(1) Original Registration (X)

Amendment ()

Cancellation ()

(2) To: _____

(9) Date Submitted: _____

(3) From: _____

(10) Scale: East-side (X)

(4) Logger: _____

(11) _____ State Brand

Registration #

(5) Begin Haul Date: _____

(12) _____

Contract Scaler Brand Code #

(14) Brand

(6) Purchaser: _____

(7) Sale Name: __Rotors Up_____

(8) Contract #: ____ ORM07-TS-2025.0012 ____

(13) Yellow Paint Yes () No (X)

Scale Location and Estimated Loads Per Day

(15) Scale Location (Name)	# of Loads	Yard	Truck	Remote Check Scaling Location
1.				
2.				
3.				
4.				
5.				
6.				

(16) Minimum Product Specifications						(17) Use for Sample Sales Only		
Species	Length (Feet)	DIB Small End (Inches)	Net Scale % Gross Scale	Min. Net Scale Volume	Weight (Yes)	CONTRACT SCALER Brand Code	Sample Group Code	Frequency
All Species	8	5	33 1/3 %			#	A	(1: 1
						#	B	(1:
						#	C	(1:
						#	D	(1:
						#	E	(1:

(18) Add-Back Volume - Deductions Due to Delay Yes () No (X)	Remarks: <u>Always</u> when amending
CONTRACT SCALER DATE RECEIVED STAMP	

(19) _____
Purchaser Date_____
BLM Representative Date

OR 5300-18 (March 1993)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 8.0.0.32
Updated: 11/4/2022

Summary of All Roads and Projects

T.S. Contract Name: Rotors Up Tract No: Sale Date:
Prepared by: BLM GPIO Ph: Print Date: 5/13/2025 9:23:41 AM
Construction: 15.54 sta
Improve: 0.00 sta Renov: 195.89 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 2.4 acres	\$9,229.58
300 Excavation: 7481 cy	\$41,063.42
Haul < 500 ft: 825 sta-yds	
Haul > 500 ft: 178 yd-mi	
400 Drainage:	\$7,543.19
Culvert: 74.00 lf DownSpout: 20.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$9,268.17
Blading 3.71 mi	
700-1200 Surfacing:	\$1,067.32
Commercial Quarry Name: Commerical 1.5" 20.00 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.50 acres	\$654.76
Includes Small Quantity Factor of 1.57	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing:	\$7,983.77
Manual Brushing: 4.50 acres	
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$500.00
Mobilization: Const. \$13,554.50 Surf. \$0.00.....	\$13,554.50
Quarry Development:	\$0.00

Total: 6,297 mbf @ \$14.430/mbf = \$90,864.71

Notes:

Quantities shown are estimates only and not pay items.
Surfacing Quantities are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Rotors Up Sale Date:

Road Number: 34-5-02.01 A-B Road Name: Eastman Gulch

Road Renovation: 2.87 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$7,230.46
Blading 2.87 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):3.48 acres	\$5,129.39
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$500.00
Mobilization: Const. \$2,254.67 Surf. \$0.00.....	\$2,254.67
Quarry Development:	\$0.00
Total:	\$15,114.51

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-02.01 A-B Road Name: Eastman Gulch

Section 500 Renovation:

Blading: $\$939.38/\text{mi} \times 2.87 \text{ mi} = \$2,696.02$

Compaction: $\$424.32/\text{mi} \times 2.87 \text{ mi} = \$1,217.80$

Clean Culverts: $\$514.62/\text{mi} \times 2.87 \text{ mi} = \$1,476.96$

Watering for Compaction

Water Truck 3000 Gal 16 hr $\times \$114.98/\text{hr} = \$1,839.68$

Subtotal: \$7,230.46

Section 700-1200 Surfacing:

Surfacing:

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: $\$965.64/\text{acre} \times 3.48 \text{ acres} = \$3,360.43$

Chipping Brush

Brush Chipper 16 hr $\times \$110.56/\text{hr} = \$1,768.96$

Subtotal: \$5,129.39

Section 8000 Miscellaneous:

HPOC

HPOC control devices 2 EA $\times \$250.00/\text{EA} = \500.00

Subtotal: \$500.00

Mobilization:

Construction - 16.63% of total Costs = $\$2,254.67$

Subtotal: \$2,254.67

Total: \$15,114.51

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Rotors Up Sale Date:

Road Number: 34-5-03.02 Road Name: Wide Open Road

Road Renovation: 0.84 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$3,593.67
Culvert: 40.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$2,037.71
Blading 0.84 mi	
700-1200 Surfacing:	\$1,067.32
Quarry Name: Commerical 1.5" 20.00 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):1.02 acres	\$2,854.39
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$1,674.91 Surf. \$0.00.....	\$1,674.91
Quarry Development:	\$0.00

Total: \$11,227.99

Notes:

Quantities shown are estimates only and not pay items.
 Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-03.02 Road Name: Wide Open Road

Section 400 Drainage:

Aluminized Milepost 0.69 24 inch 16 ga 40 lf x \$64.28/lf = \$2,571.20
Splash Pads Milepost 0.69 1 ea x \$222.47/ea = \$222.47
Additional Culvert Materials
24-inch Aluminized CMP 40 LF x \$20.00/LF = \$800.00

Subtotal: \$3,593.67

Section 500 Renovation:

Blading: \$939.38/mi x 0.84 mi = \$789.08
Compaction: \$424.32/mi x 0.84 mi = \$356.43
Clean Culverts: \$514.62/mi x 0.84 mi = \$432.28
Watering for Compaction
Water Truck 3000 Gal 4 hr x \$114.98/hr = \$459.92

Subtotal: \$2,037.71

Section 700-1200 Surfacing:

Commercial Quarry Name: Commerical 1.5"

Comment: For Culvert Replacement MP 0.69

<u>Length</u>	<u>TopW</u>	<u>BotW</u>	<u>Depth</u>	<u>CWid</u>	<u>#TOs</u>	<u>Width</u>	<u>F.W.L</u>	<u>Taper</u>	<u>Other</u>
									20 LCY

Rock Volume = 20.00 LCY

Purchase Price / Royalty: \$15.00/LCY x 20.00 LCY = \$300.00

T11 & T27 Testing: \$0.10/LCY x 20.00 LCY = \$2.00

Basic Rock Haul cost: \$0.85/LCY x 20.00 LCY = \$17.00

Rock Haul +15% grades: \$2.56/LCY-mi x 20.00 LCY x 3.00 mi= \$153.60

Rock Haul -15% grades: \$1.28/LCY-mi x 20.00 LCY x 14.00 mi= \$358.40

Rock Haul St& Co Roads: \$0.57/LCY-mi x 20.00 LCY x 15.80 mi= \$180.12

Basic Water Haul cost: \$0.83/LCY x 20.00 LCY = \$16.60

Water Haul +15% grades: \$0.36/LCY-mi x 20.00 LCY x 3.00 mi= \$21.60

Water Haul -15% grades: \$0.18/LCY-mi x 20.00 LCY x 5.00 mi= \$18.00

Subtotal: \$1,067.32

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Heavy: \$1931.28/acre x 1.02 acres = \$1,969.91

Chipping Brush

Brush Chipper 8 hr x \$110.56/hr = \$884.48

Subtotal: \$2,854.39

Mobilization:

Construction - 12.36% of total Costs = \$1,674.91

Subtotal: \$1,674.91

Total: \$11,227.99

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Rotors Up Sale Date:

Road Number: 34-5-04.00 Road Name: Eastman End Road

Road Construction: 0.29 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 2.40 acres \$9,229.58

300 Excavation: Standard cy \$41,063.42

Haul < 500 ft: 825.00 sta-yds

Haul > 500 ft: 178.00 yd-mi

400 Drainage: \$3,949.52

Culvert: 34.00 lf

DownSpout: 20.00 lf

PolyPipe: 0.00 lf

500 Renovation: \$0.00

700-1200 Surfacing: \$0.00

1300 Geotextiles: \$0.00

1400 Slope Protection: \$0.00

1800 Soil Stabilization: 0.50 acres \$654.76

Includes Small Quantity Factor of 1.57

1900 Cattleguards: \$0.00

2100 RoadSide Brushing (NONE):0.00 acres \$0.00

2300 Engineering: 0.00 sta. \$0.00

2400 Minor Concrete: \$0.00

2500 Gabions: \$0.00

8000 Miscellaneous: \$0.00

Mobilization: Const. \$9,624.93 Surf. \$0.00..... \$9,624.93

Quarry Development: \$0.00

Total: \$64,522.20

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-5-04.00 Road Name: Eastman End Road

Section 200 Clearing and Grubbing:

Clearing - Medium (Clearing): Adjustment Factor (1.67)

16-30% (Avg Side Slopes): Adjustment Factor (0.1)

Pile and Burn (Slash): Adjustment Factor (1.28)

greater than 40' (Avg Clearing Widths): Adjustment Factor (0)

Total Adjustment Factor: $1.67 + 0.1 + 1.28 + 0 = 3.05$

Base Cost/Acre: \$1,226.56 x Adjustment Factor: 3.05 x Total Acres: 2.40 = \$8,978.42

Rotors Unit

Excavator -Small (1.5 CY) 2 hr x \$125.58/hr = \$251.16

Subtotal: \$9,229.58

Section 300 Excavation:

Excavation - Common: $\$2.69/\text{cy} \times 5,000.00 \text{ cy} = \$13,450.00$

Excavation - Rippable: $\$5.35/\text{cy} \times 2,481.00 \text{ cy} = \$13,273.35$

Embankment Placement & Compaction 306.f - Common: $\$0.40/\text{cy} \times 5,000.00 \text{ cy} = \$2,000.00$

Embankment Placement & Compaction 306.f - Rock: $\$0.39/\text{cy} \times 2,481.00 \text{ cy} = \967.59

Subgrade Compaction: 4 Sta/hr $\$35.36/\text{sta.} \times 15.5 \text{ sta} = \549.49

Slope Rounding: $\$0.40/\text{lf} \times 1,554.00 \text{ lf} = \621.60

Embankment Placement & Compaction 306.a - Common: $\$1.18/\text{cy} \times 5,000.00 \text{ cy} = \$5,900.00$

Embankment Placement & Compaction 306.a - Rock: $\$1.11/\text{cy} \times 2,481.00 \text{ cy} = \$2,753.91$

End Hauling - 100 to 500 ft: $\$0.21/\text{sta-yd} \times 825.00 \text{ sta-yd} = \173.25

End Hauling > 500 ft and 10 mph: $\$2.58/\text{yd-mi} \times 178.00 \text{ yd-mi} = \459.24

End Hauling > 500 ft - Fixed Cost (CY): $\$3.52/\text{cy} \times 178.00 \text{ cy} = \626.56

Blading with ditch: $\$18.56/\text{station} \times 15.54 \text{ stations} = \288.42

Subtotal: \$41,063.42

Section 400 Drainage:

Aluminized STA 5+20 24 inch 16 ga 34 lf x $\$64.28/\text{lf} = \$2,185.52$

Full Round STA 5+20 24 inch 20 lf x $\$34.20/\text{lf} = \684.00

additional CMP cost

CMP cost 54 LF x $\$20.00/\text{LF} = \$1,080.00$

Subtotal: \$3,949.52

Section 700-1200 Surfacing:

Surfacing:

Section 1800 Soil Stabilization:

Dry Method with Mulch: $\$857.52/\text{acre} \times 0.50 \text{ acres} = \428.76

Includes Small Quantity Factor of 1.57

+ Seed Cost: $\$132.00/\text{acre} \times 0.50 \text{ acres} = \66.00

+ Mulch Cost: $\$320.00/\text{acre} \times 0.50 \text{ acres} = \160.00

Subtotal: \$654.76

Mobilization:

Construction - 71.01% of total Costs = \$9,624.93

Subtotal: \$9,624.93

Total: \$64,522.20

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Rotors Up Sale Date:

Average Mobilization distance = 50 miles Factor = 1.00

Mobilization: Construction

Graders-all:	1 ea x (1.00 x \$558.00/ea + 50 mi x \$18.75/mi)= \$1,495.50
Brush Cutter:	1 ea x (1.00 x \$558.00/ea) = \$558.00
Rollers & Comp:	1 ea x (1.00 x \$558.00/ea + 50 mi x \$28.29/mi)= \$1,972.50
Excavators (Lg):	1 ea x (1.00 x \$1208.00/ea + 50 mi x \$33.94/mi)= \$2,905.00
RTBackhoes 24/30:	1 ea x (1.00 x \$415.00/ea + 50 mi x \$7.36/mi)= \$783.00
Tractors <= D7:	1 ea x (1.00 x \$883.00/ea + 50 mi x \$49.56/mi)= \$3,361.00
Dump Truck<=15cy:	2 ea x (1.00 x \$130.00/ea + 50 mi x \$5.44/mi)= \$804.00
Water Truck:	1 ea x (1.00 x \$138.00/ea + 50 mi x \$5.75/mi)= \$425.50
Equipment Washing:	5 ea x (\$250.00) /ea = \$1,250.00

Subtotal: \$13,554.50

Mobilization: Surfacing

Subtotal: \$0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Rotors Up Sale Date:

Road Number	Const	Improv	Renov	Decomm	Temp
34-5-02.01 A-B			151.54		
34-5-03.02			44.35		
34-5-04.00	15.54				
Total Sta:	<u>15.54</u>	<u> </u>	<u>195.89</u>	<u> </u>	<u> </u>

200 Clearing and Grubbing	Clearing acres
34-5-02.01 A-B	0.0
34-5-03.02	0.0
34-5-04.00	2.4

Totals: 2.40

Rotors Unit 34-5-04.00
Excavator -Small (1.5 CY) 2 hr

300 Excavation	Excav LCY.s	Haul sta-yds	Haul yd-mi
34-5-04.00	7,481	825	178
Totals:	<u>7,481</u>	<u>825</u>	<u>178</u>

400 Drainage

Road Number	CMP Culvert	Polypipes	Downspouts
34-5-03.02	40 lf	0 lf	0 lf
34-5-04.00	34 lf	0 lf	20 lf
Total Drainage:	<u>74 lf</u>	<u> </u>	<u>20 lf</u>

Culvert Qty	Aluminized	Galvanized	Poly Pipe
12 inch	0 lf	0 lf	
18 inch	0 lf	0 lf	0 lf
24 inch	74 lf	0 lf	0 lf
30 inch	0 lf	0 lf	0 lf
36 inch	0 lf	0 lf	0 lf
42 inch	0 lf	0 lf	
48 inch	0 lf	0 lf	

Downspout Qty	Half Round	Full (poly)	Full (galv)
18 inch	0 lf	0 lf	0 lf
21 inch	0 lf		
24 inch	0 lf	0 lf	20 lf
30 inch			0 lf

additional CMP cost 34-5-04.00
CMP cost 54 LF
Additional Culvert Materials 34-5-03.02
24-inch Aluminized CMP 40 LF

Continuation of Construction Quantities

500 Renovation	Blade Miles	Slide cy
34-5-02.01 A-B	2.87	0
34-5-03.02	0.84	0

Totals:	3.71	0
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Watering for Compaction	34-5-03.02
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Water Truck 3000 Gal	4 hr
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Watering for Compaction	34-5-02.01 A-B
-------------------------	----------------

Water Truck 3000 Gal	16 hr
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Surfacing (Loose Cubic Yards)

Note: Due to slight rounding differences between total LCY vs. subtotaled LCY, Totals shown here may not be exactly as shown in the road summaries and worksheets.

Quarry Name: Commerical 1.5"

Commercial	Roadway	Turnouts	Other	
34-5-03.02	0	0	20	20
Totals:	0	0	20	20

Quarry Name: Commercial site 4"

Commercial	Roadway	Turnouts	Other	
Totals:	0	0	0	0

1300 Geotextiles

1400 Slope Protection

Totals:	0 cy
---------	------

Totals:	0
---------	---

1800 Soil stabilization - acres	Dry W/O	Dry/with	Hydro
	Mulch	Mulch	Mulch
34-5-04.00	0.0	0.0	0.0

Totals:	0.00	0.50	0.00
---------	------	------	------

Small Quantity Factor of 1.57 used

1900 Cattleguards

2100 RoadSide Brushing	acres
34-5-02.01 A-B - Manual Brushing	3.5
34-5-03.02 - Manual Brushing	1.0

Totals:	4.50
---------	------

Chipping Brush	34-5-03.02
----------------	------------

Brush Chipper	8 hr
-------------------------	------

Chipping Brush	34-5-02.01 A-B
----------------	----------------

Brush Chipper	16 hr
-------------------------	-------

Continuation of Construction Quantities

2300 Engineering stations

Totals: 0.00

2400 Minor Concrete

2500 Gabions

8000 Miscellaneous

HPOC 34-5-02.01 A-B

HPOC control devices 2 EA

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

PROJECT
LOCATION



A vertical scale bar labeled "SCALE IN MILES" with markings at 0, 6, and 12.

[illegible]

Exhibit C2-1

Legend

Rotors_Up_TS_Units

Rotors_Up_TS_Units

Ownership

Bureau of Land Management

Private Individual or Company

Industrial Lands by Ownership

Industrial Lands by Ownership

Roads by Surface Type

Paved Road

Rocked Road

Natural Surface

Null or Not Known

Renovation Responsibility

BLM Maintenance

Purchaser Renovation

Road Construction

Construction

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

MEDFORD DISTRICT - MEDFORD, OREGON

ROTORS UP TIMBER SALE

OVERALL SALE MAP

DRAFTED BY: BLM

EXHIBIT C2

DATE: APRIL 2025

SHEET: 1 OF 2

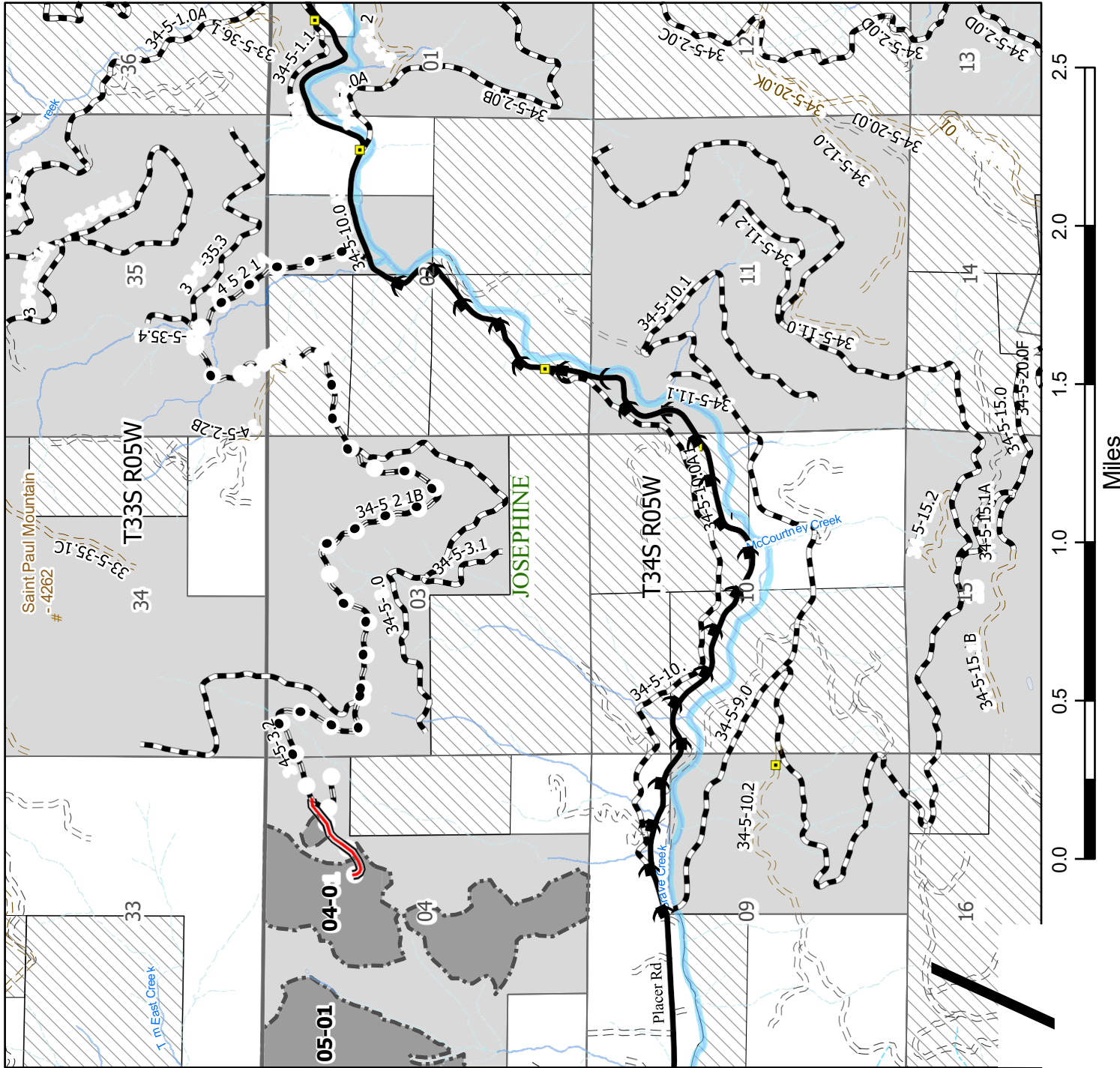


EXHIBIT C3-1

[illegible]

RENOVATION NOTES

1. ROADS LISTED FOR SURFACE RESHAPING SHALL CONSIST OF BLADING, WATERING, & ROLLING PER CONTRACT SPECIFICATIONS & DRAWINGS.

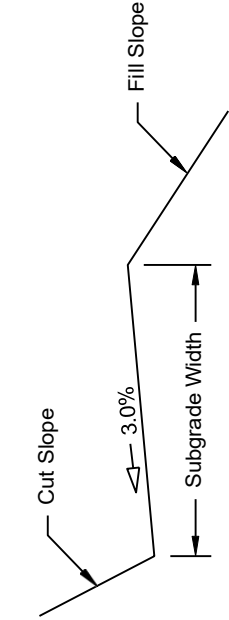
2. DITCH/CULVERT CLEANING SHALL CONSIST OF DITCH BLADING AND RESHAPING, CLEARING DEBRIS, VEGETATION, SEDIMENT, ROCK AND ALL OTHER MATERIAL HINDERING THE FLOW OF RUNOFF PER CONTRACT SPECIFICATIONS & DRAWINGS.

AGGREGATE GRADATION REQUIREMENTS

ITEM 900		ITEM 1000		ITEM 1200	
SIZE	GRADATION	SIZE	GRADATION	SIZE	GRADATION
4 INCH	A	3 INCH	A,C,F	1 1/2 INCH	C, C-1
3 INCH	B	2 INCH	B,D,G,H	1 INCH	D,D-1
2 INCH	C			3/4 INCH	E,E-1
1 INCH	D				

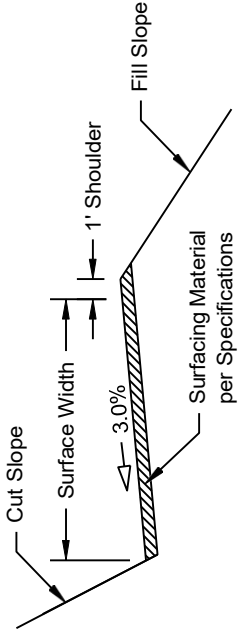
UNITED STATES DEPARTMENT OF THE INTERIOR	
BUREAU OF LAND MANAGEMENT	
MEDFORD DISTRICT - MEDFORD, OREGON	
ROTORS UP TIMBER SALE	
ESTIMATES OF QUANTITIES*	
DRAFTED BY: BLM	SCALE: NONE
DATE: APRIL 2025	SHEET 1 OF 1

*FOR INFORMATION USE ONLY. QUANTITIES SHOWN ARE NOT PAY ITEMS.



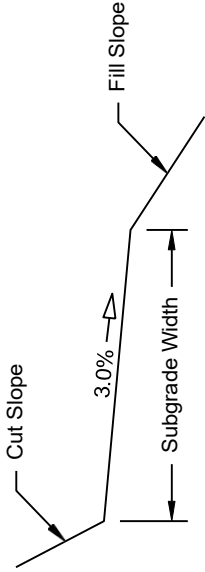
TYPICAL GRADING SECTION

TYPE 1



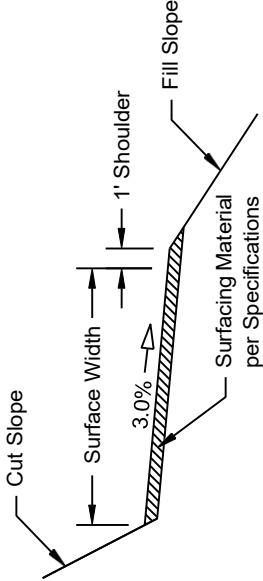
TYPICAL SURFACING SECTION

TYPE 2



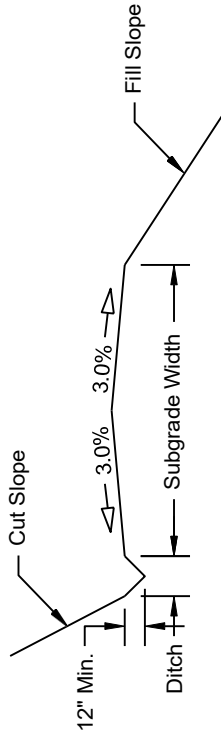
TYPICAL GRADING SECTION

TYPE 3



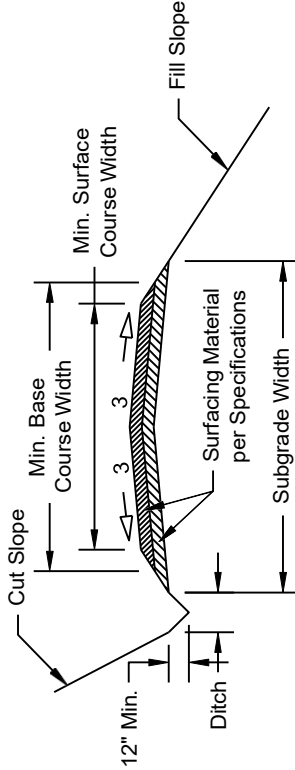
TYPICAL SURFACING SECTION

TYPE 4



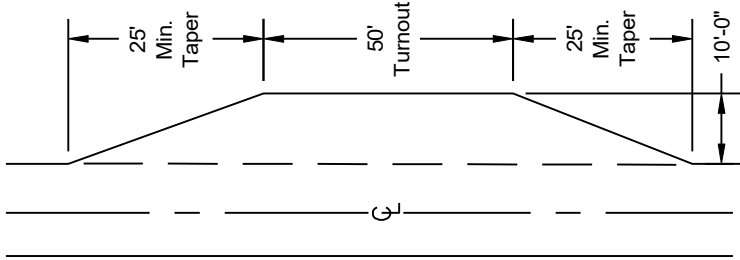
TYPICAL GRADING SECTION

TYPE 5



TYPICAL SURFACING SECTION

TYPE 6



TYPICAL TURNOUT

PLAN VIEW

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

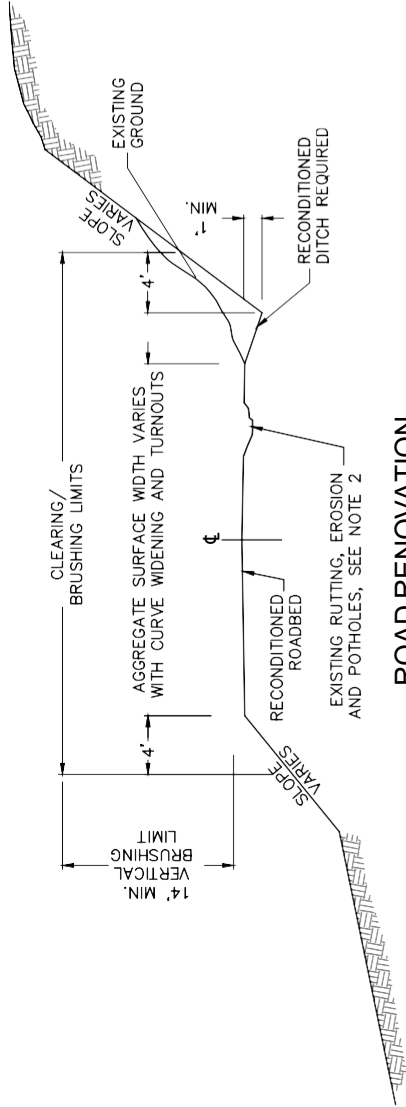
ROTORS UP
TIMBER SALE
SPECIFICATION SHEET

DRAFTED BY: BLM

SCALE: NONE

DATE: APRIL 2025

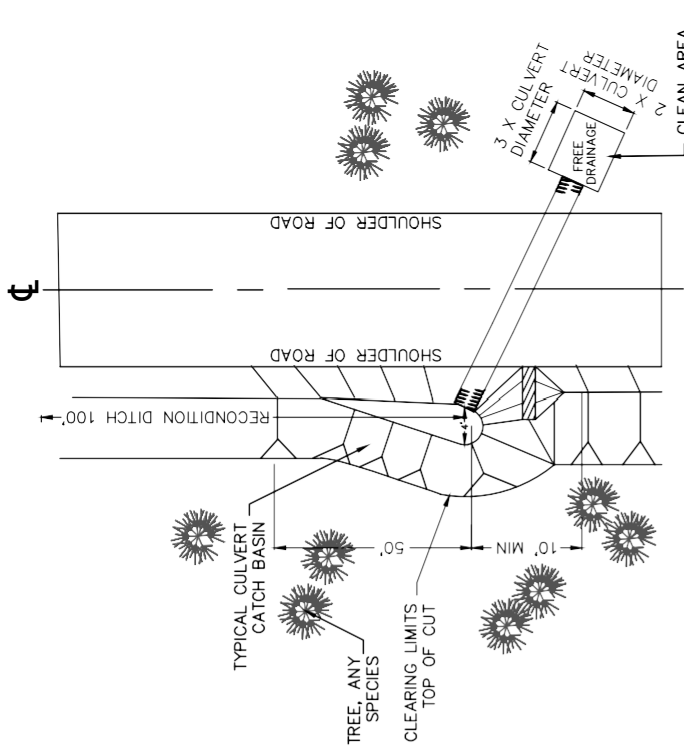
SHEET: 2 OF 2



ROAD RENOVATION

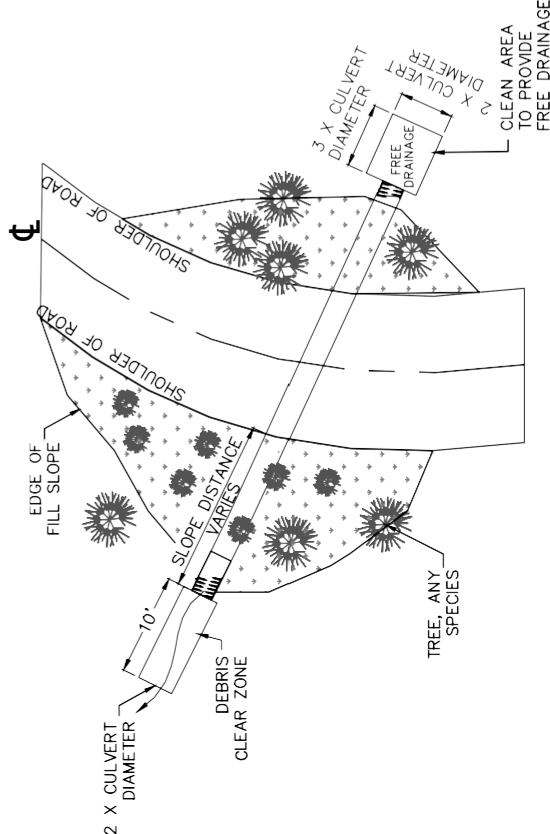
NOTES:

1. RECONDITIONING INCLUDES CURVE WIDENING AND TURNOUTS. DITCH RECONDITIONING INCLUDES CLEANING CULVERT INLETS AND OUTLETS.
2. WHERE RUTTING, EROSION AND POTHOLES EXIST, SCARIFY TO DEPTH OF RUT/EROSION/POTHOLE, BLADE, SHAPE AND COMPACT EXISTING AGGREGATE OR NATIVE SURFACE MATERIAL.
3. REMOVE AND DISPOSE OF SLIDE, DITCH, AND CATCH BASIN MATERIAL. DISPOSAL SITE LOCATIONS ARE LISTED IN THE EXHIBIT C ROAD RENOVATION WORKLIST. DISPOSAL/WASTE SITES SHALL BE APPROVED BY THE AUTHORIZED OFFICER PRIOR TO USE.
4. MATCH EXISTING TRAVEL WAY CROSS SLOPE. THE TRAVELED WAY SHALL BE SHAPED TO THE EXISTING CROSS SLOPE. EXISTING ROADS WHICH ARE CROWNED SHALL BE AT 3% FROM CENTERLINE ROAD, INSLOPED AS IS, OUTSLOPED AS IS.



CROSS DRAIN CULVERT
PLAN VIEW

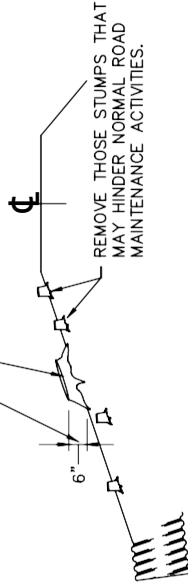
- CLEARING NOTES:
1. NO GRUBBING OR ROOT DISTURBANCE UNLESS NOTED
 2. REMOVE VEGETATION BY CUTTING OR MOWING
 3. RECONDITION CULVERT CATCH BASIN A MINIMUM OF 4' FROM CULVERT INLET



DRAW CULVERT
PLAN VIEW

- CLEARING NOTES:
1. NO GRUBBING OR ROOT DISTURBANCE UNLESS NOTED
 2. REMOVE VEGETATION BY CUTTING OR MOWING
 3. RECONDITION INLET CHANNEL, REMOVE ALL DEBRIS AND OBSTRUCTION A MINIMUM OF 2 X CULVERT DIAMETER & 10 FEET LONG

CULVERT OUTLET AT FILL SLOPE:
REMOVE ALL TREES, BRUSH AND DEBRIS FROM SHOULDER OF ROAD TO TOE OF FILL AT CULVERT PIPE. STUMPS MAY REMAIN IN PLACE EXCEPT THOSE THAT WILL HINDER NORMAL ROAD MAINTENANCE ACTIVITIES. FLUSH CUT OTHER STUMPS WITHIN 6-INCHES PARALLEL TO THE SLOPE.



DRAW CULVERT
PROFILE

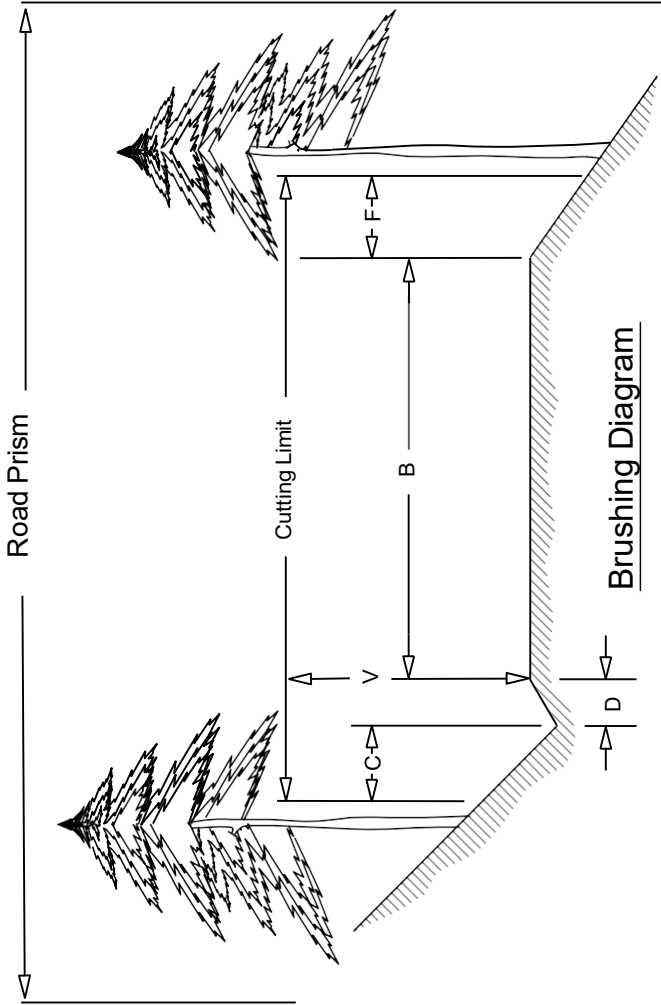
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ROTORS UP
TIMBER SALE

TYPICAL ROAD RENOVATION

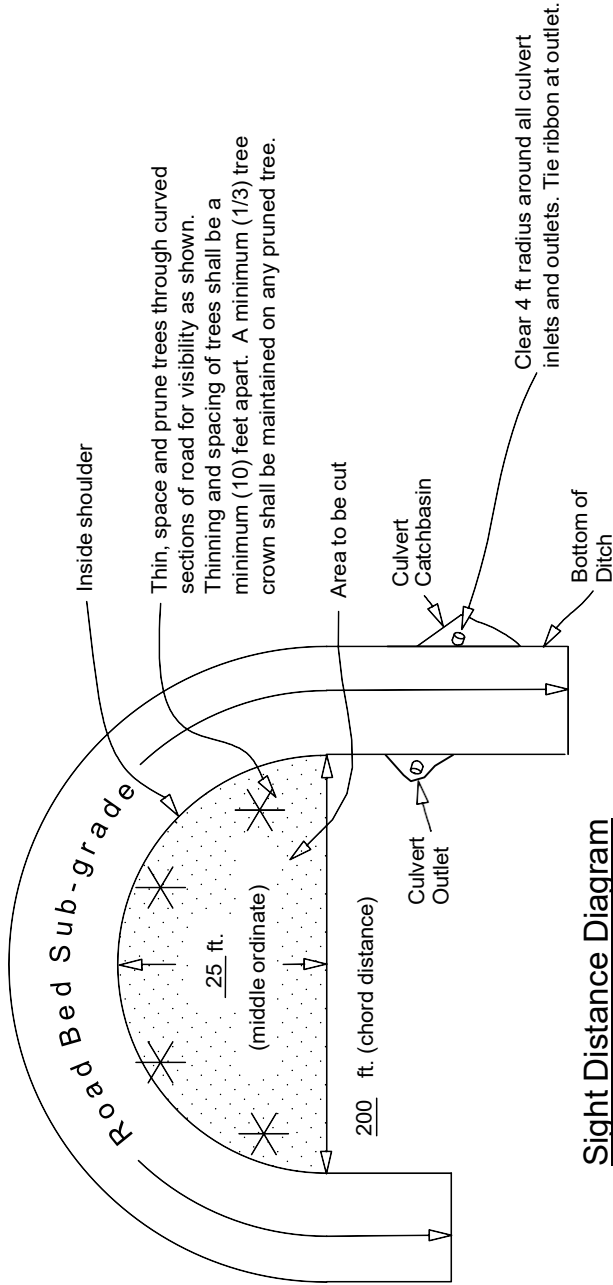
DRAFTED BY: BLM
SCALE: NONE
DATE: APRIL 2025
SHEET: 1 OF 1

EXHIBIT C6



- Cutting Limit = $C + D + B + F$
- B = Road Bed Subgrade (includes turnouts)
Cut all vegetation to maximum height of 1" flush with the running surface.
- C = 4 ft - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to maximum height of 4".
- D = Centerline of ditch to inside shoulder. Cut all vegetation to maximum height of 1".
- F = 4 ft - Distance to be brushed on fill slope beyond outside shoulder
Cut all vegetation to maximum height of 4".
- V = 14 ft - Height of vertical cutting limit

Inside Corner

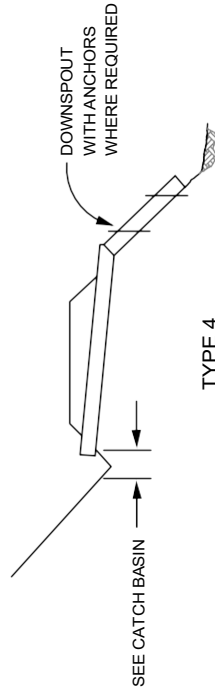
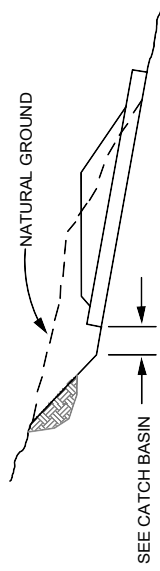
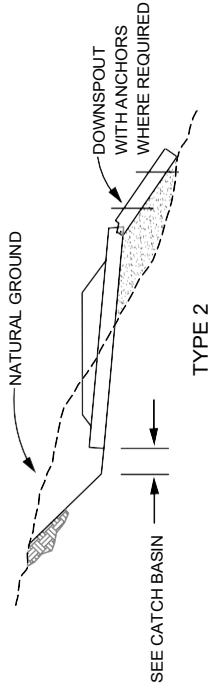
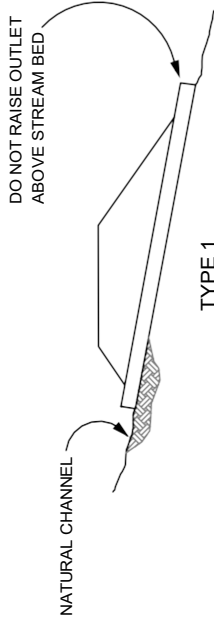


Sight Distance Diagram

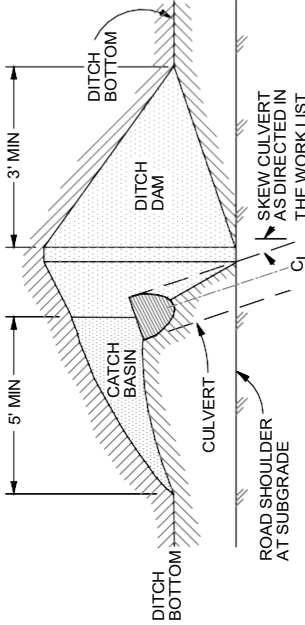
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
ROTORS UP TYPICAL ROADSIDE BRUSHING DETAIL		
DRAFTED BY: BLM	SCALE: NONE	
DATE: APRIL 2025		SHEET: 1 OF 1

EXHIBIT C8-1

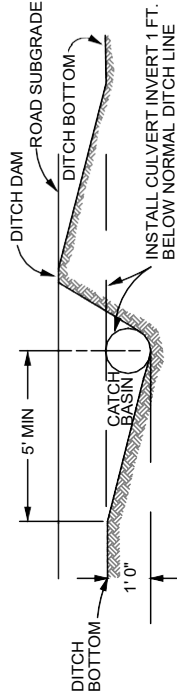
CULVERT INSTALLATION TYPES



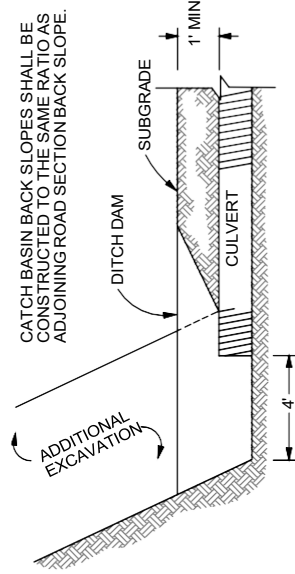
CATCH BASIN



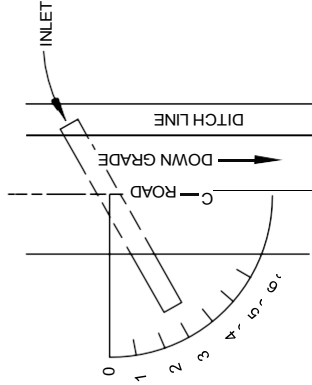
ELEVATION



CATCH BASIN BACK SLOPES SHALL BE CONSTRUCTED TO THE SAME RATIOS AS ADJOINING ROAD SECTION BACK SLOPE.



SKEW DIAGRAM



THE GRADE OF CROSDRAINS SHALL BE AT LEAST 2% GREATER THAN THE GRADE OF THE DITCH.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ROTORS UP CULVERT INSTALLATION DETAILS

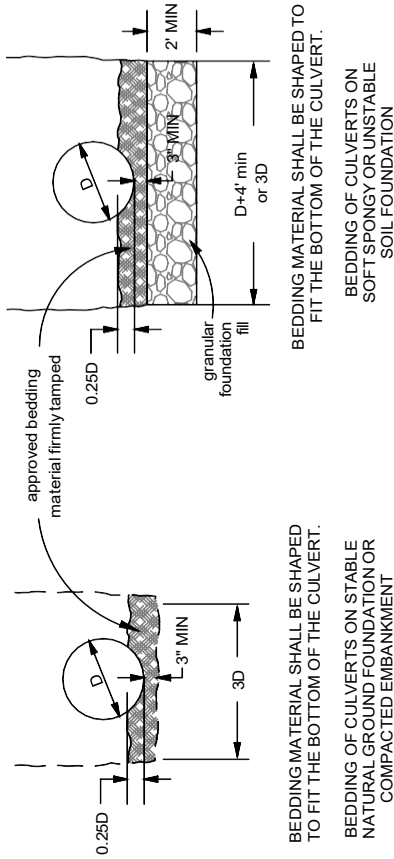
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SCALE: NONE

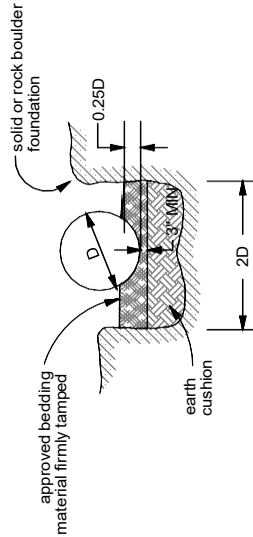
DATE: APRIL 2025

SHEET: 1 OF 2

BEDDING OF CULVERTS

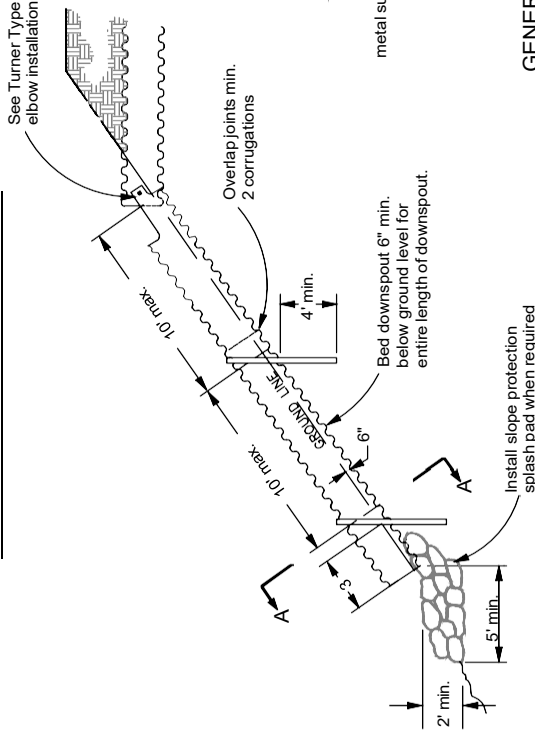


BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION

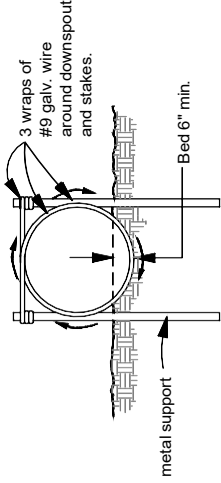


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS AND THE BOTTOM OF THE CULVERT.

FULL ROUND DOWNSPOUT



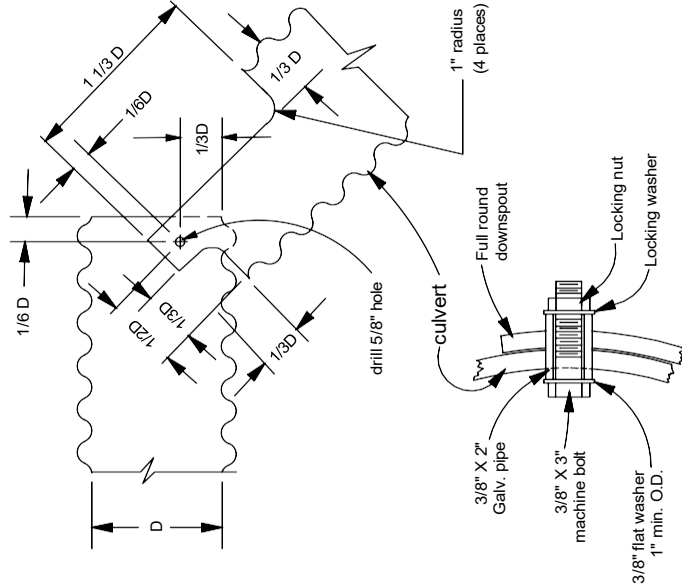
SECTION A-A



GENERAL NOTES:

1. The full round downspout shall be the same diameter, material, and coating as the culvert it is attached to.
2. The full round downspout shall be fabricated from 16 gauge metal with 2 2/3" x 1/2" corrugations.
3. Supports may be steel bar, angle iron, or approved equivalent metal posts and shall be a minimum of 6 feet long.

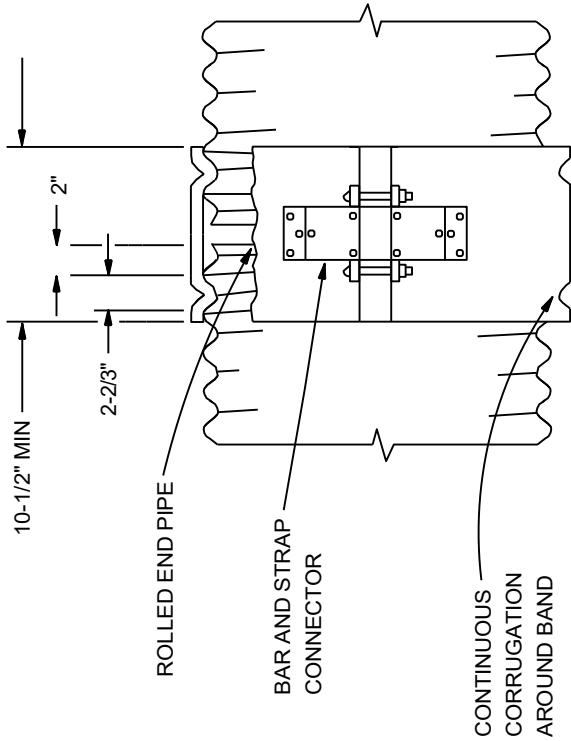
TURNER TYPE ELBOW



BOLT DETAIL

Join pipe culvert to downspout as shown. Field drill 5/8" dia. thru downspout and culvert and install 3/8" x 2" bolts, flat washers, lock washers and locking nuts.

CSP "HUGGER" COUPLER BANDS



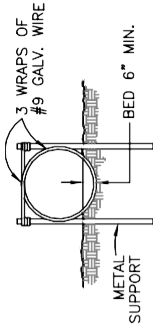
STANDARD CONSTRUCTION IS A ONE PIECE BAND FOR 12" THRU 48" PIPES AND A TWO PIECE BAND FOR 54" PIPES AND ABOVE

THE HUGGER COUPLER BAND OR AN APPROVED EQUIVALENT COUPLER BAND SHALL BE MADE OF THE SAME MATERIAL AND FINISH AS THE PIPES JOINED. THE COUPLER BANDS SHALL BE A MINIMUM OF 10-1/2 INCHES WIDE AND BE 16 GAUGE OR HEAVIER. THE BAND SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH A MINIMUM OF TWO (2) 1/2 INCH BOLTS THROUGH USE OF A BAR AND STRAP SUITABLY WELDED TO THE BAND. THE BAND SHALL ENGAGE AND MESH WITH THE SECOND ANNULER CORRUGATION INWARD FROM THE END OF EACH OF THE CONDUIT SECTIONS JOINED.

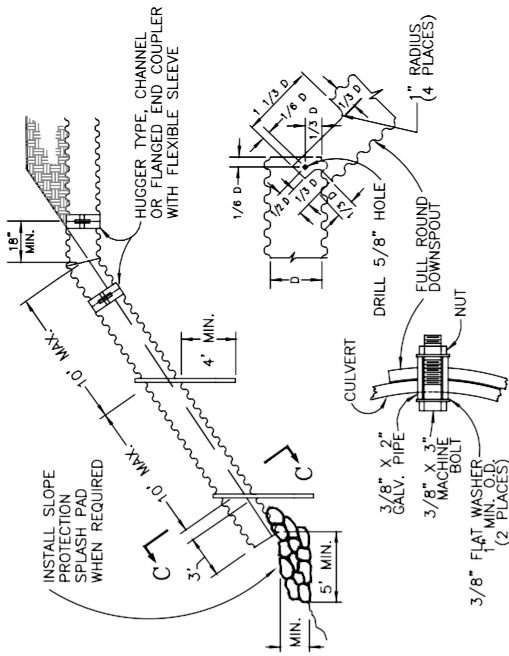
WHEN DESIGNATED ON THE PLANS OR IN THE SPECIAL PROVISIONS, GASKETS SHALL BE INSTALLED WHEN THE "HUGGER" TYPE, OR AN APPROVED EQUIVALENT COUPLER BAND IS INSTALLED ON SPILLWAY, OVERSIDE OR DOWN DRAINS.

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
ROTORS UP TIMBER SALE CULVERT BAND DETAIL		DRAFTED BY: BLM	SCALE: NONE
		DATE: APRIL 2025	SHEET: 1 OF 1

CONVENTIONAL TYPE ELBOW



SECTION C-C



TURNER TYPE ELBOW
(ALTERNATE ELBOW)

FULL ROUND DOWNSPOUT

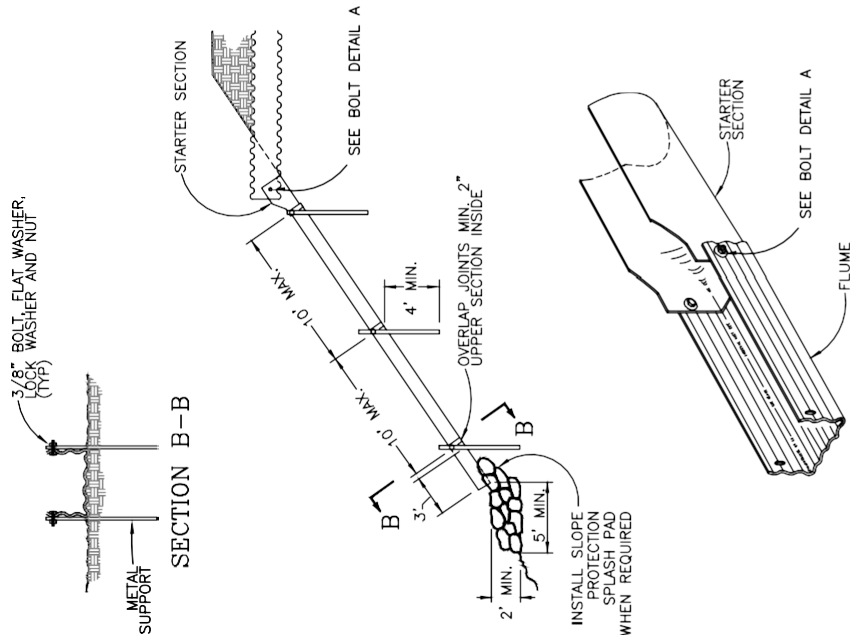
- NOTES:
1. THE ELBOW AND SPILLWAY SECTION SHALL BE OF THE SAME DIAMETER, MATERIAL AND COATING AS THE CULVERT IT IS ATTACHED TO.
 2. THE SPILLWAY SECTION SHALL BE FABRICATED FROM 16 GAUGE METAL WITH 2 2/3" X 1/2" CORRUGATIONS.
 3. SUPPORTS MAY BE COMMERCIAL STEEL FENCE POSTS, STEEL BAR, ANGLE IRON OR EQUIVALENT METAL POSTS.
 4. CONNECTION BETWEEN HELICALLY CORRUGATED AND ANNUAL PIPE SHALL REQUIRE A SPECIAL ADAPTER COUPLING BAND.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ROTORS UP TIMBER SALE
DOWNSPOUT
INSTALLATION DETAILS

DRAFTED BY: BLM
DATE: APRIL 2025
SCALE: NONE
SHEET: 1 OF 1

ALWAYS
THINK
SAFETY

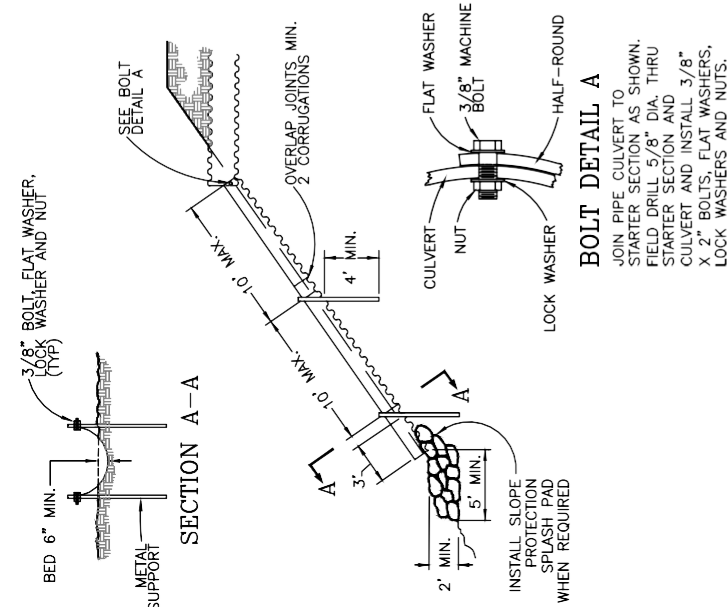


RECTANGULAR FLUME

- NOTES:
1. THE FLUME SHALL BE FABRICATED FROM 16 GAUGE CULVERT STOCK WITH 2 2/3" X 1/2" CORRUGATIONS.
 2. THE STARTER SECTION SHALL BE FABRICATED FROM 16 GAUGE NON-CORRUGATE CULVERT STOCK
 3. ADJUSTABLE WIDTH FLUMES ARE AVAILABLE FOR APPLICATIONS OVER 24" WIDE. INSTALL ACCORDING TO MANUFACTURER.
 4. SUPPORTS MAY BE STEEL BAR, ANGLE IRON OR APPROVED EQUIVALENT POSTS.

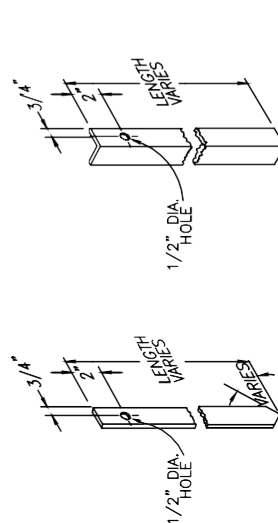
GENERAL NOTES

1. THE LENGTH OF THE DOWNSPOUT SHALL BE DETERMINED AT THE TIME OF INSTALLATION.
2. FABRICATION AND INSTALLATION OF ALL GALVANIZED STEEL DOWNSPOUTS SHALL CONFORM TO AASHTO M36, M218; ALUMINUM ALLOY TO AASHTO M196; ALUMINIZED TYPE II TO AASHTO 36, M196.
3. ALL STEEL NUTS, BOLTS AND WASHERS SHALL BE GALVANIZED. (ASTM A307, A153)
4. SLOPE PROTECTION SPLASH PADS, WHEN REQUIRED, SHALL BE A MIN. 2' WIDE X 5' LONG X 2' DEEP. INDIVIDUAL ROCKS SHALL BE 10" - 14" IN SIZE.
5. SLOPE PROTECTION SPLASH PADS SHALL EXTEND TO UNDISTURBED GROUND.



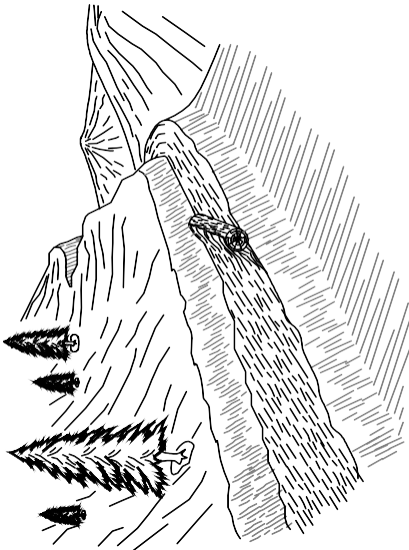
HALF ROUND DOWNSPOUT

- NOTES:
1. THE HALF ROUND SHALL BE ONE DIAMETER SIZE LARGER AND OF THE SAME MATERIAL AND COATING AS THE CULVERT IT IS ATTACHED TO.
 2. THE HALF ROUND SHALL BE FABRICATED FROM 16 GAUGE METAL WITH 2 2/3" X 1/2" CORRUGATIONS.
 3. SUPPORTS MAY BE STEEL BAR, ANGLE IRON OR APPROVED EQUIVALENT METAL POSTS.

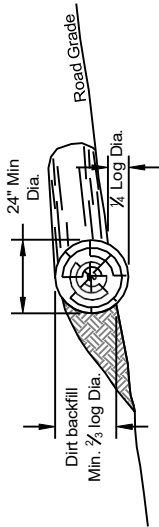


METAL SUPPORT DETAIL

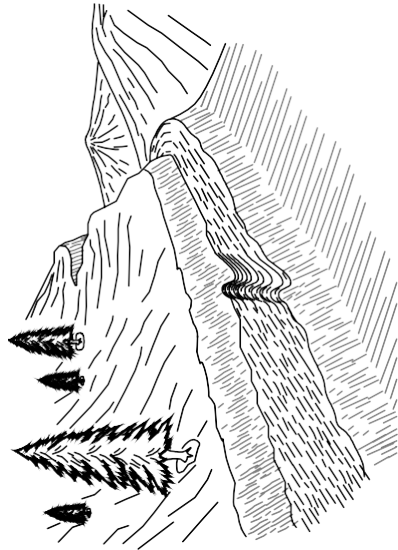
EXHIBIT C11-1-1



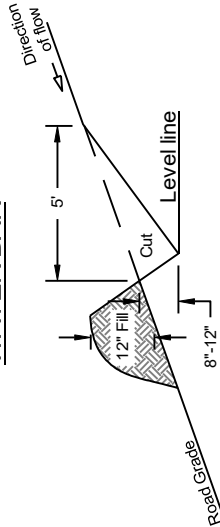
LOG BARRICADE



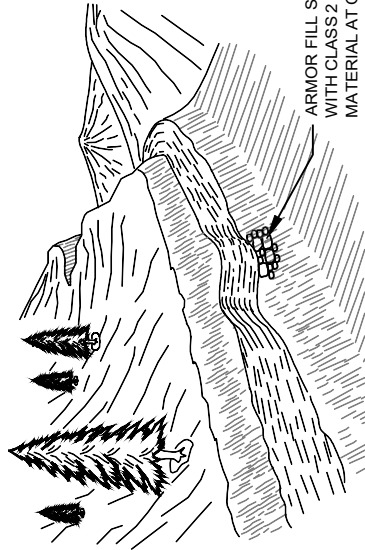
1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Roads Work List.
3. All barricades shall be skewed 30 degrees.
4. The log length shall extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".



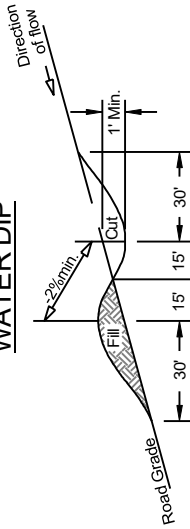
WATER BAR



1. Water bars shall be constructed as shown above.
2. Exact location will be flagged by the Authorized Officer prior to construction.
3. All water bars shall be skewed 30 degrees.
4. Upon completion of skidding logs, for the logging season, each skid road will have cross drainage constructed as shown above.



WATER DIP



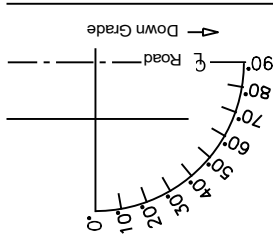
1. Water dips shall be constructed as shown above.
2. Exact location is listed in Exhibit C Roads Work List.
3. All water dips shall be skewed 30 degrees.
4. The width shall extend across entire road running surface, from the cut bank to the fill slope.
5. Armor outlet of water dip on fill slope. Riprap material will be securely placed at outlet a minimum of 10 LF wide by 8 LF down fill slope by 1 FT in depth. Key-in toe of Riprap apron for stability. See Slope Protection specifications (1400).
6. Seed and mulch fill slope upon completion to stabilize side-cast material. See Soil Stabilization specifications (1800).

WATER DIP SPACING*

ROAD GRADE	SANDY LOAM	DECOMPOSED LOAM	GRANITE/SAND	CLAY & SILTY SOILS
%	FEET	FEET	FEET	FEET
2-3	-	2000-1000	1200-600	
4-7	1200-600	950-450	600-300	
8-10	550-450	450-350	300-200	
11-15	450-300	350-200	200-100	
16+	300-250	200-150	100	

* Spacing is determined by slope distance and is the maximum allowed for the grade.

WATER DIP SPACING*



ROAD GRADE	HIGH	MODERATE	LOW
%	FEET	FEET	FEET
2-5	200	300	400
6-10	150	200	300
11-15	100	150	200
16-20	75	100	150
21-35	50	75	100
35+	50	50	50

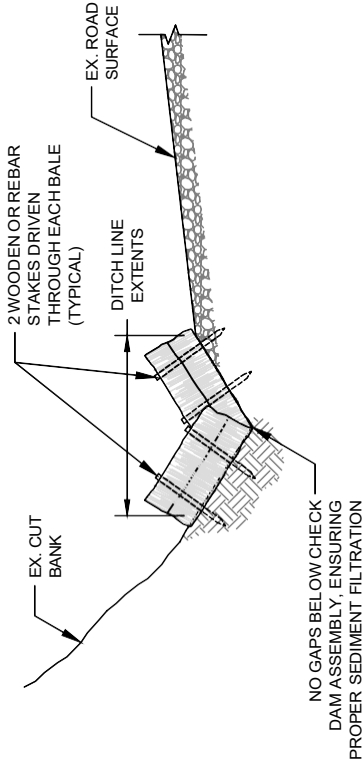
* Spacing is determined by slope distance and is the maximum allowed for the grade.

^ The erosion classes include the following rock types:
High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.
Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.
Low: Metasediments, metavolcanics, and hard shale.

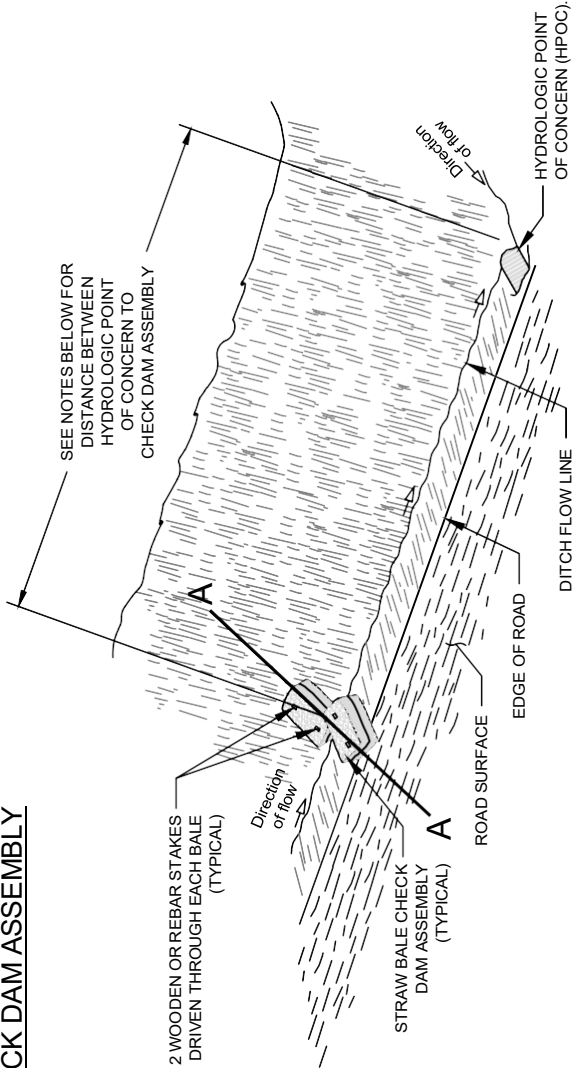
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ROTORS UP
TIMBER SALE
DRAINAGE & EROSION
CONTROL DETAILS

STRAW BALE CHECK DAM ASSEMBLY



SECTION A-A



PLAN

NOTES:

1. All straw bales will be from a weed free certified source.
2. Hydrologic Points of Concern (HPOC) are natural drainage features (i.e. streams, creeks, draws) that intersect with existing or proposed roads.
3. If the HPOC is a bridge spanning across a noted or listed critical fish habitat (Coho) waterway, install check dam assembly, or other approved BMP, in road ditch line 150 LF up-grade from top of creek bank or edge of bridge.
4. If the HPOC is a draw culvert, install check dam assembly, or other approved BMP, in road ditch line 100 LF up-grade from inlet of culvert.

INSTALLATION NOTES:

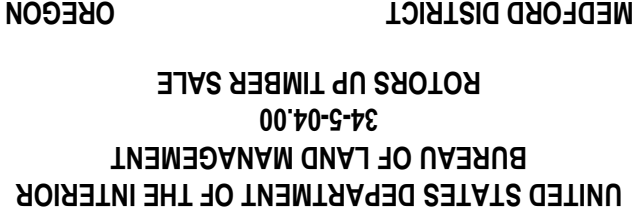
1. Do not construct the check dam assembly more than one bale high.
2. Bales shall be placed tightly together and snug to the ground to ensure no gaps between bales or underneath the assembly.
3. Securely anchor the bales in place with two wooden or rebar stakes driven through the bales. Drive the stakes in the second bale toward the previously laid bale to force the bales tightly together. Ensure stakes are driven 12 inches minimum into the ground.
4. The assemblies do not need to be anchored if the terrain is relatively flat, less than 2% ditch line grade.

INSPECTION/MAINTENANCE NOTES:

1. Inspect each assembly before, during, and after each rain event.
2. Repair and/or replace damaged assemblies or decomposed bales promptly. Replacement bales shall be in good condition to ensure sediment trapping.
3. Trapped sediment shall be removed when it reaches 6-8 inches in depth.
4. Sediment shall be removed and placed in a stable area outside of wetlands, riparian reserves, floodplains, and waters of the State.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ROTORS UP
TIMBER SALE
DRAINAGE & EROSION
CONTROL INSTALLATION

[illegible]

Profile View Data Summary:

Station (Sta)	Elevation (ft)	Feature / Note
1+00	3055	Subgrade Width R
1+50	3060	Subgrade Width R
2+00	3085	Subgrade Width R
2+50	3090	Subgrade Width R
3+00	3110	Subgrade Width R
3+50	3115	Subgrade Width R
4+00	3105	Subgrade Width R
4+50	3110	Subgrade Width R
5+00	3130	Subgrade Width R
5+50	3135	Subgrade Width R
6+00	3140	Subgrade Width R
6+50	3145	Subgrade Width R
7+00	3125	Subgrade Width R
7+50	3130	Subgrade Width R
8+00	3135	Subgrade Width R
8+50	3140	Subgrade Width R
9+00	3145	Subgrade Width R
9+50	3140	Subgrade Width R
10+00	3135	Subgrade Width R
10+50	3130	Subgrade Width R
11+00	3125	Subgrade Width R
11+50	3120	Subgrade Width R
12+00	3115	Subgrade Width R
12+50	3110	Subgrade Width R
13+00	3105	Subgrade Width R
13+50	3100	Subgrade Width R
14+00	3095	Subgrade Width R

Vertical Curve Data:

- BVC 5+31.9
- EVC 6+91.5
- L=200
- Grades: 3.24%, 1.57%, 1.03%, 2.4%, 2.0%, 11.65%, 14.33%

Scale: Distance in Feet (0 to 500)

[illegible]

[illegible]

P-Stn ft.					Grade %	L-Stn ft.	H. Offset ft.	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.																		
P-Stn ft.																												
0+00.0					* 12	0-00.8	9.6			147.8	42.2	0.0																
0+54.4						0+53.7	12.9			57.6	95.8	105.6																
1+01.5						1+01.5	-3.3			0.2	0.7	67.4																
0+99.9						1+01.8	-2.8			250.1	72.7	67.0																
2+09.8						2+10.0	3.1			466.7	278.0	244.4																
3+26.9						3+27.1	2.2			0.5	3.0	433.1																
3+27.7						3+28.0	2.2			17.4	199.3	430.7																
3+80.6						3+80.8	3.0			128.2	187.8	248.7																
4+87.1						4+87.4	0.0			540.5	51.7	189.2																
5+97.9						5+98.3	-3.5			190.3	47.6	677.9																
6+60.8						6+61.6	-10.7			1.6	0.0	820.7																
6+63.7						6+62.0	-11.2			230.7	65.6	822.3																
7+73.5						7+69.4	-15.3			0.5	0.0	987.4																
7+75.3						7+69.6	-15.5			331.6	106.0	987.8																
9+52.1						9+45.2	-23.5			7.8	1.0	1213.4																
9+55.6						9+48.9	-23.8			201.0	21.2	1220.2																
10+47.7						10+41.2																						
Pg. Tot.								2572.5	1172.6																			
Cum. Tot.								2572.5	1172.6																			

PROJECT NO:																				
DESIGN OFFICE:																				
DESIGNED BY:																				
DRAWN BY:																				
CHK'D BY:																				
APPROVED BY:																				
DATE:																				



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
34-5-04.00
ROTORS UP TIMBER SALE
MEDFORD DISTRICT
OREGON

P-Stn ft.						H. Offset ft.		L-Stn ft.		Grade %		SG Cut V. Cu. Yd.		SG Fill V. Cu. Yd.		Mass H. Cu. Yd.											
10+47.7 11+46.1 11+46.7 11+46.7 13+27.2 14+11.2 14+67.2 14+67.2 15+23.0 15+23.6 15+58.5						-18.5 -1.5 -1.6 0.0 0.0 0.0 0.0 -0.6 -1.0 -2.5		10+41.2 11+41.4 11+42.2 13+22.8 14+06.7 14+62.8 15+18.6 15+19.6 15+54.5		2 2 2 2 2		177.1 0.8 222.6 1588.2 1365.5 1050.9 15.6 487.9		38.5 0.6 76.8 669.4 2624.7 2115.4 32.4 492.3		1400.0 1538.6 1538.7 1684.6 2603.3 1344.2 279.7 262.9 258.6											
Pg. Tot.												4908.6		6050.1													
Cum. Tot.												7481.2		7222.7													

Sheet 6 of 6

PROJECT NO:																											
DESIGN OFFICE:																											
DESIGNED BY:																											
DRAWN BY:																											
CHK'D BY:																											
APPROVED BY:																											
DATE:																											
MARK																											
DESCRIPTION																											
DATE																											
APPV.																											

UNITED STATES DEPARTMENT OF THE INTERIOR


BUREAU OF LAND MANAGEMENT

34-5-04.00

ROTORS UP TIMBER SALE

MEDFORD DISTRICT

OREGON



C12

Exhibit C13

Rotors Up Timber Sale

Page 1 of 3

Roads Work List

Definitions:

AGG = Aggregate Rock Surface
BST = Bituminous Surface
CL = Center Line of Road
CMP = Corrugated Metal Pipe
CY = Cubic Yard
Jct = Junction/Intersection

MP = Mile Post
NAT = Natural or Native Surface
Pvt = Private (Industry or Citizen)
Seg = Segment
WDS = Waste Disposal Site

Road Renovation/Construction

The road renovation/construction work list consists of road work to be performed by the Purchaser's Representative and/or Contractor **prior** to timber hauling per Section 42(B)(2) of the contract Special Provisions. This work includes, but not limited to, clearing and grubbing; excavation for road construction; compacting, watering, blading and/or rolling the road surface; scarify rutted road surface as needed; clearing and reshaping ditch lines; cleaning or enlarging catch basins and outlets; cleaning the entire barrel of all culverts; furnishing and replacing corrugated metal pipes (culverts); regrading and/or constructing water-dips; surfacing or resurfacing roads with crushed rock aggregate; slide removal; seeding and mulching; and removing all down trees from roadway prisms. All road work shall comply with the contract Special Provisions, Specifications, and Exhibits.

Roadside Brushing

This consists of work to be performed by the Purchaser's Representative and/or Contractor prior to timber hauling per Section 42(B)(2) of the contract Special Provisions. This work includes, but not limited to, brushing 4 horizontal feet up the cut bank slope from the centerline of ditch and 4 horizontal feet down the fill slope from the outside shoulder hinge point of the road; removing brush at the inlet and outlet of existing culverts; and removing brush, limbs, and small diameter trees along the roadway to improve sight distance. All roadside vegetation to be cut and disposed of will be less than 8 inches in diameter at breast height ($\leq 8''$ DBH). Disposal from roadside brushing will be lop and scatter unless otherwise noted as chipping in the work list. In areas where the road crosses through private (industry or civilian) property, conifer trees shall be pruned rather than cut down. Brush shall be cut to meet regular specifications. All work shall comply with the contract Special Provisions, Specifications, and Exhibits.

34-5-02.01 Road, Seg A-B – Eastman Gulch – AGG – Sub: 16Ft – Ditch: 3Ft

MP	Description
0.00	Jct. w/ 34-5-10.0 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping; and removing all down trees from the road prism.
0.02	Jct. w/ un-numbered road on left. Waste Disposal Sight (WDS) on left. Place slump material on stable area well off running surface of road and outside of turnoff area so not to impede drivability of traffic.
0.07	Existing culvert.
0.12	Existing culvert.
0.22	Existing culvert.
0.30	Existing culvert.
0.37	Existing culvert.
0.45	Existing culvert.
0.56	Existing culvert.
0.63	Jct. w/ 33-5-35.03 road on right. End segment A.

Exhibit C13

Rotors Up Timber Sale

Page 2 of 3

- 0.66 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMPs per Exhibit C11-2 details and specifications.
- 0.69 Existing culvert.
- 0.73 Waste Disposal Sight (WDS) on left. Place slump material on stable area well off running surface of road and outside of turnoff area so not to impede drivability of traffic.
- 0.77 Existing culvert.
- 0.84 Existing culvert. Hydrologic point of concern. Install check dams or other approved BMPs per Exhibit C11-2 details and specifications.
- 0.88 Waste Disposal Sight (WDS) on left. Place slump material on stable area well off running surface of road and outside of turnoff area so not to impede drivability of traffic.
- 0.89 Existing culvert.
- 0.92 Existing culvert.
- 1.00 Existing culvert.
- 1.05 Property line (into private).
- 1.12 Existing culvert.
- 1.14 Jct. w/ 34-5-02.02 road on right.
- 1.22 Existing culvert.
- 1.31 Existing culvert.
- 1.38 Existing culvert.
- 1.43 Existing culvert.
- 1.49 Existing culvert.
- 1.52 Property line (into BLM).
- 1.57 Jct. w/ 34-5-03.00 road on left.
- 1.63 Existing culvert.
- 1.71 Existing culvert.
- 1.77 Waste Disposal Sight (WDS) on left. Place slump material on stable area well off running surface of road and outside of turnoff area so not to impede drivability of traffic.
- 1.81 Existing culvert
- 1.92 Waste Disposal Sight (WDS) on left. Place slump material on stable area well off running surface of road and outside of turnoff area so not to impede drivability of traffic.
- 2.01 Existing culvert.
- 2.07 Existing culvert.
- 2.16 Existing culvert.
- 2.18 Waste Disposal Sight (WDS) on left. Place slump material on stable area well off running surface of road and outside of turnoff area so not to impede drivability of traffic.
- 2.25 Existing culvert.
- 2.34 Existing culvert.
- 2.45 Existing culvert.
- 2.51 Existing culvert.
- 2.61 Existing BLM quarry on right.
- 2.71 Existing culvert.
- 2.80 Existing culvert.
- 2.87 Jct. w/ 34-5-03.02 road on left. End pre-haul road renovation.

34-5-03.02 Road – Wide Open Road – AGG – Sub: 15Ft – Ditch: 3Ft

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct. w/ 34-5-02.01 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.10 | Existing culvert. |

Exhibit C13

Rotors Up Timber Sale

Page 3 of 3

- 0.12 Waste Disposal Sight (WDS) on left. Place slump material on stable area well off running surface of road and outside of turnoff area so not to impede drivability of traffic.
- 0.22 Existing culvert.
- 0.31 Existing culvert.
- 0.40 Existing culvert.
- 0.48 Existing culvert.
- 0.53 Existing culvert.
- 0.62 Existing culvert.
- 0.69 Existing culvert. Remove and replace the existing culvert with a new 24" x 40' Aluminized 16-gauge CMP per contract details and specifications (Type 2). Supply and properly place 2 CYs of Class 2 Riprap material from an approved weed free commercial source at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details. Upon approval of the roadbed after the culvert replacement, properly place, water, and roll a 15' wide by 60' long by 4" depth aggregate cap which shall consist of 1-1/2"-minus crushed rock (20 CYs) compacted in place from an approved weed free commercial source per contract specifications and details. *Culvert catch basin may need to be enlarged to accommodate ditch runoff from 34-5-04.00 road. Culvert skew may need to be changed to accommodate flow.*
- 0.70 Jct. w/ proposed 34-5-04.00 road on right (to be constructed).
- 0.83 Existing culvert.
- 0.84 End pre-haul road renovation and road surfacing.

NEW 34-5-04.00 Road – Eastman End Road – NAT – Sub: 16Ft – Ditch: 3Ft

(See Exhibit C2-2 for Map and Exhibit C12 for Plan and Profile Sheets)

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ 34-5-03.02 road. Begin new road construction to road specifications and design.
2+00	Begin taper for turnout left.
2+25	Begin 10' x 50' turnout left.
2+75	End 10' x 50' turnout left.
3+00	End taper for turnout left.
5+20	Install 24" x 34' Aluminized 16-gauge CMP with a 20' aluminized full round downspout per contract details and specifications (Type 2).
13+45	Begin taper for helicopter landing (approximate size 175' x 200') left and right.
13+75	Begin helicopter landing right for 75'.
14+22	Begin helicopter landing left for 100'.
15+15	End helicopter landing left for 100'.
15+47	End helicopter landing right for 75'.
15+54	End taper for helicopter landing left and right. End new road construction.

SPECIAL PROVISIONS - ROADS

1. GENERAL:

- Before the initial start of road renovation, construction, reconstruction, or surfacing operations, or after a shutdown of 7 or more days, the Purchaser, or the Purchaser's Representative, shall notify the Authorized Officer 48 hours in advance of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer if they intend to cease operations for any period of 30 or more days.

2. BRIDGE LOAD RESTRICTIONS:

- The Purchaser shall be required to secure written approval to use vehicles or haul forest products and equipment over Government owned or controlled roads when such vehicles or equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit or if vehicles meet allowable non-permitted State vehicle weights, but the haul route crosses a structure or segment of road that is posted for reduced weights (See R-4).
- BLM haul authorization form for weight restricted structures and/or oversize loads can be obtained from the Authorized Officer. This form shall be properly filled out and submitted for approval a minimum of 14 days prior to driving oversized loads across the bridge.

3. DAMAGE:

- The Purchaser's Representative/Contractor shall protect, and is responsible for, any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements as required in Section 14. Damage to utilities and other existing improvements shall be promptly paid for or repaired to a condition which is, in the opinion of the Authorized Officer and the governing utility company, as good or better condition than just prior to such damage occurring.

4. PERMITS:

- All required permits are the responsibility of the Purchaser.

5. SEASONAL RESTRICTION. - Waivers may be granted if conditions are favorable.

<u>ACTIVITY</u>	<u>START DATE</u>	<u>END DATE</u>
Road renovation	May 15	October 15
In stream work	June 15	September 15

6. STREAMS:

- All stream channel culverts and inlets shall be cleared and cleaned between **June 15th and September 15th** in accordance with Oregon Department of Fish and Wildlife (ODFW) in-stream work period guidelines, updated March 2024.
- Construct silt fences, or approved equal, 25 and 50 feet below culvert replacement sites (on live streams) to trap sediment and prevent it from entering nearby stream channels.
- Live streams shall be diverted around or through the work area in a manner that will minimize sedimentation downstream. Keep excavation site dewatered so that installation of culverts can be carried out only under dry conditions. Dispose of excess

water by using natural drainage ways or devices near the site to the extent of their natural capacity and in a manner that will avoid damage to adjacent property. Utilize dewatering methods such as temporary sediment traps and/or silt fences for areas to be excavated. Provide for downstream water flow without significant transport of excavated material or sediment during construction. At no time shall turbidity limits exceed DEQ's water quality standards.

- Ensure that all large wood is retained in the stream channel during culvert cleaning activities by moving logs which had accumulated on the upstream side of a culvert to the downstream side of the culvert.

7. DUST ABATEMENT:

- The application of dust abatement materials such as Lignin or other approved petroleum-based dust abatement products shall be restricted from application just after severely wet weather, at stream crossings to be designated by the Authorized Officer, or other locations that could result in direct delivery to a water body.
- All dust abatement applications shall be approved by the Authorized Officer prior to application.

8. WATER SOURCE:

- The Purchaser is responsible for obtaining water. Water sources shall be approved by the Authorized Officer prior to use. The Purchaser is responsible for all permits and fees from water sources on private or commercial sources.

9. EQUIPMENT

- Construction equipment shall be washed prior to entering BLM lands. Removal of all dirt, grease, and plant parts that may carry noxious weed seeds or vegetative parts is required. Equipment shall be inspected by the Authorized Officer or Project Engineer prior to entering BLM lands. Provide a 48 hours' notice of inspection to the Authorized Officer or Project Engineer prior to mobilization.

10. SOIL STABILIZATION:

- The Purchaser's Representative/Contractor shall apply native grass seed and certified weed free straw mulch to all disturbed soil for soil stabilization operations per Exhibit C21, Section 1800. Native seed mixture shall be prescribed by the BLM project botanist. Native seed and straw mulch may be purchased from the BLM, **if available**, or purchased from a source approved by the BLM project botanist.

11. ROAD RENOVATION:

- Road renovation shall generally take place between May 15th and October 15th of the same year. Waivers may be granted from the Authorized Officer for working outside of this timeline. Seasonal restrictions for stream work and wildlife will still apply.
- Loose material cleaned from ditch lines and/or slide material shall not be placed where it can enter wetlands, riparian reserves, floodplains, and waters of the State.

12. ROADSIDE BRUSHING:

- While roadside brushing, there shall be no scarring or other damage of the tree trunk or bole allowed. All debris resulting from roadside brushing activities shall be scattered downslope or chipped according to specifications. Use of Excavators for brush removal will be at the discretion of the Authorized Officer. **All culvert inlets and outlets shall be brushed for a radius of 4 feet.**
- While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C6) shall have the branches pruned rather than being felled.
- All stumps, designated by the Authorized Officer, which would interfere with normal blading and road renovation/maintenance operations (including turnouts), shall be removed in such a way as to not cause damage to the drainage ditch or the roadbed. If such damage does occur, the Purchaser's Representative/Contractor shall properly repair the road damage immediately.

13. COMMERCIAL AGGREGATE:

- Aggregate supplied/furnished for this work shall be direct from an accredited commercial source and can be stockpiled during the period between November 1st and June 15th immediately prior to application. Aggregate which has been stockpiled between June 16th and October 31st of prior years will not be accepted. Aggregate crushed between June 16th and October 31st of the same application year shall not be stockpiled for more than two weeks before application.

14. WILDLIFE RESTRICTIONS:

- Seasonally restrict mechanical roadside brushing activities (including chainsaws) and heavy equipment use to avoid disturbance to nesting NSOs and raptors from March 1st through September 30th within 200 feet of known NSO and raptor nests. This seasonal restriction could be waived if non-nesting status is determined.

15. WET SEASON HAUL:

- The Purchaser may wet season haul, with the Authorized Officer's written approval, on roads with durable rock surfacing and sufficient rock depth to resist rutting or development of sediment on road surfaces that drain directly to wetlands, floodplains, and waters of the State.
- If hauling activities during the wet season causes or begins to cause road damage or the transport of sediment into streams, the Authorized Officer shall suspend wet season haul or require additional erosion control devices to prevent damage or off-site transportation of sediment. Additional rock may be required at the Purchaser's expense to repair any damage that occurs to the road during wet season haul. Any costs for rocking and installation of additional drainage features will be at the Purchaser's expense and shall be completed in accordance with the plans and specifications shown in Exhibit C of this contract.
- No hauling shall occur on native surface roads during the wet season (generally Oct. 15 – May 15); exceptions can be made during dry conditions of the wet season pending approval from a BLM Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

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GENERAL – 100

101 - Prewrite Conference(s):

A prework conference will be held prior to the start of new construction, improvement, and renovation operations. The Purchaser shall request the conference at least 72 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representative(s), subcontractor(s) and/or his or their representative(s) and the Authorized Officer and/or his representative(s).

The purpose of the prework conference will be to review the required work, exhibits and specifications, and to establish a work schedule and a list of the Purchaser's representatives and subcontractor(s).

102 - Definitions:

AASHTO - American Association of State Highway and Transportation Officials.
Current editions of tests and specifications.

Abrasion Resistance - The ability of a fabric surface to resist wear by friction.

ACI - American Concrete Institute

Apparent Opening Size (AOS) - Number of the U.S. Bureau of Standard sieve (or its opening size in millimeters or inches) having openings closest in size to the diameter of uniform particles which will allow 5 percent by weight to pass through the geotextile material when shaken in a prescribed manner. This is also referred to as Equivalent Opening Size (EOS).

ASTM - American Society for Testing and Materials.

Base Course - Surfacing structure consisting of crushed gravel or stone, crushed sandstone, pitrun rock, bank or river-run gravels, etc., to provide support and, in the event no surface course is placed, the running surface for traffic load.

BLM - Bureau of Land Management

Borrow - Excavated material required for embankments and other portions of the work.

Burst Strength - The resistance of a geotextile material to rupture from pressure

applied at right angles to the plane of the geotextile material under specified conditions, usually expressed as the amount of pressure causing failure. Rupture or burst results from tensile failure of the geotextile material.

Culvert - A pipe, pipe-arch, arch, or box structure constructed of metal, concrete, plastic or wood which provides an opening under the roadway primarily for the conveyance of liquids, pedestrians or livestock.

Curve Widening - Widening required on inside of curves to accommodate long log and equipment hauling trucks.

Embankment - A structure of soil, aggregate, or rock material placed on a prepared ground surface and constructed to subgrade.

End Haul - Excavated material moved, other than by dozer, to an embankment or waste area to prevent sidecasting material outside of the road prism.

Excess Excavation - Material from the roadway in excess of that needed for construction of the designed roadway (waste).

Grab Tensile Strength - A modified tensile strength of a geotextile material. The strength of a specific width of geotextile material together with the additional strength contributed by adjacent areas. Typically, grab strength is determined on a 12-inch-wide strip of geotextile material, with the tensile load applied at the midpoint of the geotextile material width through 1-inch-wide jaw faces.

Grading - Leveling to grade, shaping and smoothing of a road subgrade; the shaping of roadside ditches as to grade and contour. In some instances includes smoothing of the cut bank.

Nonwoven Geotextile Material - A textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical or chemical means.

Overhaul - Distance excavated material is transported in excess of the distance included in the cost for excavation.

Penetration Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a sharp pointed object. Initial penetration is by separating the fibers. Further penetration is essentially a tearing process.

Percent Open Area - The net area of a geotextile material that is not occupied by geotextile material filaments, normally determinable only for woven and nonwoven geotextile material having distinct, visible, and measurable openings that continue directly through the geotextile material.

Permeability - The geotextile material property which permits water to be transmitted in the longitudinal or transverse planes of the geotextile material.

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

Piping - The process by which soil particles are washed in or through pore spaces in drains and filters or poorly compacted fill/backfill material.

Plans - The approved drawings, or exact reproductions thereof which show the locations, character, dimensions, and details of the work to be done.

Pore Size - The size of an opening between geotextile material filaments; apparent opening size (AOS) is used to quantify this geotextile material property.

Puncture Resistance - The geotextile material property determined by the force required to penetrate a geotextile material with a blunt object. Failure results in a tearing of the geotextile material.

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

Reasonably Close Conformity - Compliance with reasonable and customary manufacturing and construction tolerances where working tolerances are not specified.

Reinforcement - Strengthening of concrete with iron bars or mesh: geotextile with geotextile material inclusion: subgrade with aggregate: etc.

Roadbed - The graded portion of the road within top and side slopes, prepared as a foundation for the pavement structure and shoulders.

Road Centerline - The longitudinal center of a roadbed.

Road Improvement - Work done to an existing road which improves it over its original design standard.

Road Renovation - Work done to an existing road which restores it to its original design.

Roadway - The portion of a road within limits of construction. Usually from the toe of the fill slope to a point where the cut slope intersects natural ground line.
Synonym - road prism.

Scale - In quarrying, consists of the removal of loose or overhanging rock adhering to the solid face after a shot or a round of shots has been fired.

Scarification - The process of loosening or breaking up of the surface layer of soil or road, usually to a specified depth.

Separation - Function of geotextile material as a partition between adjacent materials to prevent mixing of those materials.

Shoulder - The portion of the roadbed contiguous with the traveled way designed for accommodation of stopped vehicles, safety, and lateral support of base and surface courses.

Slope ratio notation (horizontal:vertical) – Slope ratios for constructed cut and fill slopes are expressed as a ratio of horizontal units to vertical units.

Spalls - Flakes or chips of stone.

Specifications - A general term applied to all directions, provisions, and requirements pertaining to performance of the work.

Specific Gravity - The ratio of the density of a material to the density of water obtained by weighing known volumes of both items in air. A specific gravity less than one implies that the material will float.

Structures - Bridges, culverts, catch basins, retaining walls, underdrains, flumes, splash pads, downspouts, and other project features which may be involved in the work and not otherwise classified in these specifications.

Subbase - Reinforcement of the subgrade with large particles of pitrun rock or crushed stone. Usually confined to roads having wet subgrades or subgrades with weak support characteristics.

Surface Course - Top layer of a road structure consisting of finely crushed gravels or

asphalt designed to provide a smooth running surface for traffic load.

Subgrade - The top surface of a roadbed upon which the traveled way and shoulders are constructed.

Tensile Strength - The strength shown by a geotextile material subjected to tension as distinct from torsion, compression, or shear.

Tensile Stress - Strain Modulus - A measure of the resistance to elongation under stress. The ratio of the change in tensile stress to the corresponding change in strain.

Tensile Test - A test which subjects geotextile material to tensile forces and measures resultant stresses and strains.

Timber - Standing trees, downed trees, or logs which can be measured in board feet.

Traveled Way - The portion of the roadbed used for the movement of vehicles, exclusive of shoulders.

Typical Cross Sections - Cross-sectional plane of a typical roadway; showing natural ground line and designed roadway in relation to cut and fill, through cut, and through fill.

Turnout - Extra widening of the roadbed at appropriate intervals on single-lane roads for passing purposes.

Ultraviolet (UV) Radiation Stability - The ability of geotextile material to resist deterioration from exposure to sunlight.

Unaged Cloth - Cloth in condition received from the manufacturer or distributor.

Woven Geotextile Material - A textile structure comprising two or more sets of filaments of yarns interlaced in such a way that the elements pass each other at essentially right angles with one set of elements parallel to the geotextile material axis.

102a - Tests Used in These Specifications:

AASHTO T 11 Quantity of rock finer than No. 200 sieve.

AASHTO T 27 Sieve analysis of fine and coarse aggregate using sieves with

square openings; gradation.

- AASHTO T 89 Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.
- AASHTO T 90 Plastic limits and plasticity index of soil.
a. Plastic limit - lowest water content at which the soil remains plastic.
b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.
- AASHTO T 96 Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
- AASHTO T 99 Relationship between soil moisture and density of soil.
Method A - 4" mold, soil passing a No. 4 sieve
25 blows/layer & 3 layers.
Method C - 4" mold, soil passing a 3/4 inch sieve
25 blows/layer & 3 layers.
Method D - 6" mold, soil passing a 3/4 inch sieve. 56 blows/layer & 3 layers.
- AASHTO T 119 Slump of hydraulic cement concrete.
- AASHTO T 152 Air content of freshly mixed concrete.
- AASHTO T 166 Specific Gravity of compacted Bituminous Mixtures.
- AASHTO T 176 Shows relative portions of fine dust or claylike materials in soil or graded aggregate.
- AASHTO T 180 (OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.
- AASHTO T 191 Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.
- AASHTO T 205 Rubber balloon. Density of soil in place. Use for compacted or

firmly bonded soil.

AASHTO T 209 Maximum Specific Gravity of Bituminous Paving Mixtures.

AASHTO T 210 Durability of aggregates based on resistance to produce fines.

AASHTO T 224 Correction for coarse particles in the soil.

AASHTO T 238 Density of Soil and Soil-Aggregate in place by nuclear methods.

AASHTO T 248 Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.

ASTM D 4564 Determination of relative density of cohesionless soils.

DMSO (dimethyl sulfide) Determines volume of expanding clays in aggregates.
Usually associated with marine basalts.

103 - Compaction equipment shall meet the following requirements:

103b - (Sheepfoot) (Tamping) rollers. A tamping roller unit shall consist of two watertight metal drums mounted in frames in such manner as to be fully oscillating, together with a tractor having sufficient weight and power under actual working conditions to pull the roller drums at a minimum speed of 2.5 miles per hour. The drums shall be no less than 60 inches in diameter and no less than 54 inches in length, measured at the drum's surface, and shall be studded with tamping feet projecting not less than 7 inches from the face of the drums.

The distance between circumferential rows of tamper feet shall be such that the diagonal distance from any foot to the nearest foot in each adjacent row shall be not more than 12 inches. The cross-sectional area of the face of each tamper foot, measured perpendicular to the axis of the stud, shall be not less than 5-1/2 square inches nor more than 8 square inches.

The weight of the tamping-roller unit shall be such as to exert a minimum pressure of 250 pounds per square inch on the ground area in contact with the tamping feet, and the roller shall be so designed that the weight may be increased to exert a pressure up to 500 pounds per square inch on the ground area in contact with the tamping feet. The ground pressure shall be determined by dividing the total weight of the roller unit, not including the weight of the tractor, by the total cross-sectional area of the tamping feet in one row of tamping feet parallel to the axis of the roller.

- 103e - Grid roller. A grid roller shall consist of two or more cylindrical drums independently mounted on a common shaft in a rigid frame. Each drum shall have a minimum outside diameter of 5 feet and a minimum width of 2 feet 6 inches. The overall width of the roller exclusive of frame shall be not less than 5 feet 6 inches of which not more than 6 inches shall be used for center spacing between two roller drums. The face of the drums shall have the appearance of woven open-mesh made by interlacing bars of not less than 1-1/4 inches nor more than 1-3/4 inches diameter space spaced on 4-1/2 inches to 5-1/2 inches center. Net opening between the bars shall be not less than 3 inches nor more than 4 inches. The roller shall be so constructed that counterweights can be used to adjust the gross weight of the roller to not less than 27,000 pounds. The grid roller shall be drawn by a power unit capable of propelling the fully loaded roller through 6 inches of loose embankment material at a speed of at least 4 miles per hour.
- 103f - Vibratory roller. The drum diameter shall be not less than 48 inches, the drum width not less than 58 inches, and have a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 vibrations per minute (VPM), corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled or drawn by a vehicle of sufficient horsepower to enable the unit to travel through a loose layer of material at a speed ranging from 0.9 mile to 1.8 miles per hour, as directed by the Authorized Officer.
- The towing vehicle and roller or self-propelled unit meeting the above requirements shall be considered a vibratory roller unit.
- 103g - Vibratory compactor. Vibratory compactors shall consist of multiple or gang-type compacting units or pads with a minimum variable width of 2 feet. It shall be self-contained and capable of compacting material as required.
- 103h - Drum drive self-propelled vibratory grid roller. The unit shall consist of one cylindrical drum with a drum diameter of not less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibratory frequency shall be regulated in seeps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of not less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced not more than 8-1/2 inches apart.

103i - Other. Compaction equipment approved by the Authorized Officer.

CLEARING AND GRUBBING - 200

- 201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans and as staked on the ground.
- 201a - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions from borrow pits, quarries, channel changes, stockpile sites, etc., in accordance with these specifications.
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 5 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsection 202 as shown on the plans and as posted.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.
- 204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a, 204b, 204c, and 204d, between the top of the cut slope and the toe of the fill slope.
- 204a - Stumps **including those overhanging cut banks**, shall be removed within the required excavation limits.
- 204b - Stumps and other protruding objects shall be completely removed within the limits of required embankments having heights of less than 4 feet.
- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 204d - On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.

- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.
- 206 - Clearing and grubbing debris shall be disposed of by chipping in accordance with Subsection 209 and/or piling in accordance with Subsection 211 at the following road location.

Road No.	From	To	Activity Type	Disposal
34-5-04.00	0+00	15+54	Road Construction	Pile

- 207 - The Purchaser shall prepare a burning plan for the disposal of clearing and grubbing debris in accordance with local and state laws, rules, and regulations. The plan shall be approved in writing by the Authorized Officer prior to burning.

- 207a - Burning shall utilize methods which produce intense heat with no visible smoke emissions except that minimal emissions of smoke associated with starting and stopping the operations will be tolerated. Prior to beginning burning the Purchaser shall obtain a burning permit from the regulating authority enforcing the air pollution control standards for the area and shall furnish a copy of the permit to the Authorized Officer. At the conclusion of each burning session, the fire shall be completely extinguished so that no smoldering debris remains.

Debris to be burned shall be dirt free. Final placement of debris into the actual burning area shall be done with a crane, loader, or other suitable lifting equipment. The use of dozers will not be permitted, unless they are equipped with a brush blade. Stumps larger than 3 feet in diameter shall be split prior to burning.

- 208b - Trees, firm logs, and other firm large pieces, 4 inches in diameter and 8 feet in length and larger and not removed from the contract area by the Purchaser, shall be piled at locations determined by the Authorized Officer.
- 209 - Clearing and grubbing debris **can** be reduced to chips of an acceptable size and disposed of by scattering.
- 210a - Disposal of clearing and grubbing debris and/or stumps and cull logs on non-government property by chipping or piling this material outside of clearing limits will be permitted provided the Purchaser obtains a written permit from the property owner on whose property the disposal is to be made. The Purchaser shall furnish the Authorized Officer a certified copy of the permit and a written release from the

property owner absolving the Government from responsibilities in connection with the disposal of debris on said property.

- 211 - Disposal of clearing and grubbing debris and/or stumps and cull logs shall be by piling on government lands outside of established clearing limits in an area and in a manner acceptable to the Authorized Officer.
- 212 - No grading will be permitted prior to completion and approval by the Authorized Officer of the required clearing and grubbing work, except that stump grubbing may proceed with the excavation of the road prism.
- 213 - No clearing or grubbing debris shall be left lodged against standing trees.

EXCAVATION AND EMBANKMENT - 300

- 301 - This work shall consist of excavating, overhaul, placement of embankments, backfilling, borrowing, leveling, ditching, grading, insloping, outsloping, crowning and scarification of the subgrade, compaction, disposal of excess and unsuitable materials, and other earth-moving work in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 302 - Excavation shall also consist of the excavation of road and landing cut sections, borrow sites, backfilling, leveling, ditching, grading, compaction, and other earth moving work necessary for the construction of the roadway in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.
- 304 - Borrow shall consist of suitable material required for the construction of embankments or for other portions of the work; such material shall be obtained from sources selected by the Purchaser at his option and approved by the Authorized Officer.
- 305 - Embankment construction shall consist of the placement of excavated and borrowed materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the roadway and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 305a - Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, frozen material, and other deleterious materials and shall be placed and compacted as specified.
- 305b - Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Roadway embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth.
- 305c - Embankments formed of material containing less than 25 percent rock not larger than

8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock not larger than 12 inches in the greatest dimension shall be placed in successive layers not exceeding 2 feet in thickness.

- 305d - Where embankments are constructed predominantly of blasted rock material, depth of layers shall not exceed 4 feet. Rock fragments having dimensions greater than 4 feet will be permitted provided that they have no dimensions greater than 6 feet and that clearance between adjacent fragments is adequate for the placing and compacting of material in horizontal layers as specified, and that no part of the larger fragments comes within 4 feet of subgrade.
- 306 - Layers of embankment, final subgrade, and selected roadway excavation material as specified under Subsections 305a, 305b, 305c, 305d, and 317 shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103b, 103f, 103g, 103h, and 103i and in accordance with the following table:

Road No.	From Sta./M.P.	To Sta./M.P.	Subsection 306
35-4-04.00	0+00	15+54	306 (e)

- 306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be 6 passes over each full-width layer or fraction thereof.
- 306e - The final subgrade shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103b, 103f, 103g, 103h, and 103i. Minimum compaction shall be 1 hour of continuous compacting for each 6 stations of road or a fraction of as measured along the center line of the constructed road.
- 306f - Compaction of embankment layers placed as specified under Subsection 305b above shall be accomplished by routing construction equipment over full width of embankment structures except as specified in Subsection 306.
- 306g - All fill slopes shall be compacted to 75 percent of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.
- 308 - In the case of rock fills, placement of material in layers is not required and such

material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.

- 309 - The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance not less than 1 foot and not more than 3 feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or blasting.
- 311 - In solid rock cuts where pockets that will not drain are formed by blasting below the subgrade elevation, drainage shall be provided by ditching to the edge of the subgrade and backfilling to grade, and compacting the pockets and the ditch with rock fragments, gravel, or other suitable porous material.
- 312 - When material, except solid rock, encountered in cuts at subgrade, is suitable for use in forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with these specifications.
- 313 - In cut areas where solid rock is encountered at, or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.
- 314 - When heavy clays, muck, clay shale, or other deleterious material for forming the roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected borrow material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306. Unsuitable material shall be disposed of as directed by the Authorized Officer.
- 316 - Borrow material from sources selected at the Purchaser's option shall be inspected and approved in writing by the Authorized Officer prior to placement.
- 317 - Selected borrow shall consist of talus material, finely broken rock, gravel, or other material of granular or favorable characteristics from sources shown on the plans.

- 318 - Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed in lifts not to exceed 6 inches in depth until the required thickness shown on the plans is attained.

Each layer shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.

- 320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.
- 323 - In the construction of channel changes and stream-crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.
- 324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.
- 327 - The finished grading shall be approved in writing by the Authorized Officer in segments or for the total project. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.
- 328 - The Purchaser shall adopt methods and procedures in using explosives, which will prevent damage to adjacent landscape features, and which will minimize scattering rocks and other debris outside the road prism.
- 328a - The Purchaser shall establish and be responsible for blasting techniques and shall furnish the Authorized Officer, prior to starting drilling operations, a blasting plan specifying drill-hole diameter, drill-hole spacing, depth of drilling, type of explosive to be used, loading pattern, sequence of firing, the location where the plan is to be used, and other relevant data. Acceptance of the drilling and blasting plan does not relieve the Purchaser of responsibility or liability for the results of the blasting.

PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts, full round downspouts, and splash pads in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer upon installation of the appurtenance structures. Additional pipe and erosion control devices (splash pads and/or full round downspouts) may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans. See Exhibit C7, Culvert List Sheet, for detailed culvert skew information.
- 404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated and steel pipe, and aluminum-rich paint on aluminum or aluminum-coated pipe.
- 405a - Corrugated-**aluminized** steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218, AASHTO M 274, or AASHTO M 289 as specified on the plans.
- 406 - Coupling bands shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 with the exception of band widths and the "Hugger"-type band which shall conform to the details, dimensions, and typical diagram shown on the plans.
- 406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe and pipe-arch culverts, or helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of two annular corrugations.
- 407 - Special sections, such as elbows, branch connections, and flared-end sections, shall be of the same gauge as the pipe to which they are joined, and shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274.
- 407b - Full round culvert downspouts conforming to the material and construction

requirements shall be constructed for culverts as shown on the plans at the following locations:

Road No.	M.P./Sta	Connection Type
34-5-04.00	5+20	Turner Style

- 408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.
- 410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.
- 411 - Trenches necessary for the installation of pipe culverts shall conform to the lines, grades, dimensions, and typical diagram included in the plans and in Exhibit C8, the Culvert Installation Detail Sheet.
- 412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with crushed rock material in accordance with Section 1200 gradation C-1.
- 413 - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular, crushed rock material in accordance with Section 1200 gradation C-1, or fine readily compactable soil material having a depth of not less than 6 inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.
- 416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with fine, readily compactable soil, crushed rock material from stockpiles shown on the plans, or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

- 417 - For pipe culvert, side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in layers not exceeding 6 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers until a uniform density of 85 percent of the maximum density, is attained as determined by AASHTO T 99, Method C.
- 418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.
- 419 - The pipe culverts after being bedded and backfilled as required by these specifications shall be protected by a 2-foot cover of fill before heavy equipment is permitted to cross the drainage structures. Removal of the protection fill shall be as directed by the Authorized Officer.
- 423 - Construction of catch basins and ditch dams conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for grade culverts and culverts.

Road No.	M.P./Sta
34-5-03.02	0.69
34-5-04.00	5+20

- 424 - Construction of splash pads conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for culverts at the following locations:

Road No.	M.P./Sta
34-5-03.02	0.69

- 425 - Where pervious materials are used for backfill and bedding, collars consisting of selected impervious material shall be placed at the inlet and at various intervals along the pipe barrel as shown on the plans and as directed by the Authorized Officer.
- 427 - Record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.

- 428 - Remove and dispose of old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the work site within 3 working days of completion of the culvert replacement work for each road.
- 429 - Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site in a manner that will avoid damage to adjacent property. Provide for downstream waterflow with no more that 10% increase in natural stream turbidity due to transport of excavated material or sediment during construction. Diversion streams shall not be returned to the natural channel until all in-stream work has been completed.

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans, and as marked on the ground with stakes or metal tags.
- 501a - This work shall include the removal and disposal of slides in accordance with these specifications and as marked on the ground with stakes.
- 502 - The existing road surface shall be scarified (where needed) to its full width and to a depth of 6 inches to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.
- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 504 - Scarified material and existing road surfaces shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f, 103g, 103h, and 103i and as specified in the worklist.
- 504a - Minimum compaction required shall be 6 passes over each full-width layer, or fraction thereof, as measured along the centerline per layer of material.
- 506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.
- 507 - Existing and new drainage structures shall be replaced and placed with structures of the type, gauge, diameter, and length shown on the plans and in accordance with the

placement requirements set forth under section 400 of these specifications.

- 508 - Vegetation encroaching on the roadbed and the drainage ditches of existing roads shall be removed by cutting and disposed of in accordance with Subsection 2100 of these specifications.
- 509 - The finished grading shall be approved in writing by the Authorized Officer 3 days prior to surfacing operations. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

WATERING - 600

- 601 - This work shall consist of furnishing and applying water required for the compaction of embankments, roadbeds, backfills, base courses, surface courses, finishing and reconditioning of existing roadbeds, laying dust, or for other uses in accordance with these specifications.
- 602 - Water, when needed for compaction or laying dust, shall be applied at the locations, in the amounts, and during the hours as directed by the Authorized Officer. Amounts of water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications, and for laying dust during work periods.
- 603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.
- 605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of water source(s) selected by the Purchaser and approved by the Authorized Officer.

AGGREGATE BASE COURSE - 900
SCREENED ROCK MATERIAL

- 901 - This work shall consist of furnishing, hauling, and placing one or more lifts of screened rock material on roadbed(s) and landing(s) approved for placing screened rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.
- 902a - Screened rock materials to be used in this work may be obtained from sources selected by the Purchaser, at his option, providing the rock materials furnished comply with these specifications and the source(s) are approved in writing by the Authorized Officer prior to use.
- 903 - Screened rock material shall conform to the following gradation requirements:

Table 903

SCREENED ROCK MATERIAL GRADATION REQUIREMENTS
Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 27)

4 inch	100			
3 inch	95-100	100		
2 inch		95-100	100	
1-1/2 inch			95-100	100
1 inch				95-100
No. 4	11-44	16-49	21-54	26-59
No. 200	2-15	2-15	0-15	0-15

- 904 - Screened rock material shall not exceed 35 percent loss as determined by AASHTO T 96.
- 904a - Screened rock material shall show a durability value of not less than 35 as determined by AASHTO T 210.
- 905 - The roadbed as shaped and compacted under sections 300 and 500 of these specifications, shall be approved in writing by the Authorized Officer prior to placement of screened rock materials. Notification for final inspection, prior to rocking, shall be 72 hours prior to that inspection and shall be 5 days prior to start of rock operations.
- 906 - Screened rock material shall be placed in layers not to exceed 6 inches in thickness. Where the required total thickness is more than 6 inches, the rock material shall be shaped and compacted in two or more layers of approximately equal thickness.
- 906a - Screened rock materials used to repair or reinforce a soft, muddy, frozen, yielding, or rutted subgrades shall not be construed as surfacing under this specification.
- 907 - Filler or binder material obtained from sources shown on the plans and approved by the Authorized Officer shall be uniformly blended with the screened rock material on the road. Filler or binder materials shall be free from stones, vegetative matter, and other deleterious materials.
- 908 - Screened rock material shall be blade-processed and spread to required dimensions. Processing shall be performed in such a manner as to minimize aggregate segregation.
- 910 - Screened rock material, bladed and shaped as specified, shall be moistened or dried to optimum moisture content for maximum compaction and compacted to full width by compaction equipment conforming to the requirements of Subsections 103f, 103g, 103h, and 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

- 1201 - This work shall consist of furnishing, loading, hauling and placing one or more layers of crushed rock material on roadbeds and base courses approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the road at the purchaser's expense.
- 1202a - Crushed rock materials used in this work may be obtained from commercial source(s) selected by the Purchaser, providing the rock materials furnished comply with these specifications.
- 1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.
- 1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1204

AGGREGATE SURFACE COURSE
CRUSHED ROCK MATERIAL

Percentage by weight passing square mesh sieves
AASHTO T 11 & T 27

GRADATION

Sieve Designation	C	C-1	D	D-1	E	E-1
1-1/2-inch	100	100	-	-	-	-
1-inch	-	-	100	100	-	-
3/4-inch	50-90	60-90	-	70-98	100	100

1/2-inch	-	-	-	-	-	70-98
No. 4	25-50	30-55	30-60	36-60	40-75	44-70
No. 8	-	22-43	-	25-47	-	30-54
No. 30	-	11-27	-	12-31	-	15-34
No. 40	5-25	-	5-30	-	5-35	-
No. 200	2-15	3-15	3-15	3-15	2-15	3-15

- 1205 - Crushed rock material shall not exceed 35 percent loss as determined by AASHTO T 96.
- 1206 - Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T210.
- 1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than 35 and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.
- 1208 - If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.
- 1208a - Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.
- 1209 - Shaping and compacting of roadbed or base course shall be completed and approved in writing, prior to placing crushed rock material, in accordance to the requirements of Subsections 300 and 500 for placing on the roadbed and landings and Subsection

900 for placing on the base course. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 5 days prior to start of surfacing operations.

- 1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed and base course in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and staked on the ground. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved in writing by the Authorized Officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.
- 1210a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification.
- 1212 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to the requirements of Subsections 103f, 103g, 103h, or 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

SLOPE PROTECTION - 1400

- 1401 - This work shall consist of furnishing, hauling, and placing stone materials for splash pads in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross- sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the slope protection structure at the purchaser's expense and as directed by the Authorized Officer.
- 1402 - Stone material shall consist of hard angular quarry rock of such quality that it will not disintegrate on exposure to water or weathering, and shall be graded in accordance with these specifications.

NOTE: Guide for relation between volume, size and weight. (175 lbs./cu./ft.):

<i>Volume/ Cubic Foot</i>	<i>Average Dimension in inches</i>	<i>Approximate Weight in Pounds</i>
12	27.5 x 27.5 x 27.5	2100
6	21.8 x 21.8 x 21.8	1050
4	19.1 x 19.1 x 19.1	700
3	17.3 x 17.3 x 17.3	525
1	12.0 x 12.0 x 12.0	175
2/3	10.5 x 12.0 x 12.0	120
1/2	9.5 x 9.5 x 9.5	88
1/3	8.3 x 8.3 x 8.3	60
1/4	7.6 x 7.6 x 7.6	44
1/6	6.6 x 6.6 x 6.6	30
1/8	6.0 x 6.0 x 6.0	22
1/100	2.6 x 2.6 x 2.6	2

- 1404 - The material shall be well graded from the smallest to the maximum size specified. Stones smaller than the specified 10 percent size shall consist of spalls and fine rock fragments so distributed as to provide a stable compact mass.
- 1405 - Rip rap shall conform to the following gradations:

TABLE 1405¹

Class	Range of Intermediate	Range of Rock	% of Rock Equal or Smaller by Count
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0	6-8	18-42	100
	5-6	10-18	85
	2-5	1-10	50
	0-2	0-1	15
1	9-15	59-270	100
	7-11	28-110	85
	5-8	10-42	50
	3-6	2-18	15
2	15-21	270-750	100
	11-15	110-270	85
	8-11	42-110	50
	6-8	10-42	15
3	21-27	750-1600	100
	15-19	270-560	85
	11-14	110-220	50
	8-10	42-81	15
4	27-33	1600-2900	100
	19-23	560-990	85
	14-17	220-400	50
	9-12	59-140	15

¹Gradation includes spalls and rock fragments to provide a stable, dense mass.

²The intermediate dimension is the longest straight-line distance across the rock that is perpendicular to the rock's longest axis on the rock face with the largest projection plane.

³Rock mass is based on a specific gravity of 2.65 (165#/cu.ft.) and 85 percent of the cubic volume as calculated using the intermediate dimension.

- 1406 - The placement of slope protection stones by the end dumping method shall be conducted to prevent the stones from escaping beyond the embankment toe.
- 1407 - Determination of the acceptability of the slope protection material gradation will be through visual inspection by the Authorized Officer.

EROSION CONTROL - 1700

- 1701 - This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.
- 1704 - The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800.
- 1705 - The surface area of erodible earth material exposed at any one time by clearing and grubbing shall not exceed 21,780 square feet (0.50 acres) after October 15 without prior approval by the Authorized Officer.
- 1706 - The surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way shall not exceed 21,780 square feet (0.50 acres) after October 15 without prior approval by the Authorized Officer.
- 1706a - The Purchaser shall perform, during the same construction season, erosion control measures, on all exposed excavation, borrow, and embankment areas.
- 1707 - Completed and partially completed segments of the road at the following location:

Road No.	From M.P./Sta	To M.P./Sta
34-5-04.00	0+00	15+54

- to be carried over the winter and early spring periods shall be stabilized by mulching in accordance with Section 1800.
- 1708 - Newly constructed roads to be carried over the winter period, shall be blocked to vehicular traffic.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.

- 1711 - The Purchaser shall construct catch basins and energy dissipators (splash pads) for pipe culverts conforming to the requirements and details shown on the respective exhibits and on the plans.
- 1712 - Where shown on the plans, the Purchaser shall provide erosion control measures for newly constructed ditches on steep grades which include but is not limited to, dumped stone, jute mesh, sod, check dams consisting of hay bales, and earth or stone. Width of protective lining or dam should extend far enough up the ditch slopes to effectively contain the runoff and prevent erosion and washout at the edges and prevent sediment from reaching live water.
- 1713 - Where newly constructed logging spur roads join with existing surfaced roads, the Purchaser shall construct a sag in the spur road profile and install a culvert in accordance with the requirements and details as shown on the plans.

SOIL STABILIZATION – 1800

- 1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications. This work is required for road acceptance under Section 18 of this contract.
- 1802 - Soil stabilization work consisting of seeding and mulching shall be performed on existing roads and designated locations in accordance with these specifications at the following locations:

Road No.	From M.P./Sta a	To M.P./Sta	Activity Type
34-5-04.00	0+00	6+34	Road Construction

- 1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, landings, disturbed areas, and disposal sites in accordance with these specifications and as shown on the plans.
- 1803 - Soil stabilization work as specified under Subsections 1802 and 1802a shall be performed during the following seasonal periods:

From: September 1	To: October 31 (of the same year)
-------------------	------------------------------------

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Subsection 1707 and then complete the requirements of Section 1800 the next construction season. The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

- 1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.
- 1806a - Additional soil stabilization work consisting of seeding and mulching, may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.

- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.
- 1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.
- 1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.
- 1810 - Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.
- 1811 - The Purchaser shall furnish and apply to approximately **7.50** acres designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806a, a mixture of grass seed and mulch material at the following rate of application:

a. Two Stage:

Grass Seed	10 lbs./acre
Mulch	2,000 lbs./acre

The above proportion and application rate are subject to adjustment by the Authorized Officer during the application operation.

- 1814 - The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.
- 1815 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.
- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipaker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.

- 1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.
- 1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.
- 1822 - No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.
- 1824 - Twine, rope, sacks, and other debris resulting from the soil-stabilization operation shall be picked up and disposed of to the satisfaction of the Authorized Officer.

ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet (Exhibit C6) of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment and/or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually and/or mechanically less than 7 inches in diameter when measured at D.B.H. shall be cut to a maximum height of 1 inch above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 2-inch area will be severed from the trunk.
- 2103a - Vegetation shall be cut and removed from the roadbed between the outside shoulder(s) and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. Limbs below the 1-inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.
- 2104 - Trees more than 7 inches in diameter at D.B.H. shall be delimbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 7 inches in diameter for sight distance or safety may be directed by the Authorized Officer.
- 2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inches of the trunk to produce a smooth vertical face.
- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation more than 1 foot in height, shall be cut within these areas.

- 2108 - Self-propelled equipment shall not be permitted on cut and fill slopes or in ditches.
- 2110 - Vegetation 7 inches and smaller in diameter shall be chipped where indicated in the work list. Chips shall be scattered downslope from the roadway. Vegetation over 7 inches in diameter shall be disposed of by direction of the Authorized Officer.
- 2114 - Sections of roadway to have vegetation removed will be marked at start and stop points with red-topped painted stakes.
- 2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.
- 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

Sale: Rotors Up
 Sale Date:
 Prep. By : BLM GPIO
 Tract No:

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: \$0.00/6297 MBF = \$0/MBF

Road Maintenance Obligation:

(2.1) BLM Maintenance	\$15,645.53
(2.2) BLM Rockwear	\$0.00
(5.1) Purchaser Maintenance Rockwear	\$19,108.25
Total Rockwear Payable to BLM	\$19,108.25
(3.1) 3rd Party Maintenance	\$0.00
(3.2) 3rd Party Rockwear	\$0.00
(4.1) Other Maintenance Payments	\$0.00
Total Maintenance Fee Obligation (2.1-5.1)	\$34,753.78

Purchaser Maintenance Allowances:

(5.2A) Move In	\$1,669.00
(5.2B) Culverts, Catch Basins, Downspouts	\$2,058.48
(5.2C) Grading, Ditching	\$7,515.04
(5.2D) Slide Removal and Slump Repair	\$0.00
(5.2E) Dust Palliative (Water)	\$0.00
(5.2F) Surface Repair (Aggregate)	\$13,359.00
(5.2G) Other	\$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	\$24,601.52

(2.1-5.2G) Cost (\$34,753.78 + \$24,601.52) = \$59,355.30
 Cost/MBF 59355.30 / 6297 MBF = \$9.43/MBF

(5.2H) Decommissioning \$1,047.60

(5.2H) Cost/MBF \$1,047.60/6297 MBF = \$0.17/MBF

(2.1-5.2H) Cost (\$34,753.78 + \$24,601.52 + \$1,047.60) = \$60,402.90

Total Cost/MBF (Excluding Road Use) \$60,402.90/6297 MBF = \$9.59/MBF

1) Road Use Fees - Amortization

Details

R/W	Rd Use	Vol	Road Use
Number	Road Number	Fee x MBF =	Obligation

Subtotal by agreement number

(1.1) Subtotal \$0.00

2) BLM Maintenance - Timber Haul

MAINTENANCE (2.1)						ROCKWEAR (2.2)		
Road Number	A Surf	Maint	Vol					
and Segment	N Type	Mi	x Fee x	MBF =	Maint Fee x	MBF =	Rkwear	
34-5-10.00	A1 A BST	3.03	0.82	6297	\$15,645.53	0.00	6297	\$0.00

(2.1) Subtotal \$15,645.53

(2.2) Subtotal \$0.00

3) Third Party Maintenance and Rockwear

MAINTENANCE (3.1)						ROCKWEAR (3.2)		
Agmmt	Surface	Road						
Number	Type	Number	Mi	x Fee x	MBF =	Maint Fee x	MBF =	Rkwear

Subtotal of maintenance fees by agreement number:

Subtotal of rockwear fees by agreement number:

(3.1) Subtotal

\$0.00

(3.2) Subtotal

\$0.00

4) Other Maintenance Payments - USFS or Others Perform Maintenance

Agency	Road Number	Miles (Log)	Vol (mbf)	Fee x MBF/MI =	Cost
--------	-------------	-------------	-----------	----------------	------

(4.1) Subtotal \$0.00

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)

Road No	A	RkWear	Vol	Total
and Segment	N Mi	x Fee x	MBF =	RkWear
34-5-02.01	A-B	A 2.87 x \$0.85 x	6297 =	\$15,361.53
34-5-03.02	A	0.70 x \$0.85 x	6297 =	\$3,746.72
34-5-04.00	A	0.29 x \$0.00 x	6297 =	\$0.00

(5.1) Subtotal \$19,108.25

Purchaser Operational Maintenance

Move In

No	Move	Cost/	Dist	Sub-	
Equipment	Units	x in x	50 Mi	x Factor	= total
Motor Grader:	1	2	558	1.00	\$1,116.00
Back Hoe:	1	1	415	1.00	\$415.00
Loader:			558	0.63	\$0.00
Water Truck:	1	1	138	1.00	\$138.00
Dump Truck:			130	0.63	\$0.00
Excavator:			558	0.63	\$0.00

Roller: 558 0.63 \$0.00

(5.2A) Total \$1,669.00

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x	Cost/Mi	=	Subtotal
4.00		\$514.62		\$2,058.48

(5.2B) Total \$2,058.48

Grading (Includes Ditches and Shoulders)

Miles	x	Cost/Mi	x	Freq	=	Subtotal
Blade w/ Ditch:	4.00	939.38	2			\$7,515.04
Blade w/o Ditch:	0.00	568.71	0			\$0.00

(5.2C) Total \$7,515.04

Slide and Slough removal, Slump Repair (15 sta-yds. ea.)

Type	No Slides	Hours	Equip	
Equipment	/Slumps	x Each	x Cost	= Subtotal
Grader:	0	0	\$187.45	\$0.00
Loader:	0	0	\$117.39	\$0.00
Backhoe:	0	0	\$111.88	\$0.00

(5.2D) Total \$0.00

Dust Palliative (Water)

Spreading Hours

	No	Freq	Truck					
	Miles	/	MPH	=	Hours	x	Days	x /Day = Hours
	0.00		0				0	0
Load & Haul =					0.0		0	0
Total Hours =					0			

Truck Cost: \$114.98/Hr. x 0.0 Hours = \$0.00

(5.2E) Total \$0.00

Surface Repair (Aggregate)

Quarry / Source Name: Commercial site 4"

Production Cost:	250.0 CY x \$15.00/CY	= \$3,750.00
Haul to Stockpile:		
Grades > 15%	250.0 CY x ((\$2.56/CY x 3.50 Mi) + \$0.85)	= \$2,452.50
Grades <= 15%	250.0 CY x ((\$1.28/CY x 14.00 Mi) + \$0.85)	= \$4,692.50
State / Co Roads	250.0 CY x ((\$0.57/CY x 15.80 Mi) + \$0.85)	= \$2,464.00
	SubTotal	<u>\$13,359.00</u>

(5.2F) Total \$13,359.00

Other

Fallen Timber Cutting:	0.0 Hours x \$0.00/Hour	=\$0.00
Brush Cutting/Tree Trimming:	0.0 Hours x \$0.00/Hour	=\$0.00
Oil/Asphalt Materials:	Lump Sum	=\$0.00
Signing for Dust Palliatives:	Lump Sum	=\$0.00
	Lump Sum	=\$0.00

Lump Sum	= \$0.00
Lump Sum	= \$0.00
Lump Sum	= \$0.00
Lump Sum	= \$0.00

(5.2G) Total \$0.00

Decommissioning

Other Costs

Road Number	Cubic Yds Pullback Material		Qty Waterbars		Qty Earthen Barriers	= Total
34-5-04.00	(0x2.23)	+	(9x87.3)	+	(1x261.9)	= \$1,047.60
(Other Cost) Total						<u>\$1,047.60</u>

(5.2H) Decommissioning Total \$1,047.60

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

EXHIBIT D1
ROTORS UP TIMBER SALE
TRACT NO. ORM070-TS-2025.0012

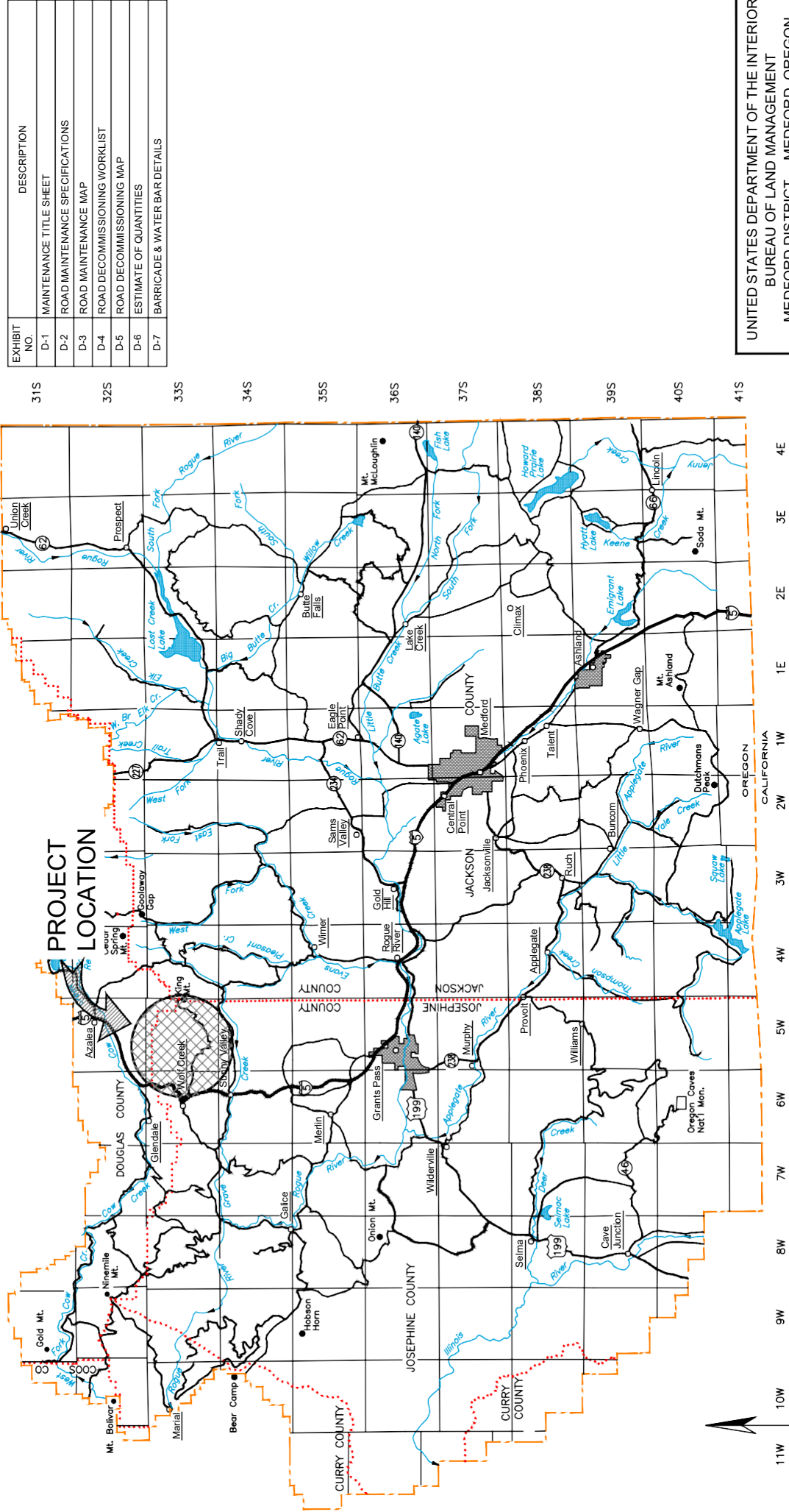


EXHIBIT NO.	DESCRIPTION
D-1	MAINTENANCE TITLE SHEET
D-2	ROAD MAINTENANCE SPECIFICATIONS
D-3	ROAD MAINTENANCE MAP
D-4	ROAD DECOMMISSIONING WORKLIST
D-5	ROAD DECOMMISSIONING MAP
D-6	ESTIMATE OF QUANTITIES
D-7	BARRICADE & WATER BAR DETAILS

ROAD MAINTENANCE SPECIFICATIONS

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SECTION	DESCRIPTION	Page(s)
3000	General	2-2
3100	Operational Maintenance	3-4
3200	Seasonal Maintenance	5-5
3300	Final Maintenance	6-6
3400	Other Maintenance	7-10
3500	Decommissioning	11-12

GENERAL - 3000

- 3001 - The Purchaser shall be required to maintain all roads as shown on Exhibit D-3 and Exhibit D-5 maps and Exhibit D-6 of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 of this exhibit.
- 3001a - The Purchaser shall be required to provide maintenance on roads in accordance with Subsections 3403a and 3404.
- 3002 - The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.
- 3003 - The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.
- 3004 - The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time.

Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

- 3101 - The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 3102 - The Purchaser shall furnish from a commercial source and place **250 cu. yds.** of aggregate conforming to the requirements in Section 900 or Section 1200 (depending on the location of the application) of Exhibit C of this contract on the roadway and landings at locations and in the amounts designated by the Authorized Officer.

This aggregate shall be used to repair surface failures and areas of depleted surface depth excluding damages covered by Section 12 of this contract. The aggregate shall be furnished, hauled, placed, spread and graded, and compacted by of a vibratory roller or similar equipment.

- 3103 - The purchaser shall maintain established berms and place additional berms using adjacent material where needed to protect fills as directed by the Authorized Officer.
- 3104 - The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.
- 3104a - Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.
- 3104b - The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

Prior to removal of any slough or slide material exceeding fifteen station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, method of disposal, and the disposal site. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based on current BLM Road Cost Guide. Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.

3105 - The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water-bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.

3106 - The Purchaser shall be responsible for repair and replacement of all materials eroded from road shoulders and fill slopes, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the Purchaser. Prior to repair and replacement of eroded material exceeding fifteen station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, borrow source and method of repair. Work may commence immediately after agreement.

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work based upon current BLM Road Cost Guide. Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.

3107 - The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe passage of traffic along the traveled way when directed by the Authorized Officer.

The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be in accordance with Section 2100 of Exhibit C15.

3108 - The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway.

Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.

3108a - The Purchaser shall perform logging operations on gravel and/or bituminous roadways only where the locations have been marked on the ground and/or approved by the Authorized Officer. Repair of the roads is not considered maintenance and shall be repaired at the Purchaser's expense.

SEASONAL MAINTENANCE - 3200

- 3201 - The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.
- 3202 - The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 15 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.
- 3203 - The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.
- 3204 - The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE - 3300

- 3301 - The Purchaser shall complete final maintenance and/or damage repairs on all roads used under terms of their contract within thirty 30 calendar days following the completion of hauling and in accordance with Sec. 16(b) of this contract. This work shall include any maintenance and/or damage repairs specified in Sections 3000, 3100, and 3200 necessary to meet the conditions specified in Subsection 3002 and shall be executed in accordance with Subsection 3302 of this section.

The Authorized Officer may grant acceptance of Purchaser's maintenance responsibility in part where certain individual roads or road segments are no longer of any use to the Purchaser's remaining removal operations, providing that all contract requirements as specified under Sec. 16(b), Special Provisions, Sections 3000, 3100, 3200 and 3300 of the maintenance specifications have been completed and a relinquishment of cutting and removal rights on cutting units tributary to these roads is signed by the Purchaser. Request for partial acceptance must be submitted in writing by the Purchaser.

- 3302 - The Purchaser shall perform final road maintenance only when weather or soil moisture conditions are suitable for normal maintenance equipment operations as determined by the Authorized Officer.

If final maintenance is delayed after the date required in Subsection 3301 of this contract by adverse soil moisture or unsuitable equipment operating conditions, the Purchaser will be notified by the Authorized Officer when soil moisture and equipment operating conditions are suitable. The Purchaser shall then be required to complete final maintenance within 30 days.

OTHER MAINTENANCE - 3400

- 3401 - The Purchaser shall repair any damage to road surfaces that was specified under Subsection 3108 and 3108a. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in Subsection 3104.
- 3402 - The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

Upon receiving written authorization for ice or snow removal, the Purchaser will perform the work according to the conditions and equipment requirements set forth in the authorization.

- 3403a - During dry hauling conditions when watering is not required, the Purchaser shall reduce hauling speeds and restrict the number of loads hauled to reduce dust as directed by the Authorized Officer on the following roads:

Road Number	From Sta./M.P.	to Sta./M.P.
34-5-02.01	0.00	1.57

Adjustments to the above schedules may be made by the Authorized Officer at his option as hauling conditions improve. The Purchaser, at his option and expense, may elect to substitute watering or other dust palliatives in lieu of the above hauling requirements provided that written approval is received from the Authorized Officer. Such authorization shall include the approval of product specifications for the application and the product to be used.

- 3404 - The Purchaser may at his option and expense substitute lignin sulfonate for water on any or all road segments listed in Subsection 3403 or 3403a provided that written approval is received from the Authorized Officer. Such authorization shall include the approval of product specifications for the application of the product to be used. Multiple applications may be required to maintain the conditions specified in Subsection 3403.
- 3405 - **IF LIGNIN SULFONATE IS USED** - The Purchaser shall be required to furnish and apply lignin sulfonate dust palliatives in accordance with these specifications.

This work shall be performed upon acceptance of the required road construction, renovation, or improvement work and be placed prior to any timber hauling other than

right-of-way timber and rock hauling.

When timber hauling has commenced during the wet weather season, the Purchaser shall apply the required dust palliative during the subsequent summer hauling season as directed by the Authorized Officer.

Other means of dust abatement needed prior to the application of the required dust palliative shall be applied as approved by Authorized Officer.

The specified dust palliative shall be applied evenly over the specified road surface width of the following roads:

Road Number	From Sta./M.P.	to Sta./M.P.
34-5-02.01	0.00	1.57

- 3405a - Turnouts and extra widening shall be included in addition to the spread width. Additional lignin sulfonate dust palliative may be required at the option of the Authorized Officer when the functional qualities of the dust palliative have been reduced or become ineffective due to third party damage, rain, or other events not under the control of the purchaser.
- All materials and labor shall be furnished by the Purchaser and placed in amounts and locations designated by the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost. Costs will be based upon the unit prices set forth in the current BLM Road Cost Guide.
- If additional dust palliative is required due to events controlled by the Purchaser, such as split hauling season, the Purchaser shall furnish and place such material at his own expense.
- 3405b - The Purchaser shall notify affected residents along the roads to be treated of the planned application of lignin sulfonate dust palliatives at least 5 days prior to the work. Warning signs shall be posted at key intersections to alert users that the road is being treated. All signs shall be removed by the Purchaser within 30 days of treatment.
- 3406 - Prior to the application of lignin sulfonate dust palliatives, the roadbed shall be bladed and shaped to remove surface irregularities and excess loose material. The prepared surface must have 1/2 to 1 inch of relatively loose material and be visibly moist and drying.
- 3406b - A light application of water to promote penetration shall be made in advance of the application of the specified dust palliative to allow the drying process to begin and to

eliminate any saturated surface conditions.

- 3406c - The prepared roadbed shall be approved by the Authorized Officer prior to application of the specified dust palliative.
- 3407 - The Purchaser shall furnish in duplicate, commercial certification signed by vendor of compliance with the lignin sulfonate dust palliatives material requirements specified under Subsection 3412b. Commercial certification includes the date, identification number of truck or trailer, net mass, and brand name with each shipment. Also provide the net volume and specific gravity at 60 degrees F, percent solids by mass, and PH.
- 3408 - Dust palliatives shall be applied with standard commercial distribution equipment operated in a manner that the material is uniformly applied on variable widths of surface at controlled rates.
- 3409 - The Purchaser shall notify the Authorized Officer a minimum of 5 days in advance of application of required dust palliative.
- 3410 - The Purchaser shall submit an application schedule for all dust palliative work to the Authorized Officer for approval. All work shall be in accordance with the approved plan.
- 3411 - Required lignin sulfonate dust palliatives shall only be applied when the atmospheric temperature is 45° F and steady or rising and when the weather is not foggy or rainy. Do not apply dust palliative if rain is anticipated within 24 hours of application or when the ground is frozen.
- 3412 - The Purchaser shall apply to the prepared roadbed specified under Subsection 3405, a lignin sulfonate dust palliative conforming to the material requirements of Subsection 3412b. The rate of application shall be 0.5 gallons per yd² surface. A second application at the rate of 0.3 gallons per yd² shall be applied at a time designated by the Authorized Officer.

Applied materials not penetrating the road surface shall be blade mixed with additional water into the top 1 to 1½ inches of the surfacing at the Contractor's expense.

- 3412a - If required, the lignin sulfonate shall be field diluted within the application vehicle and be circulated at least 5 minutes to assure mixing. An air gap shall be provided between any water source and the materials being diluted. Accidental spills shall be contained to prevent entry in water courses or ponded water. The surface of adjacent structures and trees shall be protected from spattering or marring.

A wetting agent may be used in addition to the certified compound or mixed with the road surface preparation watering. A mix of less than 1:6000 is recommended.

Water used to dilute lignin sulfonate concentrate shall be clean and free of oil, salt, acid, alkali, vegetable matter, or any other substance that contaminates the finished product.

3412b - Specifications for Lignin Sulfonate:

Lignin sulfonate shall be the chemical residue produced as a byproduct of the acid sulfite pulping process and supplied as a water solution. The base cation shall be ammonia, calcium, or sodium. The product shall be water soluble to allow field dilution. Dilute with water until the mixture contains a minimum 48 percent concentration with the following properties:

Solids	50%
Specific gravity	1.25
PH, AASHTO T289	4.5 min.

Ensure that the material does not exceed the following chemical constituents:

phosphorous	25.00 ppm
cyanide	0.20 ppm
arsenic	5.00 ppm
copper	0.20 ppm
lead	1.00 ppm
mercury	0.05 ppm
chromium	0.50 ppm
cadmium	0.20 ppm
barium	10.00 ppm
selenium	5.00 ppm
zinc	10.00 ppm

Apply when the ambient air temperature is 45° F or above.

- 3413 - Sampling of lignin sulfonate material may be required to validate certificates furnished by the Purchaser. When sampling is directed by the Government, the actual samples will be taken by the Purchaser or his representative in the presence of the Authorized Officer.

DECOMMISSIONING – 3500

- 3501 - Decommissioning work includes installing water bars, placement of slash or placement of soil stabilization material, and blocking road from access by vehicles as listed in Exhibit D4, Road Decommissioning Worklist. This work is required for road acceptance under Section 18 of this contract.
- 3503 - Decommissioning shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	From Sta/MP	To Sta/MP	Decommission
34-5-04.00	0+00	15+54	Barricade & Water bar

- 3504 - Decommissioning work shall be completed after road use. All decommissioning work shall be performed during the following seasonal periods to address soil moisture:

From: September 1	To: October 15 (of the same year)
-------------------	-----------------------------------

- 3506 - Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. All slash stockpiles created by the purchaser shall be utilized for decommissioning operations. Where slash is not available, exposed soil areas shall be stabilized in accordance with Section 1800 of Exhibit C15.
- 3507 - Culverts not designated as salvage by the Authorized Officer for the Government shall become the property of the Purchaser. The Purchaser shall be responsible for disposal of materials in a legal manner and for payment of any fees required. Sale of material on site is not allowed unless authorized in writing by the Authorized Officer.
- 3508 - Protect areas with camouflaging and soil stabilization from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 3509 - Access shall be blocked with barricades as shown on the Barricade and Water Bar Details Exhibit D7 and at locations as shown on Exhibits D4 and D5.
- 3510 - Sections of roadway where ripping or subsoiling is required shall be cleared of all vegetation and slash. The resultant slash shall be stockpiled in a manner that will allow retrieval and uniform spreading in accordance with Subsection 3506. No vegetation or slash shall be mixed with excavated material to be placed.
- 3511 - Ripping, subsoiling, and water barring shall be done on designated roadways and landings. Ripping shall be done with wing-toothed rippers or excavators modified for tillage.


- 3513 - Water bars shall be installed across full width of roadway at spacing shown in the worklist, specifications, and drawings. Water bars shall be constructed as shown on Exhibit D7. No water bar will be installed closer than 50 feet to a draw crossing.
- 3514 - Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800 and placement of slash described in Subsection 3506 on designated roadways, disturbed areas, landings, and other areas disturbed by the purchaser's operations in accordance with these specifications and as shown in the plans.

Legend

Rotors Up TS Units

Bureau of Land Management

☐ Private Individual or Company

 Industrial Land Owners

— Paved Road

— — — Natural Surface

Constructed Roads by Type

Maintenance Responsibility

● — Purchaser Maint

Decom-WaterBar

ROTORS UP TIMBER SALE

DATE: APRIL 2025

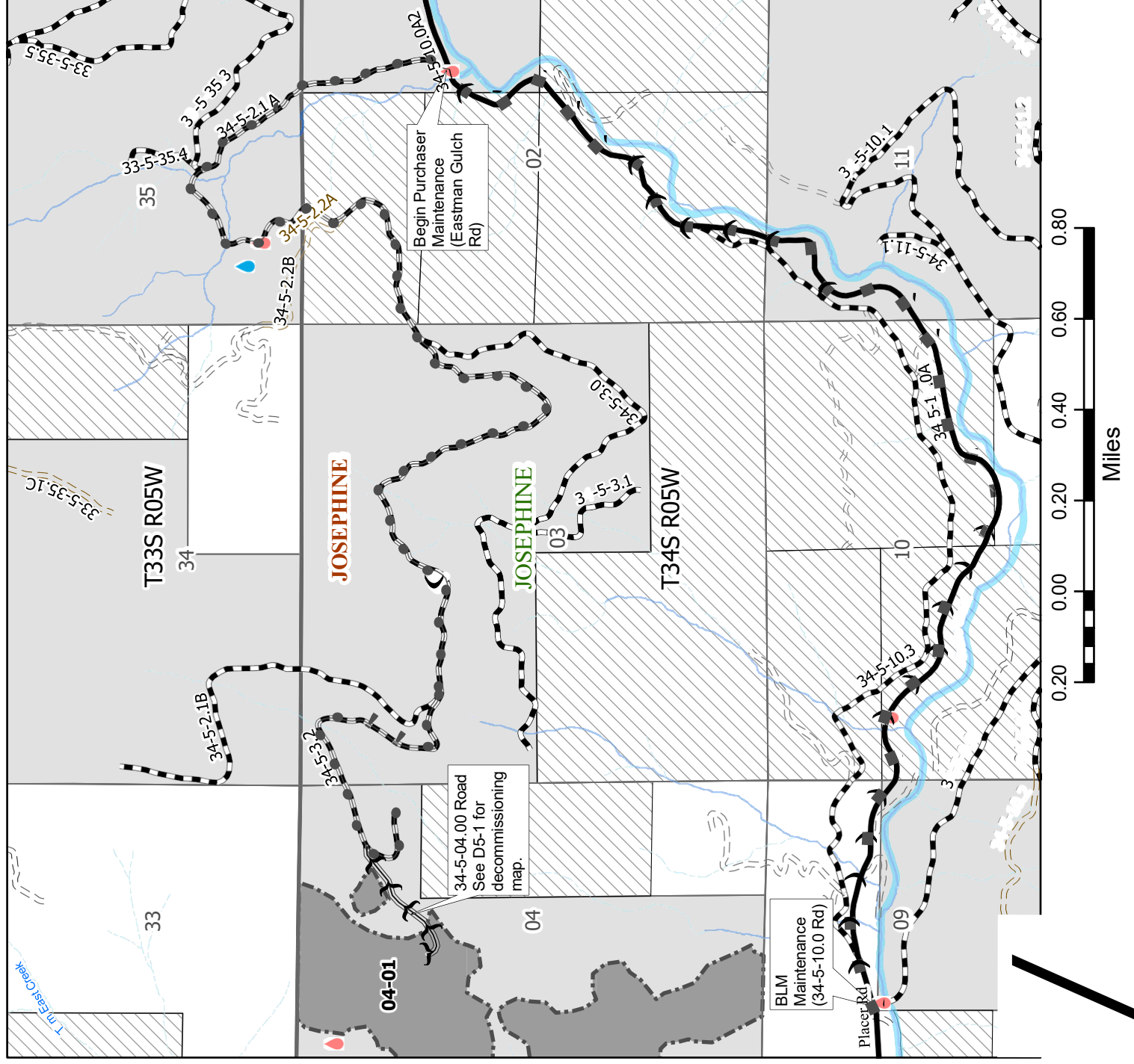


Exhibit D4

Rotors Up Timber Sale

Page 1 of 1

Roads Decommissioning Work List

Definitions:

AGG = Aggregate

BST = Bituminous

CMP = Corrugated Metal Pipe

CY = Cubic Yard

Jct. = Junction/Intersection

MP = Mile Post

NAT = Natural/Native Surface

Pvt = Private (Industry, Citizen)

Seg = Segment

STA = Station

Barricade and Water Bar = Barricade entrance and water bar the road only.

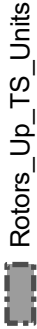
34-5-04.00 Road – Eastman End Road – NAT – Sub: 16Ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0+00	Jct. w/ 34-5-02.01 road. Upon completion of log haul, begin long term closure work. See Exhibit D5-1 for map and Exhibit D7 for barricade and water bar construction specifications.
0+50	Construct trench/earthen barricade.
2+00	Construct water bar.
3+50	Construct water bar.
5+00	Construct water bar.
6+50	Construct water bar.
8+00	Construct water bar.
9+50	Construct water bar.
11+00	Construct water bar.
12+50	Construct water bar.
14+00	Construct water bar.
15+54	End long term closure work.

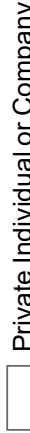
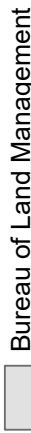
Exhibit D5

Legend

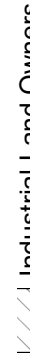
Rotors_Up_TS_Units



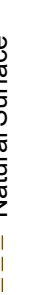
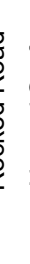
Ownership



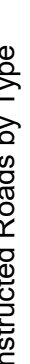
Industrial Land Owners



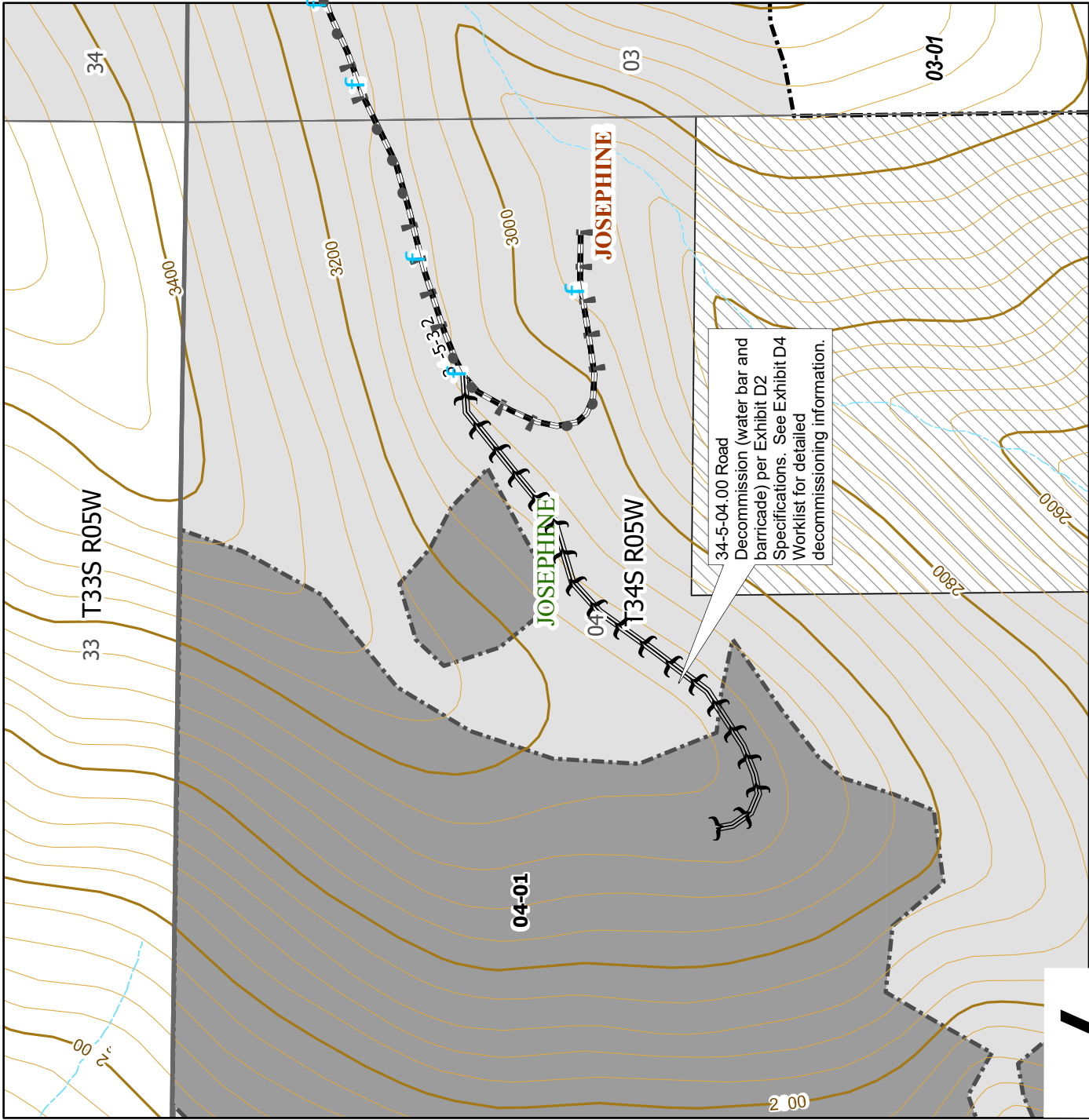
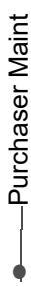
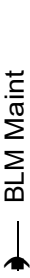
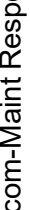
Roads by Surface Type



Constructed Roads by Type

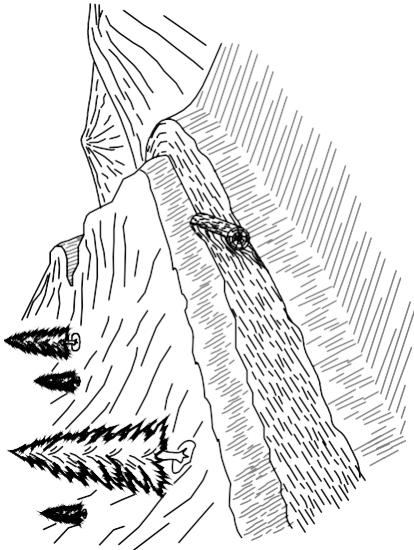


Decom-Maint Responsibility

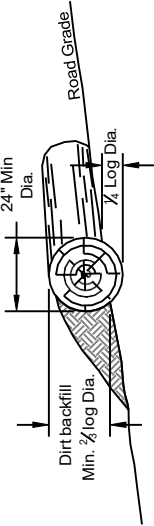


UNITED STATES DEPARTMENT OF THE INTERIOR	
BUREAU OF LAND MANAGEMENT	
MEDFORD DISTRICT - MEDFORD, OREGON	
ROTORS UP TIMBER SALE	
ROAD DECOMMISSIONING MAP	
DRAFTED BY: BLM	
DATE: APRIL 2025	SHEET: 1 OF 1

EXHIBIT D7

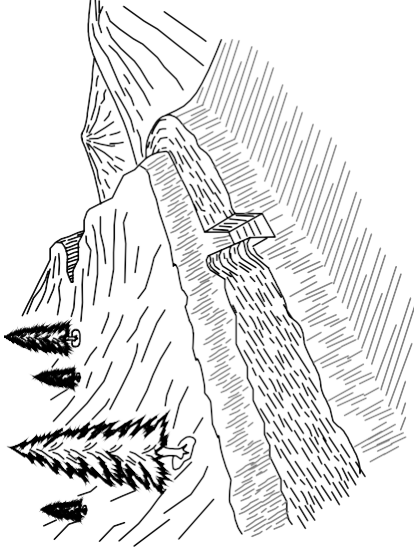
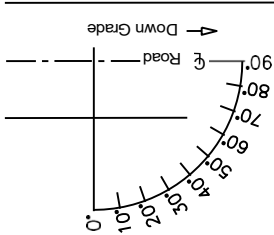


LOG BARRICADE

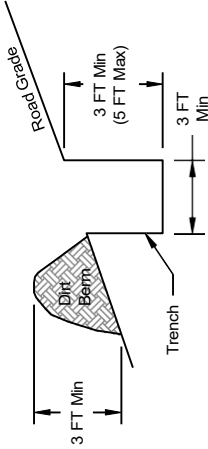


1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Decommissioning Work List.
3. All barricades shall be skewed 30 degrees.
4. The log length shall extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".

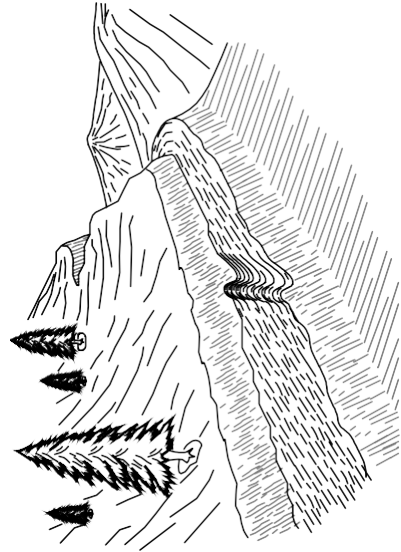
SKREW DIAGRAM



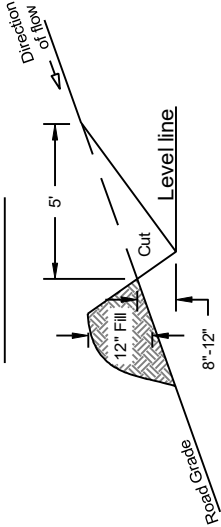
TRENCH BARRICADE



1. Trench barricade shall be constructed as shown above.
2. Exact location is listed in the Decommissioning Work List.
3. All barricades shall be skewed as needed to drain.
4. Trench barricade length shall extend from the cut bank to the fill slope or to a point sufficient to prohibit the crossing of motor vehicle traffic.



WATER BAR



1. Water bars shall be constructed as shown above.
2. Exact location will be flagged by the Authorized Officer prior to construction.
3. All water bars shall be skewed 30 degrees.
4. Upon completion of skidding logs, for the logging season, each skid road will have cross drainage constructed as shown above.

WATER BAR SPACING* BY EROSION CLASS^

ROAD GRADE	HIGH	MODERATE	LOW
%	FEET	FEET	FEET
2-5	200	300	400
6-10	150	200	300
11-15	100	150	200
16-20	75	100	150
21-35	50	75	100
35+	50	50	50

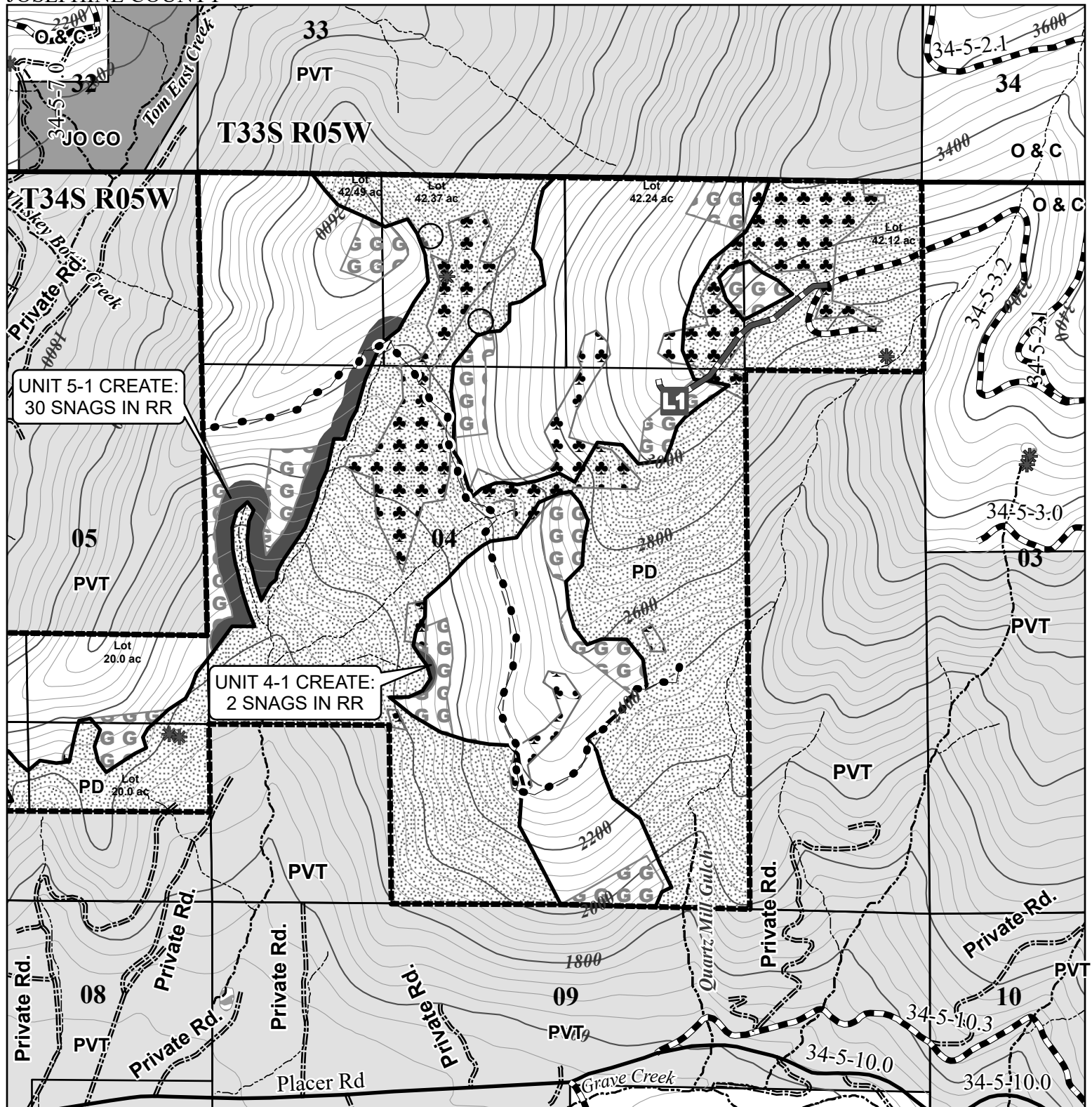
* Spacing is determined by slope distance and is the maximum allowed for the grade.

^ The erosion classes include the following rock types:

High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.
Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.
Low: Metasediments, metavolcanics, and hard shale.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

ROTORS UP
TIMBER SALE
BARRICADE AND
WATER BAR DETAILS



Legend

Rotors Up TS Potential Helicopter Landings

- Log Landing
- Service Landing
- Mining Ditch - Resource Buffer
- Rotors Up TS Permanent Road Construction
- Rotors Up Timber Sale Units
- Rotors Up TS Snag Creation Areas

Rotors Up TS Unit Rx Features

- Group Selection Opening
- Skip and Resource Buffer
- Paved Road
- Rocked Road
- Natural Surface Road
- Springs
- Intermittent Stream
- Perennial Stream

Intermediate 40-ft Contour

Index 200-ft Contour

Reserve Area

Contract Area Boundary

Ownership

Josephine County

Private

Bureau of Land Management - O&C Lands

Bureau of Land Management - PD Lands

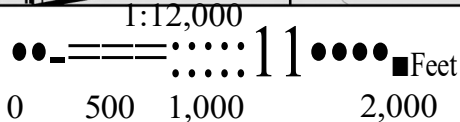
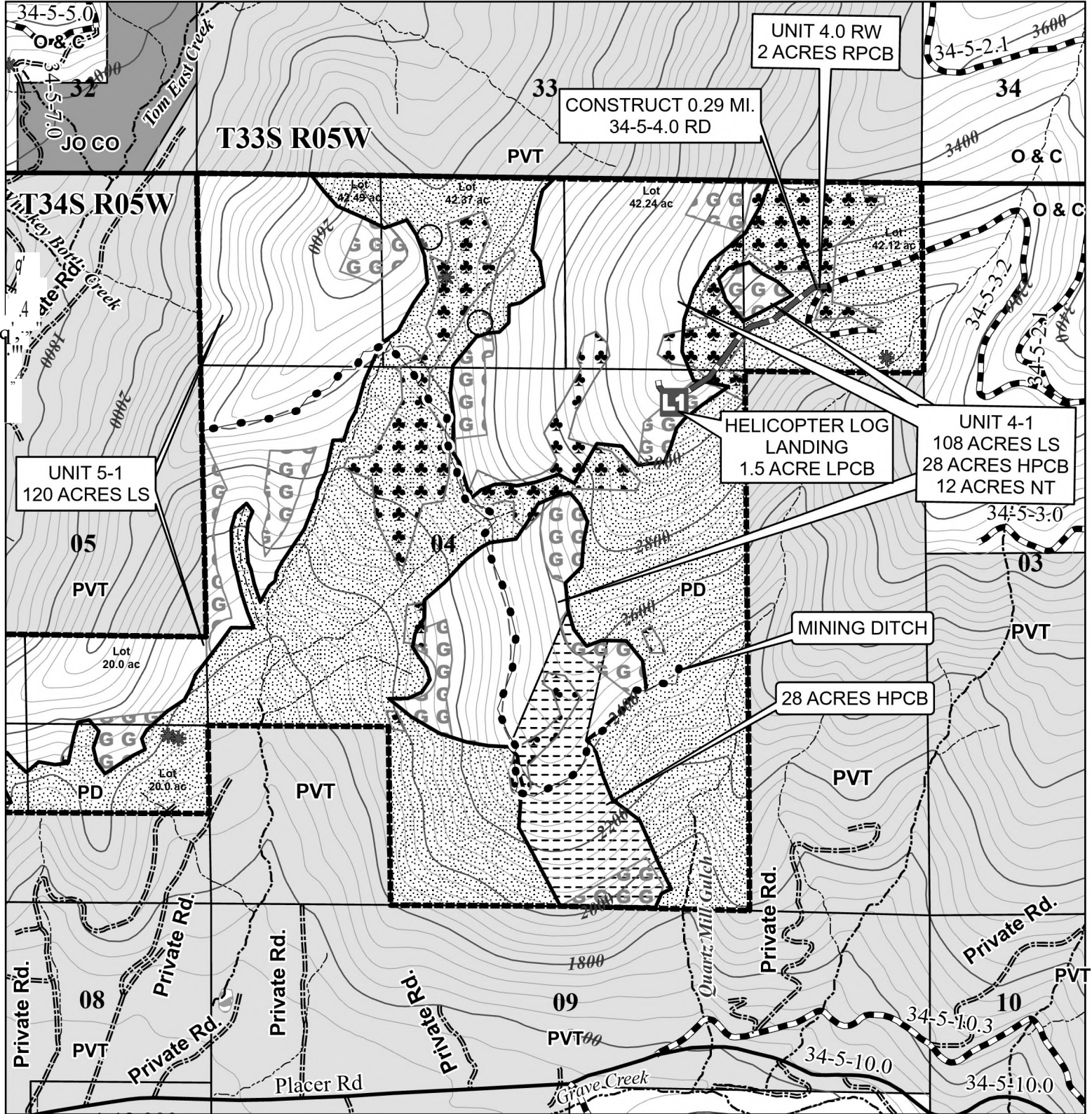
0 500 1,000 2,000
Feet

40 FOOT CONTOUR INTERVAL



United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Bridle Road
Medford, OR 97504
(541) 618-2200

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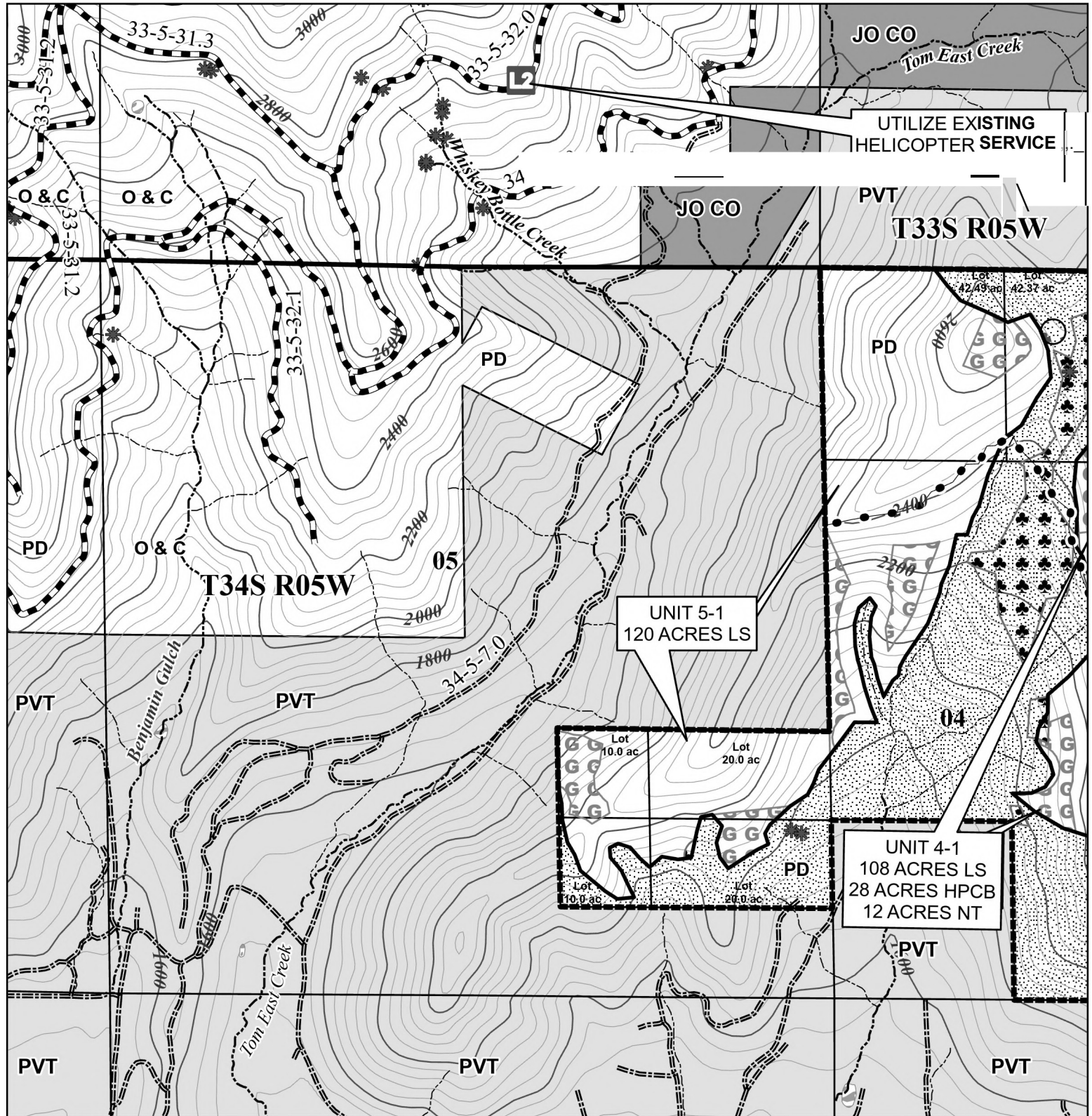


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40 FOOT CONTOUR INTERVAL





1:12,000

-----:1111----- Feet

0 500 1,000 2,000

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Bureau of Land Management

Medford District Office

3040 Biddle Road

Medford, OR 97504

(541) 618-2200

40 FOOT CONTOUR INTERVAL



Legend

- Rotors Up TS Potential

Helicopter Landings

L1

Log Landing

L2

Service Landing

Rotors Up TS

—

Permanent Road

Construction

Rotors Up Timber Sale Units

Rotors Up TS Unit Rx Features

G G

Group Selection Opening

♣ ♣

Skip and Resource Buffer

— •

Mining Ditch - Resource Buffer

Rotors Up TS Slash Disposal Rx

Lop & Scatter

Hand Pile, Cover & Burn

—

Roadside Pile, Cover & Burn

♣ ♣

Skip - No Treatment

L1

Landing Pile, Cover & Burn
- Reserve Area

Contract Area Boundary

*

Springs

Intermittent Stream

Perennial Stream

Waterbodies

—

Intermediate 40-ft Contour

—

Index 200-ft Contour

—

Paved Road

—

Rocked Road

====

Natural Surface Road

Township & Range

Section

Lots

Ownership

JO CO

Josephine County

PVT

Private

Bureau of Land Management - O&C Lands

Bureau of Land Management - PD Lands

LEGEND

UNIT	UNIT ACRES	SLASH DISPOSAL TREATMENT PRESCRIPTION	TREATMENT AREA DESCRIPTION
4-1	148	LS/HPCB/NT	HAND PILE, COVER & BURN ALONG RIDGE, AS SHOWN ON MAP. LOP AND SCATTER THE REST OF THE UNIT. NO TREATMENT IN SKIPS.
5-1	120	LS	LOP AND SCATTER WHOLE UNIT.
4.0 RW	2	RPCB	COVER AND BURN ROADSIDE PILES.
L1	1.5	LPCB	COVER AND BURN LANDING PILES.
TOTAL	271.5		

* BOUNDARIES OF HARVEST UNITS ARE POSTED AND PAINTED IN ORANGE

NT = NO TREATMENT (IN SKIPS)

LS = LOP & SCATTER

HPCB = HAND PILE, COVER & BURN PILES

RPCB = ROADSIDE PILE, COVER & BURN PILES

LPCB = LANDING PILE, COVER & BURN PILES

SLASH DISPOSAL SUMMARY BY UNIT AND PRESCRIPTION

UNIT	UNIT ACRES	SLASH TREATMENT ACRES	NO TREATMENT (SKIP) ACRES	LOP & SCATTER ACRES	HAND PILE COVER & BURN ACRES	ROAD CONSTRUCTION COVER & BURN ROADSIDE PILES ACRES	LANDINGS COVER & BURN ACRES
4-1	148	137.5	12.00	108.00	28.00	0.00	1.50
5-1	120	120	0.00	120.00	0.00	0.00	0.00
4.0 RW	2	2	0.00	0.00	0.00	2.00	0.00
TOTAL	270	259.5	12.00	228.00	28.00	2.00	1.50

1:12,000

0 500 1,000 2,000 Feet

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40 FOOT CONTOUR INTERVAL

