

P R O S P E C T U S

SCALE SALE

BUTTE FALLS RESOURCE AREA
JACKSON MASTER UNIT

Medford Sale # ORM05-TS-2025-0003
June 26, 2025 (TM)

SALT CREEK SALVAGE (5900) Jackson County, O&C

BID DEPOSIT REQUIRED: \$ 10,200.00

All timber designated for cutting in NW1/4SW1/4, Sec. 2, T.36S., R.2E., SW1/4NW1/4, LOT 4, LOT 3, S1/2NE1/4, LOT 1, LOT 2, Sec. 3, T.36S., R.2E., NW1/4, N1/2SW1/4, Sec. 11, T.36S., R.2E., 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
3,624	1,275.0	Douglas-fir	1,569	\$54.60	\$85,667.40
473	139.0	White Fir	167	\$29.00**	\$4,843.00
280	186.0	Ponderosa pine	227	\$23.90**	\$5,425.30
500	195.0	Incense Cedar	240	\$23.20**	\$5,568.00
4,877	1,795	Totals	2,203		\$101,503.70

*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)

HARVEST UNITS – All units will be restricted from operations until July 15th.

CRUISE INFORMATION - PMCTRE Variable Plot cruise using 40 BAF. Installed 110 plots across all units (1 per acre). Trees <14" were not cruised. Form Class DF 78 WF 80 PP 80 IC 66 were used in volume equation. Combined sampling error was 15.47%.

With respect to merchantable DF trees: the average tree is 21.8 inches DBHOB; the average gross merchantable log contains 142 bd. ft.; the total net volume is approximately 2,203 MBF and 64% recovery is expected.

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.

LOG EXPORT AND SUBSTITUTION RESTRICTIONS - 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 use as a substitute for exported private timber.

Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs. 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.

CUTTING AREA- Ten (10) units containing approximately one hundred ten (110) acres must be logged. Approximately sixty (60) acres of the total acreage are roadside salvage units.

CUTTING TIME - Contract duration will be twelve (12) months for cutting and removal of timber.

ACCESS - Access to the sale area is available via public roads and through the using BLM Roads and via Right-of-Way Agreement M-2000 with John Hancock Life Insurance Co. Among other conditions, agreement M-2000 with John Hancock Life Insurance Co. requires completion of a license agreement between the Purchaser and John Hancock Life Insurance Co., road maintenance to be performed by the Purchaser, BLM, or John Hancock Life Insurance and an estimated payment of a road surface replacement fee of \$2.00/mbf.

ROAD MAINTENANCE – The Purchaser will be required to maintain 10.22 miles of existing BLM and Private Roads.

ROAD CONSTRUCTION – The Purchaser will not be required to construct any temporary or permanent roads.

SOIL DAMAGE PREVENTION: Pursuant to Section 26 of Form 5450-4, Timber Sale Contract, the Purchaser shall not operate or cause to have operated on the contract area any tractor-type logging equipment when soil moisture content at six (6) inch depth exceeds twenty five (25) percent by weight as determined by the oven dry method.

EQUIPMENT REQUIREMENTS:

1. A yarding tractor not greater than 9 feet in track width equipped with an integral arch and winch system capable of lining logs at least 75 feet.

SLASH DISPOSAL- Perform logging residue reduction work on approximately sixty nine (69) acres of harvest area as directed by the Authorized Officer.

CONTRACT TERMINATION- 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;
2. Comply with a court order, or;
3. Protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and 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.

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.This contract includes an additional special provision to ensure the Purchaser understands he/she is required to conduct all operations in compliance with Contract Section 12 (Purchaser's Contractual Responsibilities for Liability) and Contract Section 29 (Safety and Health) and the Special Provisions included in Section 44 of this Contract.
3. Purchaser shall be responsible for complying with all county, state, and federal laws and regulations that relate to the execution of this contract (See Sec. 29 of contract).
4. Directional falling is required.
5. There are daily and seasonal restrictions in place on this sale.
6. Trees removed for salvage may be whole tree yarded or cut into log segments and may be yarded with or without tops attached. If excessive stand damage occurs from whole tree yarding as determined by the authorized officer, bucking and/or limbing will be required. (see section 44 Special Provisions).
7. Cleaning of equipment to eliminate noxious weed seeds is required prior to move-in of equipment onto federal lands.
8. There are landing slash and pile placement requirements in place for this sale (see SD-1F landing piles in the contract)
9. Purchaser should be aware there are logging residue reduction costs (\$38,295.00) assessed under SD-5.

Refer to the appraisal for total assessed costs of logging residue reduction.

10. All units will be Designation by Prescription (DxP). The Purchaser would make selections based on criteria explained in Exhibit F.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA

From the town of Medford, Proceed north on Highway 62 and travel approximately 6 miles. Turn right on Lake of the Woods Hwy (140) for 12.5 mi. Turn left onto Salt Creek Rd and travel approximately 5.7 miles and you will enter the Contract Area as shown on Exhibit A.

CATEGORICAL EXCLUSION Categorical exclusion DOI-BLM-ORWA-M050-2025-0004-CX was prepared for this sale, and a Finding of No Significant Impact has been documented for each environmental assessment. These documents are available for inspection as background for this sale at the Medford District Office.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

Sec. 43. TIMBER RESERVED FROM CUTTING - The following timber on the contract area is hereby reserved from cutting and removal under the terms of this contract and is retained as the property of Government.

- (A) AR-1 All timber on the Reserve Area(s) as shown on Exhibit A and all orange painted and posted trees which are on or mark the boundaries of the Reserve Area(s).
- (B) IR-6 Reserve all hardwoods and Pacific yew in all units as shown on Exhibit A, except where falling is necessary for safety or operational reasons. If such trees need to be cut for safety or operational reasons, retain cut trees in the stand.
- (C) IR-8 All timber except trees that meet the selection criteria outlined in the Designation by Description Marking Guidelines (Exhibit F) in all sale units shown on Exhibit A.
- (D) IR-13 All non-hazardous snags determined to be cull in all units as shown on Exhibit A.
- (E) IR-14 All pre-existing dead and down wood in all units as shown on Exhibit A.

Sec. 44.

(A) LOG BRANDING

- (1) LE-1 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 ten (10) inches, prior to the removal of timber from the contract area. All loads of eleven (11) logs or more will have a minimum of ten (10) logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of ten (10) logs or less. One end of all branded logs to be processed domestically will be marked with a three (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.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

(B) LOGGING

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) days or more, 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 they intend 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 assure protection of the environment and watershed. (A pre-work conference between the Purchaser's authorized representative and the Authorized Officer's representative 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 lower than six (6) inches nor higher than twelve (12) inches measured from the ground on the uphill side of the tree. This height requirement may be reduced if approved by the Authorized Officer.
- (4) L-5 All trees eight (14) inches or larger D.B.H.O.B. and not reserved shall be felled in all units shown on Exhibit A. All trees eight (8) inches or larger D.B.H.O.B. required to be cut shall be felled concurrently.
- (5) L-7 In all tractor units, as shown on Exhibit A, fell trees over twenty-one (21) inches DBH designated for cutting into log lengths not to exceed forty-four (44) feet. Log segments would be completely limbed prior to yarding.
- (6) L-8 In all tractor units, as shown on Exhibit A, all trees twenty-one (21) inches DBH and smaller designated for cutting shall be felled and yarded to approved landing locations either whole tree, or as log segments (segment length not to exceed forty-four (44) feet). If excessive stand damage occurs from whole tree yarding as determined by the Authorized Officer, bucking and/or limbing will be required.
- (7) L-10 In the units shown on Exhibit A, all trees designated for cutting which are within one hundred-sixty (160) feet of unit or reserve area boundaries, BLM improvements, private property lines, corner monuments, or resource buffers shall be felled away from the features. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (8) L-12 Yarding on the areas designated herein and shown on Exhibit A shall be done in accordance with the yarding requirements or limitations for the designated area.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

Designated Area	
<p>Ground Based Units:</p> <p>2-1, 3-1, 3-2, 3-3, 3-4, 3-6, 3-7, 11-1 Rd, 11-4 Rd</p>	<p>Yarding tractor width will not be greater than twelve (12) feet as measured from the outer edges of the standard width dozer blade in the straight position, or nine (9) feet as measured from the outer edges of standard width track shoes.</p> <p>Yarding tractors will be equipped with integral arches capable of suspending one end of the log clear of the ground and winch systems capable of lining logs at least seventy-five (75) feet.</p> <p>One end suspension is required in all ground-based units. Avoid skidding across or through sites with BLM improvements.</p> <p>The location of landings and skid trails must be clearly flagged by the Purchaser's Representative on the ground, and the locations shall be approved by the Authorized Officer prior to use.</p> <p>Incorporate existing skid trails and landings as a priority over creating new trails and landings where feasible, into a designated trail network for ground-based harvesting equipment. When new skid trails are needed, limit total (existing and new) designated skid trails to $\leq 15\%$ of the harvest unit area to reduce displacement or compaction to acceptable limits. Consider proper spacing (on average 100 feet), skid trail direction and location relative to terrain and stream channel features.</p> <p>Locate skid trails to minimize disturbance to coarse woody material. Where skid trails encounter large coarse woody material a section would be bucked out for equipment access. The remainder would be left in place and would not be disturbed.</p> <p>Restrict tractor and mechanical operations to slopes generally less than 35%. In areas where it is necessary to exceed these gradients to access adjacent tractor area, use ridge tops where possible.</p> <p>Minimize the area where more than half of the depth of the organically-enriched upper horizon (topsoil) is removed when conducting forest management operations.</p>

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

	<p>Restrict the amount of total area detrimental soil disturbance (i.e. compaction, displacement, erosion, burning) to below 20% in a timber harvest unit.</p> <p>Immediately after use, implement erosion control measures such as waterbars, slash placement, and seeding on skid trails where substantial gouging occurs that could lead to the capture and conveyance of water and/or contribute to soil erosion to waterbodies, floodplains, and wetlands, as determined by the hydrologist and as directed by the Authorized Officer.</p> <p>If operators are using feller-bunchers or cut-to-length harvesters off of designated skid trails:</p> <ul style="list-style-type: none">- Allow mechanized equipment capable of creating and walking on slash (such as a cut-to-length system) to work off designated skid trails for one or two passes on at least eight inches of slash and under dry soil conditions (less than 25% soil moisture content);- Allow mechanized equipment (feller-buncher systems) to work off designated skid trails during the dry season (soil moisture content less than 20%) for one or two passes only (one round-trip);- Use low, ground-pressure equipment off designated skid trails- Restrict all other use of ground-based equipment to designated skid trails; and <p>Mechanized felling equipment must have an arm capable of reaching at least twenty (20) feet.</p> <p>No front-end loaders are permitted.</p> <p>No yarding up or down draw bottoms is permitted.</p> <p>The use of ground-based equipment on unstable areas within units is not permitted.</p> <p>Any infrastructure impacted by logging operations (trails, service roads, kiosks, etc.) would be restored to their conditions as it was prior to logging operations.</p>
--	--

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

	Log landing size shall not exceed one-half (1/2) acre.
11-2 Rd End Line unit	Requires directional felling or endline/bull line as no equipment is allowed in harvest unit due to slopes and fragile soils.

- (9) L-14 No yarding or loading is permitted in or through plant sites, BLM improvements, or protected sites, in all units as shown on Exhibit A unless approved by the Authorized Officer.
- (10) L-19 No road construction, landing construction, skid trail construction, road renovation, road reconstruction, road decommissioning, road blocking/barricade construction, rocking, water bar construction, soil ripping, shall be conducted within contract area between October 15th of one calendar year and May 15th of the following calendar year, both days inclusive, or when soil moisture exceeds 25%, as determined by the Authorized Officer.

No ground-based yarding or soil decompaction operations shall be conducted within contract area between October 15th to May 15th, or when soil moisture exceeds 25%.

Block skid trails to prevent public motorized vehicle use and other unauthorized use by October 15th of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season.

- (11) L-19 Apply native, site-specific seed approved by the field office botanist and weed-free straw to all temporary roads, and newly constructed landings, the top fifty (50) feet of the skyline-cable yarding corridor where yarding logs to the road results in extended soil exposure, all predesignated skid trails, designated skid trails, and forwarder trails used for logging activities in all ground based units as shown on Exhibit A, beginning where the trail takes off of system roads, or landing areas for a distance of one hundred (100) feet, or as needed, as determined by the Authorized Officer.

Seeding and mulching would occur in the same operational season that construction activities occur. If hauling is not completed in the same year the route is constructed, storm proof and block the route by October 15th or when soil moisture exceeds 25%. Seeding and mulching would occur between September 1st and October 31st, or February 1st and March 31st or as approved by the Authorized Officer.

- (12) L-19 Restrict all timber hauling and landing operations on native surface or rocked roads whenever soil moisture conditions or rain events could result in road damage or the transport of sediment to nearby stream channels, generally October 15 to May

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

15. If the Authorized Officer, in consultation with Field Office watershed specialists and engineers, 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, a conditional waiver for hauling may be granted. The conditional waiver may be suspended or revoked if conditions become unacceptable as determined by the Authorized Officer.

- (13) L-19 The Purchaser may wet season haul (October 16 to May 14), with the Authorized Officer's approval on the following roads: 36-2E-3.01, 36-2E-3.06 Seg A, 36-2E-7.00 Seg A1-B1, and 36-2E-11.00. If the use of these roads during the wet season causes or begins to cause road damage or the transport of sediment into streams, the Authorized Officer may 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.

The Purchaser shall have the option to rock road numbers 36-2E-2.02, 36-2E-3.04, 36-2E-3.05, for wet weather haul (October 16 to May 14). Purchaser option rocking depths will be determined and approved by the Authorized Officer. 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 show in Exhibit C of this contract.

- (14) L-20 No operations shall be conducted within any unit as shown on Exhibit A, between March 1st through July 15th 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 by the Bureau of Land Management in accordance with accepted standards that Northern Spotted owl nesting and/or fledging activities are not occurring during the year or time of harvest.
- (15) L-22 During logging operations, the Purchaser shall keep the 36-2E-7.0 road, where it passes through the contract area, clear of trees, rock, dirt, and other debris so far as is practicable. The road shall not be blocked by such operations for more than thirty (30) minutes.
- (16) L-24 Before cutting and removing any trees necessary to facilitate logging in all units as shown on Exhibit A, the Purchaser shall identify the location of skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, 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 the following conditions must be met:
- (a) All skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees upon which timber is identified by the

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

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; however, unless otherwise approved in writing by the Authorized Officer, the width of each skid road shall be limited to twelve (12) feet, and cable yarding roads shall be limited to fifteen (15) feet.

- (b) The Purchaser may immediately cut and remove additional timber to clear skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and 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 procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Sec. 3.(b) of the contract or sufficient bonding has been provided in accordance with Sec. 3.(e). 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 Sec. 9 of the contract; or, the Authorized Officer determines that all trees otherwise reserved in section 41 of the contract or any tree that exceeds 28 inches diameter at breast height shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Sec. 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 Sec. 8 or Sec. 9 of the contract as determined by the Authorized Officer in accordance with this provision.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

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.

- (f) The Government may reserve trees previously designated for cutting and removal by applying orange paint as replacements for additional trees cut and removed for skid roads and/or cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.

- (17) L-25M Except for logs sold and removed from the contract area, all logs from areas specified below and shown on Exhibit A, which meet the length and diameter specifications shown below, shall be yarded and hauled off the sale area. If a log or piece of log meeting the specifications shown below is bucked and left in place, all portions of that log shall be yarded and decked or windrowed to the following described log destination area(s).

Specified Areas	Log Destination Areas	Log Specifications
All Units as shown on Exhibit A.	Hauled off sale area	Logs, which are [14] inches DBH or larger, and longer than [17] feet in length.

- (18) L-32 In units 11-1 Rd, 11-2 Rd, and 11-4 Rd as shown on Exhibit A, trees which are greater than or equal to forty (40) inches DBH shall be retained in a safe and stable manner within the unit, unless otherwise agreed to by the Authorized Officer.

(C) ROAD CONSTRUCTION, MAINTENANCE, AND USE (R)

PROVISION R-1: The Purchaser shall renovate all roads and decommission required roads and structures in strict accordance with the plans and specifications shown on Exhibit C and Exhibit D, which is attached hereto and made a part hereof.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

- PROVISION R-1a: Any required 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.
- PROVISION R-1c: The Purchaser shall renovate, use, and put into long term storage roads 36-2E-3.04 and 36-2E-3.05, by October 15th of the same respective operating season.
- PROVISION R-2: The Purchaser is authorized to use the roads listed and shown on Exhibit D Section 3000 for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligations described in Provision R-2b. Any road listed on Exhibit D and requiring improvement or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the 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 under modification to the contract.
- PROVISION 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 Provision 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.
- PROVISION R-2d: The Purchaser shall pay a road maintenance (and rockwear) fee of one and 33/100 dollars (\$1.33) per thousand board feet log scale for the use of said roads. 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 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.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

PROVISION 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 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 Exhibit D Section 3000. 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 obligations.

PROVISION 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. The Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D, Road Maintenance Specifications, of this contract, which is attached hereto and made a part hereof.

PROVISION R-3: In the use of Road No 36-2E-2.02 the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-2000 between the United States and John Hancock Life Insurance Co. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Payment of a road rockwear obligation of zero dollars (\$0) to John Hancock Life Insurance Co., payable at the time indicated in the License Agreement. The above maintenance amount is for the use of 0.41 miles of road or less.
- (b) Payment of a road use obligation of one hundred fifty dollars (\$150) to the John Hancock Life Insurance Co., payable at the time indicated in the License Agreement.
- (c) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

- (d) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

PROVISION 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.

PROVISION R-3e: The Purchaser shall pay a road use and maintenance fee of \$2.00 per thousand board feet log scale per mile for the use of said roads. The totals fees due shall be based on the volumes specified in 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 Contracting 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 Contracting Officer shall establish an installment schedule of payment of the road use and maintenance obligation.

PROVISION 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:

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

- A. Axle weights when fully loaded.
- B. Axle spacing.
- C. Transverse wheel spacing.
- D. Tire size.
- E. Outside width of vehicle.
- F. Operating speed.
- G. Frequency of use.
- H. 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.

PROVISION 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.

(D) ENVIRONMENTAL PROTECTION

- (1) E-1 During operations the operator would be required to have a BLM-approved spill plan or other applicable contingency plan. In the event of any release of oil or hazardous substance, as defined in Oregon Administrative Rules (OAR) 340-142-0005 (9)(d) and (15), into the soil, water, or air, the operator would immediately implement the site's plan. As part of the plan, the operator would be required to have spill containment kits present on the site during operations. The operator would be required to be in compliance with OAR 629-605-0130 of the Forest Practices Act, Compliance with the Rules and Regulations of the Department of Environmental Quality. Notification, removal, transport, and disposal of oil, hazardous substances,

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

and hazardous wastes would be accomplished in accordance with OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements, contained in Oregon Department of Environmental Quality regulations (SP-05, SP-06, and SP-07).

In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan for all hazardous substances to be used in the contract area. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. In addition, such plan shall follow all applicable State of Oregon Department of Environmental Quality guidelines for spill prevention and containment of petroleum products (Oregon Administrative Rules, Chapter 340, Department of Environmental Quality, Division 142, Oil and Hazardous Materials Emergency Response Requirements).

- (2) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall Store all hazardous materials and petroleum products in durable containers placed outside of Riparian Reserves. Locate so an accidental spill would be contained nor drain into any stream system (SP-03).

Refuel equipment a minimum of 175 feet from streams, ponds, or other wet areas. Store equipment containing reportable quantities of toxic fluids outside of the Riparian Reserve. Hydraulic fluid and fuel lines would be in proper working condition in order to minimize leakage into streams (SP-03).

- (3) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall only be allowed to use equipment that is free of noxious weed seeds prior to entering federal lands in the contract area as shown on Exhibit A.

If equipment is not considered free of noxious weed seeds by the Government, it shall be cleaned prior to entering federal lands. Cleaning shall be defined as removal from all surfaces including the under carriage any dirt, grease, plant parts, and material that may carry noxious weed seeds onto federal lands. Cleaning prior to entering federal lands may be accomplished by using a pressure hose.

Equipment shall be subject to visual inspection by the Government to certify that the equipment is free of noxious weed seeds. Only equipment inspected by the government shall be allowed to operate on federal lands within the contract area. The purchaser shall make equipment available for government inspection at an agreed upon location off federal lands prior to any move-in of equipment.

Requirements as outlined above may be waived by the Government if move-in is from one "weed free area" to another "weed free area", as determined by the Government, or as conditions warrant.

- (4) E-1 In addition to the requirement set forth in Sec. 26 of this contract and as directed by the Authorized Officer, the Purchaser shall block all temporary roads, and newly constructed landings (except landings located along temp spurs to be

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

decommissioned), and at any location where an existing barricade has been removed to provide access to units as shown on Exhibit A. Temporary roads, and newly constructed landings (except landings located along temp spurs to be decommissioned), shall be blocked in the same season of use (generally by October 15th). If hauling on a temporary route or its associated landings is not completed in the same year the route is constructed, the route will be storm-proofed and blocked by October 15th or before soil moisture exceeds 25%.

Road renovation would occur during the dry season (May 15th to October 15th). Variations in these dates would be permitted dependent upon weather and soil moisture conditions and with a specific erosion control plan (e.g., rocking, water-barring, seeding, mulching, barricading) as determined by the Authorized Officer in consultation with aquatic and/or soils scientists. All road and landing construction activities would be stopped when a storm event resulted in degrading conditions as evidenced by turbid runoff, turbid ditch flow, ponding, or rutting or other displacement in excess of two inches. Watershed specialists would closely monitor storms that result in precipitation and would convey pertinent information to the Authorized Officer. Similarly, the Authorized Officer would convey road, landing, and ditch conditions to the aquatic and/or soil specialists.

De-compact skid trails, landings, and temporary roads where needed to achieve no more than 20% detrimental soil conditions and to minimize runoff. Construct water bar all temporary routes and associated landings, and roads identified for full decommissioning to a depth of 18 inches or bedrock (whichever is shallower). Avoid subsoiling areas near tree roots and where there are rocks larger than 2 feet across. Apply native, site-specific seed approved by the field office botanist and weed-free straw, and block upon completion of use. Seeding and mulching would occur in the same operational season that construction activities occur. If hauling is not completed in the same year the route is constructed, storm proof and block the route by October 15th or before soil moisture exceeds 25%.

Place woody debris or other appropriate barriers (e.g., rocks, logs, and slash) on the first 100 feet of skid trails leading off system roads in all ground-based yarding units upon completion of yarding to block and discourage unauthorized vehicle use.

In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall construct road barricades as specified on Exhibit C, at locations where an existing barricade has been removed to provide for harvest access. Barricades shall be in place by October 15th of each calendar year.

Block skid trails by October 15th of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season.

- (5) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall seed and mulch all temporary roads, and newly constructed landings within the project area as shown on Exhibit A.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

Apply native, site-specific seed approved by the field office botanist, weed-free straw, and/or water-bars to the top 50 feet of the skyline-cable yarding corridor where yarding logs to the road results in extended soil exposure.

Seed and mulch all predesignated skid trails, designated skid trails, and forwarder trails used for logging activities in all ground-based units as shown on Exhibit A, beginning where the trail takes off of system roads, or landing areas for a distance of one hundred (100) feet, or as needed as determined by the authorized officer

Seed must be native species, site-specific, and approved by the resource area botanist. If hauling on a temporary route or its associated landings is not completed in the same year the route is constructed, the route will be storm-proofed and blocked by October 15 or when soil moisture exceeds 25%.

Apply native, site-specific seed and straw between September 1st and October 31st, and/or between February 1st and March 31st of the year of harvest, unless otherwise approved by Authorized Officer.

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 rhomboidea*, *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 1st and October 31st, and/or between February 1st and March 31st of the year of harvest. 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> (%)
-------------	--------------------	------------------

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

Purity:	95	80
Germination:	85	70
Other species/weed content (max):	0.2	0.2
Noxious weed content:	Prohibited	Prohibited

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-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the specifications shown on Exhibit W (special provisions), which is attached hereto and made a part hereof.
- (a) Water-bar all skid trails and yarding corridors as needed to prevent erosion by October 15th of the year of harvest.
- (b) Install water-bars at the same time as subsoiling (if both are required) unless skid trails are needed to complete harvest the following season. In that case, water bars would be constructed and straw would be applied to exposed soil prior to fall rains to reduce sedimentation during winter months. Water-bar spacing on tractor skid trails would be based on the RMP erosion-control measures for timber harvest, which considers slope and soil series.
- (6) 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 owls may not be allowed during this time period.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

(E) Miscellaneous

- (1) M-2 The Government at its option may check scale any portion of the timber removed from the contract area. The Purchaser hereby agrees to make such contract timber available for scaling at a location designated by the Authorized Officer. In the event that BLM elects to check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows. If the entire sale is check scaled, the purchase price of this contract shall be reduced Two Thousand Two hundred and Three Dollars (\$2,203.0). In the event that only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of \$1.00 per net thousand board foot of timber scaled which is equal to the percentage of timber sold which was actually scaled by the Government. For purposes of computing this price reduction, the percentage of timber sold which has been scaled shall be determined by the Government. Any reduction in purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of such scaling in log transportation and/or yard operations. Such adjustment to the total purchase price shall be made by unilateral modification of the contract executed by the Contracting Officer. Scaling will be conducted by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to the Purchaser upon request.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

(F) Fire Prevention and Control

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

- (a) Prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, the purchaser shall ensure that planned operations will be in full compliance with the current Fire Season Requirements issued by prepare a fire prevention and control plan to the satisfaction of the State of Oregon, Department of Forestry and the Medford District Bureau of Land Management.

Current State of Oregon, Department of Forestry requirements can be found online at: <https://www.oregon.gov/ODF/Fire/Pages/Restrictions.aspx>

(G) Slash Disposal and Site Preparation

- (1) SD-4 Logging Residue Reduction. In addition to the requirements of Sect.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 logging residue reduction and site preparation measure(s) required by this contract:

Prior to commencement of any operation under this section of the contract, a slash disposal and site preparation pre-work conference between the purchaser's representative and the Authorized Officer must be held at a location designated by the Authorized Officer. All slash disposal and site preparation shall be done in accordance with the plans developed at this pre-work conference.

Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of purchasers operations under the terms of this contract, including material cut during slashing activities for the purposes of fuels reduction.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

Refueling of chainsaws and other equipment will be done no closer than one hundred fifty (150) feet of any stream or wet area. Spilled fuel and oil would be cleaned-up and would be disposed of at an approved disposal site.

1. For Igniting, Burning, Mop-up of Piles on Units:
 - a. One work leader(s) Firefighter Type 1 (FFT1) qualified according to National Wildfire Coordinating Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1) to supervise crew and equipment operations, and to serve as Purchaser's representative.
 - b. Two-person crew Firefighter Type 2 (FFT2) qualified according to National Wildfire Coordination Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1, with sufficient fuel for burning, four (3) drip torches, one (1) power saw, and one (1) backpack pump, one (1) tool for each crew member.
 - c. The crew 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.
 - d. All ignition and mop-up personnel will be directly supervised by a BLM representative.

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. In addition, all listed personnel shall be qualified according to the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System Guide, PMS-310-1 and provide documentation of these qualifications. On the day of ignition all listed personnel shall be fluent in speaking and understanding English, clothing shall consist of long pants and long sleeved shirts, and be of approved aramid fabric (Nomex™ or equivalent), as well as being free of diesel fuel oil. All personnel shall wear lug sole boots with minimum eight (8) inch tall uppers that provide ankle support, approved hardhats and leather gloves. Personnel who do not meet these requirements or do not have proper clothing and personal protective equipment (PPE) will not be allowed to participate. 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.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop up on each cutting unit shown on Exhibit A for seventy-two (72) hours, as directed by the Authorized Officer within a five (5) day period commencing at 8:00 a.m. the day following the completion of ignition in that unit, or until released from such service by the Government, whichever occurs first.

In event of a fire escapement, the Purchaser's personnel and equipment shall, under supervision of the Authorized Officer, take action to control and mop up the escaped fire until released from such service by the Government. If it becomes necessary to use furnished personnel and equipment for the suppression of a fire which escapes from the prescribed fire area for a period beyond the remainder of the day in which the fire escapes, then the Government shall, at its option: (1) reimburse the Purchaser for such additional use of personnel and equipment at wage rates shown in the current Administratively Determined Pay Rates for the Western Area and at equipment rates shown in the current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule until the Purchaser is released from such service by the Government; or (2) 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 (i.e., trail, road, stream, rock formation, etc.), the Government may permit the Purchaser to remove personnel for that day; provided that all mop up work on the escaped fire 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.

- (2) SD-1c EXCAVATOR PILE AND BURN. Pile all slash in units or portions of units as designated by the Authorized officer in accordance with the following specifications:
- (a) Piling shall be accomplished with a track-mounted excavator with track shoes producing less than ten (10) pounds per square inch ground pressure. The excavator shall be equipped with a hydraulic thumb or rotating, controllable grapple head. The machine shall have a minimum reach of twenty five (25) feet. Finished piles shall be tight and free of earth. No portion of the excavator pile will be within 25 feet of the dripline of any living conifer tree.
 - (b) Pile all slash, brush and downed hardwoods which are greater than two (2) inch and less than sixteen (16) inches in diameter on the large end and exceed two (2) feet in length. Existing reproduction of commercial coniferous species shall be protected where feasible.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

- (c) Unmerchantable logs greater than sixteen (16) inches on the small end shall be left in place, or positioned so that they will not be burned.
 - (d) Prior to the commencement of piling work, all equipment shall meet the approval of the Authorized Officer.
 - (e) Excavators are limited to designated skid roads approved by the Authorized Officer.
 - (f) Additional trails needed shall be approved by the Authorized Officer, and the excavator shall be limited to one pass on these trails. The excavator shall pile by walking over the slash and working back to the designated trails. Existing reproduction of commercial coniferous species shall be protected where feasible.
 - (g) A ten (10) foot by ten (10) foot cover of four (4) mil black plastic or equivalent material shall cap each excavator pile to maintain a dry ignition point. The cover shall be firmly fixed to each pile to hold it in place. Covering shall be done at time of piling.
 - (h) Operations required by this provision shall be kept current with yarding as directed by the Authorized Officer and shall be conducted as follows: Units shall be piled and covered during the same season that they are logged. Piling shall be completed in each unit or portion thereof, within eight (8) weeks after being notified of BLM site treatment determination.
- (3) SD- 1f LANDING PILES In all units as shown in the Exhibit A, pile all slash located within fifty (50) feet on each side of each landing. Slash shall be piled by a grapple loader. Finished piles shall be tight and free of earth. Larger cull logs can be placed adjacent to landing pile for firewood cutting use.
- (a) A ten (10) foot by ten (10) foot cover of four (4) mil black plastic shall cap each pile to maintain a dry ignition point that contains fine fuels (i.e. kindling). The cover shall be firmly fixed to each pile to hold it in place. Landings shall be piled and covered during the same season that they are logged. No portion of the landing pile will be within 50 feet of the dripline of any living conifer tree.
- (4) SD-5 Perform logging residue reduction and site preparation work on approximately sixty nine (69) acres of harvest area as directed by the Authorized Officer.
- (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

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS

shall be determined by the Authorized Officer.

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

Treatment Level	Cost Per Acre	Number of Acres	Total Cost Per Treatment Type
Excavator Pile/Cover	\$490.00	69	\$33,810.00
Excavator Pile Burn	\$65.00	69	\$4,485.00

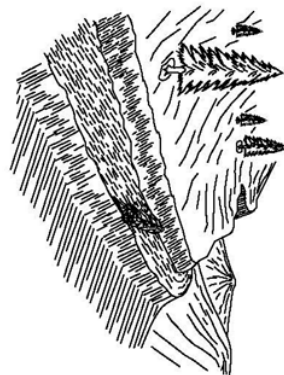
Excavator Pile/Cover	\$33,810.00
Excavator Pile burn	\$4,485.00
Total	\$38,295.00

- (c) The total Purchase Price set forth in Section 2 shall be adjusted by the amount that the total cost of the site preparation treatments designated pursuant to Section 44(G(7)(a)) differs from: Thirty Eight Thousand Two Hundred and Ninety Five dollars (\$38,295.00) as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 44(G(7)(a)).

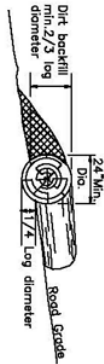
In case of injury to personnel or damage to equipment furnished by the Purchaser as required by this subsection, liability shall be borne by the Purchaser, unless such injury or damage is caused by Government negligence.

Time is of the essence in complying with this provision. In the event the Purchaser fails to provide the 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 and new conditions necessitate additional site preparation work and/or use of additional personnel and equipment to accomplish planned burning, the Purchaser also shall be responsible for such additional costs.

ORM05-TS-2025.0003 SALT CREEK SALVAGE TIMBER SALE
SPECIAL PROVISIONS



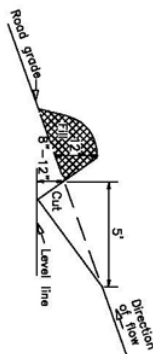
LOG BARRICADE



1. LOG BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL BARRICADES SHALL BE SKEWED 30 DEGREES FROM THE CUT BANK TO THE FILL SLOPE.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE.
5. THE MINIMUM SMALL END DIAMETER OF THE LOG BARRICADE SHALL BE 24".

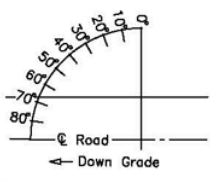


WATER BAR



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 UPON COMPLETION OF SKIDDING LOGS FOR THE LOGGING SEASON. EACH SKID ROAD WILL HAVE CROSS DRAINAGE CONSTRUCTED AS SHOWN ABOVE.
5. PRIOR TO BLOCKING, EACH ROAD WILL HAVE CROSS DRAINAGE CONSTRUCTED AS SHOWN ABOVE.

SKEW DIAGRAM



WATER BAR SPACING *

ROAD GRADE	LOAM OR CLAY LOAM	DECOMPOSED BRANITE
%	FEET	FEET
4-6	400	300
7-9	300**	200**
10-14	200	150
15-20	150	90
21-40	90	50
41-60	50	25

* DISTANCES ARE MAXIMUM.
** ON GRADES IN EXCESS OF 10%
CONSTRUCT WATER BARS.

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT MEDFORD, OREGON			
DRAINAGE & EROSION CONTROL INSTALLATION			
DRAWN	JMR	SCALE	NONE
DATE	August 2013	SHEET	1 OF 1
DRAWING NO.	OR-11-9113.4-8		

EXHIBIT W
SHEET 1 OF 1

Seasonal Restriction Matrix

Salt Creek Salvage Timber Sale
ORM05-TS-2025.0003

*Restricted Times are Shaded
**Crosshatched areas are available for a waiver by contracting officer, see contract for guidelines.

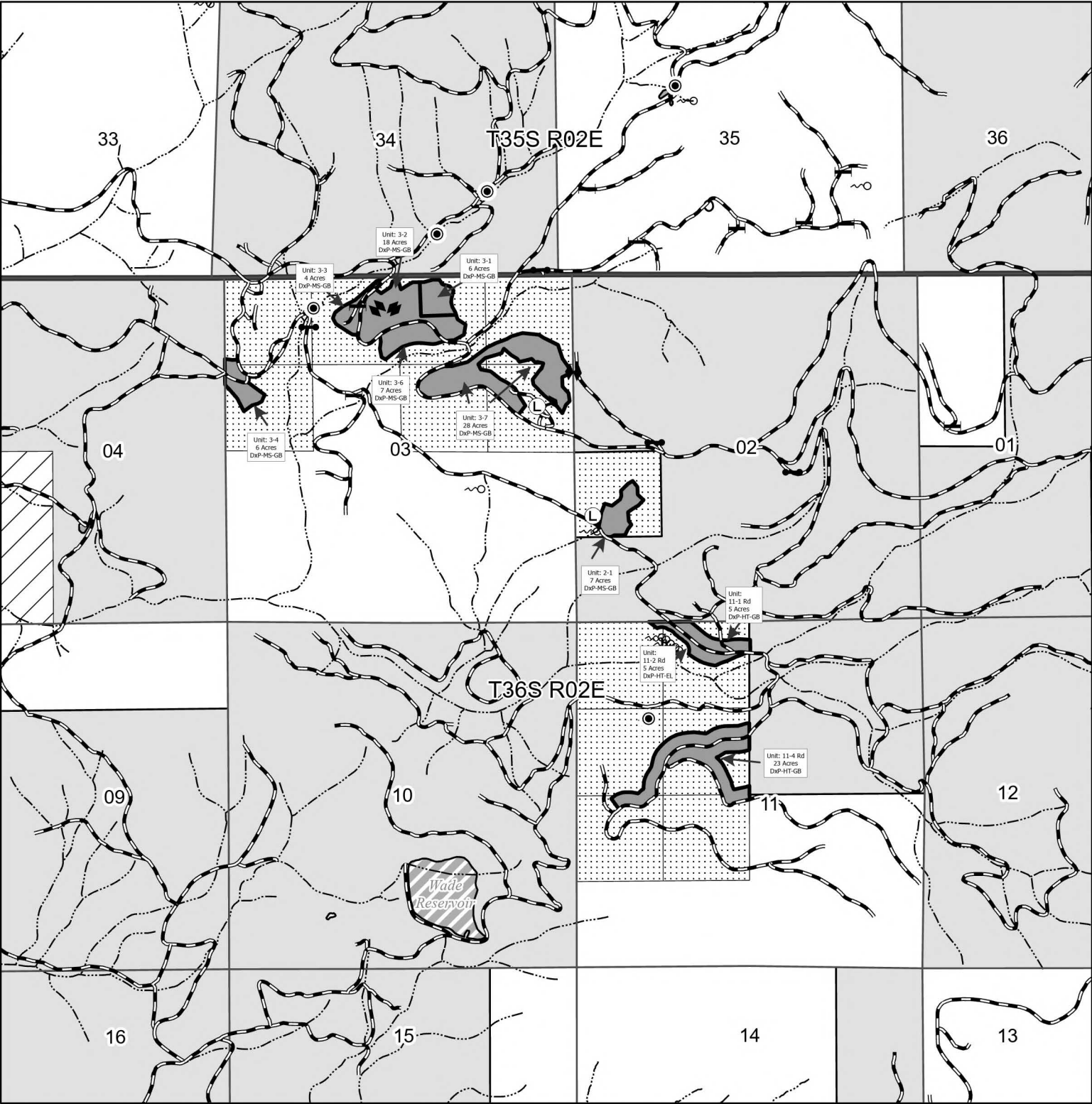
Sale Unit	Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
ALL UNITS	Ground-based yarding; road and landing construction; road renovation; road closure and decommissioning work; and soil de-compaction operations ¹												
	Hauling on natural surface or inadequately surfaced roads ²												
	Seeding ³												

¹ Wet season restrictions may be shortened or extended depending on weather conditions.

² Hauling restriction may be shortened or extended based on site specific current road and ground conditions (see L-19 in contract)

³ Seeding dates may be extended if approved by appropriate specialists

⁴ Spotted Owl seasonal restrictions from March 1 through July 15 may be shortened if it is determined that spotted owl nesting and/or fledgling activities are not occurring in the area.



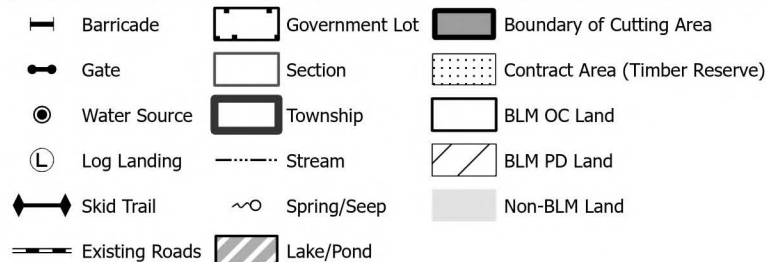
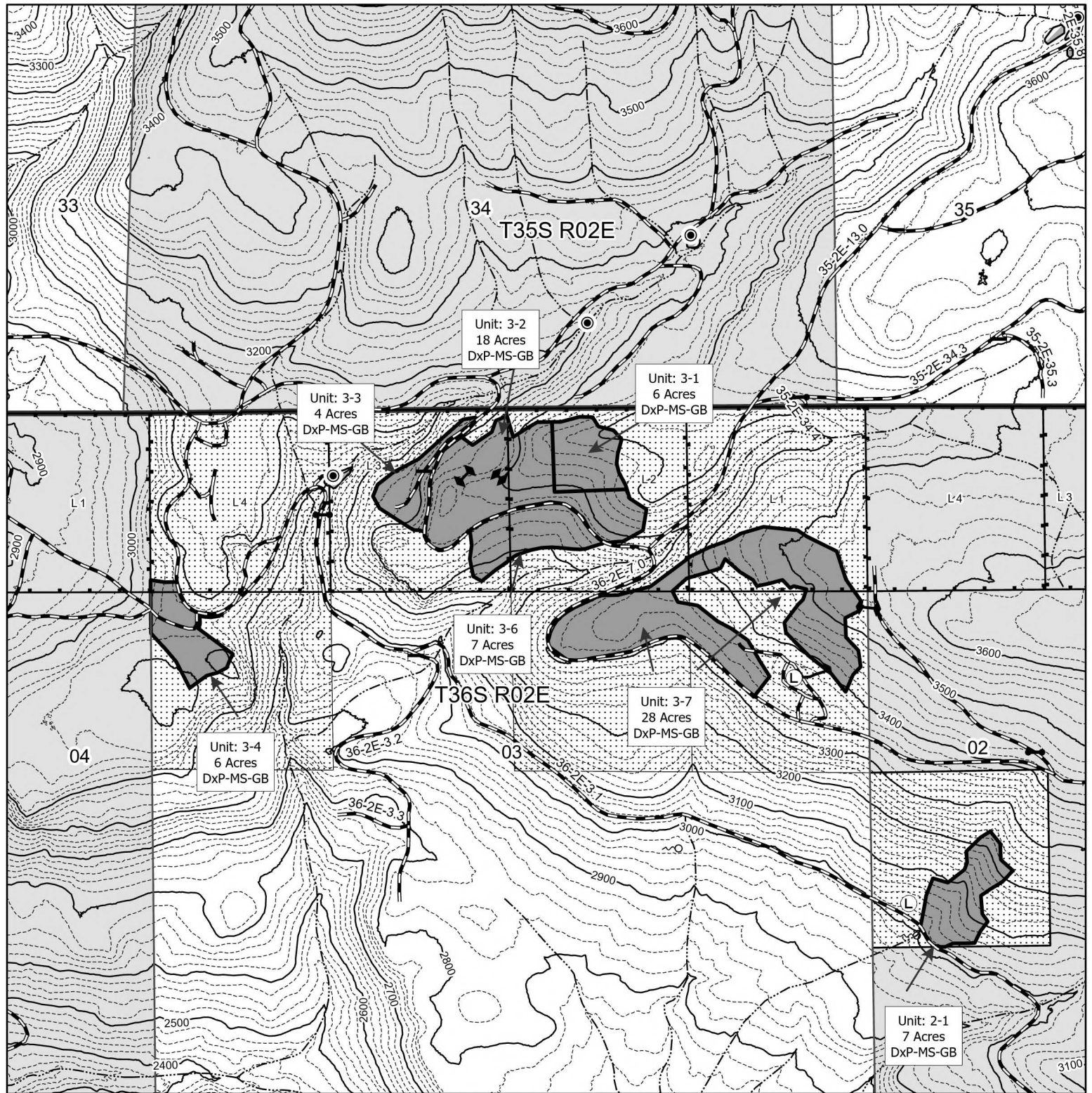
- | | | |
|----------------|-------------|--------------------------------|
| Barricade | Section | Boundary of Cutting Area |
| Gate | Township | Contract Area (Timber Reserve) |
| Water Source | Stream | BLM OC Land |
| Log Landing | Spring/Seep | BLM PD Land |
| Skid Trail | Lake/Pond | Non-BLM Land |
| Existing Roads | Swamp/Marsh | |

DXP = Designation by Prescription
MS = Mortality Salvage
HT = Hazard Tree Removal
EL = End Line
GB= Ground Based





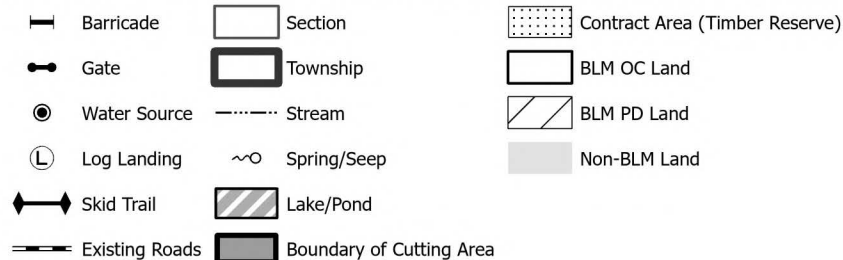
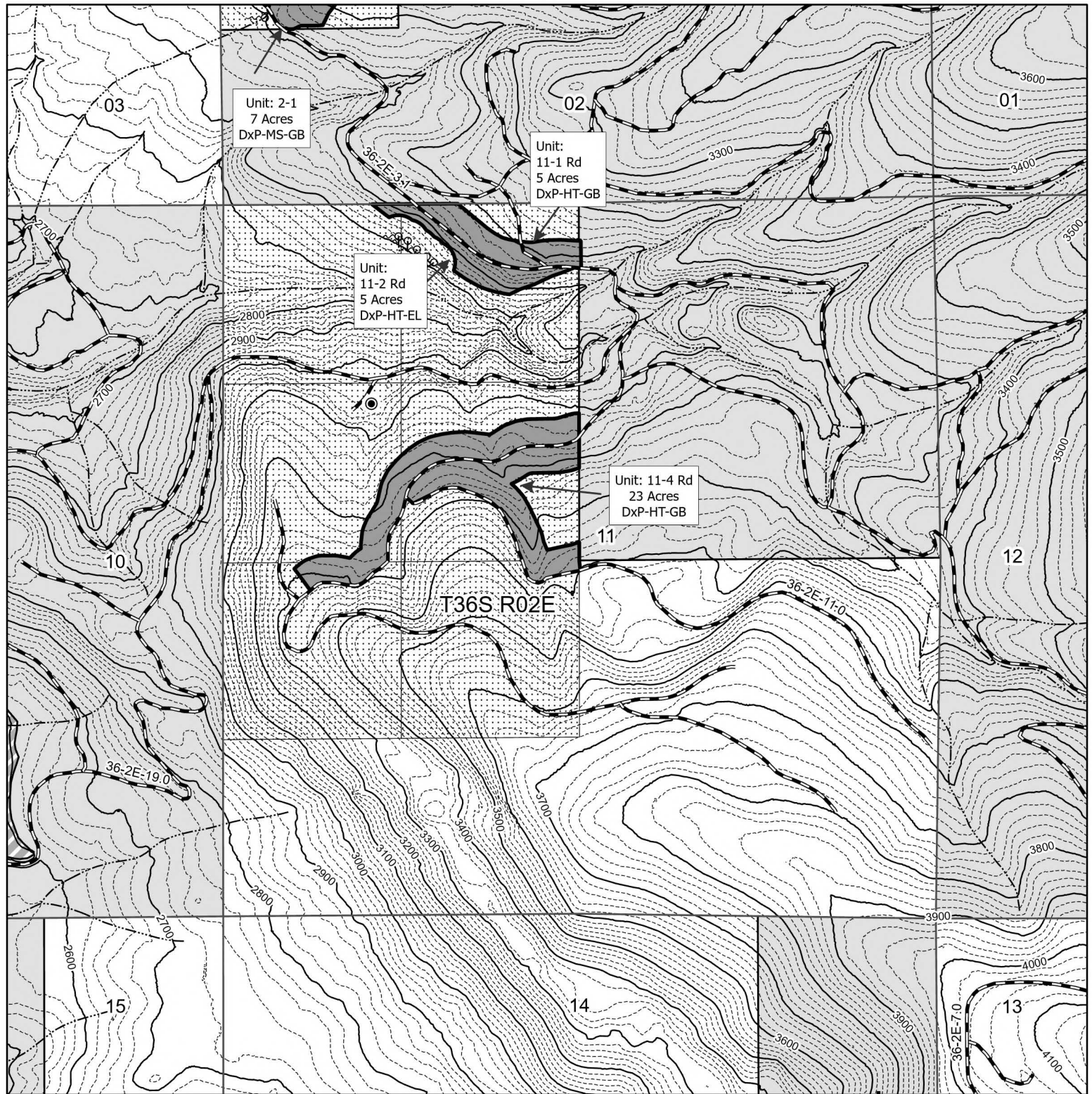
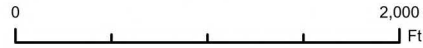
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.



DxP = Designation by Prescription
 MS = Mortality Salvage
 HT = Hazard Tree Removal
 EL = End Line
 GB = Ground Based

N





DxP = Designation by Prescription
MS = Mortality Salvage
HT = Hazard Tree Removal
EL = End Line
GB = Ground Based

N



Information for Timber Sale Notice, Prospectus, Sec. 43 & 44

Salt Creek Salvage Timber Sale

ORM05-TS-2025.0003

Approx # of trees	Est Volume MBF 32'	Species	Est Volume MBF 16'	Stumpage Adjustment	Appraised \$/MBF	Appraised Value (\$)
3,624	1,275.0	Douglas Fir	1,569.0	(\$55.22)	\$54.60	\$85,667.40
500	195.0	Incense-cedar	240.0	\$0.00	\$23.20	* \$5,568.00
280	186.0	Ponderosa Pine	227.0	\$0.00	\$23.90	* \$5,425.30
473	139.0	White Fir	167.0	\$0.00	\$29.00	* \$4,843.00
4,877	1,795.0		2,203.0			\$101,503.70

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

CRUISED BY:	Miller, Parks
CRUISE COMPLETED:	January 2025
COMBINED SAMPLING ERROR:	15.47%

CRUISE DESIGN/METHOD Description:
Variable plot cruise with 40 BAF. One plot per acre. Strata one= section 2 and 3. Strata two= section 11. Both strata have the same sampling frequency by species. DF, Sample Frequency 1 in 5, Form Class 78, Percent sound 70. WF, Sample Frequency 1 in 3, Form class 80, Percent sound 70. PP, Sample Frequency 1 in 3, Form class 80, Percent sound 70. IC, Sample Frequency 1 in 3, Form class 66, Percent sound 70. Only trees 14" DBH and greater were cruised.

TRACT FEATURES

ALL SPECIES

QM DBH	21.8	INCHES
GM LOG	142	BD FT
Total Gross Volume	3,428	MBF
Recovery	64	%
Salvage	32,672,203	MBF
Export	0	MBF

Dominant Species: **Douglas Fir**

	QM DBH	22.4	INCHES
	GM Log	137	BD FT
	Recovery	64	%
	Salvage	2,452	MBF

Admin Scale Allowance		\$0.00	\$/MBF
	TOTAL ADMIN. SCALE Allowance	\$0.00	

EXPORT VOLUME (LE-1)	Port Orford Cedar	0	MBF
----------------------	-------------------	---	-----

Reserve Tree Paint Color	Reserve Tree Count
	0

Harvest Tree Paint Color	Harvest Tree Count
	0



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

Timber Appraisal

Sale Name: Salt Creek Salvage	Sale Date: Thursday, May 22, 2025
BLM District: Medford DO	Unit of Measure: 16' MBF
Contract #: ORM05-TS-2025.0003	Contract Term: 12 months
Sale Type: Advertised	Contract Mechanism: 5450-4 Sale of Timber - Scale Sale

Content

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

Prepared By: Miller, Tait N - 4/2/2025

Approved By: Worman, Aaron S - 4/2/2025

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Jackson	36 S	2 E	2	NW1/4SW1/4.	Willamette
O&C	Jackson	36 S	2 E	3	SW1/4NW1/4, LOT 4, LOT 3, S1/2NE1/4, LOT 1, LOT 2.	Willamette
O&C	Jackson	36 S	2 E	11	NW1/4, N1/2SW1/4.	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	1,569.0	2,348.0	2,452.0	16,965	1,788	3,624
Incense-cedar	240.0	349.0	380.0	2,335	152	500
Ponderosa Pine	227.0	329.0	333.0	1,519	83	280
White Fir	167.0	241.0	264.0	2,112	326	473
Totals	2,203.0	3,267.0	3,429.0	22,931	2,349	4,877

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	110.0	0.0	110.0	20.0

Logging Costs

Stump to Truck	\$462,531.18
Transportation	\$144,238.05
Road Construction	\$30,674.46
Maintenance/Rockwear	\$10,655.69
Road Use	\$150.00
Other Allowances	\$59,307.50
Total:	\$707,556.88
Total Logging Cost per MBF:	\$321.18

Utilization Centers

<u>Location</u>	<u>Distance</u>	<u>% of Net Volume</u>
White City	21.0 miles	100%

Profit & Risk

Profit	11%
Risk	5%
Total Profit & Risk	16%

Tract Features

Quadratic Mean DBH	21.8 in
Average GM Log	142 bf
Average Volume per Acre	20.0 mbf
Recovery	64%
<u>Net MBF volume:</u>	
Green	-32,670,000.0 mbf
Salvage	32,672,203 mbf
Export	0 mbf
<u>Ground Base Logging:</u>	
Percent of Sale Volume	100%
Average Yarding Slope	10%
Average Yarding Distance	450 ft
<u>Cable Logging:</u>	
Percent of Sale Volume	0%
Average Yarding Slope	0%
Average Yarding Distance	0 ft
<u>Aerial Logging:</u>	
Percent of Sale Volume	0%
Average Yarding Slope	0%
Average Yarding Distance	0 ft

Cruise

Cruise Completed	January 2025
Cruised By	Miller, Parks
Cruise Method	

Variable plot cruise with 40 BAF. One plot per acre. Strata one= section 2 and 3. Strata two= section 11. Both strata have the same sampling frequency by species. DF, Sample Frequency 1 in 5, Form Class 78, Percent sound 70. WF, Sample Frequency 1 in 3, Form class 80, Percent sound 70. PP, Sample Frequency 1 in 3, Form class 80, Percent sound 70. IC, Sample Frequency 1 in 3, Form class 66, Percent sound 70. Only trees 14" DBH and greater were cruised.

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	3,624	1,569.0	\$507.71	\$81.23	\$321.18	\$4.49	(\$55.22)	\$54.60	\$85,667.40
Incense-cedar	500	240.0	\$231.56	\$37.05	\$321.18	\$0.00	\$0.00	\$23.20 *	\$5,568.00
Ponderosa Pine	280	227.0	\$238.45	\$38.15	\$321.18	\$0.00	\$0.00	\$23.90 *	\$5,425.30
White Fir	473	167.0	\$289.82	\$46.37	\$321.18	\$0.00	\$0.00	\$29.00 *	\$4,843.00
Totals	4,877	2,203.0							\$101,503.70

* 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			10.0%	62.0%	26.0%	2.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Incense-cedar							100.0%

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Ponderosa Pine							100.0%

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir				71.0%	28.0%	1.0%	

Marginal Log Volume By Grade

Species	Utility Cull	Peeler Cull
Douglas Fir	0	59

Unit: 2-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	96.0	145.0	150.0	251
Ponderosa Pine	18.0	25.0	26.0	24
Incense-cedar	14.0	19.0	22.0	34
White Fir	0.9	1.3	1.6	2
Totals:	128.9	190.3	199.6	311

Net Volume/Acre: 18.4 MBF

Regeneration Harvest	0.0
Partial Cut	7.0
Right of Way	0.0
Total Acres:	7.0

Unit: 3-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	82.0	124.0	129.0	215
Ponderosa Pine	15.0	22.0	22.0	20
Incense-cedar	12.0	17.0	19.0	29
White Fir	0.7	1.1	1.4	2
Totals:	109.7	164.1	171.4	266

Net Volume/Acre: 18.3 MBF

Regeneration Harvest	0.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	6.0

Unit: 3-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	246.0	372.0	387.0	646
Ponderosa Pine	45.0	66.0	66.0	60
Incense-cedar	35.0	50.0	57.0	87
White Fir	2.0	3.0	4.0	6
Totals:	328.0	491.0	514.0	799

Net Volume/Acre: 18.2 MBF

Regeneration Harvest	0.0
Partial Cut	18.0
Right of Way	0.0
Total Acres:	18.0

Unit: 3-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	68.0	103.0	107.0	180
Ponderosa Pine	13.0	18.0	18.0	17
Incense-cedar	10.0	14.0	16.0	24
White Fir	0.6	1.0	1.2	2
Totals:	91.6	136.0	142.2	223

Net Volume/Acre: 18.3 MBF

Regeneration Harvest	0.0
Partial Cut	5.0
Right of Way	0.0
Total Acres:	5.0

Unit: 3-4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	82.0	124.0	129.0	215
Ponderosa Pine	15.0	22.0	22.0	20
Incense-cedar	12.0	17.0	19.0	29
White Fir	0.8	1.1	1.4	2
Totals:	109.8	164.1	171.4	266

Net Volume/Acre: 18.3 MBF

Regeneration Harvest	0.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	6.0

Unit: 3-6

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	96.0	145.0	150.0	251
Ponderosa Pine	18.0	25.0	26.0	24
Incense-cedar	14.0	19.0	22.0	34
White Fir	0.9	1.3	1.7	2
Totals:	128.9	190.3	199.7	311

Net Volume/Acre: 18.4 MBF

Regeneration Harvest	0.0
Partial Cut	7.0
Right of Way	0.0
Total Acres:	7.0

Unit: 3-7

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	383.0	579.0	602.0	1,006
Ponderosa Pine	70.0	102.0	103.0	94
Incense-cedar	54.0	78.0	88.0	135
White Fir	4.0	5.0	7.0	9
Totals:	511.0	764.0	800.0	1,244

Net Volume/Acre: 18.3 MBF

Regeneration Harvest	0.0
Partial Cut	28.0
Right of Way	0.0
Total Acres:	28.0

Unit: 11-1 Rd

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	77.0	113.0	120.0	129
White Fir	24.0	34.0	37.0	67
Incense-cedar	13.0	20.0	21.0	19
Ponderosa Pine	5.0	7.0	8.0	3
Totals:	119.0	174.0	186.0	218

Net Volume/Acre: 23.8 MBF

Regeneration Harvest	0.0
Partial Cut	5.0
Right of Way	0.0
Total Acres:	5.0

Unit: 11-2 Rd

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	77.0	113.0	120.0	129
White Fir	24.0	34.0	37.0	67
Incense-cedar	13.0	20.0	21.0	19
Ponderosa Pine	5.0	7.0	7.0	3
Totals:	119.0	174.0	185.0	218

Net Volume/Acre: 23.8 MBF

Regeneration Harvest	0.0
Partial Cut	5.0
Right of Way	0.0
Total Acres:	5.0

Unit: 11-4 Rd

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	362.0	530.0	558.0	602
White Fir	109.1	159.2	171.7	314
Incense-cedar	63.0	95.0	95.0	90
Ponderosa Pine	23.0	35.0	35.0	15
Totals:	557.1	819.2	859.7	1,021

Net Volume/Acre: 24.2 MBF

Regeneration Harvest	0.0
Partial Cut	23.0
Right of Way	0.0
Total Acres:	23.0

Total Stump To Truck	Net Volume	\$/MBF
\$462,531.18	2,203.0	\$209.96

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

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
End Lining	GM MBF	148.0	\$312.56	\$46,258.88	Section 11-2Rd Endlining
Feller Buncher	GM MBF	3,119.0	\$131.70	\$410,772.30	
Subtotal				\$457,031.18	

Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Felling and Bucking of Oversized	Day	5.0	\$600.00	\$3,000.00	
Subtotal				\$3,000.00	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Shovel	Each	2.0	\$450.00	\$900.00	2 moves @ \$225/hr
Stroke Delimber	Each	2.0	\$450.00	\$900.00	2 moves @ \$225/hr
Feller Buncher	Each	2.0	\$350.00	\$700.00	2 moves @ \$175/hr
Subtotal				\$2,500.00	

Comments:

Felling and bucking of oversized timber.

Total	Net Volume	\$/MBF
\$144,238.05	2,203.0	\$65.47

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
White City	21.0	Highway/Gravel	GM MBF	3,267.0	\$44.15	\$144,238.05	100%

Engineering Allowances

Total	Net Volume	\$/MBF
\$41,480.15	2,203.0	\$18.83

Cost Item	Total Cost
Road Construction:	\$30,674.46
Road Maintenance/Rockwear:	\$10,655.69
Road Use Fees:	\$150.00

Total	Net Volume	\$/MBF
\$59,307.50	2,203.0	\$26.92

Environmental Protection

Cost item	Total Cost
Barricades	\$600.00
Water bar Skids	\$7,800.00
Woody Debris 100'	\$4,050.00
Equipment Washing #3	\$250.00
Equipment washing #1	\$450.00
Equipment Washing #2	\$450.00
Equipment Washing #4	\$450.00
Subtotal	\$14,050.00

Logging

Cost item	Total Cost
Skid Location	\$812.50
Skid construction	\$750.00
Landing Construction	\$2,400.00
Directional Falling	\$1,800.00
Seed and Mulch	\$1,200.00
Subtotal	\$6,962.50

Slash Disposal & Site Prep

Cost item	Total Cost
Excavator Pile Burn	\$4,485.00
Excavator Pile and Cover	\$33,810.00
Subtotal	\$38,295.00

Comments:

Directional Falling= L10, Seed and Mulch= L12, Skid Location= L24, Skid Construction= L12, Landing Construction= L12, Felling/ Bucking Oversized= L32, Water bar skids= E1, Barricades= E1, Equipment Washing #1 (Buncher)= E1, Equipment Washing #2 (Shovel)= E1, Equipment Washing #3 (Skidder)= E1, Equipment Washing #4 (Processor)= E1, Woody Debris 100' =E1, Excavator Pile and Cover= SD-1C,

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

Contract No.: ORM05-TS-2025.0003 Sale Name: Salt Creek Salvage Issuing Office: Medford District
--

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	1,569.00	
White Fir	167.00	\$29.00
Ponderosa Pine	227.00	\$23.90
Incense Cedar	240.00	\$23.20

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): 16”<	Small End DIB: 10 inches
Log Height: 32 Feet	Log Length: 16 Feet
% Sound: 33.3	% Sound: 33.3
Net Tree Volume: 30	Net Log Volume: 20

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	1,569	\$54.60	\$85,667.40
White Fir	167	\$29.00	\$4,843.00
Ponderosa Pine	227	\$23.90	\$5,425.30
Incense cedar	240	\$23.20	\$5,568.00

Total Estimated Purchase Price: \$101,503.70

MEMORANDUM OF AGREEMENT FOR YARD SCALING

DISTRICT: Medford_____ AREA: _Butte Falls_____

Scale Site Owner: _____

Scale Site Location: _____

Scale Site Authorized Representative/Phone #: _____

Purchaser: _____

Timber Sale Name: _Salt creek Salvage Timber Sale

BLM Contract No.: _ORM05-TS-2025.0003_____

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 #

(6) Purchaser: _____

(14) Brand

(7) Sale Name: __ Salt Creek Salvage _____

(8) Contract #: __ ORM05-TS-2025.0003 __

(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
<u>CONTRACT SCALER DATE RECEIVED STAMP</u>	

(19) _____
Purchaser Date_____
BLM Representative Date

OR 5300-18 (March 1993)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 8.0.0.22

Updated: 11/4/2022

Summary of All Roads and Projects

T.S. Contract Name: Salt Creek Salvage Tract No: ORM05-TS-2025.0003 Sale Date: 05/22/2025

Prepared by: F. Pardini Ph: *2471 Print Date: 4/3/2025 6:50:30 AM

Construction: 0.00 sta

Improve: 0.00 sta Renov: 539.63 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 0 acres	\$2,216.97
300 Excavation:	\$0.00
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage:	\$0.00
Culvert: 0.00 lf	DownSpout: 0.00 lf
PolyPipe: 0.00 lf	
500 Renovation:	\$15,138.76
Blading 4.54 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:	\$4,737.79
Mechanical Brushing: 14.99 acres	
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$8,580.94 Surf. \$0.00.....	\$8,580.94
Quarry Development:	\$0.00

Total: 2,203 mbf @ \$13.924/mbf = \$30,674.46

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-11.00 Road Name: Gardner Butte Ts Sp

Road Renovation: 0.46 mi 12 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$341.07
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$1,064.10
Blading 0.46 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 (Mechanical):0.67 acres	\$505.46
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$742.07 Surf. \$0.00.....	\$742.07
Quarry Development:	\$0.00
Total:	\$2,652.71

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-11.00 Road Name: Gardner Butte Ts Sp

Section 200 Clearing and Grubbing:

Roadside Unit

RVM Grubbing .12 Acre x \$2,842.27/Acre = \$341.07

Subtotal: \$341.07

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Backhoe: \$108.79/hr x 2.00 hr = \$217.58

Blading: \$923.61/mi x 0.46 mi = \$424.86

Compaction: \$415.02/mi x 0.46 mi = \$190.91

Clean Culverts: \$501.63/mi x 0.46 mi = \$230.75

Subtotal: \$1,064.10

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

RoadSide Brushing Heavy: \$754.42/acre x 0.67 acres = \$505.46

Subtotal: \$505.46

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 8.65% of total Costs = \$742.07

surfacing = 0% \$0.00

Subtotal: \$742.07

Quarry Development:

Road Number: 36-2E-11.00 Gardner Butte Ts Sp Continued

Subtotal: \$0.00

Total: \$2,652.71

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-2.02 Road Name:

Road Renovation: 0.41 mi 16 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:	\$972.09
Blading 0.41 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 (Mechanical):0.60 acres	\$169.75
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$443.48 Surf. \$0.00.....	\$443.48
Quarry Development:	\$0.00
Total:	\$1,585.31

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-2.02 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Backhoe: \$108.79/hr x 2.00 hr = \$217.58

Blading: \$923.61/mi x 0.41 mi = \$378.68

Compaction: \$415.02/mi x 0.41 mi = \$170.16

Clean Culverts: \$501.63/mi x 0.41 mi = \$205.67

Subtotal: \$972.09

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: \$282.91/acre x 0.60 acres = \$169.75

Subtotal: \$169.75

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 5.17% of total Costs = \$443.48

surfacing = 0% \$0.00

Subtotal: \$443.48

Quarry Development:

Subtotal: \$0.00

Road Number: 36-2E-2.02 Continued

Total: \$1,585.31

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-3.01 Road Name: Gardner Butte Rd

Road Renovation: 3.29 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$1,335.87
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$6,272.04
Blading 3.29 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 (Mechanical):4.79 acres	\$1,536.19
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$3,551.49 Surf. \$0.00.....	\$3,551.49
Quarry Development:	\$0.00
Total:	\$12,695.59

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-3.01 Road Name: Gardner Butte Rd

Section 200 Clearing and Grubbing:

Roadside Unit

RVM Grubbing 0.47 Acre x \$2,842.27/Acre = \$1,335.87

Subtotal: \$1,335.87

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Backhoe: \$108.79/hr x 2.00 hr = \$217.58

Blading: \$923.61/mi x 3.29 mi = \$3,038.68

Compaction: \$415.02/mi x 3.29 mi = \$1,365.42

Clean Culverts: \$501.63/mi x 3.29 mi = \$1,650.36

Subtotal: \$6,272.04

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: \$282.91/acre x 3.83 acres = \$1,083.55

RoadSide Brushing Medium: \$471.51/acre x 0.96 acres = \$452.65

Subtotal: \$1,536.19

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 41.39% of total Costs = \$3,551.49

surfacing = 0% \$0.00

Subtotal: \$3,551.49

Road Number: 36-2E-3.01 Gardner Butte Rd Continued

Quarry Development:

Subtotal: \$0.00

Total: \$12,695.59

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-3.04 Road Name:

Road Renovation: 0.17 mi 12 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$341.07
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$1,281.17
Blading 0.17 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 (Mechanical):0.25 acres	\$70.73
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$657.54 Surf. \$0.00.....	\$657.54
Quarry Development:	\$0.00
Total:	\$2,350.51

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-3.04 Road Name:

Section 200 Clearing and Grubbing:

Roadside and landing area

RVM Grubbing 0.12 Acre x \$2,842.27/Acre = \$341.07

Subtotal: \$341.07

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Backhoe: \$108.79/hr x 2.00 hr = \$217.58

Blading: \$923.61/mi x 0.17 mi = \$157.01

Compaction: \$415.02/mi x 0.17 mi = \$70.55

Clean Culverts: \$501.63/mi x 0.17 mi = \$85.28

Widening

Tractor: D7 with rippers 3 hr x \$250.25/hr = \$750.75

Subtotal: \$1,281.17

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: \$282.91/acre x 0.25 acres = \$70.73

Subtotal: \$70.73

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 7.66% of total Costs = \$657.54

surfacing = 0% \$0.00

Road Number: 36-2E-3.04 Continued

Subtotal: \$657.54

Quarry Development:

Subtotal: \$0.00

Total: \$2,350.51

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-3.05 Road Name:

Road Renovation: 0.09 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$198.96
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$383.20
Blading 0.09 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 (Mechanical):0.13 acres	\$36.78
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$240.39 Surf. \$0.00.....	\$240.39
Quarry Development:	\$0.00
Total:	\$859.33

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-3.05 Road Name:

Section 200 Clearing and Grubbing:

Remove stumps blocking road

RVM Grubbing 0.07 Acre x \$2,842.27/Acre = \$198.96

Subtotal: \$198.96

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Backhoe: \$108.79/hr x 2.00 hr = \$217.58

Blading: \$923.61/mi x 0.09 mi = \$83.12

Compaction: \$415.02/mi x 0.09 mi = \$37.35

Clean Culverts: \$501.63/mi x 0.09 mi = \$45.15

Subtotal: \$383.20

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: \$282.91/acre x 0.13 acres = \$36.78

Subtotal: \$36.78

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.80% of total Costs = \$240.39

surfacing = 0% \$0.00

Subtotal: \$240.39

Road Number: 36-2E-3.05 Continued

Quarry Development:

Subtotal: \$0.00

Total: \$859.33

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-3.06 Road Name:

Road Renovation: 0.12 mi 15 ft Subgrade 0 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:	\$438.41
Blading 0.12 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 (Mechanical):0.29 acres	\$82.04
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$202.14 Surf. \$0.00.....	\$202.14
Quarry Development:	\$0.00
Total:	\$722.60

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-3.06 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Backhoe: \$108.79/hr x 2.00 hr = \$217.58

Blading: \$923.61/mi x 0.12 mi = \$110.83

Compaction: \$415.02/mi x 0.12 mi = \$49.80

Clean Culverts: \$501.63/mi x 0.12 mi = \$60.20

Subtotal: \$438.41

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: \$282.91/acre x 0.29 acres = \$82.04

Subtotal: \$82.04

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.36% of total Costs = \$202.14

surfacing = 0% \$0.00

Subtotal: \$202.14

Quarry Development:

Subtotal: \$0.00

Road Number: 36-2E-3.06 Continued

Total: \$722.60

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-7.00 A1 Road Name: Salt Creek Access

Road Renovation: 2.16 mi 20 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:	\$1,797.88
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 (Mechanical):3.14 acres	\$888.34
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$1,043.30 Surf. \$0.00.....	\$1,043.30
Quarry Development:	\$0.00
Total:	\$3,729.52

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-7.00 A1 Road Name: Salt Creek Access

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Clean Culverts: $\$501.63/\text{mi} \times 2.16 \text{ mi} = \$1,083.52$

BST Ditch Maintenance

Blading Ditches $2.16 \text{ MI} \times \$330.72/\text{MI} = \714.36

Subtotal: \$1,797.88

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: $\$282.91/\text{acre} \times 3.14 \text{ acres} = \888.34

Subtotal: \$888.34

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 12.16% of total Costs = $\$1,043.30$

surfacing = 0% \$0.00

Subtotal: \$1,043.30

Quarry Development:

Subtotal: \$0.00

Road Number: 36-2E-7.00 A1 Salt Creek Access Continued

Total: \$3,729.52

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-7.00 B1 Road Name: Salt Creek Access

Road Renovation: 0.5 mi 16 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:	\$416.18
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 (Mechanical):0.73 acres	\$206.52
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$241.85 Surf. \$0.00.....	\$241.85
Quarry Development:	\$0.00
Total:	\$864.55

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-7.00 B1 Road Name: Salt Creek Access

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Clean Culverts: \$501.63/mi x 0.50 mi = \$250.82

BST Ditch Maintenance

Blading Ditches 0.50 MI x \$330.72/MI = \$165.36

Subtotal: \$416.18

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: \$282.91/acre x 0.73 acres = \$206.52

Subtotal: \$206.52

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.82% of total Costs = \$241.85

surfacing = 0% \$0.00

Subtotal: \$241.85

Quarry Development:

Subtotal: \$0.00

Road Number: 36-2E-7.00 B1 Salt Creek Access Continued

Total: \$864.55

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number: 36-2E-7.00A2-A6 Road Name: Salt Creek Access

Road Renovation: 3.02 mi 17 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:	\$2,513.70
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 (Mechanical):4.39 acres	\$1,241.97
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$1,458.67 Surf. \$0.00.....	\$1,458.67
Quarry Development:	\$0.00
Total:	\$5,214.34

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-2E-7.00A2-A6 Road Name: Salt Creek Access

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Clean Culverts: \$501.63/mi x 3.02 mi = \$1,514.92

BST Ditch Maintenance

Blading Ditches 3.02 MI x \$330.72/MI = \$998.77

Subtotal: \$2,513.70

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

Brushing width Left: 6ft. Right: 6ft.

RoadSide Brushing Light: \$282.91/acre x 4.39 acres = \$1,241.97

Subtotal: \$1,241.97

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 17.00% of total Costs = \$1,458.67

surfacing = 0% \$0.00

Subtotal: \$1,458.67

Quarry Development:

Subtotal: \$0.00

Road Number: 36-2E-7.00A2-A6 Salt Creek Access Continued

Total: \$5,214.34

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Average Mobilization distance = 50 miles Factor = 1.00

Mobilization: Construction

Fire Equipment: 1 ea x (1.00 x \$91.00/ea + 5 mi x \$5.06/mi)= \$116.30
Graders-all: 1 ea x (1.00 x \$536.00/ea + 11 mi x \$18.44/mi)= \$738.84
Brush Cutter: 1 ea x (1.00 x \$536.00/ea) = \$536.00
Loaders < 3cy: 1 ea x (1.00 x \$536.00/ea + 0 mi x \$11.43/mi)= \$536.00
Rollers & Comp: 1 ea x (1.00 x \$536.00/ea + 5 mi x \$27.67/mi)= \$674.35
Excavators (Sm): 1 ea x (1.00 x \$536.00/ea + 1 mi x \$25.12/mi)= \$561.12
RTBackhoes 24/30: 1 ea x (1.00 x \$399.00/ea + 11 mi x \$7.16/mi)= \$477.76
Tractors <= D7: 1 ea x (1.00 x \$856.00/ea + 3 mi x \$48.94/mi)= \$1,002.82
Dump Truck<=15cy: 1 ea x (1.00 x \$124.00/ea + 150 mi x \$5.15/mi)= \$896.50
Water Truck: 1 ea x (1.00 x \$131.00/ea + 75 mi x \$5.47/mi)= \$541.25
Equipment Washing: 10 ea x (\$250.00) /ea = \$2,500.00

Subtotal: \$8,580.94

Mobilization: Surfacing

Subtotal: \$0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Salt Creek Salvage Sale Date: 05/22/2025

Road Number	Const	Improv	Renov	Decomm	Temp
36-2E-11.00			24.29		
36-2E-2.02			21.65		
36-2E-3.01			173.71		
36-2E-3.04			8.98		
36-2E-3.05			4.75		
36-2E-3.06			6.34		
36-2E-7.00 A1			114.05		
36-2E-7.00 B1			26.4		
36-2E-7.00A2-A6			159.46		
Total Sta:			539.63		

200 Clearing and Grubbing	Clearing acres
36-2E-11.00	0.0
36-2E-2.02	0.0
36-2E-3.01	0.0
36-2E-3.04	0.0
36-2E-3.05	0.0
36-2E-3.06	0.0
36-2E-7.00 A1	0.0
36-2E-7.00 B1	0.0
36-2E-7.00A2-A6	0.0
Totals:	0.00

Remove stumps blocking road	36-2E-3.05	
RVM Grubbing		0.07 Acre
Roadside and landing area	36-2E-3.04	
RVM Grubbing		0.12 Acre
Roadside Unit	36-2E-3.01	
RVM Grubbing		0.47 Acre
Roadside Unit	36-2E-11.00	
RVM Grubbing12 Acre

300 Excavation	Excav LCY.s	Haul sta-yds	Haul yd-mi
Totals:	0	0	0

400 Drainage

Road Number	CMP Culvert	Polypipes	Downspouts
Total Drainage:			

	Totals:		No Quantities
Culvert Qty	Aluminized	Galvanized	Poly Pipe
12 inch	0 lf	0 lf	
18 inch	0 lf	0 lf	0 lf
24 inch	0 lf	0 lf	0 lf
30 inch	0 lf	0 lf	0 lf

Continuation of Construction Quantities

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	0 lf
30 inch			0 lf

500 Renovation	Blade Miles	Slide cy
36-2E-11.00	0.46	0
36-2E-2.02	0.41	0
36-2E-3.01	3.29	0
36-2E-3.04	0.17	0
36-2E-3.05	0.09	0
36-2E-3.06	0.12	0

Totals:	4.54	0
---------	------	---

BST Ditch Maintenance	36-2E-7.00A2-A6	
Blading Ditches		3.02 MI
BST Ditch Maintenance	36-2E-7.00 B1	
Blading Ditches		0.50 MI
BST Ditch Maintenance	36-2E-7.00 A1	
Blading Ditches		2.16 MI
Widening 36-2E-3.04		
Tractor: D7 with rippers		3 hr

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: Salt Ck Rd Stockpile
Commercial

	Roadway	Turnouts	Other
Totals:	0	0	0

1300 Geotextiles

Totals: No Quantities

1400 Slope Protection

Totals: 0 cy

Totals: 0

1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
Totals:	0.00	0.00	0.00

1900 Cattleguards

Continuation of Construction Quantities

Totals: No Quantities

2100 RoadSide Brushing	acres
36-2E-11.00 - Mechanical Brushing	0.7
36-2E-2.02 - Mechanical Brushing	0.6
36-2E-3.01 - Mechanical Brushing	4.8
36-2E-3.04 - Mechanical Brushing	0.3
36-2E-3.05 - Mechanical Brushing	0.1
36-2E-3.06 - Mechanical Brushing	0.3
36-2E-7.00 A1 - Mechanical Brushing	3.1
36-2E-7.00 B1 - Mechanical Brushing	0.7
36-2E-7.00A2-A6 - Mechanical Brushing	4.4

Totals: 14.99

2300 Engineering	stations
------------------	----------

Totals: 0.00

2400 Minor Concrete

Totals: No Quantities

2500 Gabions

Totals: No Quantities

8000 Miscellaneous

Totals: No Quantities

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sale: Salt Creek Salvage
Sale Date: 05/22/2025
Prep. By : F. Pardini
Tract No: ORM05-TS-2025.0003

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: \$150.00/2203 MBF = \$0.07/MBF

Road Maintenance Obligation:

(2.1) BLM Maintenance	\$0.00
(2.2) BLM Rockwear	\$0.00
(5.1) Purchaser Maintenance Rockwear	<u>\$2,928.00</u>
Total Rockwear Payable to BLM	\$2,928.00
(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)	<u>\$2,928.00</u>

Purchaser Maintenance Allowances:

(5.2A) Move In	\$1,425.06
(5.2B) Culverts, Catch Basins, Downspouts	\$752.45
(5.2C) Grading, Ditching	\$2,309.03
(5.2D) Slide Removal and Slump Repair	\$0.00
(5.2E) Dust Palliative (Water)	\$0.00
(5.2F) Surface Repair (Aggregate)	\$2,001.00
(5.2G) Other	\$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	<u>\$6,487.53</u>

(2.1-5.2G) Cost (\$2,928.00 + \$6,487.53) = \$9,415.53
Cost/MBF 9415.53 / 2203 MBF = \$4.27/MBF

(5.2H) Decommissioning \$1,240.16

(5.2H) Cost/MBF \$1,240.16/2203 MBF = \$0.56/MBF

(2.1-5.2H) Cost (\$2,928.00 + \$6,487.53 + \$1,240.16) = \$10,655.69

Total Cost/MBF (Excluding Road Use) \$10,655.69/2203 MBF = \$4.84/MBF

1) Road Use Fees - Amortization

Details

R/W		Rd Use	Vol	Road Use	
Number	Road Number	Fee x	MBF	=	Obligation
M-2000	36-2E-2.02	2.00	75		\$150.00

Subtotal by agreement number
M-2000 \$150.00

(1.1) Subtotal \$150.00

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

(2.1) Subtotal \$0.00 (2.2) Subtotal \$0.00

3) Third Party Maintenance and Rockwear

MAINTENANCE (3.1)					ROCKWEAR (3.2)				
Agrmnt	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 x (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
36-2E-3.01	A 3.29	x \$0.85	x 1033.8	= \$2,891.02
36-2E-7.00 A1	A 2.16	x \$0.00	x 2203	= \$0.00
36-2E-7.00A2-A6	A 3.02	x \$0.00	x 1169.2	= \$0.00
36-2E-7.00 B1	A 0.50	x \$0.00	x 75	= \$0.00
36-2E-11.00	A .46	x \$0.85	x 75	= \$29.33
36-2E-3.04	A .17	x \$0.00	x 91.6	= \$0.00
36-2E-3.05	A .09	x \$0.00	x 109.8	= \$0.00
36-2E-3.06	A .12	x \$0.85	x 75	= \$7.65
36-2E-2.02	A .41	x \$0.00	x 75	= \$0.00

(5.1) Subtotal \$2,928.00

Purchaser Operational Maintenance

Move In

No Move Cost/ Dist Sub-

Equipment	Units	x in	x 50 Mi	x Factor	= total
Motor Grader:	1	1	536	0.63	\$337.68
Back Hoe:	1	1	399	0.63	\$251.37
Loader:	1	1	536	0.63	\$337.68
Water Truck:	1	1	131	0.63	\$82.53
Dump Truck:	1	1	124	0.63	\$78.12
Excavator:			536	0.63	\$0.00
Roller:	1	1	536	0.63	\$337.68

(5.2A) Total \$1,425.06

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x	Cost/Mi	=	Subtotal
1.5		\$501.63		\$752.45

(5.2B) Total \$752.45

Grading (Includes Ditches and Shoulders)

Miles	x	Cost/Mi	x Freq	=	Subtotal
Blade w/ Ditch:	1.25		923.61	2	\$2,309.03
Blade w/o Ditch:	0.00		559.44	0	\$0.00

(5.2C) Total \$2,309.03

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	\$184.36	\$0.00
Loader:	0	0	\$114.30	\$0.00
Backhoe:	0	0	\$108.79	\$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: \$109.35/Hr. x 0.0 Hours = \$0.00

(5.2E) Total \$0.00

Surface Repair (Aggregate)

Quarry / Source Name:	Salt Ck Rd Stockpile		
Production Cost:	200.0 CY x \$0.00/CY	=	\$0.00
Haul to Stockpile:			
Grades > 15%	200.0 CY x ((\$2.43/CY x 0.00 Mi) + \$0.81)	=	\$0.00
Grades <= 15%	200.0 CY x ((\$1.21/CY x 0.00 Mi) + \$0.81)	=	\$0.00
State / Co Roads	200.0 CY x ((\$0.54/CY x 0.00 Mi) + \$0.81)	=	\$0.00
Load from Stockpile:	200.0 CY x \$1.35/CY	=	\$270.00

Haul from Stockpile:

Grades > 15%	200.0 CY x ((\$2.43/CY x 2.50 Mi)	= \$1,215.00
Grades <= 15%	200.0 CY x ((\$1.21/CY x 0.00 Mi)	= \$0.00
State / Co Roads	200.0 CY x ((\$0.54/CY x 0.00 Mi)	= \$0.00
Process with Grader:	200.0 CY x \$1.20/CY	= \$240.00
Compaction:	200.0 CY x \$1.38/CY	= \$276.00
	SubTotal	<u>\$2,001.00</u>

(5.2F) Total \$2,001.00

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
36-2E-3.04	(0x2.19)	+	(4x86.27)	+	(0x258.81)	= \$345.08
36-2E-3.05	(0x2.19)	+	(2x86.27)	+	(0x258.81)	= \$172.54

(Other Cost) Total \$517.62

Time & Equipment

36-2E-3.04 Camouflage Entrance:	1 EA @ \$142.79/EA	= \$142.79
36-2E-3.04 Seed and Mulch:	0.3 Acre @ \$929.70/Acre	= \$278.91
36-2E-3.05 Camouflage Entrance:	1 EA @ \$142.79/EA	= \$142.79
36-2E-3.05 Seed and Mulch:	0.17 Acre @ \$929.70/Acre	= \$158.05
(5.2H) Decommissioning Total	<u>\$1,240.16</u>	

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
SALT CREEK SALVAGE TIMBER SALE
TRACT NO. ORM05-TS-2025.0003

EXHIBIT C 1
SHEET 1 OF 1

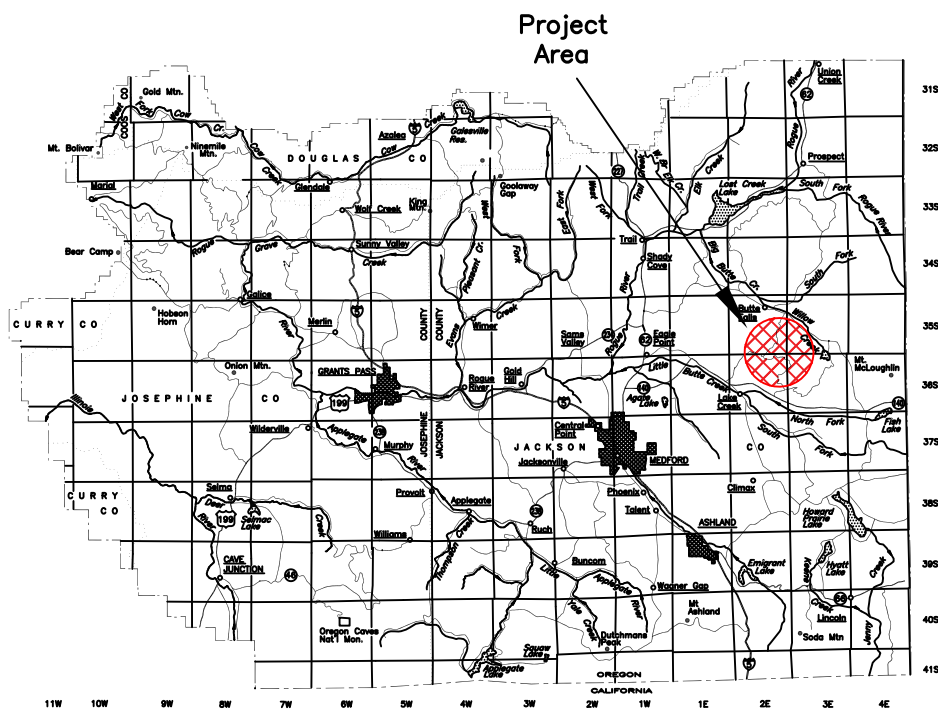
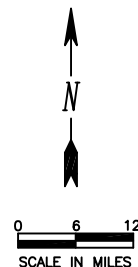


Exhibit No.	Description
C1	TITLE SHEET
C2	ROAD LOCATION MAP
C3	ESTIMATE OF QUANTITIES
C4	NOT APPLICABLE TO SALE
C5	TIMBER SALE ROAD SPECIFICATIONS
C6	ROAD RENOVATION WORKLIST
C7	SPECIAL PROVISIONS
C8	ROADSIDE BRUSHING AND RYM DETAILS
C9.1	DRAINAGE AND EROSION CONTROL
C9.2	TYPICAL ARMORED WATER DIP DETAILS
C10	TYPICAL ROAD DATA
C11	ROAD SURFACE AND CURVE WIDENING
C12.2	CULVERT BAND DETAIL
C12.3	CULVERT INSTALLATION DETAILS
C12.4	CULVERT DOWNSPOUTS

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
SALT CREEK SALVAGE TITLE SHEET			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN:	DWW	SCALE AS SHOWN	
DATE	MARCH 2025	SHEET 1 OF 1	
DRAWING NO.	ORM05-TS-2025.0003 C-1		



SALT CREEK SALVAGE

T.S.

ORM05-TS-2025.0003

ROAD WORK MAP

U.S.D.I. BLM MEDFORD DISTRICT

T.35S., R.2E., WILL. MER.

T.36S., R.2E., WILL. MER.

Legend

Road Work



Roads by S



Ownership



→ U

→ S

0

 $\frac{1}{4}$

Scale in Miles

SALT CREEK SALVAGE
T.S.

ORM05-TS-2025.0003

ROAD WORK MAP

U.S.D.I. BLM MEDFORD DISTRICT

T.35S., R.2E., WILL. MER.
T.36S., R.2E., WILL. MER.

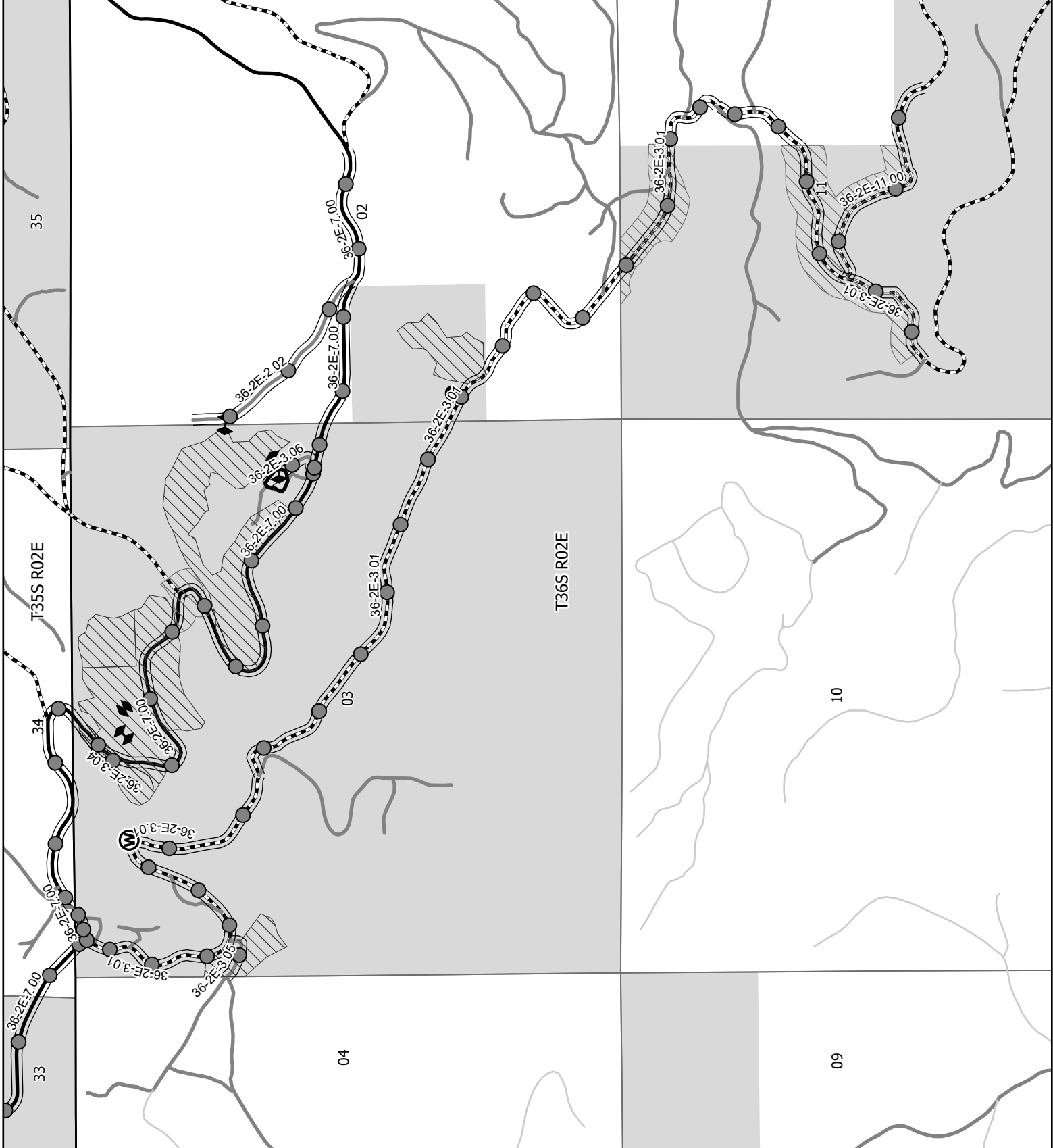
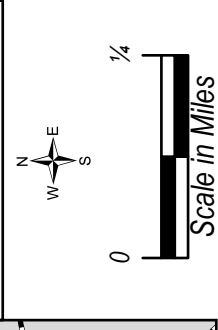
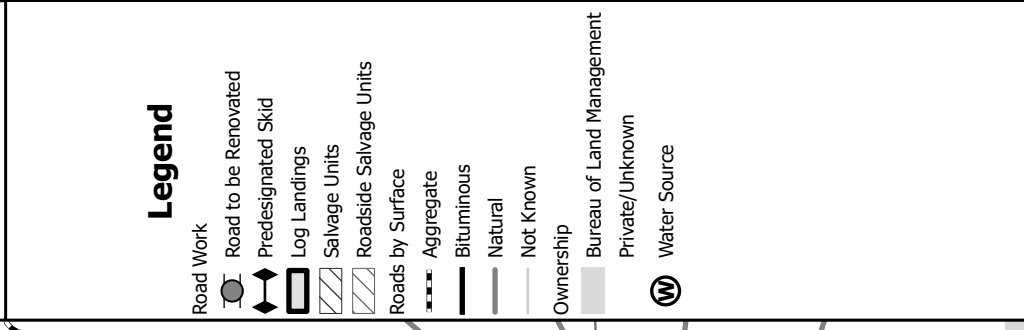


TABLE OF CONTENTS

SECTION	
100	General
200	Clearing and Grubbing
300	Excavation and Embankment
400	Pipe Culverts
500	Renovation and Improvement of Existing Roads
600	Watering
900	Aggregate Base Course - Screened Rock
1200	Aggregate Surface Course - Crushed Rock
1300	Geotextiles
1400	Slope Protection
1700	Erosion Control
1800	Soil Stabilization
1900	Cattle Guards and Bypass Gates
2100	Roadside Brushing
2200	Bituminous Surface Treatment

GENERAL – 100

101 - Prewrite Conference(s):

A prework conference will be held prior to the start of renovation, surfacing, and mulching operations.

The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representatives, subcontractors and/or their representatives and the Authorized Officer and/or their representatives.

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 subcontractors.

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 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.

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:

<u>AASHTO T 11</u>	Quantity of rock finer than No. 200 sieve.
<u>AASHTO T 27</u>	Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.
<u>AASHTO T 89</u>	Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.
<u>AASHTO T 90</u>	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.
<u>AASHTO T 96</u>	Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
<u>AASHTO T 99</u>	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.
<u>AASHTO T 119</u>	Slump of hydraulic cement concrete.
<u>AASHTO T 152</u>	Air content of freshly mixed concrete.
<u>AASHTO T 166</u>	Specific Gravity of compacted Bituminous Mixtures.
<u>AASHTO T 176</u>	Shows relative portions of fine dust or claylike materials in soil or

graded aggregate.

<u>AASHTO T 180</u>	(OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.
<u>AASHTO T 191</u>	<u>Sand Cone.</u> Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing ranging from 1-1/2-inch minus to 3-inch minus use 12-inch cone.
<u>AASHTO T 205</u>	<u>Rubber balloon.</u> Density of soil in place. Use for compacted or firmly bonded soil.
<u>AASHTO T 209</u>	Maximum Specific Gravity of Bituminous Paving Mixtures.
<u>AASHTO T 210</u>	Durability of aggregates based on resistance to produce fines.
<u>AASHTO T 224</u>	Correction for coarse particles in the soil.
<u>AASHTO T 238</u>	Density of Soil and Soil-Aggregate in place by nuclear methods.
<u>AASHTO T 248</u>	Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.
<u>ASTM D 4564</u>	Determination of relative density of cohesionless soils.
<u>DMSO (dimethyl sulfide)</u>	Determines volume of expanding clays in aggregates. Usually associated with marine basalts.

- 103 - Compaction equipment shall meet the following requirements:
- 103a - Padded Drum Rollers. The unit shall consist of a drum with pads, be either self propelled or towed by a tractor, and capable of operating at a speed of 6 mph. The drum shall be no less than 48 inches in diameter over the pads and no less than 60 inches in width. The pads shall have a minimum height of 3 inches, and a face area of no less than 14 square inches. The weight at drum shall be no less than 8000 lb.
- 103b - Sheepfoot 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 no 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 no 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 no less than 5-1/2 square inches or 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.

- 103c - Smooth-wheel power rollers. Smooth-wheel power rollers shall either be of the 3-wheel type, weighing no less than 10 tons, or of the tandem type, 2-wheel or 3-wheel, weighing no less than 8 tons. Smooth-wheel roller shall provide compression of 325 pounds per linear inch of width of rear wheels or drum.
- 103d - Pneumatic-tired rollers. Pneumatic-tired rollers shall be of the double-axle type equipped with pneumatic tires each of equal size and type. The spacing between the sidewalls of adjacent tires shall not exceed 5 inches and the rear tires shall be staggered in relation to the front tires. The rolling width of the unit shall be no less than 60 inches, exclusive of the power unit. The roller shall be so constructed that the contact pressure is uniformly distributed on all of the tires, and the tires shall be inflated to maintain the air pressure in the several tires within a total tolerance of 5 pounds per square inch. The roller shall be so constructed that the total weight shall be between 1,000 and 2,000 pounds per tire. The actual operating weight of the rollers shall be as ordered by the Authorized Officer.

Each pneumatic-tired roller shall be drawn by equipment having sufficient power and weight under normal working condition to pull the roller at a minimum speed of 5 miles per hour, or it may be self-propelled to obtain a minimum speed of 5 miles per hour.

- 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 no 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 no 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 no 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 no 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 no less than 48 inches, the drum width no less than 58 inches, and have a turning radius of no more than 15 feet. 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 respectively. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of no 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 no 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 no 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 no 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 and as staked on the ground.

- 202 - Where clearing limits have not been staked, established by these specifications, or shown on the plans, the limits shall extend 6 feet back of the top of the cut slope and 6 feet out from the toe of the fill slope.
- 202a - Where clearing limits for structures have not been staked or shown on the plans, the limits shall extend 6 feet out from the outside edge of the structure.
- 202b - Where clearing limits for borrow pits or quarries, stockpile sites, channel changes, and ditches have not been staked or shown on the plans, the limits shall extend 6 feet back of the top of the cut slope and 6 feet outside of the outside slope lines.
- 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.
- 203a - Brush under 1 foot in height need not be cut within the limits established for clearing.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.
- 203c - Disposal of logs from private timber cleared within the limits established as shown on the plans or as staked on the ground shall consist of decking at a location designated by the Authorized Officer.
- 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, 204d, and 204e 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. When authorized, stumps and other nonperishable objects may be left provided they do not extend more than 6 inches above the existing ground line.
- 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.

- 204e - Roots and embedded wood material shall be removed to a depth not less than 1 foot below embankment subgrades or slope surfaces.
- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections. Such debris will, however, be permitted to remain under waste material from full-bench construction on steep side slopes.

Road No.					
36-2E-3.01	2.17	2.44	0.27	Roadside Unit	Pile
36-2E-3.01	2.77	3.29	0.52	Roadside Unit	Pile
36-2E-3.04	0.00	0.17	0.17	ROW	Pile
36-2E-3.05	0.00	0.09	0.09	ROW	Pile
36-2E-11.00	0.00	0.33	0.33	Roadside Unit	Pile

- 206 - Clearing and grubbing debris shall be disposed of by burning in accordance with Subsection 207, and/or burying in accordance with Subsection 208, and/or chipping in accordance with Subsection 209 and/or scattering in accordance with Subsection 210, and/or piling in accordance with Subsection 211, and as shown on the plans.
- 206a - Notwithstanding Subsections 204, 204a, 204d, and 205, clearing and grubbing debris resulting from landing construction as shown on Exhibit A, shall be placed at disposal sites, and shall not be covered with excavated material. Location of disposal sites will be determined by the Authorized Officer.
- 207 - The Purchaser shall prepare a burning plan for the disposal of clearing and grubbing debris and clearing and grubbing debris within special areas as shown on the plans in accordance with local and state laws, rules, and regulations and complying with the requirements for burning operations as set forth under Subsections 207a, and 207b of these specifications. 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.

- 207b - The Purchaser may use a burning method of his own choosing which complies with the requirements of Subsection 207a and has the prior written approval of the Authorized Officer.
- 208 - Trees and limbs 4 inches in diameter and smaller, and rotten logs and similarly decomposed, degradable vegetation shall be broken down into pieces no larger than 4 inches in diameter and 3 feet in length and shall be distributed in thin layers throughout those embankment portions which are 3 feet or more below subgrade elevation. The debris shall be placed in a manner to prevent bunching or nesting and be clear of culvert pipe and structures.
- 208a - Clearing debris larger than 4 inches in diameter including stumps, firm logs, and other firm large pieces, that are not removed from the contract area by the Purchaser, shall be disposed of by burying in trenches or bury bays as designated by the Authorized Officer as shown on the plans between the outer edges of embankment slopes and the clearing limits. The trenches shall not be constructed beneath drainage ditches or in areas that will be subject to measurable amounts of free-flowing water. The debris shall be placed in layers with the stumps, logs, and large pieces distributed to avoid nesting. Each successive layer shall be covered with earth or other suitable embankment material by the land-fill methods so as to fill voids. The final surface shall be covered with a minimum of 2 feet of excavated earth or other approved embankment material.
- 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.
- 208c - Clearing debris shall be placed outside the roadway in a neat, compacted windrow laid approximately parallel and along the toe-line of embankment slopes. The top of the windrow shall not extend above the subgrade. Material in the windrow shall be matted down with construction equipment to form a compact and uniform pile. Windrows shall have 16-foot minimum breaks at least every 200 feet. Windrows shall not be placed against trees. A pioneer road may be constructed to provide an area for placement of windrows provided the excavated material is kept within the clearing limits and does not adversely affect the road construction.
- 209 - Clearing and grubbing debris shall be reduced to chips of an acceptable size and disposed of by scattering.
- 209a - Clearing and grubbing debris shall be reduced to chips having a maximum thickness of 2 inches and faces not exceeding 6 square inches on an individual surface. Chips will be used as a mulch and be produced and stockpiled at

locations that will not interfere with construction, and ultimately spread over designated portions of embankments and cut slopes in layers not to exceed 3 inches in loose thickness.

A chip blower approved by the Authorized Officer shall be used to apply the chips, and after placement of the chips, 50 pounds of available nitrogen per ton of chips shall be applied to the chipped areas.

- 210 - Disposal of clearing and grubbing debris, stumps, and cull logs shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.
- 210a - Disposal of clearing and grubbing debris, stumps, and cull logs on non-government property by scattering, burning, chipping, and 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.
- 210b - Clearing and grubbing debris, stumps, and cull logs resulting from road construction on non-Government property shall be loaded and hauled to designated areas, as shown on the plan. Disposal shall be by burning in accordance with Subsection 207, and/or burying in accordance with Subsection 208, and/or chipping in accordance with Subsection 209, and/or scattering in accordance with Subsection 210, and/or piling in accordance with Subsection 211.
- 211 - Disposal of clearing and grubbing debris, 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 and as marked on the ground with stakes or metal tags.
- 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 shown on the plans, as shown in these specifications, and 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, typical cross sections shown on the plans and as marked on the ground with stakes or metal tags.
- 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 no larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock no larger than 12 inches in the greatest dimension shall be placed in successive layers not exceeding 2 feet in thickness. Individual rocks and boulders greater than 12 inches in diameter may be used to construct 12-foot embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.
- 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, selected borrow, final subgrade, and selected roadway excavation material as specified under Subsections 305a, 305b, 317, and 317a 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 103a, 103b, 103c, 103d, 103e, 103f, 103g, 103h, and 103i.
- 306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be 1 hour of continuous compacting for each 150 cubic yards in place 4 stations of road and 6 passes over each full-width layer or fraction thereof.
- 306b - Compacted materials shall have a uniform density of no less than 85 percent of the maximum density as determined by a testing device calibrated by the incremental test method specified under Subsection 307.
- 306c - Compacted materials shall have a uniform density of no less than 85 percent of the maximum density as determined by AASHTO T 99, Method A or Method D.
- 306d - Compacted materials within 3 feet of the established subgrade elevation shall have a density in place of no less than 95 percent of maximum density, and below the 3-foot limit these materials shall have a density in place of no less than 90 percent of maximum density. Maximum density shall be determined by AASHTO T 99, Method A or Method D.
- 306e - The final subgrade including landings shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103a, 103b, 103c, 103d, 103e, 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. Landings shall be compacted by routing construction equipment over full width.
- 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.

- 307 - The Purchaser shall establish control sections as shown on the plans and/or determined by the Authorized Office on which the incremental measurements of compaction by a nuclear densometer, penetrometer or Clegg hammer can be made. No more than 3 sections will be required for the designated road and each section will not exceed 500 feet in length. Construction conditions under which the tests are conducted shall approximate normal construction conditions for the type of compaction work required in Subsection 306b. Compaction achieved on these control sections shall be used to establish calibration standards for the nuclear densometer, penetrometer, or Clegg hammer for the rest of the project.
- 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 no less than 1 foot and no more than 3 feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or blasting.
- 310 - Serrated cut slopes shall be constructed so that the final slope line shall consist of a series of steps. The step rise and tread dimensions shall be as shown on the plans.
- 310a - Steps are to be constructed on an approximately horizontal grade as determined by visual inspection. Construction on the first step shall begin immediately below the top of the cut. Each successive step shall be constructed in the opposite direction from the construction of the preceding one to minimize build up of loose excavated material at the ends of the cuts. Loose material at the end of the cuts shall be removed and the steps blended into the natural groundline. Where rock too hard to rip is encountered within a cut, steps shall be blended into the rock.
- 310b - Each step shall be completed before beginning the following one, except when permitted by the Authorized Officer; portions of steps may be constructed at the ends of cuts to accommodate general construction practices.
- 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, 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 and with Subsection 306.

- 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.
- 315 - Borrow material required for the construction of embankment or for other portions of the work shall be obtained from sources as shown on the plans.
- 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.
- 317a - Where indicated on the plans, the Purchaser shall conserve excavation material consisting of talus material, gravel, finely broken rock, or other material of granular or favorable characteristics for placement on the top portions of the roadbed as shown on the plans and as directed by the Authorized Officer.
- 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.
- 318a - Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed to a depth which, after compaction, will provide the depth

shown on the plans. Compaction shall be accomplished by routing construction and hauling equipment over the full width of the roadbed.

- 319 - Borrow pits shall be subject to the development, operation, and reclamation requirements set forth under Section 1600 of these specifications.
- 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.
- 321 - Excess excavated, unsuitable, or slide materials shall not be disposed of outside the constructed subgrade or on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsection 321a, 321b, and 321c. Materials not disposed of in this manner shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.
- 321a - Excess construction materials specified under Subsection 321 shall be loaded, hauled, and placed as embankment as shown on the plans for the roadbed.
- 321b - Excess construction material as specified under Subsection 321 shall be loaded, hauled, and disposed of at disposal sites as shown in the plans.
- 321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are not required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 322 - When so indicated on the plans, selected coarse rock encountered in the excavation shall be conserved for slope protection or special rock embankment purposes and placed in accordance with the requirements and details of section 1400 of these specifications and as shown on the plans.
- 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.
- 325 - Where shown on the plans, topsoil shall be conserved from areas of excavation or embankment. Topsoil shall consist of friable earth material which may include the natural or native sod and be reasonably free of undesirable subsoil, large roots, wood refuse, and coarse gravel or stones which might interfere with the sowing of

seed, growth of grasses, or subsequent maintenance of grass-covered areas. The removed topsoil shall be transported and deposited in stockpiles at locations shown on the plans.

- 326 - Conserved topsoil shall be uniformly spread and compacted over areas shown on the plans, and as staked on the ground, and as directed by the Authorized Officer.
- 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 and start of surfacing 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, pipe arch culverts, half rounds, flumes, perforated pipe culverts, downspouts, elbows, and other erosion control devices 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 from established construction stakes, upon completion of the roadbed, and upon installation of the appurtenance structures. Additional pipes and erosion control devices 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.
- 402 - The pipe culverts and pipe-arch culverts as shown on the plans, shall be installed in such a manner as not to impede fish passage. Installation shall conform to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 403 - Grade culverts shall have a gradient of 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.

- 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, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.
- 405 - Corrugated steel riveted and helical pipe culverts, pipe-arch culverts, and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 as specified on the plans.
- 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.
- 405b - Corrugated-aluminum-alloy pipe culverts and pipe-arch culverts shall conform to the requirements of AASHTO M 196.
- 405c - Corrugated-steel-structural plate pipe culverts and pipe-arch culverts shall conform to the requirements of AASHTO M 167, except that single plates may exceed 75 pounds in weight.
- 405d - Corrugated-aluminum-structural plate pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 219.
- 405e - Corrugated-polyethylene pipe for culverts 12-inch through 36-inch diameter shall meet the requirements of AASHTO M 294.

Corrugated-polyethylene pipe for culverts 42-inch through 60-inch diameter shall meet the requirements of AASHTO M 294-03, Type D or Type S.

Corrugated-polyethylene pipe for culverts to be used for downspouts 12-inch through 60-inch diameter shall meet the requirements of AASHTO M 294-03, Type C.

Installation will be subject to the same specification as other pipe materials.

- 405f - Ring gaskets for rigid pipe shall meet the requirements of AASHTO M 198. Continuous flat gaskets for flexible metal pipe shall meet the requirements of ASTM D 1056, with grade RE 41 used for bands with projections or flat bands, and grade RE 43 used for corrugated bands. When used with metal pipe with annular reformed ends, the ring gasket shall be one-fourth greater in diameter than the depth of the corrugation. Gasket thickness for bands with projections or flat

bands shall be 1/2 inch greater than the nominal depth of the corrugation and shall be 3/8 inch for corrugated bands. For pipe with flanged ends, a butyl-rubber-strip gasket shall be placed inside the channel band.

- 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 with helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of two annular corrugations.
- 406b - Coupling bands produced from flat galvanized steel sheets with impressed dimples will be permitted only for connecting annular corrugated steel pipe to helically corrugated steel pipe. Such coupling bands shall conform to the width requirements shown on the plans.
- 406c - Elbow sections used in conjunction with full-round pipe culvert downspouts shall be connected at both ends by "Hugger"-type bands, and "O"-ring neoprene gaskets shall be inserted between the band and pipe as shown on the plans to insure a water-tight joint.
- 406d - Pipe culverts and pipe-arch culverts shall be connected with "Hugger"-type, flanged-end, or annular coupling bands using sleeve gaskets, "O"-ring neoprene gaskets, or 1-inch neoprene flat gaskets as shown on the plans and/or as directed by the Authorized Officer.
- 406e - Bituminous coated bands or a full-size gasket shall be used to join aluminum pipe culvert to galvanized steel pipe culvert.
- 406f - Channel-type or flanged-end coupling bands may be used on helical pipe with reformed rolled ends and flanged specifically to receive these bands. Such coupling bands shall conform to the requirements shown on the plans.
- 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.
- 407a - Flumes and half rounds conforming to the material and construction requirements shall be constructed for culverts as shown on the plans and at the specified locations.

- 407b - Full round culvert downspouts conforming to the material and construction requirements shall be constructed for culverts as shown on the plans and at the specified locations.
- 407c - Flexible butyl-rubber, plastomate, nylon-vinyl fabric, and neoprene fabric sleeves conforming to the material and construction requirements shall be constructed for culverts as shown on the plans and at the specified locations.
- 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 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.
- 409 - Structural-plate pipe culverts and pipe-arch culverts shall be installed in accordance with the plans and detailed erection instructions furnished by the manufacturer. One copy of the erection instructions shall be submitted to the Authorized Officer 3 days prior to erection.
- 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 and/or pipe-arch culverts shall conform to the lines, grades, dimensions, and typical diagram included in the plans, and 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 selected granular or fine readily compactable soil material or crushed rock material in accordance with Section 1200 gradation (E-1).
- 413 - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular, crushed rock material in accordance with Section 1200 gradation (E-1), or fine readily compactable soil material having a depth of no 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.
- 414 - The invert grade of the bedding shall be cambered in accordance with the requirements and details shown on the plans and as directed by the Authorized Officer.

- 414a - The invert grade of the bedding shall be cambered at the middle ordinate a minimum of 1 percent of the total length of the drainage structure. Camber shall be developed on a parabolic curve.
- 415 - Inspection of pipe culverts having a diameter of 48 inches and pipe-arch culverts having a height of 40 inches or a cross-sectional area greater than or equal to 13 square feet shall be made before backfill is placed. Culverts found to be out of alignment or damaged shall be replaced, reinstalled, or repaired as directed by the Authorized Officer at the Purchaser's expense.
- 416 - Side-fill material for pipe culverts and pipe-arch 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 or crushed rock material in accordance with Section 1200 gradation (E-1), 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 - 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 and pipe-arch 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.
- 420 - Perforated pipe for underdrains shall be placed in accordance with plans and specifications. Pipe sections shall be securely joined together with perforations down. Inlets of underdrains shall be plugged, and outlets shall be covered with securely fastened fiberglass insect screens. Underdrain locations shall be identified with Culvert Markers.
- 421 - Trenches and bedding rock necessary for the installation of perforated pipe shall conform to the lines, grades, dimensions, and typical diagram as shown on the

plans.

- 422 - Drain rock shall be carefully placed on geotextile material required in section 1300, to prevent damage or displacement. A minimum 4-inch bedding of drain rock shall be placed and compacted in the bottom of the trench before installing the underdrain pipe. Underdrain pipe shall be firmly embedded in this layer and drain rock placed to the height shown on the plans, or as directed by the Authorized Officer, and then compacted. Care shall be taken not to displace the underdrain pipe or the covering at open joints. Geotextile material shall be overlapped on top of the drain rock a minimum of 1 foot, as shown on the plans. Backfill shall then be placed and compacted in 1 foot lifts to the required grades.
- 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.
- 423a - Culvert catch basins shall be excavated to a depth of 1 foot below the bottom of the existing culvert inlets.
- 424 - Construction of splash pads and energy dissipaters conforming to lines, grades, dimensions, and typical diagram shown on the plans, shall be required for grade culverts.
- 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.
- 426 - Culvert markers consisting of 2-inch by 1-inch by 2-foot treated wood posts shall be installed by the Purchaser at grade culverts 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 three 3 working days of completion of the culvert replacement work for each road prior to road acceptance.
- 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 than 10 percent 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, cleaning and repairing drainage structures of existing roads in accordance with these specifications, and as shown on the plans and as marked on the ground with stakes.
- 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.
- 503 - Debris from slides shall be disposed of as directed by the Authorized Officer.
- 503a - Debris from the slides shall be hauled to designated disposal sites or shall be used as embankment as shown on the plans and marked on the ground.
- 504 - Scarified material and existing road surface 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, and 103g, and 103i and in accordance with subsection 504a.
- 504a - Minimum compaction required shall be 1 hour of continuous rolling or tamping for each 3 stations of road, or 6 passes over each full-width layer, or fraction thereof, as measured along the centerline per layer of material.
- 504b - A uniform density of not less than 85 percent of the maximum density as determined by a nuclear testing device or penetrometer calibrated in accordance with Subsection 505 shall be attained.

- 504c - A uniform density of not less than 95 percent of the maximum density as determined by AASHTO T 99, Method A, C, or D.
- 505 - The Purchaser shall establish control sections of road as shown on the plans and as determined by the Authorized Officer on which the incremental measurements of compaction by a nuclear densometer or penetrometer can be made. No more than 3 sections will be required for the designated road. Sections will not exceed 500 feet in length. Construction conditions under which the tests are made shall approximate normal construction conditions for the type of compaction work required in Subsection 306 and 306a. Calibration of the nuclear densometer or penetrometer by this procedure shall constitute the basis for determining compliance with the density specified under Subsection 504b.
- 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 - New and existing drainage structures shall be placed and replaced 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 where the road crosses private property.

- 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 roadbed.
- 604 - Water required under these specifications shall be obtained at the time(s) and at the locations indicated below:

Willamette Meridian				Dates Available	
Common Name	Section	T	R	From	To
Upper Salt Creek	3	36S	02E	Jun. 15	Sept. 15

Use of the water source is subject to applicable State water regulations. In the event that the required water is not available at the location specified, water shall be obtained from a source approved by the Authorized Officer. A reduction shall be made in the total purchase price to reflect additional hauling distance based on rental rates from current BLM Timber Appraisal Cost Schedules.

- 605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of the water sources specified under Subsection 604 and for use of water sources selected by the Purchaser and approved by the Authorized Officer.
- 606 - The Purchaser shall construct pump chances and heliponds as shown in the plans and as directed 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 roadbeds and landings approved for placing screened rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.
- 902 - Screened rock materials used in this work shall be obtained from the sources shown on the plans. Development and mining of such sources shall be in accordance with Subsection 1601 and Subsection 1602.
- 902a - Screened rock materials to be used in this work may be obtained from the sources selected by the Purchaser, at his option, providing the rock materials furnished comply with these specifications and the sources 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)

Sieve Designation				
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 retained on the No. 4 sieve shall have a percentage of loss of no more than 35 at 500 revolutions 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 10 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.
- 909 - Screened rock material shall be compacted by routing construction and hauling equipment over the full width of each layer placed.
- 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 103a, 103b, 103c, 103e, 103f, 103g, 103h, and 103i. Minimum compaction shall be 1 hour or continuous compacting for each 150 cubic yards of screened rock material placed per layer or 6 passes over each full-width layer, or fraction thereof.
- 911 - The Purchaser shall place in stockpile screened rock material at sites shown on the plans. Such material shall be used as shown on the plans and as directed by the Authorized Officer. Crushed sandstone material stockpiled shall be placed on the designated roads prior to termination of the timber sale contract. This work is not required for road acceptance under Section 1800 of this contract.
- 912 - Acceptance tests will be made at the source from samples taken of screened rock materials being produced. Test data obtained by BLM from testing screened rock materials shall be made available to the Purchaser.

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

- 1201 - This work shall consist of furnishing, 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.
- 1202 - Crushed rock materials used in this work shall consist of quarry rock, stone, gravel, or other approved materials obtained from sources shown on the plans. Development and mining of such sources shall be in accordance with Subsection 1601 and Subsection 1602 of these specifications.
- 1202a - Crushed rock materials used in this work may be obtained from commercial sources selected by the Purchaser at his option and expense, providing the rock materials furnished comply with the specifications and providing laboratory tests performed by BLM of furnished rock samples in accordance with Subsection 1220 indicate compliance with the specifications in this section.
- 1203 - When crushed rock material is produced from gravel, no less than 6 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						
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

- 1204a - The Purchaser shall be required to take one sample for each 1,000 cubic yards of crushed rock material to be utilized, or a minimum of 1 sample per day, using AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures and also perform testing for sand equivalency requirements using AASHTO T 176 testing procedures. Prior to testing, each sample shall be split, making one half of the sample, with proper identification, available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within 24 hours of sampling. The Purchaser shall provide test results for the first 500 cubic yards produced prior to commencing production crushing and hauling.
- 1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of no more than 35 at 500 revolutions, as determined by AASHTO T 96.
- 1206 - Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T 210.
- 1206a - The crushed rock material shall show a loss of not more than 20 percent by weight, when submerged in DMSO for five days, according to Federal Highway

Administration Region 10 Accelerated Weathering Test Procedure.

- 1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of no more than 35 and a plasticity index of no less than 4 and no more than 12 as determined by AASHTO T 89 and AASHTO T 90.
- 1207a - That portion of crushed rock material passing No. 4 sieve, including blending filler, shall have a sand equivalent of not less than 35, as determined by AASHTO T 176, except where that portion exhibits a sand equivalence of less than 35, the aggregate will be accepted if it complies with the additional requirement as follows:

TABLE 1207a

Sand Equivalent	Percent Passing #200 Sieve AASHTO T 27
34	9
33	8
32	7
31	6
30	5
29 or less	4

- 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 shown on the plan and 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 and 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 10 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, landings, 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 unless approved by the Authorized Officer.
- 1211 - Crushed rock material shall be compacted by routing construction and hauling equipment over the full width of each layer placed.
- 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 103c, 103d, 103f, and 103h. Minimum compaction shall be 1 hour of continuous compacting for each 150 cubic yards of crushed rock material placed per layer for each 6 stations, or 6 passes over each full-width layer, or fraction thereof.
- 1213 - Each layer of crushed rock material placed, uniformly processed, and shaped as specified shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width until a uniform density of no less than 5 percent of the maximum density is attained as determined by a nuclear testing device calibrated by the incremental test method specified under Subsection 1214 95 percent of maximum density is attained as determined by AASHTO T 99, Method C or D.
- 1214 - The Purchaser shall establish control sections as shown on the plans and as directed by the Authorized Officer on which incremental measurements of compaction by a nuclear testing device can be made. Construction conditions under which the tests are conducted shall approximate normal construction conditions for the type of compaction work required. Calibration of the nuclear testing device by this procedure shall constitute the basis for determining compliance with the required density.
- 1215 - The Purchaser is authorized to remove crushed rock material from BLM stockpiles for placement on the roads in accordance with the requirements and

details shown on the plans. Additional crushed rock material required to complete the surfacing shall be furnished by the Purchaser in accordance with these specifications and as shown on the plans. The Purchaser shall maintain records of material removed from each of the stockpile sites designated above. These records shall be submitted to the Authorized Officer upon completion of the surfacing operation.

- 1216 - The Purchaser shall place in stockpile crushed rock material at sites shown on the plans. This work is not required for road acceptance under Section 1800 of this contract.

Such material shall be used to reinforce and repair areas of deficient support which appear during the hauling operation. Crushed rock material stockpiled shall be placed on the designated road prior to termination of the timber sale contract.

- 1217 - Prior to stockpiling Subsection 1204 crushed rock material, the stockpile sites shall be prepared by clearing and disposing of all trees, stumps, brush, and other debris in accordance with Section 200. The floor of each stockpile site shall be graded to a level and uniform cross section. A minimum of 1 foot of crushed rock material shall be placed and compacted on the entire floor area.

- 1218 - The equipment and methods used for stockpiling crushed rock material and for removing material from the stockpiles shall be such that minimum degradation or segregation of the material will result and that minimal amounts of foreign material will be incorporated into the crushed base material and that there will be no intermingling of stockpiled materials.

- 1219 - Upon completion of the work, stockpile sites designated on the plans as temporary shall be scarified as directed by the Authorized Officer, and mulched and seeded in accordance with Section 1800, and planted as directed by the Authorized Officer.

- 1219a - When shown on the plans, the access roads to the temporary stockpile sites shall be blocked, water-barred, scarified, mulched, seeded, and planted in accordance with Section 1800 and as directed by the Authorized Officer.

- 1220 - Crushed rock material required under Section 1200 of these specifications shall first be placed in stockpile after crushing. The Purchaser shall notify the Authorized Officer a minimum of 3 days in advance of the date he intends to commence the crushing and stockpiling operations so that progressive test samples can be taken as the crushed rock material is produced. Sampled materials shall remain in stockpile until such time the Authorized Officer receives test results which indicate compliance with Subsections 1203, 1204, 1205, 1206, 1207, and 1208. Crushed rock material so tested shall be approved in writing by

the Authorized Officer within 6 days from sampling date. Approved material may then be removed from stockpile for placement on the designated road. In no event shall the Purchaser place crushed rock materials on the road from sources other than the tested and approved stockpiles. Noncompliance with the requirements of this subsection shall constitute grounds for the rejection of all crushed rock materials furnished under this contract.

GEOTEXTILES – 1300

- 1301 - This work shall consist of furnishing, hauling, and installing geotextile material at the locations and in accordance with these specifications and the lines, grades, dimensions, and typical cross sections shown on the plans.
- 1302 - Use long-chain, synthetic polymers, composed of at least 95 percent by mass of polyolefins or polyesters, to manufacture geotextile or the threads used to sew geotextile.
- 1303 - Furnish to the Authorized Officer a commercial certification including the name of the manufacturer, product name, style number, chemical composition of the filaments or yarns, and other pertinent information to fully describe the geotextile.
- 1303a - Each roll of geotextile material shall be labeled to provide for identification of the material. Elevate and protect rolls with a waterproof cover if stored outdoors.
- 1303b - When using a geotextile for a permanent installation, limit material exposure to ultraviolet radiation to less than 10 days. Geotextile material deemed to have been overexposed to sunlight by the Authorized Officer shall be rejected.
- 1304 - Where a geotextile brush barrier is shown on the plans, the geotextile material shall be laid over the upper-slope face of the barrier. The bottom of the geotextile material shall be trenched into the existing ground a minimum of 6 inches. The top of the geotextile material shall be tied, stapled, nailed, or otherwise securely fastened to the side or top of the brush barrier. Intermediate attachments of the geotextile material shall be by suitable ties, staples, or nails. A 12-inch overlap of geotextile material for vertical and horizontal piercing shall be maintained. Care must be exercised in securing the geotextile material to the brush barrier to avoid puncturing by protruding limbs.
- 1305 - Where a geotextile silt fence is shown on the plans, the geotextile material shall be laid against the fence on the upper slope face. The bottom of the geotextile material shall be trenched into the existing ground a minimum of 6 inches. The top of the geotextile material shall be tied, stapled, nailed, or otherwise securely fastened to the side or top of the silt fence. Intermediate attachments of the geotextile material shall be by suitable ties, staples, or nails. A 12-inch overlap of

geotextile material for vertical and horizontal piercing shall be maintained. Care must be exercised in securing the geotextile material to the fence to avoid puncturing.

- 1306 - The geotextile material used to construct brush barriers and/or silt fences shall meet the following requirements:

TABLE 1306
Physical Requirements for Brush Barrier and Silt Fence

Property	Test Method ASTM	Units	Specifications		
			Type V-A	Type V-B ⁽²⁾	Type V-C ⁽³⁾
Grab Strength					
Machine Direction	D 4632	N	400	550	550
Cross Direction			400	450	450
Permittivity	D 4491	s ⁻¹	0.05	0.05	0.05
Apparent opening size	D 4751	mm	0.60 ⁽¹⁾	0.60 ⁽¹⁾	0.60 ⁽¹⁾
Ultraviolet stability	D 4355	%	70% after 500 hours of exposure		

(1) Maximum average roll value.

(2) Elongation at break \geq 50 percent elongation (ASTM D 4632).

(3) Elongation at break $<$ 50 percent elongation (ASTM D 4632).

- 1307 - Where subgrade reinforcement and material separation is required, clearing, grubbing, and excavation of the subgrade shall be completed prior to the placement of geotextile material. The subgrade shall be leveled and smoothed to remove lumps and depressions which exceed 6 inches in height and depth. Small pieces of woody debris shall be removed. Light vegetation—i.e., grasses, weeds, leaves, and other small woody debris—may be left in place.
- 1308 - The geotextile material shall be installed directly on the prepared surface. Place the geotextile smooth and free of tension, stress, or wrinkles. Fold or cut the geotextile to conform to curves. Overlap in the direction of construction. Overlap the geotextile a minimum of 2 feet at the ends and sides of adjoining sheets or sew the geotextile joints according to manufacturer's recommendations. Do not place longitudinal overlaps below anticipated wheel loads. Hold the geotextile in place with pins, staples, or piles of cover material.
- 1309 - End-dump the cover material onto the geotextile from the edge of the geotextile or from previously placed cover material. Do not operate equipment directly on the geotextile. Spread the end-dumped pile of cover material maintaining a minimum lift thickness of 4 inches. Compact the cover material with rubber-tired

or non-vibratory smooth drum rollers. Avoid sudden stops, starts, or turns of the construction equipment. Fill all ruts from construction equipment with additional cover material. Do not re-grade ruts with placement equipment.

- 1310 - Repair or replace all geotextile that is torn, punctured, or muddy. Remove the damaged area and place a patch of the same type of geotextile overlapping 3 feet beyond the damaged area.
- 1311 - Geotextile material used for subgrade reinforcement or material separation shall meet the following requirements:

TABLE 1311a
Physical Requirements for Separation Geotextile

Property	Test Method ASTM	Units	Specifications ⁽¹⁾		
			Type II-A	Type II-B	Type II-C
Grab strength	D 4632	N	1400/900	1100/700	800/500
Sewn seam strength	D 4632	N	1260/810	990/630	720/450
Tear strength	D 4533	N	500/350	400 ⁽³⁾ /250	300/180
Puncture strength	D 4833	N	500/350	400/250	300/180
Burst strength	D 3786	kPa	3500/1700	2700/1300	2100/950
Permittivity	D 4491	s ⁻¹	0.02	0.02	0.02
Apparent opening size	D 4751	mm	0.60 ⁽²⁾	0.60 ⁽²⁾	0.60 ⁽²⁾
Ultraviolet stability	D 4355	%	50% after 500 hours of exposure		

(1) The first values in a column apply to geotextiles that break at less than 50 percent elongation (ASTM D 4632). The second values in a column apply to geotextiles that break at greater than or equal to 50 percent elongation (ASTM D 4632).

(2) Maximum average roll value.

(3) The minimum average tear strength for woven monofilament geotextile is 245 N.

TABLE 1311b
Physical Requirements for Stabilization Geotextile

Property	Test Method ASTM	Units	Specifications ⁽¹⁾	
			Type III-A	Type III-B
Grab strength	D 4632	N	1400/900	1100/700
Sewn seam strength	D 4632	N	1260/810	990/630
Tear strength	D 4533	N	500/350	400 ⁽³⁾ /250
Puncture strength	D 4833	N	500/350	400/250
Burst strength	D 3786	kPa	3500/1700	2700/1300
Permittivity	D 4491	s ⁻¹	0.43	0.43
Apparent opening size	D 4751	mm	0.60 ⁽²⁾	0.60 ⁽²⁾
Ultraviolet stability	D 4355	%	50% after 500 hours of exposure	

(1) The first values in a column apply to geotextiles that break at less than 50 percent elongation (ASTM D 4632). The second values in a column apply to geotextiles that break at greater than or equal to 50 percent elongation (ASTM D 4632).

(2) Maximum average roll value.

(3) The minimum average tear strength for woven monofilament geotextile is 245 N.

- 1312 - Where geotextile material is specified as filter wrap for underdrains it shall be inert to commonly encountered chemicals, and resistant to mildew, rot, ultraviolet light exposure, insects, and rodents.
- 1313 - Trenches for underdrains shall be excavated to the dimensions and grades shown on the plans and adjusted to meet field conditions. Smooth the trench surfaces by removing all projections that may damage the geotextile. Minimum slope of trenches shall be 1 percent. The Authorized Officer shall have a minimum of 3 days notice in which to approve trenches prior to installation of the geotextile material, pipe, drain rock, or other backfill.
- 1314 - Geotextile material used as a filter shall be placed in a manner and at the locations shown on the plans. Place the long dimension of the geotextile parallel to the centerline of the trench. Position the geotextile, without stretching, in contact with the trench surface. Overlap the joints a minimum of 24 inches with the upstream geotextile placed over the downstream geotextile. Replace geotextile damaged during installation.

1315 - Geotextile materials used for subsurface drainage shall meet the following requirements:

TABLE 1315
Physical Requirements for Subsurface Drainage Geotextile

Property	Test Method ASTM	Units	Specifications ⁽¹⁾					
			Type I-A	Type I-B	Type I-C	Type I-D	Type-I-E	Type I-F
Grab strength	D 4632	N	1100/700	1100/700	1100/700	800/500	800/500	800/500
Sewn seam strength	D 4632	N	990/630	990/630	990/630	720/450	720/450	720/450
Tear strength	D 4533	N	400 ⁽³⁾ /250	400 ⁽³⁾ /250	400 ⁽³⁾ /250	300/175	300/175	300/175
Puncture strength	D 4833	N	400/250	400/250	400/250	300/175	300/175	300/175
Burst strength	D 3786	kPa	2750/1350	2750/1350	2750/1350	2100/950	2100/950	2100/950
Permittivity	D 4491	s ⁻¹	0.5	0.2	0.1	0.5	0.2	0.1
Apparent opening size	D 4751	mm	0.43 ⁽²⁾	0.25 ⁽²⁾	0.22 ⁽²⁾	0.43 ⁽²⁾	0.25 ⁽²⁾	0.22 ⁽²⁾
Ultraviolet stability	D 4355	%	50% after 500 hours of exposure					

- (1) The first values in a column apply to geotextiles that break at less than 50 percent elongation (ASTM D 4632). The second values in a column apply to geotextiles that break at greater than or equal to 50 percent elongation (ASTM D 4632).
- (2) Maximum average roll value.
- (3) The minimum average tear strength for woven monofilament geotextile is 245 N.

SLOPE PROTECTION - 1400

- 1401 - This work shall consist of furnishing, hauling, and placing stone materials for slope protection structures and rock blankets 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, blasted rock and coarse stone from roadway excavation of such quality that it will not disintegrate on exposure to water or weathering and shall be graded in accordance with these specifications.

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

- 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			
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 lbs/cu.ft.) and 85 percent of the cubic volume as calculated using the intermediate dimension.

1405a - Stone materials shall show a durability value of no less than 50 as determined by AASHTO T 210.

1405b Stone materials shall conform to a minimum apparent specific gravity of 2.50 and a maximum absorption of 4.2 percent as determined by AASHTO T 85.

- 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.
- 1406a - The embankment shall be placed in successive horizontal layers of sufficient depth to contain the maximum size rock present in the material. Spalls and finer fragments of stone other than specified in Subsection 1405 shall be used to chock the larger stones solidly in position and to fill voids between the major stones as laid in the embankment. The exposed face of the embankment shall be reasonably smooth and uniform; material shall be prevented from escaping beyond the toe of the structure.
- 1406b - Spaces in back of hand-laid embankment shall be filled with hand-tamped or rammed rock-spall material.
- 1407 - Determination of the acceptability of the slope protection material gradation will be through visual inspection and physical measurements by the Authorized Officer.
- 1408 - Trenches for slope protection structures shall be excavated to the lines, elevations, and typical diagram shown on the plans. They shall be of sufficient size to permit the placing of structure footing of the full widths and length shown. Trenches shall be approved by the Authorized Officer prior to placement of slope protection material.
- 1408a - Foundation trenches and other required excavation as shown on the plans shall be approved prior to placing the slope protection material.
- 1408b - The Purchaser shall excavate unsuitable roadway material as shown on the plans or directed by the Authorized Officer prior to the placement of the required rock blanket or structure.
- 1409 - Slope protection material shall be placed to form the cross sections shown on the plans. The face of the slope protection structure above the low-water line shall be uniform, free from humps, depressions, or large cavities.
- 1410 - The embankment slopes shall be protected or stabilized by placement of rock materials to form a slope-protection structure conforming to the construction requirements and details of these specifications.
- 1411 - Slope protection materials shall be placed on geotextile material conforming with requirements of Section 1300 for material separation and geotextile material repair.

QUARRY AND BORROW PIT DEVELOPMENT – 1600

- 1601 - This work shall consist of quarry and borrow pit development, and rehabilitation in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 1602 - The designated rock quarry and borrow pit sites shall be developed and mined in strict accordance with these specifications and the mining and reclamation plan shown on the plans. The Purchaser shall perform reclamation work in accordance with the requirements of Subsection 1617, as shown on the plans, and as directed by the Authorized Officer.
- 1602a - Use of sites on non-BLM ownership are subject to the terms and conditions of Rock Permits, and regulations as administered by the State of Oregon Department of Geology and Mineral Industries (DOGAMI) which may include, but are not limited to, the following requirements: payment of a royalty fee, obtaining liability insurance and performance bond, and compliance with rock quarry or borrow pit site development and reclamation plans.
- 1603 - If the Purchaser elects to use a rock source other than the designated source, the rock material produced shall comply with applicable sections of these specifications. If the alternate source is located on BLM ownership and a current BLM plan is not available, a development, mining, and reclamation plan shall be prepared by the Purchaser, and submitted for approval by the Authorized Officer. Development, mining, and reclamation work shall be in accordance with the approved plan and 1600 specifications.
- 1604 - If the designated source proves insufficient as to quantity and quality of the required rock material, the Purchaser shall, when ordered in writing by the Authorized Officer, move his operation to an alternate material source as shown on the plans and as selected by the Authorized Officer. Development, extraction, and reclamation work on the alternate source shall be in accordance with the mining and reclamation plans prepared by the BLM. An equitable adjustment will be made in the contract price.
- 1605 - Quarry access roads to designated or approved rock sources located on public lands and private lands under permit shall be constructed in accordance with the typical cross section and at the locations shown on the development, mining, and reclamation plans. Required road construction work, except surfacing, shall be approved by the Authorized Officer prior to the removal of road-embankment and/or surfacing materials.
- 1605a - Quarry access roads to the designated or approved rock sources located on public land and private lands under permit shall be constructed to the minimum

necessary for rock hauling operations, with adequate drainage facilities to minimize channeling and soil erosion. Required road construction, except surfacing, shall be completed prior to the removal of road embankment or surfacing materials.

- 1605b - Quarry access roads to the designated or approved rock sources located on public land shall be surfaced with 8 inches, compacted depth, of screened-rock material conforming to requirements of Section 900, or crushed rock material conforming to requirements of Section 1200, Gradation D.
- 1605c - The operation of equipment related to the production of rock aggregate and quarry operations shall be confined to the quarry operations area and to the designated tractor trails as shown on the plans.
- 1606 - Prior to removal of overburden from the quarry site, topsoil shall be removed and stockpiled. Stockpiles shall not be covered by overburden or waste materials, and will be readily accessible for final backfilling and grading. The location of stockpile sites shall be shown on the mining and reclamation plans. Topsoil stockpiles shall be seeded and mulched to minimize erosion.
- 1607 - Slash, stumps, logs, and other organic debris from quarry operations shall be piled and burned in accordance with the requirements of Subsection 207, 207a, and 207b.
- 1607b - Slash, stumps, logs, and other organic debris shall be piled or windrowed in the location shown on the plans so that it can be returned to the quarry floor at the termination of operations as directed by the Authorized Officer.
- 1608 - Overburden or reject material which does not conform to the requirements of Subsections 1005 and 1006, 1205 and 1206 shall be wasted as shown on the plans shall be stockpiled and used or reclamation backfill.
- 1609 - Overburden, trees, stumps, logs, and loose rock shall be removed back from the edge of working quarry faces for a minimum distance of 20 feet.
- 1609a - Overburden and/or reject material shall be removed back from the upper edge of the quarry for a distance equal to one-half of the working face or a minimum of 15 feet whichever is greater. Overburden shall be sloped no steeper than 1 to 1.
- 1609b - Overburden and reject mineral material shall be placed as a "screening berm" between the road and the quarry as shown on the plans or as directed by the Authorized Officer.
- 1609c - Overburden and reject material shall be graded level over the quarry floor, graded

level to construct a plant site, piled in orderly piles, or placed at the disposal sites shown on the plans, as directed by the Authorized Officer.

- 1610 - Waste disposal sites shall be selected and prepared to minimize erosion and establish conditions conducive to vegetative growth. Disposal areas shall be seeded, fertilized, and mulched in accordance with the requirements set forth in Section 1800 of these specifications.
- 1611 - The Purchaser shall notify the Authorized Officer in writing at least 7 days prior to commencing quarry operations.
- 1611a - The Purchaser shall not commence production drilling or crushing until the Authorized Officer has inspected and approved the site development in writing.
- 1612 - The Purchaser shall notify MSHA (Mining Safety and Health Administration) by standard form or telephone, and in accordance with part 56, Chapter 1 of Title 30 Code of Federal Regulations (CFR), of what date he intends to commence, terminate, and/or temporarily close down operations of the pit or quarry. Notice shall be submitted a minimum of 10 days prior to the proposed date of the action to be taken. Notification shall be submitted to:

Mining Safety and Health Administration
Albany, OR 97321
or
Mining Safety and Health Administration
Bellevue, WA 98004

The Purchaser shall also prepare and submit to MSHA the quarterly Employment Report and Injury and Illness Report for the mining operation.

- 1613 - The Purchaser shall comply with local and State Safety Codes covering quarrying operations, warning signs, seismic monitoring, and traffic control. All quarrying operations will be conducted by appropriately licensed personnel—i.e. blasting and powder handler's license, etc.
- 1613a - The Purchaser shall submit a written blasting plan or modification of the plan to the Authorized Officer for the Quarry, 7 working days prior to the start of drilling. The plan shall include: a) plan view of delay pattern; b) cross section of a typical loaded hole; c) types of explosives; d) powder factor; e) burden spacing, hole diameter, depth of holes, and depth of subdrill; and f) number of lifts. Acceptance of the blasting plan does not relieve the Purchaser of the liability or responsibility for the results of the blasting.
- 1613b - Controlled blasting techniques shall be employed during production blasting to

contain blasted rock. The quarry shall be shot in multiple lifts with no more than one-half of the total volume shot per lift.

- 1613 - The Purchaser shall submit to the Authorized Officer a blasting log showing "as built" data and a brief summary of the blasting results, within 10 days after blasting.
- 1614 - Rock materials extracted from the quarry walls shall be utilized or disposed of as shown on the plans. Secondary blasting or other methods shall be employed to reduce 75 percent of the quarried rock to a maximum 24 inches in any dimension.
- 1614a - Existing and oversized rock on the quarry floor shall be utilized before drilling and shooting new rock. Oversized boulders shall not be wasted but shall be broken and utilized concurrent with acceptable material.
- 1615 - Operations on the quarry site shall be so conducted that, both during and after completion of work, erosion will be minimized, and sediment will not enter streams or other bodies of water. Waste or disposal areas and quarry access roads shall be located, constructed, and maintained in a manner that will prevent sediment from entering live streams or other bodies of water. Noncombustible debris and silt-laden water material resulting from the quarry operations shall be placed in such waste or disposal areas as shown on the plans and directed by the Authorized Officer.
- 1616 - Upon completion of quarrying operations, overburden and waste materials shall be disposed of in accordance with requirements of the approved reclamation plan or in a manner approved in writing by the Authorized Officer.
- 1616a - Excavation retained for impoundment of water shall be shaped to provide safe access to water for persons, livestock, and wildlife, as shown on the plans and directed by the Authorized Officer.
- 1617 - Upon completion of quarrying operations, required site reclamation measures shall be performed to the satisfaction of the Authorized Officer, including but not limited to the following:
 - (a) Permanently seal or fill unused drill holes as directed by the Authorized Officer. Follow State of Oregon Department of Water Resources guidelines and requirements.
 - (b) Backfill pits and excavations with overburden and waste as directed by the Authorized Officer.
 - (c) Grade backfill material to the natural contour or desired landforms as directed by the Authorized Officer.
 - (d) Cover backfill material with previously stockpiled topsoil, performing

final grading to produce a surface favorable to revegetation.

(e) Backfilled areas shall be seeded, fertilized, and mulched in accordance with the requirements set forth in Section 1800 of these specifications.

(f) Quarry access roads shall be scarified, then seeded or planted, as directed by the Authorized Officer.

(g) Construct waterbars and take other erosion control measures as directed by the Authorized Officer.

(h) Remove blockages from drainage systems, streams, and waterways, and restore streams and waterways to their original courses. Follow State of Oregon guidelines and requirements.

(i) Erect barricades on quarry access roads as directed by the Authorized Officer.

(j) Complete required site-reclamation measures within 14 days after final cessation of quarrying operations.

(k) Clear quarry benches and scale wall of loose or dislodged shot material and move to a designated location within the quarry.

- 1618 - The Purchaser shall establish, and be responsible for, controlled pre-splitting and production blasting techniques. The purchaser shall furnish the Authorized Officer, prior to starting drilling operations on a test section, a pre-splitting and production blasting plan specifying drill hole diameter, drill hole spacing, depth of drilling, type of explosives to be used, loading pattern, sequence of firing, the location where the plan is to be used, and other relevant data. The pre-splitting, production, drilling, and blasting plan is for record purposes only and will not absolve the Purchaser of his responsibility for using proper drilling and blasting procedures.
- 1619 - Rock excavating using controlled blasting shall begin with a short test section of a length approved by the Authorized Officer. The test section shall be pre-split, production drilled, blasted, and sufficient material excavated whereby the Authorized Officer can determine if the Purchaser proposed methods will produce satisfactory results and slope within the following tolerances:
- A pre-split slope shall not deviate more than 6 inches from the front of the staked line nor more than 12 inches from the back of the staked slope line and shall be reasonably free of loose rock. Localized irregularities or surface variations outside the slope tolerances will be permitted, provided they do not constitute a safety hazard or an impairment to drainage courses or facilities.
- 1620 - Whenever the Purchaser's controlled blasting methods do not produce acceptable results, the Authorized Officer may require the Purchase to furnish a revised pre-splitting and production blasting plan to construct additional test sections prior to resuming full scale production.

- 1621 - Pre-split slopes constructed within the specified slope tolerance will be considered acceptably completed if in reasonably close conformity to the staked lines and slopes.

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, or 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.
- 1702 - The Purchaser shall construct dikes, dams, diversion channels, settling basins, and other erosion control structures located outside of the road right-of-way in accordance with the requirements and details shown on the plans and as directed by the Authorized Officer.
- 1703 - This work shall consist of furnishing and installing brush barriers or sediment fences in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans and as directed by the Authorized Officer.
- 1704 - The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800 and the Geotextile requirement of Section 1300.
- 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 after October 15 without prior approval by the Authorized Officer.
- 1706a - The Purchaser shall perform, during the same construction season, erosion control measures specified in the plans, on all exposed excavation, borrow, and embankment areas.
- 1707 - Completed and partially completed segments of roads carried over the winter and early spring periods shall be stabilized by seeding, fertilizing, and mulching in accordance with Section 1800.
- 1708 - Newly constructed or graded roads to be carried over the winter period, shall be

blocked to vehicular traffic or a protective lift of aggregate furnished under Sections 900 and 1200 shall be placed on the unsurfaced roadbed as directed by the Authorized Officer.

- 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.
- 1709 - The ditch on roads shown below and/ or listed in the plans shall be shaped and lined with aggregate furnished under Sections 900 and 1200 in accordance with the cross section and details shown on the plans and as directed by the Authorized Officer.
- 1711 - The Purchaser shall construct sedimentation pools, temporary berms, flexible downdrains, toe of slope ditches, brush barriers, sediment and check dams, catch basins, and energy dissipators for pipe culverts, and diversion channels 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 culverts and settling basins in accordance with the requirements and details as shown on the plans and directed by the Authorized Office.

SOIL STABILIZATION – 1800

- 1801 - This work shall consist of seeding, planting, fertilizing, and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is not required for road acceptance under Section 1800 of this contract.
- 1802 - Soil stabilization work consisting of seeding, planting, fertilizing, and mulching shall be performed on existing roads and designated locations in accordance with these specifications and as shown on the plans.

1802a - Soil stabilization work consisting of seeding, planting, fertilizing, and mulching shall be performed on new road construction, road renovation, improvements, landings, disturbed areas, borrow sites, disposal sites, and specials areas 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 15 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.

1805a - The Purchaser shall provide in writing compliance with seed mixtures requirements specified under Subsection 1805. Seed weight and seed mixture type shall be shown on the tag attached to each sack.

1805b - Seed shall be sacked in quantities proportional to the capacity of the Purchaser's slurry tank and the required rate of application as specified under Subsection 1811.

1806a - Additional soil stabilization work consisting of seeding, planting, fertilizing, 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 Subsections 1808a, 1808b, and 1808c 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.

- 1808b - Wood cellulose fiber shall have the property of dispersing readily in water and shall have no toxic effect when combined with seed or other materials. The homogeneous slurry or mixture shall be capable of application with power spray equipment. A green-colored dye which is non-injurious to plant growth shall be used. Processed wood cellulose fiber shall be packaged in new, labeled containers in an air dry condition.

The Purchaser shall furnish a sample and descriptive literature to the Authorized Officer for approval prior to application. Processed wood cellulose fiber furnished by the Purchaser which has become wet or otherwise damaged in transit or storage will not be accepted.

- 1808c - Wood chips shall be 1/8-inch nominal thickness, with 50 percent having an area of no less than 1 square inch, nor more than 6 square inches. Wood chip mulch material shall be free from leaves, twigs, shavings, bark, or materials injurious to plant growth.
- 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 0.47 acres designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806, a mixture of water, grass, legume seed, grass seed, fertilizer, and mulch material at the following rate of application:

b. Two Stage:

Grass Seed	20 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.

- 1812 - The Purchaser shall furnish and apply to the area designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806, a mixture of water, grass seed, fertilizer, and mulch material at the application rate to be determined by the Authorized Officer based on visual observation of trial

applications.

Mulches shall be spread/placed in treatment areas to a depth of 2 inches to allow seed germination or as directed by the Authorized Officer. Treatment area will be covered evenly and completely. Mulch can be broadcast onto the soil surface by hand or with hand/mechanical operated spreaders.

- 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, fertilizer, and mulch materials shall be placed by the hydraulic method in accordance with the requirements set forth in Subsection 1815a or dry method in accordance with the requirements set forth in Subsection 1815b.
- 1815a - Hydraulic Method - The seed, fertilizer, and mulch materials shall be mixed with water to form a slurry and then applied under pressure by hydroseeder. Where only seed and fertilizer are to be applied hydraulically, the mulch material and tackifier, if specified, may be applied after the seeding operation.

When processed wood cellulose or fiber mulch material is to be incorporated as an integral part of the slurry mix, it shall be added after the seed and fertilizer have been thoroughly mixed.

- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form. Fertilizer in dry form shall be spread separately at the rates set forth under these specifications and Subsection 1811.
- 1816 - Hydraulic equipment used for the application of slurry shall meet the following requirements:

The equipment shall have a built-in agitation system. The slurry distribution lines shall be large enough to prevent stoppage. Discharge line shall be equipped with a set of hydraulic spray nozzles which will provide even distribution of the slurry on the various slopes to be treated. The slurry tank shall have a minimum operation capacity of 1300 gallons and shall be mounted on a traveling unit which will place the slurry tank and spray nozzles within sufficient proximity to the areas to be treated so as to provide uniform distribution without waste. Lug- or track-type units are not authorized. The hydroseeder must be capable of spraying the slurry a minimum distance of 100 feet. The nozzle, mounted on a stand, must be capable of traversing 360 degrees on a horizontal plane and a minimum of 70 degrees on a vertical plane.

All equipment and tanks (internally and externally) shall be cleaned before entering BLM lands. Tanks shall be cleaned prior to mixing BLM seed mixes to avoid application of unwanted plant species.

- 1816a - Hydromulch slurry mixing shall be with water and seed first, followed by fertilizer, and finally fiber. The time between mixing and application shall not exceed 1 hour.
- 1816b - Hydroseeding shall be performed in two steps. Water, seed, and fertilizer as specified in Subsection 1811, shall be mixed with a wood fiber tracer and applied to the area specified. The second step shall include the application of water and processed wood fiber, also specified in Subsection 1811, to be applied on the same area within an hour.
- 1817 - At the beginning of each day's operation, a measured area will be seeded, fertilized, and mulched to assure uniform application.
- 1818 - The maximum distance to be seeded, fertilized, and mulched from the road centerline shall be 100 feet for the cut slopes and 150 feet for the fill slopes.
- 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.
- 1820 - When sprayed, the mix or slurry must overlap on the ground uniformly so that there will be no voids in the treated areas.
- 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.
- 1823 - Mix or slurry will not be applied above the upper edge of cut banks unless otherwise specified.
- 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.

CATTLE GUARDS AND BYPASS GATES - 1900

- 1901 - This work shall consist of furnishing, hauling, installing, and the construction of cattleguards, complete with foundations and bypass gates in accordance with these

specifications and conforming to the lines, grades, dimensions, and typical cross sections shown in the plans and as staked on the ground.

- 1902 - The Purchaser shall furnish and install steel cattleguard superstructures in accordance with Subsections 1902a, 1902b, and 1902c and as shown on the plans.
- 1902a - Cattleguard superstructures shall be constructed of structural steel conforming to ASTM A 36 specifications. Welds shall be secure and complete along both edges of cross pieces, at the frame joints, and shall conform to current specifications of the American Welding Society for Welded Highway and Railroad Bridges.
- 1902b - Cattleguard superstructures shall be given one shop coat of a low VOC alkyd primer 2-3 mils dry after fabrication is completed. Two field coats of foliage green low VOC alkyd 2-3 mils dry paint enamel shall be applied upon completion of fabrication.
- 1902c - The Purchaser may furnish, in lieu of Subsection 1902, commercial cattleguard superstructures, providing such structures are designed for and will support U80 loading, and are of steel and welded construction, and are the nominal overall dimensions shown on the plans.
- 1902d - Replaced cattleguard grids, foundations, by-pass gates and end wings shall be disposed of as directed by the Authorized Officer.
- 1903 - The Purchaser shall construct timber, concrete, or precast concrete cattleguard substructures conforming to the requirements and details shown on the plans, in accordance with these specifications and as staked on the ground.
- 1903a - Lumber used in the construction of timber substructures shall be Douglas-fir number 1 or better. Lumber shall conform to AASHTO M 168 and be pressure treated. Incise all wood and make all dimensional cuts and holes in the wood before pressure treatment with chromated copper arsenate according to AASHTO M 133.
- 1903b - Concrete construction of cattleguard substructures shall conform to the requirements of Section 2400, Concrete Structures, of these specifications.
- 1904 - The cattleguard structure shall be constructed at right angles to the roadway.
- 1905 - Excavation for cattleguard substructures shall be to the lines, grades, and dimensions shown on the plans.
- 1906 - Where subsurface solid rock is encountered, it shall be excavated 6 inches below final grade and backfilled with a compactable granular material approved by the Authorized Officer to the lines, grades, and dimensions shown on the plans and shall be hand- or pneumatically tamped to a uniform density satisfactory to the Authorized Officer.

- 1906a - When the foundation material is soft or otherwise unsuitable, it shall be removed to a depth of 24 inches and replaced with granular material that has been approved in writing by the Authorized Officer.
- 1907 - Cattleguard structures shall not be used for a minimum period of 21 days after placing of concrete has been completed.
- 1908 - Prior to casting any members for precast substructures, the Purchaser shall notify the Authorized Officer of plant location and availability of forms for inspection. Authorized Officer shall be allowed 72 hours in which to inspect forms, placement of reinforcing steel, and any other pertinent features of the precasting operation.

Precast units shall not be transported until flexural strength has reached a minimum strength of 500 psi, or until they have reached the age of 10 days if flexural strength tests are not made.

Upon completion of installation, precast units shall be free of structural cracks, chipped and spalled edges, and honeycombing. Precast units shall be placed in an equalizing bed of sand or other granular material approved by the Authorized Officer at least 4 inches thick and conforming to the grades shown on the plans.

- 1909 - Backfill material shall be placed around the foundation to the finished grade shown on the plans. Backfill material shall be readily compactable soil or granular material free of excess moisture, muck, frozen materials, roots, sod, or other deleterious materials and devoid of rocks or stones larger than gravel size. The backfill shall be placed in layers not to exceed 6 inches in thickness. Each layer of backfill shall be hand or pneumatically tamped to a uniform density satisfactory to the Authorized Officer.
- 1910 - The cattleguard superstructure shall be securely fastened to the fence as shown on the plans. Where necessary, the locations and spacing of the anchor bolts shall be adjusted from that shown on the plans to fit the particular cattleguard furnished.
- 1911 - It shall be the responsibility of the Purchaser to modify the dimensions of the substructure to coincide with the dimensions of the commercial cattleguard furnished. This requirement especially refers to curb height. Tolerances shown on the plans shall be complied with in constructing the substructure for the type of cattleguard furnished.
- 1912 - Cattleguard structures shall be constructed so that the deck surface is 2 inches higher than the finished roadbed and profile grade.
- 1912b - The cattleguard structures may be constructed so that the decks are at the same grade as the existing surface.

- 1913 - Drainage for cattleguard bases shall be provided during and after construction. If necessary for adequate drainage, the Purchaser shall construct approach channels to the base-end openings as shown on the plans and as directed by the Authorized Officer.
- 1914 - Prior to the installation of the cattleguard superstructure, the interior area of the base shall be cleared of construction debris and excavated materials to the satisfaction of the Authorized Officer.
- 1915 - Bypass gates shall be provided in conjunction with cattleguard structures where shown on the plans. Gate materials and construction shall conform to the requirements and details shown on the plans.

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 of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing shall be performed mechanically with self-powered, self-propelled equipment or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually or mechanically less than 8 inches in diameter when measured at diameter breast height (DBH) shall be cut to a maximum height of 2 inches 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 shoulders 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 in excess of 8 inches at DBH shall be limbed, 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 8 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 inch 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 in excess of 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.
- 2109 - Debris resulting from this operation shall be scattered or chipped downslope from the roadway as indicated on Exhibit C-3 (Estimate of Quantities) and Exhibit C-6 (Road Renovation Worklist). Debris shall not be allowed to accumulate in concentration. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

Road No.				
36-2E-2.02	0.00	0.41	0.41	Scatter
36-2E-3.01	0.00	3.29	3.29	Scatter
36-2E-3.04	0.00	0.17	0.17	Scatter
36-2E-3.05	0.00	0.09	0.09	Scatter
36-2E-3.06	0.00	0.12	0.12	Scatter
36-2E-7.00	0.00	5.68	5.68	Scatter
36-2E-11.00	0.00	0.46	0.46	Scatter

- 2110 - Vegetation 8 inches and smaller in diameter shall be chipped where indicated on Exhibit C-3 (Estimate of Quantities) and Exhibit C-6 (Road Renovation Worklist). Chips shall be scattered downslope from the runway. Vegetation over 8 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.

BITUMINOUS SURFACE TREATMENT - 2200

- 2201 - This work shall consist of furnishing and applying bituminous material and cover aggregate in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and as directed by the Authorized Officer. If so specified, the Purchaser shall furnish and apply blotter material conforming to the requirements of these specifications and as directed by the Authorized Officer.
- 2202 - Prior to the application of the specified bituminous material, the roadbed, aggregate surface course, and aggregate base course shall be shaped to the lines, grades, dimensions, and typical cross section(s) shown on the plans and compacted in accordance with Subsections 900 and 1200 of these specifications.
- 2203 - When so ordered by the Authorized Officer, a light application of water to improve penetration shall be made just before the application of the specified bituminous material.
- 2204 - The roadbed, aggregate surface course, and aggregate base course as shaped and compacted in accordance with these specifications shall be approved by the Authorized Officer in segments or in total prior to application of the specified bituminous material.
- The Purchaser shall furnish a written certification, signed by the vendor, of compliance with the bituminous material requirements specified under AASHTO M 82 for MC-250 and MC-800 AASHTO M 208 for CRS-2.
- Upon receipt of the certificate of compliance, the Authorized Officer will identify the date as having been received and approved by being so marked and dated.
- 2205 - The pressure distributor used to apply the specified bituminous material shall be designed, equipped, maintained, and operated such that bituminous material may be applied uniformly to the road surface at the required temperatures and rates. Standard commercial distributor equipment used shall include heaters, tachometer, pressure gauges, thermometer, and accurate volume measuring devices.
- 2206 - Blotter material and cover aggregate shall be spread by means of a self-propelled, pneumatic-tire mechanical spreader of a type and capacity satisfactory to the Authorized Officer.
- 2207 - Blotter material and cover aggregate shall be hard durable particles or fragments of crushed stone or crushed gravel conforming to the size and quality requirements for crushed aggregate as approved by the Authorized Officer.

- 2208 - If directed by the Authorized Officer, blotter material and cover aggregate shall be moistened to eliminate or reduce the dust coating of the materials. Moistening shall be done early enough prior to aggregate application to allow excess moisture to drain off.
- 2209 - Before the bituminous material is applied, sufficient cover aggregate to cover the planned section of asphalt treatment shall be in trucks on the roadway at the site of the work.
- 2210 - Building paper may be required on the surface for a sufficient distance back from the ends of each application so that the flow through the nozzles may be started and stopped on the paper and so that nozzles will show proper operation. Building paper as used shall be removed and disposed of after use in a manner satisfactory to the Authorized Officer.
- 2211 - During the application the surfaces of adjacent structures and trees shall be protected in such a manner as to prevent their being spattered or marred. No bituminous material shall be discharged into borrow pits, ditches, ponds, or streams.
- 2212 - The distributor, when not in use, shall be parked so that the spray bar will not drip bituminous materials on the surface of the traveled way.
- 2213 - The specified bituminous material shall be applied evenly over the entire width of road surface, including turnouts.
- 2214 - Application of bituminous surface treatments shall be made between May 1 and September 30 unless otherwise approved in writing by the Authorized Officer.
- 2214a - The Purchaser shall notify the Authorized Officer a minimum of 7 days in advance of application of required bituminous material.
- 2214b - The Purchaser shall prepare and submit to the Authorized Officer for his review and approval, an application schedule for bituminous treatment work required under this section. Such work shall be in accordance with the approved plan.
- 2214c - Required bituminous material shall be applied under the supervision of the Authorized Officer.
- 2215 - The Purchaser shall apply to the approved shaped and compacted aggregate surface and base courses MC-250 MC-800 liquid asphalt prime coat conforming to the material requirements of AASHTO M 82. MC-250 liquid asphalt shall be applied at a temperature of 165-200°F at a rate of 0.25-0.50 gallons per square

yard. MC-800 liquid asphalt shall be applied at a temperature of 200-250°F at a rate of 0.25-0.50 gallons per square yard. Additional asphaltic material shall be applied to areas of deficient treatment as directed by the Authorized Officer.

- 2215a - The specified prime coat shall be applied when the surface to be treated is dry or slightly damp, the atmospheric temperature is above 55°F and rising, or above 60°F if falling, and the weather is not foggy or rainy.
- 2215b - Upon completion of the prime coat treatment, the road shall be closed to all traffic for a minimum of 72 hours.
- 2215c - When necessary to provide for traffic on a new prime coat, blotter material consisting of 1/4-inch minus, 1/2-inch minus, or 3/4-inch minus shall be applied uniformly and immediately to the asphalt application at the rate of 25 to 40 pounds per square yard of road surface as directed by the Authorized Officer.

Areas of deficient blotter material shall have additional blotter material applied as directed by the Authorized Officer.
- 2215d - Blotter material for prime coat shall be broom-dragged and rolled by a pneumatic-tired roller conforming with Subsection 103c to the extent necessary to keep the treated surface smooth under traffic until the prime coat has been cured, the next asphalt surface treatment has been placed or approved by the Authorized Officer.
- 2216 - The Purchaser shall apply to the prime coat or existing asphalt surface MC-250, MC-800, or CRS-2 conforming to the material requirements of AASHTO M 82 for MC 250 or MC 800 and AASHTO M 208 for CRS-2. MC-250 liquid asphalt shall be applied at a temperature of 165-200°F at a rate of 0.30-0.50 gallons per square yard. MC-800 liquid asphalt shall be applied at a temperature of 200-250°F at a rate of 0.30-0.50 gallons per square yard. CRS-2 emulsified asphalt shall be applied at a temperature of 140-185°F at a rate of 0.40-0.65 gallons per square yard.
- 2217 - Cover aggregate consisting of 3/4-inch - 1/4-inch or 1/2-inch - 1/4-inch shall be uniformly applied immediately after application of bituminous material at a rate of 40-50 pounds per square yard or 25 to 35 pounds per square yard. Areas of deficient treatment shall have additional bituminous material and cover aggregate applied as directed by the Authorized Officer.
- 2218 - Cover aggregate shall be rolled by a pneumatic-tired roller conforming with Subsection 103c to the extent necessary to uniformly and thoroughly bond the cover aggregate over the full width. Complete rolling within one hour after the bituminous material is applied to the surface.

- 2219 - Lightly broom the aggregate surface on the morning after construction. Do not displace embedded material. Apply any additional applications of bituminous material and cover aggregate as directed by the Authorized Officer. After the last application of cover aggregate, monitor and maintain the surface for 4 days by distributing blotter according to Subsection 2215 to absorb any free bituminous material. Also repair any areas deficient in cover aggregate.

SALT CREEK SALVAGE TIMBER SALE

Road Renovation Worklist

Renovation: This consists of road work to be performed on the road prior to timber haul from sale units. This work includes, but is not limited to: clearing and grubbing, excavation for roads and landings, compacting, watering, blading and/or rolling the road surface, cleaning and/or constructing ditches where needed, cleaning and/or enlarging catch basins and outlets, cleaning the entire barrel of all culverts, maintaining and/or constructing water dips, spot rocking, road surfacing, seeding and mulching, constructing water bars, and constructing barricades. Remove all down trees from road surface, ditch lines, culvert catch basins, and within brushing limits.

Roadside Brushing: This work includes removing brush and non-merchantable trees along haul routes according to the dimensions specified in Exhibit C-8, prior to timber haul from sale units.

Removal of brush, and non-merchantable trees (conifers less than 8 inches DBH and all hardwoods), will be completed along all haul routes. Debris resulting from these activities shall be disposed of by lop and scatter, pile and burn, or chipping in accordance with Exhibit C-5 Section 205 and 2109.

Debris disposed of by lop and scatter shall not exceed 8 feet in length or be allowed to accumulate in concentrations but shall be further reduced or removed. Concentrations will be defined as any debris, limbs or branches touching each other or piled on top of each other or any material sticking up over 2 feet in elevation above the ground. Cut trees or debris shall not be allowed to stand or lean against other standing uncut trees or brush.

All stumps that may hinder road maintenance, including road/shoulder/ditch blading operations and snow plowing, shall be removed or ground to 6 inches below subgrade. Any damage to the road/shoulder/ditch resulting from these activities shall be repaired. Disturbed soil from these activities will be treated in accordance with Exhibit C-5 Section 1802a.

ASC – Aggregate Surface Course
AWD – Armored water dip
BRSH – Brushing
CHPN – Chipping
CMP – Corrugated Metal Pipe
CY – Cubic yards
DBH – Diameter at Breast Height
IMPR – Improvement

Jct. – Junction
NAT – Natural Surface
PRR – Pit Run Rock Surface
Pvt. – Private
RENO – Renovation
RVM – Roadside Vegetation Maintenance
SRFC – Surfacing
WB – Water bar

Existing Roads Renovation

Road 36-2E-2.02 NAT	
<u>Summary of work to be completed</u>	
Brushing	
Cross Drain Maint	
Ditch Maint	
Shaping	
Seed/Mulch	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-2E-7.00. Begin 36-2E-2.02. Begin BRSH and RENO.
0.05	Gate.
0.41	End BRSH and RENO.

<u>Road 36-2E-3.01 ASC</u>	
<u>Summary of work to be completed</u>	
Stump Removal	
Brushing	
Cross Drain Maint	
Ditch Maint	
Shaping	
Seed/Mulch	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-2E-7.00. Begin 36-2E-3.01. Begin BRSH and RENO.
0.02	Jct. un-numbered road (left).
0.09	Jct. un-numbered road (left).
0.30	Jct. 36-2E-3.05 (right).
0.36	Jct. un-numbered road (left).
0.47	Jct. un-numbered road (left).
0.56	Jct. un-numbered road and watersource: Upper Salt Creek pump chance (left).
0.61	BLM Mega Gate
0.88	Jct. 36-2E-3.02 (right).
1.79	Property boundary. Private.
2.17	Property boundary. BLM.
2.44	Property boundary. Private.
2.59	Jct. 36-2E-19.00 (right).
2.77	Property boundary. BLM.
3.05	Jct. 36-2E-11.00 (left).
3.29	Jct. un-numbered road (left). End BRSH and RENO.

Road 36-2E-3.04 NAT	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Stump Removal	
Brushing	
Shaping	
Seed/Mulch	
Barricade Inst	
Winterization	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-2E-7.00. Begin 36-2E-3.04. Begin BRSH and RENO. Begin widening road entrance from 12' to 15' subgrade.
0.17	End BRSH and RENO.

Road 36-2E-3.05 NAT	
<u>Summary of work to be completed</u>	
Stump Removal	
Brushing	
Cross Drain Maint	
Ditch Maint	
Shaping	
Seed/Mulch	
Winterization	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-2E-3.01. Begin 36-2E-3.05. Remove stumps barricading the road. Begin BRSH and RENO.
0.09	Property boundary. Private. End BRSH and RENO.

<u>Road 36-2E-3.06 ASC</u>	
<u>Summary of work to be completed</u>	
Brushing	
Cross Drain Maint	
Ditch Maint	
Shaping	
Seed/Mulch	
Winterization	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-2E-7.00. Begin 36-2E-3.06. Begin BRSH and RENO.
0.06	Jct. un-numbered road (left).
0.12	Jct. un-numbered road (left). End BRSH and RENO.

Road 36-2E-7.00 BST	
Summary of work to be completed	
Brushing	
Cross Drain Maint	
Ditch Maint	
Seed/Mulch	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-2E-7.01 (left). Begin 36-2E-7.00. Begin BRSH and RENO.
1.03	Property boundary, BLM.
1.16	Jct. 36-2E-7.01 (left).
1.77	Jct. un-numbered road (left).
2.16	Jct. 36-2E-33.00 (left).
3.25	Property boundary. Private.
3.37	Property boundary. BLM.
3.39	Jct. 36-2E-3.01 (right).
3.42	Jct. un-numbered road (right).
3.45	Property boundary. Private.
3.80	Jct. 35-2E-34.00 (left)
3.88	Property Boundary. BLM.
3.91	Jct. 36-2E-3.04
4.46	Jct. 35-2E-13.00.
5.09	Jct. un-numbered road (left).
5.10	Jct. 36-2E-3.06 (left.)
5.18	Property boundary. Private.
5.45	Jct. 36-2E-2.02 left.
5.68	Truck turn around. End Haul. End BRSH and RENO.

<u>Road 36-2E-11.00 ASC</u>	
<u>Summary of work to be completed</u>	
Stump Removal	
Brushing	
Cross Drain Maint	
Ditch Maint	
Shaping	
Seed/Mulch	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-2E-3.01. Begin 36-2E-11.00. Begin BRSH and RENO.
0.46	End BRSH and RENO.

SPECIAL PROVISIONS

1. 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 Contracting Officer, CO, prior to entering BLM lands. Provide 48 hours' notice of inspection to BLM prior to mobilization.

2. SOIL STABILIZATION

- All disturbed soil shall be seeded and mulched. Purchaser shall apply native grass seed and certified weed free straw mulch for soil stabilization operations. The Purchaser shall supply native seed and certified weed free straw. Native seed and certified weed free straw may be purchased from the BLM, if available.

3. DAMAGE

- The Purchaser shall protect and is responsible for any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements. Damage to utilities and 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, at least as good as the condition just prior to such damage.

4. DUST ABATEMENT

- The application of dust abatement materials such as Lignin, Mag-chloride, or approved petroleum based dust abatement products shall be restricted from application just after severely wet weather, at stream crossings 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.

5. WATER SOURCES

- For the purpose of maintenance and construction, the following water source is permitted for purchaser use: pump chance located on the north side of 36-2E-3.01 at M.P. 0.56. The purchaser shall keep a log recording of the water taken from the listed water source. Any other water sources shall be approved by the authorized officer. The Purchaser is responsible for obtaining water and associated rights and permits for any other water source.

6. PERMITS

- All permits required are the responsibility of the Purchaser.

7. CULVERT REMOVAL

- When removing culverts, unless constructing armored water dips, pull slopes back to the natural slope, or at least 2:1, to minimize sloughing, erosion, and the potential for the stream to undercut stream banks during periods of high stream flows. Remove excess sediment from the stream channels during culvert removal, replacement, and installation activities. Apply seed and mulch to all disturbed or exposed soils at each stream culvert removal site.

8. COMMERCIAL AGGREGATE

- If aggregate furnished for this work comes from a commercial source, then the aggregate shall be from an accredited weed free quarry or shall have been stockpiled in 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.

9. 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 time period. Seasonal restrictions for stream work and wildlife may still apply.
- Loose material cleaned from ditch lines and/or slide material shall not be sidecast or placed where it can enter wetlands, riparian reserves, floodplains, and waters of the State.

10. STREAMS

- All in-stream work shall be done from June 15 thru September 15 both days included.
- Construct silt fences 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 stream side of a culvert to the downstream side of the culvert.

11. TEMPORARY ROUTES

- All temp routes and native surfaced roads (that were previously closed before timber sale activities began) shall be winterized if access is needed over two dry seasons by October 15th. Winterization includes water barring, seeding, mulching, and barricading. All temp routes shall be ripped, water barred, barricaded, seeded, and mulched after use unless otherwise specified.
- Clearing, grubbing, and excavation activities of temporary spur routes shown on Exhibit C shall be performed in accordance with Exhibit C5, Section 200.
- Construction of temporary spur routes shall be to a subgrade width of 14 feet.
- All decommissioning shall be in accordance with Exhibit D-3 sections 3525 through 3526

12. PERMANENT ROADS

- All permanent roads shall be winterized if access is needed over two dry seasons by October 15th unless the road is surfaced. Winterization includes water barring, seeding, mulching, and barricading.
- All roads placed into long term storage will be camouflaged and/or barricaded as per Exhibit D-3 section 3520 through 3524.

13. ROADSIDE BRUSHING

- While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed.
- Use of Excavators and/or flailers 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.
- All bridges shall be brushed 8 horizontal feet from the outer most portion of the structure.

14. WET SEASON HAUL

- The purchaser may wet season haul, with the Authorized Officer's approval on the following roads: 36-2E-3.06 Seg A, 36-2E-7.00 SegA1-B1, 36-2E-3.01 Seg A-C, 36-2E-11.00. If the use of these roads during the wet season causes or begins to cause road damage or the transport of sediment into streams, the Authorized Officer may suspend wet season haul or require additional erosion control devices to prevent damage or off-site transportation of sediment. Additional rock may be required to repair any damage that occurs to the road during wet season haul.
- The Purchaser shall have the option to rock road numbers 36-2E-2.02, 36-2E-3.04, 36-2E-3.05, for wet weather haul. Purchaser option rocking depths will be determined and approved by the Authorized Officer. 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.

EXHIBIT C8
SHEET 1 OF 1

Cutting Limit = C + D + B + F

B = Road Bed Subgrade (includes turnouts). Cut all vegetation to max. height of 1".

*C = $\frac{6}{1}$ ft - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to max height of 6".

D = Centerline of ditch to inside shoulder. Cut all vegetation to max. height of 1".

*F = $\frac{6}{1}$ ft - Distance to be brushed on fill slope beyond outside shoulder. Cut all vegetation to max height of 6".

V = $\frac{14}{1}$ ft - Height of vertical cutting limit.

All distances shown are horizontal except for V.

NOTES:

Cutting and Removal of vegetation from ditches and roadway is incidental to brushing within cutting limits.

All merchantable roadside cut trees outside of timber sale units will be marked with blue paint. All merchantable roadside trees within timber sales units shall be cut unless painted orange or pink (reserve trees).

See Exhibit C-2 (Maps) and Exhibit C-6 (Road Renovation Worklist) for Roadside Vegetation Management locations.

* = Roads identified for Roadside Vegetation Management shall have all brush, and non-merchantable/merchantable trees 8" DBH or greater (except reserve trees), cut within the cutting limits.

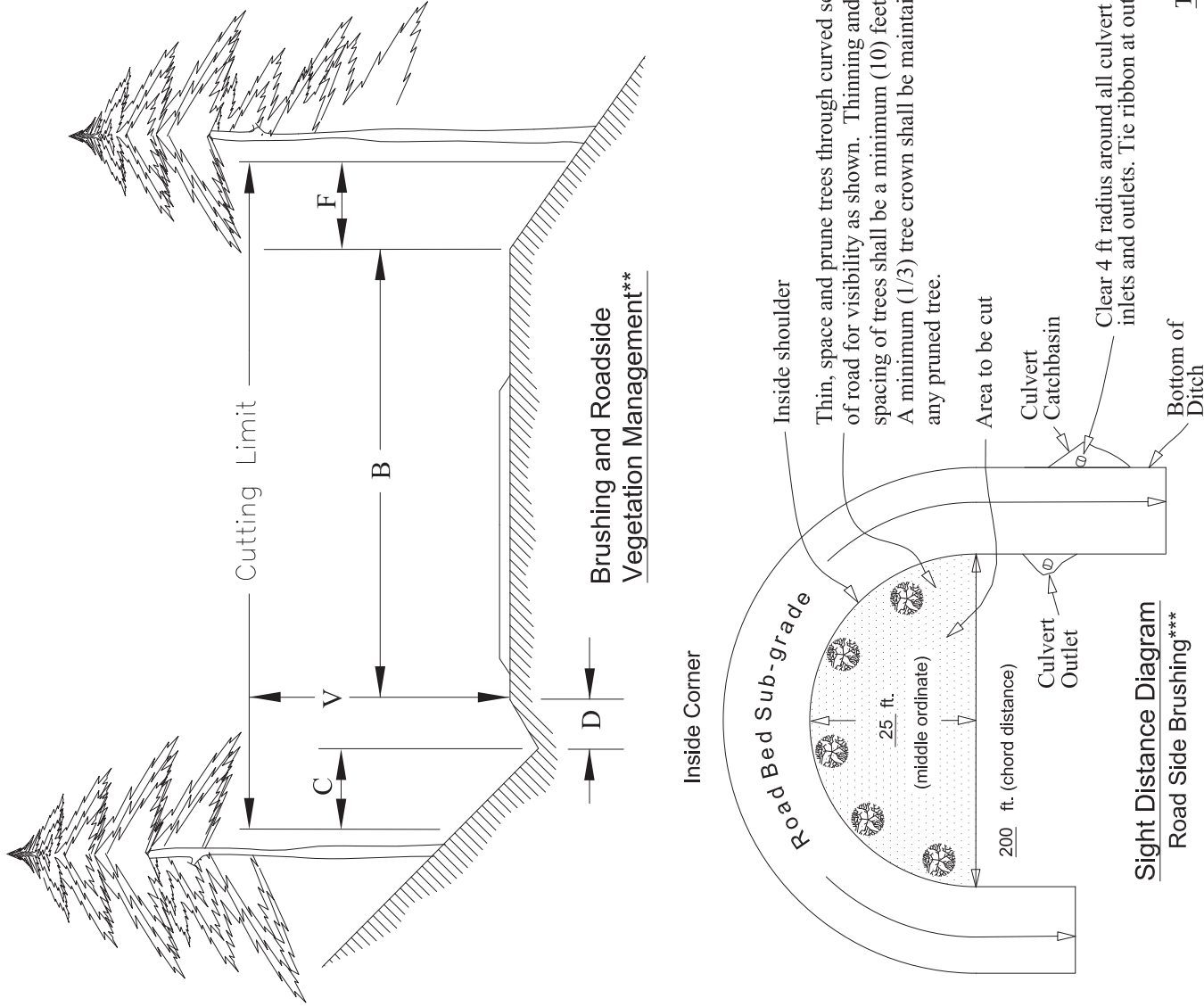
** = All stumps that may impede road maintenance equipment from properly maintaining the road and ditch line shall be grubbed or ground 6" below subgrade. Stump holes shall be filled (if needed) with suitable material and compacted.

*** = Excludes work for roadside vegetation management.

Typical Road Bed Subgrade widths

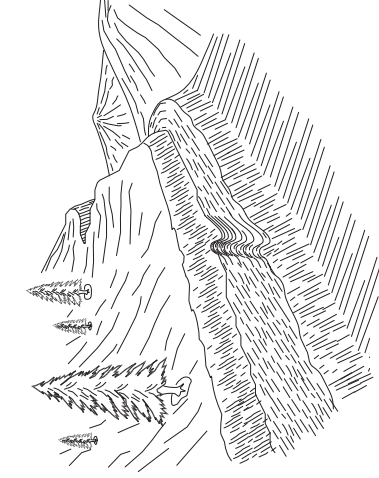
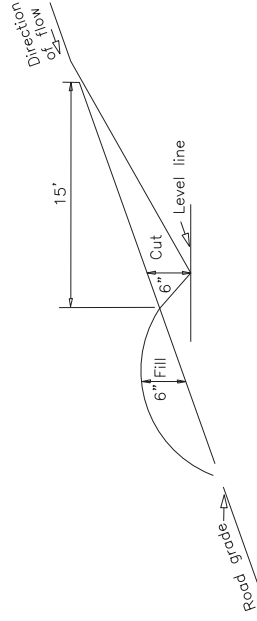
One lane low traffic volume 12 to 16 ft
One lane medium traffic volume . . 16 to 20 ft
Two lane high volume traffic 20 to 40 ft
Turnouts 10 ft

Sight Distance Diagram
Road Side Brushing***



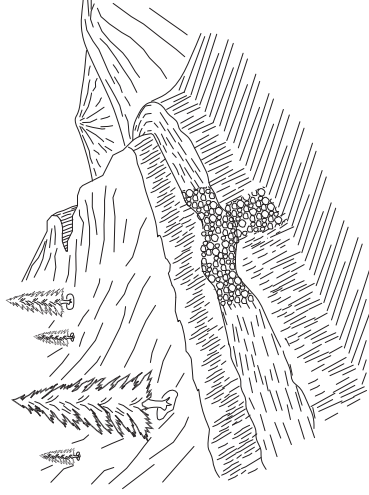
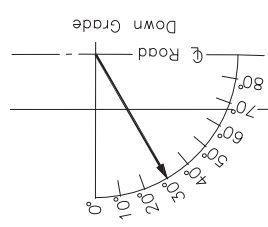
Clear 4 ft radius around all culvert inlets and outlets. Tie ribbon at outlet.

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
ROADSIDE BRUSHING AND ROADSIDE VEGETATION MANAGEMENT DETAILS			
DRAWN	JWR	SCALE	NONE
DATE	April 2022	SHEET	1 OF 1
DRAWING NO. ORM05-TS-2025-0003-C8			

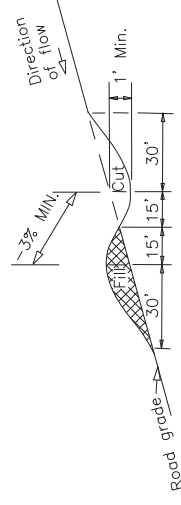
WATER_BAR

1. CROSS-DRAINS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL CROSS DRAINS SHALL BE SKEWED 30 DEGREES.
4. THE CROSS-DRAINS INVERT SHALL BE SMOOTH AND FREE DRAINING.

SKREW DIAGRAM



ARMORED WATER DIP



1. WATER DIPS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER DIPS SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE AND BE READILY CROSSED BY HIGH CLEARANCE TYPE VEHICLES.

REV.	NO.	DESCRIPTION	DATE	APPROV	
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT — MEDFORD, OREGON					
<i>DRAINAGE & EROSION CONTROL DETAILS</i>					
DRAWN	JAB	SCALE	NONE		
DATE	FEBRUARY	2023	SHEET	1	OF 1
DRAWING NO.	ORM05-TS—			-C9.1	





EXHIBIT C-9.2

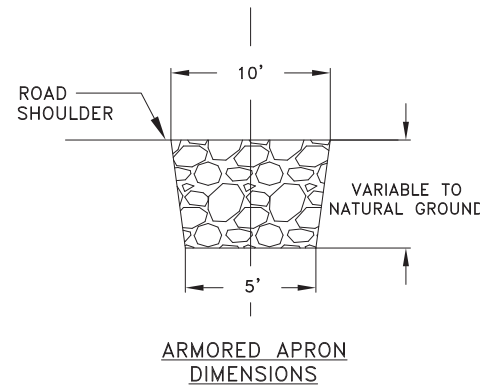
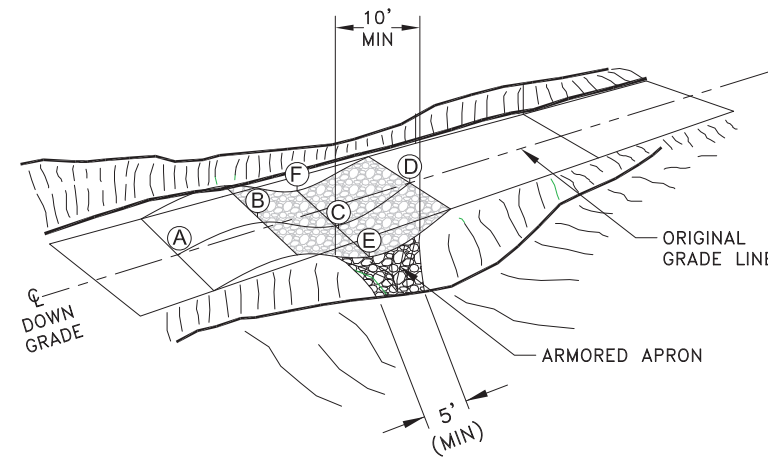
SHFFT 1 OF 1

NOTES

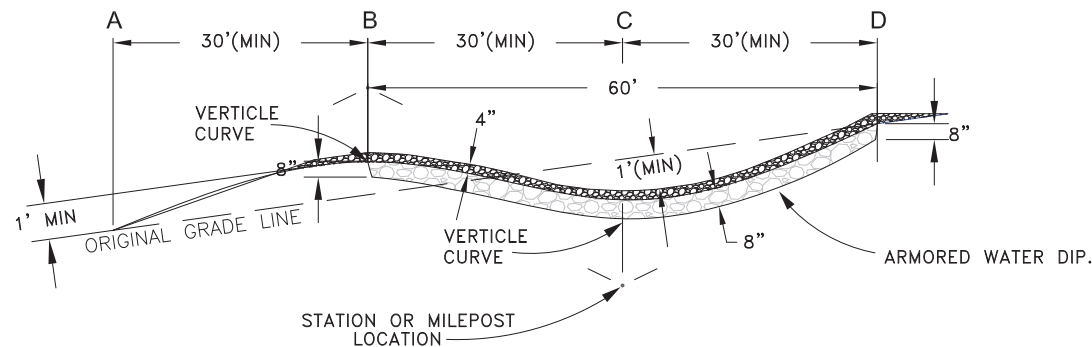
- 1) THE WATER DIP INVERT SHALL BE SMOOTH AND FREE DRAINING.
- 2) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE CUTSLOPE HINGE POINT IS 1.0 FEET.
- 3) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE FILLSLOPE SHOULDER IS 1.5 FEET.
- 4) SKEW DIP MINIMUM 15-30 DEGREES FROM PERPENDICULAR TO CENTERLINE.
- 5) EXCAVATED SOIL SHALL BE UTILIZED IN CONSTRUCTION OF WATER DIP. SIDECASTING OF VEGETATIVE MATTER IS PERMITTED.
- 6) 4" MINUS ROCK MATERIAL SHALL BE PLACED ON FILL SLOPE OF ARMORED WATERDIP.
- 7) SEE ROAD RENOVATION WORKLIST FOR WATER DIPS TO BE ARMORED.
- 8) EACH DIP SHALL BE REINFORCED WITH 40 CUBIC YARDS OF 4" MINUS ROCK, ON ROADWAY AND 4" MINUS ROCK AT OUTFALL.
- 9) EACH DIP ON EXISTING ROCKED ROADS SHALL BE SURFACED WITH 20 CUBIC YARDS OF 1-1/2" MINUS ROCK, EXTENDING AND TAPERING IN DEPTH 20' ON EACH SIDE OF THE AWD, TO MEET THE EXISTING ROAD SURFACE. NATURAL SURFACE ROADS WILL ONLY USE THE 4" MINUS AGGREGATE.

LEGEND

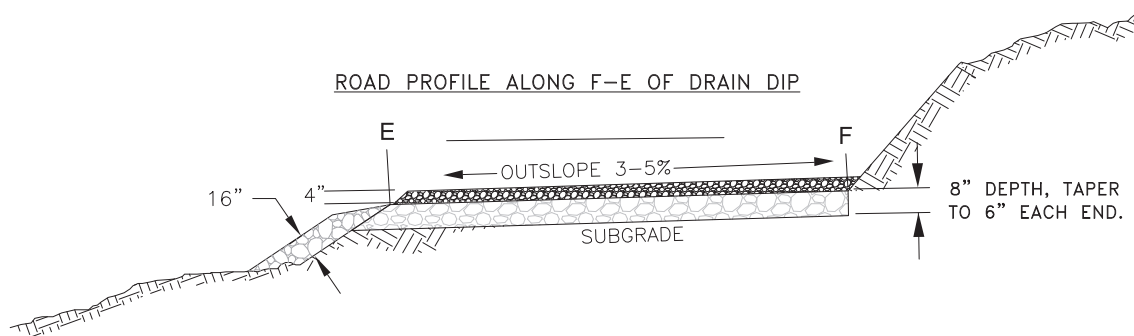
-  CUT/FILL SLOPES
-  SUBGRADE ARMOR MATERIAL (4 INCH MINUS)
-  FILL SLOPE ARMOR MATERIAL PIT RUN OR OTHER APPROVED MATERIAL.
-  SURFACE COURSE AGGREGATE (1-1/2" minus)



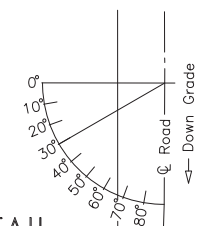
ROAD PROFILE ALONG A-B-C-D OF DRAIN DIP



ROAD PROFILE ALONG F-E OF DRAIN DIP



SKEW DIAGRAM



DRAWINGS NOT TO SCALE

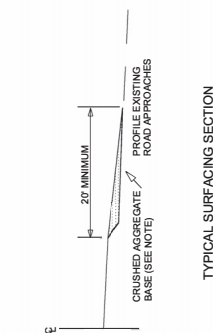
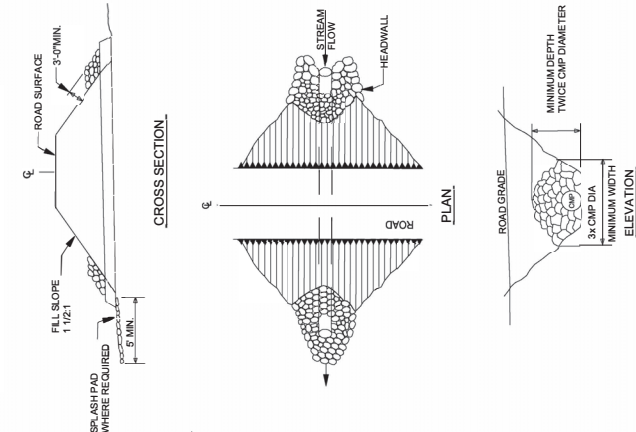
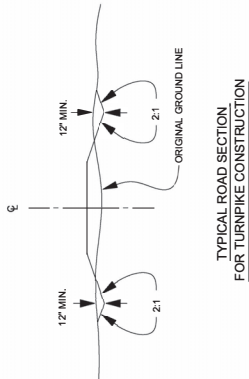
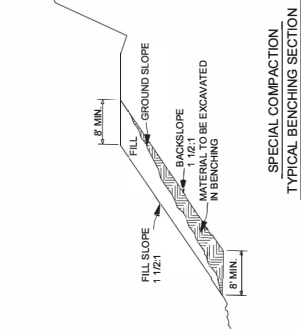
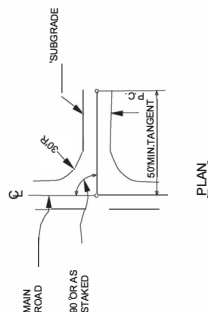
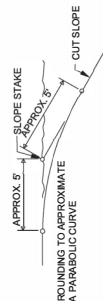
TYPICAL ARMORED WATER DIP CONSTRUCTION DETAIL

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

TYPICAL ARMORED WATER DIP CONSTRUCTION

DRAWN BY JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO. ORM05-TS-	-C9.2

EXHIBIT C-10
SHEET 1 OF 1

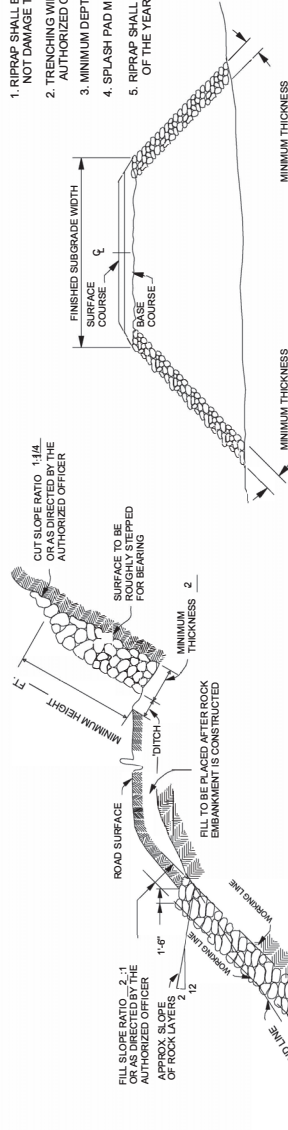


- NOTES:
1. THE PROFILE OF EXISTING APPROACH ROADS SHALL BE TAPERED TO MEET THE SHOULDER LINE OF THE MAIN ROADWAY AND SHALL BE FINISHED WITH A 2% GRADE.
 2. THE CRUSHED AGGREGATE BASE SHALL BE OF THE SAME GRADATION AS USED IN THE ADJACENT ROADBED.
 3. THE CRUSHED AGGREGATE SHALL BE FINISHED WITH THE SAME TREATMENT AS SHOWN FOR THE ADJACENT ROADBED.

NOTES:

RIPRAP AT CULVERTS

1. RIPRAP SHALL BE PLACED IN SUCH A MANNER THAT IT WILL NOT DAMAGE THE CULVERT.
2. TRENCHING WILL BE DONE AS REQUIRED BY THE AUTHORIZED OFFICER.
3. MINIMUM DEPTH OF SPLASH PADS SHALL BE 1 FT.
4. SPLASH PAD MINIMUM QUANTITY DESIGNATED IN WORK LIST.
5. RIPRAP SHALL BE PLACED BEFORE OCTOBER 15TH OF THE YEAR THE CMP IS INSTALLED.



ROCK BLANKETS AND STRUCTURE

SEE EXHIBIT C SECTION 1400

SLOPE PROTECTION ROCK

SEE EXHIBIT C SECTION 1400

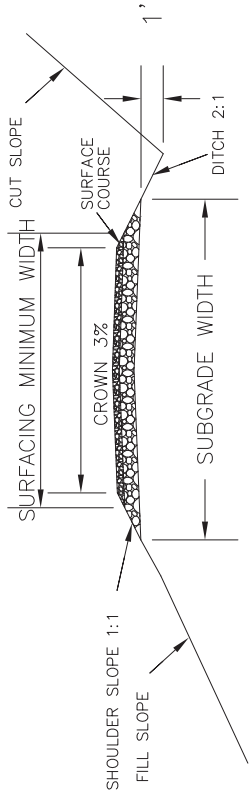
* AS SHOWN IN RENOVATION WORKLIST.

ALWAYS
THINK
SAFETY

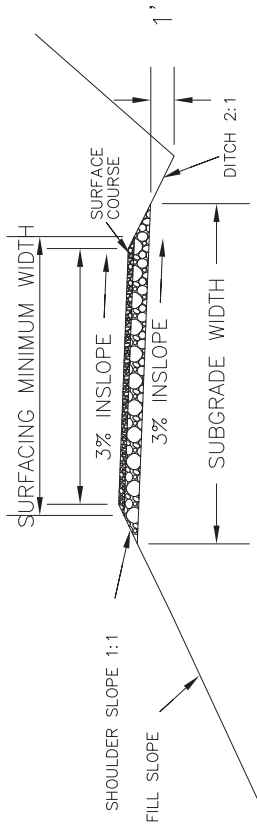
TYPICAL
ROAD DATA

REV. NO.	DESCRIPTION	DATE	APPROVED
1	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT MEDFORD, OREGON		
DRAWN JAB	SCALE	NONE	
DATE FEBRUARY 2023		SHEET 1 OF 1	

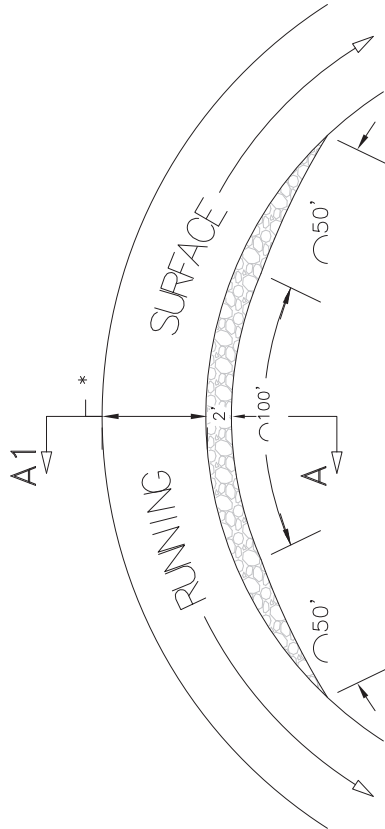
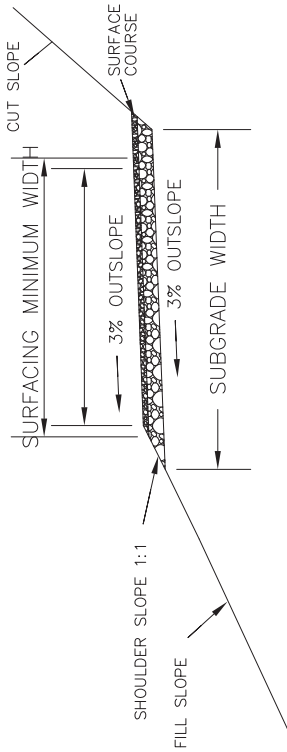
TYPICAL CROWNED SURFACE
EXISTING MIN. BASE COURSE WIDTH



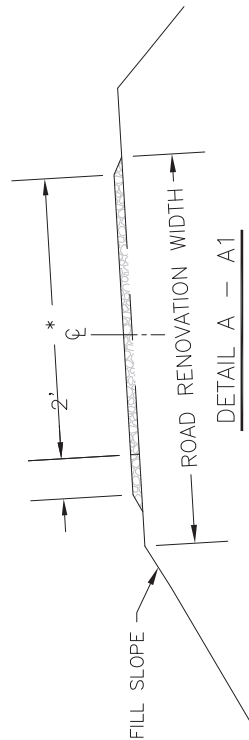
TYPICAL INSLOPED SURFACE
EXISTING MIN. BASE COURSE WIDTH



TYPICAL OUTSLOPED SURFACE
EXISTING MIN. BASE COURSE WIDTH



TYPICAL CURVE WIDENING DETAIL



DETAIL A - A1

NOTES:

- SURFACING SHALL BE THE COMPACTED DEPTH AS SPECIFIED IN THE WORKLIST.
- CURVE WIDENING SHALL BE SURFACED TO A LENGTH OF 100' WITH 50' TAPERS.
- APPLY THE WIDENING ON THE INSIDE OF THE CURVES THROUGHOUT THE RADIUS OF THE CORNER TO MATCH THE EXISTING ROAD TEMPLATE.
- MAINTAIN EXISTING CROSS SLOPE AT CURVES

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

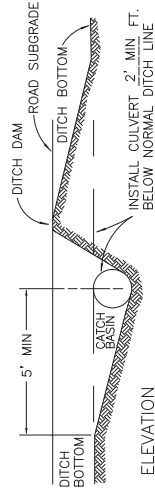
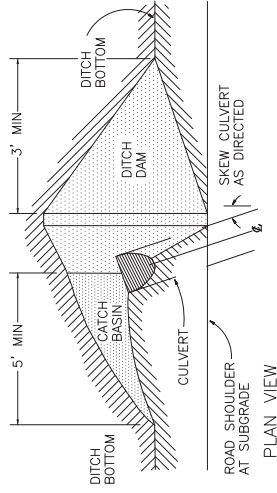
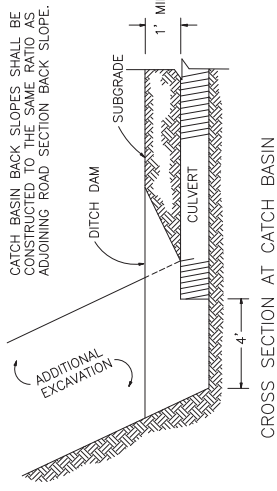
*ROAD SURFACING and
CURVE WIDENING SECTIONS*

DRAWN: JCM SCALE: AS SHOWN

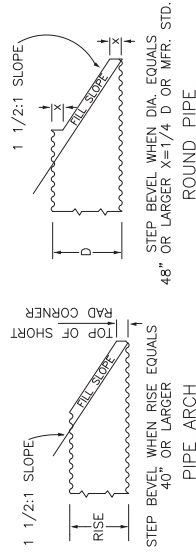
DATE: FEBRUARY 2023 SHEET 1 OF 1

DRAWING NO. ORM05-TS- -C11

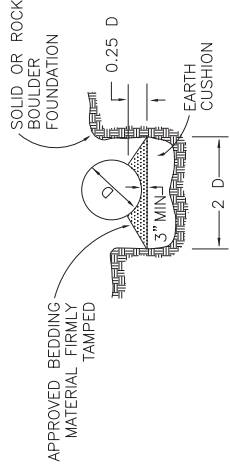
EXHIBIT C-12.3
SHEET 1 OF 1



CATCH BASIN



BEVELED END DETAIL



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" MIN. DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS AND THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERT IN SOLID
OR BOULDER FOUNDATION

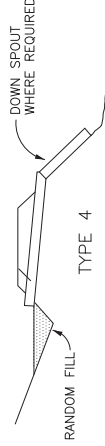
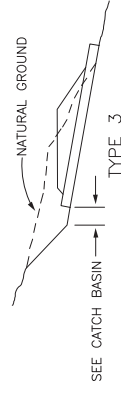
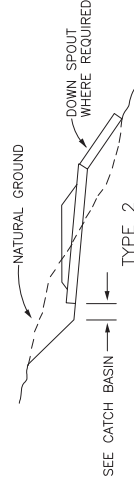
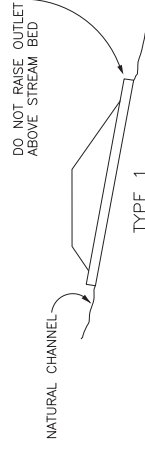
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

OR 2 D

BEDDING OF CULVERTS ON
SOFT SPONGY OR UNSTABLE
SOIL FOUNDATION

BEDDING OF CULVERTS

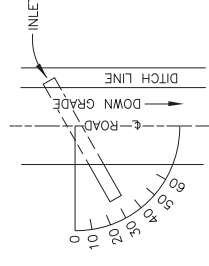


CULVERT INSTALLATION TYPES

NOTES:

- 1) DOWNSPOUTS SHALL BE CONNECTED TO CULVERT OUTLETS VIA TURNER STYLE CONNECTION (SEE DRAWING C-12.4).

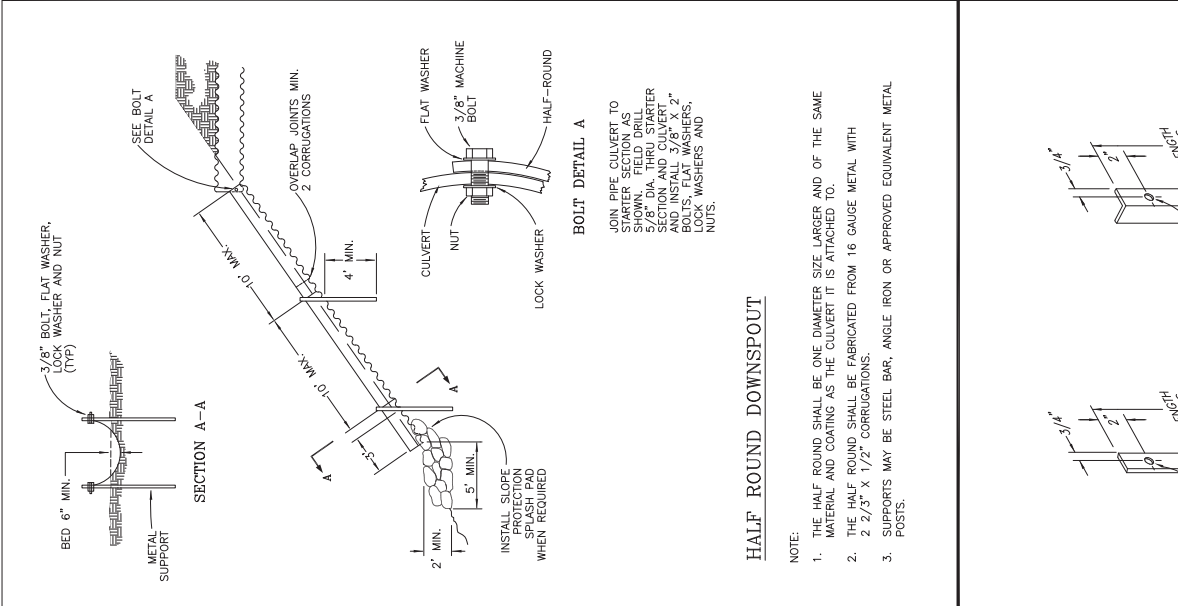
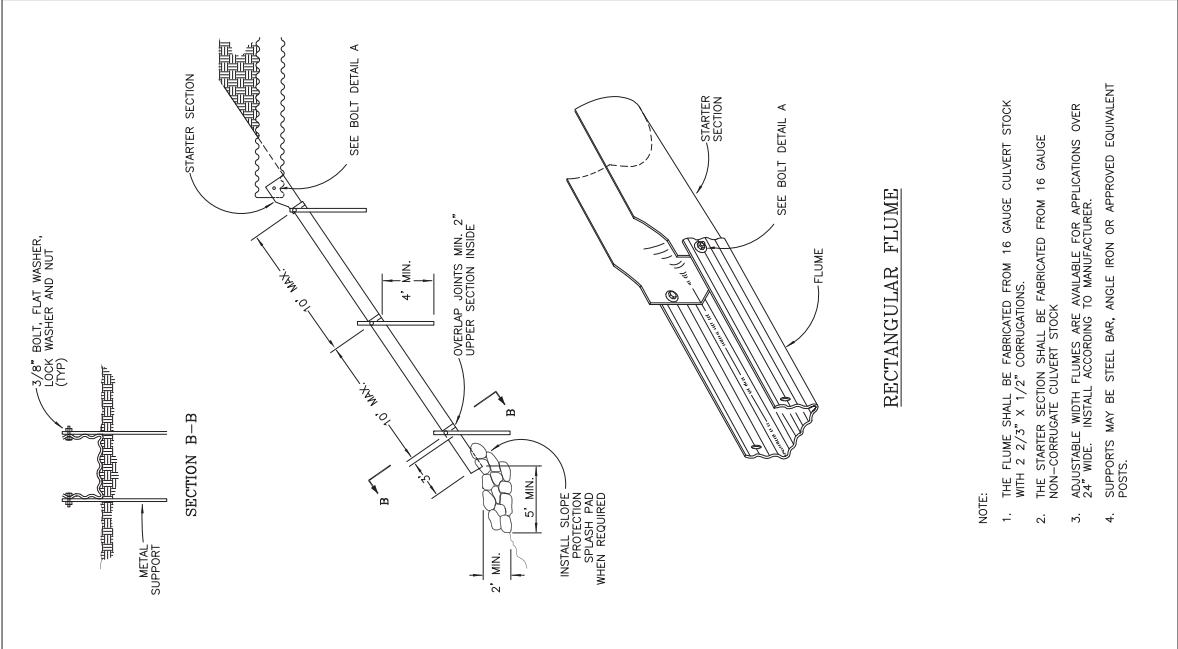
ALWAYS
THINK
SAFETY



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

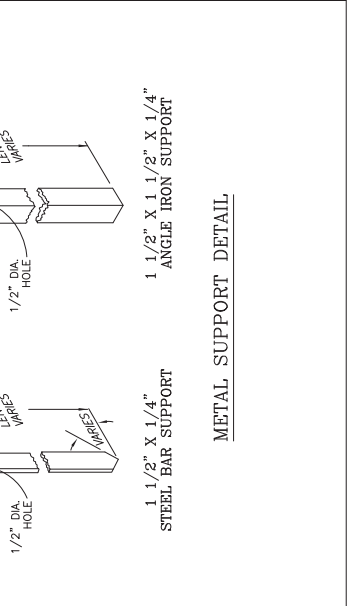
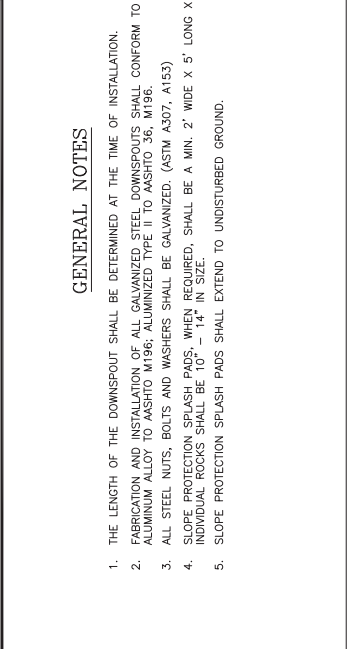
SKEW DIAGRAM

REV.	NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT — MEDFORD, OREGON				
<i>CULVERT INSTALLATION DETAILS</i>				
DRAWN	DKL		SHEET	NONE
DATE	FEBRUARY 2023		OF	1
DRAWING NO. ORM05-TS- -C12.3				



NOTE:

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.



NOTE:

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.

REV. NO.	DESCRIPTION	DATE	APPROV.
1	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		

DRAWN	DKL	SCALE	NONE
DATE	April 2022	SHEET	1 OF 1
DRAWING NO.	ORM05-TS-2025.0003-C12.4		

ALWAYS
THINK
SAFETY

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 M36, 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.
5. SLOPE PROTECTION SPLASH PADS SHALL EXTEND TO UNDISTURBED GROUND.

1 1/2" X 1 1/2" X 1/4" ANGLE IRON SUPPORT

1 1/2" X 1 1/4" STEEL BAR SUPPORT

METAL SUPPORT DETAIL

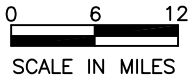
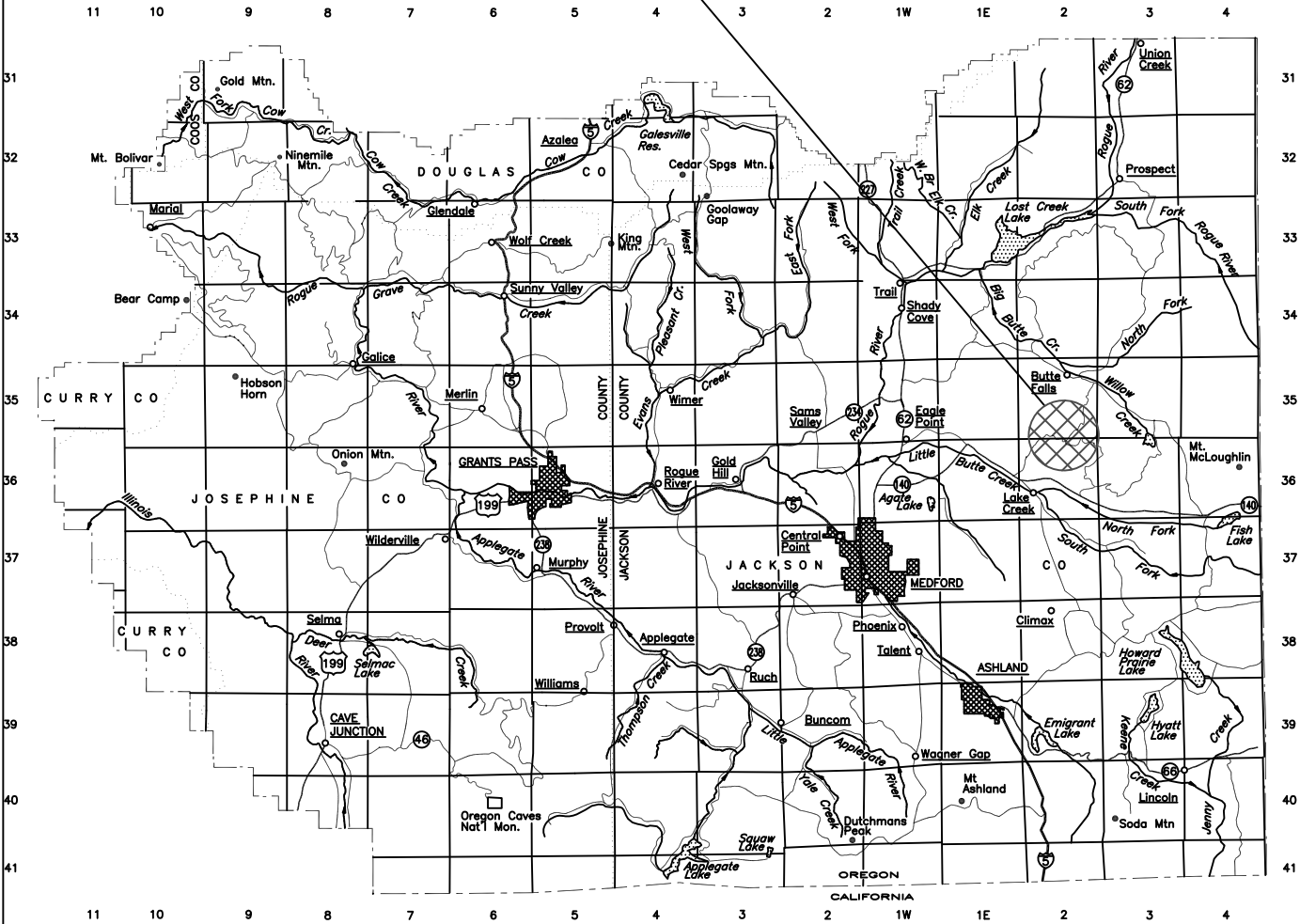
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT

SALT CREEK SALVAGE TIMBER SALE
TRACT NO. ORM05-TS-2025.0003

EXHIBIT D-1
SHEET 1 OF 1

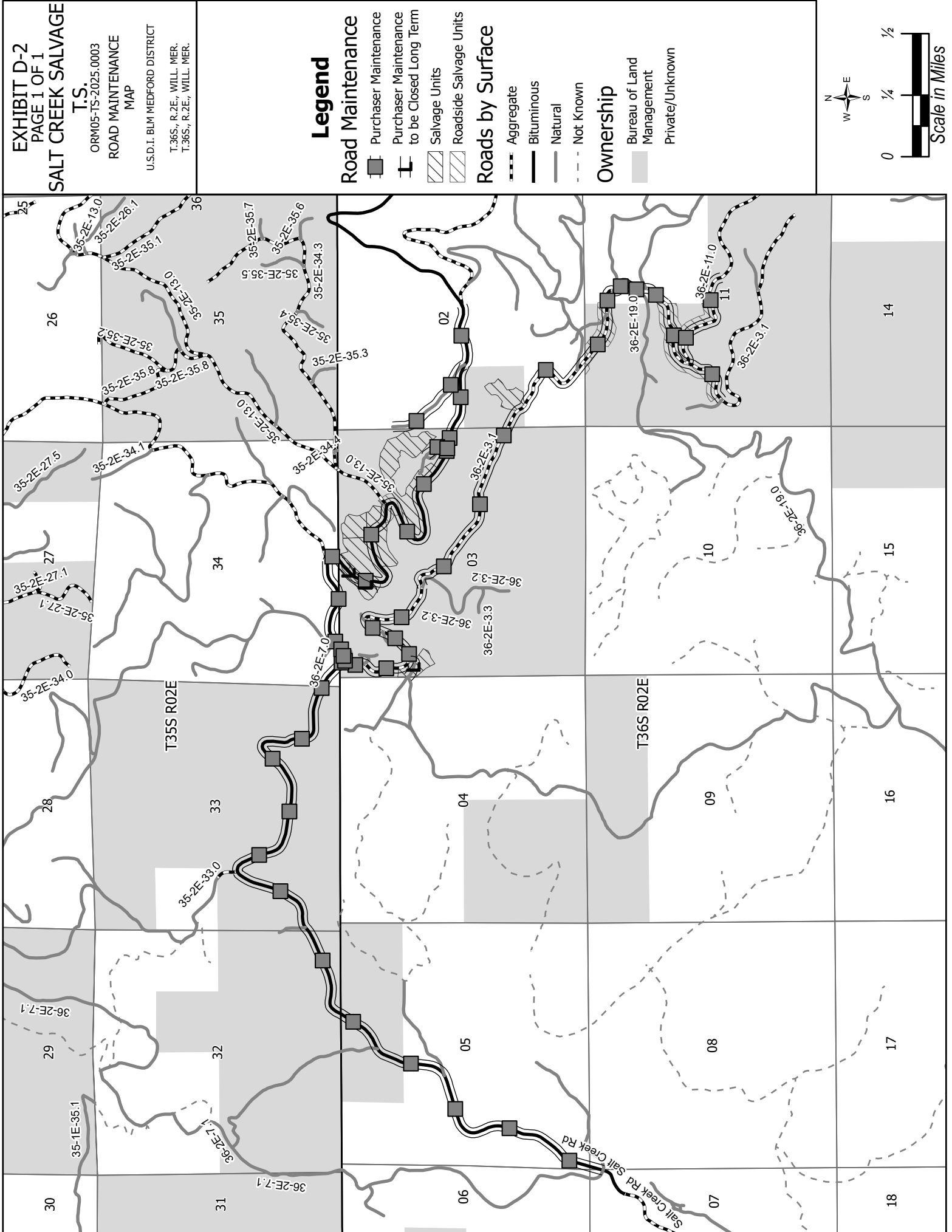
Exhibit No.	Description
D-1	TITLE SHEET
D-2	ROAD MAINTENANCE MAP
D-3	ROAD MAINTENANCE SPECIFICATIONS
D-4	ESTIMATE OF QUANTITIES
D-5	DRAINAGE & EROSION CONTROL DETAILS
D-6	ROAD DECOMMISSIONING MAP
D-7	ROAD DECOMMISSIONING WORKLIST
D-8	TYPICAL FULL DECOMMISSION
D-9	TYPICAL ROAD CAMOUFLAGED
D-10	TYPICAL BARRICADE

PROJECT LOCATION



ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR		
	BUREAU OF LAND MANAGEMENT		
	MEDFORD DISTRICT - MEDFORD, OREGON		
SALT CREEK SALVAGE TITLE SHEET			
DRAWN	DKL	SCALE	AS SHOWN
DATE	MARCH 2025	SHEET	1 OF 1
DRAWING NO.	ORM05-TS-2025.0003-D1		



ROAD MAINTENANCE SPECIFICATIONS

General road maintenance specifications are designated by numeric symbols according to the type of work performed as follows:

SECTION	DESCRIPTION
3000	General
3100	Operational Maintenance
3200	Seasonal Maintenance
3300	Final Maintenance
3400	Other Maintenance
3500	Decommissioning

ROAD MAINTENANCE SPECIFICATIONS

GENERAL - 3000

3001 The Purchaser shall be required to maintain all roads listed and/or as shown in Exhibit D-2 map of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.

Road No. and Segment	Length Miles Used	Ownership	Road Surface Type	Maintenance Responsibility
36-25E-2.02	0.41	Private	Native	Purchaser
36-2E-3.01	3.29	BLM	Aggregate	Purchaser
36-2E-3.04	0.17	BLM	Native	Purchaser
36-2E-3.05	0.09	BLM	Native	Purchaser
36-2E-3.06	0.12	BLM	Aggregate	Purchaser
36-2E-7.00	5.45	BLM	Bituminous	Purchaser
36-2E-11.00	0.46	BLM	Aggregate	Purchaser

3001a The Purchaser shall be required to provide maintenance on roads in accordance with Subsections 3403, 3403a, 3404, 3405, 3406.

3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be 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 may place stockpiled aggregate (3/4" minus) conforming to the requirements in Section 1200 of Exhibit C of this contract on the roadway and at locations and in the amounts

ROAD MAINTENANCE SPECIFICATIONS

designated by the Authorized Officer.

Stockpile Number	Section	T.	R.	Approx. Cubic Yards	Road Number
Salt Creek Road Stockpile	3	36	2	2000	36-2E-3.06

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 hauled, placed, spread, and compacted by use of dump trucks, water trucks, and motor grader 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

ROAD MAINTENANCE SPECIFICATIONS

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 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 by scattering below the road in accordance with Section 2100 of Exhibit C.

- 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 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 1 each year, except as specified in

ROAD MAINTENANCE SPECIFICATIONS

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. 16b 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. 16b, 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.

ROAD MAINTENANCE SPECIFICATIONS
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.

3403 The Purchaser shall be required to furnish and apply non-saline water during dry hauling periods, when directed by the Authorized Officer, for the purpose of laying dust and to prevent loss of surface material. The first application of water shall be made at the rate of one-half gallon per yd² of road surface traveled. Subsequent applications shall be made for each 40 MBF of timber or 120 yds³ of rock hauled. Subsequent watering may be done at a rate less than one-half gallon per yd² when a specified lesser rate is approved by the Authorized Officer.

The Purchaser shall secure any necessary water permits and pay all required water fees for use of the water source indicated below and approved by the Authorized Officer.

Water required under these specifications shall be obtained at the time and at the location indicated below:

Willamette Meridian				Dates Available	
Common Name	Section	T	R	From	To
Upper Salt Creek (Pump Chance)	3	36	2	June 15	September 15

During drought periods when the transportation of water from the source to the roads noted above exceeds 15 miles, a reduction shall be made in the total purchase price to reflect the additional haul or the substitution of other acceptable dust palliatives in lieu of watering based on equipment rental rates from the current BLM Road Cost Guide.

ROAD MAINTENANCE SPECIFICATIONS

- 3403a During dry hauling conditions when watering is not required, the Purchaser shall reduce hauling speeds and/or restrict the number of loads hauled to reduce dust as directed by the Authorized Officer.
- 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, magnesium chloride, or calcium chloride 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 The Purchaser shall be required to furnish and apply lignin sulfonate, magnesium chloride, or calcium chloride 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. Turnouts and extra widening shall not be included in addition to the spread width.
- 3405a Additional lignin sulfonate, magnesium chloride, or calcium chloride 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 MAINTENANCE SPECIFICATIONS

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, magnesium chloride, calcium chloride dust palliatives at least 3 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 thirty days of treatment.
- 3406 Prior to the application of lignin sulfonate, magnesium chloride, or calcium chloride dust palliatives, the roadbed shall be bladed and shaped to remove surface irregularities and excess loose material. The prepared surface must have ½ 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, magnesium chloride, or calcium chloride dust palliatives material requirements specified under Subsections 3412b and 3412c. 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 3 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, magnesium chloride, calcium chloride 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

ROAD MAINTENANCE SPECIFICATIONS

application or when the ground is frozen.

- 3412 The Purchaser shall apply to the prepared roadbed specified under Subsection 3405, a lignin sulfonate, magnesium chloride, or calcium chloride dust palliative conforming to the material requirements of Subsection 3412b and 3412c. 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, magnesium chloride, calcium chloride 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, magnesium chloride, or calcium chloride 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

ROAD MAINTENANCE SPECIFICATIONS

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.

3412c Specifications for magnesium chloride and calcium chloride:

The material shall consist of a brine containing 29 to 35 percent magnesium chloride, calcium chloride by weight and 62 to 72 percent water by weight. 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
sulfate	4.3 percent maximum
nitrate	5.0 percent maximum.

Concentration specifications for Calcium Chloride

Calcium chloride shall conform to AASHTO M 144, type L for the specified concentration.

Concentration specifications for Magnesium chloride

ROAD MAINTENANCE SPECIFICATIONS

- | | |
|------------------------------------|----------------|
| (1) Magnesium chloride by mass | 28% minimum |
| (2) Water by mass | 72% maximum |
| (3) Specific gravity, AASHTO T 227 | 1.290 to 1.330 |

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

- 3413 Sampling of lignin sulfonate, magnesium chloride, or calcium chloride 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 shall consist of removing cross drain and draw culverts, removing draw crossings by excavating fill material and placing in locations to form partially recontoured roadway sections. Work includes ripping, subsoiling, installing water bars, drain dips, placement of slash and soil stabilization material, and blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.
- 3502 Obliteration shall consist of complete road removal and full recontouring by recovering all available fill slope material from the outside road shoulder and burying cutbanks until the surrounding terrain is matched. Work includes removing cross drain culverts, draw culverts, restoring draw channels by removing fill material, and placing at designated locations. Work also includes ripping, subsoiling, water barring, placement of slash, and placement of soil stabilization material. This work is required under Section 18 of this contract.

ROAD MAINTENANCE SPECIFICATIONS

- 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 MP	To MP	Full Decommission (DF) or Long Term Storage (DR)
36-2E-3.04	0.0	0.17	DR
36-2E-3.05	0.0	0.09	DR

- 3504 Decommissioning and obliteration work shall be completed at the end of timber hauling. All decommissioning and obliteration work shall be performed during the following seasonal periods to address soil moisture and in stream work periods:

From: September 15	To: October 15 of the same year
--------------------	---------------------------------

- 3505 Where draw crossing fill material is to be excavated and removed, the finished bottom of draw profile shall be re-established to its original channel grade and resulting banks shall be re-established to their original backslope ratios or constructed to a 2:1 backslope ratio.
- 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 Camouflaging and Full Decommission.
- 3607 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 mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 3509 Barricades shall be installed across full width of roadway at locations designated in the specifications. Barricades shall be constructed conforming to the lines, grades, dimensions and typical details as shown on Exhibit D7.
- 3510 All vegetation and slash shall be removed from the immediate area designated for excavation and partial contouring including draw fill slopes, waste areas, and other special areas. Sections of

ROAD MAINTENANCE SPECIFICATIONS

roadway where ripping and subsoiling is required shall be cleared of all vegetation and slash. The resultant slash shall be scattered along the roadway fill slopes or 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 travelled ways, turnouts, disturbed areas, landings, and special areas. Ripping shall be done in accordance with Exhibit D8. Subsoiling shall be performed with wing-toothed rippers or excavator modified for tillage as shown in Exhibit D8.
- 3512 Draw crossing fill material shall be excavated and placed in designated locations for use in accomplishing partial recontouring. Placement of materials shall produce well-drained, uniform recontoured terrain as shown on the plans. The finished draw excavation shall meet requirements of Subsection 3505.
- 3513 Water bars and drain dips shall be installed across full width of roadway at spacing shown in the specifications. Water bars and drain dips shall be constructed conforming to the lines, grades, dimensions and typical details as shown on Exhibit D7. No water bar or drain dip 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 Exhibit C5, 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.
- 3515 For obliteration, all vegetation and slash shall be removed from the immediate area designated for full recontouring, which includes roadway fill slopes to be recovered, roadbed and cut bank sections to be buried, waste areas, and other special areas. The resultant slash shall be stockpiled in a manner that will allow retrieval and uniform spreading onto full recontoured slopes as shown in Subsection 3506. No vegetation or slash shall be mixed with excavated material to be placed. Vegetation outside of the work limits shall be protected from damage.
- 3516 Prior to full recontouring, ripping, subsoiling, and water barring shall be performed on designated roadways, turnouts, disturbed areas, landings, and special areas in accordance with these plans and specifications. Ripping shall be done in accordance with Exhibit D8. Subsoiling shall be performed with wing-toothed rippers or excavator modified for tillage as shown on Exhibit D8.
- 3517 Full recontouring shall be completed by retrieving and utilizing roadway fill slope material to bury the adjacent road prism and cut slopes as shown on the plans. Draw crossing fill material shall be excavated and placed in designated locations for use in accomplishing full recontouring.

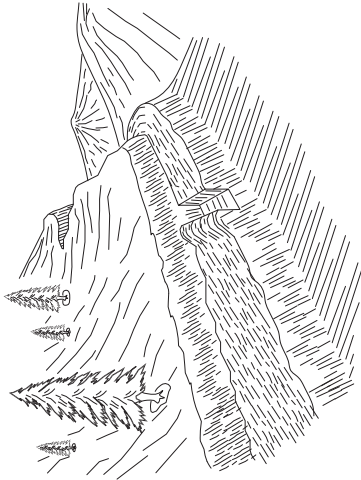
ROAD MAINTENANCE SPECIFICATIONS

the finished draw excavation shall meet requirements of Subsection 3505. Placement of materials shall produce a well-drained, uniform recontoured terrain as shown on the plans.

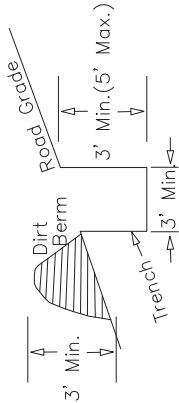
3518 Protection of exposed recontoured surfaces shall be accomplished by placement of previously stockpiled slash as shown in Subsection 3506, placement of soil stabilization material in accordance with Section 1800 on designated finished recontoured terrain areas, landings, and special areas and other areas disturbed by the purchaser's obliteration operations in accordance with these specifications and as shown in the plans.

3521 Decommissioning shall be performed on existing roads in accordance with these specifications, as shown on the plans at the following location:

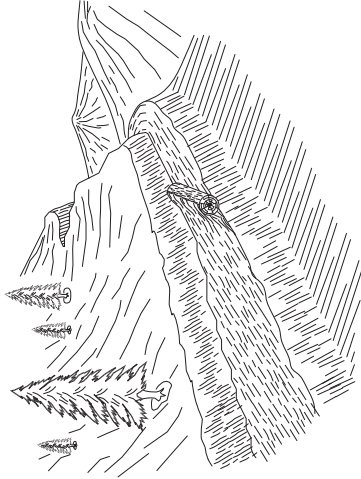
Road No.	Treatment
36-2E-3.04	Waterbar, Seed and Mulch, Camouflage
36-2E-3.05	Waterbar, Seed and Mulch, Camouflage



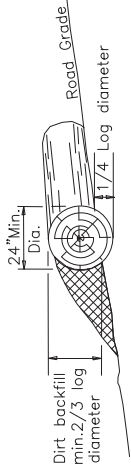
TRENCH BARRICADE



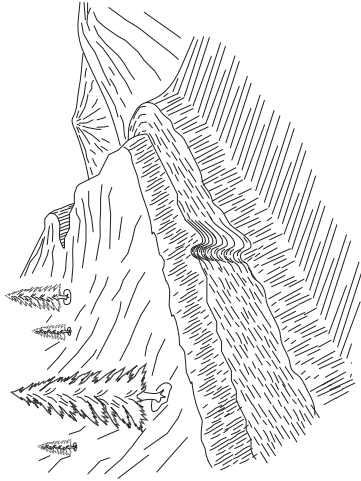
1. BARRICADE LENGTH SHALL EXTEND ACROSS THE ENTIRE ROAD SURFACE TO A POINT SUFFICIENT TO PROHIBIT MOTOR VEHICLE TRAFFIC.
2. THE EXACT LOCATION SHALL BE AS STAKED IN THE FIELD.
3. THE BARRICADE SHALL BE SKEWED AS NEEDED TO DRAIN OR AS DIRECTED BY THE AUTHORIZED OFFICERS REPRESENTATIVE.



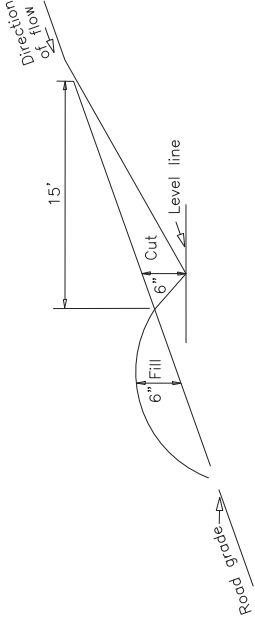
LOG BARRICADE



1. LOG BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL BARRICADES SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE.
5. THE MINIMUM SMALL END DIAMETER OF THE LOG BARRICADE SHALL BE 24" .

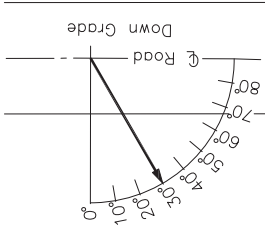


WATER BAR



1. CROSS-DRAINS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL CROSS DRAINS SHALL BE SKEWED 30 DEGREES.
4. THE CROSS-DRAINS INVERT SHALL BE SMOOTH AND FREE DRAINING.

SKEW DIAGRAM



UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT — MEDFORD, OREGON			
DRAINAGE & EROSION CONTROL INSTALLATION			
DRAWN	JWR	SCALE	NONE
DATE	April 2022	SHEET	1 OF 1
DRAWING NO.			ORM05-TS—
			—D5

Road Maintenance

Purchaser Maintenance

Purchaser Maintenance
to be Closed Long Term

Roadside Salvage Units

Salvage Units

Roads by Surface

Aggregate

Bituminous

Natural

Ownership

Bureau of Land
Management

Private/Unknown

The map displays a network of roads within the Salt Creek Salvage T.S. area. The roads are categorized by their surface type and maintenance status. The legend indicates that roads can be in 'Road Maintenance' (solid line with square markers), 'Purchaser Maintenance' (dashed line with square markers), or 'Purchaser Maintenance to be Closed Long Term' (dashed line with 'L' markers). Roads can also be 'Roadside Salvage Units' (hatched area) or 'Salvage Units' (diagonal lines). The map shows various road segments with labels such as T35S R02E 34, T36S R02E 03, 36-2E-3.04, 36-2E-3.05, 36-2E-3.1, 36-2E-3.2, and 36-2E-7.0. The map also shows land ownership areas, with 'Bureau of Land Management' (light gray) and 'Private/Unknown' (dark gray) areas. A north arrow and a scale bar (0 to 600 feet) are located in the bottom right corner.

N

E

S

W

0 600
Scale in Feet

Road Decommissioning Work List

Long Term Closure - Work shall include installing waterbars every 200' and camouflaging or barricading the road entrance as per Exhibit D9 or D10. Seeding with approved native seed species and mulching with weed-free straw or approved native materials on all disturbed areas.

Road 36-2E-3.04

(BLM) NAT

<u>M.P.</u>	<u>Remarks</u>
--------------------	-----------------------

- | | |
|------|--|
| 0.00 | Jct. 36-2E-7.00. Begin long term closure. Construct waterbars, seed and mulch, and camouflage first 100ft. |
| 0.17 | End long term closure, waterbars, seed and mulch. |

Road 36-2E-3.05

(BLM) NAT

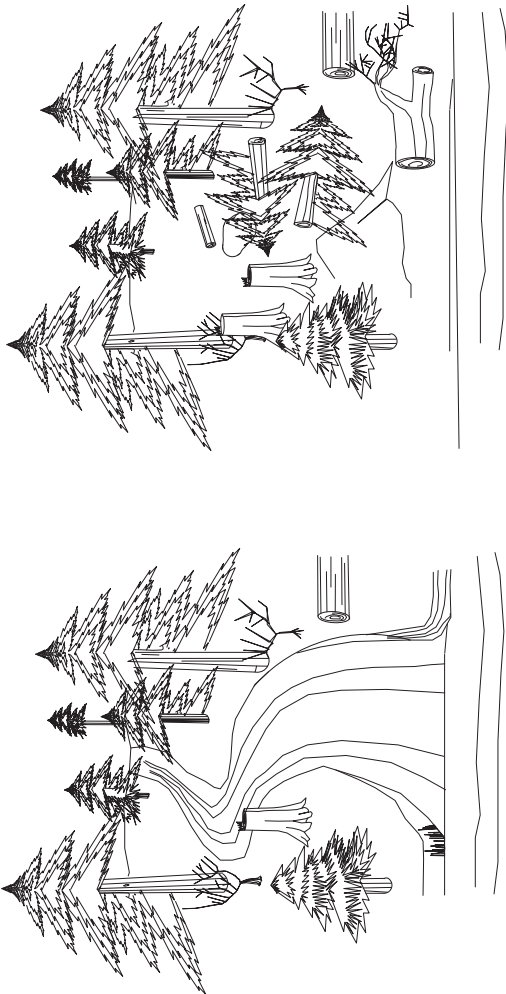
<u>M.P.</u>	<u>Remarks</u>
--------------------	-----------------------

- | | |
|------|--|
| 0.00 | Jct. 36-2E-3.01. Begin long term closure. Construct waterbars, seed and mulch, and camouflage first 100ft. |
| 0.09 | End long term closure, waterbars, seed and mulch. |

EXHIBIT D8
SHEET 1 OF 1
Salt Creek Salvage

Notes:

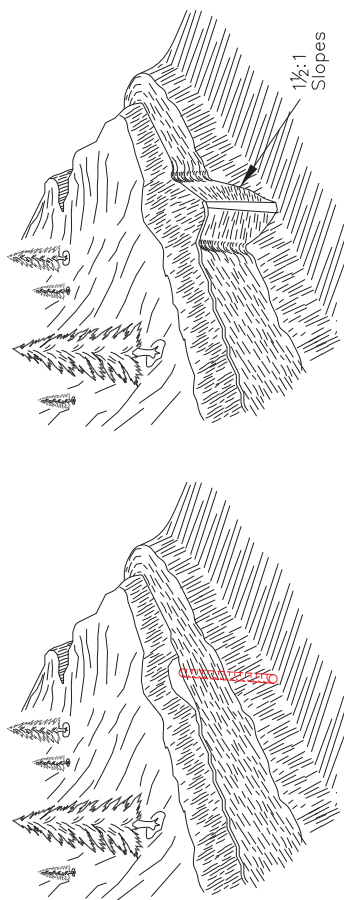
1. The Purchaser shall barricade, decompact the road prism and camouflage the roadbed so that the road entrance and roadway are indiscernible from the intersecting road. Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use. Barricades shall be constructed as shown for each road.
- Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads will be restored as indicated on plan view. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible. No live trees shall be used without approval of the Authorized Officer.
3. Road surface shall be decompact for its entire length using mechanical equipment. Decompact road surface to a depth of 12 to 18 inches or to a point where 10 inch diameter stones are the dominant substrate (whichever is shallower). Where it is determined by the Authorized Officer that decompaction may cause unacceptable damage to the root systems of residual trees along a majority of the road, decompaction may be intermittent, or scarification may be used instead. Woody debris, brush, stumps, boulders, and other debris shall be placed along the roads entire length as determined by availability of materials to provide ground cover and discourage use. No live trees shall be cut or used without approval of the Authorized Officer.
4. All culverts shall be removed from road for its entire length. Excavated culverts shall be left open to drain and have slopes of 1½:1. Where draw culverts are removed the grade of the channel shall be restored to match existing stream. Culverts not designated as salvage for the Government shall become the property of the Contractor. The Contractor shall be responsible for legally disposing of material.
5. See Section 1800 for Seeding Specifications.



Typical Entrance — Before

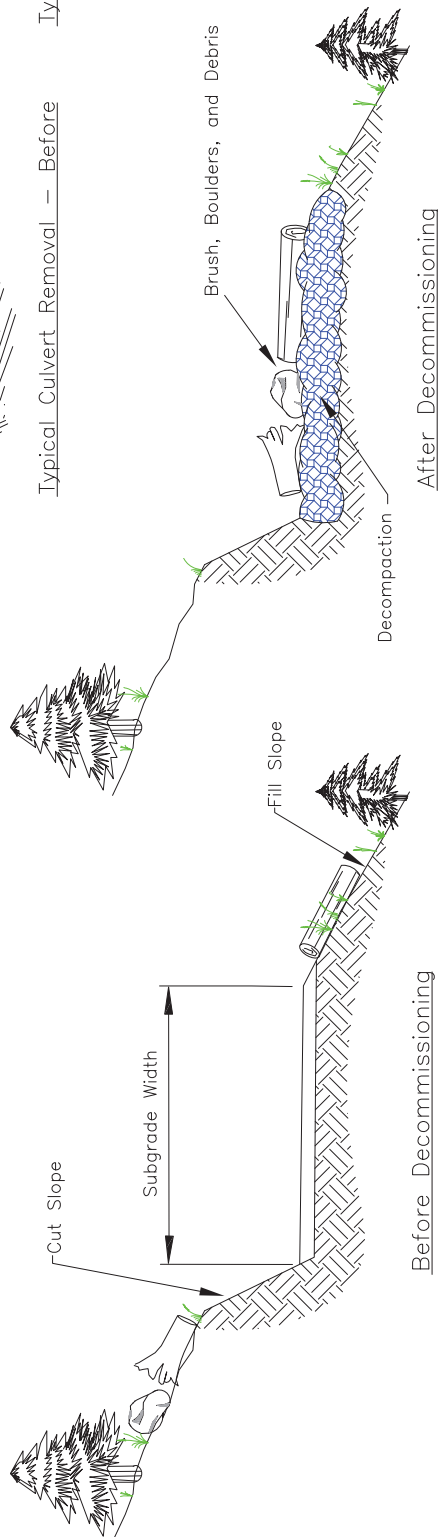
Typical Road Camouflaged Entrance
(See Exhibit D-9)

Typical Entrance — After



Typical Culvert Removal — Before

Typical Culvert Removal — After



Before Decommissioning

After Decommissioning

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT — MEDFORD, OREGON			
Typical Full Decommission			
DRAWN	JWR	SCALE	NONE
DATE	April 2022	SHEET	1 OF 1
DRAWING NO.	ORM05-TS-	-D8	

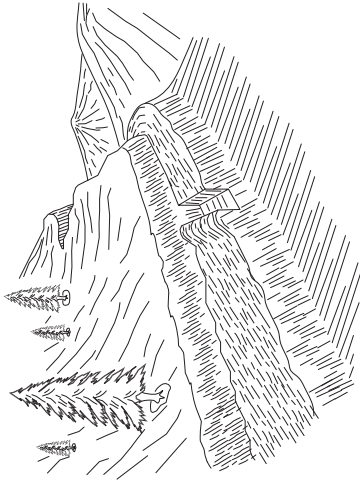
The illustrations show a tree being removed from a road. The first illustration shows a tree with a 'Minimum 100 feet' clearance line. The second illustration shows the tree being cut. The third illustration shows the tree falling. The fourth illustration shows the tree removed and the road cleared.

Typical Entrance – After

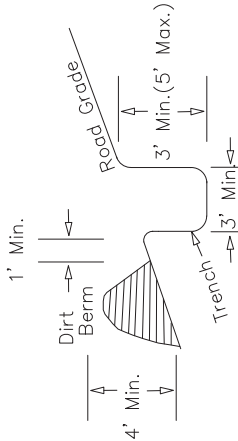
1. The Purchaser shall Camouflage the road prism and disguise the roadbed so that the road entrance and roadway are indiscernible from the intersecting road. Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use.
2. Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads will be restored as indicated on plan view. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible. No live trees should be used without approval of the Authorized Officer.

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT — MEDFORD, OREGON			
<h1>Typical Road Camouflage</h1>			
DRAWN	JWR	SCALE	NONE
DATE	April 2022	SHEET	1 OF 1
DRAWING NO. ORM05-TS-			--D9

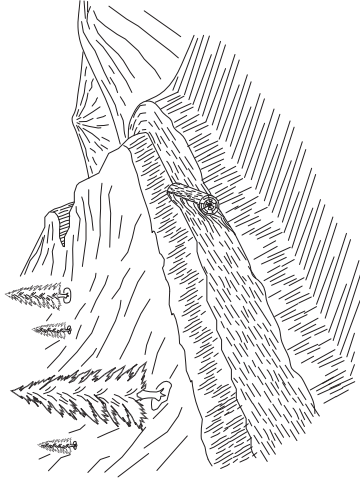
EXHIBIT D-10
SHEET 1 OF 1
Salt Creek Salvage



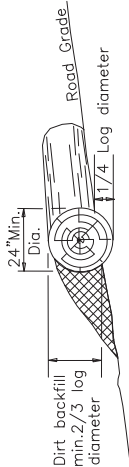
TRENCH BARRICADE



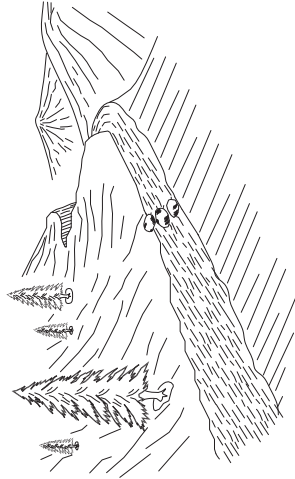
1. BARRICADE LENGTH SHALL EXTEND ACROSS THE ENTIRE ROAD SURFACE TO A POINT SUFFICIENT TO PROHIBIT MOTOR VEHICLE TRAFFIC.
2. THE EXACT LOCATION SHALL BE AS STAKED IN THE FIELD.
3. THE BARRICADE SHALL BE SKEWED AS NEEDED TO DRAIN OR AS DIRECTED BY THE AUTHORIZED OFFICERS REPRESENTATIVE.
4. A MINIMUM OF 1' OF LEVEL GROUND IS NEEDED BETWEEN TOE OF THE DIRT BERM AND THE EDGE OF THE TRENCH.



LOG BARRICADE



1. LOG BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL BARRICADES SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE.
5. THE MINIMUM SMALL END DIAMETER OF THE LOG BARRICADE SHALL BE 24".

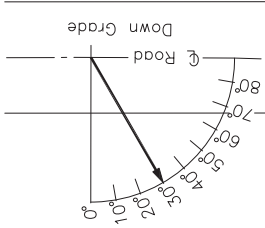


ROCK BARRICADE



1. ROCK BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. THE LENGTH SHALL BE SUFFICIENT TO BLOCK ROAD FROM VEHICLE USE.
4. THE MINIMUM DIAMETER OF ROCK SHALL BE 3 FEET.
5. THE MAXIMUM SPACE BETWEEN ROCKS SHALL BE 36" OR AS APPROVED BY THE AUTHORIZED OFFICER.

SKEW DIAGRAM



REV.	NO.	DESCRIPTION	DATE	APPROV.
		UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
BARRICADE DETAILS				
DRAWN	JAB	SCALE	NONE	
DATE	FEBRUARY 2023	SHEET	1 OF 1	
DRAWING NO.	ORM05-TS-			-D10

+SELECTION CRITERIA-DESIGNATION BY PRESCRIPTION EXHIBIT F

Fire-affected trees would be selected for harvest based on their probability of mortality and whether or not they have succumbed to fire-induced mortality. The methodology for determining the probability of fire-induced mortality for affected trees is described in the United States Forest Service's (USFS) Marking Guidelines for Fire-Injured Trees in California (Smith & Cluck 2011) (Appendix 2), which provides guidelines for assessing post-fire characteristics and determining the likelihood of future mortality. Trees that do not fit the mortality criteria would be retained. All boundary and interior trees marked with orange paint and/or poster tags and large live hardwoods and live green conifers outside the probability of mortality level would be retained in designated salvage areas. The selection criteria would be utilized by the Purchaser to determine which trees to cut and which to retain. This appendix describes the condition of trees available for removal. Trees that would otherwise be retained based on the prescription may be removed to facilitate logging or for safety reasons. Units would also have a basal area retention requirement based upon the pre-harvest basal area. Trees that might otherwise be cut may be retained in order to meet this requirement.

Treatment Objectives:

- a 40% probability of mortality on BLM-administered lands and roads.
- Reduce fuel loads created by dead and dying trees on BLM-administered lands and roads.
- Facilitate reforestation opportunities (e.g. tree planting) by removing material occupying growing space.
- Retain trees that are likely to survive on the landscape.
- Keep roads and infrastructure clear of debris and protect public safety.
- Remove hazard trees to maintain access.

Prescription:

	Land Use Allocation	Total Acres	Harvest System	Approximate Pre-Harvest Basal Area (sq. ft.)	
2-1	HLB-UTA	7	Ground-Based	220	15
3-1	HLB-UTA	6	Ground-Based	240	15
3-2	HLB-LITA	18	Ground-Based	180	30
3-3	HLB-LITA	5	Ground-Based	120	25
3-4	HLB-UTA	6	Ground-Based	220	15
3-6	HLB-UTA	7	Ground-Based	260	20

3-7	HLB-UTA	28	Ground-Based	200	15
11-1 Rd	LSR-DRY	5	Ground-Based	NA	NA
11-2 Rd	LSR-DRY	5	End-Line	NA	NA
11-4 Rd	LSR-DRY	23	Ground-Based	NA	NA

- Fire-killed trees and those with $\geq 40\%$ probability of mortality (Pm) would be selected for harvest.
- Pm would be determined by assessing the percent crown length killed or the percent crown volume killed, as defined in Appendix 2, USFS Marking Guides for Fire-Injured Trees in California (Smith and Cluck 2011) (See Table 1). Figure 1 illustrates trees at varying percentages of crown length scorch.
- If a retention snag needs to be fallen for safety concerns, another snag of similar size would be retained in substitution.

Ponderosa Pine	
Pm = 0.40	DBH
	10 - 29"
	30 - 40"
	>40 - 50+"
	DBH
	10 - 60+"
	DBH
	10 - 60+"
	4 - 40+"
	10-35"
	35-60+" 50

Table 1. Crown Scorch Levels for 40% Probability of Mortality (Pm)

The Purchaser would make selections based on the following criteria to determine which trees they would not harvest and when to remove excess hardwood material:

Leave tree characteristics:

- Conifer trees with less than a 40% Pm (see Table 1).
- Orange-marked trees (typically trees used to delineate the unit boundary or special retention zone boundary).

- All non-hazardous live and dead hardwoods (≥ 8 inches DBH).
- Standing cull trees.
- Snags with prominent structural complexity and defect such as broken or forked tops and large limbs that provide wildlife habitat benefit.
- Retain cull material and existing Down Woody Material (DWM) to the extent possible.

Before cutting and removing any trees necessary to facilitate logging in all salvage harvest areas, the operator would identify the following locations in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan:

- skid trails,
- cable yarding roads,
- tailhold, tieback, guyline, lift, intermediate support, and
- danger trees on the ground

Figure 1. Crown Scorch Ocular Estimation Guide

