

P R O S P E C T U S

LUMP SUM SALE

BUTTE FALLS RESOURCE AREA
JACKSON MASTER UNIT

Medford Sale # ORM05-TS-2018.0010
August 23, 2018 (CP)

1 Obenchain (5900) Jackson County, O&C, P.D.

BID DEPOSIT REQUIRED: \$137,300.00

All timber designated for cutting in SW1/4SE1/4, Sec. 1; S1/2SE1/4, Sec. 11; NE1/4, Sec. 12; NE1/4NW1/4, W1/2NW1/4, S1/2SW1/4, Sec. 13; SW1/4NE1/4, N1/2NW1/4, SE1/4NW1/4, NE1/4SW1/4, Sec. 23; T.35S, R.1E., SW1/4SW1/4, Sec. 7; W1/2SW1/4, Sec. 9; SW1/4NE1/4, E1/2SW1/4, SW1/4SE1/4, Sec. 17; SE1/4NW1/4, NE1/4SW1/4, Sec. 18; T.35S., R.2E.; Willamette Meridian.

Approx. Number Merch. Trees	Species	Est. Volume MBF 16' Log	Appr. Price Per MBF*	Est. Volume Times Appraised Price
13,077	Douglas-fir	3,460	\$382.90	\$1,324,834.00
418	White Fir	202	\$169.40	\$34,218.80
568	Incense-cedar	46	\$229.40	\$10,522.40
134	Ponderosa Pine	28	\$99.40	\$2,783.20
14,197	Totals	3,736		\$1,372,388.40

*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.

CRUISE INFORMATION - Douglas-fir, White fir, Incense Cedar and Ponderosa Pine have been cruised using the 3-P sampling methods to select sample trees. Maps showing the location and description of these sample trees are available at the Medford District Office. The sample trees have been measured using the volt system of measurement, and the volume expanded to a total sale volume.

With respect to merchantable DF trees: the average tree is 16.1 inches DBHOB; the average gross merchantable log contains 64 bd. ft.; the total gross volume is approximately 3,803 M bd. Ft. and 90% 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.

The BLM has revised the log export restrictions special provision to reduce the log branding and painting requirements. The new requirements include branding of one end of all logs with a scaling diameter of over 10 inches. All loads of 11 logs or more, regardless of the diameter of the logs, will have a minimum of 10 logs branded on one end. All logs will be branded on loads of 10 logs or less. One end of all branded logs will be marked with yellow paint. At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. The Purchaser shall bear any increased costs for log branding and painting.

CUTTING AREA Twenty-six (26) units containing two hundred seventy-one (271) acres must logged.

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

ACCESS - Access to the sale area is available via public roads and through the contract area using BLM Roads and Right-of-way and Road Use Agreement M-2000D with Juniper Properties LLC., via Right-of-way and Road Use Agreement M-2000F with Weyerhaeuser Company, and Right-of-Way and Road Use Agreement M-660L with Murphy Timber Investments.

Among other conditions, agreement M-2000D with Juniper Properties LLC. requires completion of a license agreement between the Purchaser and Juniper Properties LLC., road maintenance to be performed by the Purchaser or BLM, payment of a road use fee of **\$3,003.08**, and payment of a surface replacement fee of **\$575.29**. Among other conditions, agreement M-2000F with Weyerhaeuser Company requires completion of a license agreement between the Purchaser and Weyerhaeuser Company, road maintenance to be performed by the Purchaser or BLM, payment of a road use fee of **\$2,430.60**, and payment of a surface replacement fee of **\$695.41**. Among other conditions, agreement M-660L with Murphy Timber Investments, requires completion of a license agreement between the Purchaser and Murphy Timber Investments, road maintenance to be performed by the Purchaser or BLM, and payment of a surface replacement fee of **\$1,090.70**.

ROAD MAINTENANCE - The Purchaser will be required to maintain 11.49 miles of existing BLM roads and private roads as well as 1.82 miles of roads to be constructed.

ROAD CONSTRUCTION – The Purchaser will be required to construct 0.80 miles of permanent road, to construct 1.02 miles of temporary road, and to reconstruct 0.51 miles of existing permanent and temporary roads.

SOIL DAMAGE PREVENTION: Pursuant to Section 26 of Form 5450-3, 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 a integral arch and winch system capable of lining logs at least 75 feet.
2. A tractor equipped with winged-toothed rippers.
3. A helicopter equipped with a dropline with a minimum length of 150 feet and capable of lifting logs vertically to a height above adjacent trees without horizontal movement.

SLASH DISPOSAL Perform logging residue reduction and site preparation work on approximately two hundred fifty (250) 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 42 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. Cleaning of equipment to eliminate noxious weed seeds is required prior to move-in of equipment onto federal lands.
7. Dust abatement is required.
8. There are slash treatment and pile placement requirements in place for this sale (see SD-1 in the contract)
9. Purchaser should be aware there are logging residue reduction costs assessed under SD-1. Refer to the appraisal for total assessed costs of logging residue reduction.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA

From Medford, Proceed north on highway 62 to the junction of Highways 62 and Butte Falls Highway. Take Butte Falls Highway to Obenchain Road, turn right and proceed into the sale area.

ENVIRONMENTAL ASSESSMENT – An environmental assessment (DOI-BLM-ORWA M050-2017-0001-EA) was prepared for this sale, and a Finding of No Significant Impact has been documented for this environmental assessment. This document is available for inspection as background for this sale at the Medford District Office.

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SPECIAL PROVISIONS

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

Sec. 41. 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-1 Approximately five thousand one hundred and fifty-two (5,152) trees marked with orange paint above and below stump height in units 11-1, 12-2, 12-2R, 12-3, 12-3R, 13-1, 13-3, 23-1 and 23-2 as shown on Exhibit A.
- (C) IR-2 All timber except approximately four thousand four hundred and twenty-nine (4,429) trees marked for cutting heretofore by the Government with blue paint above and below stump height in units 1-1, 7-1, 7-1A, 9-1, 9-2, 9-3, 9-4, 12-1, 12-1A, 13-4, 17-1, 17-2, 18-1 and 23-3 as shown on Exhibit A.
- (D) IR-5 All young growth conifers less than eight (8) inches in diameter D.B.H.O.B. not damaged in the normal course of logging in all units as shown on Exhibit A.
- (E) IR-6 All hardwood and yew trees in all units as shown on Exhibit A.
- (F) IR-13 All non-hazardous snags in all units as shown on Exhibit A. Any felled hazard snags must remain where felled or as directed by the Authorized Officer.
- (G) IR-14 All pre-existing dead and down wood in all units as shown on Exhibit A.

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Sec. 42.

(A) Log Exports

(1) LE-1 All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export from the United States in the form of unprocessed timber, and is prohibited from being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters ($8\frac{3}{4}$) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better. Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timber, regardless of size, manufactured to standards and specifications suitable for end-product uses; (2) chips, pulp, and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacturing of eight and threequarters ($8\frac{3}{4}$) inches in thickness or less; (6) shakes and shingles. Substitution will be determined under the definition found in 43 CFR 5400.0-5. The Purchaser is required to maintain and upon request to furnish the following information:

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

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

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

Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer Form 5460-15 (Log Scale and Disposition of Timber Removed Report) which shall be executed by the Purchaser.

The purchaser shall also provide a current, interim Log Scale and Disposition of Timber Removed Report (Form 5460-15) upon request by the Authorized Officer at any time during the contract period for cutting and removal specified in Section 4 of this contract as amended.

In addition, the Purchaser is required under the terms of this contract to retain for a three-year period from the date of termination of the contract the records of all sales or transfer of logs involving timber from the sale for inspection and use of the Bureau of Land Management.

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

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

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

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

(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 prework conference between the Purchasers' 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-7 In all tractor units, fell trees over twenty one (21) inches DBH designated for cutting and cut into log lengths not to exceed 44 feet. Log segments would be completely limbed prior to yarding.
- (5) L-8 In all tractor units, as shown on Exhibit A, all trees twenty one (21) inches D.B.H.O.B. 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

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tree yarding as determined by the Authorized Officer, bucking and/or limbing will be required.

- (6) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy five (175) feet of the unit boundary shall be felled way from the unit boundary. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (7) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy five (175) feet of a private property line shall be felled away from the private property line. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (8) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy five (175) feet of the corner monument shall be felled away from the corner monument. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (9) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy five (175) feet of any plant site, or Reserve Area boundary as shown on Exhibit A shall be felled away from the painted and posted boundary. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (10) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy five (175) feet of fences, cattle guards, livestock watering troughs, and other improvements shall be felled away from these improvements. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (11) 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.

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Designated Area	Yarding Requirements or Limitations
<p>Ground Based</p> <p>7-1, 11-1, 12-1, 12-2, 12-2R, 13-1, 13-3, 18-1, 23-1, 23-2, 23-3</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 and winch systems capable of lining logs at least seventy five (75) feet.</p> <p>Designate skid trails at an average of one hundred (100) foot spacing in order to minimize ground disturbance.</p> <p>The location of the tractor skid trails must be clearly designated on the ground by the purchaser with flagging, locations must be approved by the Authorized Officer. Use existing skid trails to the extent possible. Where new skid trails are necessary, limit the extent to minimize the impact.</p> <p>Locate skid trails to minimize disturbance to coarse woody debris (CWD). Where skid trails encounter CWD twenty (20) inches and larger at the small end, a section of the CWD is to be bucked out for equipment access. The bucked out portion shall be as narrow as operationally feasible, (maximum of fourteen (14) feet). The remainder of the CWD shall be left in place and not disturbed.</p> <p>In all ground-based units, allow harvesting operations (cutting and transporting logs) when ground is frozen or adequate snow cover exists to prevent soil compaction and displacement. The Authorized Officer would consult with a BLM watershed specialist to determine appropriate conditions. If conditions change during operations where detrimental soil compaction and displacement is occurring, operations would be stopped immediately.</p> <p>Once soil moisture exceeds 25%, ground-based operations may only occur when snow depth is at least eighteen (18) inches. In the condition where snow is present but soil moisture is below 25%, ground-based operations may occur. Stop ground-based harvest if rutting begins to occur within the unit or when soil moisture exceeds 25%.</p>

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	<p>No ground based yarding is permitted when soil moisture content at six (6) inch depth exceeds twenty five (25) percent by weight as determined by the oven dry method. Yarding and mechanical harvesting will be further limited in accordance with Sec. 26 if detrimental soil damage is occurring, as determined by the Authorized Officer.</p> <p>Mechanized felling equipment must have an arm capable of reaching at least twenty (20) feet.</p> <p>Restrict ground-based operations to slopes generally less than 35%. In areas where it is necessary to exceed these gradients to access adjacent tractor areas, 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> <p>Restrict the amount of detrimental soil disturbance (i.e. compaction, displacement, erosion) to below 20% (assuming 5% of the unit has roads/landings) in a timber harvest unit if operators are using fellerbunchers or cut-to-length harvesters off of designated skid trails:</p> <p>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);</p> <p>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);</p> <p>Use low, ground-pressure equipment off designated skid trails;</p> <p>Restrict all other use of ground-based equipment to designated skid trails; and</p> <p>Stop equipment use off of designated skid trails if logging equipment is causing soil disturbance as determined by the Authorized Officer.</p>
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	<p>During logging operations, the protection of rangeland improvements will be required. Directional falling (see contract stipulation L-10 in this contract) will be used to prevent damage to fences, cattle guards, livestock watering troughs and other rangeland improvements. If damage to range improvements does occur, the BLM shall be notified immediately and proper repair or replacement would occur within two weeks. Proper repair of fences and gates includes keeping wire properly attached to posts, splicing or replacing broken wire in kind, repairing structures such as corners, stress panels or gates, and any other work necessary to keep improvements functional. Repair of structures such as stress or corner panels and gates requires pre-approval by BLM staff. Repair or cleaning of cattle guards damaged or filled with sediment by logging activities would require approval of BLM Road Engineering Staff for structural integrity and public safety compliance.</p> <p>During logging activities, operators would keep all gates closed and all livestock containment systems functional to keep livestock in authorized areas.</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>Log landing size shall not exceed one-half (½) acre.</p>
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Helicopter Units 1-1, 7-1A, 9-1, 9-2, 9-3, 9-4, 12-1A, 12-3, 12-3R, 13-4, 17-1, 17-2	<p>A helicopter equipped with a dropline with a minimum length of one hundred fifty (150) feet and capable of lifting logs vertically to a height above adjacent trees without horizontal movement is required.</p> <p>Service landing pads and log landing pads can be constructed with prior approval of the Authorized Officer and shall not be larger than necessary. Log landing size shall not exceed one (1) acre, service landing size shall not exceed (3) acres, and all landings are to be approved by the Authorized Officer prior to construction.</p> <p>All multiple log turns will be vertically lifted from a small enough radius to result in minimal damage to the residual forest stand as determined by the Authorized Officer.</p> <p>All aerial operations within 0.5 miles of any residence (all helicopter units and associated helicopter / service landing) will be restricted to an operating time of 6:00 am to 6:00 pm Monday thru Friday unless otherwise approved by Authorized Officer.</p> <p>During logging operations use of techniques such as directional falling (see contract stipulation L-10 in this contract) would be used to prevent damage to fences, cattle guards, livestock watering troughs and other improvements.</p> <p>If damage to range improvements does occur, the BLM shall be notified immediately and proper repair or replacement would occur within two weeks. Proper repair of fences and gates includes keeping wire properly attached to posts, splicing or replacing broken wire in kind, repairing structures such as corners, stress panels or gates, and any other work necessary to keep improvements functional. Repair of structures such as stress or corner panels and gates requires pre-approval by BLM staff. Repair or cleaning of cattle guards damaged or filled with sediment by logging activities would require approval of BLM road engineering staff for structural integrity and public safety compliance.</p> <p>During logging activities, operators would keep all gates closed and all livestock containment systems functional to keep livestock in authorized areas.</p>
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- (12) L-14 No yarding or loading is permitted in or through plant sites, or Reserve Areas, shown on Exhibit A.
- (13) L-19 No ground based yarding, road construction, landing construction, road renovation, road reconstruction, road decommissioning, road closure, road blocking/barricade construction, water bar construction, soil ripping, and seeding/mulching shall be conducted within the contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or when soil moisture exceeds 25% when sampled at a 6 inch depth as determined by Authorized Officer.
- (14) 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 15. If the Authorized Officer, in consultation with resource area 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.
- (15) L-19 Hauling could occur during the wet season (October 16 to May 14) on roads determined to have adequate surfacing (See Exhibit C-15). In addition, a selection of roads have been identified as available for wet season haul if adequate rock is added to the roadbed (See Exhibit C-15). If the Authorized Officer, in consultation with resource area 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 (where the road surface is deteriorating due to vehicular rutting or standing water, or where turbid runoff is likely to reach stream channels) as determined by the Authorized Officer.
- (16) L-20 No harvest activities within 0.25 mile of known NSO sites (within 0.5 mile for helicopter operations and blasting) shall be conducted between March 1 to September 30 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from NSO protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that NSO nesting and/or fledging activities are not occurring during the year of harvest.
- (17) L-28 In all ground-based units as shown on Exhibit A, all yarding shall be done by equipment operated entirely on designated skid roads which have been approved by the Authorized Officer, except as addressed in L-12.

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- (18) L-29 In accordance with the requirements of Sec. 8 of the contract it has been determined that it is in the best interest of the Government and within the provisions of 43 CFR 5402.0-6 to sell additional timber located in or adjacent to all units as shown on Exhibit A, which is obstructing needed cable yarding roads, ground based yarding skid roads, hazardous to workers, needed for guyline, tailhold, and/or tieback trees, or severely damaged from the normal conduct of felling or yarding operations to meet all applicable State safety laws, codes or regulations. This timber must be cut or removed so that the Purchaser can continue active falling and yarding operations. The Purchaser is, therefore, authorized to cut and remove such additional timber in accordance with the provisions of Section 8 of the contract: provided, however, that:
- (a) Trees reserved for the tree improvement program and trees reserved for the wildlife habitat objectives under Sec. 41 of the contract are not included in the authorization.
 - (b) The Purchaser shall identify each tree sold and cut in accordance with the provision by marking the cut surface of the stump immediately after falling with a large "X". The "X" shall be cut with a chain saw. The stump shall be marked by hanging red fluorescent flagging near the stump so that the stump can be visually located from a distance of not less than one hundred (100) feet.
 - (c) The volume and price for such timber shall be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and paid for by the Purchaser in accordance with Sec. 3(a) or 3(c) of the contract as required by Sec. 8 of the contract.
 - (d) No timber may be cut or removed under the terms of this provision if all contract payments required by Sec. 3(a) or 3(c) of the contract have been made.
 - (e)
 - (f) The permission to cut and remove additional timber contained in this provision may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser:
 - 1. Failed to properly mark any stump with the "X" cut.
 - 2. Failed to identify the location of any stump.
 - 3. Cut any tree that was reserved for tree improvement and/or wildlife habitat.
 - 4. Cut any tree in or adjacent to cable yarding corridors that was not necessary to facilitate cable yarding.

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5. Cut any reserve tree in or adjacent to tractor skid roads that was not necessary to facilitate ground based yarding.
6. Failed to properly segregate any pulled over tree that was yarded to the landing.
7. Cut any reserve tree that was not severely (as defined during the prework conference and documented in the approved logging plan) damaged from felling and yarding operations.
8. Cut more than the minimum number of trees necessary to properly serve as guyline anchor stumps.
9. Cut or topped more than the minimum number of trees necessary to properly serve as tailhold trees.
10. Cut more than the minimum number of trees necessary to properly serve as tie-backs for topped tailhold trees.
11. Failed to maintain accurate and current (no more than 24 hours old) documentation of cut and removed timber.

If the permission to cut and remove additional timber provision is withdrawn, the Authorized Officer shall deliver to the Purchaser a written notice that additional sale of timber under this special provision is no longer approved.

If the permission to cut and remove additional timber provision is withdrawn, the Purchaser shall inform the Authorized Officer at least two working days prior to the need for cutting and yarding any guyline tree, tailhold tree, tie-back tree, danger tree, corridor tree, pulled over tree, and severely damaged tree. All sales of additional timber shall comply with Section 8 of the contract.

The Contracting Officer may order the Purchaser, in writing, to suspend, delay, or interrupt all or any part of the work of this contract for the period of time that the Contracting Officer determines appropriate for the Government to safely measure and mark additional timber.

All ground based equipment skid roads upon which timber may be cut and removed in accordance with this special provision must be needed for the removal of timber sold under this contract and shall be limited to the narrowest width necessary for the yarding of logs with minimum damage to reserved trees.

The Purchaser shall be liable for damages in accordance with Sec. 13 of the contract for any reserved timber cut or removed in violation of the terms of this special provision.

- (19) L-32 When constructing helicopter landing in the SE corner of unit 13-3, as shown on Exhibit A, the Purchaser shall fell, buck, and move to an area determined by the

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Authorized Officer all trees over forty (40) inch diameter at breast height (trees are marked with "C/L"). No adjustments of volume or value shall be made to meet these requirements. (The Purchaser shall tally all trees by diameter class and species on a daily basis. The tally may be requested by the Authorized Officer at any time during falling operations. At the end of falling operations a completed tree tally shall be submitted to the Authorized Officer.)

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

In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified.

If the cost of such contract modification is of a substantial nature (\$2,000.00 or more), the Purchaser may request, in writing, an adjustment in the Total Purchase Price specified in Section 2 of the timber sale contract, as amended, to compensate for the changed conditions.

Unless otherwise specified in writing, when operations are in progress adjacent to or on roads and/or trails in the harvest unit area, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the road or trail user with adequate warning of and protection from hazardous or potentially hazardous conditions associated with its operations.

Purchaser shall prepare a Traffic Control Plan, which the Purchaser has determined is compliant with state and local OSHA and Transportation standards no later than the pre-work meeting and prior to commencing operations. Traffic control devices shall be appropriate to current operating and/or weather conditions and shall be covered or removed when not needed. Flagmen and devices shall be as specified in state OSHA and Transportation standards for logging roads or the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD) published by the U.S. Department of Transportation - Federal Highway Administration. Included in the Traffic Control Plan, Purchaser shall note traffic control device locations on a Purchaser produced copy of the contract Exhibit "A" Map.

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

- (1) R-1: The Purchaser shall construct, improve, renovate, and/or decommission all 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.
- (2) R-1a: Any required construction, improvement, or renovation of structures and roads shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.
- (3) R-1b: The Purchaser shall construct, use and decommission temporary routes 2, 8, 13, 14, 15, and 16 by October 31st of the same respective operating season.
- (4) R-2: The Purchaser is authorized to use the roads listed and shown on Exhibit D-2 for the removal of Government timber sold under the terms of this contract and/or the hauling of rock as required in Exhibit C, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 42(C)(6). Any road listed on Exhibit D-2 and requiring construction, improvement, or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the construction, improvement, or renovation from the Contracting Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to the contract.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type	Maintenance Responsibility
35-1E-11.00	0.45	Weyerhaeuser	ASC	Purchaser
35-1E-12.00	0.71	BLM	ASC	Purchaser
35-1E-12.04	0.87	Murphy	NAT	Purchaser
35-1E-12.05	0.15	BLM	NAT	Purchaser
35-1E-12.06	0.38	BLM	NAT	Purchaser
35-1E-12.07	0.42	BLM	NAT	Purchaser
35-1E-13.01	0.50	BLM	NAT	Purchaser

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35-1E-23.01 A	0.65	Hamman	ASC/NAT	Purchaser
35-1E-23.01 B	0.05	BLM	NAT	Purchaser
35-1E-23.01C	0.20	Weyerhaeuser	NAT	Purchaser
35-2E-7.00A-B	1.83	Lone Rock	ASC	Purchaser
35-2E-10.00A-B1	0.67	Weyerhaeuser	ASC	Purchaser
35-2E-10.00B2	0.14	Lone Rock	ASC	Purchaser
35-2E-16.00	0.79	Lone Rock	ASC	Purchaser
35-2E-18.00A	0.25	Weyerhaeuser	ASC	Purchaser
35-2E-18.00B1-B2	1.10	Murphy	ASC	Purchaser
35-2E-18.00C-D	0.89	Weyerhaeuser	ASC	Purchaser
35-2E-18.03A	0.20	Lone Rock	ASC	Purchaser
35-2E-18.03B	0.18	BLM	ASC	Purchaser
35-2E-20.00	1.13	Lone Rock	ASC	Purchaser
35-2E-20.01 A	0.18	Lone Rock	ASC	Purchaser
35-2E-20.01 B	0.31	BLM	NAT	Purchaser

- (5) R-2a: With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of road(s) needs a line for the list here included in Section 42(C)(8) 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.
- (6) R-2b: The Purchaser shall pay the Government a rockwear fee of **Two hundred twenty three and 94/100 dollars (\$223.94)** for the transportation of timber included in

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this contract price over said roads. The above maintenance amount is for the use of 12.09 miles of road or less. 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.

- (7) 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 road(s) 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 road(s) listed in Section 42(C)(4). If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligation(s).
- (8) 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.
- (9) R-3: In the use of Road Nos. 35-1E-12.04, 35-2E-18.00 B1, and 35-2E-18.00 B2, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No M-660L, between the United States of America and Murphy Timber Investments. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Payment of a road rockwear obligation of **One thousand ninety and 70/100 dollars (\$1,090.70)** to Murphy Timber Investments, payable at the time indicated in the License Agreement.
- (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (c) Prior to cutting or removing any timber from the road right of way between Stations 0+00 and 1+31 on Road No. 35-1E-12.07, the Purchaser shall pay to Murphy Timber Investments, the owner of the

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right-of-way timber, the total value of that timber as shown below based upon the indicated estimated volume and species price per unit used in the Government's contract as set forth on the Exhibit B.

Species	Estimated Volume MBF	Price Per MBF	Estimated Volume times Unit Price
Douglas-fir	0.10	*	*

*These figures will not be available until after the timber sale.

- (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.
- (10) R-3: In the use of Road Nos. 35-2E-7.00A-B, 35-2E-10.00B2, 35-2E-16.00, 35-2E-18.03A, 35-2E-20.00, and 35-2E-20.01A1, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-2000D, between the United States of America and Juniper Properties LLC. This document is available for inspection at the Medford District Office.
- These conditions include:
- (a) Payment of a road rockwear obligation of **Five hundred seventy five and 29/100 dollars (\$575.29)** to Juniper Properties LLC, payable at the time indicated in the License Agreement.
- (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (c) 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.
- (11) R-3: In the use of Road Nos. 35-1E-11.00, 35-1E-23.01C, 35-2E-10.00A-B, and 35-2E-18.00A, C, and D, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-2000F, between the United States of America and Weyerhaeuser Company. This document is available for inspection at the Medford District Office.

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These conditions include:

- (a) Payment of a road rockwear obligation of **Six hundred ninety five and 41/100 dollars (\$695.41)** to Weyerhaeuser Company, payable at the time indicated in the License Agreement.
- (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (c) Prior to cutting or removing any timber from the road right of way between Stations 0+00 and 5+53 on Road No. 35-1E-12.06, the Purchaser shall pay to Murphy Timber Investments, the owner of the right-of-way timber, the total value of that timber as shown below based upon the indicated estimated volume and species price per unit used in the Government's contract as set forth on the Exhibit B.

Species	Estimated Volume MBF	Price Per MBF	Estimated Volume times Unit Price
Douglas-fir	1.0	*	*
Ponderosa pine	0 7	*	*
White fir	0.3	*	*

*These figures will not be available until after the timber sale.

- (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.
- (12) R-3: In the use of Road No. 35-1E-23.01 A, the Purchaser shall comply with the conditions of easement Re-M-1214, between the United States of America and Dan Hamann and Lois R Hamann. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Purchaser shall maintain a guard at the entrance gate during hauling operations while cattle are present.

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- (b) Purchaser shall repair any damage to entrance gate caused by hauling or road maintenance operations.
- (c) Dan and Lois Hamann shall be notified, by phone, prior to use of the easement.
- (d) A form of dust abatement shall be used on the easement during commercial log hauling on an “as needed” basis as determined by the BLM Authorized Officer.
- (e) Prior to cutting or removing any timber from the road right of way between Stations 0+00 and 1+02 on Temp Route 14, the Purchaser shall pay to Dan and Lois Hamann, the owner of the right-of-way timber, the total value of that timber as shown below based upon the indicated estimated volume and species price per unit used in the Government’s contract as set forth on the Exhibit B.

Species	Estimated Volume MBF	Price Per MBF	Estimated Volume times Unit Price
Douglas-fir	0.5	*	*

*These figures will not be available until after the timber sale.

- (13) 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.
- (14) 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.

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Details shall include:

- 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.

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

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

(C) Environmental Protection

- (1) E-1 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) 340142-0005 (9)(d) and (15), into the soil, water, or air, the operator would

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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, 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.

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 not store, or cause to have stored, any fuel or other petroleum products inside any riparian reserve area. All petroleum products shall be stored in durable containers and located so that any accidental release will be contained and not drain into any stream system. Refuel equipment a minimum of one hundred and fifty (150) feet from streams, ponds, or other wet areas.
- (3) 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, predesignated skid trails, designated skid trails, and newly constructed landings (except landings located along temp spurs to be decommissioned), and at any location where an existing barricade has been removed to provide access to units as shown on Exhibit A. This work shall be completed in the same season of use. 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 before soil moisture exceeds 25%.
- (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 barricade and place woody debris or other appropriate barriers (e.g. rocks, logs, and slash) on the first one hundred (100) feet of skid trails leading off system roads or landings in

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all ground-based yarding units shown on Exhibit A by October 15 of the year of harvest.

- (5) E-1 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 15 of each calendar year.
- (6) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall; Use a minimum 200 flywheel horsepower tractor with mounted rippers having shanks and teeth consistent with drawings and specifications shown on Exhibit R of this contract, which is attached hereto and made a part hereof.
 - (a) Rip to a depth of eighteen (18) inches or bedrock (whichever is shallower).
 - (b) Ripping will not occur unless soil moisture content is twenty-five percent or less (at a six (6) inch depth) as determined by the oven-dry method.
 - (c) Rip all temporary roads, road to be decommissioned, and newly constructed landings, as shown on Exhibit A. All ripping activities shall be performed in the same season of use. If hauling on a temporary road, road to be decommissioned, or its associated landings is not completed in the same year the road is constructed, the road will be storm-proofed and blocked by October 15 or before soil moisture exceeds 25%.
 - (d) Where the width of the trail permits, and no damage to residual trees would occur, skid trails within regeneration harvest units as shown on Exhibit A of this contract would be discontinuously subsoiled to a depth of at least 12 to 18 inches, to a point where stones 10 inches or larger diameter are the dominant substrate, or to bedrock (whichever is shallower). Where the Authorized Officer determines that subsoiling skid trails would cause unacceptable damage to the root systems of residual trees along a majority of the skid trail, such as where new skid trails are constructed within the dripline of leave trees, subsoiling may be intermittent, or scarification may be used instead. Equipment must be able to avoid rocky areas and adapt to changes in rock depth.

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Seed and mulch all temporary roads and newly constructed landings in all units as shown on Exhibit A by October 15 in the same year constructed. Seed must be native species, site-specific, and approved by the resource area botanist.

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. Apply native, site-specific seed approved by the resource area botanist and weed-free straw between February 1 to March 31 or September 1 and October 31 of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season. If a waiver is in place, seed and mulching shall be completed prior to the fall rains and as directed by the Authorized Officer.

Apply native, site-specific seed approved by the resource area botanist and weed-free straw to the top twenty (20) feet of the skyline-cable yarding corridor where yarding logs to the road results in extended soil exposure.

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*, *Elymus glaucus*, *Festuca californica*, *Festuca roemerii*, *Koeleria macrantha*, *Poa secunda*

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

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

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<u>Test</u>	<u>Grasses</u> (%)	<u>Forbs (%)</u>
Purity:	95	80
Germination:	85	70
Weed content (max):	0.2	0.2

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. The seed mixture and straw mulch may be provided by the BLM if the purchaser is unable to locate and buy the approved materials. The Purchaser shall reimburse the government for the cost of seed and straw, if provided by the government.

- (7) 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 C-10, which is attached hereto and made a part hereof.
- (a) Water-bar all temporary roads and newly constructed landings, shown on Exhibit A, in the same season of use. 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 before soil moisture exceeds 25%.
- (b) Water-bar all pre-designated skid trails, designated skid trails, and forwarder trails used for logging activities in all ground based units shown on Exhibit A, at locations approved by the Authorized Officer, by October 15 of the year of harvest unless a waiver is in place for ground-based yarding to

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extend the dry season. Install water-bars at the same time as subsoiling 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 BLM erosion-control measures for timber harvest, which considers slope and soil series.

(c) Construct water bars by hand and pull available slash into cable yarding corridors where gouging of mineral soil occurs for a continuous distance of 20 feet or more, as directed by the Authorized Officer, by October 15 of the same season of use.

- (8) E-3 The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
- (1) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;
 - (2) when, in order to comply with the Endangered Species Act, or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - (3) federal proposed, federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;
 - (4) when, in order to comply with a court order, which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;
 - (5) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

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- (6) species have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
- (7) when, in order to protect species which were identified for protection in accordance with management direction established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

Those operations necessary for a safe removal of personnel and equipment from the contract area and those directed by the Contracting Officer, which are required in order to leave the contract area in an acceptable condition will be permitted. Discontinued operations may be resumed upon receipt of written instructions and authorization by the Contracting Officer.

During any period of suspension, the Purchaser may withdraw performance and payment bond coverage aside from that deemed necessary by the Authorized Officer to secure cut and/or removed timber for which the Bureau of Land Management has not received payment, and/or unfulfilled contract requirements associated with harvest operations that have already occurred and associated postharvest requirements.

In the event of a suspension period or a combination of suspension periods that exceed a total of 30 days, the First Installment held on deposit may be temporarily reduced upon the written request of the Purchaser. For the period of suspension extending beyond 30 days, the First Installment on deposit may be reduced to five (5) percent of the First Installment amount listed in Section 3.b. of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, et seq.). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the First Installment to the full amount shown in Section 3.b.

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In the event of a suspension period or a combination of suspension periods that exceed a total of 30 days, the unamortized Out-of-Pocket Expenses for road or other construction required pursuant to Exhibit C of the contract shall be refunded or transferred to another BLM contract at the request of the Purchaser. Upon written notice from the Contracting Officer lifting the suspension, the Purchaser shall reimburse the Government the amounts refunded or transferred. The Purchaser may choose to pay this reimbursement at once or in installments payable at the same time as payments are due for the timber under the contract and in amounts approximately equal to the expenses associated with the timber for which payment is due.

In the event that operating time is lost as a result of the incorporation of additional contract requirements, or delays due to Endangered Species Act consultation with the U.S. Fish and Wildlife Service or U.S. National Marine Fisheries Service, or court-ordered injunctions, the Purchaser agrees that an extension of time, without reappraisal, will constitute a full and complete remedy for any claim that delays due to the suspension hindered performance of the contract or resulted in damages of any kind to the Purchaser.

The Contracting Officer may determine that it is necessary to modify the contract or terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, prevent incidental take of northern spotted owls in accordance with the ROD and RMP, protect species that have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, or comply with a court order. Following the issuance of a written notice that cutting and removal rights will be terminated, the Purchaser will be permitted to remove timber cut under the contract, if allowed by the Endangered Species Act, if able to proceed without causing incidental take of northern spotted owls in accordance with the ROD and RMP consistent with species protection in accordance with management direction

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established in the ROD and RMP, or court order requirements necessitating the modification or termination.

In the event the contract is modified or cutting and removal rights are terminated under this subsection, the Purchaser agrees that the liability of the United States shall be limited to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area. This calculation of liability shall utilize actual Purchaser costs and Government estimates of timber volumes. At the Authorized Officer's request, the Purchaser agrees to provide documentation of the actual costs incurred in the performance of the contract. In addition, the Purchaser shall be released from the obligation to pay the contract price for any timber which is not authorized to be removed from the contract area.

The Purchaser specifically and expressly waives any right to claim damages, other than those described in the preceding paragraphs, based on an alleged breach of any duty to the Purchaser, whether express or implied, in regard to the manner in which the Government defended the litigation which resulted in the court order affecting the operation of the contract. This waiver also extends to any claims based on effects on the operation of the contract that arise from litigation against another agency. Furthermore, the Purchaser specifically acknowledges and agrees that a court ruling that the Government violated the Administrative Procedures Act cannot be interpreted, in itself, to mean that the Government had not acted reasonably in regard to its duties to the Purchaser under this contract.

- (9) 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. Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls are nesting within 0.25 miles of the harvest units. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations (in writing). Without this approval, such operations are prohibited from March 1 through September 30 of each year.

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- (10) E-7 In order to prevent the spread of noxious weeds the Purchaser shall steam clean or pressure wash all logging, construction, rock crushing, brushing chipping, shredding or grinding and/or transportation equipment prior to entry onto BLM lands (and between sale locations) as directed by the Authorized Officer. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.

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.

(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 by two thousand eight hundred and two dollars (\$2,802.00). In the event that only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of \$0.75 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

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SPECIAL PROVISIONS

compensation to the Purchaser for any expense or loss incurred as a result of such scaling.

(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, prepare a fire prevention and control plan to the satisfaction of the State of Oregon, Department of Forestry.
- b) Provide and maintain in good repair, on the contract area, the following equipment for use during closed fire season or periods of fire danger:
 1. F-2a Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever people are working on the contract area. All fire fighting tools shall be kept in a sturdily constructed box which shall be painted red and lettered on the front or top in large letters, "For Fire Only." The box shall have a hinged lid and a hasp by which the lid can be sealed. One box may serve two landings not over six hundred (600) feet apart. When filled, the box shall not weigh over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and have sharp cutting edges. There shall not be less than four (4) tools in each box nor less than one (1) tool for each person working on the contract area. Three- fourths ($\frac{3}{4}$) of all fire tools shall be shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire.
 2. F-2b A round pointed size zero (0) or larger shovel in good condition, shall be within fifty (50) feet of any power saw when in operation.
 3. F-2c At each landing during periods of operation one (1) tank truck. Each truck shall have three hundred (300) gallons minimum capacity with five hundred (500) feet minimum of hose and a nozzle acceptable to the Authorized Officer and a mounted or portable pump conforming to the standards set forth in Oregon Revised

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SPECIAL PROVISIONS

Statute (ORS) 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.410 as amended or be provided with suitable adapters. At the close of each working day, all bulldozers and tank trucks shall be filled with fuel and made ready for immediate use. All tank trucks and portable tanks shall be filled with water and made available for immediate use.

4. F-2d Serviceable radio or radio-telephone equipment able to provide prompt and reliable communication between the contract area and Medford, Oregon. Such communication shall be available during periods of operation including the time watchservice is required.
5. F-2e A pair of headlights capable of being quickly attached to each bulldozer used on the contract area. The headlights shall be adequate to provide illumination sufficient to allow use of the bulldozers for fire fighting and construction of fire trails at night.
6. F-2f A headlight for each person in the woods crew adequate to provide sufficient illumination for night fire fighting. A headlight shall be of the type that can be fastened to the head so as to allow independent use of the hands. It shall be equipped with a battery case so designed that it can be either carried in the hip pocket or fastened to the belt. At least one extra set of batteries shall be provided for each such headlight.
7. F-2g Two (2) back-pack pumps at each landing and one (1) at each tail block, all to be kept full of water and in good operating condition.
8. F-2h A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Oregon State Forester shall be carried during the closed fire season or periods of fire danger by each saw operator using a power saw on the contract area. Such fire extinguisher shall be filled and in effective operating condition and shall at all times be immediately available to the operator when the saw is being fueled or the motor of the saw is running. A size "0" or larger shovel shall be available with each gas can when refueling. Any fueling of a power saw shall be done in an area which has first been cleared of all flammable material. Power saws shall

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be moved at least twenty (20) feet from the place of fueling before the engine is started. Each power saw shall be equipped with an exhaust system and a spark arresting device which are of types approved by the Oregon State Forester.

- (2) F-5 Where blocks and cables are used on the contract area during periods of fire danger, the Purchaser shall remove all flammable material at least ten (10) feet from the place where the tail or any other block will hang when the cable is tight. Such clearings shall be inspected periodically by the Purchaser and shall be kept free of flammable material.
- (3) F-8 Blasting caps and fuses shall not be used during closed fire season or any period of fire danger on any land administered by the Government. Blasting with electric detonators during the closed fire season or periods of fire danger is permitted only between the hours of 4:00 a.m. and 10:00 a.m.

(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.

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.

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- (2) SD-1f LOP AND SCATTER Lop and scatter all slash as directed by the Authorized Officer , concurrently with normal felling operations. All tops and side branches must be free of the central stem so that such slash is reduced to the point that it is within eighteen (18) inches of the ground at all points.
- (3) SD-4a SLASHING DAMAGED RESIDUALS. Slash all sprung or otherwise severely damaged trees greater than one (1) inch and less than six (6) inches D.B.H.O.B. concurrently with logging as designated by the Authorized Officer. All slashing is to be completed prior to any required piling of slash.
- (4) SD-1h HANDPILE Handpile and cover all slash as directed by the Authorized Officer in accordance with the following specifications:
1. Piling shall be accomplished by hand. Finished piles shall be tight and free of earth.
 2. Pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds three (3) feet in length.
 3. A six (6) foot by six (6) foot sheet of four (4) mil polyethylene black plastic shall be placed in each pile in a manner such that approximately one-third ($\frac{1}{3}$) of the pile lies above it to hold it in place and so that a two (2) foot by two (2) foot dry ignition point is maintained for one (1) year or until burned. The ignition point will consist of fine fuel material such as needles, small limbs, and branches less than one-half ($\frac{1}{2}$) inch in diameter and free of dirt. Piles shall be constructed by aligning individual pieces in the same direction and placing the heavier slash on top. Piles shall have a stable base to prevent toppling. The long axis of individual pieces shall be oriented up and down the slope. Protruding pieces shall be trimmed to allow covering in a manner that permits the pile to shed water. Height shall be no less than four (4) feet and no greater than six (6) feet; width shall not exceed six (6) feet; piles shall be circular and not windrowed. No pile shall be located within one hundred and twenty (120) feet of fish-bearing, perennial streams or within sixty (60) feet from non-fish-bearing, intermittent streams. Piles shall not be located on down logs, stumps, talus slopes, roadways, or drainage ditches. No pile shall be located within ten (10) feet of reserve trees,

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SPECIAL PROVISIONS

any other pile, or unit boundary. No pile shall be located within twenty five (25) feet of designated wildlife trees. No portion of the pile will be under the crown of any living conifer tree.

4. Operations required by this provision shall be kept current with yarding as directed by the Authorized Officer and shall be conducted as follows:

- a. 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.

- (5) SD-1i 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.

1. 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. 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.

- (6) SD-5 Perform logging residue reduction and site preparation work on approximately two hundred fifty (250) 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 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
Hand Pile & Cover Slash	\$580.00	150	\$87,000.00
Lop and Scatter	\$48.00	100	\$4,800
Total Appraised Cost			\$91,800.00

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SPECIAL PROVISIONS

- (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 41(G)(2)(a) differs from: Ninety one thousand eight hundred dollars (\$91,800.00) as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 41(G)(2)(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 overhead expenses. If the Purchaser's failure results in deferral of burning 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.

(H) Quarry Development

- (1) Q-1 The Purchaser shall develop a rock quarry in strict accordance with the plans and specifications shown on Exhibit C-11 which is attached hereto and made a part hereof. Exhibit C-11 contains 1 sheet.
- (a) Q-1b Any quarry access road construction and site preparation shown on exhibit C-11 shall be completed at each quarry location shown on Exhibit C-11 prior to removal of any rock from such area.

(I) Equal Opportunity in Employment

- (1) Certification of Nonsegregated Facilities attached hereto and made a part hereof.

Seasonal Restriction Matrix

Sheet 1 of 3

Obchain Timber Sale

ORM05-TS18-10

Possible Waived Times are Hatched

Restricted Times are Shaded

(Restriction Type) Sale Area	Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
		1	15	1	15	1	15	1	15	1	15	1	15
(NSO)* Units	Hand timber falling and bucking ^{1,2,3}												
	Helicopter operations ^{1,2,3}												
	Log processing, loading, log hauling ^{1,2,3}												
	Road and/or landing construction ^{1,3}												
	Road renovation, reconstruction, or closure ^{1,3}												
	Road decommissioning, or blocking ^{1,3}												
	Barricade and/or waterbar construction, ^{1,3}												
	Road grading, watering, or rocking, ^{1,3}												
	Road hauling ^{2,3}												
	Soil ripping, seeding, mulching ^{1,3}												
	Fuels chainsaw site prep, prescribed burning ^{1,2,3}												
	Hand timber falling and bucking ^{1,2,4}												
	Helicopter operations ^{1,2,4}												
(Goshawk) Units	Log processing, loading, log hauling ^{1,2,4}												
	Road and/or landing construction ^{1,4}												
	Road renovation, reconstruction, or closure ^{1,4}												
	Road decommissioning, or blocking ^{1,4}												
	Barricade and/or waterbar construction, ^{1,4}												
	Road grading, watering, or rocking, ^{1,4}												
	Road hauling ^{2,4}												
	Soil ripping, seeding, mulching ^{1,4}												
	Fuels chainsaw site prep, prescribed burning ^{1,2,4}												
	Hand timber falling and bucking ^{1,2,4}												

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

² Hauling restriction may be shortened or extended (see L-19 in contract)

³ Spotted Owl seasonal restrictions may be waived if it is determined that spotted owl nesting and/or fledgling activities are not occurring in the area.

⁴ Goshawk and Other Raptor Species seasonal restrictions may be waived if surveys determine nesting is not occurring or completed in the area

Seasonal Restriction Matrix

Sheet 2 of 3

Obenchain Timber Sale

ORM05-TS18-10

▨ Possible Waived Times are Hatched

■ Restricted Times are Shaded

(Restriction Type) Sale Area	Activity	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
(Other Raptor Species) Units 13-1 23-1 23-2	Hand timber falling and bucking ^{1,2,3}																								
	Helicopter operations ^{1,2,3}																								
	Log processing, loading, log hauling ^{1,2,3}																								
	Road and/or landing construction ^{1,3}																								
	Road renovation, reconstruction, or closure ^{1,3}																								
	Road decommissioning, or blocking ^{1,3}																								
	Barricade and/or waterbar construction, ^{1,3}																								
	Road grading, watering, or rocking, ^{1,3}																								
	Road hauling ^{2,3}																								
	Soil ripping, seeding, mulching ^{1,3}																								
Skid Trails, Roads, Landings and Rock Quarries	Fuels chainsaw site prep, prescribed burning ^{1,2,3}																								
	Construction ¹																								
	Reconstruction ¹																								
	Renovation ¹																								
	Decommissioning ¹																								
	Culvert removal and/or replacement ¹																								
	Quarry activities ¹																								
	Soil ripping ¹																								

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

² Hauling restriction may be shortened or extended (see L-19 in contract)

³ Spotted Owl seasonal restrictions may be waived if it is determined that spotted owl nesting and/or fledgling activities are not occurring in the area.

⁴ Goshawk and Other Raptor Species seasonal restrictions may be waived if surveys determine nesting is not occurring or completed in the area


Seasonal Restriction Matrix

Sheet 3 of 3

Obenchain Timber Sale

ORM05-TS18-10

 Possible Waived Times are Hatched

 Restricted Times are Shaded

(Restriction Type) Sale Area	Activity	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
		1	15	1	15	1	15	1	15	1	15	1	15
(Wet Season)	Hand timber falling and bucking ^{1,2}												
	Helicopter operations ^{1,2}												
All Units	Log processing, loading, log hauling ^{1,2}												
	Road and/or landing construction ¹												
	Road renovation, reconstruction, or closure ¹												
	Road decommissioning, or blocking ¹												
	Barricade and/or waterbar construction, ¹												
	Road grading, watering, or rocking, ¹												
	Road hauling ²												
	Soil ripping, seeding, mulching ¹												
	Fuels chainsaw site prep, prescribed burning ^{1,2}												

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

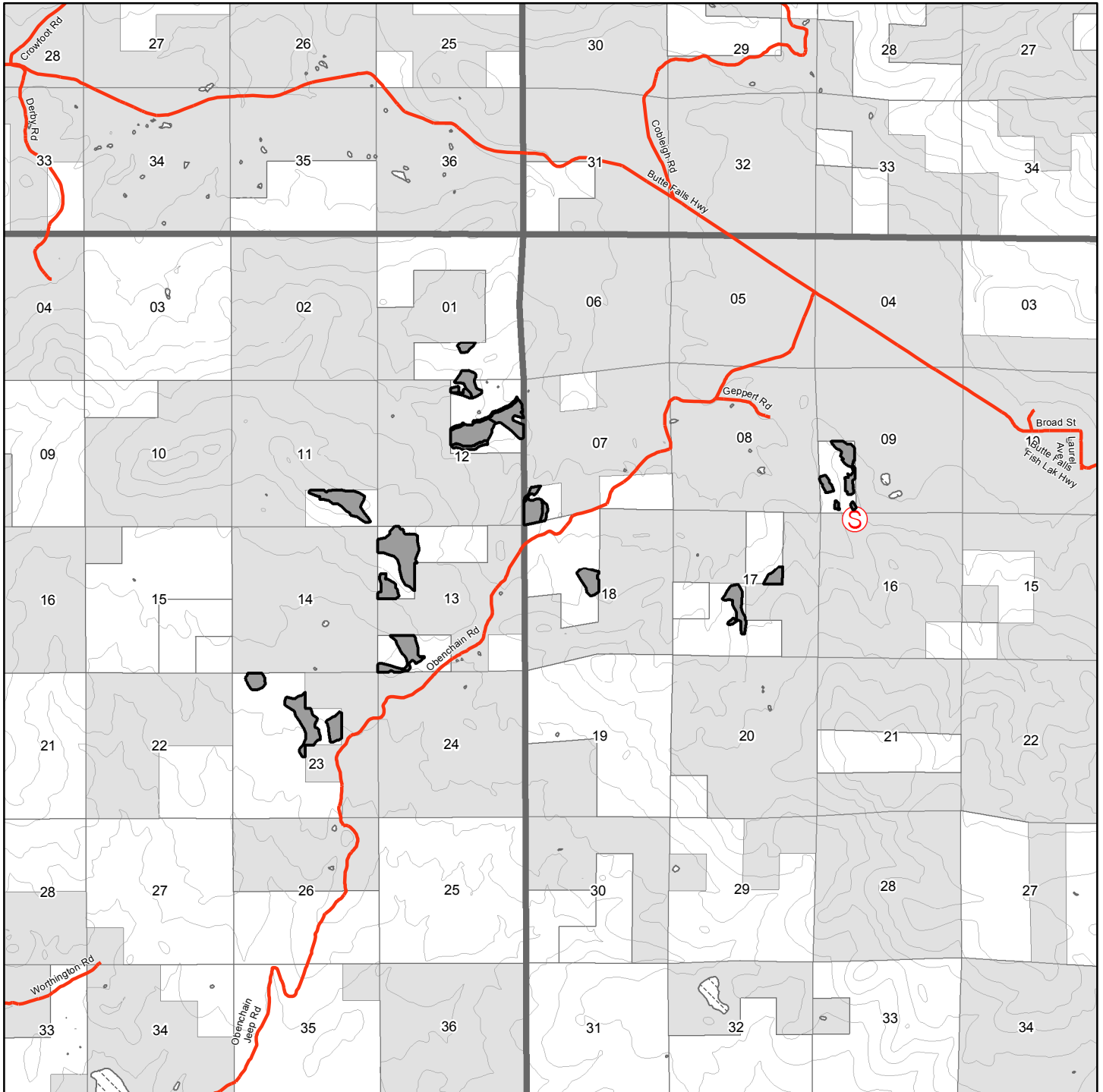
² Hauling restriction may be shortened or extended (see L-19 in contract)

³ Spotted Owl seasonal restrictions may be waived if it is determined that spotted owl nesting and/or fledgling activities are not occurring in the area.

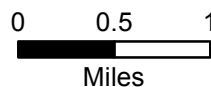
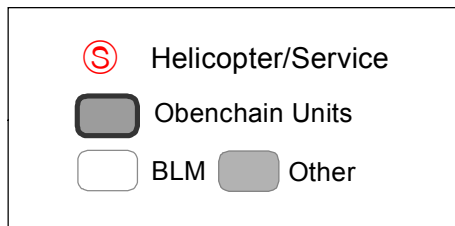
⁴ Goshawk and Other Raptor Species seasonal restrictions may be waived if surveys determine nesting is not occurring or completed in the area

U.S.D.I. BLM MEDFORD DISTRICT SALE NO.2018-10
 OBENCHAIN TIMBER SALE
 BUTTE FALLS RESOURCE AREA
 JACKSON COUNTY

TIMBER SALE LOCATION MAP
 CONTRACT NO.ORM05-TS-2018-10



Medford District BLM - July 2018



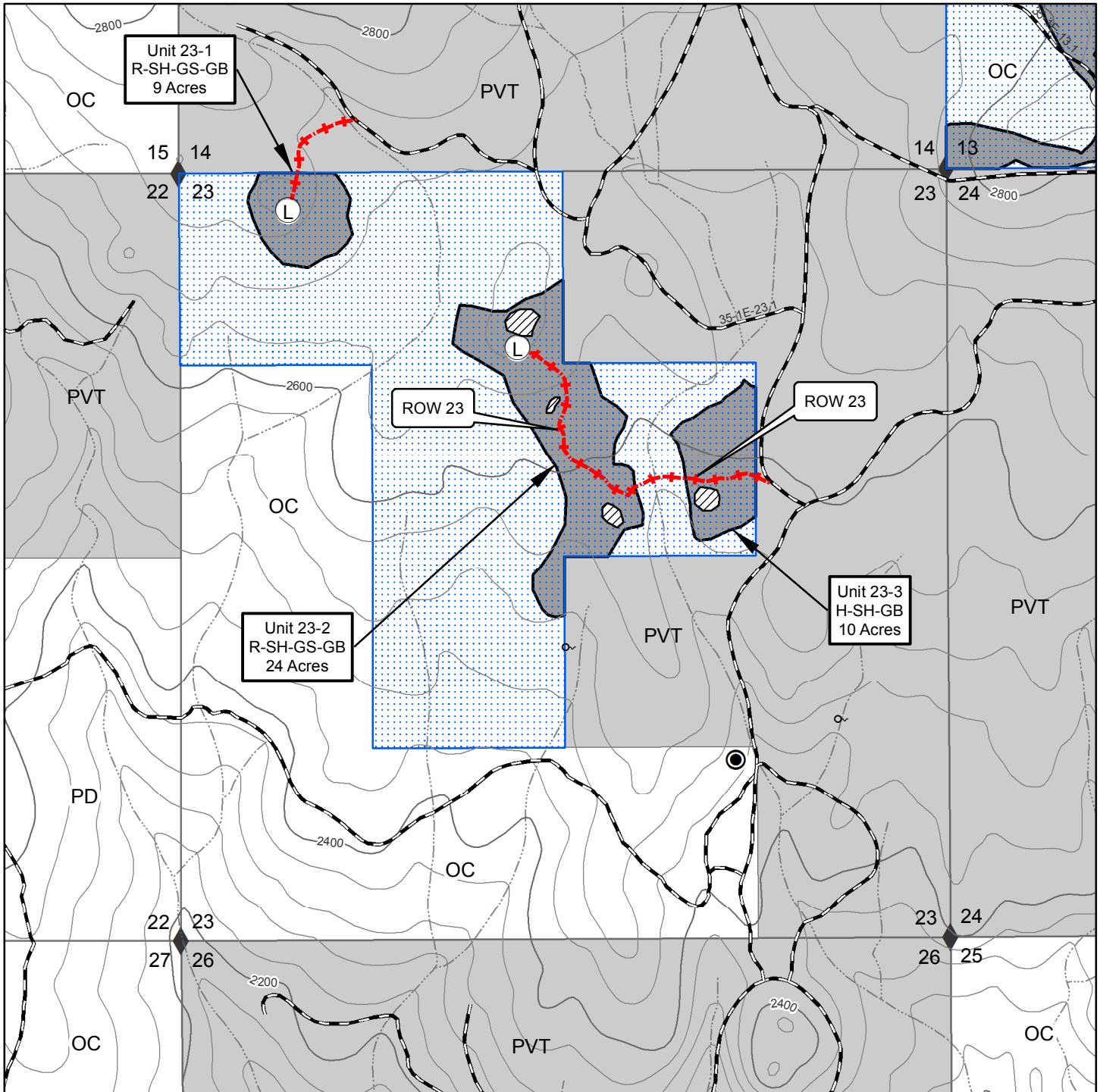
1 inch = 1 miles
 Contours = 40 feet

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U.S.D.I. BLM MEDFORD DISTRICT SALE NO.2018-10
T35S-R01E SECTION 23, WILL. MER
OBENCHAIN TIMBER SALE

TIMBER SALE CONTRACT MAP
CONTRACT NO.ORM05-TS-2018-10
EXHIBIT A
PAGE 1 OF 12



Medford District BLM
July 2018

1 inch = 1,000 feet

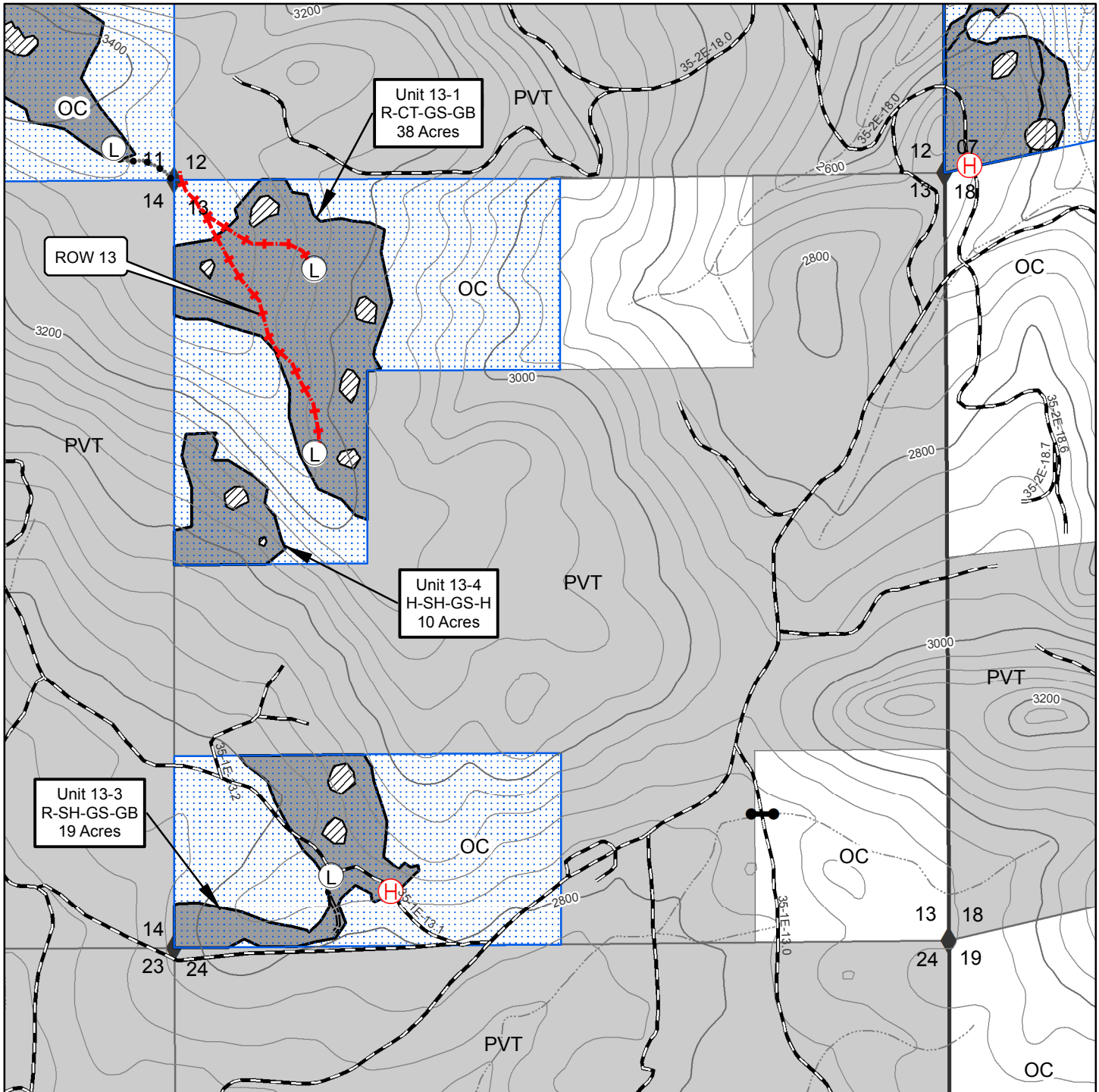
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OBENCHAIN TIMBER SALE

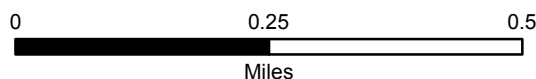
TIMBER SALE CONTRACT MAP
CONTRACT NO.ORM05-TS-2018-10
EXHIBIT A
PAGE 2 OF 12



Medford District BLM
July 2018

1 inch = 1,000 feet

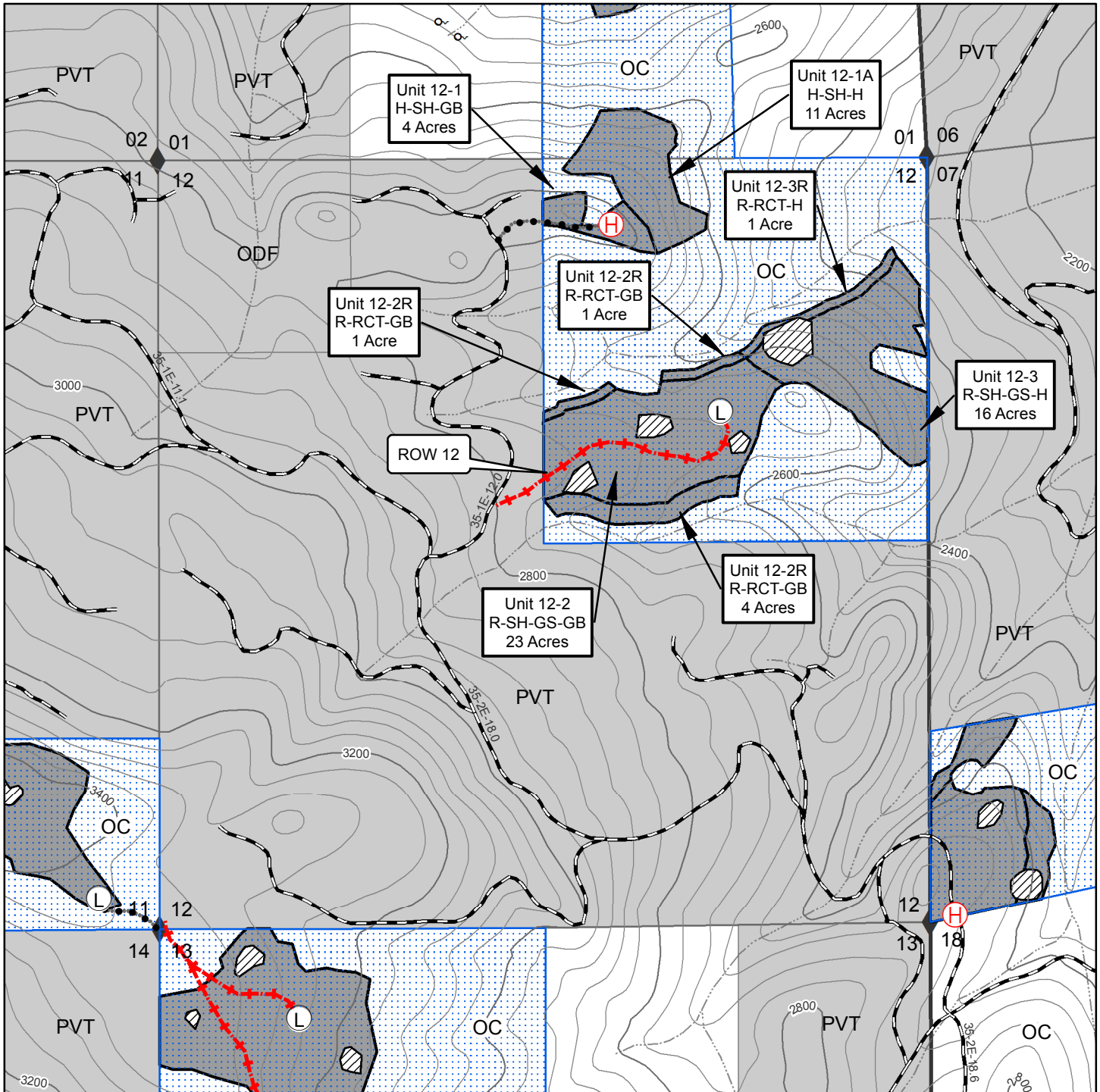
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U.S.D.I. BLM MEDFORD DISTRICT SALE NO.2018-10
T35S-R01E SECTION 12, WILL. MER
OBENCHAIN TIMBER SALE

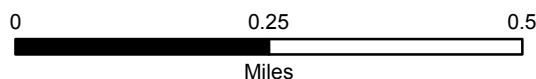
TIMBER SALE CONTRACT MAP
CONTRACT NO.ORM05-TS-2018-10
EXHIBIT A
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Medford District BLM
July 2018

1 inch = 1,000 feet

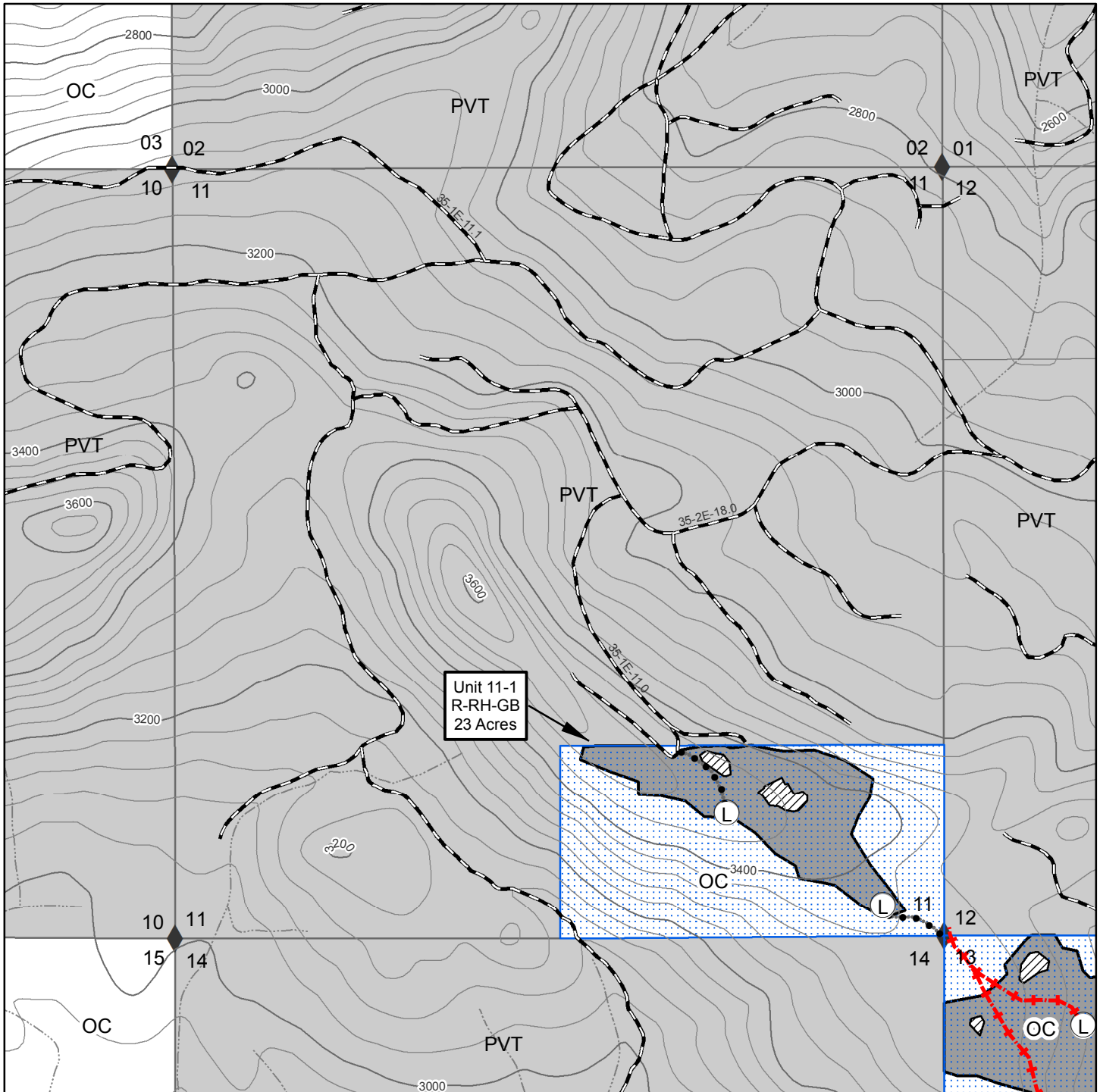
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U.S.D.I. BLM MEDFORD DISTRICT SALE NO.2018-10
T35S-R01E SECTION 11, WILL. MER
OBENCHAIN TIMBER SALE

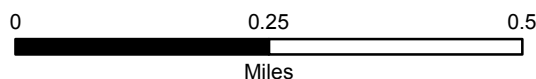
TIMBER SALE CONTRACT MAP
CONTRACT NO.ORM05-TS-2018-10
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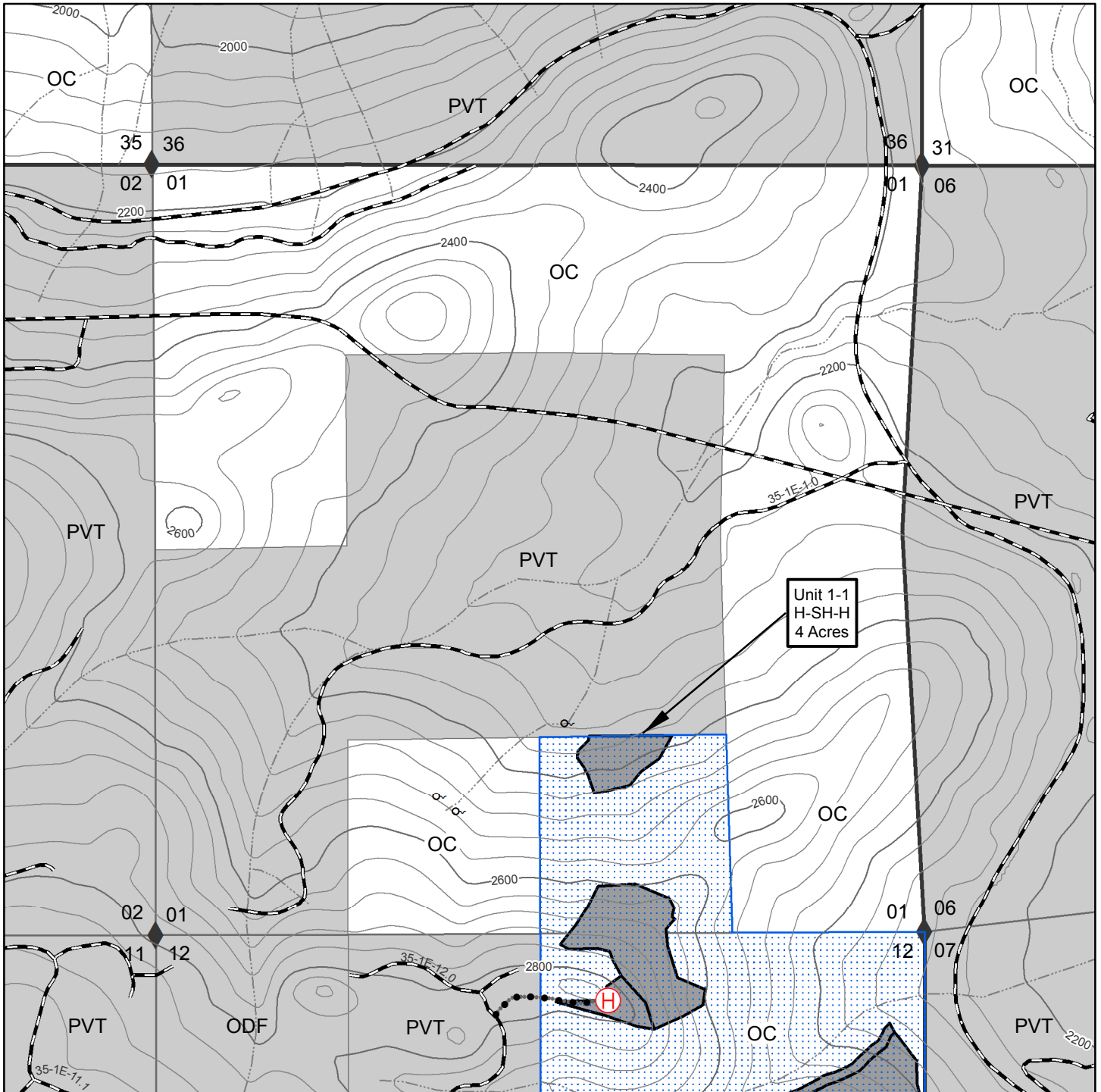
Medford District BLM
July 2018

1 inch = 1,000 feet

Contours = 40 feet



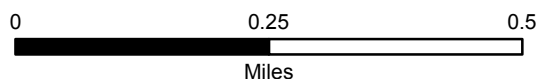
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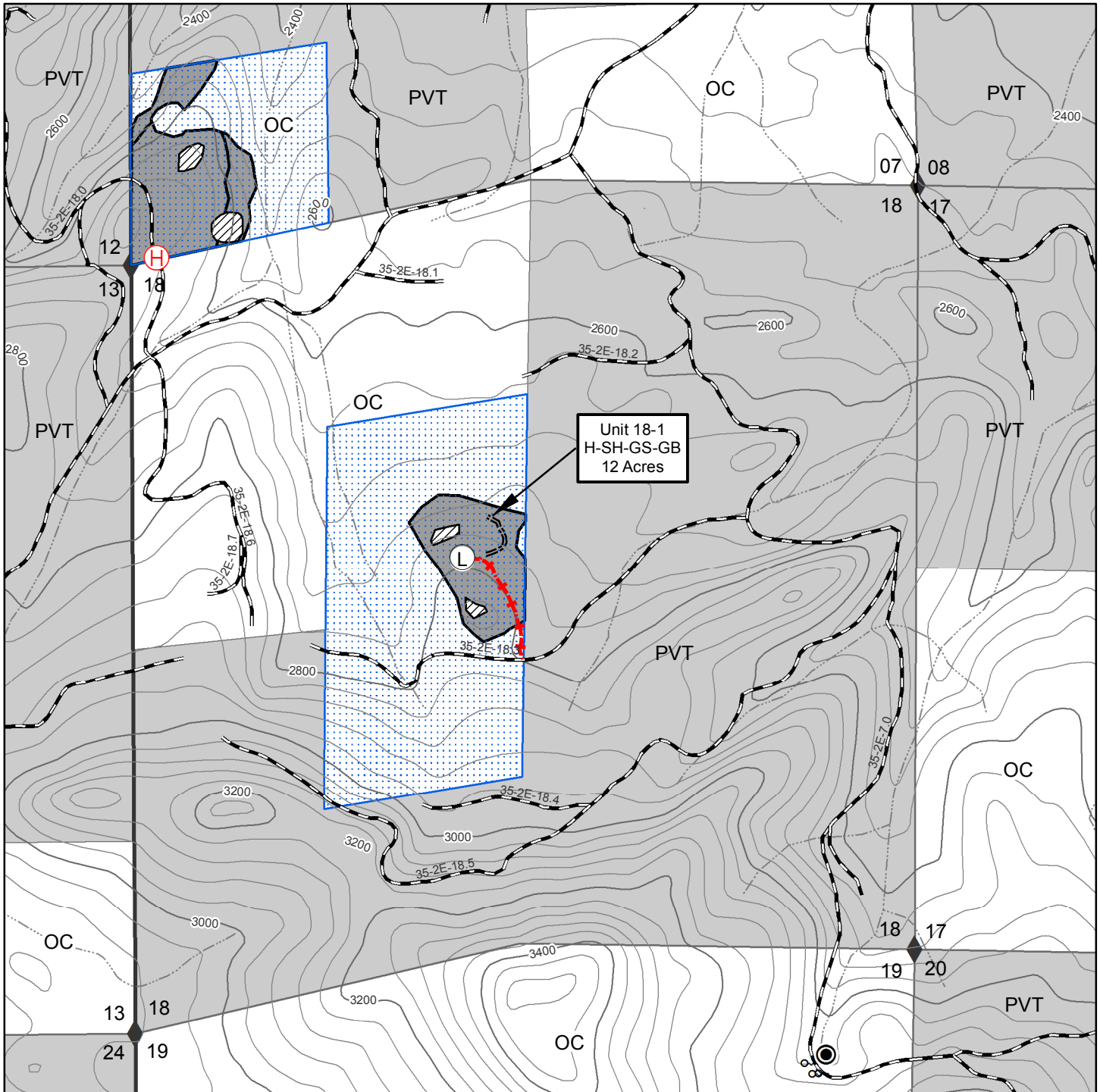
Medford District BLM
July 2018

1 inch = 1,000 feet

Contours = 40 feet



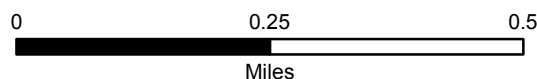
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Medford District BLM
July 2018

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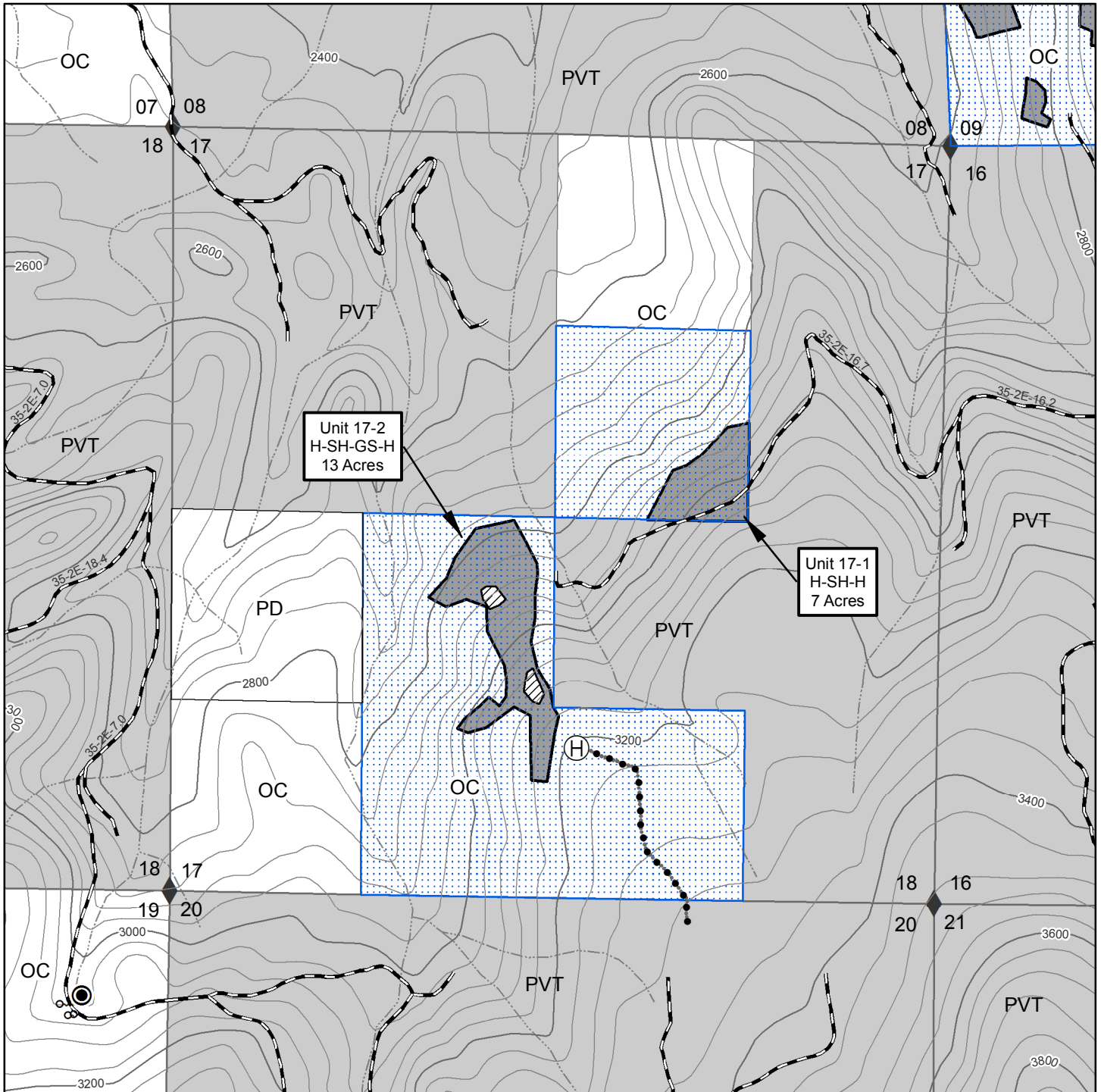
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U.S.D.I. BLM MEDFORD DISTRICT SALE NO.2018-10
T35S-R02E SECTION 17, WILL. MER
OBENCHAIN TIMBER SALE

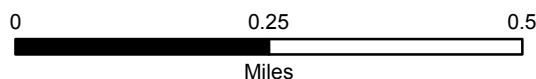
TIMBER SALE CONTRACT MAP
CONTRACT NO.ORM05-TS-2018-10
EXHIBIT A
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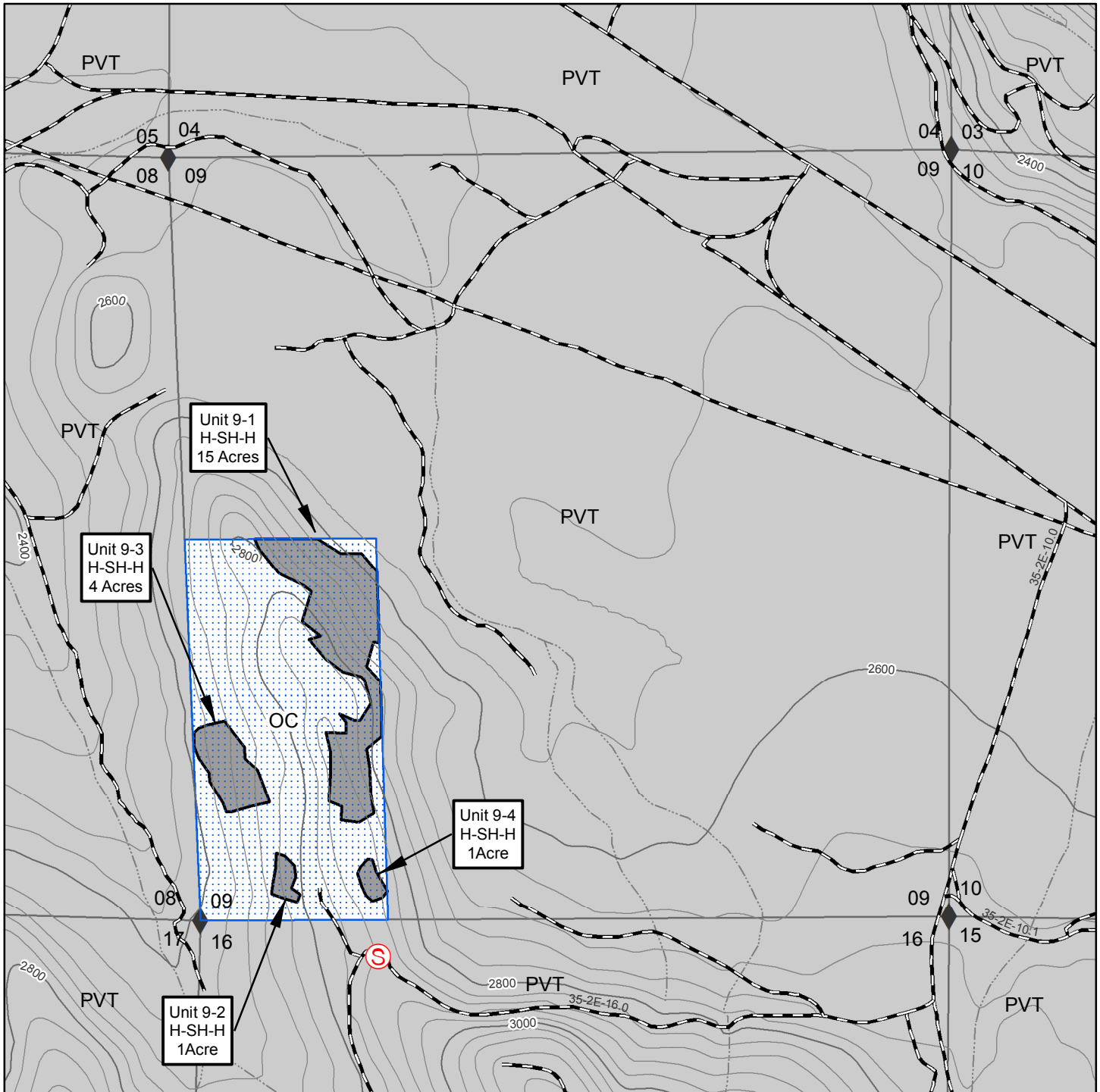
Medford District BLM
July 2018

1 inch = 1,000 feet

Contours = 40 feet



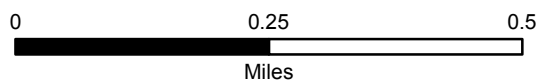
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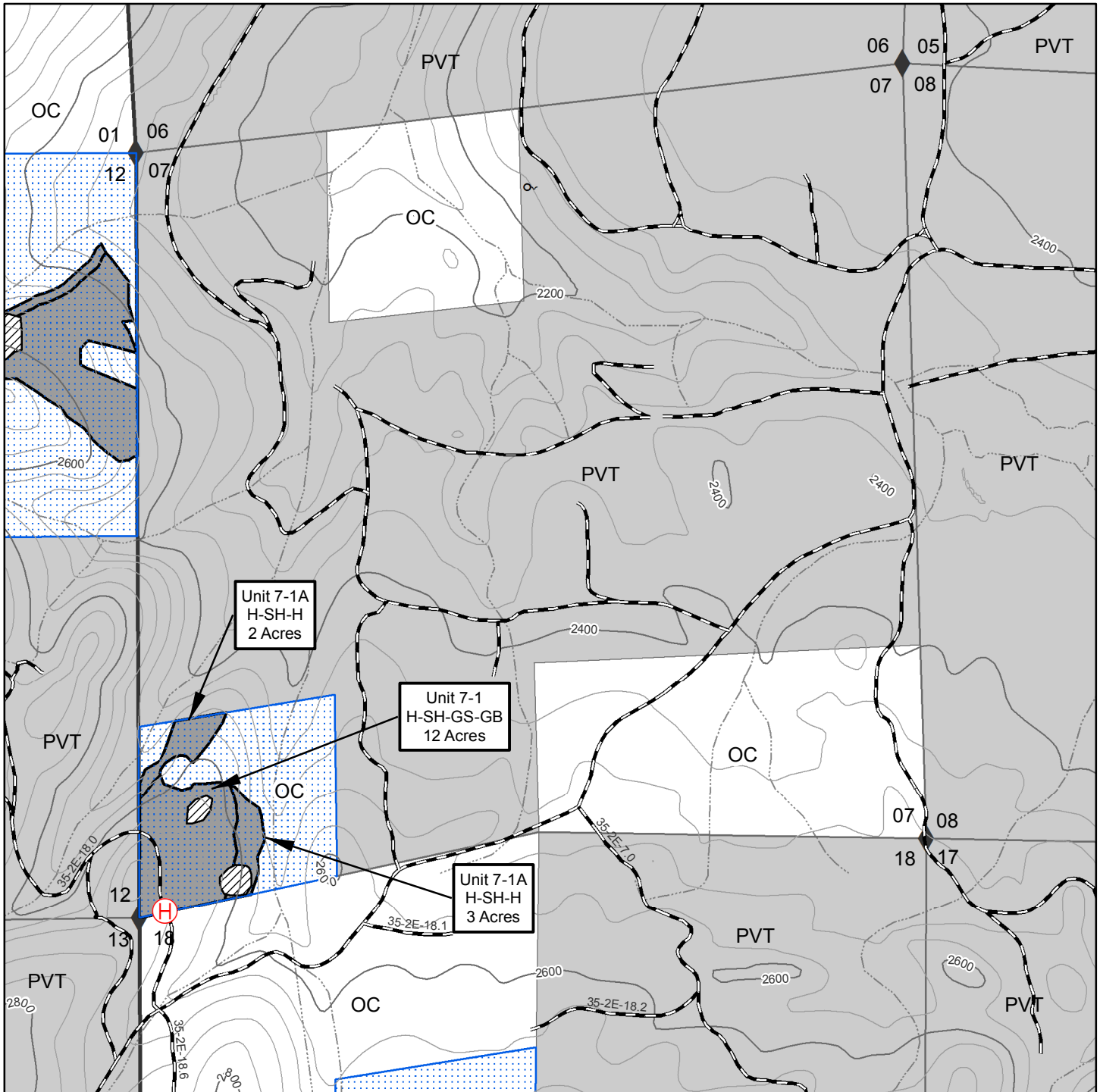
Medford District BLM
July 2018

1 inch = 1,000 feet

Contours = 40 feet



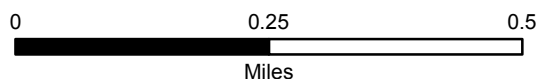
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Medford District BLM
July 2018

1 inch = 1,000 feet

Contours = 40 feet


























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U.S.D.I. BLM MEDFORD DISTRICT SALE NO. 2018-10
T. 35S. R. 01E., SEC 01, 11, 12, 13, 23 WILL. MER.
T. 35S. R. 02E., SEC 07, 09, 17, 18 WILL. MER.
OBENCHAIN TIMBER SALE

TIMBER SALE CONTRACT MAP
CONTRACT NO. ORM05- TS-2018-10
EXHIBIT A
PAGE 10 OF 12

Legend

	Helicopter		Transmission Line
	Log		Stream
	Helicopter/Service		40 ft. Intermediate Contour
	Helicopter/Log		200 ft. Index Contour
	Found Corner		Boundary of Cutting Area
	Spring		Government Lot
	Water Source		Contract Area
	Gate, Existing		BLM Administered Land
	Barricade, Existing		Non-BLM Land
	Road		Skip Reserve Areas
	New Road Construction		
	Temporary Spur Reconstruction		
	Pre-designated Skid		

U.S.D.I. BLM MEDFORD DISTRICT SALE NO. 2018-10
T. 35S. R. 01E., SEC 01, 11, 12, 13, 23 WILL. MER.
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OBENCHAIN TIMBER SALE

TIMBER SALE CONTRACT MAP
CONTRACT NO. ORM05- TS-2018-10
EXHIBIT A
PAGE 11 OF 12

R - CT - GS - GB	COMMERCIAL THIN, GROUP SELECTION (ORANGE PAINT) GROUND BASED: UNITS: 13-1
R - SH - GS- H	SELECTION HARVEST, GROUP SELECTION (ORANGE PAINT) HELICOPTER: UNITS: 12-3
R - SH - GS- GB	SELECTION HARVEST, GROUP SELECTION (ORANGE PAINT) GROUND BASED: UNITS: 12-2, 13-3, 23-1, 23-2
H - SH - GS - GB	SELECTION HARVEST, GROUP SELECTION (BLUE PAINT) GROUND BASED: UNITS: 7-1, 18-1
H - SH - H	SELECTION HARVEST (BLUE PAINT) HELICOPTER: UNITS: 1-1, 7-1A, 9-1, 9-2, 9-3, 9-4, 12-1A, 17-1
H - SH - GS - H	SELECTION HARVEST, GROUP SELECT (BLUE PAINT) HELICOPTER: UNITS: 13-4, 17-2
H - SH - GB	SELECTION HARVEST (BLUE PAINT) GROUND BASED: 12-1, 23-3
R - RH - GB	REGENERATION HARVEST (ORANGE PAINT) GROUND BASED: 11-1
R - RCT - GB	RIPARIAN COMMERCIAL THIN (ORANGE PAINT) GROUND BASED: 12-2R
R - RCT - H	RIPARIAN COMMERCIAL THIN (ORANGE PAINT) HELICOPTER: 12-3R

U.S.D.I. BLM MEDFORD DISTRICT SALE NO. 18-0010
T. 35S. R. 1E., SEC.1, 11, 12, 13, 23, WILL. MER.
T. 35S. R. 2E., SEC. 7, 9, 17, 18, WILL. MER.
OBENCHAIN TIMBER SALE

TIMBER SALE CONTRACT MAP
CONTRACT NO. ORM05-TS18-10
EXHIBIT A
PAGE 12 OF 12

Section Number	Unit Number	Unit Acres	Reserve Acres	Contract Acres
1	1-1, 12-1A	8	392	400
7	7-1, 7-1A	17	143	160
9	9-1, 9-2, 9-3, 9-4	21	59	80
11	11-1	23	57	80
12	12-1, 12-1A, 12-2, 12-2R, 12-3, 12-3R	57	103	160
13	13-1, 13-3, 13-4	67	213	280
16	Service Landing	N/A	N/A	N/A
17	17-1, 17-2	20	260	280
18	18-1	12	188	200
23	23-1, 23-2, 23-3	43	357	400
Totals		268	1772	2040



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

Timber Appraisal

Sale Name: Obenchain TS	Sale Date: Thursday, August 23, 2018
BLM District: Medford DO	Unit of Measure: 16' MBF
Contract #: ORM05-TS-2018.0010	Contract Term: 36 months
Sale Type: Advertised	Contract Mechanism: 5450-3
	Sale of Timber - Lump Sum

Content

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

Prepared By: Darner, Richard J

Approved By: Rentz, George C

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Jackson	35S	2E	17	SW1/4NE1/4, E1/2SW1/4, SW1/4SE1/4	Willamette
O&C	Jackson	35S	1E	12	NE1/4	Willamette
O&C	Jackson	35S	2E	7	SW1/4SW1/4	Willamette
O&C	Jackson	35S	2E	18	SE1/4NW1/4, NE1/4SW1/4	Willamette
O&C	Jackson	35S	2E	9	W1/2SW1/4	Willamette
O&C	Jackson	35S	1E	1	SW1/4SE1/4	Willamette
O&C	Jackson	35S	1E	11	S1/2SE1/4	Willamette
O&C	Jackson	35S	1E	13	NE1/4NW1/4, W1/2NW1/4, S1/2SW1/4	Willamette
O&C	Jackson	35S	1E	23	SW1/4NE1/4, N1/2NW1/4, SE1/4NW1/4, NE1/4SW1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	3,460.0	3,803.0	3,836.0	60,321	1,036	13,077
White Fir	202.0	224.0	234.0	2,214	42	418
Incense-cedar	46.0	49.0	65.0	828	147	568
Ponderosa Pine	28.0	30.0	30.0	645	0	134
Totals	3,736.0	4,106.0	4,165.0	64,008	1,225	14,197

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
23.0	245.0	3.0	271.0	13.8

Logging Costs

Stump to Truck	\$720,800.78
Transportation	\$138,084.78
Road Construction	\$261,779.96
Maintenance/Rockwear	\$39,785.81
Road Use	\$5,417.20
Other Allowances	\$122,587.16
Total:	\$1,288,455.69
Total Logging Cost per MBF:	\$344.88

Utilization Centers

Location	Distance	% of Net Volume
White City, OR	26.5 miles	100 %

Profit & Risk

Basic Profit & Risk	9 %
Additional Risk	3 %
Total Profit & Risk	12 %

Tract Features

Quadratic Mean DBH	16.1 in
Average GM Log	64 bf
Average Volume per Acre	13.8 mbf
Recovery	90 %
<u>Net MBF volume:</u>	
Green	3,736.0 mbf
Salvage	0 mbf
Export	0 mbf
<u>Ground Base Logging:</u>	
Percent of Sale Volume	73 %
Average Yarding Slope	10 %
Average Yarding Distance	375 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	27 %
Average Yarding Slope	40 %
Average Yarding Distance	1750 ft

Cruise

Cruise Completed	May 2018
Cruised By	Darner, Parks, Worman, Siemer, Rentz
Cruise Method	All species 3P cruised.

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF	Appraised Value
Douglas Fir	13,077	3,460.0	\$826.99	\$99.24	\$344.88	\$0.00	\$382.90	\$1,324,834.00
White Fir	418	202.0	\$584.46	\$70.14	\$344.88	\$0.00	\$169.40	\$34,218.80
Incense-cedar	568	46.0	\$652.63	\$78.32	\$344.88	\$0.00	\$229.40	\$10,552.40
Ponderosa Pine	134	28.0	\$504.83	\$60.58	\$344.88	\$0.00	\$99.40	\$2,783.20
Totals	14,197	3,736.0						\$1,372,388.40

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			6.0 %	54.0 %	36.0 %	4.0 %	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir				64.0 %	34.0 %	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				48.0 %	44.0 %	8.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Ponderosa Pine				64.0 %	28.0 %	8.0 %	

Obenchain TS**Unit Summary****ORM05-TS-2018.0010****Unit: 1-1**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	43.0	47.0	47.0	228
White Fir	0.3	0.3	0.3	1
Totals:	43.3	47.3	47.3	229

Net Volume/Acre: 10.8 MBF

Regeneration Harvest	0.0
Partial Cut	4.0
Right of Way	0.0
Total Acres:	4.0

Unit: 7-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	102.0	112.0	113.0	352
Incense-cedar	0.2	0.2	0.3	3
Totals:	102.2	112.2	113.3	355

Net Volume/Acre: 8.5 MBF

Regeneration Harvest	0.0
Partial Cut	12.0
Right of Way	0.0
Total Acres:	12.0

Unit: 7-1A

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	64.0	71.0	71.0	247
Totals:	64.0	71.0	71.0	247

Net Volume/Acre: 12.8 MBF

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

Unit: 9-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	179.0	197.0	199.0	679
Totals:	179.0	197.0	199.0	679

Net Volume/Acre: 11.9 MBF

Regeneration Harvest	0.0
Partial Cut	15.0
Right of Way	0.0
Total Acres:	15.0

Unit: 9-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	16.0	17.0	17.0	57
Totals:	16.0	17.0	17.0	57

Net Volume/Acre: 16.0 MBF

Regeneration Harvest	0.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	1.0

Unit: 9-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	39.0	43.0	43.0	141
Ponderosa Pine	6.0	6.0	6.0	21
Incense-cedar	3.0	4.0	4.0	57
Totals:	48.0	53.0	53.0	219

Net Volume/Acre: 12.0 MBF

Regeneration Harvest	0.0
Partial Cut	4.0
Right of Way	0.0
Total Acres:	4.0

Unit: 9-4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	10.0	11.0	11.0	44
Totals:	10.0	11.0	11.0	44

Net Volume/Acre: 10.0 MBF

Regeneration Harvest	0.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	1.0

Unit: 11-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	426.0	469.0	473.0	864
White Fir	28.0	31.0	32.0	85
Incense-cedar	14.0	15.0	20.0	128
Totals:	468.0	515.0	525.0	1,077

Net Volume/Acre: 20.3 MBF

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

Unit: 12-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	38.0	41.0	42.0	159
Ponderosa Pine	0.1	0.2	0.2	1
Totals:	38.1	41.2	42.2	160

Net Volume/Acre: 9.5 MBF

Regeneration Harvest	0.0
Partial Cut	4.0
Right of Way	0.0
Total Acres:	4.0

Unit: 12-1A

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	73.0	81.0	81.0	288
White Fir	3.0	3.0	3.0	6
Incense-cedar	0.2	0.2	0.3	1
Totals:	76.2	84.2	84.3	295

Net Volume/Acre: 6.9 MBF

Regeneration Harvest	0.0
Partial Cut	11.0
Right of Way	0.0
Total Acres:	11.0

Unit: 12-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	320.0	349.0	354.0	1,167
White Fir	119.8	132.7	139.6	222
Incense-cedar	7.4	8.2	11.5	108
Totals:	447.2	489.9	505.1	1,497

Net Volume/Acre: 19.4 MBF

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

Unit: 12-2R

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	63.0	69.0	70.0	286
White Fir	14.0	16.0	16.0	37
Incense-cedar	0.5	0.5	0.7	10
Totals:	77.5	85.5	86.7	333

Net Volume/Acre: 12.9 MBF

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

Unit: 12-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	229.0	252.0	254.0	775
White Fir	0.5	0.6	0.6	2
Incense-cedar	0.2	0.2	0.3	4
Ponderosa Pine	0.1	0.2	0.2	1
Totals:	229.8	253.0	255.1	782

Net Volume/Acre: 14.4 MBF

Regeneration Harvest	0.0
Partial Cut	16.0
Right of Way	0.0
Total Acres:	16.0

Unit: 12-3R

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	15.0	17.0	17.0	71
Totals:	15.0	17.0	17.0	71

Net Volume/Acre: 15.0 MBF

Regeneration Harvest	0.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	1.0

Unit: 13-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	563.0	619.0	624.0	1,954
Ponderosa Pine	2.0	2.0	2.0	9
Incense-cedar	0.2	0.2	0.3	4
White Fir	0.1	0.1	0.2	1
Totals:	565.3	621.3	626.5	1,968

Net Volume/Acre: 14.9 MBF

Regeneration Harvest	0.0
Partial Cut	38.0
Right of Way	0.0
Total Acres:	38.0

Unit: 13-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	296.0	326.0	328.0	1,306
Incense-cedar	6.0	6.0	8.0	80
Ponderosa Pine	2.0	2.0	2.0	7
Totals:	304.0	334.0	338.0	1,393

Net Volume/Acre: 16.0 MBF

Regeneration Harvest	0.0
Partial Cut	19.0
Right of Way	0.0
Total Acres:	19.0

Unit: 13-4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	104.0	115.0	116.0	365
Incense-cedar	1.0	1.0	1.0	11
Ponderosa Pine	0.2	0.2	0.2	2
Totals:	105.2	116.2	117.2	378

Net Volume/Acre: 10.5 MBF

Regeneration Harvest	0.0
Partial Cut	10.0
Right of Way	0.0
Total Acres:	10.0

Unit: 17-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	64.0	70.0	71.0	187
White Fir	15.0	17.0	18.0	31
Totals:	79.0	87.0	89.0	218

Net Volume/Acre: 11.3 MBF

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

Unit: 17-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	113.0	124.0	125.0	403
Ponderosa Pine	1.0	1.0	1.0	3
Incense-cedar	0.4	0.5	1.0	7
White Fir	0.3	0.3	0.3	1
Totals:	114.7	125.8	127.3	414

Net Volume/Acre: 8.8 MBF

Regeneration Harvest	0.0
Partial Cut	13.0
Right of Way	0.0
Total Acres:	13.0

Unit: 18-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	135.0	148.0	150.0	781
Incense-cedar	0.5	0.5	1.0	5
Ponderosa Pine	0.4	0.5	0.5	3
Totals:	135.9	149.0	151.5	789

Net Volume/Acre: 11.3 MBF

Regeneration Harvest	0.0
Partial Cut	12.0
Right of Way	0.0
Total Acres:	12.0

Unit: 23-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	139.0	153.0	154.0	707
Ponderosa Pine	3.0	3.0	3.0	11
Incense-cedar	0.2	0.2	0.2	3
Totals:	142.2	156.2	157.2	721

Net Volume/Acre: 15.8 MBF

Regeneration Harvest	0.0
Partial Cut	9.0
Right of Way	0.0
Total Acres:	9.0

Unit: 23-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	208.0	229.0	231.0	1,163
Incense-cedar	6.0	6.0	8.0	80
Ponderosa Pine	3.2	3.9	3.9	33
Totals:	217.2	238.9	242.9	1,276

Net Volume/Acre: 9.1 MBF

Regeneration Harvest	0.0
Partial Cut	24.0
Right of Way	0.0
Total Acres:	24.0

Unit: 23-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	56.0	62.0	62.0	303
Ponderosa Pine	2.0	3.0	3.0	16
Incense-cedar	2.0	2.0	3.0	26
Totals:	60.0	67.0	68.0	345

Net Volume/Acre: 6.0 MBF

Regeneration Harvest	0.0
Partial Cut	10.0
Right of Way	0.0
Total Acres:	10.0

Unit: ROW 12

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	34.0	37.0	37.0	99
White Fir	21.0	23.0	24.0	32
Incense-cedar	1.0	1.0	1.0	4
Totals:	56.0	61.0	62.0	135

Net Volume/Acre: 56.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	1.0

Unit: ROW 13

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	100.0	110.0	111.0	291
Ponderosa Pine	2.0	2.0	2.0	7
Incense-cedar	0.2	0.3	0.4	4
Totals:	102.2	112.3	113.4	302

Net Volume/Acre: 102.2 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	1.0

Unit: ROW 23

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	31.0	34.0	35.0	160
Ponderosa Pine	6.0	6.0	6.0	20
Incense-cedar	3.0	3.0	4.0	33
Totals:	40.0	43.0	45.0	213

Net Volume/Acre: 40.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	1.0
Total Acres:	1.0

Total Stump To Truck	Net Volume	\$/MBF
\$720,800.78	3,736.0	\$192.93

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

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Helicopter	GM MBF	1,079.5	\$371.68	\$401,228.56	
Wheel Skidder	GM MBF	3,026.5	\$99.48	\$301,076.22	
Subtotal				\$702,304.78	

Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
snag falling sec. 17 heli landing	Day	1.0	\$300.00	\$300.00	
Directional Falling	MBF	50.0	\$35.00	\$1,750.00	Directional Falling = directional falling away from boundary / skips
Oversize falling	MBF	400.0	\$30.00	\$12,000.00	Oversize 21"+ DBH handfalling
Subtotal				\$14,050.00	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Feller Buncher	Hour	9.0	\$134.00	\$1,206.00	Harvester = 3 moves @ 3 hr / move
Shovel	Hour	9.0	\$134.00	\$1,206.00	Shovel =Loader 3 moves @ 3 hr /move
Shovel	Hour	9.0	\$134.00	\$1,206.00	Shovel = processor 3 moves @ 3hr/move
Track Skidder	Hour	9.0	\$92.00	\$828.00	Track skidder = 3 moves @ 3 hr / move
Subtotal				\$4,446.00	

Comments:

Additional helicopter moves captured in helicopter STT costs.

Wheel skidder = mechanized harvest

Total	Net Volume	\$/MBF
\$138,084.78	3,736.0	\$36.96

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
White City, OR	26.5	All species	GM MBF	4,106.0	\$33.63	\$138,084.78	100 %

Engineering Allowances

Total	Net Volume	\$/MBF
\$306,982.97	3,736.0	\$82.17

Cost Item	Total Cost
Road Construction:	\$261,779.96
Road Maintenance/Rockwear:	\$39,785.81
Road Use Fees:	\$5,417.20

Total	Net Volume	\$/MBF
\$122,587.16	3,736.0	\$32.81

Environmental Protection

Cost item	Total Cost
Waterbar skids	\$6,750.00
Barricade / woody debris	\$2,200.00
Equipment washing	\$750.00
Equipment washing	\$740.00
Ripping	\$4,210.00
Subtotal	\$14,650.00

Logging

Cost item	Total Cost
Skid location	\$1,982.16
Landing Cleanup	\$1,375.00
Skid construction	\$6,000.00
Landing Construction	\$2,250.00
Falling/bucking/skidding Heli landing 13-3	\$500.00
Seed and mulch	\$4,030.00
Subtotal	\$16,137.16

Slash Disposal & Site Prep

Cost item	Total Cost
Lop and Scatter	\$4,800.00
Hand pile / cover	\$87,000.00
Subtotal	\$91,800.00

Comments:

Equipment washing #1 = Loader, Harvester

Equipment washing #2 = Skidder, Processor, ripping cat

Landing construction = Additional cat landings and heli landing in SE corner of unit 13-3

Falling/bucking/skidding helicopter landing 13-3 = Oversize 40"+DBH RMP restriction

Barricade / woody debris = barricade and place woody debris on first 100' of skid trails with loader.

Ripping = newly constructed landings not included in RC (road) pkg appraisal

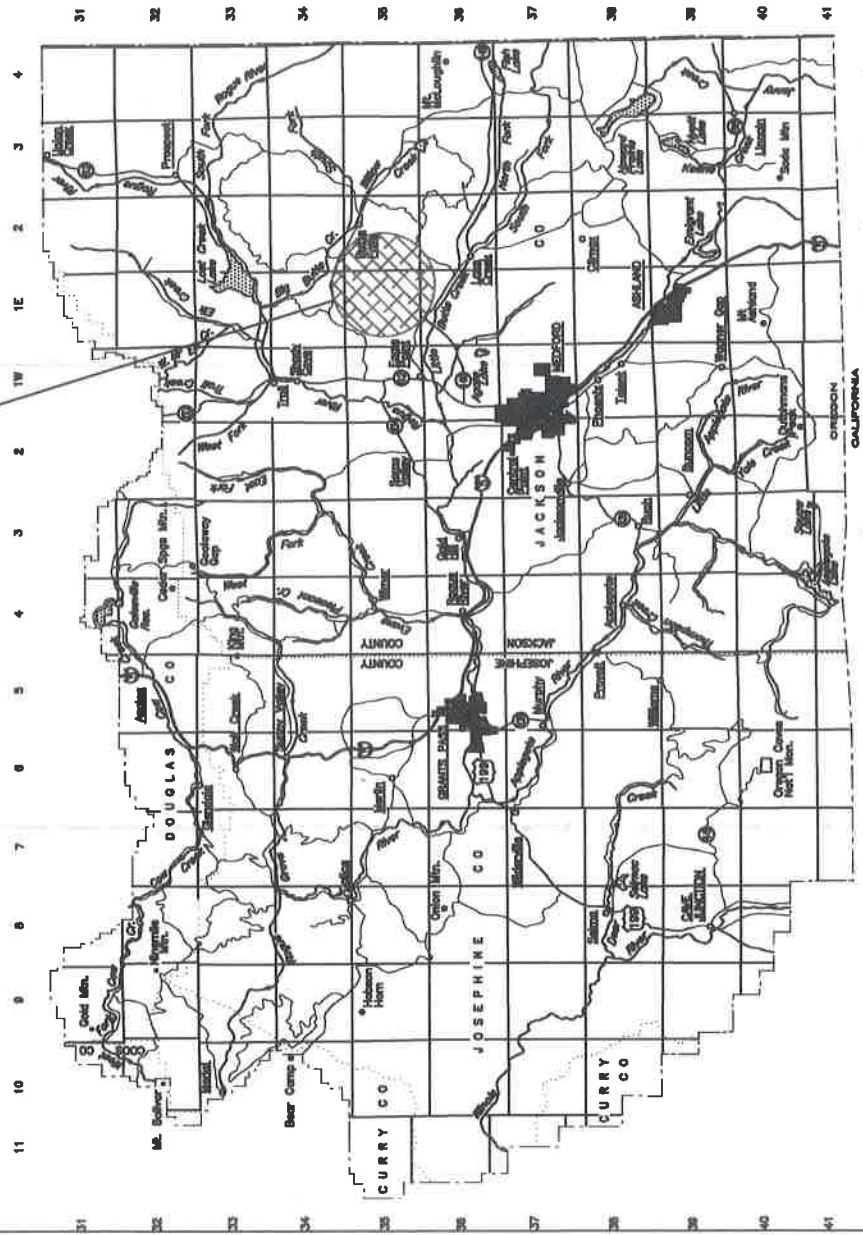
Landing Clean-up- Loader

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
OBENCHAIN TIMBER SALE
TRACT NO. ORM05-TS-2018-0010

EXHIBIT C-1
SHEET 1 OF 1

Exhibit No.	Description
C-1	TITLE SHEET
C-2	ROAD LOCATION MAP
C-3	ESTIMATE OF QUANTITIES
C-4	TYPICAL ROAD DATA
C-5	CULVERT LIST
C-6	CULVERT INSTALLATION DETAILS
C-7	CULVERT BAND DETAILS
C-8	DRAINAGE AND EROSION CONTROL DETAILS
C-9	ROADSIDE BRUSHING DETAILS
C-10	35-1E-12 06 CONSTRUCTION
C-11	35-1E-12 07 CONSTRUCTION
C-12	ROAD RENOVATION WORK LIST
C-13	TEMP ROUTE WORK LIST
C-14	ROAD SPECIFICATIONS
C-15	SPECIAL PROVISIONS
D-1	ROAD MAINTENANCE SPECIFICATIONS
D-2	ROAD MAINTENANCE MAP
D-3	ROAD DECOMMISSIONING WORK LIST
D-4	ROAD DECOMMISSIONING MAP

PROJECT LOCATION



ALWAYS
THINK
SAFETY



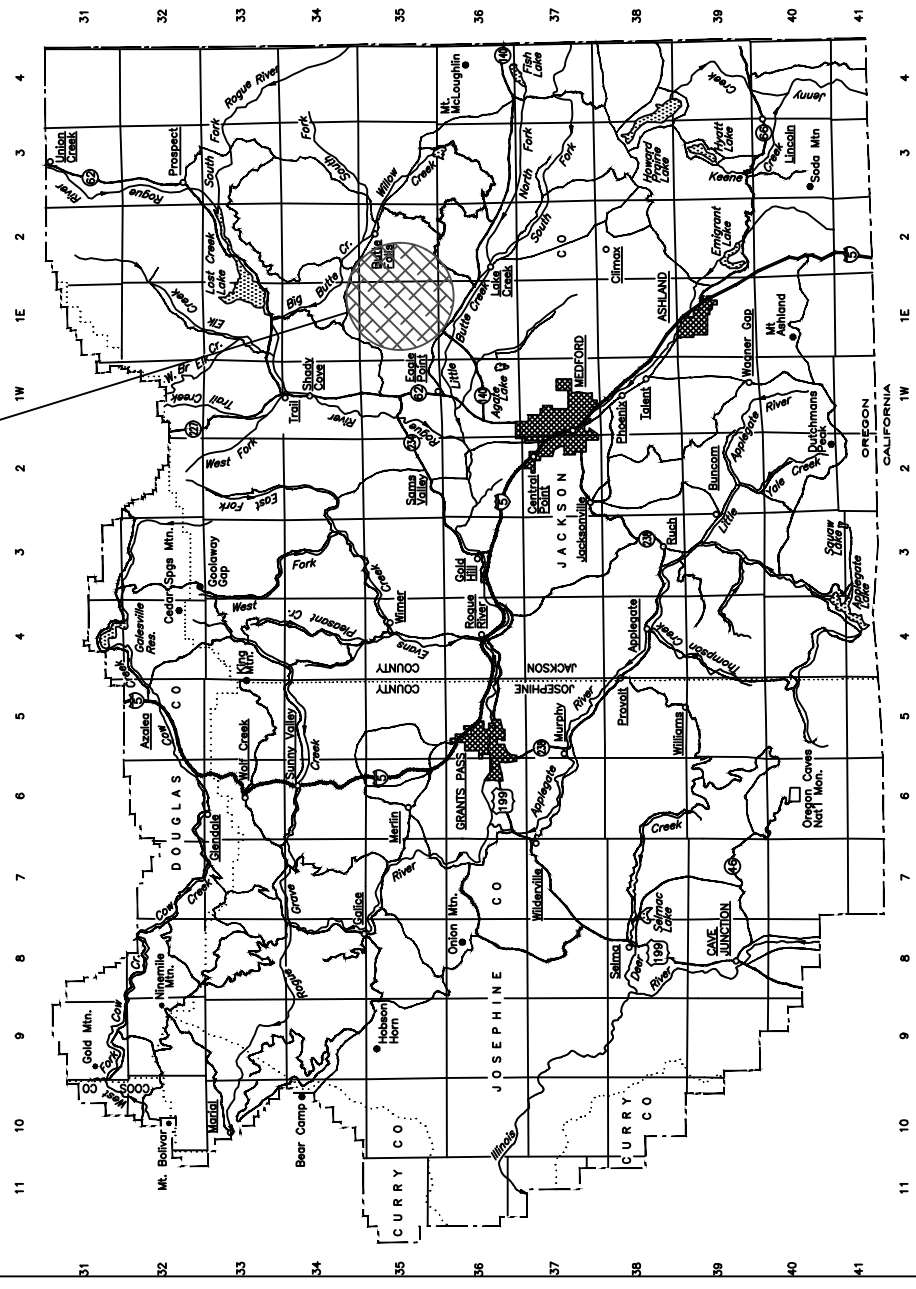
0 6 12
SCALE IN MILES

REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
	OBENCHAIN T.S. TITLE SHEET		
	DESIGNED		
	REVIEWED		
	APPROVED		
	DRAWN BGS		
	DATE JULY 2018		
	SCALE AS SHOWN		
	SHEET 1 OF 1		
	DRAWING NO. ORM05-TS-2018-0010-C1		

EXHIBIT C-1
SHEET 1 OF 1

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT
OBENCHAIN TIMBER SALE
TRACT NO. ORM05-TS-2018-0010

PROJECT LOCATION



ALWAYS
THINK
SAFETY

Exhibit No.	Description
C-1	TITLE SHEET
C-2	ROAD LOCATION MAP
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C-7	CULVERT BAND DETAILS
C-8	DRAINAGE AND EROSION CONTROL DETAILS
C-9	ROADSIDE BRUSHING DETAILS
C-10	35-IE-12.06 CONSTRUCTION
C-11	35-IE-12.07 CONSTRUCTION
C-12	ROAD RENOVATION WORK LIST
C-13	TEMP ROUTE WORK LIST
C-14	ROAD SPECIFICATIONS
C-15	SPECIAL PROVISIONS
D-1	ROAD MAINTENANCE SPECIFICATIONS
D-2	ROAD MAINTENANCE MAP
D-3	ROAD DECOMMISSIONING WORK LIST
D-4	ROAD DECOMMISSIONING MAP

REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
OBENCHAIN T.S. TITLE SHEET			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN BGS	SCALE AS SHOWN		
DATE JULY 2018	SHEET 1 OF 1		
DRAWING NO. ORM05-TS-2018-0010-C1			

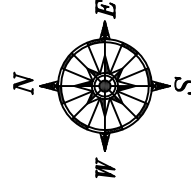
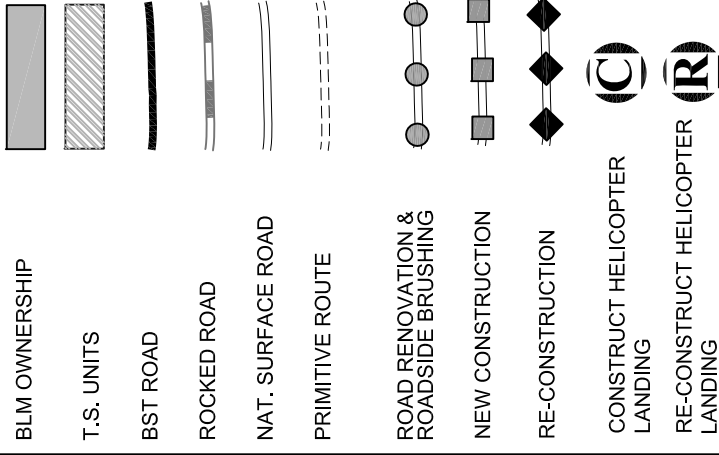
EXHIBIT C-2

SHEET 1 OF 2

OBENCHAIN TIMBER SALE

TRACT NO.:

ORM05-TS-2018-0010



ALWAYS
THINK
SAFETY



SCALE IN MILES

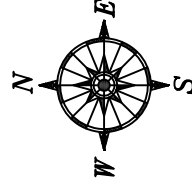
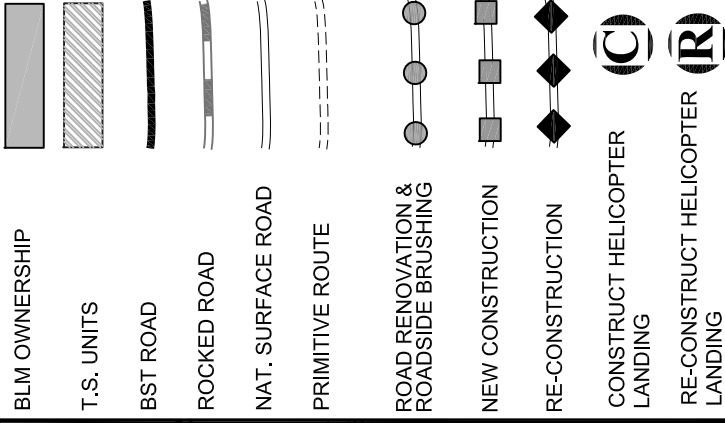


EXHIBIT C-2

SHEET 2 OF 2

OBECHAIN TIMBER SALE
TRACT NO.:

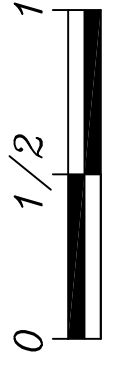
ORM05-TS-2018-0010



ALWAYS

THINK

SAFETY



SCALE IN MILES

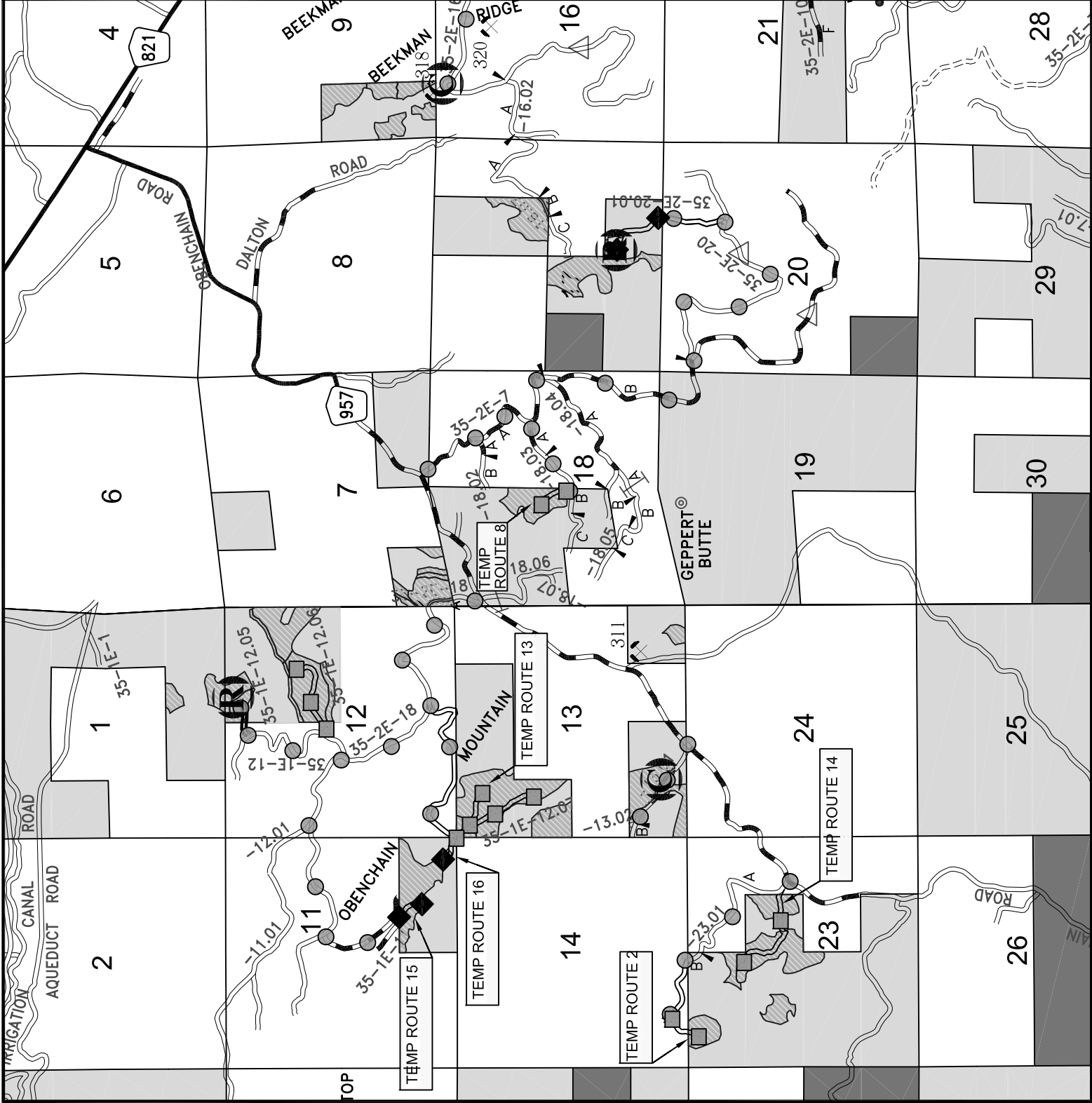
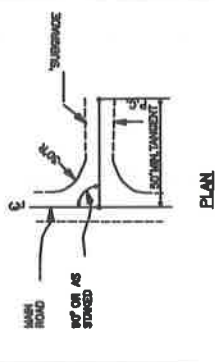


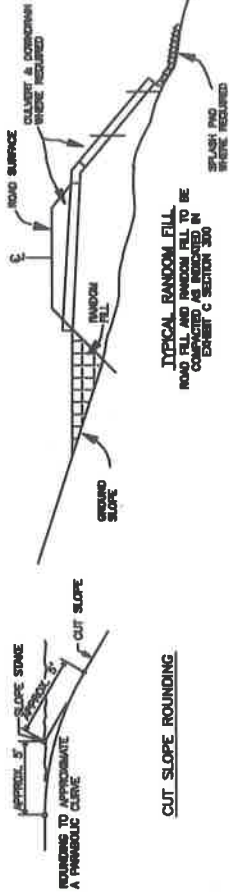
EXHIBIT C-4
SHEET 1 OF 1
OBENCHAIN T.S.

TYPICAL ROAD APPROACHES



TYPICAL SURFACING SECTION

- NOTE: THE PROFILE OF EXISTING APPROACH ROADS SHALL BE TYPED TO MEET THE SHOULDER LINE OF THE MAIN ROADWAY AND SHALL BE TYPED TO MEET THE SHOULDER LINE OF THE ADJACENT ROADWAY. THE SAME GRADATION AS USED IN THE ADJACENT ROADWAY SHALL BE FURNISHED WITH THE SAME TREATMENT AS SHOWN FOR THE ADJACENT ROADWAY.

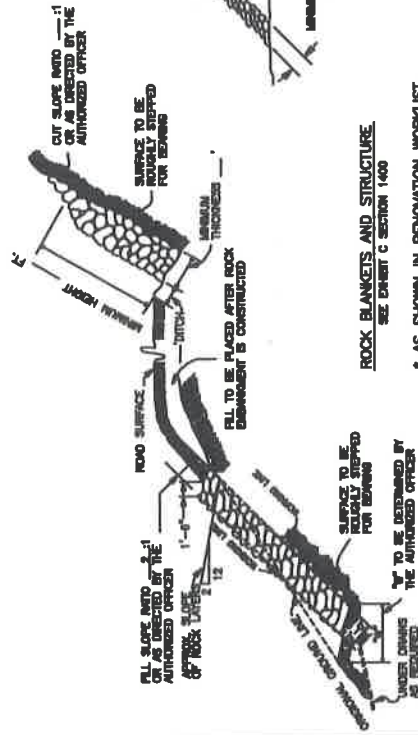


CUT SLOPE ROUNDING



SPECIAL COMPACTION
TYPICAL BENCHING SECTION

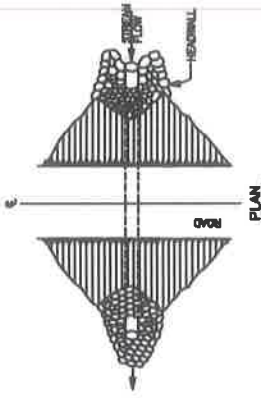
TYPICAL ROAD SECTION
FOR TURNPIKE CONSTRUCTION



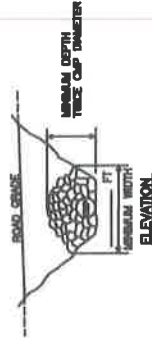
ROCK BLANKETS AND STRUCTURE
SEE EXHIBIT C SECTION 1400

AS SHOWN IN RENOVATION WORKLIST.

CROSS SECTION



PLAN



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 CAP IS INSTALLED.

REVISION	DESCRIPTION	DATE	APPROVED
1	DESIGNED	08/05/15	APPROVED
2	REVIEWED	08/05/15	APPROVED
3	DRAWN	08/05/15	APPROVED
4	DATE	SEPT. 2017	SHEET 1 OF 1
5	DRAWING NO.	08005-TS-2015-2010-04	

TYPICAL
ROAD DATA

DESIGNED
REVIEWED
APPROVED
DRAWN
DATE
DRAFTING NO.

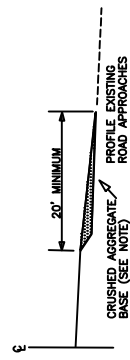
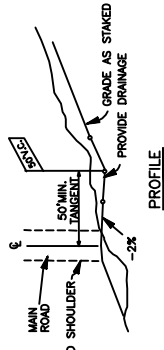
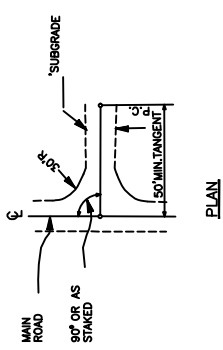
SLOPE PROTECTION ROCK
SEE EXHIBIT C SECTION 1400

ROCK BLANKETS AND STRUCTURE
SEE EXHIBIT C SECTION 1400

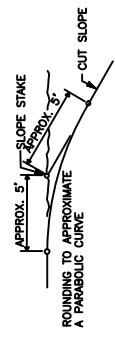
AS SHOWN IN RENOVATION WORKLIST.

EXHIBIT C-4 SHEET 1 OF 1 OBENCHAIN T.S.

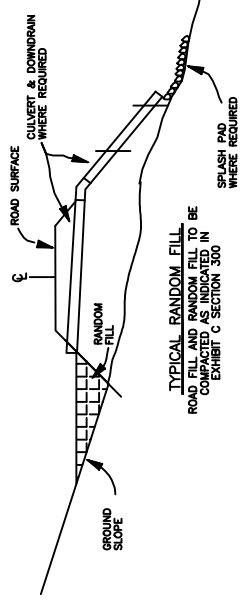
TYPICAL ROAD APPROACHES



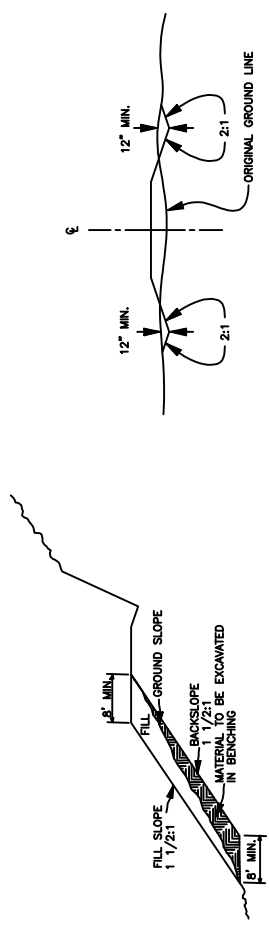
- NOTES:
- THE PROFILE OF EXISTING APPROACH ROADS SHALL BE USED TO SET THE SHOULDER LINE OF THE ROAD ROLLING SURFACE.
 - THE CRUSHED AGGREGATE BASE SHALL BE OF THE SAME GRADATION AS USED IN THE ADJACENT ROAD.
 - APPROACHES SHALL BE FINISHED WITH THE SAME TREATMENT AS SHOWN FOR THE ADJACENT ROAD.



CUT SLOPE ROUNDING

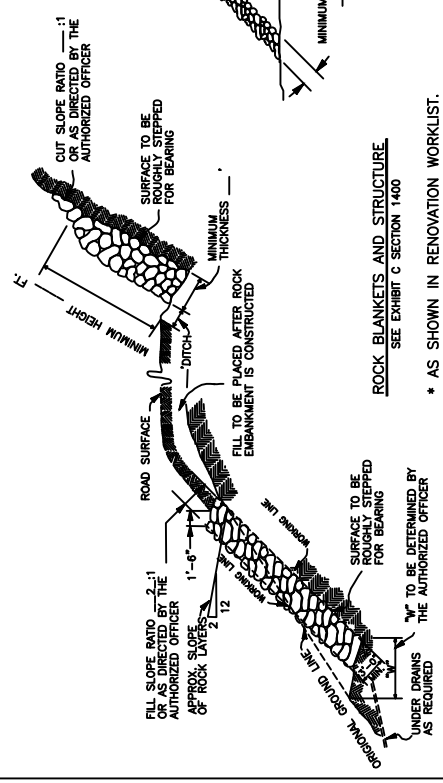
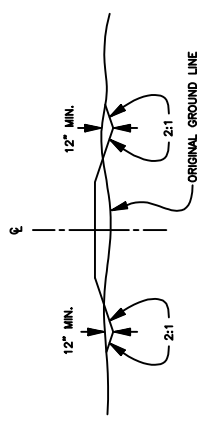


TYPICAL RANDOM FILL

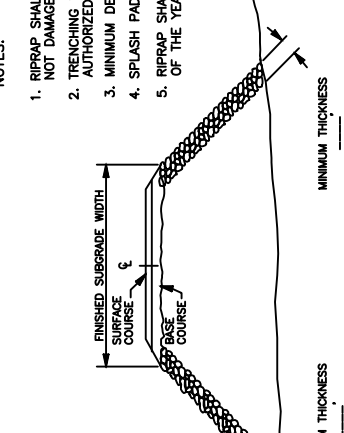


SPECIAL COMPACTION TYPICAL BENCHING SECTION

TYPICAL ROAD SECTION FOR TURNPIKE CONSTRUCTION



ROCK BLANKETS AND STRUCTURE



SLOPE PROTECTION ROCK

* AS SHOWN IN RENOVATION WORKLIST.

NOTES:

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

RIPRAP AT CULVERTS

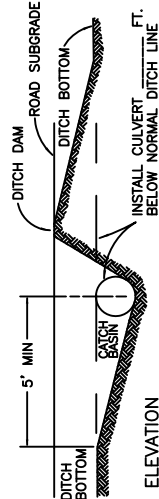
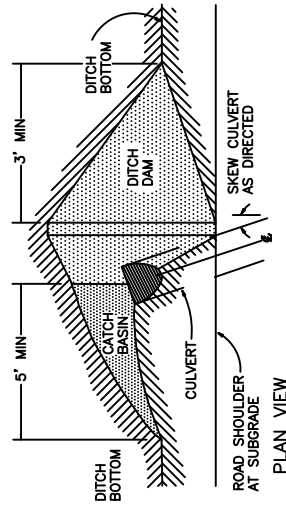
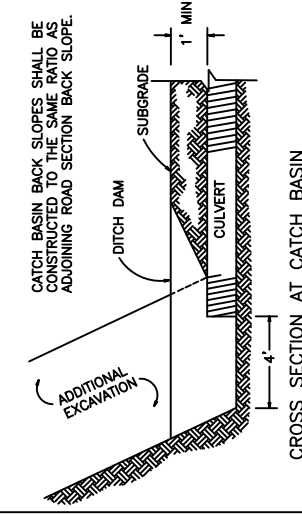
REV. NO.	DESCRIPTION	DATE	APPROVED
1	DESIGNED		
2	REVIEWED		
3	APPROVED		
4	DRAWN		
5	BLM		
6	SCALE		
7	NONE		
8	DATE	SEPT. 2017	SHEET 1 OF 1
9	DRAWING NO.	ORM05-TS-2018-0010-C4	

TYPICAL ROAD DATA

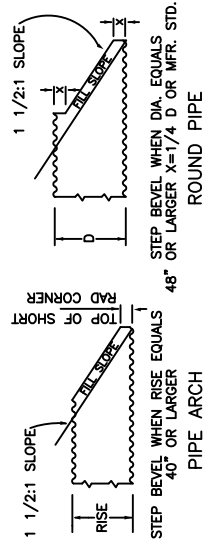
UNITED STATES DEPARTMENT OF THE INTERIOR	BUREAU OF LAND MANAGEMENT	MEDFORD DISTRICT	MEDFORD, OREGON
DESIGNED	REVIEWED	APPROVED	
DRAWN	BLM	SCALE	NONE
DATE	SEPT. 2017	SHEET	1 OF 1
DRAWING NO.	ORM05-TS-2018-0010-C4		

ALWAYS
THINK
SAFETY

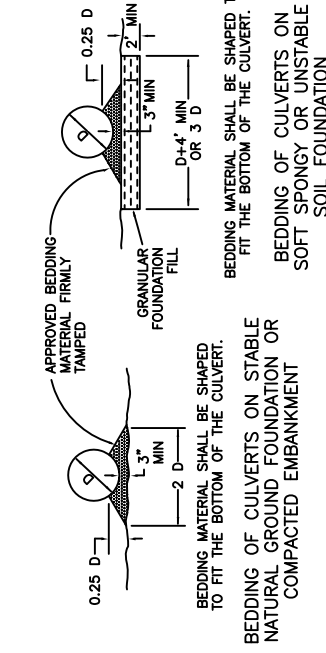
EXHIBIT C-6
SHEET 1 OF 2
OBENCHAIN T.S.



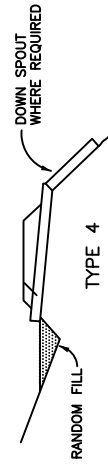
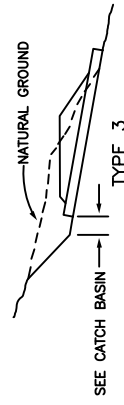
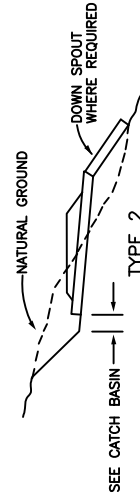
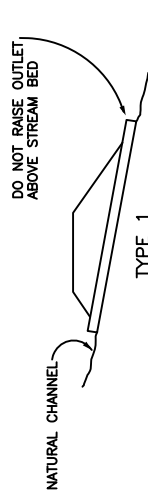
CATCH BASIN



BEVELED END DETAIL



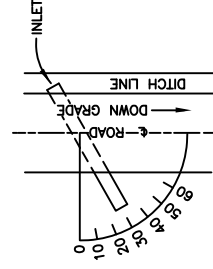
BEDDING OF CULVERTS



CULVERT INSTALLATION TYPES

Surfacing:

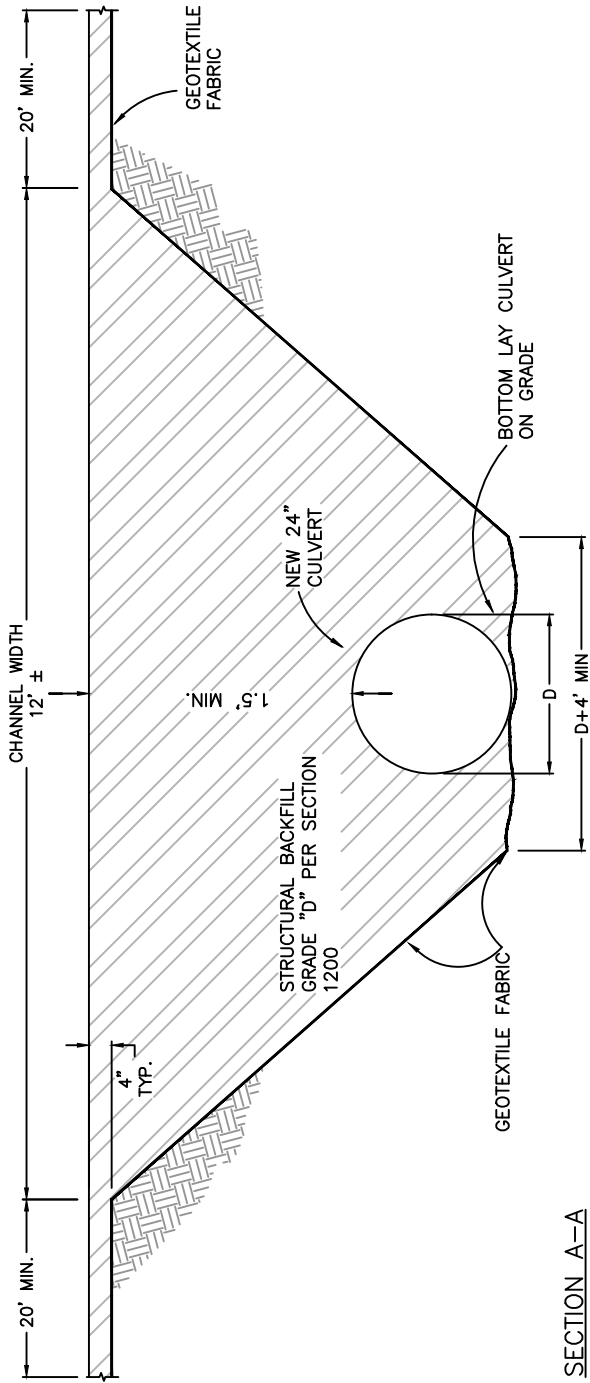
Place 20 CY crushed rock over installation unless otherwise noted in the work list.



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	BGS		SCALE	NONE					
DATE	JULY 1918	SHEET	1	OF	2				
DRAWING NO. ORMO5-TS-2018-0010-C6									

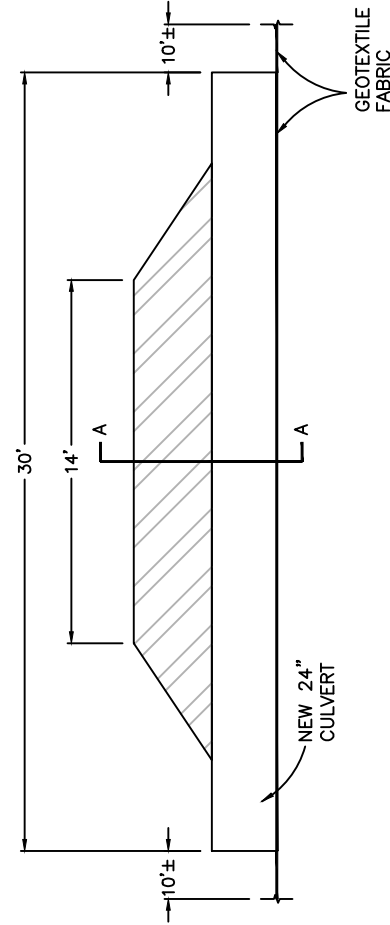


SECTION A-A

NOTES:

Fabric Shall Be Placed Through Stream Channel Adjacent To Existing Ground With No Voids, Extending 20' Beyond Top Of Channel On Both Sides. Fabric Shall Extend 10'± Beyond Inlet and Outlet Of Culvert Placed To The Lines Specified. Fabric Shall Be Class 2 Geotextile.

After Work Is Complete The Following Shall Take Place: Remove All Aggregate Fill Placed In Stream Channel and Road. Remove Temporary Fabric And Temporary 24" CMP, And Return Disturbed Areas To Their Natural State Including Slopes And Existing Conditions.

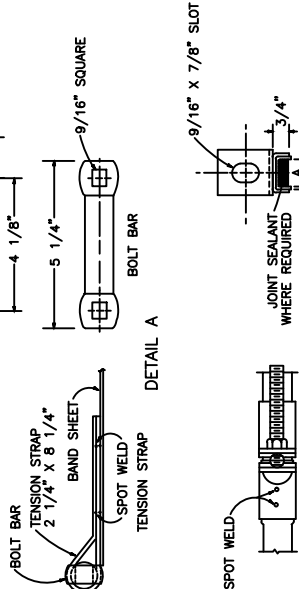


ELEVATION SECTION

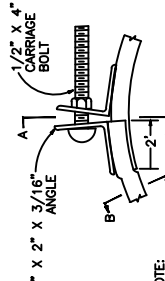
REV.	NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR				
BUREAU OF LAND MANAGEMENT				
MEDFORD DISTRICT - MEDFORD, OREGON				
CULVERT INSTALLATION				
TEMP ROUTE 14				
DETAILS				
DRAWN	BGS	SCALE	NONE	
DATE	JULY 2018	SHEET	2 OF 2	
DRAWING NO.	ORM05-TS-2018-0010-C6			

EXHIBIT C-7
SHEET 1 OF 1
OBENCHAIN T.S.

NOTE:
DESIGN VARIATIONS IN FASTENERS,
(STRAPS, BARS & WELDS) WHICH
PROVIDE A TENSILE STRENGTH OF
7500 LBS. ARE PERMISSIBLE.

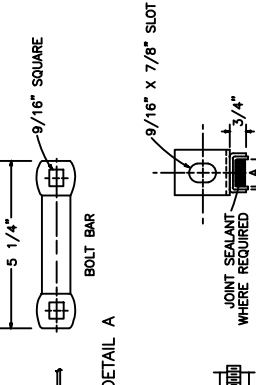
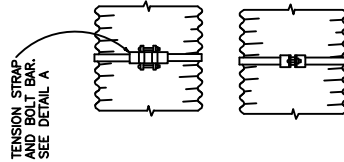


DIMENSIONS IN INCHES	
T	A
.079	3/4
.109	1
	1.38 OR HEAVIER

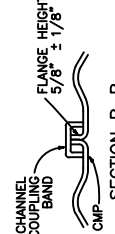


NOTE:
AS AN ALTERNATE TO SWEDGE, AN
OVERSIZE BRIDGE CLIP MAY BE USED.

CHANNEL
BAND
COUPLER

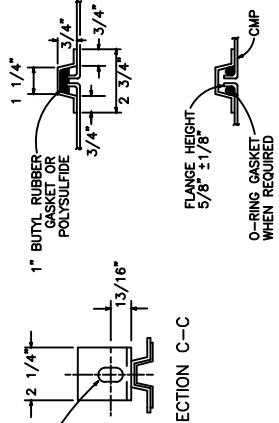
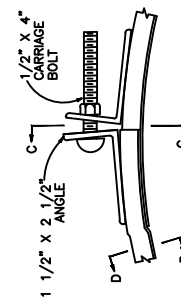


DIMENSIONS IN INCHES	
T	A
.079	3/4
.109	1
	1.38 OR HEAVIER



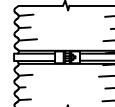
SECTION B-B

FLANGED END COUPLER



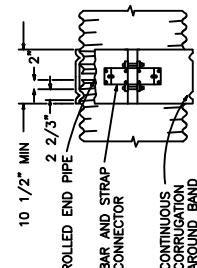
SECTION D-D

SHOWN WITH ALTERNATE TYPES
OF JOINT SEALERS



STANDARD COUPLER BANDS									
CULVERT SIZE INCHES	CORRUGATED					FLAT-DIMPLED			
	STD. WIDTH INCHES	ANNUAL NO. OF BOLTS	HELICAL NO. OF BOLTS	3\" X 1\" WIDTH BOLTS	6\" X 1\" WIDTH BOLTS	NO. OF ROWS OF DIMPLES	NO. OF BOLTS	NO. OF DIMPLES	NO. OF BOLTS
UNDER 18	7	2	7	2	2	2	2	2	2
18 TO 54	12	3	12	3	14	3	10 1/2	2	3
OVER 54	24	5	24	5	24	4	16 1/2	4	5

THE HUGGER COUPLER BAND OR AN APPROVED EQUIVALENT
COUPLER BAND SHALL BE MADE OF THE SAME MATERIAL AND
FINISH AS THE PIPES JOINED. THE COUPLER BANDS SHALL
BE MADE OF A MINIMUM OF TWO STRIPS OF MATERIAL BE TWO
NUMERICAL THICKNESSES LIGHTER THAN THE GAGE OR
THICKNESS DESIGNATED FOR THE CONDUIT JOINED. THE BAND
SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH TWO
1/2 INCH BOLTS THROUGH USE OF A BAR AND STRAP SUITABLY
WELDED TO THE BAND. THE BAND SHALL ENGAGE AND MESH
WITH THE SECOND ANNUAL CORRUGATION INWARD FROM
THE END OF EACH OF THE CONDUIT SECTIONS JOINED.



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

"HUGGER" COUPLER BANDS

ALWAYS
THINK
SAFETY

- Ⓐ BANDS WITH ANGLES
- Ⓑ BANDS WITH TENSION TYPE CONNECTIONS

DATA IN THIS BLOCK DOES NOT APPLY TO PERFORATED PIPE UNDERDRAIN.
FOR BANDS WITH PUNCH-OUT TYPE CONNECTIONS, 2 BOLTS ARE
PERMISSIBLE FOR EACH USE. BANDS SHALL HAVE 1/2 WIDTH ONTO EACH
SECTION OF PIPE AND MUST BE FULLY SPLICED AT JOINT FORMING A
NEARLY WATERTIGHT CONNECTION. SEE SECTION 400.

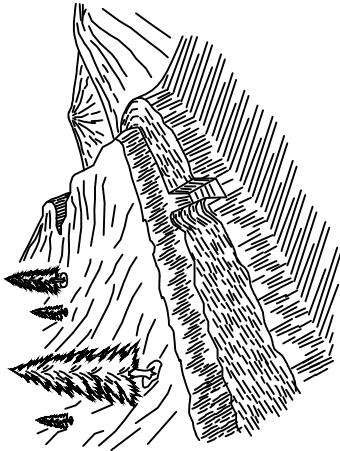
REV.	NO.	DESCRIPTION	DATE	APPROV.

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

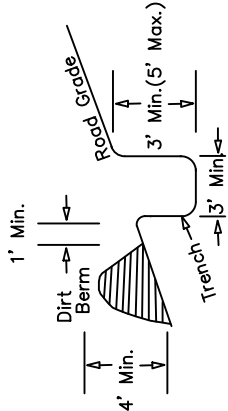
CULVERT BAND
DETAILS

DRAWN: BGS	SCALE: NONE
DATE: JULY 2018	SHEET: 1 OF 1
DRAWING NO. ORM05-TS-2018-0010-C7	

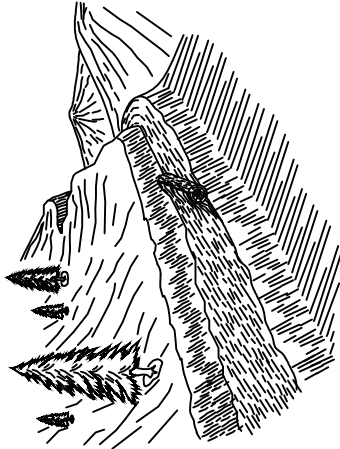
EXHIBIT C-8
SHEET 1 OF 2
OBENCHAIN T.S.



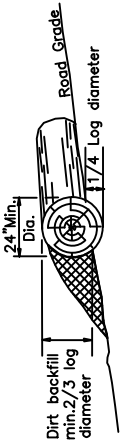
TRENCH BARRICADE



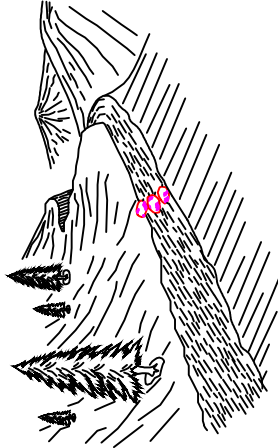
1. BARRICADE LENGTH SHALL EXTEND ACROSS THE ENTIRE ROAD SURFACE TO A POINT SUFFICIENT TO PROHIBIT MOTOR VEHICLE TRAFFIC.
2. THE EXACT LOCATION SHALL BE AS STAKED IN THE FIELD.
3. THE BARRICADE SHALL BE SKEWED AS NEEDED TO DRAIN OR AS DIRECTED BY THE AUTHORIZED OFFICERS REPRESENTATIVE.
4. A MINIMUM OF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



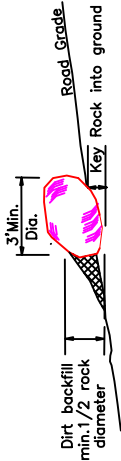
LOG BARRICADE



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".

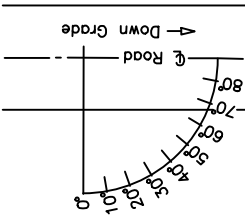


ROCK BARRICADE



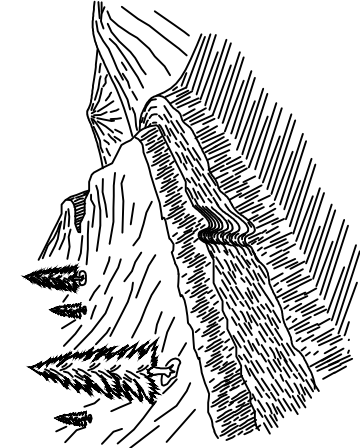
1. ROCK BARRICADE SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. THE LENGTH SHALL BE SUFFICIENT TO BLOCK ROAD FROM VEHICLE USE.
4. THE MINIMUM DIAMETER OF ROCK SHALL BE 3 FEET.
5. THE MAXIMUM SPACE BETWEEN ROCKS SHALL BE 36"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

SKIEW DIAGRAM

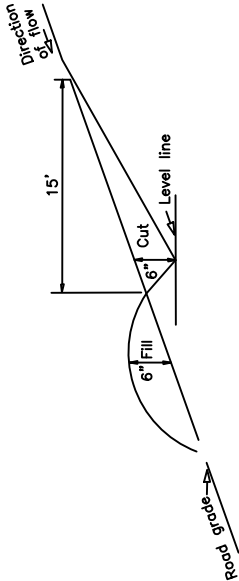


REV.	NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON				
DRAINAGE & EROSION CONTROL DETAILS				
DRAWN	BGS	SCALE	NONE	
DATE	JULY 2018	SHEET	1 OF 2	
DRAWING NO.	ORM05-TS-2018-0010-C8			

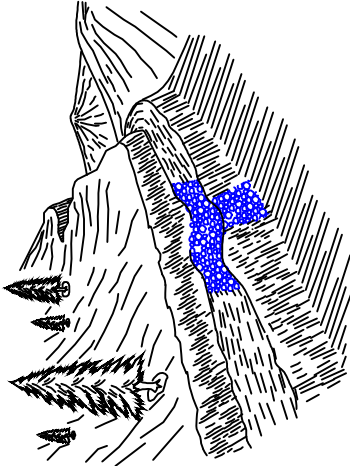
EXHIBIT C-8
SHEET 2 OF 2
OBENCHAIN T.S.



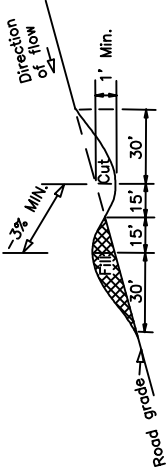
WATER BAR



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.

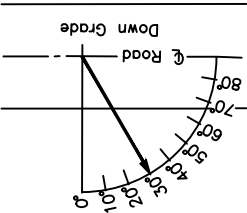


ARMORED WATER DIP

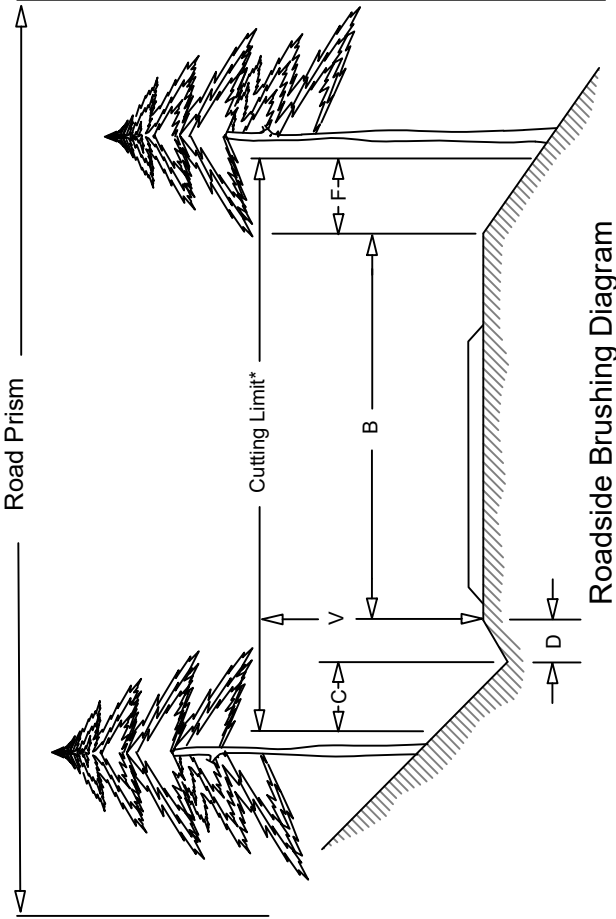


1. WATER DIPS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL WATER DIPS SHALL BE SKEWED 30 DEGREES.
4. THE LENGTH SHALL BE SUFFICIENT TO EXTEND FROM THE CUT BANK TO THE FILL SLOPE AND BE READILY CROSSED BY HIGH CLEARANCE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

SKREW DIAGRAM



REV. NO.	DESCRIPTION	DATE	APPROV.
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		
DRAINAGE & EROSION CONTROL DETAILS			
DRAWN	BGS	SCALE	NONE
DATE	JULY 2018	SHEET	2 OF 2
DRAWING NO. ORM05-TS-2018-0010-C8			



Cutting Limit = $C + D + B + F$

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

C = 4 ft - Distance to be brushed on cut slope
beyond centerline of ditch. Cut all vegetation to max height of 3".

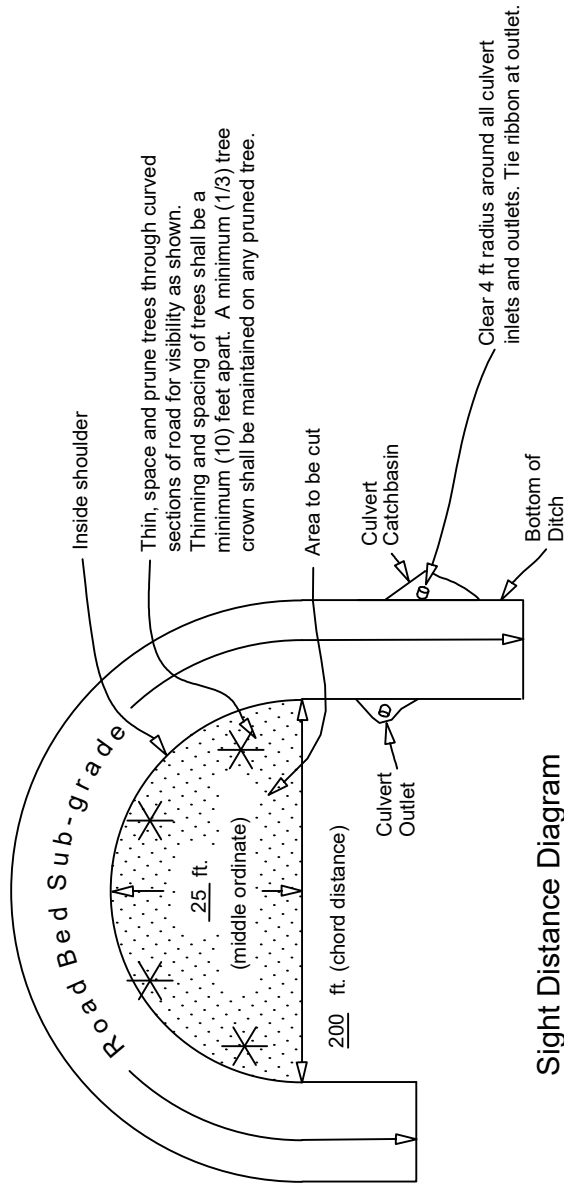
D = Centerline of ditch to inside shoulder. Cut all vegetation to max. height of 1".

F = 4 ft - Distance to be brushed on fill slope beyond outside shoulder
Cut all vegetation to max. height of 3".

V = 14 ft - Height of vertical cutting limit

Roadside Brushing Diagram

Inside Corner



Sight Distance Diagram
Roadside Brushing

ALWAYS
THINK
SAFETY

All distances shown are horizontal except for V

REV. NO.	DESCRIPTION	DATE	APPROV.

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

ROADSIDE BRUSHING DETAILS

DRAWN: BGS	SCALE: NONE
DATE: JULY 2018	SHEET: 1 OF 1
DRAWING NO. ORM05-TS-2018-0010-C9	



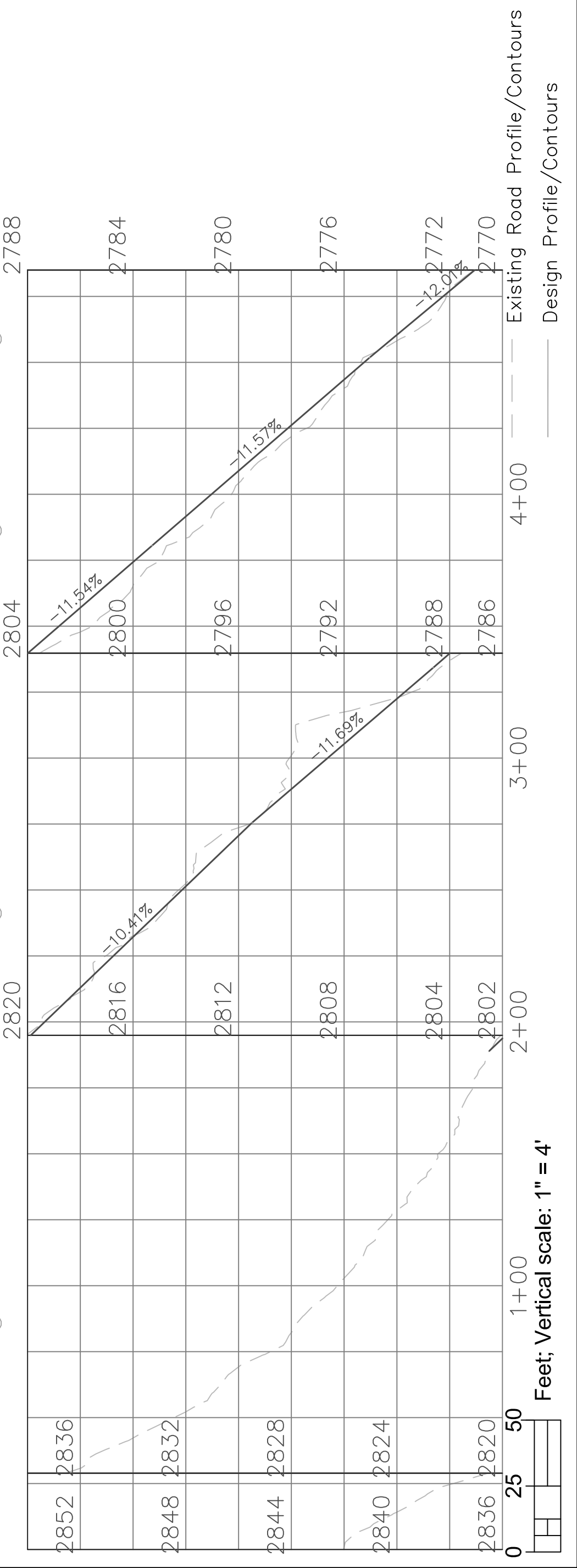
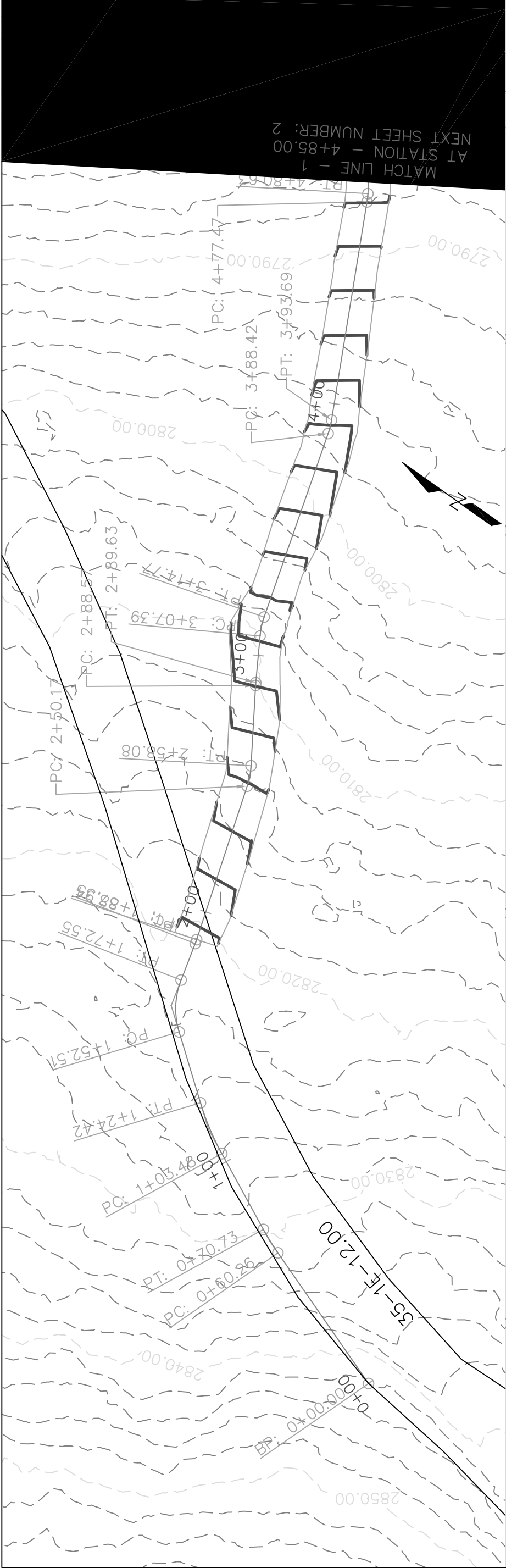
Oregon

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
35-1E-12.06 Construction
Obenchain Timber Sale

Medford

PROJECT NO: ORM05-TS-18-10	DESIGNED BY: B. Sikes	MARK	DESCRIPTION	DATE	APPROVED
DRAWN BY: B. Sikes	CHK'D BY: J. Brown				
APPROVED BY: J. Brown	DATE				
DATE: 3/21/2018					

Exh.C10
SHEET 1 OF 6





Obenchain Timber Sale

Oregon

DATE: 3/21/2018

Exh. C10
SHEET 2 OF 6





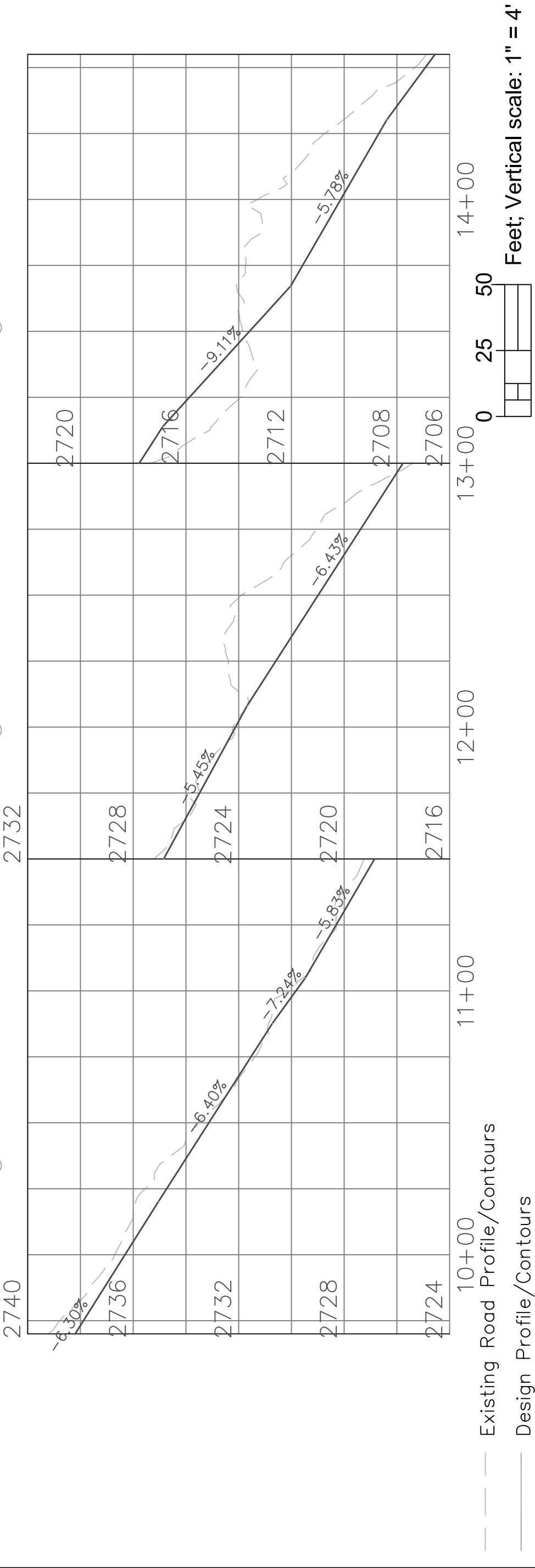
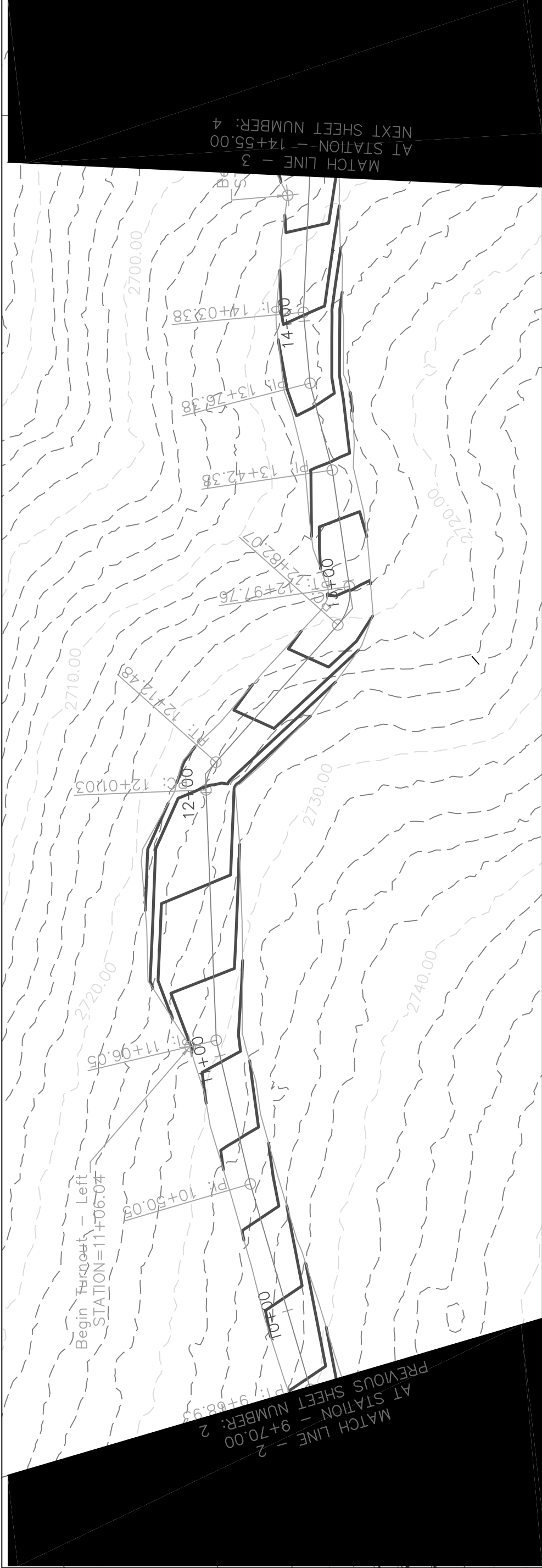
Oregon

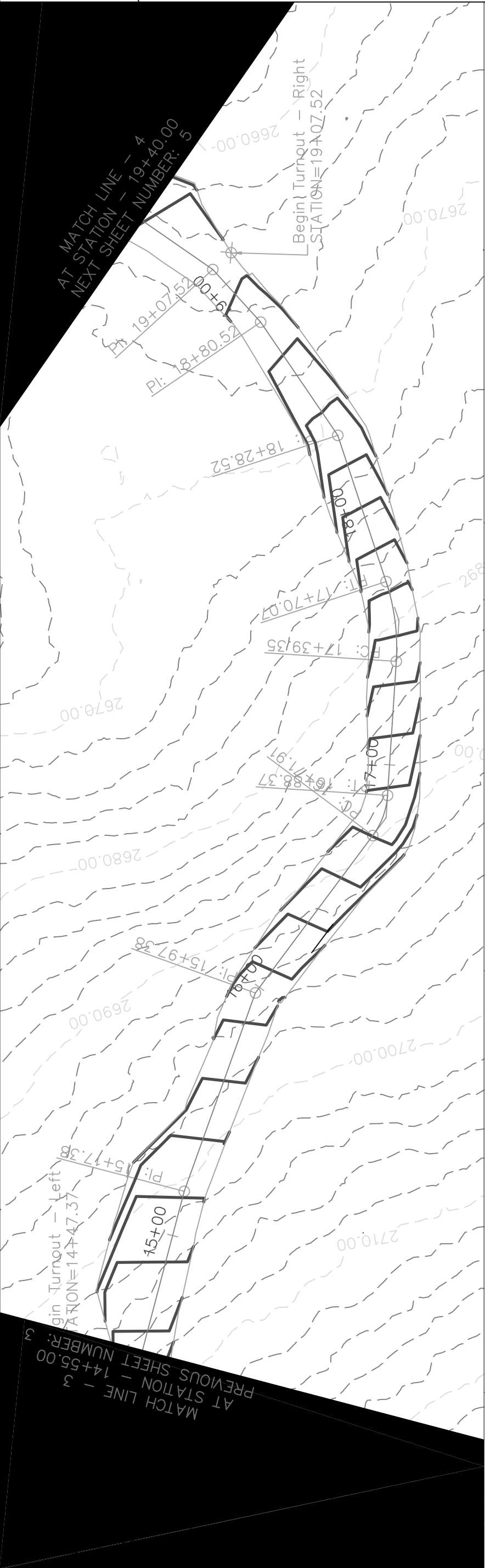
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
35-1E-12.06 Construction
Obchain Timber Sale

Medford

PROJECT NO: ORM05-TS-18-10	DESIGNED BY: B. Sikes	MARK	DESCRIPTION	DATE	APPROVED
DESIGN OFFICE: Butte Falls Field Office	DRAWN BY: B. Sikes				
	CHK'D BY: J. Brown				
	APPROVED BY: J. Brown				
DATE: 3/21/2018					

Exh.C10
SHEET 3 OF 6





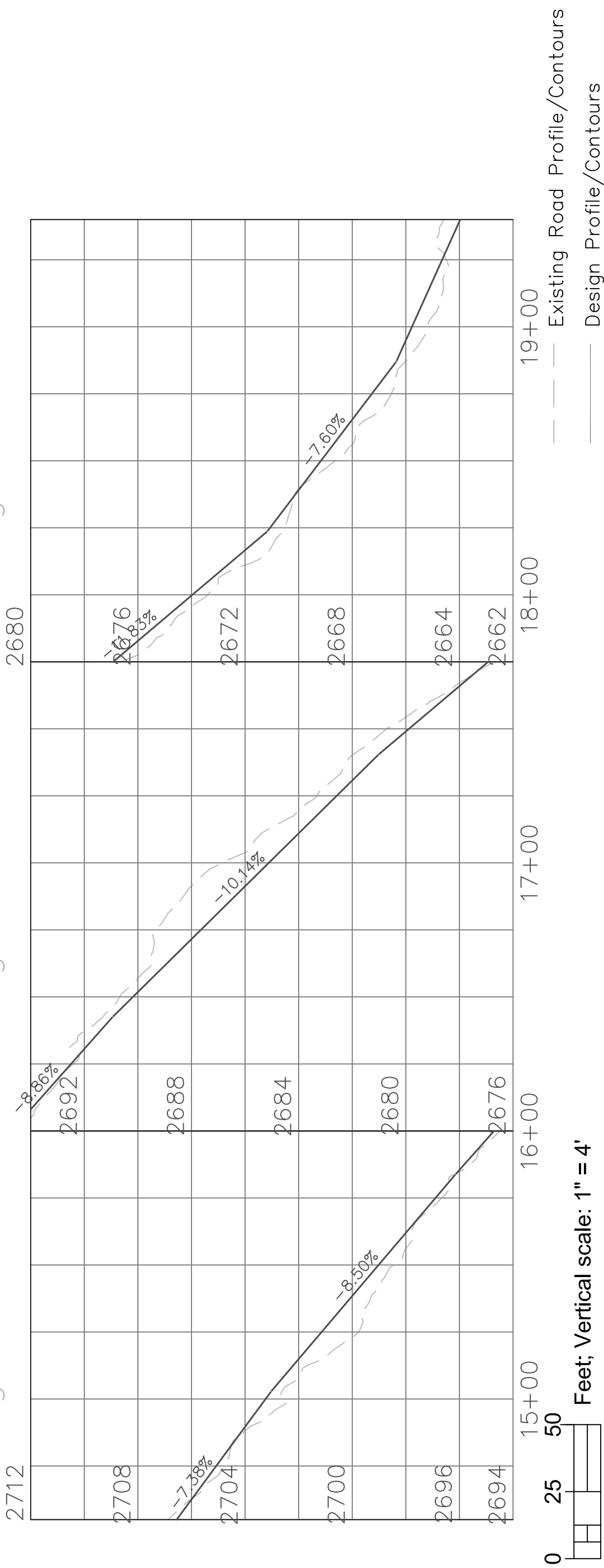
Medford
Oregon

35-1E-12.06 Construction

Obenchain Timber Sale

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Exh. C10
SHEET 4 OF 6



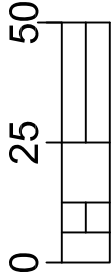


Obenchain Timber Sale

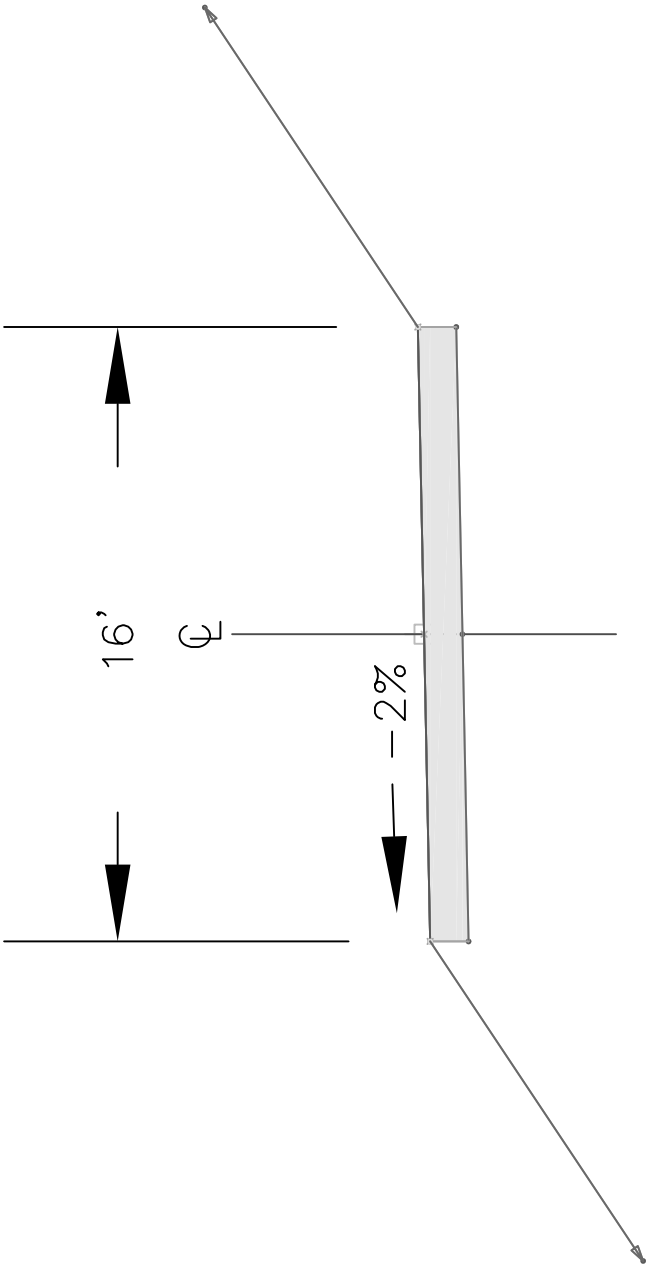
Medford

PROJECT NO: ORM05-TS-18-10
DESIGN OFFICE: Butte Falls Field
DESIGNED BY: B. Sikes
DRAWN BY: B. Sikes
CHK'D BY: J. Brown
APPROVED BY: J. Brown
DATE: 3/21/2018

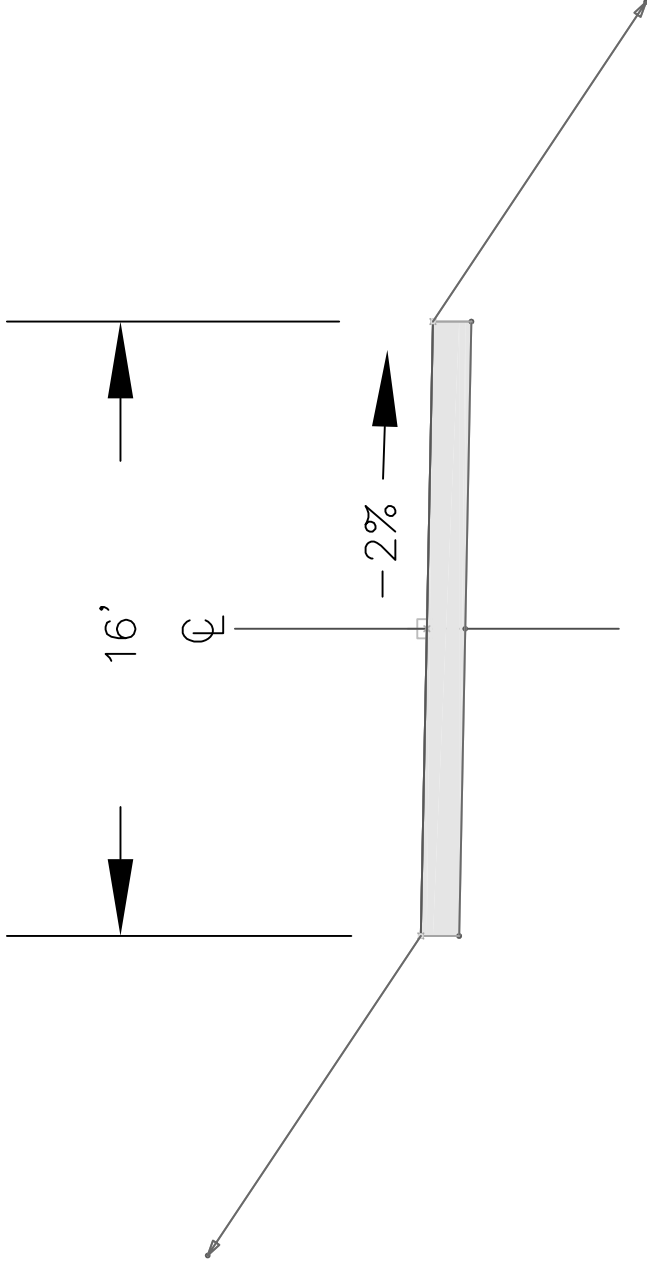
Exh. C10
SHEET 5 OF 6



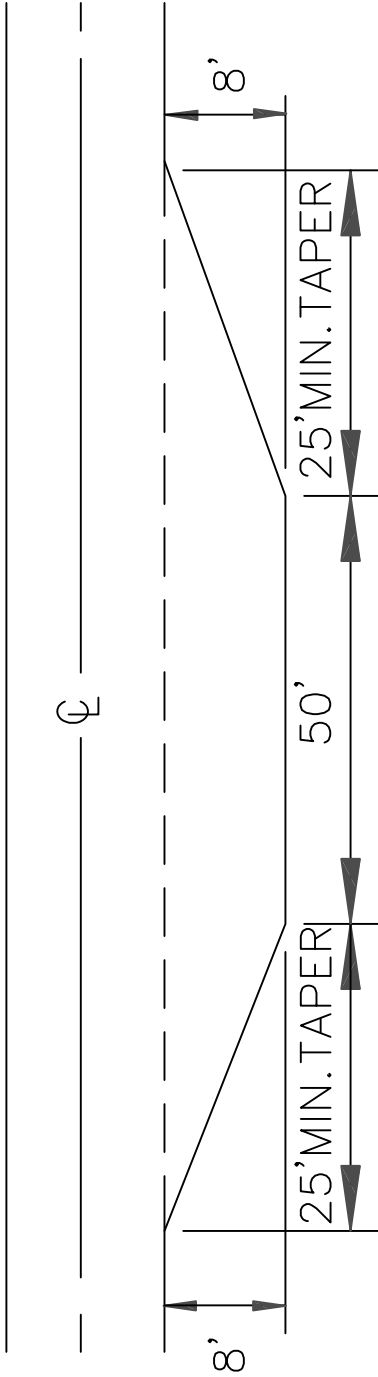
Feet; Vertical scale: 1" = 4'



ROAD SECTION
Station 3+15.00 – 18+96.51
NO SCALE



ROAD SECTION
Station 1+88.99 – 3+15.00
Station 18+96.51 – 22+23.52
NO SCALE



TYPICAL TURNOUT SECTION
NO SCALE

PROJECT NO: ORM05-TS-18-10	DESIGN OFFICE: Butte Falls Field Office	DESIGNED BY: B. Sikes	DRAWN BY: B. Sikes	CHK'D BY: J. Brown	APPROVED BY: J. Brown	DATE: 3/22/2018
MARK	DESCRIPTION	DATE	APPROVED	APPROVED	Medford	

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
35-1E-12.06 Construction
Obenchain Timber Sale

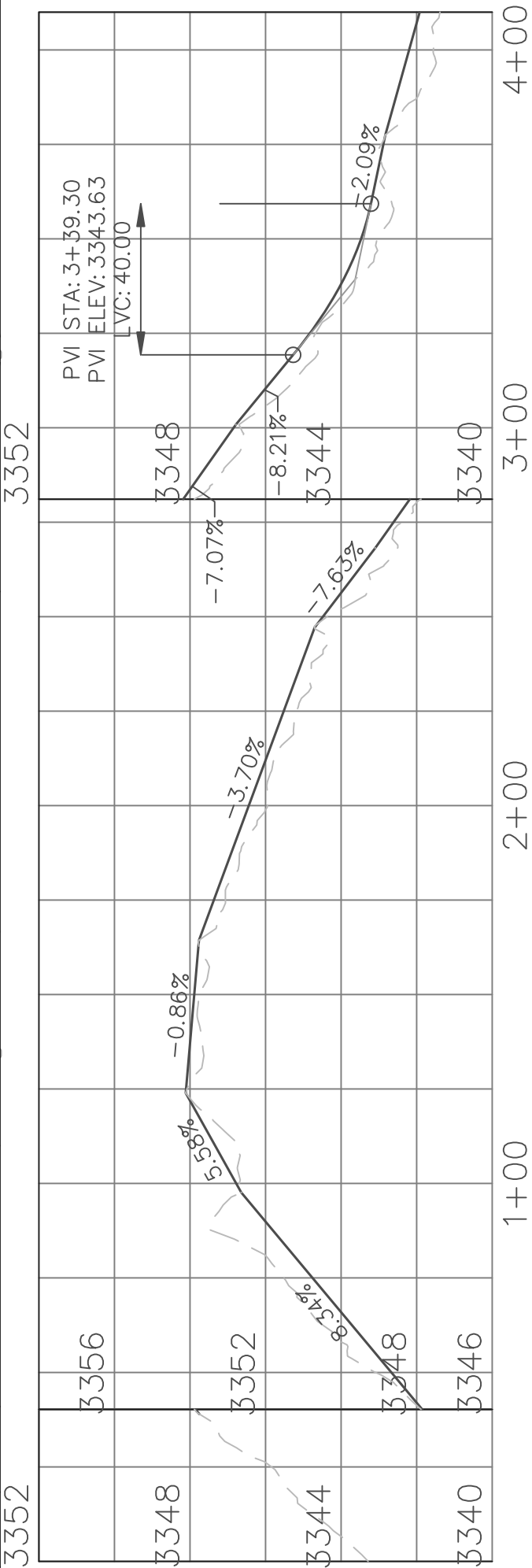


Oregon



Medford

Exh.C11
SHEET 1 OF 7



Feet; Vertical scale: 1" = 4'

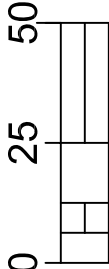
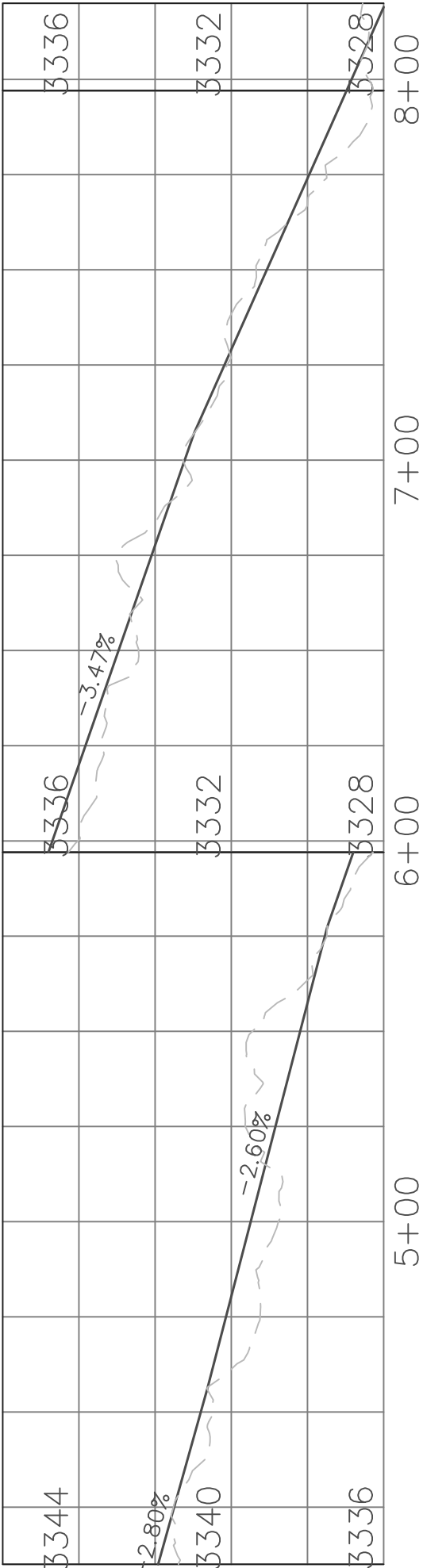
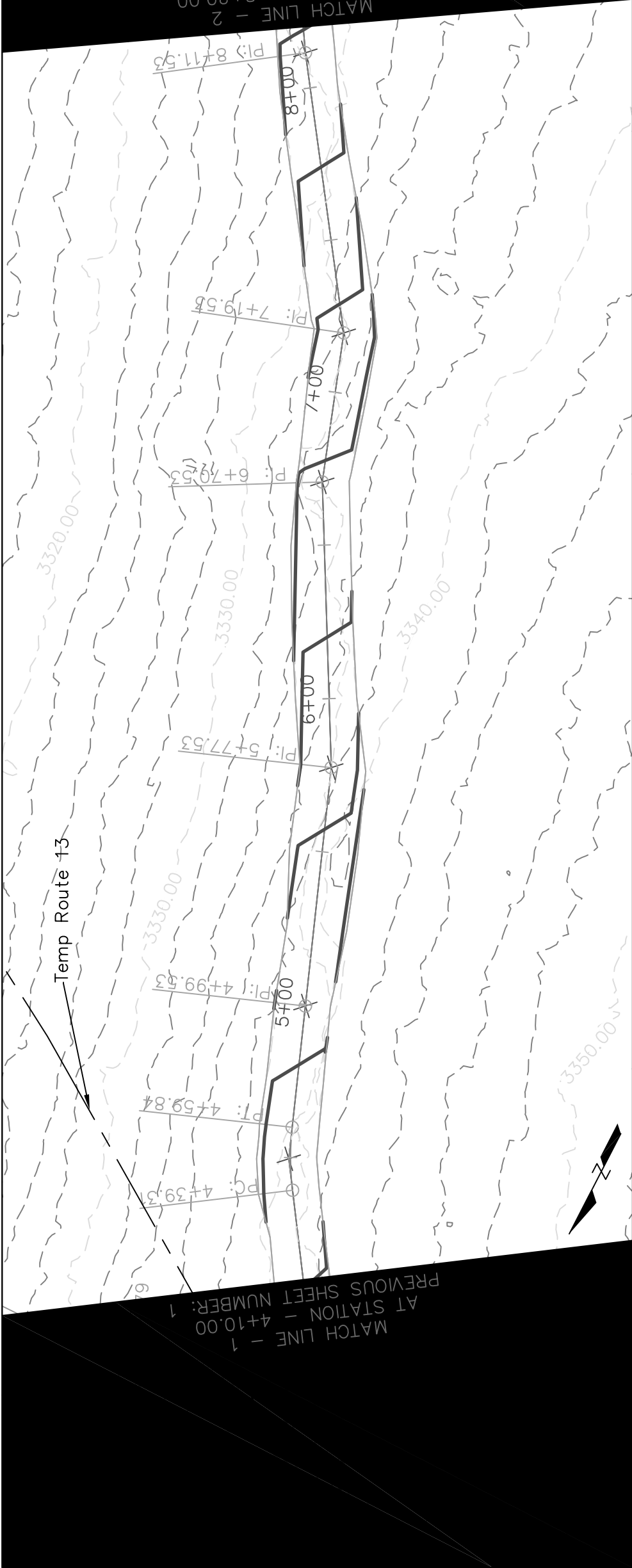
Existing Road Profile/Contours
Design Profile/Contours



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
35-1E-12.07 Construction
Obenchain Timber Sale
Oregon

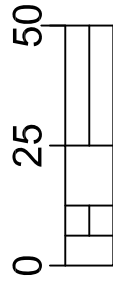
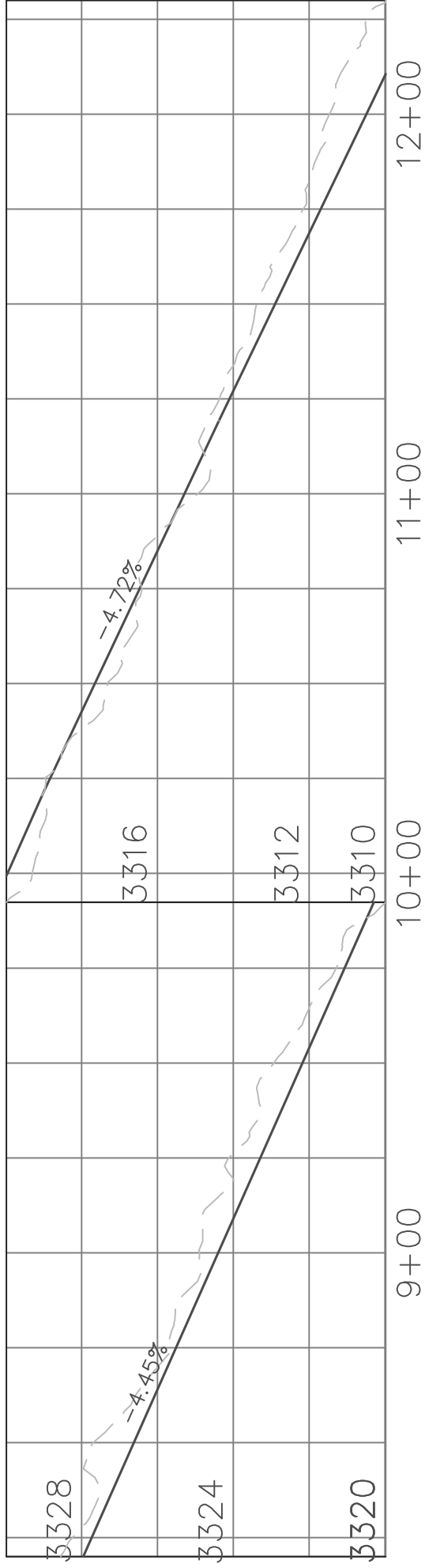
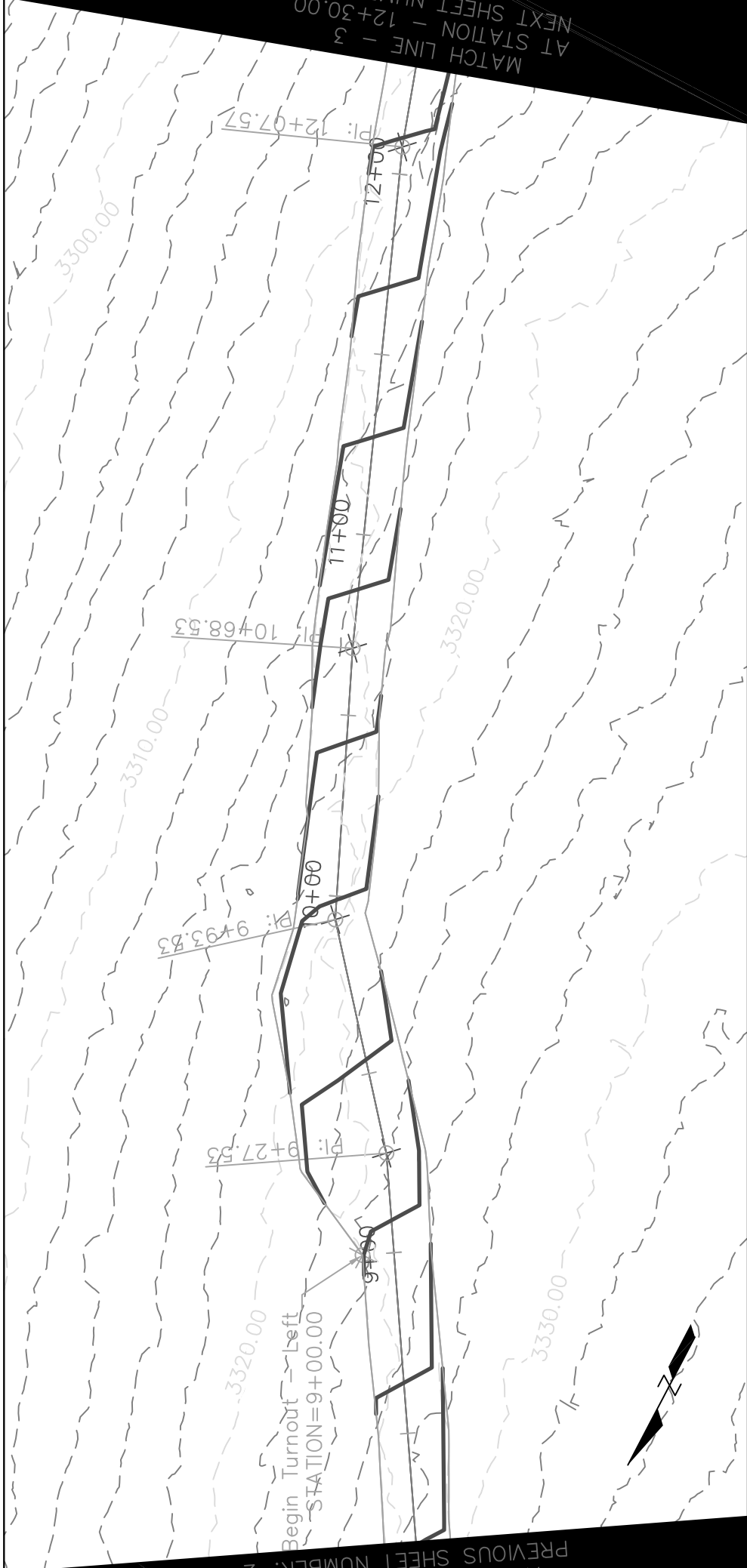
Medford

PROJECT NO: ORM05-TS-18-10									
DESIGN OFFICE: Butte Falls Field Office									
DESIGNED BY: B. Sikes									
DRAWN BY: B. Sikes									
CHK'D BY: J. Brown									
APPROVED BY: J. Brown									
DATE: 3/13/18									



Feet; Vertical scale: 1" = 4'

--- Existing Road Profile/Contours
— Design Profile/Contours



Feet; Vertical scale: 1" = 4'

— — — — — Existing Road Profile/Contours
 — — — — — Design Profile/Contours

PROJECT NO: ORM05-TS-18-10			
DESIGN OFFICE: Butte Falls Field Office			
DESIGNED BY: B. Sikes			
DRAWN BY: B. Sikes			
CHK'D BY: J. Brown			
APPROVED BY: J. Brown			
DATE: 3/13/18	MARK	DESCRIPTION	DATE
			APPROVED

Exh. C11
SHEET 3 OF 7



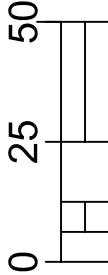
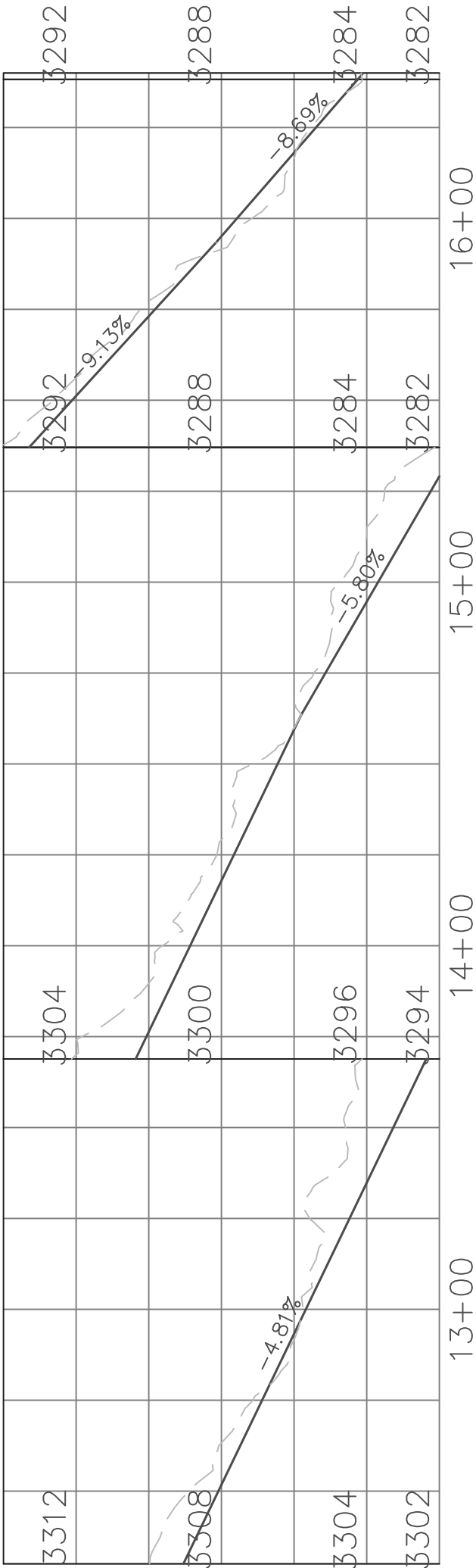
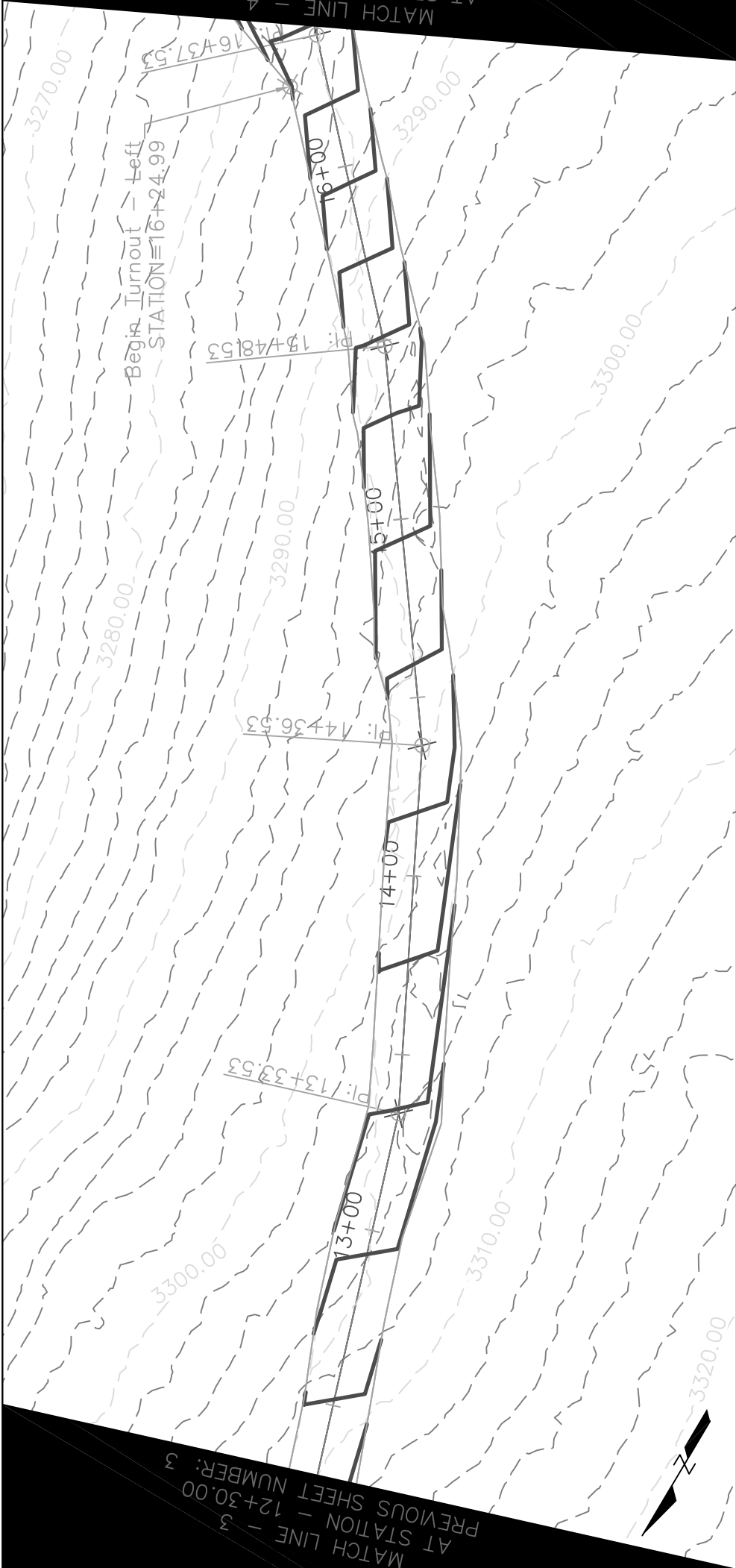
Oregon

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
35-1E-12.07 Construction
Obchain Timber Sale

Medford

PROJECT NO: ORM05-TS-18-10	DESIGN OFFICE: Butte Falls Field Office	DESIGNED BY: B. Sikes	DRAWN BY: B. Sikes	CHK'D BY: J. Brown	APPROVED BY: J. Brown	DATE: 3/13/18

Exh.C11
SHEET 4 OF 7



Feet; Vertical scale: 1" = 4'

--- Existing Road Profile/Contours
— Design Profile/Contours

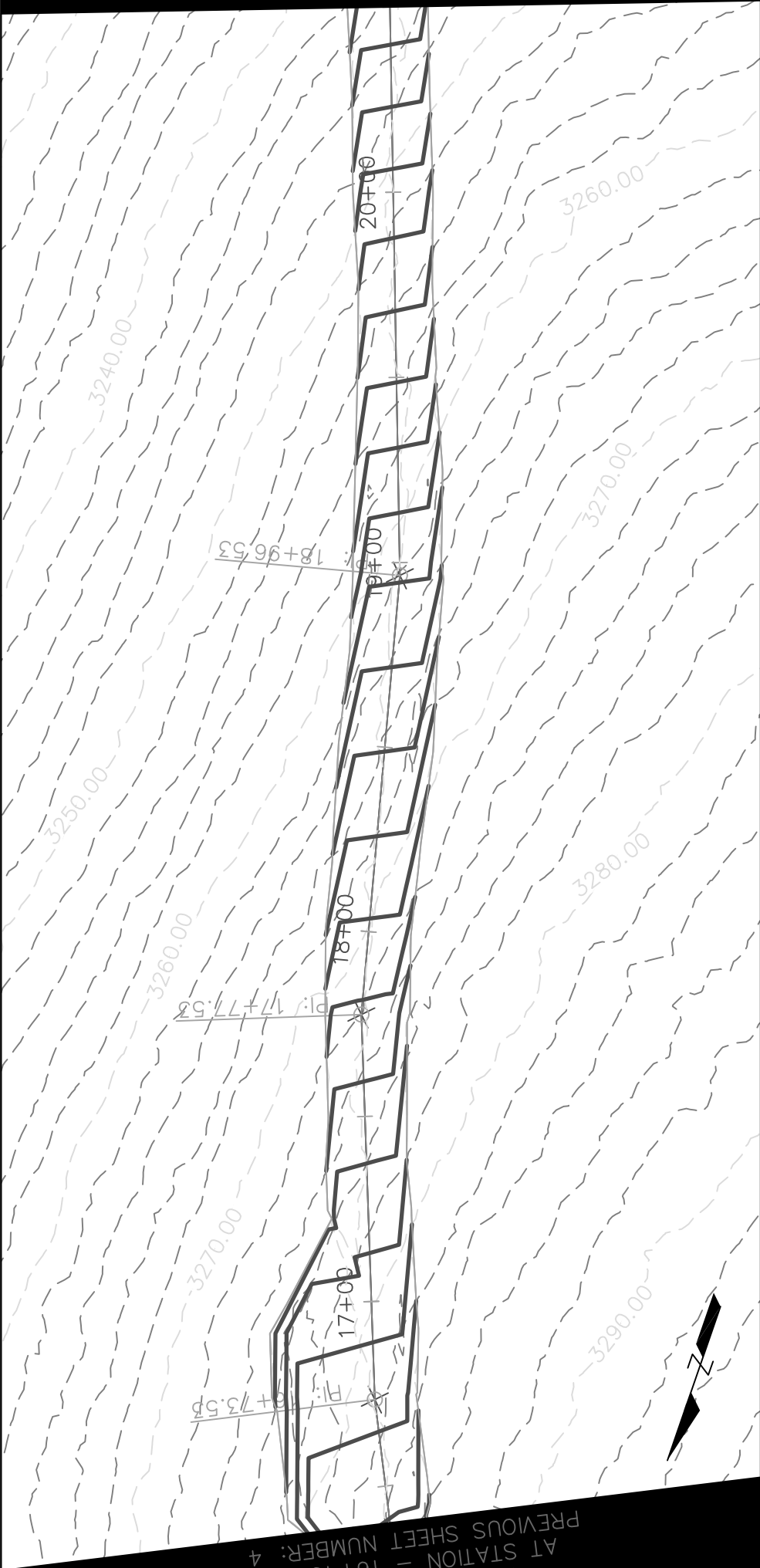


Oregon

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
35-1E-12.07 Construction
Obenchain Timber Sale

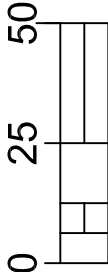
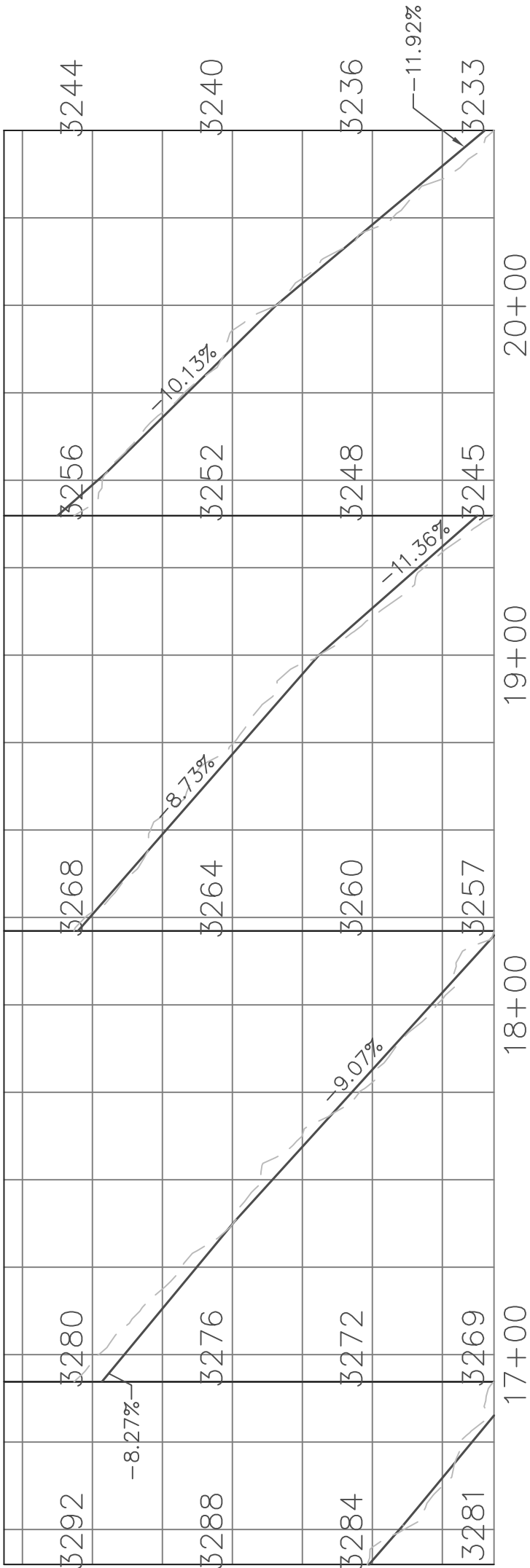
Medford

PROJECT NO: ORM05-TS-18-10									
DESIGN OFFICE: Butte Falls Field Office									
DESIGNED BY: B. Sikes									
DRAWN BY: B. Sikes									
CHK'D BY: J. Brown									
APPROVED BY: J. Brown									
DATE: 3/13/18									
APPROVED									



MATCH LINE - 4
AT STATION - 16+40.00
PREVIOUS SHEET NUMBER: 4

MATCH LINE - 5
AT STATION - 20+50.00
NEXT SHEET NUMBER: 6



Feet; Vertical scale: 1" = 4'

--- Existing Road Profile/Contours
—— Design Profile/Contours

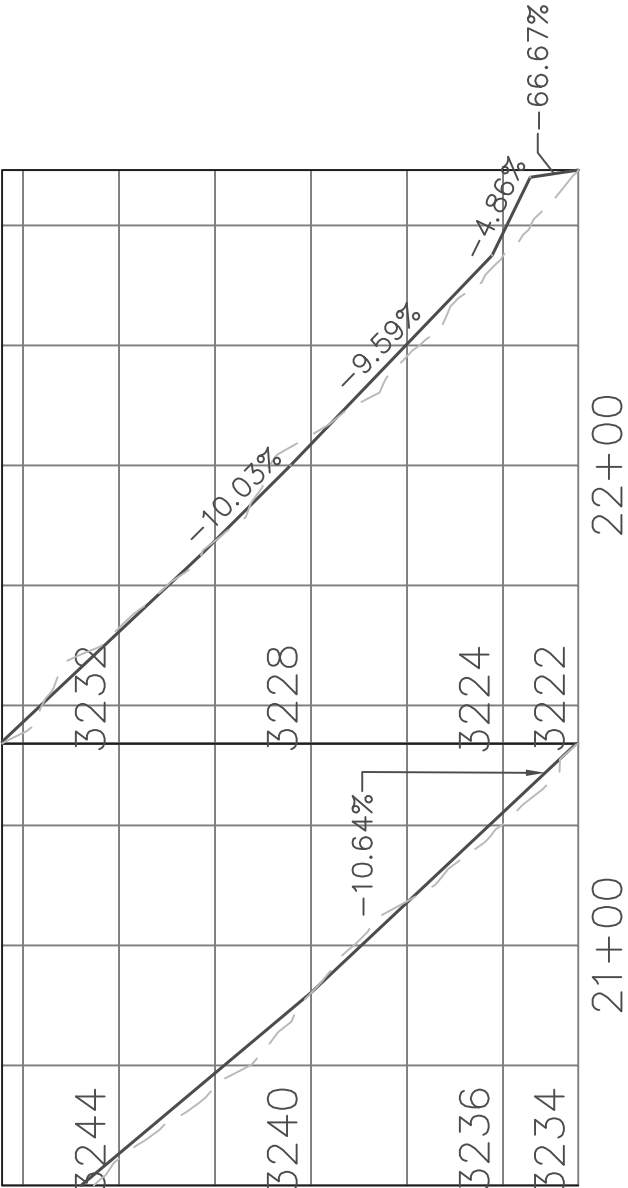
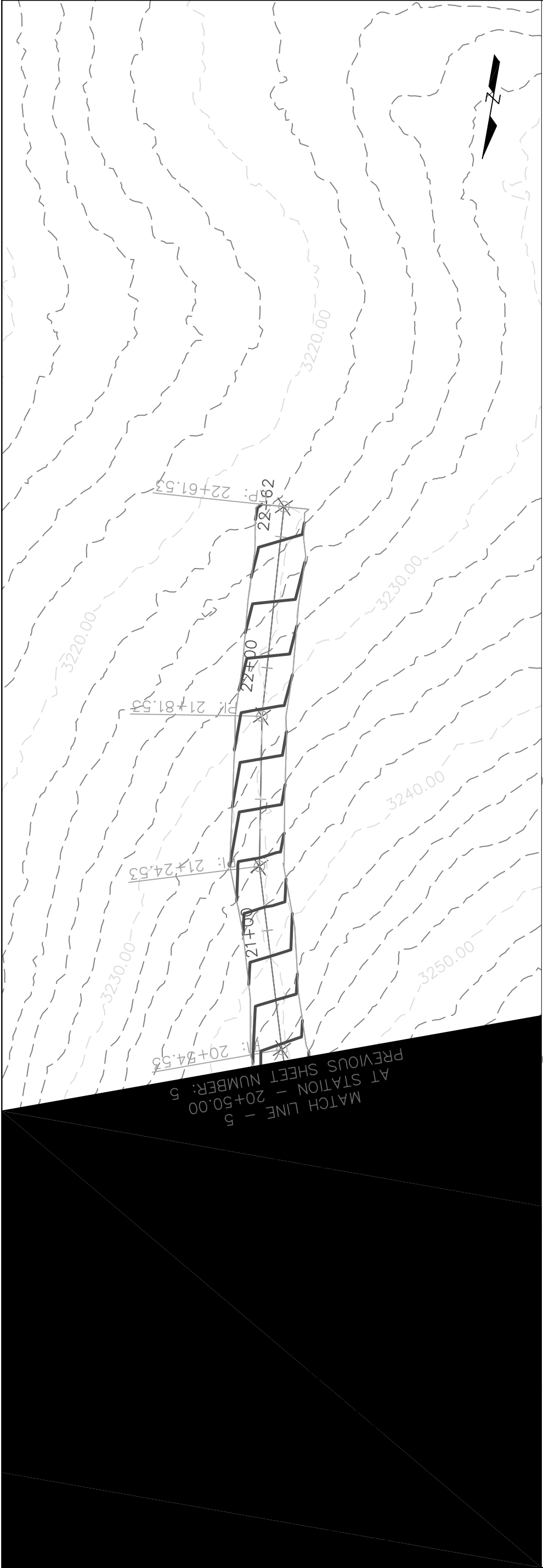


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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
35-1E-12.07 Construction
Obenchain Timber Sale

Medford

PROJECT NO: ORM05-TS-18-10	DESIGN OFFICE: Butte Falls Field Office	DESIGNED BY: B. Sikes	DRAWN BY: B. Sikes	CHK'D BY: J. Brown	APPROVED BY: J. Brown	DATE: 3/13/18



le/Contours
ours0 25 50
Feet; Vertical scale: 1" = 4'
Existing Road Profile/Contours
Design Profile/Contours

Road Renovation Work List

Renovation: This consists of roadwork to be performed on the road prior to its use. The work includes, but is not limited to: blading and/or rolling the road surface, cleaning ditches where needed, cleaning or enlarging catch basins and outlets, cleaning the entire barrel of all culverts, furnishing and replacing/installing corrugated metal pipes and/or culverts, maintaining and/or constructing water dips (WDs), maintaining armored water dips (AWDs), spot rocking, placing surfacing rock as specified in Exhibit C/drawings/specs and removing and/or constructing barricades. All drainage structures including culverts and water dips shall be inspected and required work performed so that water flow is not impeded, and brought to the design standard as shown on the plans. Remove all down trees from roadways. All culvert replacements shall be capped with 20 cubic yards of commercially sourced 1½" minus crushed aggregate.

Roadside Brushing: This consists of roadwork to be performed on the road prior to its use. The work includes, but is not limited to: brushing 4 horizontal feet from the centerline of the ditch and 4 horizontal feet from the outside shoulder of the road prism, removing brush near inlet or outlet of CMPs, removing brush, limbs, and trees along the roadway to improve sight distance. Vegetation to be cut and disposed of will generally be 6 inches in diameter at breast height or less. Disposal from roadside brushing shall be lop and scatter unless otherwise noted as chipping in the work list. Debris shall not 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. Such "hang ups" shall be removed and scattered down slope. Debris shall be cut so that the length of limbs, downed pole, hardwoods, or brush does not exceed eight feet. Brush shall be cut to meet regular specifications in Section 2100. While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed. Use of Excavators for brush removal will be at the discretion of the Authorized Officer. All culvert inlets and outlets shall be brushed for a radius of 4 feet.

Surfacing: Shall be done in accordance with Exhibit C. Grade A shall be used in accordance with table 903 and Grade C-1 shall be used in accordance with table 1204, as specified in this worklist and Exhibit C-3.

Jct. – Junction	CY – Cubic Yards
AWD – Armored Water Dip	WD – Water Dip
CSP – Corrugate Steel Pipe	ASC – Aggregate Surface Course
PRR – Pit Run Rock	BST – Bituminous Surface Treatment
NAT – Natural Surface Roads	

Road 35-1E-11.00 Obenchain R/W (PVT) ASC

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with 35-2E-18.00 (R). Begin road renovation and roadside brushing.
0.02	Existing culvert, cross drain.
0.18	Downed tree.
0.45	Jct. with unnumbered road (L); property line. Construct temp route 15 (R). End road

renovation and roadside brushing.

Road 35-1E-12.00 Obenchain Medco Spur
(BLM) ASC

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with 35-2E-18.00 (L). Begin road renovation and roadside brushing. Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-14.
0.14	Jct. with unnumbered spur (R).
0.27	Existing culvert, cross drain. Clean out inlet.
0.33	Existing culvert, cross drain.
0.34	Jct. with unnumbered road (L).
0.54	Existing culvert, draw.
0.67	Jct. with unnumbered spur (L).
0.71	Jct. with 35-1E-12.05(R). End road renovation, roadside brushing, and surfacing.

35-1E-12.04
(PVT) NAT

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with 35-2E-18.00. Begin road renovation and roadside brushing.
0.01	Barricade.
0.03	Barricade.
0.05	Water bar.
0.09	Water bar.
0.11	Water bar.
0.14	Water bar.
0.17	Water bar.
0.19	Water bar.
0.27	Water bar.
0.30	Water bar.
0.32	Water bar.
0.34	Water bar.
0.36	Water bar.
0.49	Water bar.
0.52	Water bar.
0.56	Water bar.
0.59	Water bar.
0.61	Water bar.
0.70	Water bar.
0.77	Water bar.
0.85	Construct 35-1E-12.07 (L).
0.87	Property line. Reconstruct temp route 16 (R). End road renovation and roadside brushing.

35-1E-12.05 Obenchain N. Spur
(BLM) NAT

<u>MP</u>	<u>Remarks</u>
0.00	Begin road renovation and roadside brushing. Begin surfacing 14' wide with an 8" compacted depth using gradation A from Table 903 in Exhibit C-14.

- 0.02 Barricade.
0.15 End road renovation, roadside brushing, and surfacing. Reconstruct helicopter landing. Surface approximately ¼ of helicopter landing with 250CY of gradation A from Table 903 to an 8" compacted depth to facilitate wet season use.

35-1E-12.06
(BLM) NAT

MP **Remarks**

- 0.00 Jct. with 35-1E-12.00. Begin New Construction. See Exhibit C-10.
0.38 End New Construction.

35-1E-12.07
(BLM) NAT

MP **Remarks**

- 0.00 Jct. with 35-1E-12.04. Begin New Construction. See Exhibit C-11.
0.07 Construct temp route 13 (L).
0.42 End New Construction.

Road 35-1E-13.01 Geppart Butte Sp W
Segment A (BLM) NAT

MP **Remarks**

- 0.00 Jct. with Obenchain Rd. Begin road renovation and roadside brushing. Begin surfacing 14' wide with an 8" compacted depth using gradation A from Table 903 in Exhibit C-14.
0.10 End surfacing. Construct helicopter landing. Surface approximately ¼ of helicopter landing with 250CY of gradation A from Table 903 to an 8" compacted depth to facilitate wet season use.
0.21 Jct. with overgrown road (R).
0.30 Jct. with overgrown road (R).
0.44 Jct. with 35-1E-13.02 (R).
0.50 Private cattle gate. End road renovation and roadside brushing.

Road 35-1E-23.01 Upper Obenchain R/W
Segment A (PVT) ASC

MP **Remarks**

- 0.00 Jct. with Obenchain Rd. Begin road renovation and roadside brushing.
0.01 Private electric gate.
0.05 Construct temp route 14 (L).
0.29 Jct. with private driveway (R). Surface changes to NAT.
0.37 Replace existing 18" culvert with an 18" x 28' CSP with a 2 cubic yard splash pad. Place 20cy of surfacing material. Culvert installation shall be a Type 1 (refer to Exhibit C-6; Culvert Installation Details Sheet for installation type).
0.67 Gate into BLM property. End segment A

Segment B (BLM) NAT

MP **Remarks**

- 0.74 Property line into private property. Jct. with private road (R). End segment B.

Segment C (PVT) NAT

MP **Remarks**

- 0.94 Construct temp route 2 (L). End road renovation and roadside brushing.

Road 35-2E-7.00 Geppart Butte R/W35-
Segment A (PVT) PRR

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with Obenchain Rd. Begin road renovation and roadside brushing. Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-14.
0.08	Existing culvert, cross drain.
0.14	Existing culvert, cross drain.
0.27	Existing culvert, cross drain.
0.33	Jct. with 35-2E-18.02 (R).
0.35	Existing culvert, cross drain.
0.44	Existing culvert, cross drain.
0.65	Existing culvert, cross drain.
0.66	Jct. with 35-2E-18.03 (R).
0.66	Existing culvert, cross drain.
0.92	Jct. with 35-2E-18.04 (R).
1.00	Existing culvert, cross drain.
1.33	Existing culvert, cross drain.
1.79	Existing culvert, cross drain.
1.83	Jct. with 35-2E-20.00 (L). End road renovation, roadside brushing and surfacing.

Road 35-2E-10.00 (Hukill ML)
Segment A (PVT) ASC

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with Butte Falls Hwy. Begin road renovation and roadside brushing.
0.02	Jct. with unnumbered road (L).
0.08	Jct. with unnumbered road (L).
0.16	Replace existing 18" culvert with an 18" x 36' CSP with a 2 cubic yard splash pad. Place 20cy of surfacing material. Culvert installation shall be a Type 3 (refer to Exhibit C-6; Culvert Installation Details Sheet for installation type).
0.19	Jct. with private road, old RR grade (L). End segment A.

Segment B1 (PVT) ASC

<u>MP</u>	<u>Remarks</u>
0.28	Jct. with private road, old RR grade (R).
0.31	Jct. with unnumbered spurs (L and R).
0.40	Existing culvert, cross drain.
0.44	Jct. with unnumbered private spur (L).
0.63	Jct. with 35-2E-10.01 (L).
0.67	End segment B1.

Segment B2 (PVT) ASC

<u>MP</u>	<u>Remarks</u>
0.81	Jct. with 35-2E-16.00 (R). Existing culvert. End road renovation and roadside brushing.

Road 35-2E-16.00 Lower Beekman
(PVT) ASC

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with 35-2E-10.00. Begin road renovation and roadside brushing.

- 0.15 Jct. with private road (R).
- 0.19 Existing culvert, cross drain.
- 0.38 Replace existing 18" culvert with a 24" x 50' CSP with a 2 cubic yard splash pad. Place 20cy of surfacing material. Culvert installation shall be a Type 2 (refer to Exhibit C-6; Culvert Installation Details Sheet for installation type).
- 0.51 Existing culvert, cross drain.
- 0.75 Existing culvert, cross drain.
- 0.76 Construct helicopter landing left. Surface approximately 30' x 50' x 8" (approximately 50 CY) of helicopter landing using gradation A from Table 903 to facilitate wet season use. Keep drainage to culvert at milepost 0.75 functional.
- 0.79 Jct. with private road (R). End road renovation and roadside brushing.

Road 35-2E-18.00 Obenchain R/W

Segment A (PVT) ASC

- | <u>MP</u> | <u>Remarks</u> |
|------------------|--|
| 0.00 | Jct. with Obenchain Rd. Begin road renovation and roadside brushing. Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-14. |
| 0.00 | Existing culvert, draw. |
| 0.04 | Gate. |
| 0.25 | End segment A. |

Segment B (PVT) ASC

- | <u>MP</u> | <u>Remarks</u> |
|------------------|---|
| 0.26 | Replace existing 18" culvert with an 18" x 32' CSP with a 2 cubic yard splash pad. Place 20cy of surfacing material. Culvert installation shall be a Type 3 (refer to Exhibit C-6; Culvert Installation Details Sheet for installation type). |
| 0.41 | Existing culvert, draw. |
| 0.54 | Jct. with unnumbered spur (R). |
| 1.06 | Existing culvert, cross drain. |
| 1.31 | Existing culvert, cross drain. |
| 1.40 | Jct. with 35-1E-12.00 (R). End surfacing. End segment B. |

Segment C (PVT) ASC

- | <u>MP</u> | <u>Remarks</u> |
|------------------|---|
| 1.40 | Existing culvert, cross drain. |
| 1.53 | Existing culvert, cross drain. |
| 1.58 | Existing culvert, cross drain. |
| 1.77 | Jct. with 35-1E-11.01 (R). |
| 1.91 | Existing culvert, cross drain. |
| 2.05 | Jct. with unnumbered road (R). End segment C. |

Segment D (PVT) ASC

- | <u>MP</u> | <u>Remarks</u> |
|------------------|---|
| 2.11 | Jct. with unnumbered road (L). |
| 2.20 | Jct. with unnumbered spur (L). |
| 2.24 | Jct. with 35-1E-11.00 (L). End road renovation and roadside brushing. |

Road 35-2E-18.03 Geppart Butte Crk. Sp

Segment A (PVT) ASC

- | <u>MP</u> | <u>Remarks</u> |
|------------------|-----------------------|
|------------------|-----------------------|

- 0.00 Jct. with 35-2E-7.00. Begin road renovation and roadside brushing.
0.20 Existing culvert, cross drain. End segment A.

Segment A (BLM) ASC

MP Remarks

- 0.32 Jct. with unnumbered road (L).
0.38 Barricade. Construct temp route 8 (R). End road renovation and roadside brushing.

Road 35-2E-20.00
(PVT) ASC

MP Remarks

- 0.00 Jct. with 35-2E-7.00. Begin road renovation and roadside brushing. Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-14.
0.11 Existing culvert, cross drain.
0.29 Existing culvert, cross drain.
1.06 Existing culvert, cross drain.
1.13 End road renovation, roadside brushing and surfacing.

Road 35-2E-20.01
Segment A (PVT) ASC

MP Remarks

- 0.00 Jct. with 35-2E-20.00. Begin road renovation and roadside brushing. Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-14.
0.18 Begin re-construction and change surfacing type. Surfacing shall be Grade A as described in Table 903. Road shall be decommissioned after use (See Exhibit D-3; Road Decommissioning Work List for details). End segment A.

Segment B (BLM) NAT

MP Remarks

- 0.49 End re-construction. End road renovation, roadside brushing and surfacing. Construct helicopter landing. Surface approximately ¼ of helicopter landing with 250CY of gradation A from Table 903 to an 8" compacted depth to facilitate wet season use.

OBENCHAIN TIMBER SALE

Temp Route Work List

Temp Route 2 T35S-R01E-Section 14/23 NAT.

<u>MP</u>	<u>Remarks</u>
0.00	Jct. w/ 35-1E-23.01. Begin temp route construction. Road shall be decommissioned after use (See Exhibit D-3; Road Decommissioning Work List for details).
0.24	End temp route construction.

Temp Route 8 T35S-R02E-Section 18 NAT.

<u>MP</u>	<u>Remarks</u>
0.00	Jct. w/ 35-2E-18.03. Begin temp route construction. Road shall be decommissioned after use (See Exhibit D-3; Road Decommissioning Work List for details).
0.19	End temp route construction.

Temp Route 13 T35S-R01E-Section 13 NAT.

<u>MP</u>	<u>Remarks</u>
0.00	Jct. w/ 35-1E-12.07. Begin temp route construction. Road shall be decommissioned after use (See Exhibit D-3; Road Decommissioning Work List for details).
0.18	End temp route construction.

Temp Route 14 T35S-R01E-Section 23 NAT.

<u>MP</u>	<u>Remarks</u>
0.00	Jct. w/ 35-1E-23.01. Begin temp route construction. Road shall be decommissioned after use (See Exhibit D-3; Road Decommissioning Work List for details).
0.15	Install temporary 24" x 30' CMP (See Exhibit C-6: Sheet 2 for details).
0.41	End temp route construction.

Temp Route 15 T35S-R01E-Section 11 NAT.

<u>MP</u>	<u>Remarks</u>
0.00	Jct. w/ 35-1E-11.00. Begin temp route re-construction. Road shall be decommissioned after use (See Exhibit D-3; Road Decommissioning Work List for details).
0.11	End temp route construction.

Temp Route 16 T35S-R01E-Section 11 NAT.

<u>MP</u>	<u>Remarks</u>
0.00	Jct. w/ 35-1E-12.04. Begin temp route re-construction. Road shall be decommissioned after use (See Exhibit D-3; Road Decommissioning Work List for details).
0.09	End temp route construction.

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GENERAL – 100

101 - Prework Conference(s):

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

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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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

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penetration is by separating the fibers. Further penetration is essentially a tearing process.

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

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

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

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

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

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

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

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

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

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

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

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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

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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.

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102a - Tests Used in These Specifications:

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

AASHTO T 27 Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.

AASHTO T 89 Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.

AASHTO T 90 Plastic limits and plasticity index of soil.

- a. Plastic limit - lowest water content at which the soil remains plastic.
- b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.

AASHTO T 96 Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.

AASHTO T 99 Relationship between soil moisture and density of soil.

Method A - 4" mold, soil passing a No. 4 sieve
25 blows/layer & 3 layers.

Method C - 4" mold, soil passing a 3/4 inch sieve
25 blows/layer & 3 layers.

Method D - 6" mold, soil passing a 3/4 inch sieve. 56 blows/layer & 3 layers.

AASHTO T 119 Slump of hydraulic cement concrete.

AASHTO T 152 Air content of freshly mixed concrete.

AASHTO T 166 Specific Gravity of compacted Bituminous Mixtures.

AASHTO T 176 Shows relative portions of fine dust or claylike materials in soil or graded aggregate.

AASHTO T 180 (OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.

AASHTO T 191 Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.

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AASHTO T 205 Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.

AASHTO T 209 Maximum Specific Gravity of Bituminous Paving Mixtures.

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

AASHTO T 224 Correction for coarse particles in the soil.

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

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

ASTM D 4564 Determination of relative density of cohesionless soils.

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

- 103 - Compaction equipment shall meet the following requirements:
- 103f - Vibratory roller. The drum diameter shall be not less than 48 inches, the drum width not less than 58 inches, and have a turning radius of 15 feet or less. Vibration frequency shall be regulated in steps to 1400, 1500, and 1600 vibrations per minute (VPM), corresponding to engine speeds of 1575, 1690, and 1800 RPM. The centrifugal force developed shall be 7 tons at 1600 RPM. It shall be activated by a power unit of not less than 25 horsepower. The vibratory roller shall be self-propelled or drawn by a vehicle of sufficient horsepower to enable the unit to travel through a loose layer of material at a speed ranging from 0.9 mile to 1.8 miles per hour, as directed by the Authorized Officer.

The towing vehicle and roller or self-propelled unit meeting the above requirements shall be considered a vibratory roller unit.

- 103g - Vibratory compactor. Vibratory compactors shall consist of multiple or gang-type compacting units or pads with a minimum variable width of 2 feet. It shall be self-contained and capable of compacting material as required.

- 103h - Drum drive self-propelled vibratory grid roller. The unit shall consist of one

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cylindrical drum with a drum diameter of not less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibratory frequency shall be regulated in seeps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of not less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced not more than 8-1/2 inches apart.

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

CLEARING AND GRUBBING - 200

- 201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans and as staked on the ground.
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsections 202 as shown on the plans and as posted.
- 203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.
- 204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a, 204c, and 204d between the top of the cut slope and the toe of the fill slope.
- 204a - Stumps including those overhanging cut banks, shall be removed within the required excavation limits.

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- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 204d - On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.
- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.
- 206 - Clearing and grubbing debris shall be disposed of by chipping in accordance with Subsection 209 and/or scattering in accordance with Subsection 210 and/or piling in accordance with Subsection 211 at the following road locations.

Road No.	From M.P.	To M.P.	Disposal Method
35-1E-12.06	0.00	0.38	Haul and Pile
35-1E-12.07	0.00	0.42	Haul and Pile
35-2E-20.01	0.00	0.31	Scatter
Temp Route 2	0.00	0.24	Scatter
Temp Route 8	0.00	0.19	Scatter
Temp Route 13	0.00	0.18	Scatter
Temp Route 14	0.00	0.41	Scatter
Temp Route 15	0.00	0.11	Scatter
Temp Route 16	0.00	0.09	Scatter

- 206a - Notwithstanding Subsections 204, 204a, 204d, and 205, clearing and grubbing debris resulting from landing construction 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.
- 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.
- 210 - Disposal of clearing and grubbing debris 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

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- Authorized Officer.
- 210b - Clearing and grubbing debris and 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 scattering in accordance with Subsection 210 or piling in accordance with Subsection 211.
- 211 - Disposal of clearing and grubbing debris and 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.
- 303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.
- 304 - Borrow shall consist of suitable material required for the construction of embankments or for other portions of the work; such material shall be obtained from sources selected by the Purchaser at his option and approved by the Authorized

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Officer.

- 305 - Embankment construction shall consist of the placement of excavated and borrowed materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the roadway and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.
- 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.
- 306 - Layers of embankment material as specified under Subsections 305a, and 305b shall be moistened or dried to an uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f, 103g, 103h, and 103i.
- 306e - The final subgrades shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 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 and Temp Routes 2, 8, 13, 14, 15, and 16 shall be compacted by routing construction equipment over full width.
- 306g - All fill slopes shall be compacted to 75 percent of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.
- 308 - In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.
- 314 - When heavy clays, muck, clay shale, or other deleterious material for forming the

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roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected borrow material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306. Unsuitable material shall be disposed of as directed by the Authorized Officer.

- 316 - Borrow material from sources selected at the Purchaser's option shall be inspected and approved in writing by the Authorized Officer prior to placement.
- 317 - Selected borrow shall consist of talus material, finely broken rock, gravel, or other material of granular or favorable characteristics from sources shown on the plans.
- 318 - Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed in lifts not to exceed 6 inches in depth until the required thickness shown on the plans is attained.

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

- 320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.
- 321 - Excess excavated, unsuitable, or slide materials shall not be disposed of 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 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.
- 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 required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 323 - In the construction of channel changes and stream-crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.

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- 324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.
- 327 - The finished grading shall be approved in writing by the Authorized Officer for the total project. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts, full round downspouts, 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. Additional pipe 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.
- 403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.
- 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.
- 405a - Corrugated-**aluminized** steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218, AASHTO M 274, or AASHTO M 289 as specified on the plans.
- 406 - Coupling bands shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 with the exception of band widths and the "Hugger"-type band which shall conform to the details, dimensions, and typical diagram shown on the plans.

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- 406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe and pipe-arch culverts, or helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of two annular corrugations.
- 407 - Special sections, such as elbows, branch connections, and flared-end sections, shall be of the same gauge as the pipe to which they are joined, and shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274.
- 408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.
- 410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.
- 411 - Trenches necessary for the installation of pipe culverts shall conform to the lines, grades, dimensions, and typical diagram included in the plans and 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.
- 413 - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular crushed rock material from stockpiles shown on the map or fine readily compactable soil material having a depth of not less than 3 inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.
- 416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with fine, readily compactable soil, crushed rock material from stockpiles shown on the plans, or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes

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which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

- 417 - For pipe culverts, 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.
- 418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.
- 419 - The pipe culverts after being bedded and backfilled as required by these specifications shall be protected by a 2-foot cover of fill before heavy equipment is permitted to cross the drainage structures. Removal of the protection fill shall be as directed by the Authorized Officer.
- 423 - Construction of catch basins and ditch dams conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for grade culverts and culverts at the locations specified in the worklist.
- 424 - Construction of splash pads conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for grade culverts and culverts at the locations specified in the worklist.
- 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.
- 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 water flow with no more than 10% increase in natural stream turbidity

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due to transport of excavated material or sediment during construction. Diversion streams shall not be returned to the natural channel until all in-stream work has been completed.

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans, and as marked on the ground with stakes.
- 502 - The existing road surface shall be bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes and as specified in the worklist.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 504 - 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, 103g, 103h, and 103i and as specified in the worklist.
- 504a - Minimum compaction required shall be 1 hour of continuous rolling for each 3 stations of road, or fraction thereof, as measured along the centerline per layer of material.
- 506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.
- 507 - Existing and new drainage structures at the locations specified in the worklist and on the plans, shall be replaced and placed with structures of the type, gauge, diameter, and length shown on the plans and in accordance with the placement requirements set

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forth under section 400 of these specifications.

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

WATERING - 600

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

AGGREGATE BASE COURSE - 900 **SCREENED ROCK MATERIAL**

- 901 - This work shall consist of furnishing, hauling, and placing one or more lifts of screened rock material on roadbeds approved for placing screened rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.

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- 902a - Screened rock materials to be used in this work shall be obtained from 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	Gradation			
	A	B	C	D
4 inch	100			
3 inch	95-100	100		
2 inch		95-100	100	
1-1/2 inch			95-100	
1 inch				100
¾-inch				86-100
½-inch				59-89
No. 4	11-44	16-49	21-54	35-65
No. 40				11-27
No. 200	2-15	2-15	0-15	4-7

- 904 - Screened rock material retained on the No. 4 sieve shall have a percentage of loss of not more than 35 at 500 revolutions as determined by AASHTO T 96.

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- 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.
- 910 - Screened rock material, bladed and shaped as specified, shall be moistened or dried to optimum moisture content for maximum compaction and compacted to full width by compaction equipment conforming to the requirements of Subsections 103f, 103g, 103h, and 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

AGGREGATE SURFACE COURSE - 1200 **CRUSHED ROCK MATERIAL**

- 1201 - This work shall consist of purchasing, 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

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to these specifications will be rejected, and shall be removed from the road at the purchaser's expense.

- 1202a - Crushed rock materials used in this work may be obtained from commercial source(s) selected by the Purchaser at his option and expense, providing the rock materials furnished comply with the specifications.
- 1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces.
- 1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1204
AGGREGATE SURFACE
COURSE CRUSHED ROCK
MATERIAL

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

GRADATION

Sieve Designation	C	C-1	D	D-1	E	E-1
1-1/2-inch	100	100	-	-	-	-
1-inch	-	-	100	100	-	-
3/4-inch	50-90	60-90	-	70-98	100	100
1/2-inch	-	-	-	-	-	70-98
No. 4	25-50	30-55	30-60	36-60	40-75	44-70
No. 8	-	22-43	-	25-47	-	30-54
No. 30	-	11-27	-	12-31	-	15-34

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No. 40	5-25	-	5-30	-	5-35	-
No. 200	2-15	3-15	3-15	3-15	2-15	3-15

- 1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of not 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 T210.
- 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 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/or base course shall be completed and

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approved in writing, prior to placing crushed rock material, in accordance to the requirements of Subsection 500 for placing on the roadbed and Subsections 900 for placing on the base course.

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

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.

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- 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.
- 1307 - Where subgrade reinforcement 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 shall meet the following requirements:

TABLE 1311b
Physical Requirements for Stabilization Geotextile

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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	

The first values in a column apply to geotextiles that break at < 50 percent elongation (ASTM D 4632). The second values in a column apply to geotextiles that break at ≥ 50 percent elongation (ASTM D 4632).

Maximum average roll value.

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

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

<i>Volume/ Cubic Foot</i>	<i>Average Dimension in inches</i>	<i>Approximate Weight in Pounds</i>
12	27.5 x 27.5 x 27.5	2100
6	21.8 x 21.8 x 21.8	1050
4	19.1 x 19.1 x 19.1	700

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<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	Range of Intermediate Dimensions ² (inches)	Range of Rock Mass ³ (pounds)	% of Rock Equal or Smaller by Count
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

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4	11-14	110-220	50
	8-10	42-81	15
	27-33	1600-2900	100
	19-23	560-990	85
	14-17	220-400	50
	9-12	59-140	15

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

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

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

- 1407 - Determination of the acceptability of the slope protection material gradation will be through visual inspection by the Authorized Officer.

EROSION CONTROL - 1700

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

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Road No.	From M.P.	To M.P.
Temp Route 2	0.00	0.24
Temp Route 8	0.00	0.19
Temp Route 13	0.00	0.18
Temp Route 14	0.00	0.41
Temp Route 15	0.00	0.11
Temp Route 16	0.00	0.09

carried over the winter and early spring periods shall be stabilized by seeding and mulching in accordance with Section 1800.

- 1708 - Newly constructed roads to be carried over the winter period, shall be blocked to vehicular traffic.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.
- 1711 - The Purchaser shall construct energy dissipators (splash pads) for pipe culverts conforming to the requirements and details shown on the respective exhibits and on the plans.

SOIL STABILIZATION – 1800

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

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road construction, landings, disturbed areas, and disposal sites in accordance with these specifications and as shown on the plans.

- 1803 - Soil stabilization work as specified under Subsections 1802 and 1802a shall be performed during the following seasonal periods:

From: August 1	To: October 31 (of the same year)
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If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Subsection 1707 and then complete the requirements of Section 1800 the next construction season. The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

- 1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.
- 1806a - Additional soil stabilization work consisting of seeding and mulching, may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.
- 1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.
- 1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.
- 1810 - Bulk mulching material required under these specifications shall be delivered to the

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work area bound either by twine, string or hemp rope. Wire binding will not be permitted.

- 1811 - The Purchaser shall furnish and apply to approximately **7.70** acres designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806a, a mixture of grass seed and mulch material at the following rate of application:

a. Two Stage:

Grass Seed	20 lbs./acre
Mulch	3,000 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 1806a, a mixture of grass seed 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 and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.
- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.
- 1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.
- 1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the

TIMBER SALE ROAD SPECIFICATIONS

slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.

- 1822 - No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.
- 1824 - Twine, rope, sacks, and other debris resulting from the soil-stabilization operation shall be picked up and disposed of to the satisfaction of the Authorized Officer.

ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet (C-9) of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment and/or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually and/or mechanically less than 6 inches in diameter when measured at D.B.H. shall be cut to a maximum height of 3 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 road bed between the outside shoulder(s) and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. Limbs below the 1 inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.
- 2104 - Trees in excess of 6 inches in diameter at D.B.H. 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 6 inches in diameter for sight distance or safety may be directed by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

- 2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inches of the trunk to produce a smooth vertical face.
- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation 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 (unless otherwise noted in the work list) downslope from the roadway. Debris shall not be allowed to accumulate in concentrations. 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.
- 2110 - Vegetation 6 inches and smaller in diameter shall be chipped where indicated in the work list. Chips shall be scattered downslope from the roadway. Vegetation over 6 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.

ROAD MAINTENANCE SPECIFICATIONS

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 as shown on the Exhibit D-2 map of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.
- 3001a The Purchaser shall be required to provide maintenance on roads in accordance with Subsections 3403 and 3403a.
- 3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.
- 3003 The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.
- 3004 The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

- 3101 The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 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

ROAD MAINTENANCE SPECIFICATIONS

designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.

- 3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

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

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

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

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

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

- 3107 The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe

ROAD MAINTENANCE SPECIFICATIONS

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 roadways only where the locations have been marked on the ground and/or approved by the Authorized Officer. The Purchaser shall furnish gravel for necessary repairs at designated locations. Repair of the road(s) 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 31 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the preceding 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

ROAD MAINTENANCE SPECIFICATIONS

during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE - 3300

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

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

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

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

OTHER MAINTENANCE - 3400

3401 The Purchaser shall repair any damage to road surfaces that was specified under Subsection 3108 and 3108a. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in Subsection 3104.

ROAD MAINTENANCE SPECIFICATIONS

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 following roads shall be watered:

Road Number	From M.P.	to M.P.
35-1E-12.00	0.00	0.71
35-1E-13.01	0.00	0.10
35-1E-23.01	0.00	0.94
35-2E-7.00	0.00	1.83
35-2E-10.00	0.00	0.81
35-2E-16.00	0.00	0.79
35-2E-18.00	0.00	1.40

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

During drought periods when the transportation of water from the source to the roads noted above exceeds 20 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 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.
- 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.

DECOMMISSIONING – 3500

- 3501 Decommissioning shall consist of removing cross drain culverts. Work also includes ripping, water bars, and blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.
- 3503 Decommissioning shall be performed on existing roads in accordance with these specifications (Exhibit D-1), as shown on the plans and at locations specified in Exhibit D3- Decommissioning worklist.
- 3504 Decommissioning work shall be completed after road use. All decommissioning work shall be performed during the following seasonal periods:

From: August 1	To: October 31 (of the same year)
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ROAD MAINTENANCE SPECIFICATIONS

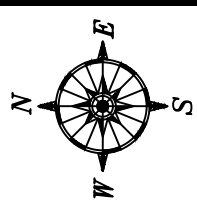
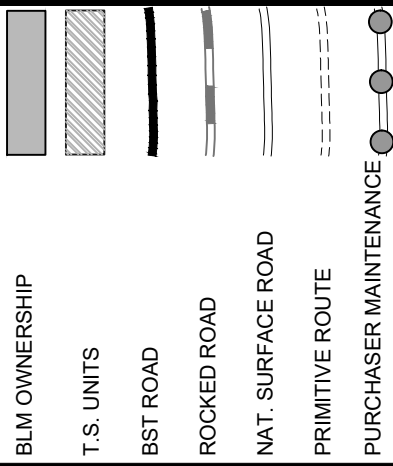
- 3505 Where draw crossing fill material is to be excavated and removed, the finished bottom of draw profile shall be re-established to its original channel grade and resulting adjacent banks shall be constructed to a 2:1 backslope ratio.
- 3506 Stockpiled slash shall be used to protect exposed areas 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. Where slash is no longer available, remaining exposed soil areas shall be stabilized in accordance with Section 1800.
- 3507 Culverts not designated as salvage by the Authorized Officer for the Government shall become the property of the Purchaser. The Purchaser shall be responsible for disposal of materials in a legal manner and for payment of any fees required. Sale of material on site is not allowed unless authorized in writing by the Authorized Officer.
- 3508 Protect areas mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 3509 Access shall be blocked with barricades as shown on the typical detail sheet Drainage and Erosion Control Detail Sheet Exhibit C-8 and at locations as shown on Exhibit D-3.
- 3511 Ripping and water barring shall be done on designated roadways, temporary roads, disturbed areas, and landings. Ripping shall be performed with wing-toothed rippers or an excavator modified for tillage.
- 3513 Water bars shall be installed across full width of roadway at locations shown in the specifications. Water bars shall be constructed as shown on Exhibit C-8.
- 3514 Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800 and/or placement of slash described in Subsection 3506 on designated roadways, temporary roads, disturbed areas, landings, cut banks, fill slopes, and other areas disturbed by the purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

EXHIBIT D-2

SHEET 1 OF 2

OBENCHAIN TIMBER SALE

TRACT NO.:
ORM05-TS-2018-0010



ALWAYS
THINK
SAFETY

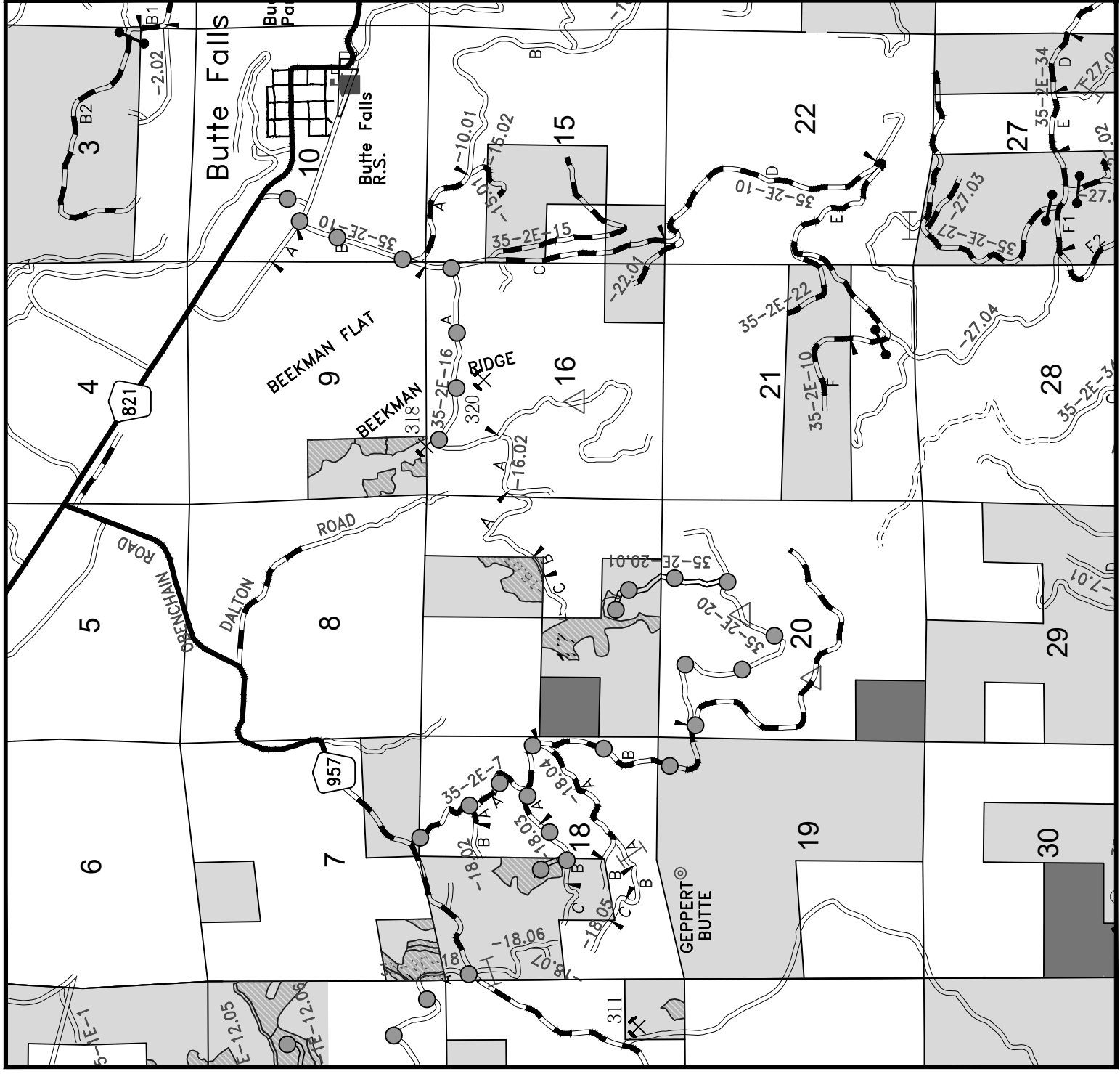
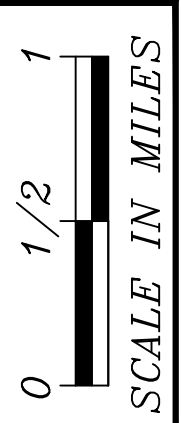


EXHIBIT D-2

SHEET 2 OF 2

OBENCHAIN TIMBER SALE
TRACT NO.:

ORM05-TS-2018-0010

BLM OWNERSHIP

T.S. UNITS

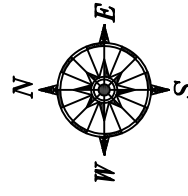
BST ROAD

ROCKED ROAD

NAT. SURFACE ROAD

PRIMITIVE ROUTE

PURCHASER MAINTENANCE



ALWAYS
THINK
SAFETY



SCALE IN MILES



OBENCHAIN TIMBER SALE

Road Decommissioning Work List

GENERAL DEFINITIONS:

Decommission (Full) = Rip, Water bar (every 150' for grades <10% - every 100' grades >10%) unless otherwise noted in the work list, Barricade, and/or Remove Culverts (Armor if needed) and Seed and Mulch.

Decommission (Partial) = Water bar (every 150' for grades <10% - every 100' grades >10%) unless otherwise noted in the work list, Barricade, and/or Remove culverts (Armor if needed) and Seed and Mulch disturbed areas.

Barricade = Barricade only.

ASC - Aggregate Surface Course

CMP – Corrugated metal pipe

D.B.H.- Diameter breast height

NAT – Natural surface

WD – Water Dip

AWD – Armored water dip

Cu. Yds = CY = Cubic Yards

Jct.– Junction

PRR - Pit Run Rock

DS – Down Spout

35-1E-12.06 T35S-R01E-Section 12 NAT.

MP Remarks

0.00 Jct. w/ 35-1E-12.00. Construct Barricade. Begin partial decommission.

0.38 End partial decommission.

35-1E-12.07 T35S-R01E-Section 13 NAT.

MP Remarks

0.00 Jct. w/ 35-1E-12.04. Construct Barricade. Begin partial decommission.

0.42 End partial decommission.

Road 35-2E-20.01 T35-2E-Section 17/20 PRR.

MP Remarks

0.00 Jct. w/ 35-2E-20.00.

0.18 Construct Barricade.

Temp Route 2 T35S-R01E-Section 14/23 NAT.

MP Remarks

0.00 Jct. w/ 35-1E-23.01. Construct barricade. Begin full decommission.

0.24 End full decommission.

Temp Route 8 T35S-R02E-Section 18 NAT.

MP Remarks

0.00 Jct. w/ 35-2E-18.03. Construct barricade. Begin full decommission.

0.19 End full decommission.

Temp Route 13 T35S-R01E-Section 13 NAT.

MP Remarks

0.00 Jct. w/ 35-1E-12.07. Construct barricade. Begin full decommission.
0.18 End full decommission.

Temp Route 14 T35S-R01E-Section 23 NAT.

MP Remarks

0.00 Jct. w/ 35-1E-23.01.
0.03 Begin full decommission. Put fence back up in original location.
0.05 Construct barricade.
0.15 Remove temporary culvert, rock, and fabric.
0.41 End full decommission.

Temp Route 15 T35S-R01E-Section 11 NAT.

MP Remarks

0.00 Jct. w/ 35-1E-11.00. Construct barricade. Begin full decommission.
0.11 End full decommission.

Temp Route 16 T35S-R01E-Section 11 NAT.

MP Remarks

0.00 Jct. w/ 35-1E-12.04. Construct barricade. Begin full decommission.
0.09 End full decommission.

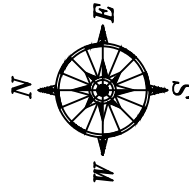
EXHIBIT D-4

SHEET 1 OF 2

OBENCHAIN TIMBER SALE

TRACT NO.:
ORM05-TS-2018-0010

- BLM OWNERSHIP
- T.S. UNITS
- BST ROAD
- ROCKED ROAD
- NAT. SURFACE ROAD
- PRIMITIVE ROUTE
- DECOMMISSION
SEE EXHIBIT D-3



ALWAYS
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SAFETY

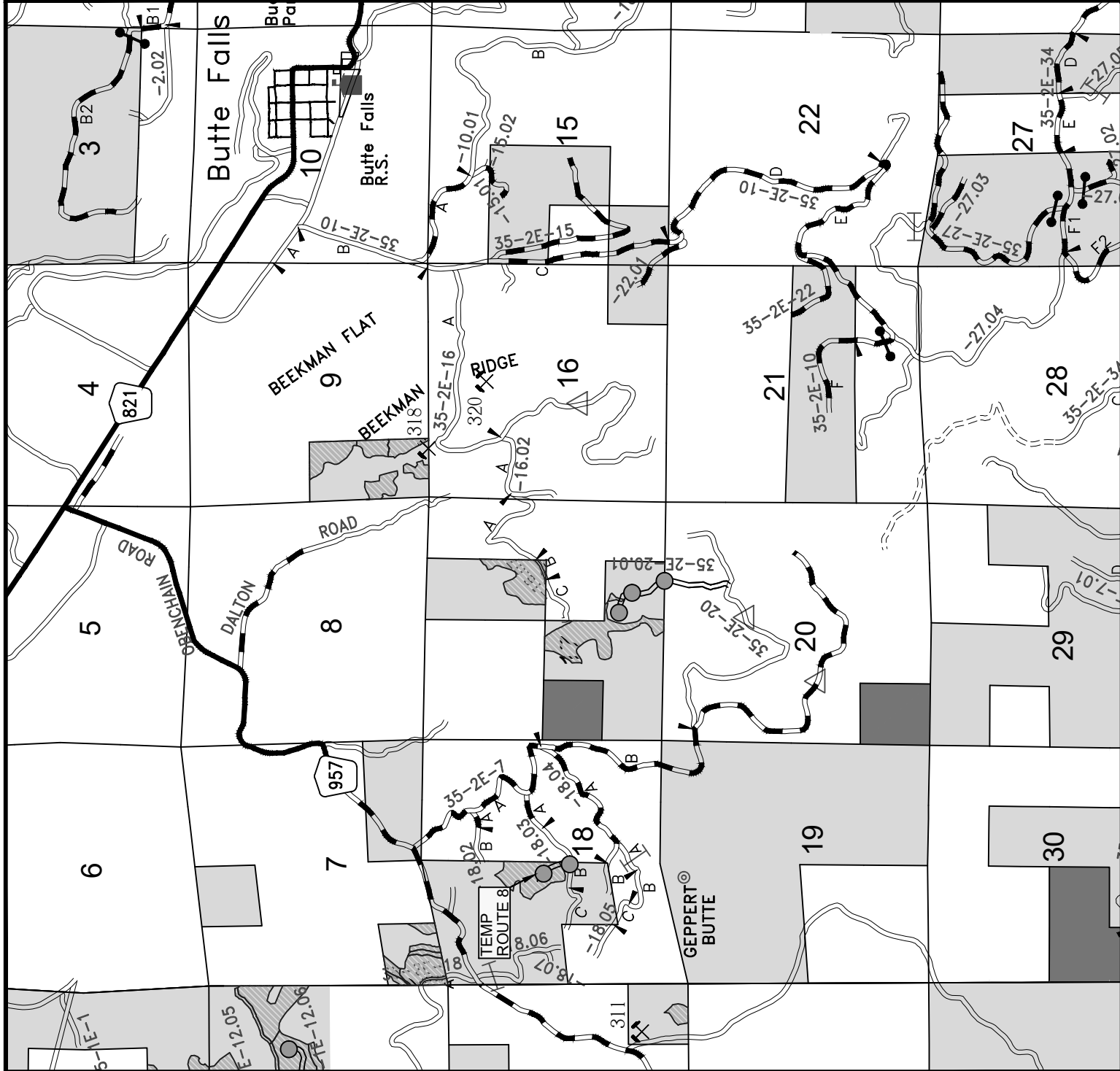
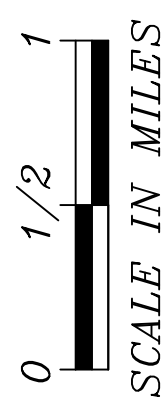


EXHIBIT D-4

SHEET 2 OF 2

OBCCHAIN TIMBER SALE
TRACT NO.:

ORM05-TS-2018-0010

BLM OWNERSHIP

T.S. UNITS

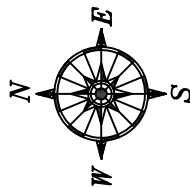
BST ROAD

ROCKED ROAD

NAT. SURFACE ROAD

PRIMITIVE ROUTE

DECOMMISSION
SEE EXHIBIT D-3



ALWAYS
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SAFETY



SCALE IN MILES



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 5.2.0.123
Updated: 6/14/2017

Summary of All Roads and Projects

T.S. Contract Name: Obenchain Tract No: Sale Date: 2018

Prepared by: B.Sikes Ph: 2286 Print Date: 7/6/2018 11:55:15 AM

Construction: 106.65 sta

Improve: 0.00 sta Renov: 596.10 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 14.3 acres	\$39,363.47
300 Excavation:	\$28,876.54
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage:	\$9,605.84
Culvert: 176 lf	DownSpout: 0 lf
PolyPipe: 0 lf	
500 Renovation:	\$14,062.32
Blading 11.29 mi	
700-1200 Surfacing:	\$141,869.19
Commercial Quarry Name: Hailicka Pit 7,053 LCY	
Commercial Quarry Name: Hailicka PRR 2,325 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.5 acres	\$518.24
Includes Small Quantity Factor of 1.57	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing:	\$7,078.05
Manual Brushing: 10.7 acres	
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$11,129.10
Mobilization: Const. \$9,277.20 Surf. \$0.00.....	\$9,277.20
Quarry Development:	\$0.00

Total: 3,736 mbf @ \$70.070/mbf = \$261,779.96

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-11.00 Road Name: Obenchain R/W

Road Renovation: 0.45 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$623.61
Blading 0.45 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.4 acres	\$265.34
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$32.66 Surf. \$0.00.....	\$32.66
Quarry Development:	\$0.00
Total:	\$921.61

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-12.00 Road Name: Obenchain-Medco Sp

Road Renovation: 0.71 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$983.91
Blading 0.71 mi	
700-1200 Surfacing:	\$12,998.96
Quarry Name: Hailicka Pit 862 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.7 acres	\$464.35
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$530.81 Surf. \$0.00.....	\$530.81
Quarry Development:	\$0.00

Total: \$14,978.03

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-12.04 Road Name:

Road Renovation: 0.87 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$373.15
Blading 0.87 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.8 acres	\$530.69
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$33.21 Surf. \$0.00.....	\$33.21
Quarry Development:	\$0.00
Total:	\$937.05

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-12.05 Road Name: Obenchain N. Spur

Road Renovation: 0.15 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$113.16
Blading 0.15 mi	
700-1200 Surfacing:	\$9,921.24
Quarry Name: Hailicka PRR 651 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.1 acres	\$66.34
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$371.11 Surf. \$0.00.....	\$371.11
Quarry Development:	\$0.00

Total: \$10,471.84

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-12.06 Road Name:

Road Construction: 0.38 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 2.6 acres	\$8,568.82
300 Excavation:	\$5,897.59
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$1,187.45
Mobilization: Const. \$575.14 Surf. \$0.00.....	\$575.14
Quarry Development:	\$0.00
Total:	\$16,229.00

Notes:

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-12.07 Road Name:

Road Construction: 0.42 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 2.8 acres	\$9,302.34
300 Excavation:	\$5,968.70
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$1,187.45
Mobilization: Const. \$604.70 Surf. \$0.00.....	\$604.70
Quarry Development:	\$0.00
Total:	\$17,063.19

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-13.01 Road Name: Geppert Butte Spur W

Road Renovation: 0.50 mi 15 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$509.99
Blading 0.50 mi	
700-1200 Surfacing:	\$7,853.23
Quarry Name: Hailicka PRR 517 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.5 acres	\$331.68
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$319.46 Surf. \$0.00.....	\$319.46
Quarry Development:	\$0.00

Total: \$9,014.35

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-1E-23.01 Road Name: Upper Obenchain R/W

Road Renovation: 0.94 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$1,506.90
Culvert: 28 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,091.09
Blading 0.94 mi	
700-1200 Surfacing:	\$296.00
Quarry Name: Hailicka Pit 20 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.1 acres	\$103.65
Includes Small Quantity Factor of 1.57	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.9 acres	\$597.02
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$132.07 Surf. \$0.00.....	\$132.07
Quarry Development:	\$0.00

Total: \$3,726.73

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-2E-07.00 Road Name: Geppart Butte R/W

Road Renovation: 1.83 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$2,536.00
Blading 1.83 mi	
700-1200 Surfacing:	\$36,840.44
Quarry Name: Hailicka Pit 2,443 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):1.8 acres	\$1,194.05
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$1,490.60 Surf. \$0.00.....	\$1,490.60
Quarry Development:	\$0.00

Total: \$42,061.08

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-2E-10.00 Road Name: Hukill Crk Rd.

Road Renovation: 0.81 mi 18 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$1,891.78
Culvert: 36 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,122.49
Blading 0.81 mi	
700-1200 Surfacing:	\$304.80
Quarry Name: Hailicka Pit 20 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.1 acres	\$103.65
Includes Small Quantity Factor of 1.57	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.8 acres	\$530.69
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$145.25 Surf. \$0.00.....	\$145.25
Quarry Development:	\$0.00

Total: \$4,098.66

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-2E-16.00 Road Name: Lower Beekman

Road Renovation: 0.79 mi 18 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$2,877.32
Culvert: 50 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,094.77
Blading 0.79 mi	
700-1200 Surfacing:	\$1,134.50
Quarry Name: Hailicka Pit 20 LCY	
Quarry Name: Hailicka PRR 50 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.1 acres	\$103.65
Includes Small Quantity Factor of 1.57	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.8 acres	\$530.69
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$210.93 Surf. \$0.00.....	\$210.93
Quarry Development:	\$0.00

Total: \$5,951.86

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-2E-18.00 Road Name: Obenchain R/W

Road Renovation: 2.24 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$1,699.34
Culvert: 32 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$3,104.17
Blading 2.24 mi	
700-1200 Surfacing:	\$28,184.52
Quarry Name: Hailicka Pit 1,869 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.1 acres	\$103.65
Includes Small Quantity Factor of 1.57	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):2.2 acres	\$1,459.39
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$1,269.44 Surf. \$0.00.....	\$1,269.44
Quarry Development:	\$0.00

Total: \$35,820.51

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-2E-18.03 Road Name: Geppart Butte C Sp

Road Renovation: 0.38 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$526.60
Blading 0.38 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.4 acres	\$265.34
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$29.10 Surf. \$0.00.....	\$29.10
Quarry Development:	\$0.00
Total:	\$821.04

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-2E-20.00 Road Name:

Road Renovation: 1.13 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,565.94
Blading 1.13 mi	
700-1200 Surfacing:	\$22,755.72
Quarry Name: Hailicka Pit 1,509 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):1.1 acres	\$729.70
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$920.41 Surf. \$0.00.....	\$920.41
Quarry Development:	\$0.00

Total: \$25,971.77

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: 35-2E-20.01 Road Name:

Road Renovation: 0.49 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 1.8 acres	\$3,401.03
300 Excavation:	\$3,636.42
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$417.45
Blading 0.49 mi	
700-1200 Surfacing:	\$20,489.88
Quarry Name: Hailicka Pit 240 LCY	
Quarry Name: Hailicka PRR 1,107 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Manual):0.2 acres	\$112.77
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$1,030.86 Surf. \$0.00.....	\$1,030.86
Quarry Development:	\$0.00

Total: \$29,088.42

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: Temp Route 13 Road Name:

Road Construction: 0.18 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.2 acres	\$3,988.08
300 Excavation:	\$2,270.04
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$1,187.45
Mobilization: Const. \$273.56 Surf. \$0.00.....	\$273.56
Quarry Development:	\$0.00
Total:	\$7,719.13

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: Temp Route 14 Road Name:

Road Construction: 0.41 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 2.0 acres	\$5,206.30
300 Excavation:	\$4,525.98
400 Drainage:	\$1,630.50
Culvert: 30 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$1,089.90
Quarry Name: Hailicka Pit 70 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.1 acres	\$103.65
Includes Small Quantity Factor of 1.57	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$2,816.95
Mobilization: Const. \$564.83 Surf. \$0.00.....	\$564.83
Quarry Development:	\$0.00

Total: \$15,938.11

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: Temp Route 15 Road Name:

Road Construction: 0.11 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.8 acres	\$1,496.46
300 Excavation:	\$1,382.32
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$1,187.45
Mobilization: Const. \$149.40 Surf. \$0.00.....	\$149.40
Quarry Development:	\$0.00
Total:	\$4,215.62

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: Temp Route 16 Road Name:

Road Construction: 0.09 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.7 acres	\$1,399.28
300 Excavation:	\$1,346.77
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$1,187.45
Mobilization: Const. \$144.52 Surf. \$0.00.....	\$144.52
Quarry Development:	\$0.00
Total:	\$4,078.02

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: Temp Route 2 Road Name:

Road Construction: 0.24 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.4 acres	\$3,688.45
300 Excavation:	\$2,324.87
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$1,187.45
Mobilization: Const. \$264.56 Surf. \$0.00.....	\$264.56
Quarry Development:	\$0.00
Total:	\$7,465.34

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number: Temp Route 8 Road Name:

Road Construction: 0.19 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.2 acres	\$2,312.70
300 Excavation:	\$1,523.86
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$1,187.45
Mobilization: Const. \$184.59 Surf. \$0.00.....	\$184.59
Quarry Development:	\$0.00
Total:	\$5,208.60

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Obenchain Sale Date: 2018

Road Number	Const	Improv	Renov	Decomm	Temp
35-1E-11.00			23.76		
35-1E-12.00			37.49		
35-1E-12.04			45.94		
35-1E-12.05			7.92		
35-1E-12.06	20.06				
35-1E-12.07	22.18				
35-1E-13.01			26.40		
35-1E-23.01			49.63		
35-2E-07.00			96.62		
35-2E-10.00			42.77		
35-2E-16.00			41.71		
35-2E-18.00			118.27		
35-2E-18.03			20.06		
35-2E-20.00			59.66		
35-2E-20.01			25.87		
Temp Route 13	9.50				
Temp Route 14	21.65				
Temp Route 15	5.81				
Temp Route 16	4.75				
Temp Route 2	12.67				
Temp Route 8	10.03				
Total Sta:	106.65		596.10		

200 Clearing and Grubbing	Clearing acres
35-1E-11.00	0.0
35-1E-12.00	0.0
35-1E-12.04	0.0
35-1E-12.05	0.0
35-1E-12.06	2.6
35-1E-12.07	2.8
35-1E-13.01	0.0
35-1E-23.01	0.0
35-2E-07.00	0.0
35-2E-10.00	0.0
35-2E-16.00	0.0
35-2E-18.00	0.0
35-2E-18.03	0.0
35-2E-20.00	0.0
35-2E-20.01	1.8
Temp Route 13	1.2
Temp Route 14	2.0
Temp Route 15	0.8
Temp Route 16	0.7
Temp Route 2	1.4
Temp Route 8	1.2
Totals:	14.3

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

Continuation of Construction Quantities

Totals: 0 0 0

Landing Construction	35-2E-20.01	
Tractor: D8 with rippers		5 hr
New Construction	Temp Route 14	
Tractor: D8 with rippers		16 hr
New Construction	Temp Route 13	
Tractor: D8 with rippers		8 hr
New Construction	35-1E-12.07	
Tractor: D8 with rippers		22 hr
New Construction	Temp Route 8	
Tractor: D8 with rippers		5 hr
New Construction	35-1E-12.06	
Tractor: D8 with rippers		22 hr
New Construction	Temp Route 2	
Tractor: D8 with rippers		8 hr
Re-Construction	Temp Route 15	
Tractor: D8 with rippers		5 hr
Re-Construction	Temp Route 16	
Tractor: D8 with rippers		5 hr
Road Re-construction	35-2E-20.01	
Tractor: D8 with rippers		8 hr

400 Drainage

Road Number	Culvert	Polypipe	Downspout
35-1E-23.01	28 lf	0 lf	0 lf
35-2E-10.00	36 lf	0 lf	0 lf
35-2E-16.00	50 lf	0 lf	0 lf
35-2E-18.00	32 lf	0 lf	0 lf
Temp Route 14	30 lf	0 lf	0 lf
Total Drainage:	176 lf		

500 Renovation	Blade Miles	Slide cy
35-1E-11.00	0.45	0
35-1E-12.00	0.71	0
35-1E-12.04	0.87	0
35-1E-12.05	0.15	0
35-1E-13.01	0.50	0
35-1E-23.01	0.94	0
35-2E-07.00	1.83	0
35-2E-10.00	0.81	0
35-2E-16.00	0.79	0
35-2E-18.00	2.24	0
35-2E-18.03	0.38	0
35-2E-20.00	1.13	0
35-2E-20.01	0.49	0
Totals:	11.29	0

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: Hailicka Pit

Commercial	Roadway	Turnouts	Other	
Temp Route 14	0	0	70	70
35-2E-18.00	1,869	0	0	1,869

Continuation of Construction Quantities

35-1E-12.00	862	0	0	862
35-2E-07.00	2,443	0	0	2,443
35-2E-20.00	1,509	0	0	1,509
35-2E-20.01	240	0	0	240
35-1E-23.01	0	0	20	20
35-2E-10.00	0	0	20	20
35-2E-16.00	0	0	20	20

Totals:	6,923	0	130	7,053
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Quarry Name: Hailicka PRR

Commercial	Roadway	Turnouts	Other	
35-2E-20.01	857	0	250	1,107
35-1E-12.05	401	0	250	651
35-1E-13.01	267	0	250	517
35-2E-16.00	0	0	50	50
Totals:	1,525	0	800	2,325

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
35-1E-23.01	0.0	0.1	
35-2E-10.00	0.0	0.1	
35-2E-16.00	0.0	0.1	
35-2E-18.00	0.0	0.1	
Temp Route 14	0.0	0.1	

Totals: 0.0 0.5 0.0

Small Quantity Factor of 1.57 used

1900 Cattleguards

Totals: No Quantities

2100 RoadSide Brushing	acres
35-1E-11.00 - Manual Brushing	0.4
35-1E-12.00 - Manual Brushing	0.7
35-1E-12.04 - Manual Brushing	0.8
35-1E-12.05 - Manual Brushing	0.1
35-1E-13.01 - Manual Brushing	0.5
35-1E-23.01 - Manual Brushing	0.9
35-2E-07.00 - Manual Brushing	1.8
35-2E-10.00 - Manual Brushing	0.8
35-2E-16.00 - Manual Brushing	0.8
35-2E-18.00 - Manual Brushing	2.2
35-2E-18.03 - Manual Brushing	0.4
35-2E-20.00 - Manual Brushing	1.1
35-2E-20.01 - Manual Brushing	0.2

Continuation of Construction Quantities

Totals:	<u>10.7</u>
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2300 Engineering	stations
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Totals:	<u>0.00</u>
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2400 Minor Concrete

Totals:	No Quantities
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2500 Gabions

Totals:	No Quantities
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8000 Miscellaneous

Culvert Temp Route 14

High strength / high flow, woven 275 sy

Seeding and Mulching1 AC

Culvert Removal 1 Ea

Landing Const. 35-1E-12.07

Tractor: D8 with rippers 5 hr

Landing Const. Temp Route 8

Tractor: D8 with rippers 5 hr

Landing Construction Temp Route 16

Tractor: D8 with rippers 5 hr

Landing Construction Temp Route 15

Tractor: D8 with rippers 5 hr

Landing Construction Temp Route 13

Tractor: D8 with rippers 5 hr

Landing Construction Temp Route 14

Tractor: D8 with rippers 5 hr

Landing Construction 35-1E-12.06

Tractor: D8 with rippers 5 hr

Landing Construction Temp Route 2

Tractor: D8 with rippers 5 hr

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

DEPOSIT AND BID FOR ☒ **TIMBER***
☐ **VEGETATIVE RESOURCE**
(Other Than Timber)

LUMP SUM SALE

Name of Bidder
Tract Number ORM05-TS-18-10
Sale Name Obenchain
Sale Notice (dated) 7/26/2018
BLM District Medford

<input type="checkbox"/> Sealed Bid for Sealed Bid Sale	<input checked="" type="checkbox"/> Written Bid for Oral Auction Sale
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In response to the above dated Sale Notice, the required deposit and bid are hereby submitted for the purchase of designated timber/vegetative resource on the tract specified above.

Required bid deposited is **\$137,300.00** and is enclosed in the form of ☐ cash ☐ money order ☐ bank draft
☐ cashier's check ☐ certified check ☐ bid bond of corporate surety on approved list of the United States Treasury
☐ guaranteed remittance approved by the authorized officer.

IT IS AGREED That the bid deposit shall be retained by the United States as liquidated damages if the bid is accepted and the undersigned fails to execute and return the contract, together with any required performance bond and any required payment within 30 days after the contract is received by the successful bidder. It is understood that no bid for less than the appraised price on a unit basis per species will be considered. If the bid is rejected the deposit will be returned.

BID SCHEDULE – LUMP SUM SALE

NOTE: Bidders should carefully check computations in completing the Bid Schedule

BID SUBMITTED					ORAL BID MADE	
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANTITY	UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir	MBF	3,460	X	=\$	X	=
White Fir	MBF	202	X	=\$	X	=
Incense-cedar	MBF	46	X	=\$	X	=
Ponderosa Pine	MBF	28	X	=\$	X	=
			X	=	X	=
Total		3,736	X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
TOTAL PURCHASE PRICE						

(Continued on reverse)

If sale contract is executed, undersigned is liable for total purchase price even though the quantity cut, removed, or designated for taking is more or less than the total estimated volume or quantity shown above. Undersigned certifies bid was arrived at by bidder or offeror independently, and was tendered without collusion with any other bidder or offeror. In submitting or confirming this bid, undersigned agrees to the foregoing provisions, applicable regulations, and certifies that he is authorized to act as, or on behalf of, the bidder.

Bid submitted on *(date)*

(Check appropriate box, sign in ink, and complete the following)

<input type="checkbox"/>	Signature, if firm is individually owned	Name of firm <i>(type or print)</i>
<input type="checkbox"/>	Signatures, if firm is a partnership or L.L.C.	Business address, include zip code <i>(type or print)</i>
<input type="checkbox"/>	Corporation organized under the state laws of	<i>(To be completed following oral bidding)</i>
	Signature of Authorized Corporate Signing Officer	I HEREBY confirm the above oral bid By <i>(signature)</i>
	Title	Date
Submit bid, in <i>duplicate</i> , to qualify for either an oral auction or sealed bid sale together with the required bid deposit made payable to the Department of the Interior – BLM. Oral Auction – Submit to Sales Supervisor prior to closing of qualifying period for tract.		Sealed Bid – Send to District Manager, who issued the sale notice, in a sealed envelope marked on the outside: (1) “Bid for Timber” (2) Vegetative Resource Other Than Timber (3) Time bids are to be opened (4) Legal description

NOTICE

The Privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

PURPOSE: To qualify an oral auction bidder, and then if successful, to bind bidder to certain contract conditions.

ROUTINE USE: To determine that an individual is qualified to participate in oral auction bidding, and, as surety that bidder will fulfill contract requirements.

EFFECT OF NOT PROVIDING INFORMATION: Filing this deposit and bid information is necessary only when an individual wishes to participate in a sealed or auction bid sale for timber or vegetative resources.

INSTRUCTIONS TO BIDDERS

1. **AUTHORITY** – Timber located on the revested Oregon and California Railroad Grant Lands and on the reconveyed Coos Bay Wagon Road Grant Lands is administered and sold pursuant to authority of the Act of August 28, 1937 (50 Stat. 874; 43 U.S.C. 1181a); timber located on other lands and other vegetative resources on all public lands of the United States under jurisdiction of the Bureau of Land Management are administered and sold pursuant to authority of the Act of July 31, 1947 (61 Stat. 681), as amended, by the Act of July 23, 1955 (69 Stat. 367; 30 U.S.C. 601 et. seq.). Regulations of the Secretary of the Interior governing sale of timber are codified in 43 CFR Group 5400.

2. **QUALIFICATIONS OF BIDDERS** – A bidder for sale of timber/vegetative resources must be either (a) a citizen of the United States, (b) a partnership composed wholly of such citizens, (c) an unincorporated association composed wholly of such citizens, or (d) a corporation authorized to transact business in the State in which the timber/vegetative resource is located.

3. **INSPECTION OF TIMBER/VEGETATIVE RESOURCES** – Bidder is invited, urged, and cautioned to inspect the timber/vegetative resource prior to submitting a bid. By executing the timber/vegetative resource sale contract, bidder warrants that the contract is accepted on the basis of his examination and inspection of the timber/vegetative resource and his opinion of its value.

4. **DISCLAIMER OF WARRANTY** – Government expressly disclaims any warranty of the fitness of the designated timber/vegetative resource for any purpose of the bidder; all timber/vegetative resources are to be sold “As Is” without any warranty of merchantability by Government. Any warranty as to the quantity or quality of timber/vegetative resource to be sold is expressly disclaimed by Government.

5. **BIDS** – Sealed or written bids for not less than the advertised appraised price, per timber/vegetative resource must be submitted in duplicate to the District Manager who issued *Timber/Vegetative Resource Sale Notice*.

(a) **Sealed Bid Sales** – Bids will be received until time for opening which is set out in the Notice. Enclose both copies of bid with required bid deposit in a sealed envelope marked on the outside *Bid for Timber/Vegetative Resource*, time bid is to be opened, tract number, and legal description of land on which timber/vegetative resource is located. In event of a tie, the high bidder shall be determined by lot from among those who submitted the tie bids.

(b) **Auction Sales** – Submission of the required bid deposit and a written bid is required to qualify for oral bidding. Oral bidding shall begin from the highest written bid. No oral bid will be considered which is not higher than the preceding bid. In the event there is a tie in high written bids, and no oral bidding occurs, the bidder who was the first to submit his bid deposit and written bid shall be declared the high bidder. If the officer conducting the sale cannot determine who made the first submission of high tie written bids, the high bidder shall be determined by lot. High bidder must confirm his bid, in writing, immediately upon being declared high bidder.

(c) Except as otherwise provided in 43 CFR 5442.2, bids will not be considered in resale of timber/vegetative resource remaining from an uncompleted contract from any person or affiliate of such person who failed to complete the original contract because of (1) cancellation for the purchaser's breach or (2) through failure to complete payment by expiration date.

(d) When it is in the interest of the Government to do so, it may reject any and all bids and may waive minor deficiencies in bids or in sale advertisement.

6. **BID FORMS** – All sealed, written bids, and confirmation of oral bids shall be submitted on forms provided by Government.

(a) **Lump Sum Sales** – Bids shall specify (1) Bureau of Land Management estimated volume, (2) price per unit, and (3) total purchase price. Estimated volume and price per unit are to be used for administrative and appraisal purposes only. Upon award of contract, high bidder shall be liable for total purchase price, including any adjustment which may be made as a result of reappraisal if an extension of time is granted, even though quantity of timber/vegetative resource actually cut, removed, or designated for taking is more or less than the estimated volume or quantity listed.

(b) **Timber Scale Sales** – Bids must state price per thousand board feet that will be paid for each species. High bidder will be determined by multiplying bid price per thousand board feet per species by Bureau of Land Management estimate of volume of each species. Purchaser shall be liable for purchase price of all merchantable timber sold under contract even though all such timber is not actually cut

and removed prior to expiration of time for cutting and removal as specified in contract.*

7. **BID DEPOSIT** – All bidders must make a deposit of not less than the amount specified in the *Timber/Vegetative Resource Notice*. Deposit may be in the form of cash, money orders, bank drafts, cashiers or certified checks made payable to the Department of the Interior – BLM, bid bonds of a corporate surety shown on the approved list of the United States Treasury Department*, or any approved guaranteed remittance approved by the Authorized Officer. Upon conclusion of bidding, the bid deposit of all bidders, except high bidder, will be returned. The cash deposit of the successful bidder may be applied toward the required sale deposit and/or the purchase price. Cash not applied to the sale deposit or the purchase price, or a corporate surety bid bond, will be returned at the time the contract is signed by the Government.

8. **AWARD OF CONTRACT** – Government may require high bidder to furnish such information as is necessary to determine the ability of bidder to perform the obligation of contract. Contract will be awarded to high bidder, unless he is not qualified or responsible or unless all bids are rejected. If high bidder is not qualified or responsible or fails to sign and return the contract together with required performance bond and any required payment, contract may be offered and awarded to the highest bidders qualified, responsible, and willing to accept the contract.

9. **TIMBER/VEGETATIVE RESOURCE SALE CONTRACT** – To be executed by purchaser, has been prepared by Government, and may be examined in the District Manager's office.

10. PERFORMANCE BOND-

(a) A performance bond in an amount of not less than 20 percent of total purchase price is required, but the amount of the bond shall not be in excess of \$500,000, except when the purchaser opts to increase the minimum bond to permit cutting prior to payment as provided in 43 CFR 5451.2, or in the event the purchaser is a holder of an unresolved default the bond may be increased as provided in 43 CFR 5450.1(b). Performance bond may be (1) bond of a corporate surety shown on approval list issued by the United States Treasury Department and executed on an approved standard form, (2) personal surety bond executed on an approved standard form if Government determines principals and bondsman are capable of carrying out the terms of the contract, (3) cash bonds, (4) negotiable securities of the United States, or (5) any guaranteed remittance approved by the Authorized Officer.

(b) If purchaser elects to cut timber without skidding or yarding it to a loading point or removing it prior to the payment of the second or subsequent installments, Government shall require an increase in amount of performance bond initially required by an amount equal to the value of timber to be cut. Such increase must be on a bond rider form supplied by Government and be approved, in writing, by Government prior to cutting timber covered by the bond increase. This increased amount of bond shall be used to assure payment for timber cut in advance of payment.*

11. **PAYMENT BOND** – If purchaser elects to (a) cut and remove timber, or (b) remove timber already cut which has been secured by an increased performance bond as provided in paragraph 10(b) above, before payment of the second or subsequent installments, Government shall require a payment bond on a form supplied by Government. Purchaser shall obtain written approval from Government of payment bond prior to cutting and/or removal of timber covered by the bond. Payment bond shall be used to assure payment for timber cut and/or removed in advance of payment.*

12. **PAYMENT OF PURCHASE PRICE** – For sales of \$500 or more, Government may allow payment by installments. Except as discussed in paragraphs 10 and 11 above, no part of any timber/vegetative resource sold may be severed, cut, or removed unless advance payment has been made as provided in contract.

13. **LIQUIDATED DAMAGES** – Within thirty (30) days from receipt of *Timber/Vegetative Resource Sale Contract*, the successful bidder shall sign contract and return it to Government, together with required bond and any required payment. If successful bidder fails to comply within the stipulated time, his bid deposit shall be retained by Government as liquidated damages.

14. **NINETY-DAY SALES** – If no bid is received within time specified in the advertisement of sale and if Government determines that there has been no significant rise in the market value of timber/vegetative resource, it may, in its discretion, keep the sale open, not to exceed ninety (90) days.

*Applies to Timber Only

15. **UNAUTHORIZED USE OF GOVERNMENT PROPERTY** – A sale may be refused to high bidder who has been notified that he has failed to make satisfactory arrangements for payment of damages resulting from unauthorized use of, or injury to, property of the United States.

16. **EQUAL OPPORTUNITY CLAUSE** – This contract is subject to the provisions of Executive Order No. 11246 of September 24, 1965, as amended, which sets forth the nondiscrimination clauses. Copies of this order may be obtained from the District Manager. 43 CFR 60-1.7(b) requires that the Equal Opportunity Compliance Report Certification will be completed by prospective contractors. Certification may be obtained from District Manager.

17. **LOG EXPORT** – All timber offered for sale except as noted in the *Timber Sale Notice* is restricted from export from the United States in the form of unprocessed timber and cannot be used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as: (1) any logs except those of utility grade or below, such as sawlogs, peeler logs, and pulp logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three quarters (8-3/4) inches in thickness; (3) split or round bolts or other roundwood not processed to standards and specifications suitable for end product use; or (4) western

red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 common or better. Timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacture of eight and three quarters (8-3/4) inches in thickness or less; or (6) shakes and shingles. In event purchaser wishes to sell any or all of timber restricted from export in the form of unprocessed timber, the buyer, exchanges, or recipient shall be required to comply with contractual provisions relating to “unprocessed timber”. Special reporting, branding and painting of logs may be included in contract provisions.*

18. **DETAILED INFORMATION** – Detailed information concerning contract provisions, bid, performance bond forms, tract location maps, and access conditions may be obtained from the District Manager. All persons interested in bidding on the products listed are encouraged to familiarize themselves with all such detailed information.