

# P R O S P E C T U S

## LUMP SUM SALE

ASHLAND RESOURCE AREA  
JACKSON MASTER UNIT

Medford Sale #ORM06-TS-2018.0015  
September 13, 2018 (ES)

# 1 Griffin Half Moon (6310) Jackson County, O&C

BID DEPOSIT REQUIRED: \$267,300.00

All timber designated for cutting in NW $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 10, NE $\frac{1}{4}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$ , Sec. 11, NW $\frac{1}{4}$ SW $\frac{1}{4}$ , Sec. 12, SE $\frac{1}{4}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$ , Sec. 13, NE $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , Sec 15, T38S., R3E, NE $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ , Govt. Lots 2, 3, 4, NW $\frac{1}{4}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , Sec. 7, T38S, R4E, NE $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ , Sec. 1, NE $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , Sec.11, SW $\frac{1}{4}$ NE $\frac{1}{4}$ , Sec. 13, T39S., R4E., Willamette Meridian.

Approx. Number Merch. Trees	Est. Volume MBF 32' Log	Species	Est. Volume MBF 16' Log	Appr. Price Per MBF*	Est. Volume Times Appraised Price
16,873	4,440	white fir	5,517	\$251.80	\$1,389,180.60
10,813	2,443	Douglas-fir	3,037	\$401.30	\$1,218,748.10
1,722	249	ponderosa pine	330	\$135.30	\$44,649.00
740	48	incense-cedar	60	\$288.20	\$17,292.00
137	19	sugar pine	26	\$107.70	\$2,800.20
30,285	7199	<b>Totals</b>	8,970		\$2,672,669.90

\*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.

**TIMBER AUCTION LOCATION** – The timber auction will be held at the Medford Interagency office, located at 3040 Biddle Road, Medford, Oregon at 9am on Thursday, September 13<sup>th</sup>, 2018.

**CRUISE INFORMATION** – white fir, Douglas-fir, ponderosa pine, incense cedar and sugar 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 all merchantable trees: the average tree is 17.2 inches DBHOB; the average gross merchantable log contains 84 bd. ft.; the total gross volume is approximately 9,807 M bd. Ft. and 91% recovery is expected.

Bidders will be restricted to bidding on a unit (MBF) rate of the white 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 Fourteen (14) units containing eight hundred sixty (860) acres must be 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 road through the contract area, existing BLM roads, USFS Roads, and Right-of-Way and Road Use Agreements as shown in Provision R-3. Among other conditions, these agreements require payment of road use fees and the completion of license agreements between the Purchaser and Permittee's.

ROAD MAINTENANCE - The Purchaser will be required to maintain 7.08 miles of existing road listed in Section 3100 of Exhibit D1. An allowance in the amount of \$9,896.48 has been made for the maintenance of these roads. BLM will maintain 25.89 miles of roads listed in Section 3100 of Exhibit D1. The Purchaser will be required to pay a road maintenance obligation and rockwear fee of \$4.96 per MBF or a total of \$44,510.67 for the use of these roads.

DECOMMISSIONING – An allowance in the amount of \$8,896.81 has been made for decommissioning. Decommissioning work to be performed is described in Section 3500 of Exhibit D1.

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 an integral arch and winch system capable of lining logs at least 75 feet.
2. A tractor equipped with winged-toothed rippers.

SLASH DISPOSAL Perform logging residue reduction and site preparation work on approximately eight hundred sixty (860) 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 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 41 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-5. Refer to the appraisal for total assessed costs of logging residue reduction.

10. The Purchaser shall be required to rehabilitate the Lily Glen User Created Trail upon completion of haul. Work to be performed is described in the Decommissioning Worklist of Exhibit D-6.
11. Fuels and Slash disposal prices will be displayed under the SD-5 provision in the contract (Sec 41 (G)). Amount of slash and appropriate treatments will be determined by Authorized officer upon completion of cutting and removal of timber. After a complete review of each unit, the contract price will be modified to reflect most accurate prices for appropriate treatments in each unit based on the slash remaining after completion of logging. The estimated costs of fuels treatments will be agreed on by both the BLM and the purchaser.

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

From the City of Ashland, take Highway 66 to Dead Indian Memorial Highway, Turn Left on Dead Indian Memorial Highway and continue for 18 miles. Multiple BLM roads are used to access different timber sale units. Please see Timber Sale Vicinity Map.

ENVIRONMENTAL ASSESSMENT - Environmental assessments DOI-BLM-ORWA M060-2018-0001-EA) were prepared for this sale, and a Finding of No Significant Impact has been documented for each environmental assessment. These documents are available for inspection as background for this sale at the Medford District Office.



GRIFFIN HALF MOON  
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 fourteen thousand seven hundred sixty nine (14,769) trees marked with orange paint above and below stump height in units 1-1, 10-1, 11-1, 11-2, 12-1, 13-1, 13-2, 13-3, 13-4, and 15-1 as shown on Exhibit A.
- (C) IR-2 All timber except approximately five thousand seven hundred five (5,705) trees marked for cutting heretofore by the Government with blue paint above and below stump height in units 7-1, 7-2, 11-3, and 15-2 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.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

Section 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 (8¾) 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 three-quarters (8¾) inches in thickness or less; (6) shakes and shingles. Substitution will be determined under the definition found in 43 CFR 5400.0-5. The Purchaser is required to maintain and upon request to furnish the following information:

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

In the event the Purchaser elects to sell any or all of the timber sold under this contract in the form of unprocessed timber, the Purchaser shall require each party buying, exchanging, or receiving such timber to execute a Form 5460-16 (Certificate as to Nonsubstitution and the Domestic Processing of Timber). The original of such certification shall be filed with the Authorized Officer.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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.

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.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

(B) Logging

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) days or more, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of seven (7) or more days.
- (2) L-2 Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer's representative must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan.
- (3) L-4 All trees designated for cutting shall be cut so that the resulting stumps shall not be lower than six (6) inches nor higher than twelve (12) inches measured from the ground on the uphill side of the tree. This height requirement may be reduced if approved by the Authorized Officer.
- (4) L-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 tree yarding as determined by the Authorized Officer, bucking and/or limbing will be required.
- (5) L-8 In all tractor units, fell trees over twenty one (21) inches D.B.H.O.B. designated for cutting and cut into log lengths not to exceed forty-four (44) feet. Log segments would be completely limbed prior to yarding.
- (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



GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-five (175) feet of dry draws and all riparian reserves shall be felled away these areas. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (12) 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.

Designated Area	Yarding Requirements or Limitations
Ground-Based Yarding 1-1, 7-1, 7-2, 10-1, 11- 1, 11-2, 11-3, 12-1, 13-1, 13-2, 13-3, 13-4, 15-1, 15-2.	<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 twenty-five (125) foot spacing in order to minimize ground disturbance to no more than fifteen (15) percent of total acres.</p> <p>The location of the tractor skid roads must be clearly designated by purchaser on the ground, and approved by the Authorized Officer prior to operations. Use existing skid trails to the extent possible. Where new skid trails are necessary, limit the extent to minimize the impact.</p>

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

	<p>Designated skids as shown on Exhibit A for units 1-1 and 11-3 will be identified and located according to the contract prior to any harvest activities.</p> <p>Locate skid trails to minimize disturbance to coarse woody debris (CWD). Where skid trails encounter CWD sixteen (16) 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>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 Section 26 if detrimental soil damage is occurring, as determined by the Authorized Officer.</p> <p>In all 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 watershed specialist (hydrologist, soils scientist, or fisheries biologist) 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 twenty-five (25) percent, 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 twenty-five (25) percent, ground-based operations may occur. Stop ground-based harvest if rutting begins to occur within the unit or when soil moisture exceeds twenty-five (25) percent.</p> <p>Mechanized felling equipment must have an arm capable of reaching at least twenty (20) feet.</p> <p>Restrict tractor and mechanical operations to slopes generally less than thirty-five (35) percent. In areas where it is necessary to exceed these gradients to access adjacent tractor area, use ridge tops where possible.</p> <p>Minimize the amount of soil disturbance in the upper layers of soil profile.</p>
--	--

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

	<p>Restrict the amount of detrimental soil disturbance (i.e. compaction, displacement, erosion, burning) to below 15% (assuming 5% of the unit has roads/landings) in a timber harvest unit if operators are using feller-bunchers or cut-to-length harvesters off of designated skid trails: - Allow mechanized equipment capable of creating and walking on slash (such as a cut-to-length system) to work off of designated skid trails for one or two passes on at least eight (8) inches of slash or under dry soil conditions (less than twenty-five (25) percent soil moisture content);</p> <ul style="list-style-type: none"><li>- 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);</li><li>- Use only ground-pressure equipment off of designated skid trails; 8-10 p.s.i tracks or tires.</li><li>- Restrict all other use of ground-based equipment to designated skid trails; and</li><li>- Stop equipment use off of designated skid trails if logging equipment is causing detrimental soil disturbance as determined by the Authorized Officer.</li></ul> <p>If damage to range improvements do 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>
--	---

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

	Log landing size shall not exceed one-half (1/2) acre.
--	--

- (13) L-14 No yarding or loading is permitted in or through plant sites, or protected sites, shown on Exhibit A.
- (14) L-19 No ground-based yarding, road construction, landing construction, road renovation, road reconstruction, road decommissioning, road closure, road blocking/barricading, water bar construction, soil ripping, or seeding/mulching shall be conducted within the contract area between October 15<sup>th</sup> 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.
- (15) L-19 No mechanical, roadside brushing activities or heavy equipment use shall be conducted within the contract area between March 1st and June 30<sup>th</sup> of the same calendar year, both days inclusive, within one hundred ninety-five (195) feet of known Northern spotted owl and raptor nests. Seasonal restriction could be waived if non-nesting status is determined with seasonal surveys.
- (16) 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<sup>th</sup> to May 15<sup>th</sup> . 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.
- (17) L-19 Hauling could occur during the wet season (October 16<sup>th</sup> to May 14<sup>th</sup> ) on roads determined to have adequate surfacing ( See Exhibit C-16). 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-16). 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.
- (18) L-19 No operations shall be conducted on the contract area between April 1st and July 15th of the same calendar year, both days inclusive as directed by the Contracting Officer in the event of discovering any gray wolf den site in the sale

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

area. Suspend all activities within one (1) mile of any known gray wolf den or rendezvous sites that are discovered during the life of the contract as determined by the Authorized Officer.

- (19) L-24 Before cutting and removing any trees necessary to facilitate logging in all units as shown on Exhibit A, the Purchaser shall identify the location of skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding the following conditions must be met:
- (a) All skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees; however, unless otherwise approved in writing by the Authorized Officer, the width of each skid road shall be limited to twelve (12) feet, and cable yarding roads shall be limited to fifteen (15) feet.
  - (b) The Purchaser may immediately cut and remove additional timber to clear skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees when the trees have been marked with green paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Sec. 3(b) of the contract or sufficient bonding has been provided in accordance with Sec. 3(e) of the contract.
  - (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Sec. 9 of the contract; or, the Authorized Officer determines that all trees otherwise reserved in section 41 of the contract or any tree that exceeds 28 inches diameter at breast height shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Sec. 8 of the contract.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

- (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.
  - (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Sec. 8 or Sec. 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.
  - (f) The Government may reserve trees previously designated for cutting and removal by applying orange paint or blacking out blue paint as replacements for additional trees cut and removed for skid roads and/or cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.
- (20) 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.
- (21) 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

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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.

(D) Environmental Protection

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

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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, the Purchaser shall only be allowed to use logging, construction, rock crushing, chipping, shredding or grinding and/or transportation equipment that is free of noxious weed seeds prior to entering federal lands in the contract area as shown on Exhibit A.

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

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

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

- (4) E-1 In addition to the requirement set forth in Sec. 26 of this contract and as directed by the Authorized Officer, the Purchaser shall block all temporary roads, 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. Temporary roads, skid trails, and newly constructed landings (except landings located along temp spurs to be decommissioned), shall be blocked 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 when soil moisture exceeds twenty-five (25) percent.
- (5) 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 designated skid trails leading off system roads or landings



GRIFFIN HALF MOON  
SPECIAL PROVISIONS

in all ground-based yarding units shown on Exhibit A, by October 15<sup>th</sup> of the year of harvest.

- (6) 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.
- (7) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall;
- (a) Use a minimum two hundred (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.
  - (b) Rip to a depth of eighteen (18) inches or bedrock (which ever is shallower).
  - (c) Ripping will not occur unless soil moisture content is twenty-five (25) percent or less (at a six (6) inch depth) as determined by the oven-dry method.
  - (d) 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 route, road to be decommissioned, 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<sup>th</sup> or when soil moisture exceeds twenty-five (25) percent.
  - (e) 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 twelve (12) to eighteen (18) inches, to a point where stones ten (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.
  - (f) 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 BLM botanist. If hauling on a temporary route or its associated landings is not completed in the same year the route is constructed, the route will be storm-proofed and blocked by October 15<sup>th</sup> before soil moisture exceeds twenty-five (25)

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

percent. Seed mulch must be applied by March 31<sup>st</sup> following any wet season logging.

(g) Seed and mulch all skid trails, and forwarder trails used for logging activities in all ground-based units as shown on Exhibit A, beginning where the trail intersects 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 BLM botanist and weed-free straw by October 15<sup>th</sup> 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.

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:

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

Furnished seed shall meet the minimum requirements 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

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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.

- (8) 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<sup>th</sup> or before soil moisture exceeds twenty-five (25) percent.
- (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<sup>th</sup> of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season. Install waterbars 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 RMP erosion-control measures for timber harvest, which considers slope and soil series.

Construct water bars on skid trails using guidelines in Table C-6 where potential for soil erosion or delivery to waterbodies, floodplains, and wetlands exist.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

- (9) E-3 The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
- (a) 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;
  - (b) 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;
  - (c) other active raptor nests have been discovered, and a determination is made that continued operations under this contract would adversely affect the present use of the discovered nesting area by the raptor, or;
  - (d) 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;
  - (e) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

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 post-harvest 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.

## GRIFFIN HALF MOON SPECIAL PROVISIONS

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. of the contract within 15 days after the bill for collection is issued, subject to Section 3.h. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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.

The 30 days can be the sum of days accruing during more than one operating season. Reappraisal may result in a decrease to the unit price bid per species. Reappraisal will be based on the loss of net volume due to the deterioration of logs during the period of delay and any associated changes in the amortization of logging costs per unit of volume, as determined by the Authorized Officer. Amortization of road construction cost over a reduced net volume will be considered as well as any additional move-in or logging costs caused by the delay, as determined by the Authorized Officer. Reappraisal will adjust Exhibit B volume and values, and will not consider changes in the market price of timber. 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 terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect occupied marbled murrelet sites in accordance with the ROD and RMP, protect species that have been discovered which were identified for protection through survey and manage and/or protection buffer

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

standards and guidelines 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, marbled murrelet occupied site protection in accordance with the ROD and RMP, survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, or court order requirements necessitating the modification or termination.

In the event 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.

- (10) 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.
- (11) E-7 In order to prevent the spread of noxious weeds, the Purchaser shall steam clean or pressure wash all Mechanized 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 invasive plants are detected during project development or implementation, they would be flagged for avoidance by the field office Botanist.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

(E) Miscellaneous

- (1) M-2 The Government at its option may check scale any portion of the timber removed from the contract area. The Purchaser hereby agrees to make such contract timber available for scaling at a location designated by the Authorized Officer. In the event that BLM elects to check scale and if such check scaling causes a delay in log transportation time, an adjustment will be made to the purchase price as follows. If the entire sale is check scaled, the purchase price of this contract shall be reduced by seven thousand two hundred twenty-eight dollars and seventy-five cents (\$7,228.75). 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 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,

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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 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 watch-service 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



GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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 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.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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

2. 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.
  
3. SD-1h HANDPILE Handpile and cover all slash as directed by the Authorized Officer in accordance with the following specifications:
  - a. Piling shall be accomplished by hand. Finished piles shall be tight and free of earth.
  
  - b. 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.
  
  - c. A six (6) foot by six (6) foot sheet of four (4) mil black sheeting 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 sixty (60) feet of fish-bearing, perennial streams or within thirty five (35) 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 the bole/stem of any reserve trees, any other pile, or unit boundary. No pile shall be located within twenty five (25) feet of any trees designated for protection such as nest trees.
  
  - d. Operations required by this provision shall be kept current with yarding as directed by the Authorized Officer and shall be conducted as follows:
    1. 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

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

4. 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.

(a) A ten (10) foot by ten (10) foot cover of four (4) mil black sheeting 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.

5. SD-5 Perform logging residue reduction and site preparation work on approximately eight hundred sixty (860) 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 level 1	\$314.20	315	\$98,973.00
Hand Pile & Cover Slash Level 2	\$406.16	500	\$203,080.00
Hand Pile & Cover Slash Level 3	\$596.19	20	\$11,293.80
Lop and Scatter	\$47.86	TBD	TBD
Total Appraised Cost			\$313,976.80

(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: three hundred forty-nine thousand two hundred ninety-seven and sixty cents (\$349,297.60) 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.

GRIFFIN HALF MOON  
SPECIAL PROVISIONS

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.

(I) Equal Opportunity in Employment

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





		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
		1	15	1	15	1	15	1	15	1	15	1	15
15-2	Hauling												
	Felling and bucking												
	Tractor Operations												
	Hauling												

\*Hauling on roads with adequate surfacing allowed from May 15th-October 15th  
 \*\* All Crosshatched areas are available for winter logging and hauling waiver if conditions permit.  
 Hauling allowed in wet season with conditional waiver when roads are frozen (or) have 2-4 inches of snow after plowing and upon approval from Authorized Officer  
 Winter logging in the wet season may be permissible with waiver from Authorized Officer upon review of soil condition and a snow depth of a minimum of 18 inches.

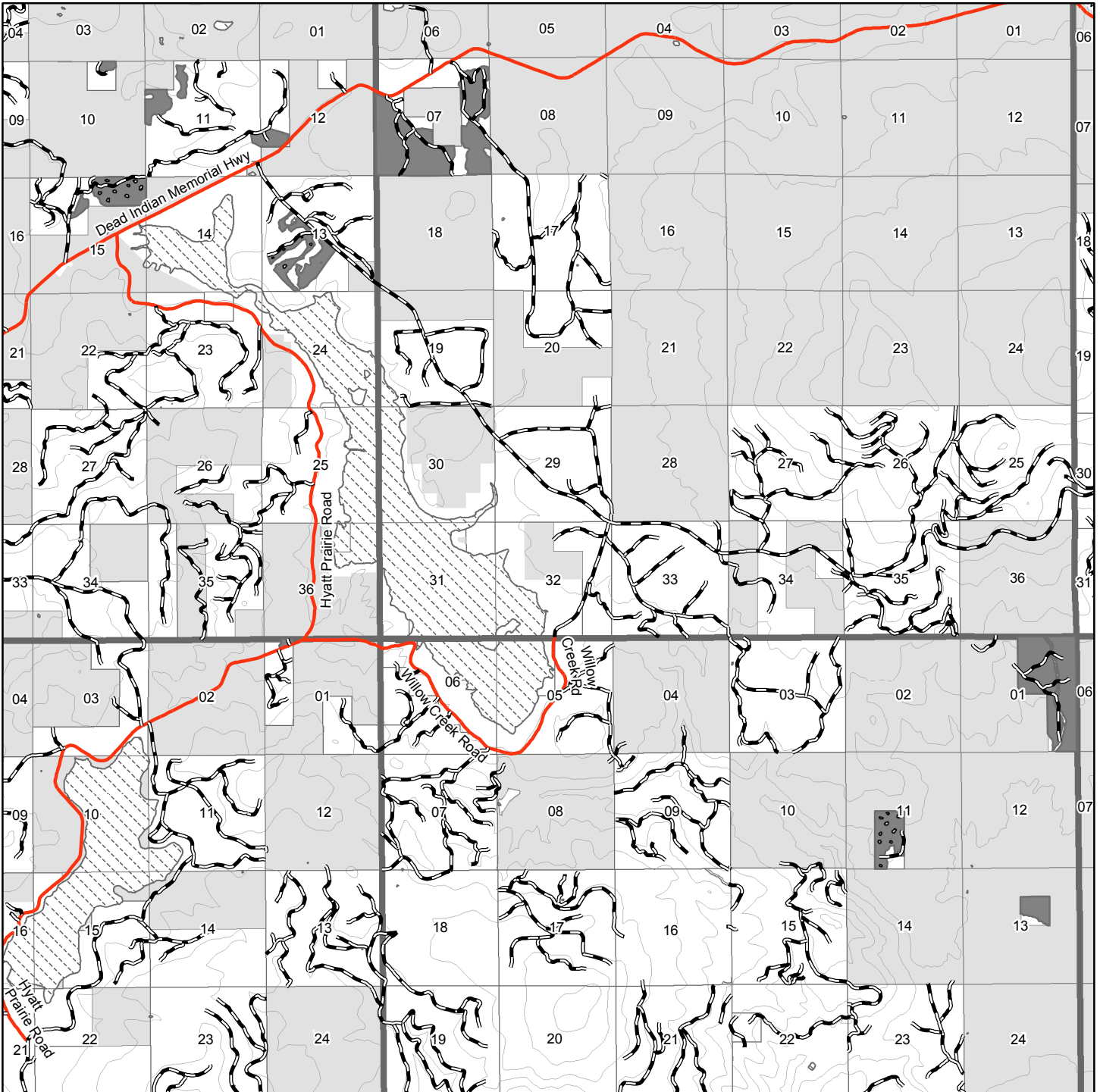
In the event of any new NSO nest site being located during the timeline of the timber sale, a restriction for affected units would restrict logging activities for 0.25 miles from nest site from March st through September 30th.



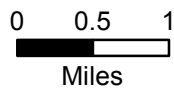


U.S.D.I. BLM MEDFORD DISTRICT SALE NO.2018-15  
 GRIFFIN HALF MOON TIMBER SALE  
 ASHLAND RESOURCE AREA  
 JACKSON COUNTY

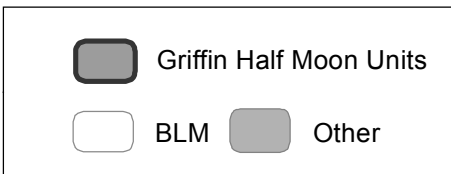
TIMBER SALE LOCATION MAP  
 CONTRACT NO.ORM06-TS-2018-15



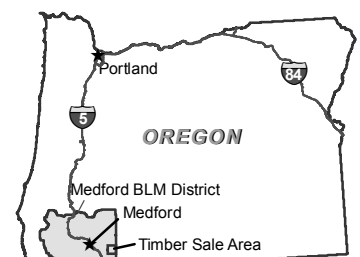
Medford District BLM - September 2018



1 inch = 1 miles  
 Contours = 40 feet



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





U.S.D.I. BLM MEDFORD DIST. SALE NO. 18-15  
T. 38 S. R. 04 E., SECS. 7 WILL. MER.  
T. 38 S. R. 03 E., SECS. 10, 11, 12, 13, 15 WILL. MER.  
T. 39 S. R. 04 E., SECS. 1, 11, 13 WILL. MER.  
GRIFFIN HALF MOON TIMBER SALE

TIMBER SALE CONTRACT MAP  
CONTRACT NO. ORM06-TS18-15  
EXHIBIT A  
PAGE 1 OF 10

TRACTOR YARD HARVEST UNITS ORANGE MARKED FOR RESERVE  
UNITS 1-1, 10-1, 11-1, 11-2, 12-1, 13-1, 13-2, 13-3, 13-4, 15-2, .....526 ACRES

TRACTOR YARD HARVEST UNITS BLUE MARKED FOR CUTTING  
UNITS 7-1, 7-2, 11-3, 15-1.....334 ACRES

TOTAL HARVEST AREA.....860 ACRES

TOTAL RESERVE AREA.....706 ACRES

TOTAL CONTRACT AREA.....1,566 ACRES



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



## Legend

	Found Corner		20 ft. Intermediate Contour
	Barricade, Existing		100 ft. Index Contour
	Road		Government Lot
	Temporary Spur Road		Contract Area
	Designated Skid Trail		BLM Administered Land
	Stream		Non-BLM Land
	Boundary of Cutting Area		Skip Reserve Area

**RH-RTM-T**

REGENERATION HARVEST, RESERVE TREE MARKED (ORANGE PAINT), TRACTOR YARD, UNITS, 1-1, 10-1, 11-2, 12-1, 13-1, 13-2, 13-4

**RH-HTM-T**

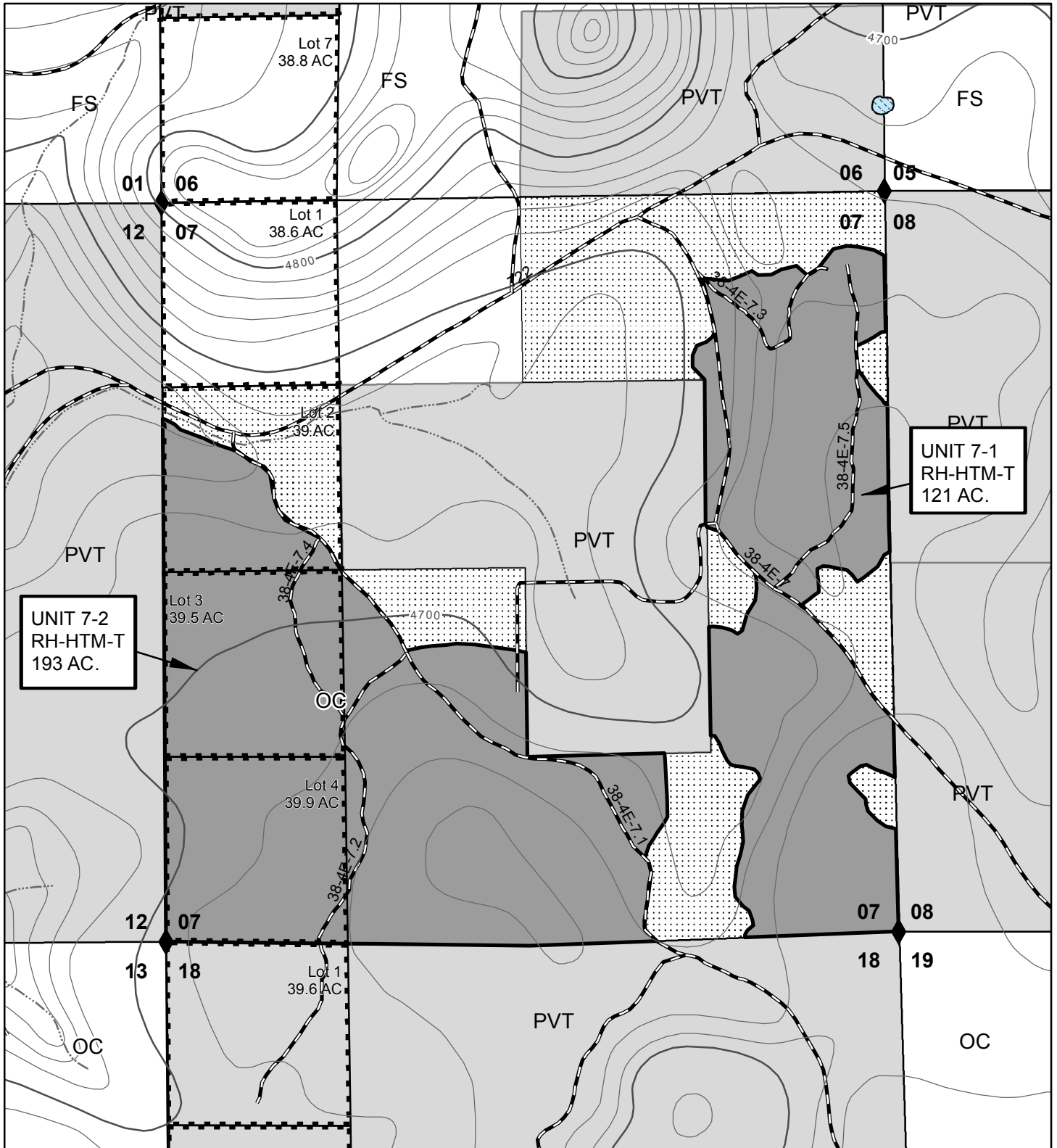
REGENERATION HARVEST, HARVEST TREE MARKED (BLUE PAINT), TRACTOR YARD, UNITS 7-1, 7-2, 11-3, 15-2

**CT-RTM-T**

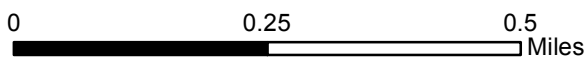
COMMERCIAL THINNING, RESERVE TREE MARKED (ORANGE PAINT), TRACTOR YARD, UNITS 11-1, 13-3, 15-1







20 FOOT CONTOURS



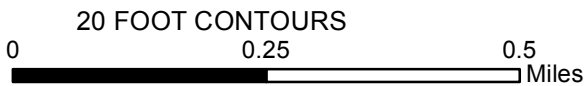
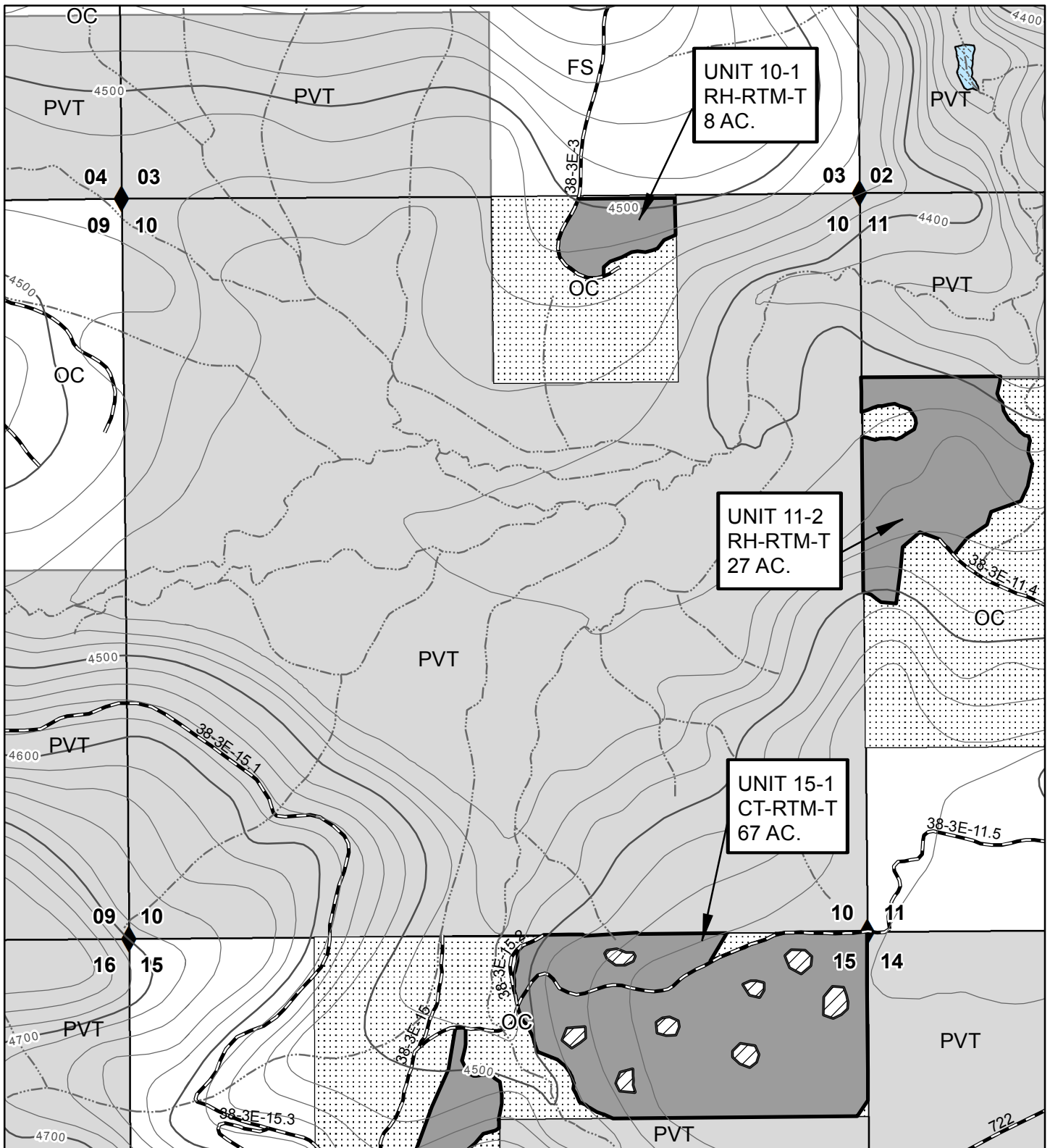
1 inch = 1,000 feet



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





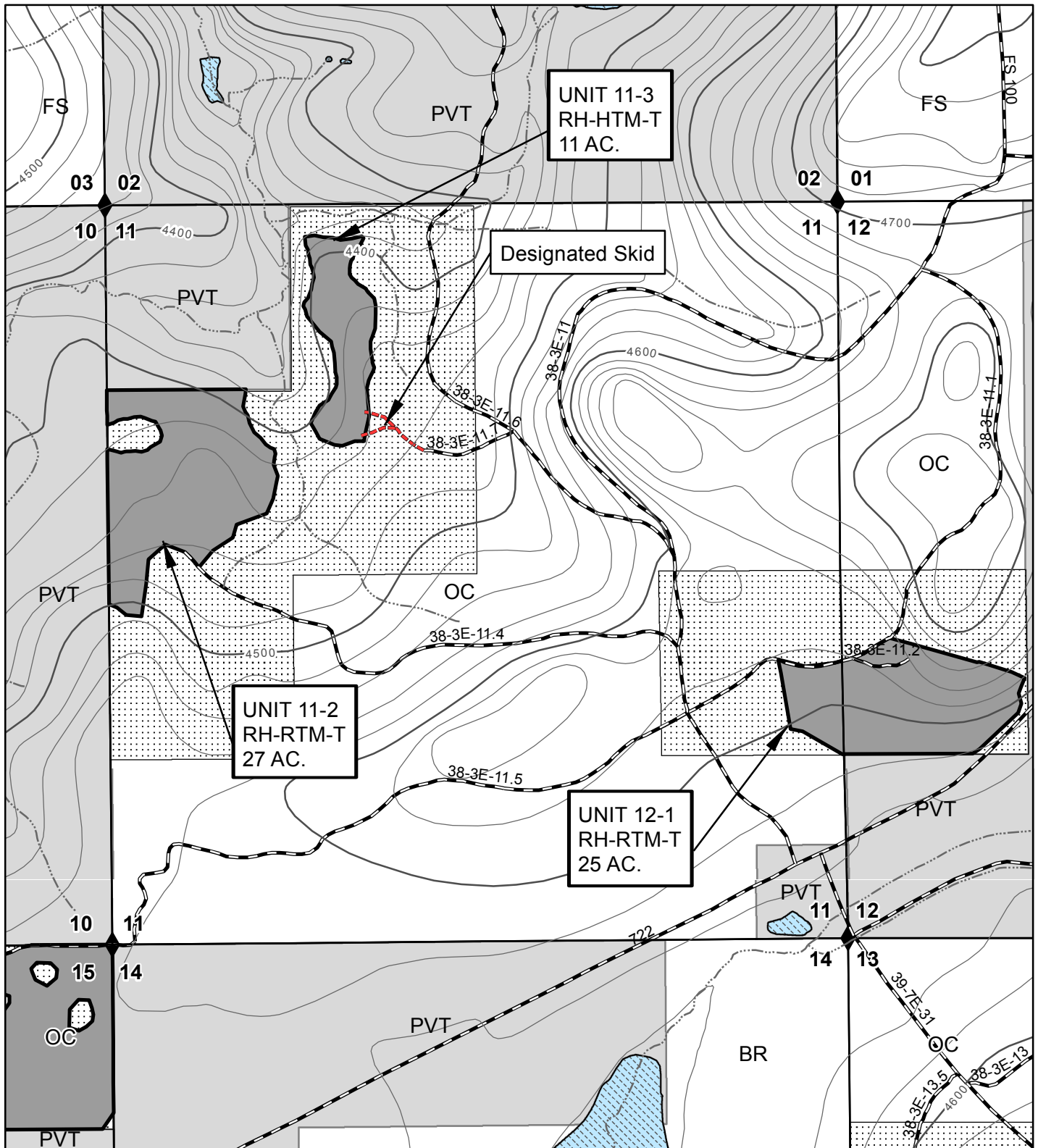


1 inch = 1,000 feet

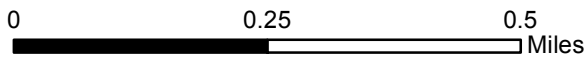


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.





20 FOOT CONTOURS

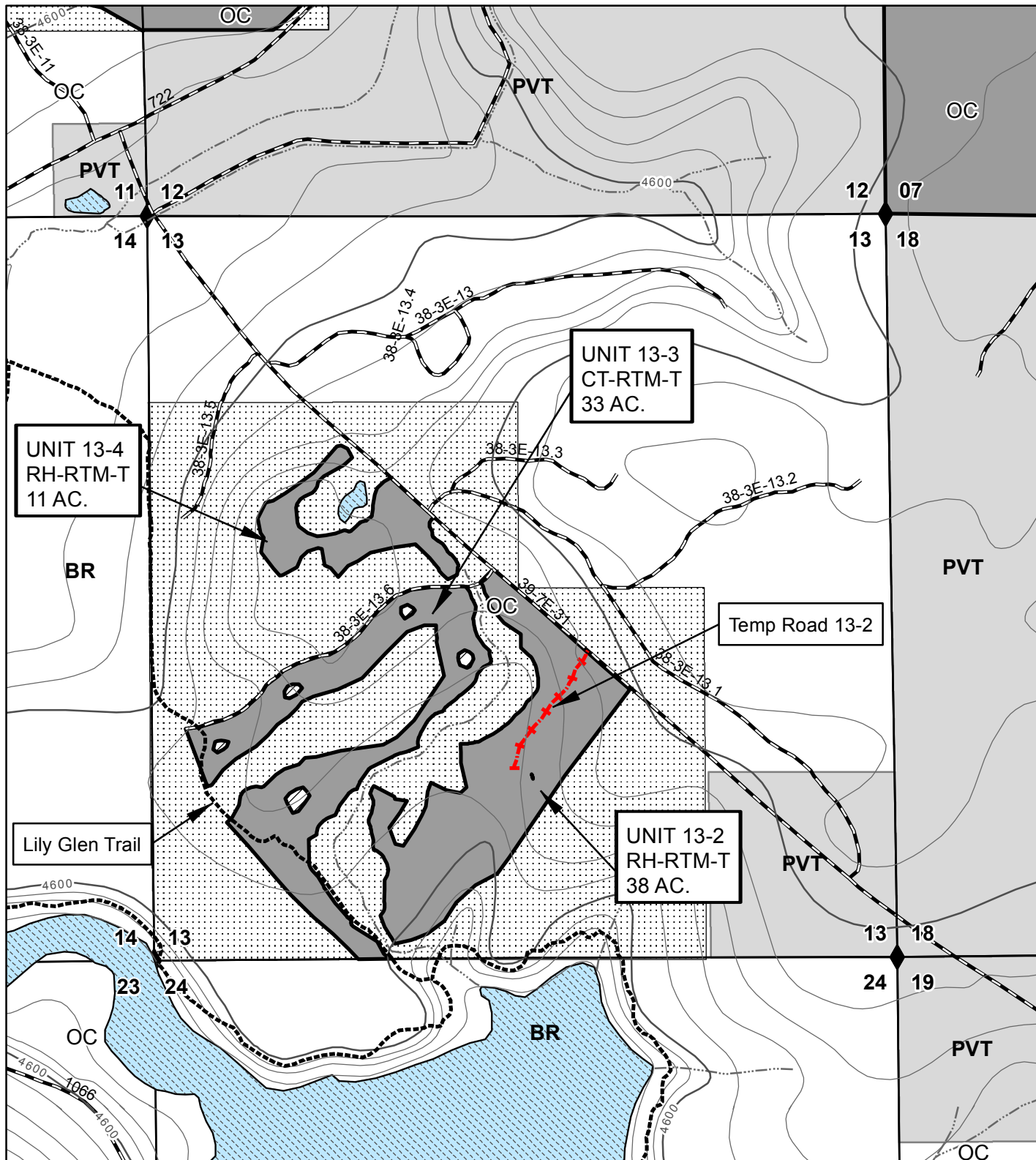


1 inch = 1,000 feet

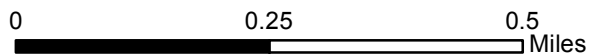


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.





20 FOOT CONTOURS

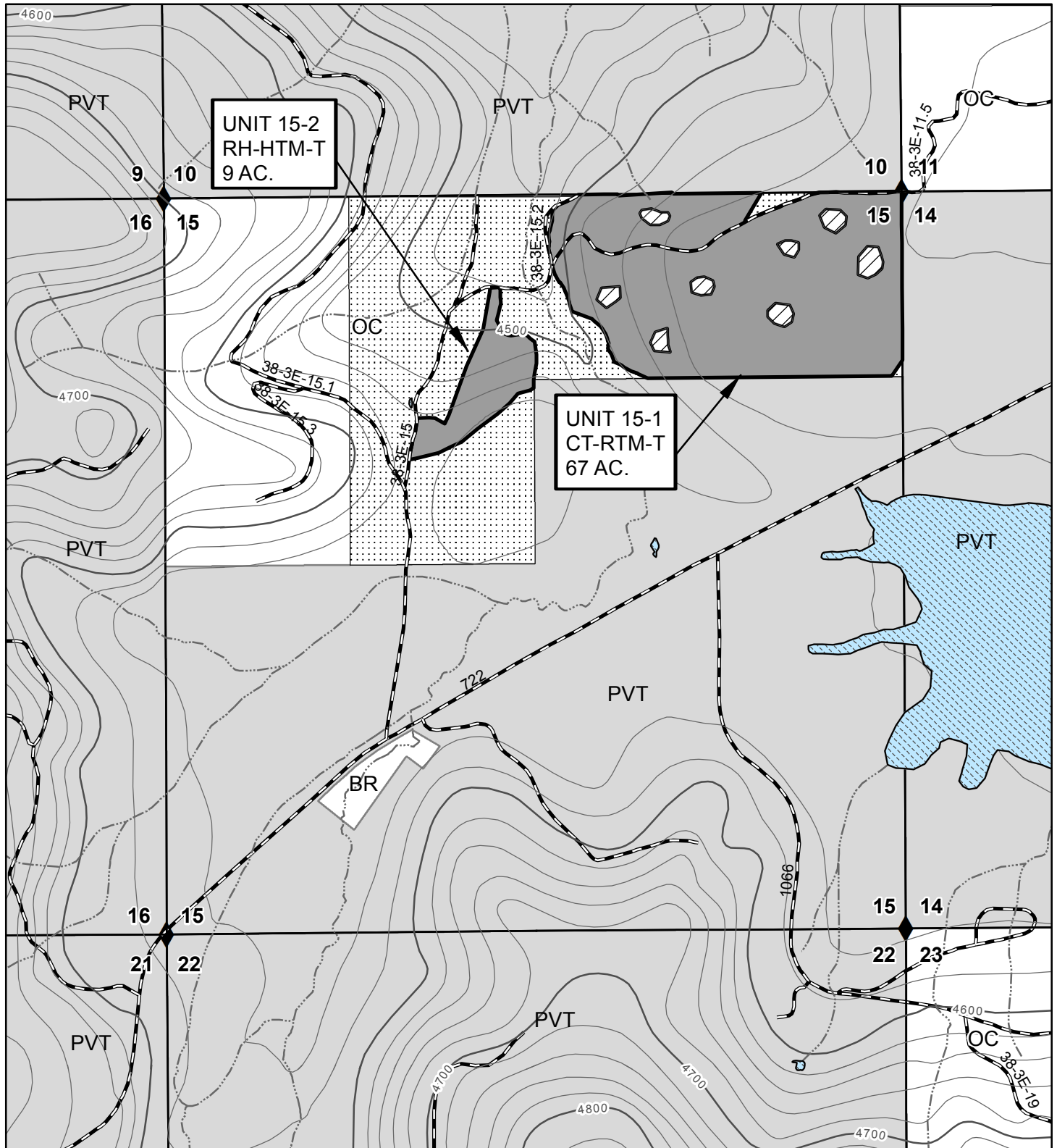


1 inch = 1,000 feet



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

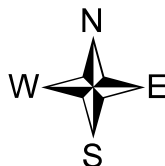




20 FOOT CONTOURS

0 0.1 0.2 0.4 Miles

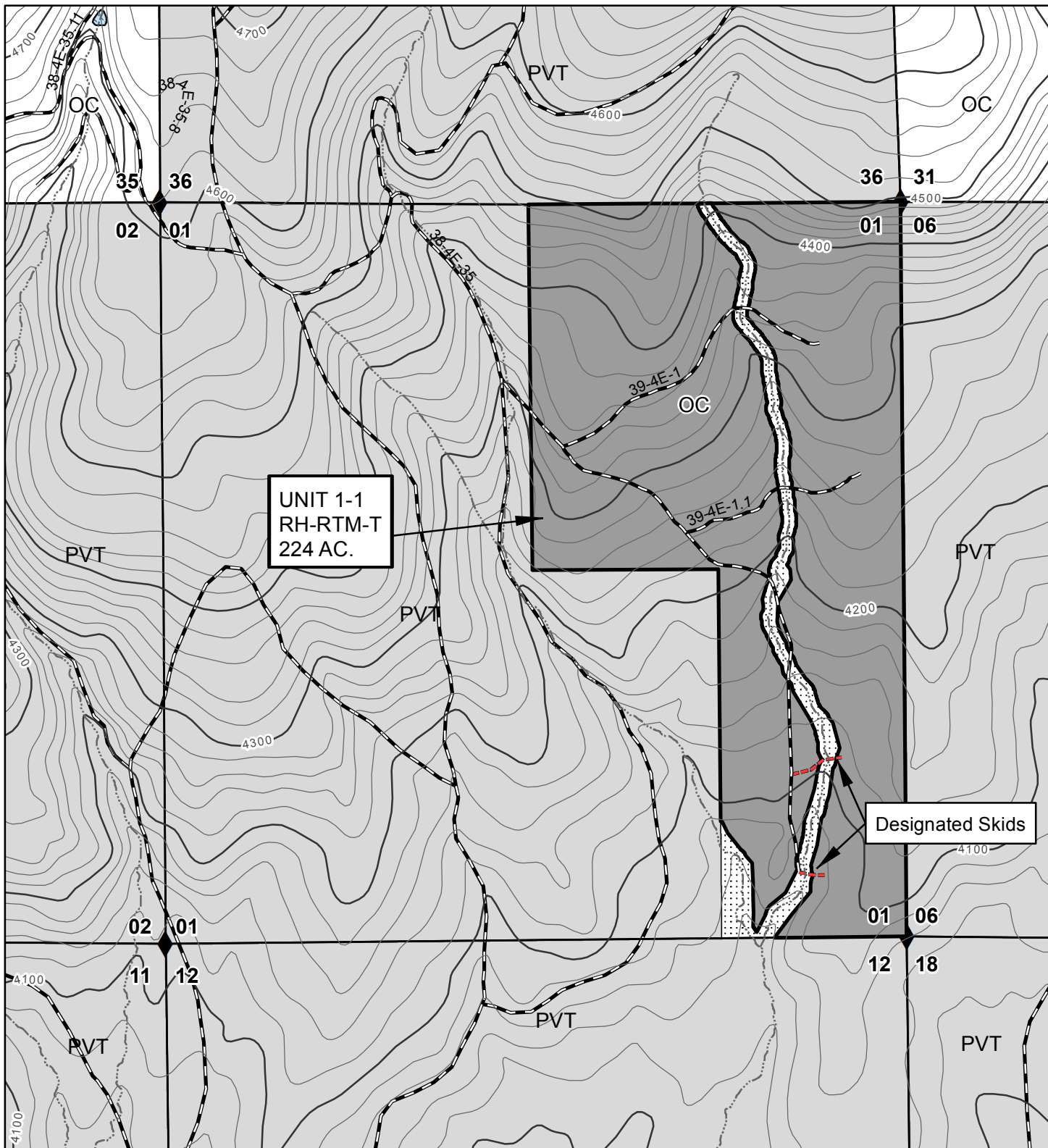
1 inch = 1,000 feet



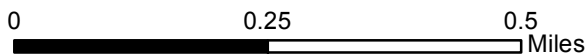
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.







20 FOOT CONTOURS

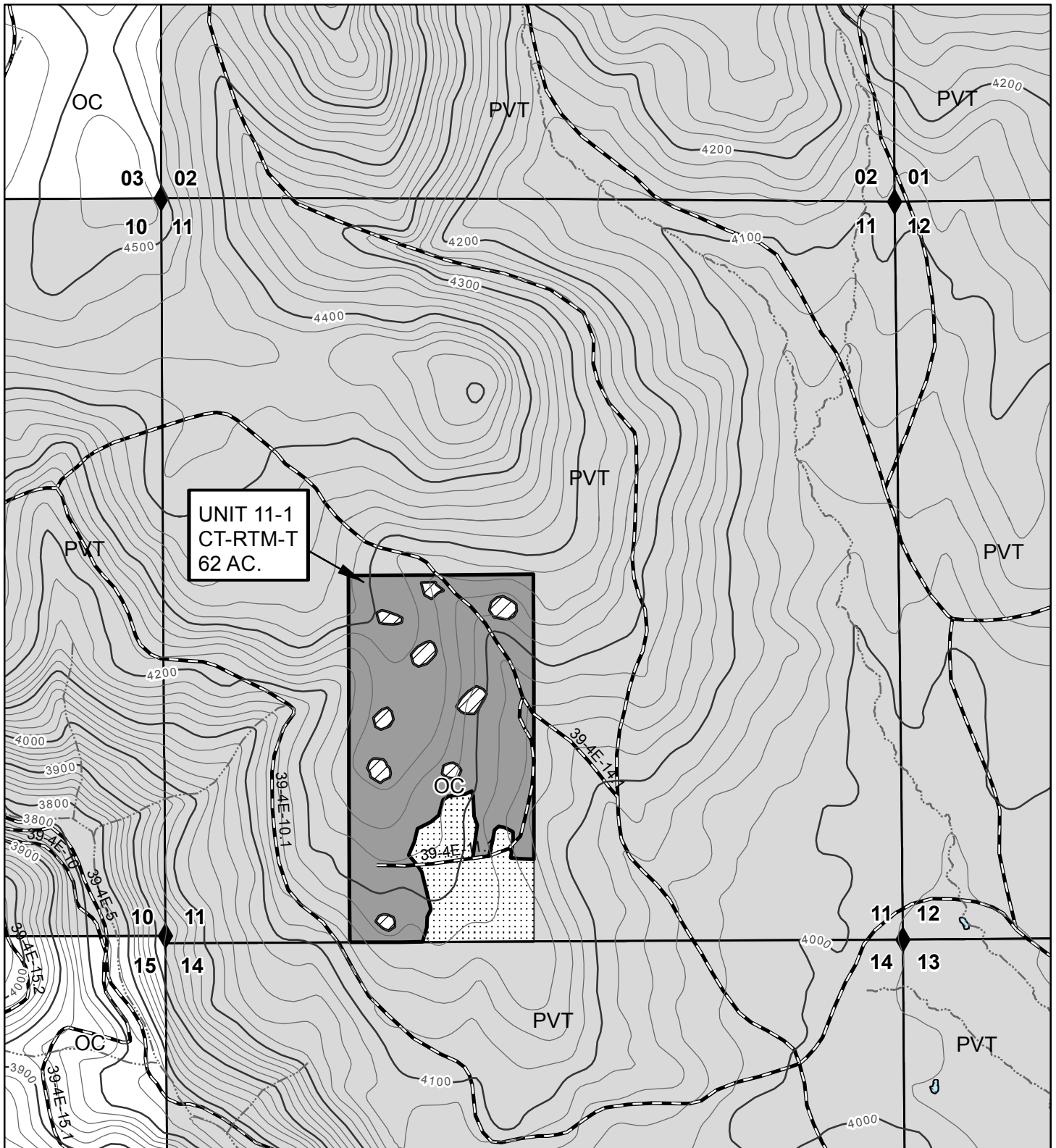


1 inch = 1,000 feet

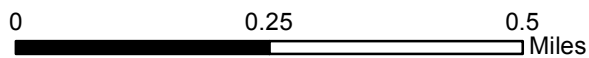


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.





20 FOOT CONTOURS

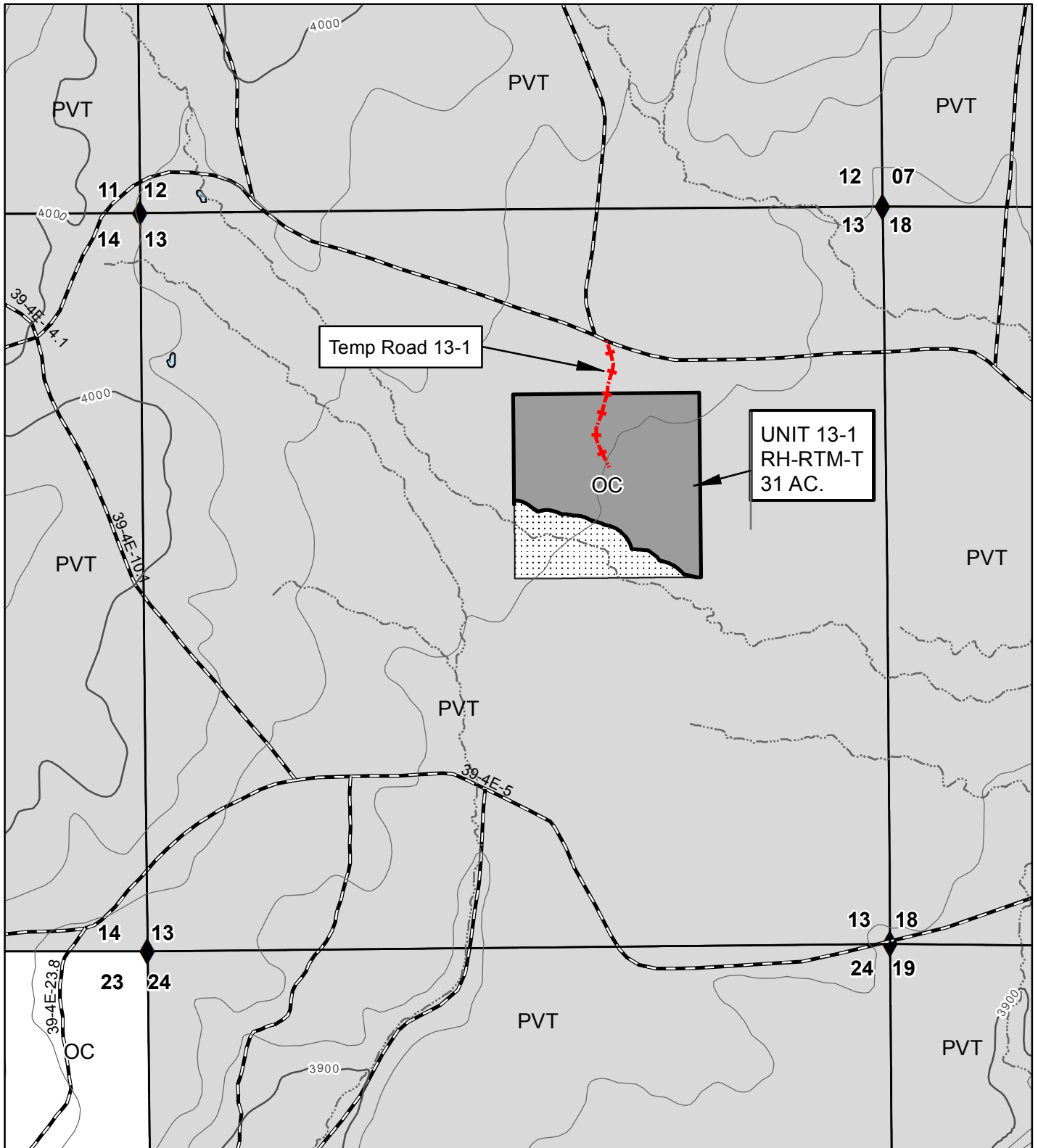


1 inch = 1,000 feet

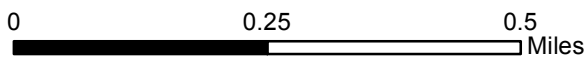


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.





20 FOOT CONTOURS



1 inch = 1,000 feet



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





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

**Timber Appraisal**

---

<b>Sale Name:</b> Griffin Half Moon	<b>Sale Date:</b> Thursday, September 13, 2018
<b>BLM District:</b> Medford DO	<b>Unit of Measure:</b> 16' MBF
<b>Contract #:</b> ORM06-TS-2018.0015	<b>Contract Term:</b> 36 months
<b>Sale Type:</b> Advertised	<b>Contract Mechanism:</b> 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:**

**Approved By:**

## Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Jackson	38S	3E	10	NW1/4NE1/4.	Willamette
O&C	Jackson	38S	3E	11	NE1/4NW1/4, SW1/4NW1/4, NE1/4SE1/4.	Willamette
O&C	Jackson	38S	3E	12	NW1/4SW1/4.	Willamette
O&C	Jackson	38S	3E	13	SE1/4NW1/4, SW1/4NW1/4, SW1/4, NW1/4SE1/4, SW1/4SE1/4	Willamette
O&C	Jackson	38S	3E	15	NE1/4NE1/4, NW1/4NE1/4, NE1/4NW1/4, SE1/4NW1/4.	Willamette
O&C	Jackson	38S	4E	7	NE1/4NE1/4, SE1/4NE1/4, Govt, Lots2, 3, 4, NE1/4SW1/4, NE1/4SE1/4, SE1/4SE1/4, SW1/4NE1/4, SE1/4SW1/4.	Willamette
O&C	Jackson	39S	4E	1	NE1/4, NE1/4SE1/4, SE1/4SE1/4.	Willamette
O&C	Jackson	39S	4E	11	NE1/4SW1/4, SE1/4SW1/4.	Willamette
O&C	Jackson	39S	4E	13	SW1/4NE1/4.	Willamette

## Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
White Fir	5,517.0	5,916.0	6,052.0	62,963	1,805	16,873
Douglas Fir	3,037.0	3,262.0	3,284.0	42,471	1,211	10,813
Ponderosa Pine	330.0	366.0	376.0	7,206	312	1,722
Incense-cedar	60.0	67.0	67.0	1,548	0	740
Sugar Pine	26.0	28.0	28.0	545	0	137
<b>Totals</b>	<b>8,970.0</b>	<b>9,639.0</b>	<b>9,807.0</b>	<b>114,733</b>	<b>3,328</b>	<b>30,285</b>



### Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	860.0	0.0	860.0	10.4

**Logging Costs**

Stump to Truck	\$833,856.38
Transportation	\$531,012.51
Road Construction	\$267,910.86
Maintenance/Rockwear	\$68,202.56
Road Use	\$0.00
Other Allowances	\$361,431.26
<b>Total:</b>	<b>\$2,062,413.57</b>
<b>Total Logging Cost per MBF:</b>	<b>\$229.92</b>

**Utilization Centers**

Location	Distance	% of Net Volume
White City	44.0 miles	100 %

**Profit & Risk**

Basic Profit & Risk	9 %
Additional Risk	3 %
<b>Total Profit &amp; Risk</b>	<b>12 %</b>

**Tract Features**

<b>Quadratic Mean DBH</b>	17.2 in
<b>Average GM Log</b>	84 bf
<b>Average Volume per Acre</b>	10.4 mbf
<b>Recovery</b>	91 %
<b>Net MBF volume:</b>	
<b>Green</b>	8,970.0 mbf
<b>Salvage</b>	0 mbf
<b>Export</b>	0 mbf
<b>Ground Base Logging:</b>	
<b>Percent of Sale Volume</b>	100 %
<b>Average Yarding Slope</b>	5 %
<b>Average Yarding Distance</b>	650 ft
<b>Cable Logging:</b>	
<b>Percent of Sale Volume</b>	0 %
<b>Average Yarding Slope</b>	0 %
<b>Average Yarding Distance</b>	0 ft
<b>Aerial Logging:</b>	
<b>Percent of Sale Volume</b>	0 %
<b>Average Yarding Slope</b>	0 %
<b>Average Yarding Distance</b>	0 ft

**Cruise**

<b>Cruise Completed</b>	July 2018
<b>Cruised By</b>	Aaron Worman
<b>Cruise Method</b>	
Cruised using 3-P BLM Cruiser software, all species. 190 sample trees total.	

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF	Appraised Value
White Fir	16,873	5,517.0	\$540.75	\$64.89	\$229.92	\$5.86	\$251.80	\$1,389,180.60
Douglas Fir	10,813	3,037.0	\$717.24	\$86.07	\$229.92	\$0.00	\$401.30	\$1,218,748.10
Ponderosa Pine	1,722	330.0	\$414.98	\$49.80	\$229.92	\$0.00	\$135.30	\$44,649.00
Incense-cedar	740	60.0	\$588.80	\$70.66	\$229.92	\$0.00	\$288.20	\$17,292.00
Sugar Pine	137	26.0	\$383.67	\$46.04	\$229.92	\$0.00	\$107.70	\$2,800.20
<b>Totals</b>	<b>30,285</b>	<b>8,970.0</b>						<b>\$2,672,669.90</b>

Percent of Volume By Log Grade

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir			2.0 %	58.0 %	30.0 %	10.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Ponderosa Pine				45.0 %	45.0 %	10.0 %	

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

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

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Sugar Pine				37.0 %	53.0 %	10.0 %	

### Marginal Log Volume By Grade

Species	Utility Cull	Peeler Cull
White Fir	171	0

**Griffin Half Moon**

**Unit Summary**

**ORM06-TS-2018.0015**

**Unit: 1-1**

**Net Volume/Acre: 12.5 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1,563.0	1,679.0	1,690.0	5,540
White Fir	1,024.0	1,100.0	1,126.0	4,480
Ponderosa Pine	127.0	141.0	145.0	483
Incense-cedar	55.0	61.0	61.0	685
Sugar Pine	25.8	27.8	27.8	134
<b>Totals:</b>	<b>2,794.8</b>	<b>3,008.8</b>	<b>3,049.8</b>	<b>11,322</b>

Regeneration Harvest	0.0
Partial Cut	224.0
Right of Way	0.0
<b>Total Acres:</b>	<b>224.0</b>

**Unit: 7-1**

**Net Volume/Acre: 6.9 MBF**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	731.0	784.0	802.0	1,811
Douglas Fir	104.0	111.0	112.0	296
Sugar Pine	0.1	0.1	0.1	1
<b>Totals:</b>	<b>835.1</b>	<b>895.1</b>	<b>914.1</b>	<b>2,108</b>

Regeneration Harvest	0.0
Partial Cut	121.0
Right of Way	0.0
<b>Total Acres:</b>	<b>121.0</b>

**Unit: 7-2**

**Net Volume/Acre: 6.7 MBF**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	1,233.0	1,322.0	1,352.0	2,332
Douglas Fir	62.0	67.0	68.0	179
<b>Totals:</b>	<b>1,295.0</b>	<b>1,389.0</b>	<b>1,420.0</b>	<b>2,511</b>

Regeneration Harvest	0.0
Partial Cut	193.0
Right of Way	0.0
<b>Total Acres:</b>	<b>193.0</b>

**Unit: 10-1**

**Net Volume/Acre: 14.6 MBF**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	72.0	78.0	78.0	343
White Fir	36.0	38.0	39.0	160
Ponderosa Pine	9.0	9.0	10.0	59
<b>Totals:</b>	<b>117.0</b>	<b>125.0</b>	<b>127.0</b>	<b>562</b>

Regeneration Harvest	0.0
Partial Cut	8.0
Right of Way	0.0
<b>Total Acres:</b>	<b>8.0</b>

**Unit: 11-1**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	471.0	505.0	517.0	1,714
Douglas Fir	150.0	161.0	162.0	569
Incense-cedar	2.0	2.0	2.0	27
Ponderosa Pine	0.5	0.6	0.6	5
Sugar Pine	0.1	0.1	0.1	2
<b>Totals:</b>	<b>623.6</b>	<b>668.7</b>	<b>681.7</b>	<b>2,317</b>

**Net Volume/Acre: 10.1 MBF**

Regeneration Harvest	0.0
Partial Cut	62.0
Right of Way	0.0
<b>Total Acres:</b>	<b>62.0</b>

**Unit: 11-2**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	197.0	211.0	213.0	858
White Fir	129.0	138.0	141.0	463
Ponderosa Pine	33.0	36.0	37.0	223
<b>Totals:</b>	<b>359.0</b>	<b>385.0</b>	<b>391.0</b>	<b>1,544</b>

**Net Volume/Acre: 13.3 MBF**

Regeneration Harvest	0.0
Partial Cut	27.0
Right of Way	0.0
<b>Total Acres:</b>	<b>27.0</b>

**Unit: 11-3**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	97.0	104.0	107.0	274
Douglas Fir	35.0	38.0	38.0	116
Ponderosa Pine	2.0	2.0	2.0	9
<b>Totals:</b>	<b>134.0</b>	<b>144.0</b>	<b>147.0</b>	<b>399</b>

**Net Volume/Acre: 12.2 MBF**

Regeneration Harvest	0.0
Partial Cut	11.0
Right of Way	0.0
<b>Total Acres:</b>	<b>11.0</b>

**Unit: 12-1**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	258.0	277.0	283.0	761
Douglas Fir	26.0	28.0	28.0	104
Ponderosa Pine	0.5	0.5	0.5	1
<b>Totals:</b>	<b>284.5</b>	<b>305.5</b>	<b>311.5</b>	<b>866</b>

**Net Volume/Acre: 11.4 MBF**

Regeneration Harvest	0.0
Partial Cut	25.0
Right of Way	0.0
<b>Total Acres:</b>	<b>25.0</b>

**Unit: 13-1**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	155.0	166.0	167.0	669
White Fir	128.0	137.0	140.0	462
Ponderosa Pine	58.0	65.0	67.0	446
<b>Totals:</b>	<b>341.0</b>	<b>368.0</b>	<b>374.0</b>	<b>1,577</b>

**Net Volume/Acre: 11.0 MBF**

Regeneration Harvest	0.0
Partial Cut	31.0
Right of Way	0.0
<b>Total Acres:</b>	<b>31.0</b>

**Unit: 13-2**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	384.0	412.0	421.0	1,015
Douglas Fir	222.0	239.0	241.0	713
Ponderosa Pine	43.0	48.9	48.9	219
Incense-cedar	1.4	2.3	2.3	15
<b>Totals:</b>	<b>650.4</b>	<b>702.2</b>	<b>713.2</b>	<b>1,962</b>

**Net Volume/Acre: 17.1 MBF**

Regeneration Harvest	0.0
Partial Cut	38.0
Right of Way	0.0
<b>Total Acres:</b>	<b>38.0</b>

**Unit: 13-3**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	353.0	379.0	387.0	1,218
Douglas Fir	97.0	105.0	105.0	285
Ponderosa Pine	48.0	54.0	55.0	228
Incense-cedar	0.6	0.7	0.7	7
<b>Totals:</b>	<b>498.6</b>	<b>538.7</b>	<b>547.7</b>	<b>1,738</b>

**Net Volume/Acre: 15.1 MBF**

Regeneration Harvest	0.0
Partial Cut	33.0
Right of Way	0.0
<b>Total Acres:</b>	<b>33.0</b>

**Unit: 13-4**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	88.0	94.0	95.0	213
White Fir	85.0	91.0	93.0	319
Ponderosa Pine	3.0	3.0	3.0	16
Incense-cedar	1.0	1.0	1.0	6
<b>Totals:</b>	<b>177.0</b>	<b>189.0</b>	<b>192.0</b>	<b>554</b>

**Net Volume/Acre: 16.1 MBF**

Regeneration Harvest	0.0
Partial Cut	11.0
Right of Way	0.0
<b>Total Acres:</b>	<b>11.0</b>

**Unit: 15-1**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	535.0	572.0	586.0	1,632
Douglas Fir	246.0	264.0	266.0	901
Ponderosa Pine	6.0	6.0	7.0	33
<b>Totals:</b>	<b>787.0</b>	<b>842.0</b>	<b>859.0</b>	<b>2,566</b>

**Unit: 15-2**

Species	Net	Gross Merch	Gross	# of Trees
White Fir	53.0	57.0	58.0	232
Douglas Fir	20.0	21.0	21.0	27
<b>Totals:</b>	<b>73.0</b>	<b>78.0</b>	<b>79.0</b>	<b>259</b>

**Net Volume/Acre: 11.7 MBF**

Regeneration Harvest	0.0
Partial Cut	67.0
Right of Way	0.0
<b>Total Acres:</b>	<b>67.0</b>

**Net Volume/Acre: 8.1 MBF**

Regeneration Harvest	0.0
Partial Cut	9.0
Right of Way	0.0
<b>Total Acres:</b>	<b>9.0</b>



Total Stump To Truck	Net Volume	\$/MBF
\$833,856.38	8,970.0	\$92.96

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

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Feller Buncher	GM MBF	5,719.0	\$90.82	\$519,399.58	
Track Skidder	GM MBF	3,920.0	\$74.29	\$291,216.80	
<b>Subtotal</b>				<b>\$810,616.38</b>	

### Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Additional Cat Time	Hour	14.0	\$76.00	\$1,064.00	
<b>Subtotal</b>				<b>\$1,064.00</b>	

### Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Processor	Hour	48.0	\$107.00	\$5,136.00	6 moves x 4 hr x 2 seasons.
Feller Buncher	Hour	48.0	\$107.00	\$5,136.00	6 moves x 4hr x 2 seasons.
D7 (eqv.) Ripping Cat	Hour	48.0	\$92.00	\$4,416.00	6 moves x 4hr x 2 seasons.
Loader	Hour	48.0	\$92.00	\$4,416.00	6 moves x 4 hr x 2 seasons.
Track Skidder	Hour	48.0	\$64.00	\$3,072.00	6 moves x 4 hr x 2 seasons.
<b>Subtotal</b>				<b>\$22,176.00</b>	

### Comments:

1; Split logging systems for oversize >24". 2; Six moves for each piece of equipment, x2 for short operational windows and locality( 2 townships). 3; Additional Cat time for misc. use.

Total	Net Volume	\$/MBF
\$531,012.51	8,970.0	\$59.20

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
White City	44.0	All Sawlogs	GM MBF	9,639.0	\$55.09	\$531,012.51	100 %

**Engineering Allowances**

Total	Net Volume	\$/MBF
\$336,113.42	8,970.0	\$37.47

Cost Item	Total Cost
Road Construction:	\$267,910.86
Road Maintenance/Rockwear:	\$68,202.56
Road Use Fees:	\$0.00

Total	Net Volume	\$/MBF
\$361,431.26	8,970.0	\$40.29

### Environmental Protection

Cost item	Total Cost
Seed and Mulch	\$13,680.00
Equipment washing	\$4,440.00
Ripping skids.	\$25,260.00
<b>Subtotal</b>	<b>\$43,380.00</b>

### Slash Disposal & Site Prep

Cost item	Total Cost
SD-5 Lop and Scatter	\$47.86
Landing clean up	\$3,300.00
SD-5 Level 1	\$98,973.00
SD-5 Level 2	\$203,080.00
SD-5 Level 3	\$11,923.80
SD-5 Level 4	\$726.60
<b>Subtotal</b>	<b>\$318,051.26</b>

#### Comments:

Ripping; 60 landings planned, 1/2 acre each=30 acres of landings and skid approach for ripping. All units to be fuels treated; TBD using SD-5 stip post harvest.

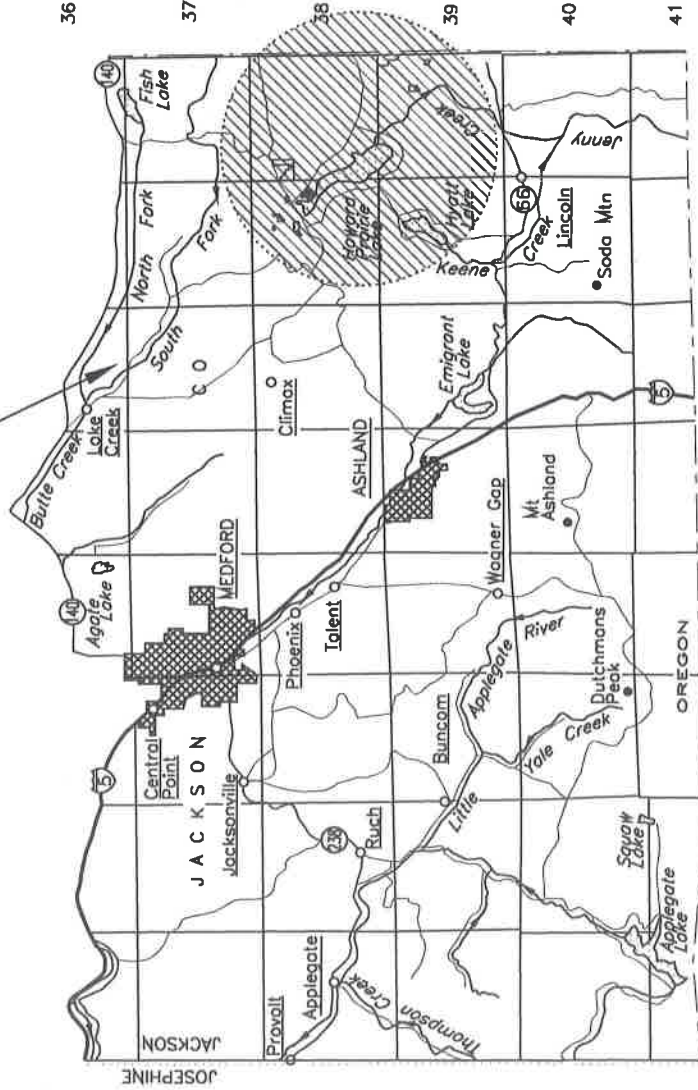




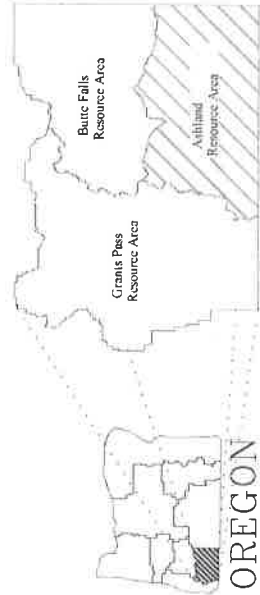
UNITED STATES DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT  
 MEDFORD DISTRICT ASHLAND RESOURCE AREA  
 GRIFFIN HALF MOON TIMBER SALE  
 TRACT NO. 18-15

EXHIBIT C-1  
 SHEET 1 OF 1

PROJECT LOCATION



SCALE IN MILES



Medford District BLM

Exhibit No.	Description
C1	TITLE SHEET
C2	ROAD LOCATION MAP
C3	ESTIMATE OF QUANTITIES
C4	TYPICAL ROAD SURFACING SECTIONS
C5	ROADSIDE BRUSHING DETAIL
C6	TYPICAL ARMORED WATER DIP CONSTRUCTION
C7	TYPICAL ROAD RENOVATION DETAIL
C8	ROAD RENOVATION WORKLIST
C9	SPECIAL PROVISIONS
C10	CONSTRUCTION SPECIFICATIONS
D1	ROAD MAINTENANCE SPECIFICATIONS
D2	ROAD MAINTENANCE MAP
D3	TYPICAL FULL DECOMMISSION
D4	TYPICAL ROAD CAMOUFLAGE
D5	DRAINAGE AND EROSION CONTROL
D6	ROAD DECOMMISSION WORKLIST

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

MEDFORD TITLE SHEET OREGON

DESIGNED *[Signature]*  
 REVIEWED *[Signature]*  
 APPROVED

DRAWN: JMR SCALE: AS SHOWN  
 DATE: July 2018 SHEET 1 OF 1  
 DRAWING NO. OR 117-TS18-15-C1



U.S.D.I. BLM MEDFORD DISTRICT

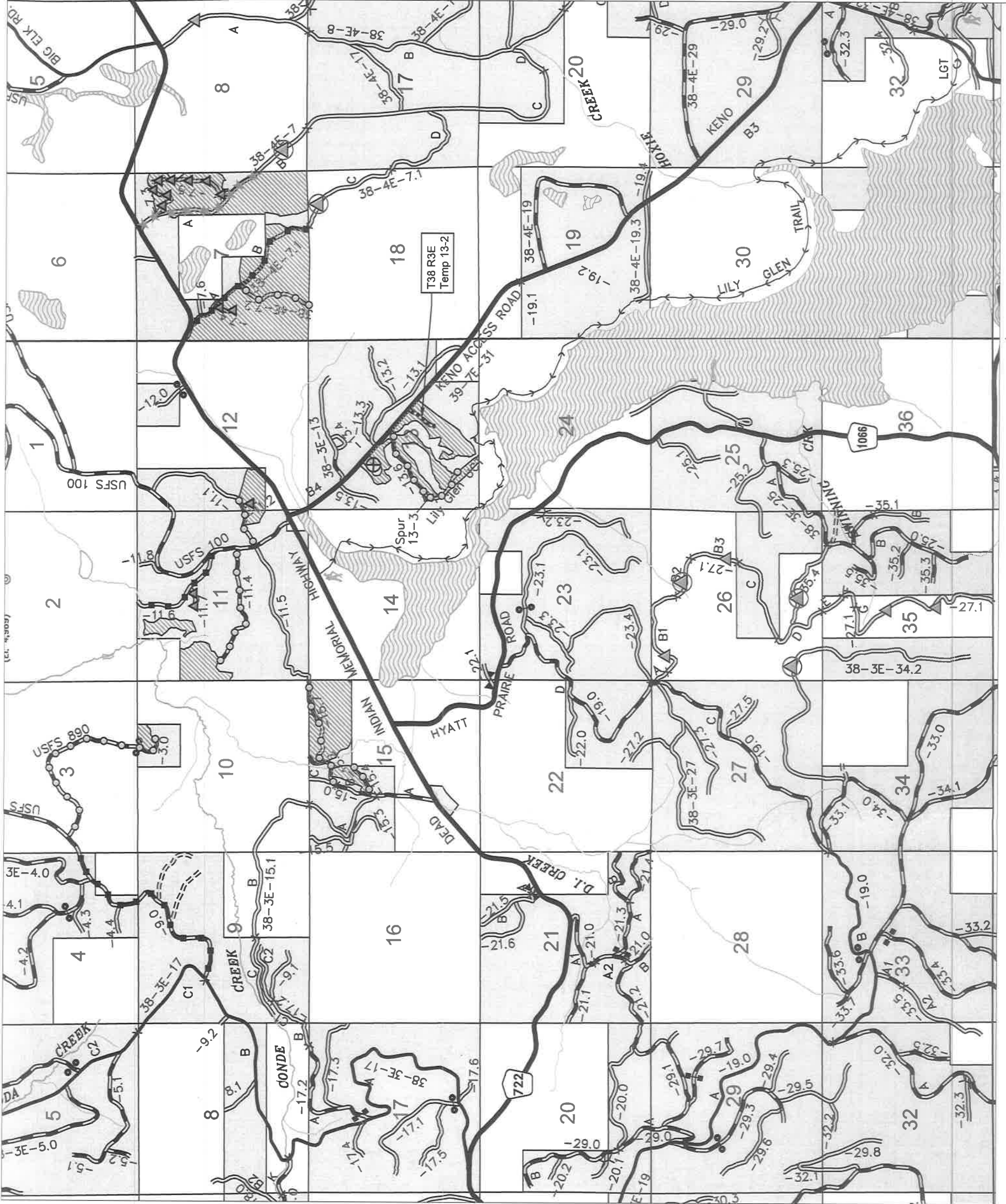
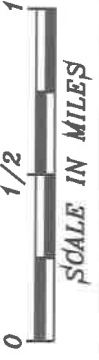
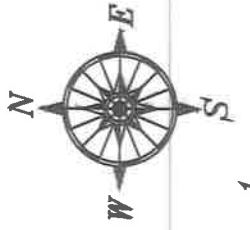
T.38S., R.3E. WILL. MER.  
T.38S., R.4E. WILL. MER.  
T.39S., R.3E. WILL. MER.  
T.39S., R.4E. WILL. MER.

- EXISTING GATE
- EXISTING BARRICADE
- PUMP CHANGE

ROAD PROJECTS

- EXISTING ROAD
- EXISTING PAVED ROAD
- EXISTING PRIMITIVE ROAD
- ROAD RENOVATION AND ROADSIDE BRUSHING
- ROAD TO BE BRUSHED ONLY
- ROAD RENOVATION, ROADSIDE BRUSHING, AND ROCK ROAD SURFACE
- ROAD TO BE OPENED and RECONSTRUCTED
- TEMPORARY ROAD TO BE CONSTRUCTED

- BLM LAND
- TS UNITS



T.38S.

R.3E. R.4E.
















GRIFFIN HALF MOON TIMBER SALE  
ROAD LOCATION MAP  
EXHIBIT C-2; PAGE 2 OF 2

U.S.D.I. BLM MEDFORD DISTRICT

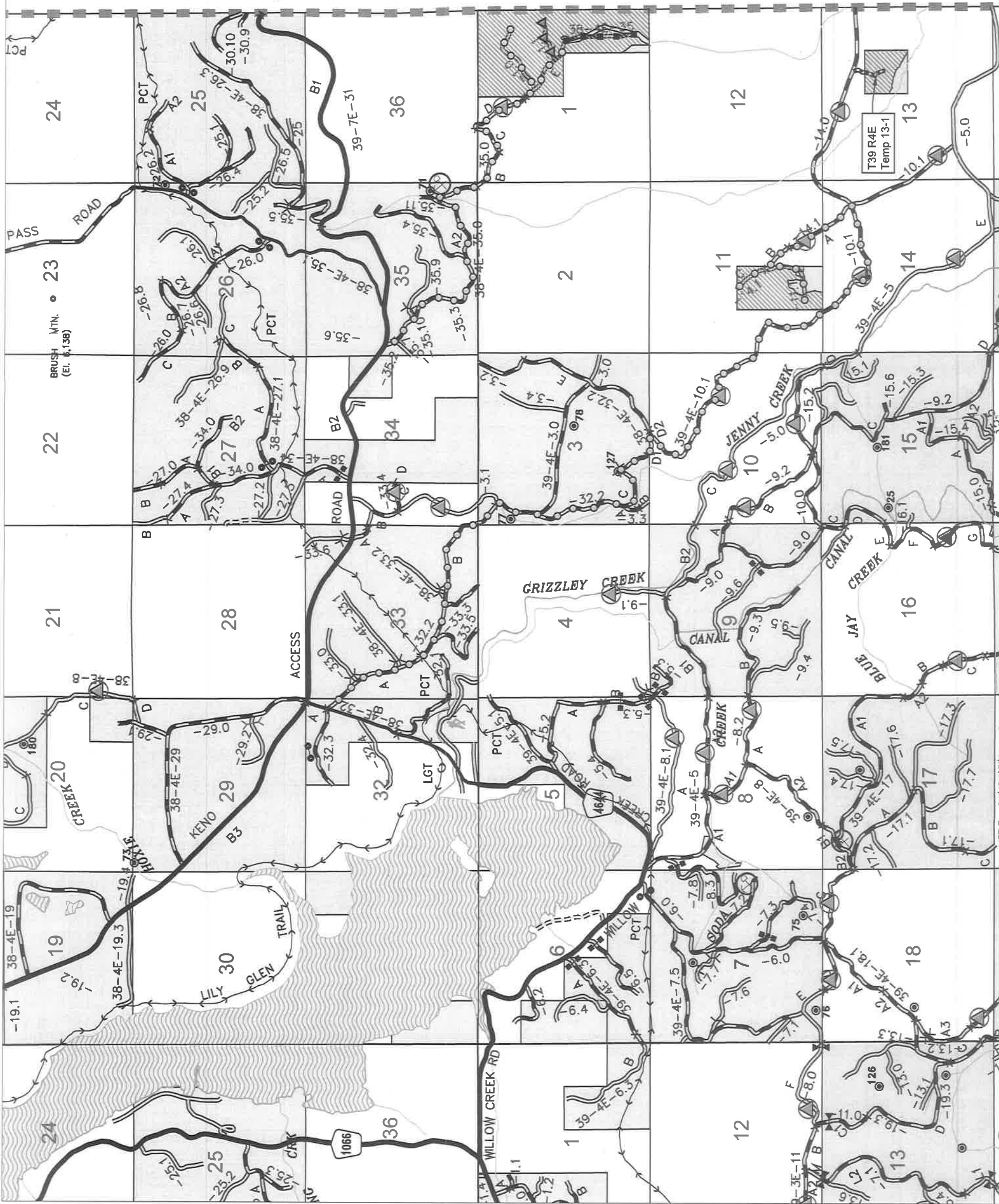
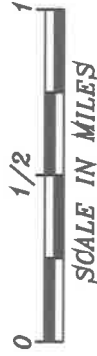
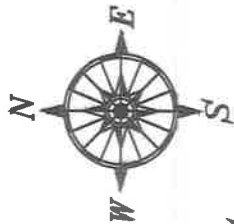
T.38S., R.3E. WILL. MER.  
T.38S., R.4E. WILL. MER.  
T.39S., R.3E. WILL. MER.  
T.39S., R.4E. WILL. MER.

-  EXISTING GATE
-  EXISTING BARRICADE
-  PUMP CHANGE

ROAD PROJECTS

-  EXISTING ROAD
-  EXISTING PAVED ROAD
-  EXISTING PRIMITIVE ROAD
-  ROAD RENOVATION AND  
ROADSIDE BRUSHING
-  ROAD TO BE BRUSHED ONLY
-  ROAD RENOVATION, ROADSIDE  
BRUSHING, AND ROCK ROAD  
SURFACE
-  ROAD TO BE OPENED and  
RECONSTRUCTED
-  TEMPORARY ROAD TO BE  
CONSTRUCTED

-  BLM LAND
-  TS UNITS



T.38S.

T.39S.

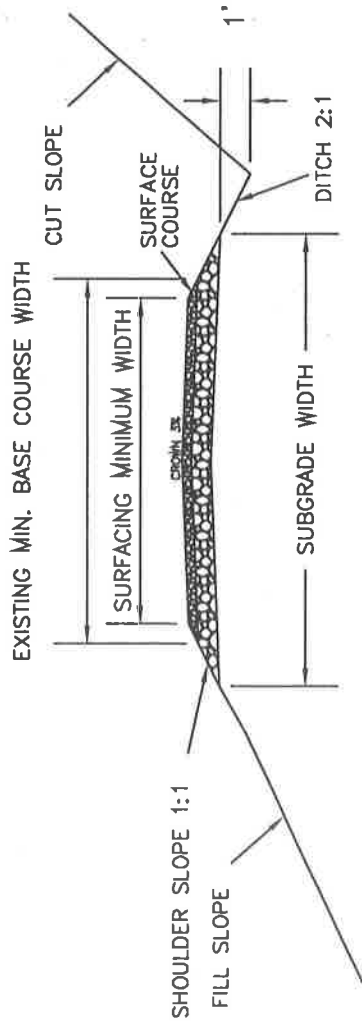
R.3E. R.4E.



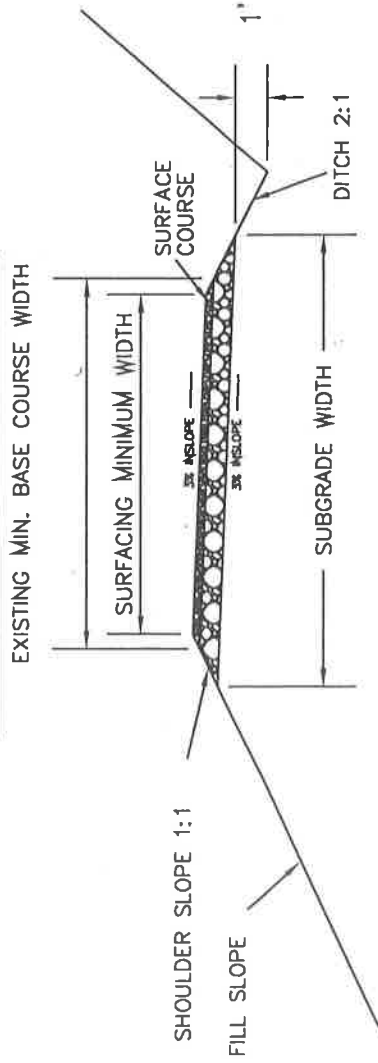




TYPICAL CROWNED SURFACE



TYPICAL INSLOPED SURFACE



TYPICAL OUTSLOPED SURFACE

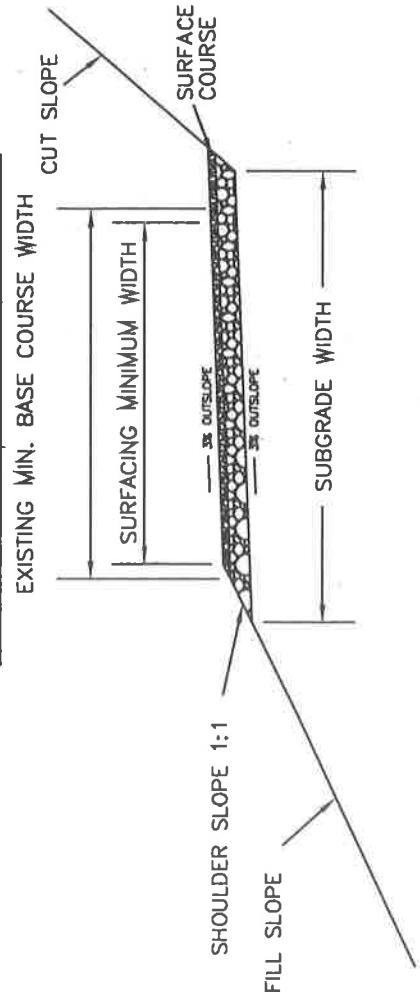


EXHIBIT C-4  
SHEET 1 OF 1

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

TYPICAL ROAD  
SURFACING SECTIONS

DRAWN: JWR

SCALE: AS SHOWN

DATE: July 2018

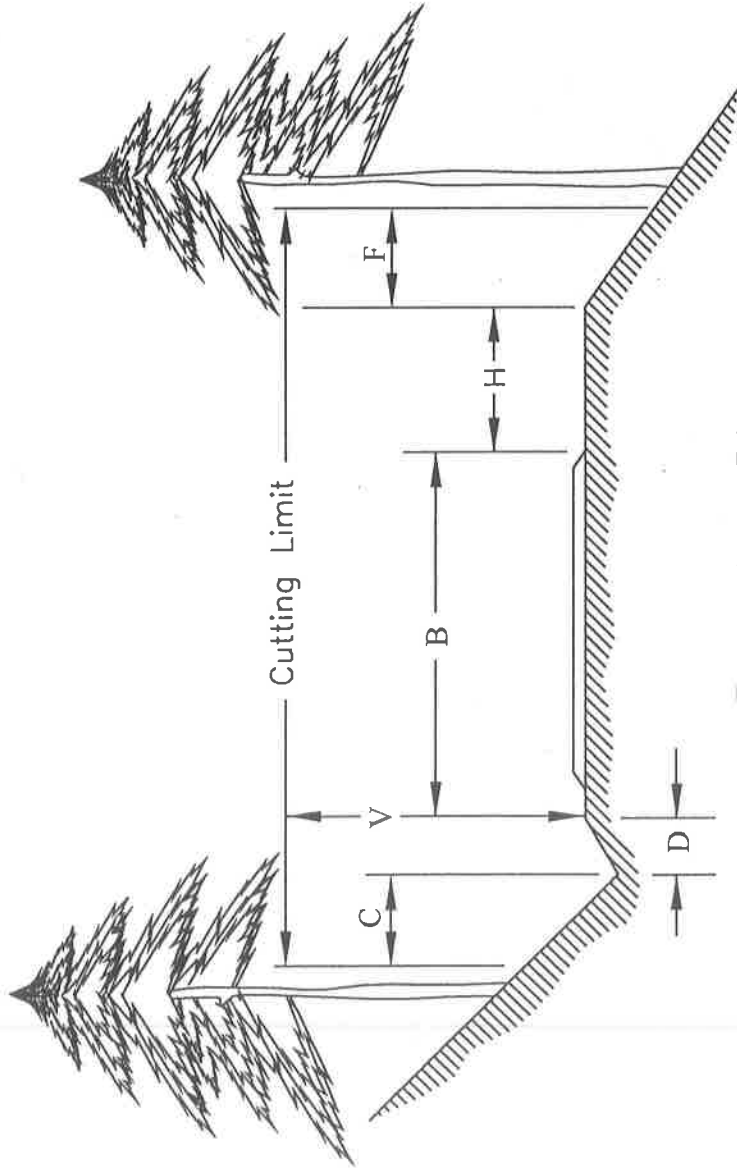
SHEET 1 OF 1

DRAWING NO. OR 117-TS18-15-C4



# Exhibit C-5

SHEET 1 OF 1



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

B = Basic lane width (includes turnouts)  
Width shall be determined by the PI

C = 4 ft - Distance to be brushed on cut slope beyond centerline of ditch

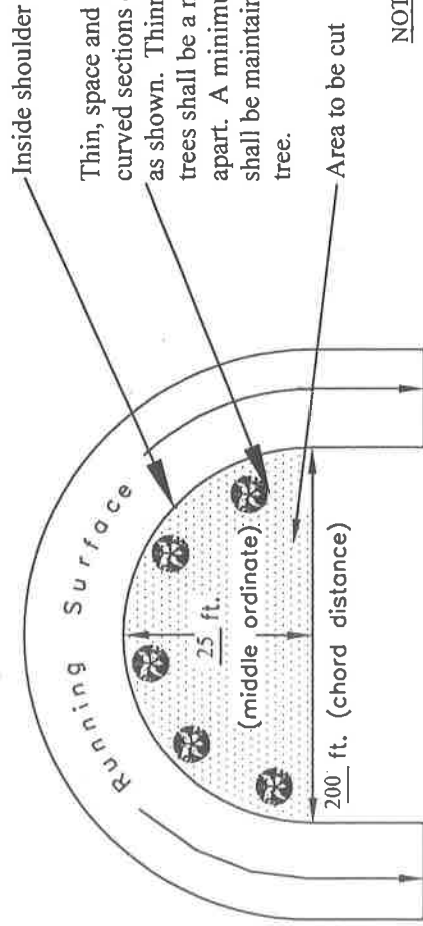
D = Centerline of ditch to inside shoulder

H = Variable distance between edge of basic lane and outside shoulder (does not include turnout widths)

F = Distance to be brushed on fill slope beyond outside shoulder  
(F = 4 when H is 4 ft or less)  
(F = 0 when H is greater than 4 ft)

V = 14 ft - Height of vertical cutting limit

## Brushing Diagram



Thin, space and prune trees through curved sections of road for visibility as shown. Thinning and spacing of trees shall be a minimum (10) feet apart. A minimum (1/3) tree crown shall be maintained on any pruned tree.

Area to be cut

### NOTES:

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

All distances shown are horizontal except for V

## Sight Distance Diagram

### Typical Basic lane widths

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

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON		<b>ROADSIDE BRUSHING DETAIL</b>	
DRAWN	JWR	SCALE	NONE
DATE	July 2018	SHEET	1 OF 1
DRAWING NO.		OR 117-TS18-15-C5	





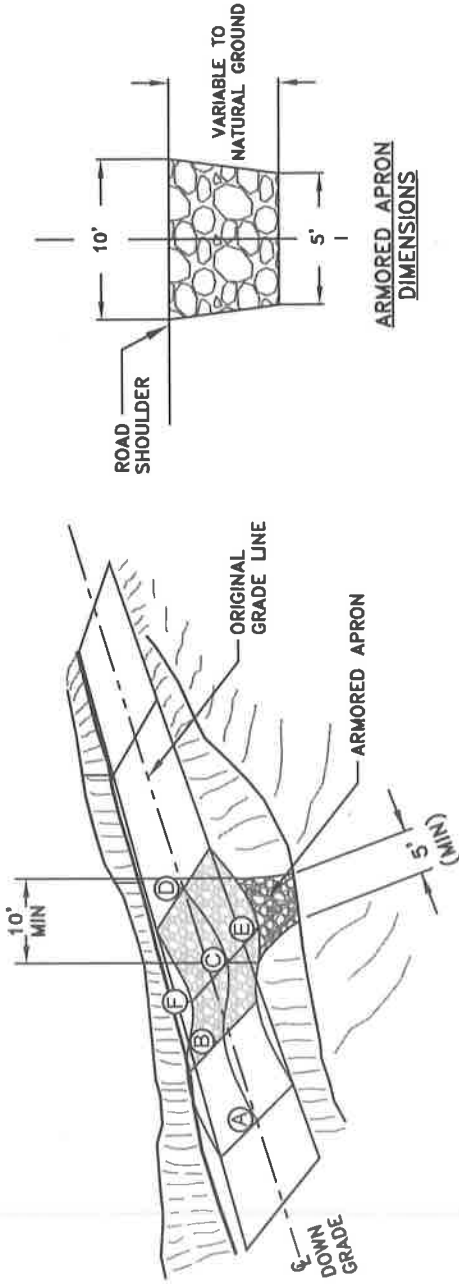
# EXHIBIT C-6

## SHEET 1 OF 1

### NOTES

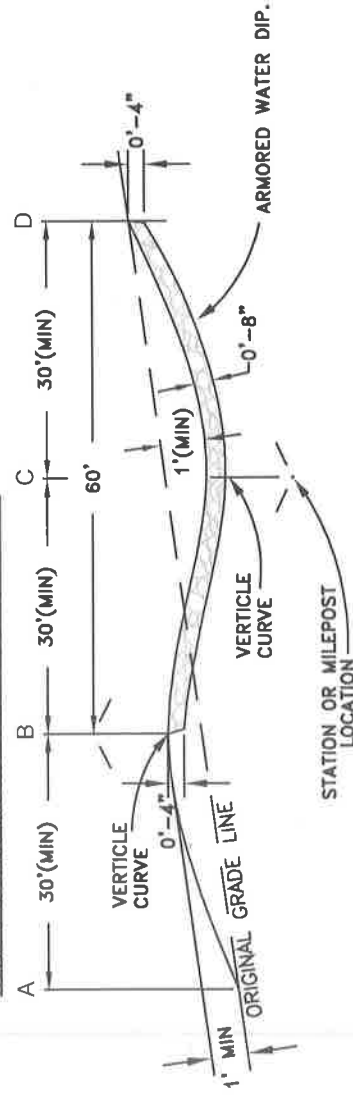
- 1) THE WATER DIP INVERT SHALL BE SMOOTH AND FREE DRAINING.
- 2) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE CUTSLOPE HINGE POINT IS 1.0 FEET.
- 3) THE MINIMUM DIFFERENCE IN ELEVATION BETWEEN THE SAG AND THE CREST OF THE WATER DIP ALONG THE FILLSLOPE SHOULDER IS 1.5 FEET.
- 4) SKEW DIP MINIMUM 15-30 DEGREES FROM PERPENDICULAR TO CENTERLINE.
- 5) EXCAVATED SOIL SHALL BE UTILIZED IN CONSTRUCTION OF WATER DIP. SIDECASTING OF VEGETATIVE MATTER IS PERMITTED.
- 6) PIT RUN MATERIAL SHALL BE PLACED ON FILL SLOPE AND SUBGRADE OF EACH ARMORED WATERDIP.
- 7) SEE ROAD RENOVATION WORKLIST FOR WATER DIPS TO BE ARMORED.
- 8) EACH DIP SHALL BE REINFORCED WITH 40 CUBIC YARDS OF 4 INCH MINUS ROCK, ON ROADWAY AND OUTFALL.

### LEGEND



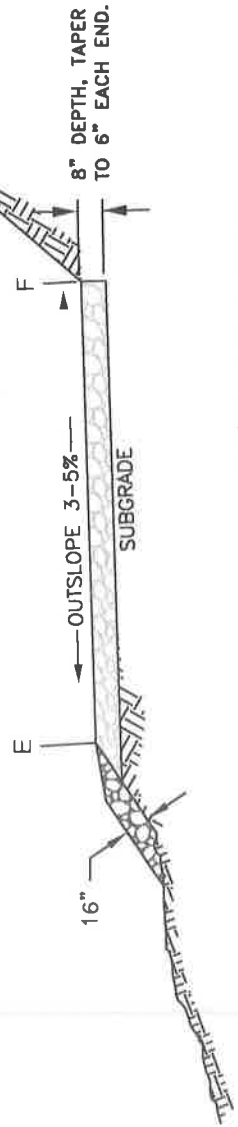
ARMORED APRON DIMENSIONS

ROAD PROFILE ALONG A-B-C OF DRAIN DIP

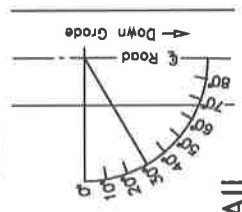


STATION OR MILEPOST LOCATION

ROAD PROFILE ALONG D-E OF DRAIN DIP



SKEW DIAGRAM



DRAWINGS NOT TO SCALE

## TYPICAL ARMORED WATER DIP CONSTRUCTION DETAIL

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

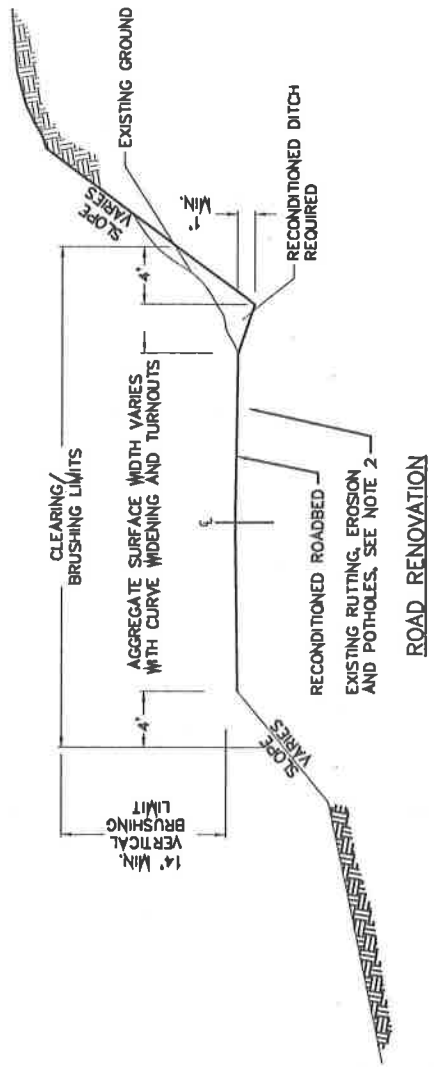
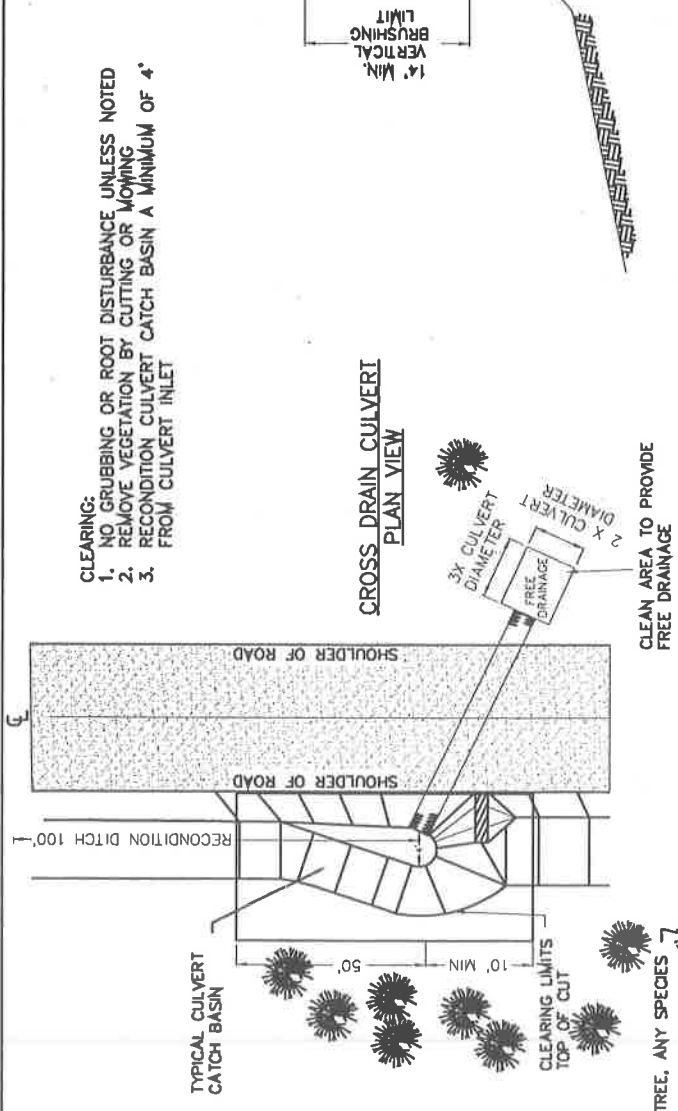
### TYPICAL ARMORED WATER DIP CONSTRUCTION

DRAWN BY JWR	SCALE NONE
DATE July 2018	SHEET 1 OF 1
DRAWING NO. OR 117-TS18-15-C6	



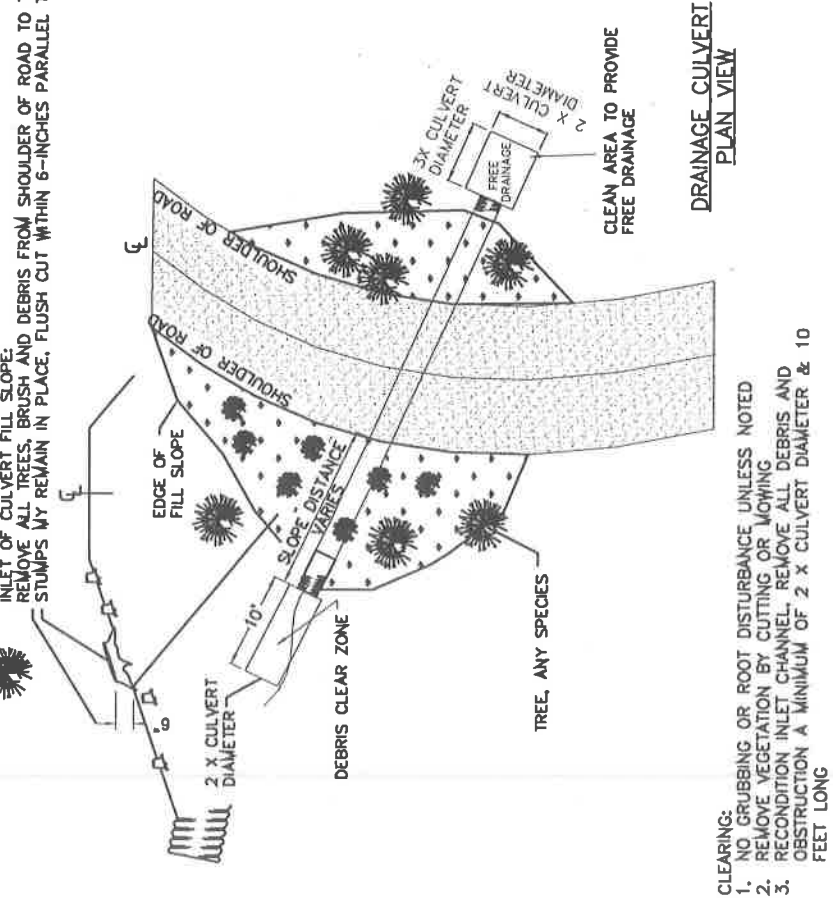
# EXHIBIT C-7 SHEET 1 OF 1

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



**NOTES:**

1. RECONDITION ROADS AS SHOWN AND IN ACCORDANCE WITH SECTION 600 OF THE SPECIFICATIONS. REQUIRED RECONDITIONING INCLUDES CURVE WIDENING AND TURNOUTS, DITCH RECONDITIONING INCLUDES CLEANING CULVERT INLETS AND OUTLETS.
2. WHERE RUTTING, EROSION AND POTHOLES EXIST, SCARIFY TO DEPTH OF RUT/EROSION/POTHOLE, BLADE, SHAPE AND COMPACT EXISTING AGGREGATE OR NATIVE SURFACE MATERIAL.
3. REMOVE AND DISPOSE OF SLIDE, DITCH, AND CATCH BASIN MATERIAL DISPOSAL SITE LOCATIONS AS STAKED ON THE GROUND. DISPOSAL/WASTE SITES SHALL BE APPROVED BY THE C.O. PRIOR TO USE. SEE VICINITY MAP FOR DISPOSAL SITE LOCATIONS/ OR AS STAKED ON GROUND.
4. MATCH EXISTING TRAVEL WAY CROSS SLOPE. THE TRAVELED WAY SHALL BE SHAPED TO THE EXISTING CROSS SLOPE. EXISTING ROADS WHICH ARE CROWNED SHALL BE AT 3% FROM CENTERLINE ROAD, INSLOPED AS IS, OUTSLOPED AS IS.



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

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON	
<b>TYPICAL ROAD RENOVATION DETAIL</b>	
DRAWN BY JWR	SCALE NONE
DATE July 2018	SHEET 1 OF 1
DRAWING NO. OR 117-TS18-15-C7	



**GRIFFIN HALF MOON TIMBER SALE  
 Road Renovation Worklist**

Renovation: This consists of road work to be performed on the road prior to its use. The work includes, but not limited to blading the road surface, brushing, cleaning catch basins, cleaning ditches, removing and installing culverts, reconstructing and constructing armored water dips, and placing crushed aggregate on approved road bed. Ditch cleaning shall only be done where ravel and other debris blocks the flow and causes erosion of the running surface.

Temporary roads constructed shall be fully decommissioned at the completion of timber harvest activities. See Exhibit D for decommissioning.

Road barricades removed during timber operations shall be replaced immediately after use. For activities that are not finished in one dry season, barricades shall be re-installed before the wet season, October 15<sup>th</sup>.

Jct.– Junction  
 CY – Cubic Yards

**Road 38-3E-3.00  
 Natural 14' Width**

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with USFS 890. Existing Wire gate. Begin Brushing. Begin Blading.
0.30	Turn around. End Brushing. End Blading.

**Road 38-3E-9.00  
 Aggregate 16' Width**

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with 38-3E-17.00. Begin Brushing. Begin Blading. Begin cleaning catch basins. Begin placing 1 ½" minus aggregate from commercial source at 6 inch depth.
1.37	Jct. USFS 800. End Brushing. End Blading. End cleaning catch basins. End placing aggregate surface.

**Road 38-3E-11.01  
 Natural 14' Width**

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with USFS 100. Begin Brushing. Begin Blading.
0.26	Jct. 38-3E-11.02 to right.
0.31	End brushing. End blading.
0.32	Existing buried gas line crossing.

**Road 38-3E-11.02**

**Natural**

**14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with 38-3E-11.01. Remove existing barricade. Begin Brushing. Begin Blading.
0.09	End brushing. End blading.

**Road 38-3E-11.04**

**Aggregate**

**14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with USFS 100. Begin Brushing. Begin Blading. Begin cleaning catch basins.
0.21	Existing culvert.
0.47	Existing buried gas line crossing.
0.48	Existing culvert.
0.59	Existing culvert.
0.68	Existing culvert.
0.74	Turn around.
0.80	End brushing. End blading. End cleaning catch basins.

**Road 38-3E-11.06**

**Aggregate**

**14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with USFS 100. Begin Brushing. Begin Blading. Begin placing 1 ½" minus aggregate from commercial source at 6 inch depth.
0.11	Existing water dip armor with 40 CY 4 inch minus, open to drain.
0.20	Existing water dip armor with 40 CY 4 inch minus, open to drain.
0.40	Existing water dip armor with 40 CY 4 inch minus, open to drain.
0.47	Jct. 38-3E-11.07 to left.
0.59	Turn Around. End Brushing. End Blading. End placing aggregate surface.

**Road 38-3E-11.07**

**Natural**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-3E-11.06. Remove existing barricade. Begin Brushing. Begin Blading.

0.14

End Brushing. End Blading.

**Road 38-3E-13.06**

**Aggregate**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 39-7E-31.00. Remove existing barricade. Begin Brushing. Begin light Blading to remove debris from road way.

0.49

Jct. with T38 R3E Spur 13-3 to left. End Brushing. End Blading.

**Road 38-3E-15.02**

**Aggregate**

**16' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-3E-15.00. Begin Brushing. Begin Blading.

0.16

Jct. with 38-3E-15.07 to right. End Brushing. End Blading.

**Road 38-3E-15.04**

**Aggregate**

**16' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-3E-15.00. Begin Brushing. Begin Blading.

0.18

Turn Around. End Brushing. End Blading.

**Road 38-3E-15.07**

**Natural**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-3E-15.02. Begin Brushing. Begin Blading.

0.52

End Brushing. End Blading.

**Road 38-4E-7.00**

**Aggregate**

**14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with Dead Indian Memorial Highway. Begin Brushing. Begin cleaning catch basins.
0.13	Jct. with 38-3E-7.03 to left.
0.68	Jct. with 38-3E-7.05 to left.
0.74	Turn Around.
0.80	End Brushing. End cleaning catch basins.

**Road 38-4E-7.01**

**Aggregate**

**14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with Dead Indian Memorial Highway. Begin Brushing. Begin Blading. Begin placing 1 1/2" minus aggregate from commercial source at 6 inch depth.
0.01	Large concrete irrigation crossing.
0.20	Jct. with 38-3E-7.04 to right.
0.23	Jct. private drive to left.
0.40	Jct. with 38-3E-7.02 to right.
0.97	End Brushing. End Blading. End placing aggregate surface.

**Road 38-4E-7.02**

**Natural**

**14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with 38-3E-7.01. Begin Brushing. Begin Blading.
0.45	End Brushing. End Blading.

**Road 38-4E-7.03**

**Natural**

**14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with 38-3E-7.00. Remove existing barricade. Begin Brushing. Begin Blading.
0.27	End Brushing. End Blading.



**Road 38-4E-7.04****Natural****14' Width****MP****Remarks**

0.00

Jct. with 38-3E-7.00. Remove existing barricade. Begin Brushing. Begin Blading.

0.14

End Brushing. End Blading.

**Road 38-4E-7.05****Natural****14' Width****MP****Remarks**

0.00

Jct. with 38-3E-7.00. Remove existing barricade. Begin Brushing. Begin Blading.

0.48

End Brushing. End Blading.

**Road 38-4E-32.02****BST/Aggregate****16' Width****MP****Remarks**

0.00

Jct. with 38-4E-32.00. Begin Brushing. Begin cleaning catch basins. Begin BST surface.

1.24

Existing culvert.

1.34

Existing culvert.

1.68

Existing culvert.

1.75

Existing culvert.

1.77

Jct. with 38-4E-3.01 to left.

2.00

Existing culvert.

2.01

Jct. with 38-4E-3.00 to left. End BST surface. Begin Aggregate surface.

2.86

Existing culvert.

3.02

Existing culvert.

3.15

Existing culvert.

3.16

Jct. with 39-4E-10.01 to right. End Brushing. End cleaning catch basins.

<u>MP</u>	<u>Remarks</u>
0.00	Jct. with 39-7E-31.00. Begin Brushing. Begin cleaning catch basins. Begin BST surface.
0.21	Existing culvert.
0.23	Jct. with 38-4E-35.09 to left.
0.45	Existing culvert.
0.52	Jct. with 38-4E-35.03 to right.
0.87	Jct. with 38-4E-35.04 to left.
1.16	Existing culvert.
1.27	Jct. with 38-4E-35.11 to left.
1.32	Existing culvert.
1.42	Existing culvert.
1.49	End BST surface. Begin existing Aggregate surface. Begin Blading.
2.01	Existing culvert.
2.02	Existing culvert.
2.33	Jct. with private road to right.
2.34	Existing culvert. End cleaning catch basins.
2.46	Jct. with 39-4E-1.00 to left.
2.68	Jct. with 39-4E-1.01 to left.
2.80	Begin placing 1 1/2" minus aggregate from commercial source at 6 inch depth.
2.82	Construct water dip, armor with 40 CY 4 inch minus.
2.95	Existing heavy rutting, upslope road to drain. Begin placing 100 CY 4 inch minus rock to fill drainage failures.
3.03	Construct water dip, armor with 40 CY 4 inch minus.

3.28 End Brushing. End Blading. End placing 4 inch minus rock. End placing aggregate surface.

**Road 39-4E-1.00**

**Natural**

**14' Width**

**MP**

**Remarks**

0.00

Jct. with 38-4E-35.00. Begin Brushing. Begin Blading.

0.45

End Brushing. End Blading.

**Road 39-4E-1.01**

**Natural**

**14' Width**

**MP**

**Remarks**

0.00

Jct. with 38-4E-35.00. Remove existing barricade. Begin Brushing. Begin Blading.

0.28

End Brushing. End Blading.

**Road 39-4E-10.01**

**Aggregate**

**14' Width**

**MP**

**Remarks**

0.00

Jct. with 38-4E-32.00. Begin Brushing. Begin cleaning catch basins.

2.45

Jct. with 39-4E-14.00 to left. End Brushing. End cleaning catch basins.

**Road 39-4E-11.01**

**Natural**

**14' Width**

**MP**

**Remarks**

0.00

Jct. with 39-4E-14.01. Begin Brushing. Begin Blading.

0.40

End Brushing. End Blading.

**Road 39-4E-14.01**

**Aggregate/Natural**

**14' Width**

**MP**

**Remarks**

0.00

Jct. with 39-4E-14.00. Begin Brushing. Begin Blading.

0.63

Jct. with 39-4E-11.01 to left.

0.82

End Brushing. End Blading.

**Road USFS 100**  
**Aggregate/Natural      14' Width**

- | <b><u>MP</u></b> | <b><u>Remarks</u></b>  |
|------------------|--|
| 0.00             | Jct. with Dead Indian Memorial Highway. Begin Brushing. Begin cleaning catch basins. |
| 0.43             | Jct. 38-3E-11.06 to left. End Brushing. End cleaning catch basins.                   |

**Road USFS 800**  
**Aggregate/Natural      14' Width**

- | <b><u>MP</u></b> | <b><u>Remarks</u></b>   |
|------------------|---|
| 0.00             | Jct. with 38-3E-9.00. Begin Brushing. Begin Blading. Begin cleaning catch basins. |
| 0.11             | Jct. USFS 890 to right. End Brushing. End Blading. End cleaning catch basins.     |

**Road USFS 890**  
**Aggregate/Natural      14' Width**

- | <b><u>MP</u></b> | <b><u>Remarks</u></b>   |
|------------------|---|
| 0.00             | Jct. with USFS 800. Begin Brushing. Begin Blading.              |
| 1.11             | Jct. 38-3E-3.00. Existing wire gate. End Brushing. End Blading. |

**Road T38 R3E Spur 13-3**  
**Natural      14' Width**

- | <b><u>MP</u></b> | <b><u>Remarks</u></b>   |
|------------------|---|
| 0.00             | Jct. with 38-3E-13.06. Remove existing barricade. Begin Brushing. Begin Blading. Upon completion of log haul Install Barricade and Camouflage road entrance with debris for 100 feet. Seed and mulch. |
| 0.07             | Jct. Lily Glen User Created Trail. End Brushing. End Blading.   |

**Road Lily Glen User Created Trail**  
**Natural      10' Width**

- | <b><u>MP</u></b> | <b><u>Remarks</u></b>   |
|------------------|---|
| 0.00             | Jct. with T38 R3E Spur 13-3. Begin Brushing. Begin Blading. Begin widening trail to facilitate safe passage of vehicles, wind row material along cut slope side of the roads edge to be utilized upon completion of haul. |
| 0.23             | End Brushing. End Blading.  |

**Temporary Spur T39 R4E Temp 13-1**

**Natural 14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with 39-4E-14.00. Begin Construction.
0.20	End Construction.

**Temporary Spur T38 R3E Temp 13-2**

**Natural 14' Width**

<b><u>MP</u></b>	<b><u>Remarks</u></b>
0.00	Jct. with 39-7E-31.00. Begin Construction.
0.19	End Construction.

## SPECIAL PROVISIONS

1. Before beginning road construction operations for the first time or after a shutdown of seven or more days, the Purchaser shall notify the Authorized Officer of the date he plans to begin operations. The Purchaser shall also notify the Authorized Officer if he intends to cease operations for any period of 30 or more days.
2. DAMAGE:
  - The contractor shall protect and is responsible for any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements as required in Section 14. Damage to utilities and existing improvements shall be promptly paid for or repaired to a condition which is, in the opinion of the Authorized Officer and the governing utility company, at least as good as the condition just prior to such damage.
3. DUST ABATEMENT:
  - The application of dust abatement materials such as Lignin, Mag-chloride, or approved petroleum based dust abatement products shall be restricted from application just after severely wet weather, at stream crossings, or other locations that could result in direct delivery to a water body.
  - All dust abatement applications shall be approved by the Authorized Officer prior to application.
4. PERMITS:
  - All permits required are the responsibility of the Purchaser.
5. WATER SOURCE:
  - Listed are approved water sources. Other water sources shall be approved by the Authorized Officer prior to use. The Purchaser is responsible for all permits and fees from water sources on private or commercial sources.

Location:

<u>ROAD #</u>	<u>and NAME</u>	<u>MP</u>
39-7E-31.00	Skinny Dip Quarry	0.64
38-2E-27.00	Sharon Lakes Quarry	0.53
38-3E-17.00	Conde Creek Road	2.52

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

7. SOIL STABILIZATION:

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

8. ROAD RENOVATION:

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

9. TEMPORARY ROUTES

- All temp routes and native surfaced roads (that were previously closed before timber sale activities began) shall be winterized if access is needed over two dry seasons by October 15<sup>th</sup>. Winterization includes water barring, seeding, mulching, and barricading. All temp routes shall be ripped, water barred, barricaded, seeded, and mulched after use unless otherwise specified.
- Clearing, grubbing, and excavation activities of temporary spur routes shown on Exhibit C shall be performed in accordance with Exhibit C-10.
- Construction of temporary routes shall be to minimum width.

12. COMMERCIAL AGGREGATE

- Aggregate furnished for this work shall be from an accredited weed free quarry or shall have been stockpiled in the period between November 1<sup>st</sup> and June 15<sup>th</sup> immediately prior to application. Aggregate which has been stockpiled between June 16<sup>th</sup> and October 31<sup>st</sup> of prior years will not be accepted. Aggregate crushed between June 16<sup>th</sup> and October 31<sup>st</sup> of the same application year shall not be stockpiled for more than two weeks before application.





---

## TIMBER SALE ROAD SPECIFICATIONS

---

### TABLE OF CONTENTS

SECTION	DESCRIPTION
100	General
200	Clearing and Grubbing
500	Renovation and Improvement of Existing Roads
600	Watering
900	Aggregate Base Course - Screened Rock
1200	Aggregate Surface Course - Crushed Rock
1700	Erosion Control
1800	Soil Stabilization
2100	Roadside Brushing

---

## TIMBER SALE ROAD SPECIFICATIONS

---

### 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.

---

## TIMBER SALE ROAD SPECIFICATIONS

---

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

---

## TIMBER SALE ROAD SPECIFICATIONS

---

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.

## TIMBER SALE ROAD SPECIFICATIONS

---

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

---

## TIMBER SALE ROAD SPECIFICATIONS

---

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.

---

## TIMBER SALE ROAD SPECIFICATIONS

---

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.

## TIMBER SALE ROAD SPECIFICATIONS

---

- 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



---

## TIMBER SALE ROAD SPECIFICATIONS

---

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.

**TIMBER SALE ROAD SPECIFICATIONS**

---

- 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
38-4E-7.03	0.00	0.27	Scatter
38-4E-7.05	0.00	0.48	Scatter
T38 R3E Temp 13-2	0.00	0.19	Scatter
T39 R4E Temp 13-1	0.00	0.20	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 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

## **TIMBER SALE ROAD SPECIFICATIONS**

---

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.

### **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

## **TIMBER SALE ROAD SPECIFICATIONS**

---

- 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.
- 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.

**TIMBER SALE ROAD SPECIFICATIONS**

---

**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.
  
- 902a - Screened rock materials to be used in this work shall be obtained from commercial sources selected by the Purchaser, 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	<b>100</b>			
3 inch	<b>95-100</b>	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	<b>11-44</b>	16-49	21-54	35-65

**TIMBER SALE ROAD SPECIFICATIONS**

---

No. 40				11-27
No. 200	<b>2-15</b>	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.
- 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.

**TIMBER SALE ROAD SPECIFICATIONS**

---

**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 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 shall be obtained from commercial source(s) selected by the Purchaser, providing the rock materials furnished comply with these specifications.
  
- 1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces.
  
- 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	<b>100</b>	-	-	-	-
1-inch	-	-	100	100	-	-

**TIMBER SALE ROAD SPECIFICATIONS**

3/4-inch	50-90	<b>60-90</b>	-	70-98	100	100
1/2-inch	-	-	-	-	-	70-98
No. 4	25-50	<b>30-55</b>	30-60	36-60	40-75	44-70
No. 8	-	<b>22-43</b>	-	25-47	-	30-54
No. 30	-	<b>11-27</b>	-	12-31	-	15-34
No. 40	5-25	-	5-30	-	5-35	-
No. 200	2-15	<b>3-15</b>	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



## **TIMBER SALE ROAD SPECIFICATIONS**

---

- 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 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.

---

---

**TIMBER SALE ROAD SPECIFICATIONS**

---

---

**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:

Road No.	From M.P.	To M.P.
T38 R3E Temp 13-2	0.00	0.19
T39 R4E Temp 13-1	0.00	0.20

to be 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.

## **TIMBER SALE ROAD SPECIFICATIONS**

---

- 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 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 15 (of the same year)
----------------	-----------------------------------

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

- 1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.
- 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.

## TIMBER SALE ROAD SPECIFICATIONS

---

- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.
- 1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.
- 1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.
- 1810 - Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.
- 1811 - The Purchaser shall furnish and apply to approximately **3.92** 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

---

**TIMBER SALE ROAD SPECIFICATIONS**

---

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

**ROADSIDE BRUSHING - 2100**

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet (C-5) 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

## **TIMBER SALE ROAD SPECIFICATIONS**

---

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.
- 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.

---

## **TIMBER SALE ROAD SPECIFICATIONS**

---

- 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

---

### ROAD MAINTENANCE SPECIFICATIONS TABLE OF CONTENTS

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

## ROAD MAINTENANCE SPECIFICATIONS

### GENERAL - 3000

3001 The Purchaser shall be required to maintain all roads listed and/or as shown on the Exhibit D2 map of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.

Road No. and Segment	Length Miles Used	Ownership	Road Surface Type	Maintenance Responsibility
38-3E-09.00	1.37	BLM	Aggregate	BLM
38-3E-11.04	0.80	BLM	Aggregate	BLM
38-3E-11.06	0.44	BLM	Aggregate	BLM
38-3E-13.06	0.49	BLM	Aggregate	BLM
38-3E-15.00 A-B	0.66	BLM	Aggregate	BLM
38-3E-17.00 A-B	3.74	BLM	Bituminous	BLM
38-4E-07.00 A	0.80	BLM	Aggregate	BLM
38-4E-07.01 A-B	0.97	BLM	Aggregate	BLM
38-4E-32.00 A	0.10	BLM	Bituminous	BLM
38-4E-32.02 A-C	2.92	BLM	BST/Aggregate	BLM
38-4E-32.02 D	0.10	Private	Aggregate	BLM
38-4E-35.00 A1-A2	1.59	BLM	Bituminous	BLM
38-4E-35.00 B	0.21	Private	Aggregate	BLM
38-4E-35.00 C	0.27	BLM	Aggregate	BLM
38-4E-35.00 D	0.30	Private	Aggregate	BLM
38-4E-35.00 E	0.86	BLM	Aggregate	BLM
39-4E-10.01 A-C	2.45	Private	Aggregate	BLM
39-4E-14.00	1.08	Private	Aggregate	BLM
39-7E-31.00 B4-B2	6.74	BLM	Bituminous	BLM
38-3E-03.00	0.30	BLM	Natural	Purchaser
38-3E-11.01	0.39	BLM	Natural	Purchaser

**ROAD MAINTENANCE SPECIFICATIONS**

Road No. and Segment	Length Miles Used	Ownership	Road Surface Type	Maintenance Responsibility
38-3E-11.02	0.15	BLM	Natural	Purchaser
38-3E-11.07	0.14	BLM	Natural	Purchaser
38-3E-15.02	0.30	BLM	Aggregate	Purchaser
38-3E-15.04 A	0.25	Private	Aggregate	Purchaser
38-3E-15.07	0.57	BLM	Natural	Purchaser
38-4E-07.02	0.45	BLM	Natural	Purchaser
38-4E-07.03	0.27	BLM	Natural	Purchaser
38-4E-07.04	0.14	BLM	Natural	Purchaser
38-4E-07.05	0.48	BLM	Natural	Purchaser
39-4E-01.00	0.45	BLM	Natural	Purchaser
39-4E-01.01	0.28	BLM	Natural	Purchaser
39-4E-11.01	0.40	BLM	Natural	Purchaser
39-4E-14.01 A	0.38	Private	Aggregate	Purchaser
39-4E-14.01 B	0.19	Private	Natural	Purchaser
39-4E-14.01 C	0.25	Private	Natural	Purchaser
USFS 100	0.47	USFS	Bituminous	Purchaser
USFS 800	0.11	USFS	Aggregate	Purchaser
USFS 890	1.11	USFS	Agg/Natural	Purchaser

- 3001a The Purchaser shall be required to provide maintenance on roads in accordance with Subsections 3403 and 3404.
- 3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards.
- 3003 The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.

---

**ROAD MAINTENANCE SPECIFICATIONS**

---

- 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.
- 3104 The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.
- 3104a Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.
- 3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.
- Prior to removal of any slough or slide material exceeding fifteen station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, method of disposal, and the disposal site. Work may commence immediately after agreement.
- Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based on current BLM Road Cost Guide. Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.
- 3105 The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water-bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.

## **ROAD MAINTENANCE SPECIFICATIONS**

---

- 3106 The Purchaser shall be responsible for repair and replacement of all materials eroded from road shoulders and fill slopes, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the Purchaser. Prior to repair and replacement of eroded material exceeding fifteen station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, borrow source and method of repair. Work may commence immediately after agreement.
- Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work based upon current BLM Road Cost Guide. Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.
- 3107 The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe passage of traffic along the traveled way when directed by the Authorized Officer.
- The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be by scattering below the road in accordance with Section 2100 of Exhibit C.
- 3108 The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.
- 3108a The Purchaser shall perform logging operations on gravel and/or bituminous roadways only where the locations have been marked on the ground and/or approved by the Authorized Officer. (Repair of the roads is not considered maintenance and shall be repaired at the Purchaser's expense.)

### **SEASONAL MAINTENANCE - 3200**

- 3201 The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.

**ROAD MAINTENANCE SPECIFICATIONS**

---

- 3202 The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 1 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.
- 3203 The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.
- 3204 The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

**FINAL MAINTENANCE - 3300**

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

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

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

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

**ROAD MAINTENANCE SPECIFICATIONS**

**OTHER MAINTENANCE - 3400**

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

3402 The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

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

3403 The Purchaser shall be required to furnish and apply non-saline water during dry hauling periods, when directed by the Authorized Officer, for the purpose of laying dust and to prevent loss of surface material. The first application of water shall be made at the rate of one-half gallon per yd<sup>2</sup> of road surface traveled. Subsequent applications shall be made for each 40 MBF of timber or 120 yds<sup>3</sup> of rock hauled. Subsequent watering may be done at a rate less than one-half gallon per yd<sup>2</sup> 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.
38-3E-9.00	0.00	1.37
USFS 800	0.00	0.11
38-3E-11.06	0.00	0.44
38-4E-7.00	0.00	0.80
38-4E-7.01	0.00	0.97
38-4E-32.02	2.01	3.16
39-4E-10.01	0.00	2.45
39-4E-14.00	0.00	1.08

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

## **ROAD MAINTENANCE SPECIFICATIONS**

---

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.

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**

3506 Stockpiled slash shall be used to protect exposed areas created by the Purchaser's operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. All slash stockpiles created by the purchaser shall be utilized for Camouflaging and Full Decommission.

3507 Culverts not designated as salvage by the Authorized Officer for the Government shall become the property of the Purchaser. The Purchaser shall be responsible for disposal of materials in a legal manner and for payment of any fees required. Sale of material on site is not allowed unless authorized in writing by the Authorized Officer.

3508 Protect areas with camouflaging and soil stabilization from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.

3509 Barricades shall be installed across full width of roadway at locations designated in the specifications. Barricades shall be constructed conforming to the lines, grades, dimensions and typical details as shown on Exhibit D5.



**ROAD MAINTENANCE SPECIFICATIONS**

3513 Water bars shall be installed across full width of roadway at spacing shown in the specifications. Water bars shall be constructed conforming to the lines, grades, dimensions and typical details as shown on Exhibit D5. No water bar will be installed closer than 50 feet to a draw crossing.

3514 Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800 and placement of slash described in Subsection 3506 on designated roadways, disturbed areas, landings, and other areas disturbed by the purchaser's operations in accordance with these specifications and as shown in the plans.

3520 Long Term Closure of roads shall consist of all or part of the following treatments:

- a. Construct water bars along entire length of road at 200' spacing, or as staked or directed by the Authorized Officer's Representative.
- b. The Purchaser shall Camouflaged the road entrance for a minimum of 100 feet or to the first curve or hillcrest. Camouflaged roads shall consist of using boulders, brush, dead material, stumps, and other debris to disguise the entire length of the road prism to the extent possible. No live trees should be used without approval by the Authorized Officer.
- c. An earth berm or equivalent barricade shall be constructed near the beginning of road. The final locations will be staked by the Authorized Officer's Rep.

3521 Long Term Closure shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	Treatment
38-3E-11.02	Waterbar, Barricade, Camouflage, Seed and Mulch
38-3E-11.07	Waterbar, Barricade, Camouflage, Seed and Mulch
38-3E-13.06	Barricade end of road
38-4E-7.03	Waterbar, Barricade, Camouflage, Seed and Mulch
38-4E-7.04	Waterbar, Barricade, Camouflage, Seed and Mulch
38-4E-7.05	Waterbar, Barricade, Camouflage, Seed and Mulch
39-4E-1.00	Waterbar, Barricade, Camouflage, Seed and Mulch
39-4E-1.01	Waterbar, Barricade, Camouflage, Seed and Mulch
T39 R4E Temp 13-3	Waterbar, Barricade, Camouflage, Seed and Mulch

3522 Long Term Closure work shall be completed at the end of timber hauling. All work shall be performed during the dry season before October 15<sup>th</sup>.

3523 Protect areas mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.

## ROAD MAINTENANCE SPECIFICATIONS

---

- 3524 Access shall be blocked with barricades as shown at locations on Exhibit D2.
- Existing barricades removed during timber operations shall be replaced immediately after use. For activities that are not finished in one dry season, barricades shall be re-installed before the wet season, October 15<sup>th</sup>.
- 3525 Full Decommissioning of roads shall consist of all or part of the following treatments:
- a. Subsoiling shall be done using mechanical treatment to de-compact road surface to a depth 12 to 18 inches or to a point where 10 inch diameter stones are the dominant substrate (whichever is shallower). Where it is determined by the Authorized Officer that decompaction may cause unacceptable damage to the root systems of residual trees along a majority of the road, decompaction may be intermittent, or scarification may be used instead. Woody debris, brush, stumps, boulders, and other debris shall be placed along the roads entire length as determined by availability of materials to provide ground cover and discourage use. No live trees shall be cut or used without approval of the Authorized Officer.
- Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads shall be restored. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible.
- b. All culverts shall be removed from road for its entire length. Excavated culverts shall be left open to drain and have slopes of 1 1/2:1. Where draw culverts are removed the grade of the channel shall be restored to match existing stream. Culverts not designated as salvage for the Government shall become the property of the Contractor. The Contractor shall be responsible for legally disposing of material.
  - c. Construct water bars along entire length of road at 200' spacing, or as staked or directed by the Authorized Officer's Representative.
  - d. The Purchaser shall Camouflaged the road entrance for a minimum of 100 feet or to the first curve or hillcrest. Camouflaged roads shall consist of using boulders, brush, dead material, stumps, and other debris to disguise the entire length of the road prism to the extent possible. No live trees should be used without approval by the Authorized Officer.
  - e. An earth berm or equivalent barricade shall be constructed near the beginning of road. The final locations will be staked by the Authorized Officer's Rep.

## ROAD MAINTENANCE SPECIFICATIONS

---

3526

Full Decommission shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	Treatment
T38 R3E Temp 13-2	Subsoil, Waterbar, Barricade, Camouflage, Seed and Mulch
T39 R4E Temp 13-1	Subsoil, Waterbar, Barricade, Camouflage, Seed and Mulch



GRIFFIN HALF MOON TIMBER SALE  
ROAD LOCATION MAP  
EXHIBIT D-2; PAGE 1 OF 2

U.S.D.I. BLM MEDFORD DISTRICT

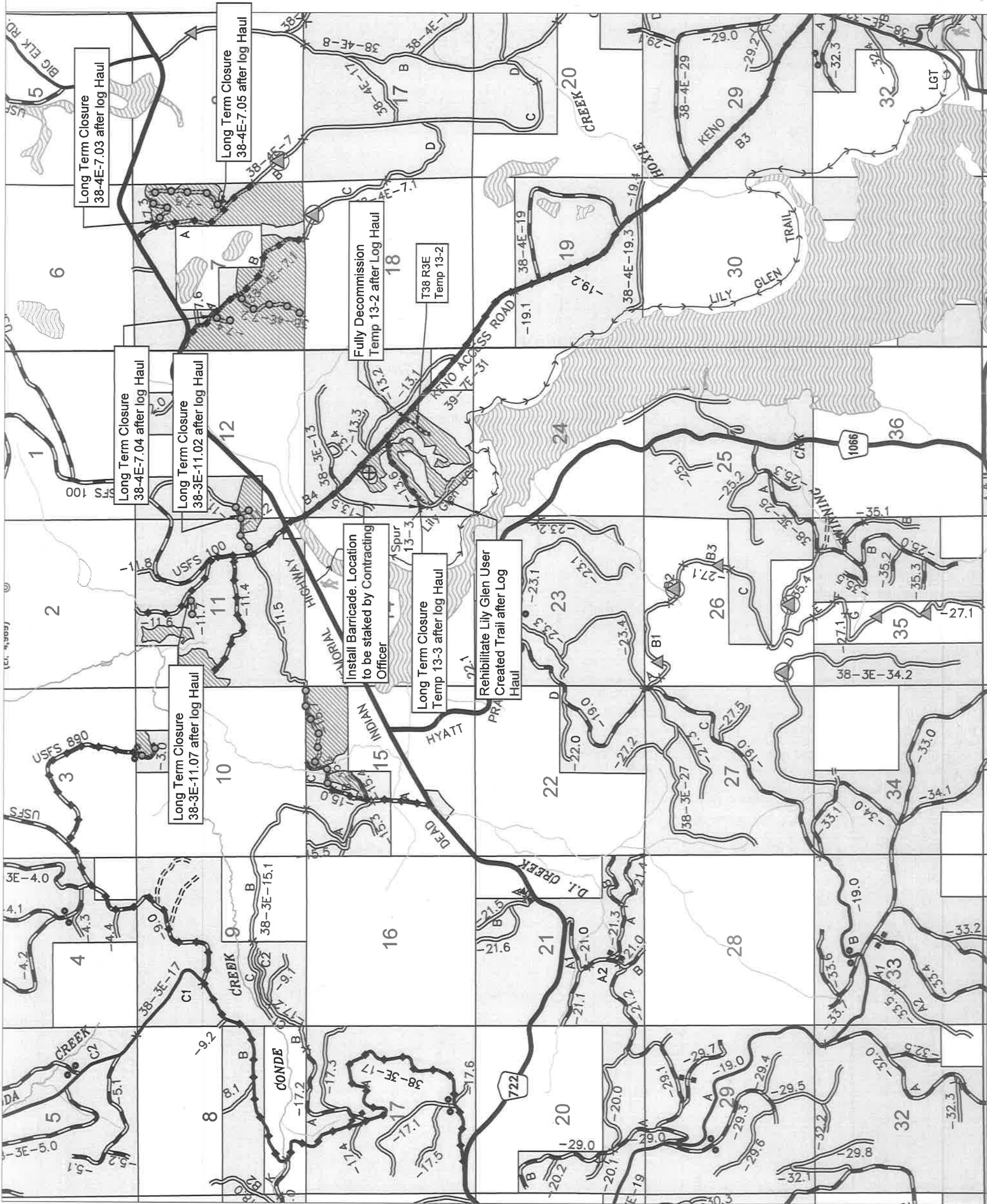
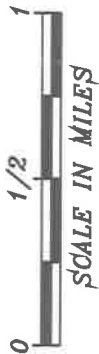
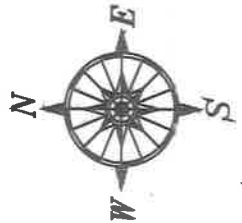
T.38S., R.3E. WILL. MER.  
T.38S., R.4E. WILL. MER.  
T.39S., R.3E. WILL. MER.  
T.39S., R.4E. WILL. MER.

- EXISTING GATE
- EXISTING BARRICADE
- PUMP CHANGE

ROAD PROJECTS

- EXISTING ROAD
- EXISTING PAVED ROAD
- EXISTING PRIMITIVE ROAD
- OPERATOR MAINTENANCE
- BLM MAINTENANCE

- BLM LAND
- TS UNITS



T.38S.

R.3E. | R.4E.



GRIFFIN HALF MOON TIMBER SALE  
ROAD LOCATION MAP  
EXHIBIT D-2; PAGE 2 OF 2

U.S.D.I. BLM MEDFORD DISTRICT

T.38S., R.3E. WILL. MER.  
T.38S., R.4E. WILL. MER.  
T.39S., R.3E. WILL. MER.  
T.39S., R.4E. WILL. MER.

- EXISTING GATE
- EXISTING BARRICADE
- PUMP CHANGE

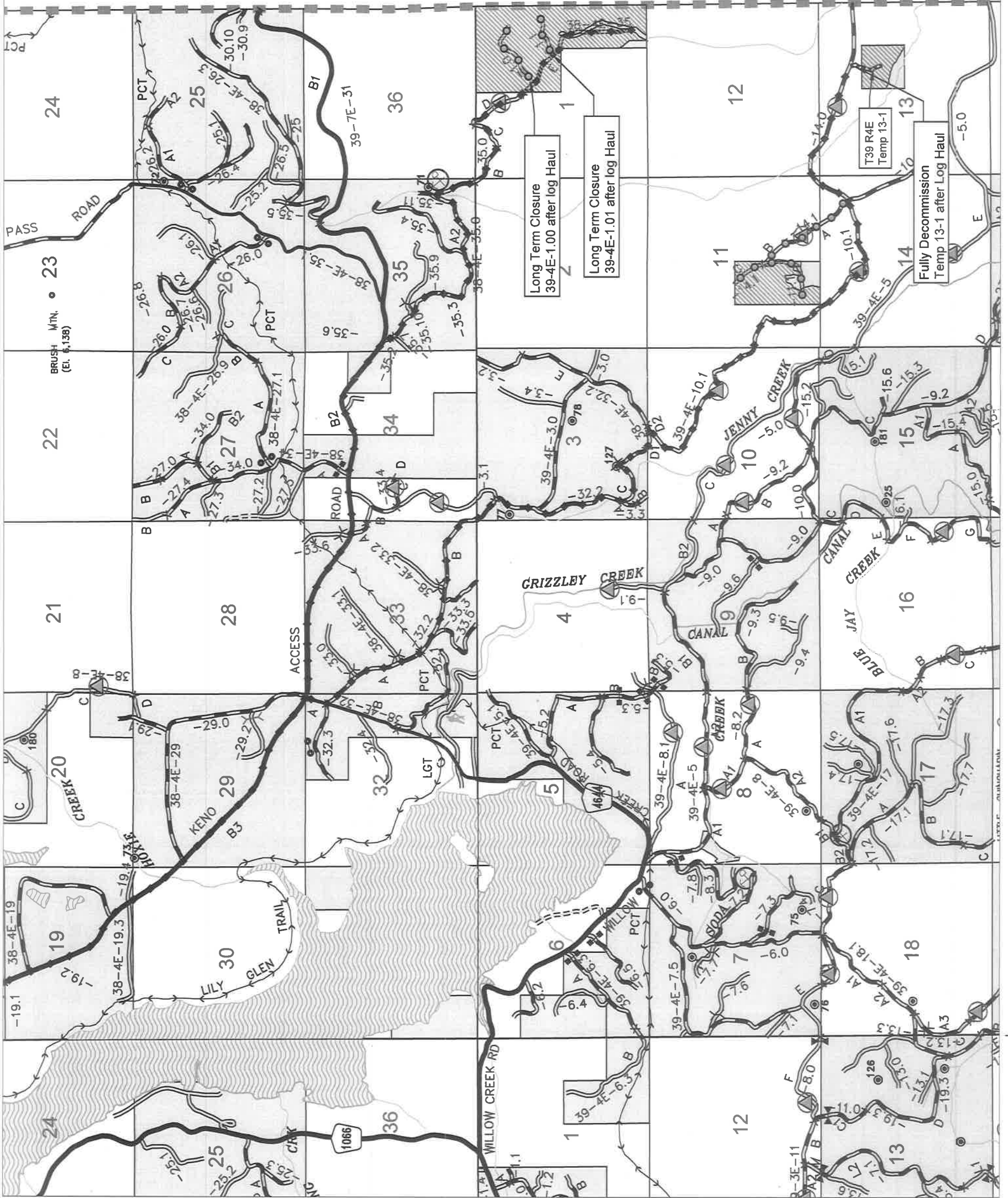
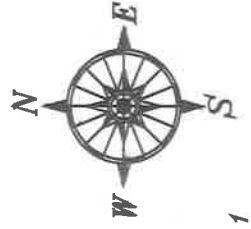
T.38S.

T.39S.

ROAD PROJECTS

- EXISTING ROAD
- EXISTING PAVED ROAD
- EXISTING PRIMITIVE ROAD
- OPERATOR MAINTENANCE
- BLM MAINTENANCE

- BLM LAND
- TS UNITS



R.3E. R.4E.

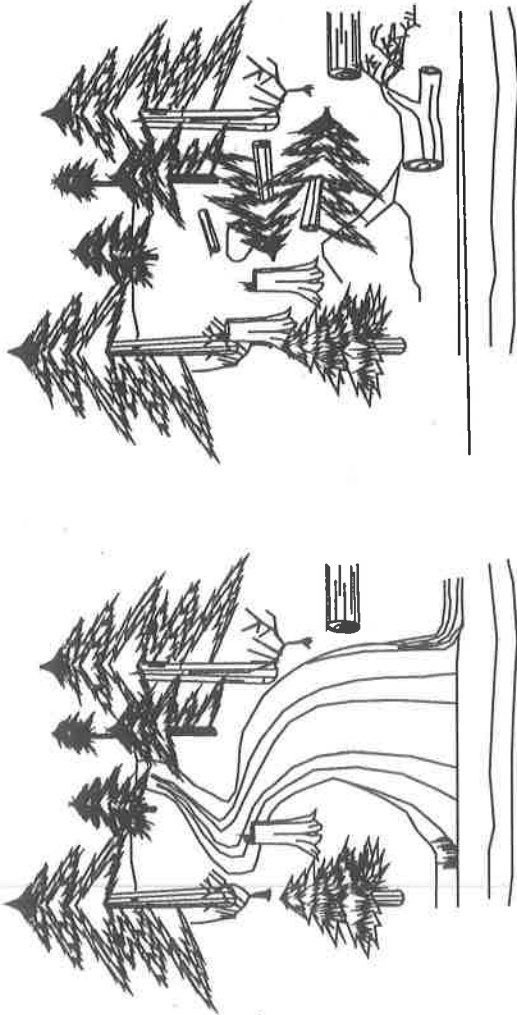




**EXHIBIT D-3**  
**SHEET 1 OF 1**

**Notes:**

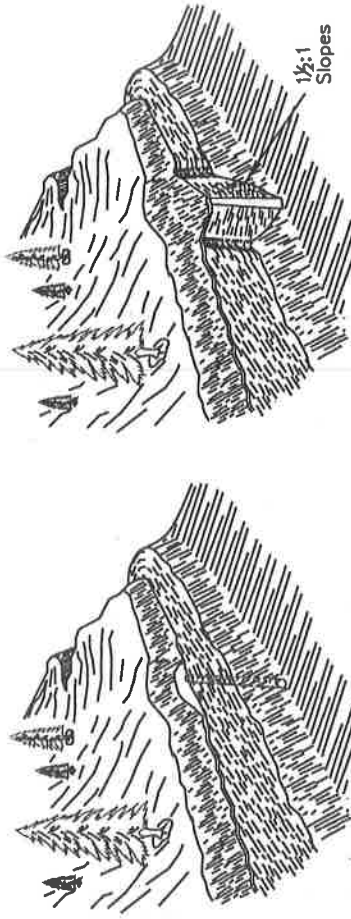
- The Purchaser shall barricade, decompect the road prism and camouflage the roadbed so that the road entrance and roadway are indiscernible from the intersecting road. Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet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



Typical Entrance - Before

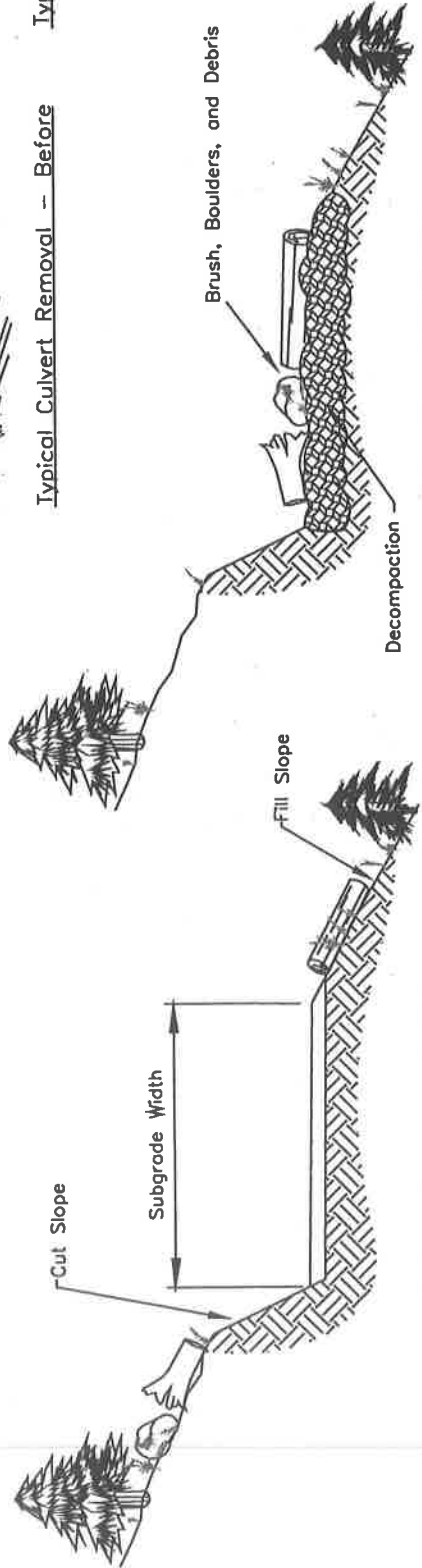
Typical Entrance - After

Typical Road Camouflaged Entrance  
(See Exhibit D-4)



Typical Culvert Removal - Before

Typical Culvert Removal - After



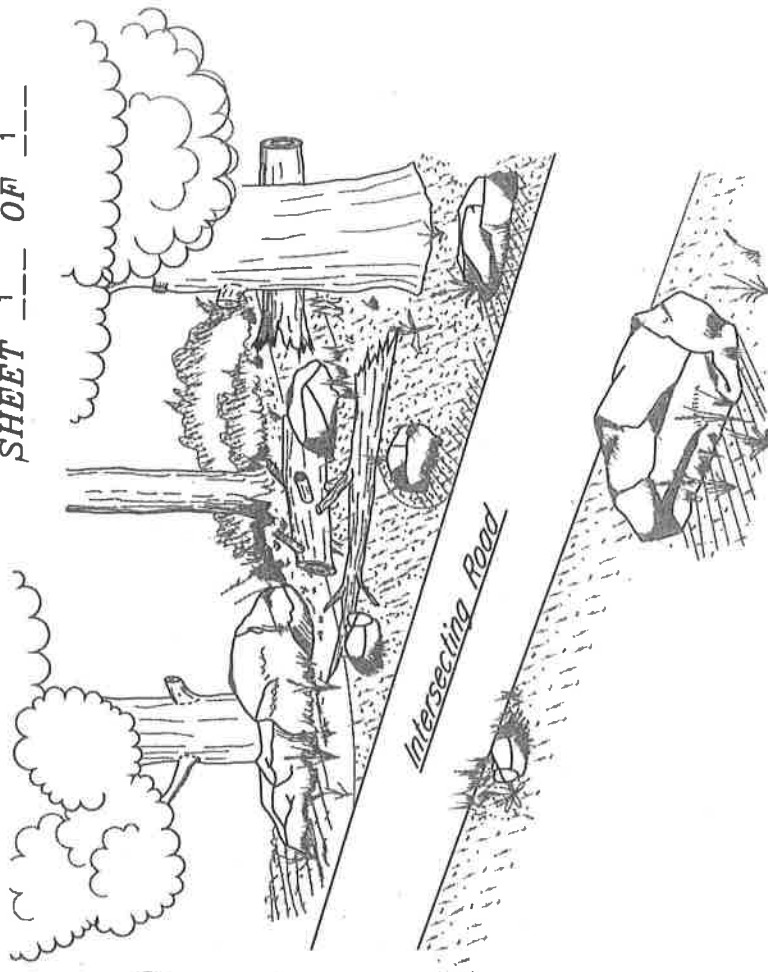
Before Decommissioning

After Decommissioning

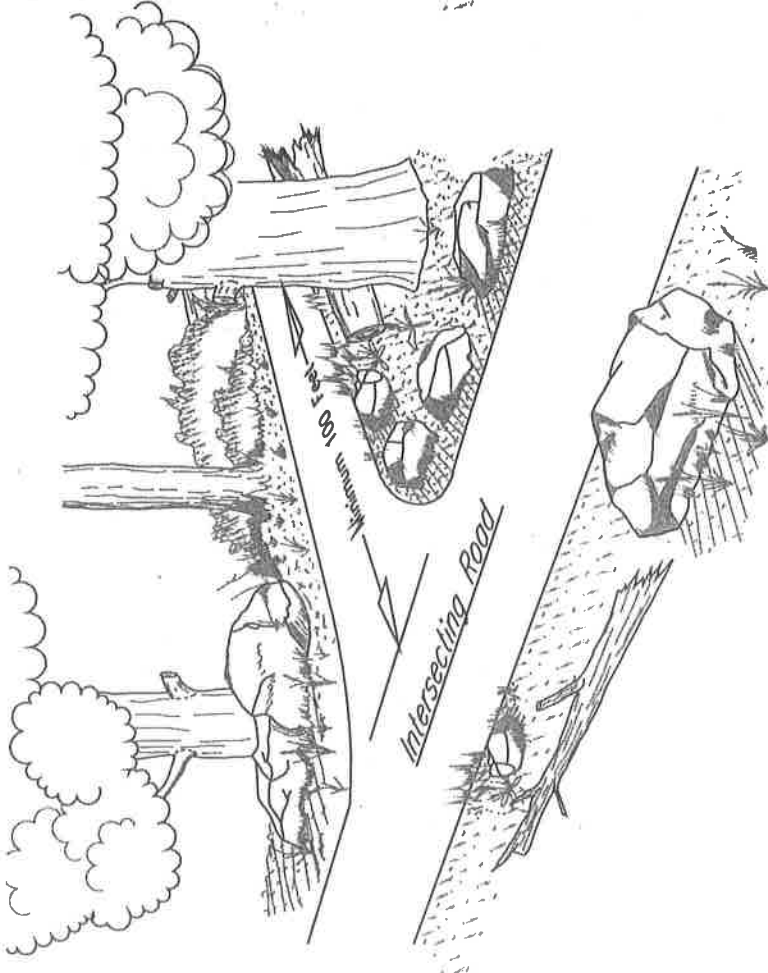
Typical Full Decommission

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
<i>Typical Full Decommission</i>			
DRAWN	JWR	SCALE	NONE
DATE	July 2018	SHEET	1 OF 1
DRAWING NO. OR 117-TS18-15-D3			





Typical Entrance - After



Typical Entrance - Before

Notes:

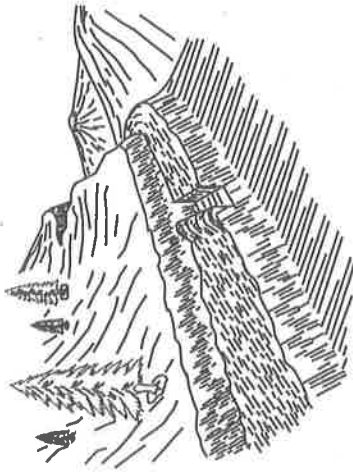
1. The Purchaser shall barricade and Camouflage the road prism and disguise the roadbed so that the road entrance and roadway are indiscernible from the intersecting road. Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet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

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

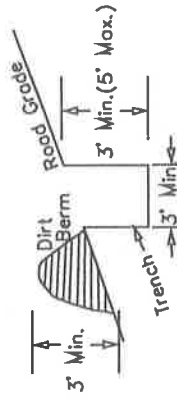
Typical Road  
 Camouflage

DRAWN	JWR	SCALE	NONE
DATE	July 2018	SHEET	1 OF 1
DRAWING NO. OR 117-TS18-15-D4			

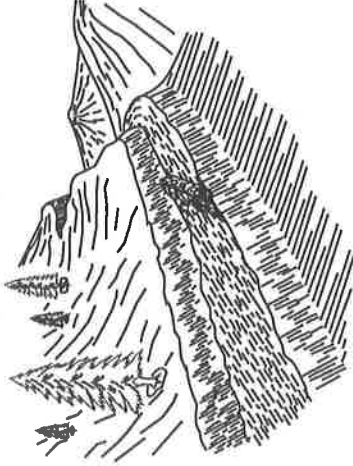




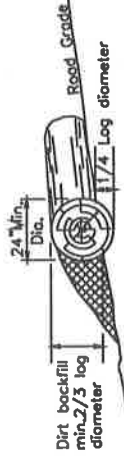
TRENCH BARRICADE



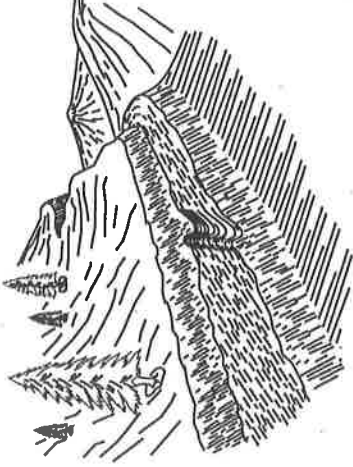
1. BARRICADE LENGTH SHALL EXTEND ACROSS THE ENTIRE ROAD SURFACE TO A POINT SUFFICIENT TO PROHIBIT MOTOR VEHICLE TRAFFIC.
2. THE EXACT LOCATION SHALL BE AS STAKED IN THE FIELD.
3. THE BARRICADE SHALL BE SKEWED AS NEEDED TO DRAIN OR AS DIRECTED BY THE AUTHORIZED OFFICERS REPRESENTATIVE.



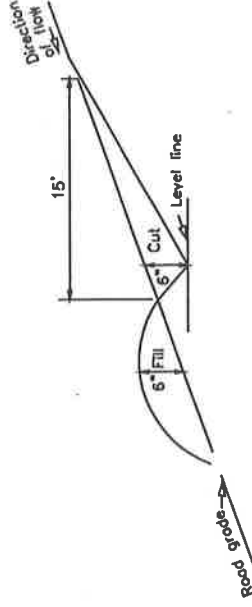
LOG BARRICADE



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

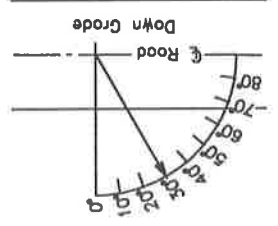


WATER BAR



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

SKEW DIAGRAM



UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
<b>DRAINAGE &amp; EROSION CONTROL INSTALLATION</b>		SCALE	NONE
DRAWN	DCM	DATE	June 2015
DRAWING NO.		SHEET	1 OF 1
		OR117-TS18-15-D5	



## GRIFFIN HALF MOON TIMBER SALE Road Decommissioning Work List

### GENERAL DEFINITIONS:

**Decommission (Full)** = Full Decommissioning shall include decompacting the surface to a depth of 12 to 18 inches, installing waterbars (every 200' for grades <10% - every 100' grades >10%) unless otherwise noted in the work list, stabilizing or removing fills on unstable areas, barricading the road entrance, camouflaging, and/or removing culverts (armor if needed). Seeding with approved native seed species and mulching with weed-free straw or approved native materials.

**Long Term Closure** = Long Term Closure shall include installing waterbars (every 200' for grades <10% - every 100' grades >10%) unless otherwise noted in the work list, stabilizing or removing fills on unstable areas, barricading the road entrance, camouflaging, and/or removing culverts (armor if needed). Seeding with approved native seed species and mulching with weed-free straw or approved native materials.

**Camouflaging** = Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use.

**Barricade** = Barricade only.

CMP – Corrugated metal pipe  
D.B.H.- Diameter breast height

Cu. Yds = CY = Cubic Yards  
Jct.- Junction

### Road 38-3E-11.02

Natural

14' Width

MP

Remarks

0.00

Jct. with 38-3E-11.01. Upon completion of log haul begin Long Term Closure. Construct 2 waterbars, Install Barricade and Camouflage road entrance with debris for 100 feet. Seed and mulch.

0.09

End of Project

### Road 38-3E-11.07

Natural

14' Width

MP

Remarks

0.00

Jct. with 38-3E-11.06. Upon completion of log haul begin Long Term Closure. Construct 4 waterbars, Install Barricade and Camouflage road entrance with debris for 100 feet. Seed and mulch.

0.14

End of Project

**Road 38-3E-13.06**

**Aggregate**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 39-7E-31.00.

0.49

Install Barricade, at location marked by Contracting Officer,  
to block vehicle access beyond the end of road.

**Road 38-4E-7.03**

**Natural**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-3E-7.00. Upon completion of log haul begin Long Term Closure.  
Construct 7 waterbars, Install Barricade and Camouflage road entrance with  
debris for 100 feet. Seed and mulch.

0.27

End of Project

**Road 38-4E-7.04**

**Natural**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-3E-7.00. Upon completion of log haul begin Long Term Closure.  
Construct 4 waterbars, Install Barricade and Camouflage road entrance with  
debris for 100 feet. Seed and mulch.

0.14

End of Project

**Road 38-4E-7.05**

**Natural**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-3E-7.00. Upon completion of log haul begin Long Term Closure.  
Construct 13 waterbars, Install Barricade and Camouflage road entrance with  
debris for 100 feet. Seed and mulch.

0.48

End of Project

**Road 39-4E-1.00**

**Natural**

**14' Width**

**MP**  
0.00

**Remarks**

Jct. with 38-4E-35.00. Upon completion of log haul begin Long Term Closure.  
Construct 12 waterbars, Install Barricade and Camouflage road entrance with  
debris for 100 feet. Seed and mulch.



0.45 End of Project

**Road 39-4E-1.01**

**Natural 14' Width**

**MP** **Remarks**

0.00 Jct. with 38-4E-35.00. Upon completion of log haul begin Long Term Closure. Construct 7 waterbars, Install Barricade and Camouflage road entrance with debris for 100 feet. Seed and mulch.

0.28 End of Project

**Road T38 R3E Spur 13-3**

**Natural 12' Width**

**MP** **Remarks**

0.00 Jct. with 38-3E-13.06. Upon completion of log haul begin Long Term Closure. Install Barricade and Camouflage road entrance with debris for 100 feet. Seed and mulch.

0.07 Jct. Lily Glen User Created Trail. End of Project

**Road Lily Glen User Created Trail**

**Natural 8-10' Width**

**MP** **Remarks**

0.00 Jct. with T38 R3E Spur 13-3. Upon completion of log haul utilized wind rowed material and stockpiled slash to bring the width of the road back to its original trail width for its entire length. Place slash, boulders, and other debris over disturbed areas. Construct 6 waterbars at 200' spacing and/or where necessary or as located by the Contracting Officer.

0.23 End of Project

**Temporary Spur T39 R4E Temp 13-1**

**Natural 12' Width**

**MP** **Remarks**

0.00 Jct. with 39-4E-14.00. Upon completion of log haul Fully Decommission entire length of temporary road using mechanical treatment to de-compact road surface to a depth 12 to 18 inches. Install Barricade and Camouflage road entrance with debris for 100 feet. Seed and mulch.

0.20 End of Project

**Temporary Spur T38 R3E Temp 13-2**  
**Natural 12' Width**

**MP**  
0.00

**Remarks**

Jct. with 39-7E-31.00. Upon completion of log haul Fully Decommission entire length of temporary road using mechanical treatment to de-compact road surface to a depth 12 to 18 inches. Install Barricade and Camouflage road entrance with debris for 100 feet. Seed and mulch.

0.19

End of Project

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT

Sale: Griffin Half Moon  
 Sale Date: Sept 2018  
 Prep. By : Josh R  
 Tract No: 18-15

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: \$4,854.15/9638 MBF = \$0.50/MBF

---

Road Maintenance Obligation:

(2.1) BLM Maintenance . . . . .		\$39,781.13
(2.2) BLM Rockwear . . . . .	\$4,608.94	
(5.1) Purchaser Maintenance Rockwear . . . . .	<u>\$120.60</u>	
Total Rockwear Payable to BLM . . . . .		\$4,729.54
(3.1) 3rd Party Maintenance . . . . .		\$0.00
(3.2) 3rd Party Rockwear . . . . .		\$3,007.16
(4.1) Other Maintenance Payments . . . . .		\$309.83
Total Maintenance Fee Obligation (2.1-5.1)		<u>\$47,517.83</u>

Purchaser Maintenance Allowances:

(5.2A) Move In . . . . .		\$1,341.27
(5.2B) Culverts, Catch Basins, Downspouts . . . . .		\$212.18
(5.2C) Grading, Ditching . . . . .		\$4,875.39
(5.2D) Slide Removal and Slump Repair . . . . .		\$0.00
(5.2E) Dust Palliative (Water) . . . . .		\$5,359.08
(5.2F) Surface Repair (Aggregate) . . . . .		\$0.00
(5.2G) Other . . . . .		\$0.00

Total Purchaser Maintenance Allowances (5.2A-5.2G) \$11,787.92

(2.1-5.2G) Cost (\$47,517.83 + \$11,787.92) = \$59,305.74  
 Cost/MBF \$59,305.74 / 9638 MBF = \$6.15/MBF \$6.15/MBF

(5.2H) Decommissioning . . . . . \$8,896.81

(5.2H) Cost/MBF \$8,896.81/9638 MBF = \$0.92/MBF

(2.1-5.2H) Cost (\$47,517.83 + \$11,787.92 + \$8,896.81) = \$68,202.56

Total Cost/MBF (Excluding Road Use) \$68,202.56/9638 MBF = \$7.08/MBF

1) Road Use Fees - Amortization

Details

R/W	Rd Use	Vol	Road Use
Number	Road Number	Fee x MBF =	Obligation
M-690	39-4E-10.01 A		1035 \$0.00
M-690	39-4E-10.01 B	2.73 1035	\$2,825.55
M-690	34-4E-10.01 C	1.96 1035	\$2,028.60
M-690	38-4E-32.02 D		1035 \$0.00

Subtotal by agreement number

M-690 \$4,854.15

(1.1) Subtotal \$4,854.15

2) BLM Maintenance - Timber Haul

MAINTENANCE (2.1)						ROCKWEAR (2.2)			
Road Number and Segment	A Surf N Type	Mi	Maint x Fee x	Vol MBF =	Maint	Fee x	MBF =	Rkwear	
38-4E-07.01	A A AGG	0.36	0.75	556	\$150.12	0.60	556	\$120.10	
38-3E-11.04	A AGG	0.80	0.75	385	\$231.00	0.60	385	\$184.80	
38-3E-11.06	A AGG	0.44	0.75	143	\$47.19	0.60	143	\$37.75	
38-3E-15.00	A-BA AGG	0.39	0.75	250	\$73.13	0.60	250	\$58.50	
38-3E-15.00	A-BA AGG	0.66	0.75	670	\$331.65	0.60	670	\$265.32	
38-3E-17.00	A-BA BST	3.74	0.92	125	\$430.10	0.00	125	\$0.00	
38-4E-07.00	A A AGG	0.80	0.75	358	\$214.80	0.60	358	\$171.84	
38-4E-07.00	A A AGG	0.58	0.75	358	\$155.73	0.60	358	\$124.58	
38-4E-07.00	A A AGG	0.11	0.75	179	\$14.77	0.60	179	\$11.81	
38-4E-07.01	A-BA AGG	0.97	0.75	556	\$404.49	0.60	556	\$323.59	
38-4E-07.01	A A AGG	0.20	0.75	278	\$41.70	0.60	278	\$33.36	
38-4E-32.00	A A BST	0.10	0.92	1035	\$95.22	0.00	1035	\$0.00	
38-4E-32.02	A A AGG	0.62	0.75	1035	\$481.28	0.60	1035	\$385.02	
38-4E-32.02	B A AGG	1.06	0.75	1035	\$822.83	0.60	1035	\$658.26	
38-4E-32.02	C N AGG	1.24	0.95	1035	\$1,219.23	0.60	1035	\$770.04	
38-4E-35.0	A1-2A BST	1.59	0.92	3006	\$4,397.18	0.00	3006	\$0.00	
38-4E-35.00	E N AGG	0.07	0.95	992	\$65.97	0.60	992	\$41.66	
38-4E-35.00	E N AGG	0.28	0.95	992	\$263.87	0.60	992	\$166.66	
38-4E-35.00	E N AGG	0.86	0.95	1022	\$834.97	0.60	1022	\$527.35	
39-7E-31.0	B4-2A BST	6.74	0.92	3006	\$18,639.60	0.00	3006	\$0.00	
39-7E-31.0	B4-3A BST	4.48	0.92	1035	\$4,265.86	0.00	1035	\$0.00	
39-7E-31.00	B4A BST	0.97	0.92	701	\$625.57	0.00	701	\$0.00	
39-7E-31.00	B4A BST	0.79	0.92	726	\$527.66	0.00	726	\$0.00	
38-3E-09.00	N AGG	1.37	0.95	125	\$162.69	0.60	125	\$102.75	
38-3E-13.06	A AGG	0.25	0.75	134	\$25.13	0.60	134	\$20.10	
38-3E-13.06	A AGG	0.49	0.75	403	\$148.10	0.60	403	\$118.48	
38-4E-32.02	D N AGG	0.10	0.95	1035	\$98.33	0.00	1035	\$0.00	
38-4E-35.00	B N AGG	0.21	0.95	3006	\$599.70	0.00	3006	\$0.00	
38-4E-35.00	C N AGG	0.27	0.95	3006	\$771.04	0.60	3006	\$486.97	
38-4E-35.00	D N AGG	0.30	0.95	3006	\$856.71	0.00	3006	\$0.00	
39-4E-10.01	A N AGG	0.94	0.95	1035	\$924.26	0.00	1035	\$0.00	
39-4E-10.01	B N AGG	0.16	0.95	1035	\$157.32	0.00	1035	\$0.00	
39-4E-10.01	C N AGG	1.35	0.95	1035	\$1,327.39	0.00	1035	\$0.00	
39-4E-14.00	N AGG	1.08	0.95	367	\$376.54	0.00	367	\$0.00	

(2.1) Subtotal \$39,781.13

(2.2) Subtotal \$4,608.94

3) Third Party Maintenance and Rockwear

MAINTENANCE (3.1)					ROCKWEAR (3.2)		
Agmnt Number	Surface Type	Road Number	Mi x Fee x	Vol MBF =	Maint	Fee x	MBF = Rkwear
M-2000	AGG	38-3E-15.04	A 0.25			0.60	250 \$37.50

M-690	AGG	39-4E-10.01	A	0.94	0.60	1035	\$583.74
M-690	AGG	39-4E-10.01	B	0.16	0.60	1035	\$99.36
M-690	AGG	38-4E-35.00	D	0.30	0.60	3006	\$541.08
M-690	AGG	39-4E-14.01	B	0.19	0.60	668	\$76.15
M-690	AGG	39-4E-14.01	A	0.38	0.60	668	\$152.30
M-690	AGG	39-4E-14.00		1.08	0.60	367	\$237.82
M-690	AGG	39-4E-10.01	C	1.35	0.60	1035	\$838.35
M-690	AGG	38-4E-35.00	B	0.21	0.60	3006	\$378.76
M-690	AGG	38-4E-32.02	D	0.10	0.60	1035	\$62.10

Subtotal of maintenance fees by agreement number:

Subtotal of rockwear fees by agreement number:

M-2000	\$37.50
M-690	\$2,969.66

(3.1) Subtotal \$0.00

(3.2) Subtotal \$3,007.16

**4) Other Maintenance Payments - USFS or Others Perform Maintenance**

Agency	Road Number	Miles (Log)	Vol (mbf)	Fee MBF/MI	Cost
USFS	FSR 100	0.47	143	0.76	\$51.08
USFS	FSR 100	0.35	385	0.76	\$102.41
USFS	FSR 100	0.26	305	0.76	\$60.27
USFS	FSR 800	0.11	125	0.63	\$8.66
USFS	FSR 890	1.11	125	0.63	\$87.41

(4.1) Subtotal \$309.83

**5) Purchaser Maintenance - Rock Wear**

TIMBER HAUL (5.1)

Road No and Segment	A N	RkWear Mi	Vol x Fee	Total MBF = RkWear
38-3E-03.00	N	0.30	0.00	125 \$0.00
38-3E-11.01	A	0.39	0.00	305 \$0.00
38-3E-11.02	A	0.15	0.00	305 \$0.00
38-3E-11.07	A	0.14	0.00	143 \$0.00
38-3E-15.02	A	0.30	0.60	670 \$120.60
38-3E-15.07	A	0.57	0.00	670 \$0.00
38-4E-07.02	A	0.45	0.00	556 \$0.00
38-4E-07.03	A	0.27	0.00	179 \$0.00
38-4E-07.04	A	0.14	0.00	278 \$0.00
38-4E-07.05	A	0.48	0.00	358 \$0.00
39-4E-01.00	N	0.45	0.00	992 \$0.00
39-4E-01.01	N	0.28	0.00	992 \$0.00
39-4E-11.01	N	0.40	0.00	334 \$0.00
39-4E-14.01	C N	0.25	0.00	334 \$0.00
USFS 100	A	0.47	0.00	143 \$0.00
USFS 100	A	0.35	0.00	385 \$0.00
USFS 100	A	0.26	0.00	305 \$0.00
USFS 800	N	0.11	0.00	125 \$0.00
USFS 890	N	1.11	0.00	125 \$0.00

(5.1) Subtotal \$120.60

**Purchaser Operational Maintenance**

**Move In**

Equipment	No Units	Move in x	Cost/ 50 Mi	Dist Factor	Sub-total
Motor Grader:	1	1	\$410.00	0.63	\$258.30
Back Hoe:	1	1	\$305.00	0.63	\$192.15
Loader:	1	1	\$410.00	0.63	\$258.30
Water Truck:	1	1	\$95.00	0.63	\$59.85
Dump Truck:	1	1	\$89.00	0.63	\$56.07
Excavator:	1	1	\$410.00	0.63	\$258.30
Roller:	1	1	\$410.00	0.63	\$258.30

(5.2A) Total \$1,341.27

**Culvert Maintenance - Including Catch basins and Downpipes**

Miles	x Cost/Mi	= Subtotal
0.58	\$365.82	\$212.18

(5.2B) Total \$212.18

**Grading (Includes Ditches and Shoulders)**

Miles	x Cost/Mi	x Freq	= Subtotal
Blade w/ Ditch:	7.02		\$694.50
Blade w/o Ditch:	0.00		\$428.91
		1	\$4,875.39
		0	\$0.00

(5.2C) Total \$4,875.39

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

Type Equipment	No Slides /Slumps	Hours x Each	Equip Cost	= Subtotal
Grader:	0	0	\$140.96	\$0.00
Loader:	0	0	\$101.17	\$0.00
Backhoe:	0	0	\$85.84	\$0.00

(5.2D) Total \$0.00

**Dust Palliative (Water)**

Spreading Hours

No Miles	Freq / MPH	Truck = Hours	x Days	x /Day	= Hours
8.37	5	1.7	40	1	68

Load & Haul = 0.0 x 0 = 0  
 Total Hours = 68

Truck Cost: \$78.81/Hr. x 68.0 Hours = \$5,359.08

(5.2E) Total \$5,359.08

**Surface Repair (Aggregate)**

Production Cost:	0.0 CY x \$0.00/CY	=	\$0.00
Haul to Stockpile:	0.0 CY x ((\$1.75/CY x 0.00 Mi) + \$0.58)	=	\$0.00
Stockpile:	0.0 CY x \$1.07/CY	=	\$0.00
Load from Stockpile:	0.0 CY x \$1.05/CY	=	\$0.00
Haul from Stockpile:	0.0 CY x ((\$1.75/CY x 0.00 Mi) + \$0.58)	=	\$0.00
Process with Grader:	0.0 CY x \$0.88/CY	=	\$0.00
Compaction:	0.0 CY x \$1.08/CY	=	\$0.00

(5.2F) Total \$0.00

**Other**

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

(5.2G) Total \$0.00

**Decommissioning**

**Clearing**

Road Number	Base Cost	Adjustment x Factor	Clearing Acres	Total
Lily Glen UCT	\$308.57	x 2.26	x 0.2	= \$139.47

(Clearing) Total \$139.47

**Ripping**

Road Number	Ripping Cost	x	(NumSta or CuYds)	Total
Temp 39 4E 13-1	\$30.34	x	10.56	= \$320.39
Temp 38 3E 13-2	\$30.34	x	10.03	= \$304.31

(Ripping) Total \$624.70

**Other Costs**

Road Number	Cubic Yds Pullback Material	Qty Waterbars	Qty Earthen Barriers	Total
Temp 39 4E 13-1	(0x\$1.77)	+ (0x\$55.35)	+ (1x\$166.04)	= \$166.04
38-3E-11.02	(0x\$1.77)	+ (2x\$55.35)	+ (1x\$166.04)	= \$276.74
38-3E-11.07	(0x\$1.77)	+ (4x\$55.35)	+ (1x\$166.04)	= \$387.44
38-3E-13.06	(0x\$1.77)	+ (0x\$55.35)	+ (1x\$166.04)	= \$166.04
38-4E-07.03	(0x\$1.77)	+ (7x\$55.35)	+ (1x\$166.04)	= \$553.49
38-4E-07.04	(0x\$1.77)	+ (4x\$55.35)	+ (1x\$166.04)	= \$387.44
38-4E-07.05	(0x\$1.77)	+ (13x\$55.35)	+ (1x\$166.04)	= \$885.59
39-4E-01.00	(0x\$1.77)	+ (12x\$55.35)	+ (1x\$166.04)	= \$830.24
39-4E-01.01	(0x\$1.77)	+ (7x\$55.35)	+ (1x\$166.04)	= \$553.49
T38 R3E Sp 13-3	(0x\$1.77)	+ (0x\$55.35)	+ (1x\$166.04)	= \$166.04
Temp 38 3E 13-2	(0x\$1.77)	+ (0x\$55.35)	+ (1x\$166.04)	= \$166.04
Lily Glen UCT	(100x\$1.77)	+ (6x\$55.35)	+ (0x\$166.04)	= \$509.10

(Other Cost) Total \$5,047.69

**Time & Equipment**

38-3E-11.02 Camoflaug Entrance: 1 EA @ \$75.00/EA = \$75.00  
 38-3E-11.02 Seed and Mulch: 0.15 AC @ \$595.65/AC = \$89.35  
 38-3E-11.07 Camoflaug Entrance: 1 EA @ \$75.00/EA = \$75.00  
 38-3E-11.07 Seed and Mulch: 0.24 AC @ \$595.65/AC = \$142.96  
 38-4E-07.03 Camoflaug Entrance: 1 EA @ \$75.00/EA = \$75.00  
 38-4E-07.03 Seed and Mulch: 0.46 AC @ \$595.65/AC = \$274.00  
 38-4E-07.04 Camoflaug Entrance: 1 EA @ \$75.00/EA = \$75.00  
 38-4E-07.04 Seed and Mulch: 0.24 AC @ \$595.65/AC = \$142.96

38-4E-07.05 Camouflage Entrance: 1 EA @ \$75.00/EA	= \$75.00
38-4E-07.05 Seed and Mulch: 0.81 AC @ \$595.65/AC	= \$482.48
39-4E-01.00 Camouflage Entrance: 1 EA @ \$75.00/EA	= \$75.00
39-4E-01.00 Seed and Mulch: 0.76 AC @ \$595.65/AC	= \$452.69
39-4E-01.01 Camouflage Entrance: 1 EA @ \$75.00/EA	= \$75.00
39-4E-01.01 Seed and Mulch: 0.48 AC @ \$595.65/AC	= \$285.91
T38 R3E Sp 13-3 Camouflage Entrance: 1 EA @ \$75.00/EA	= \$75.00
T38 R3E Sp 13-3 Seed and Mulch: 0.12 AC @ \$595.65/AC	= \$71.48
Temp 38 3E 13-2 Camouflage Entrance: 1 EA @ \$75.00/EA	= \$75.00
Temp 39 4E 13-1 Camouflage Entrance: 1 EA @ \$75.00/EA	= \$75.00
Temp 39 4E 13-1 Seed and Mulch: 0.34 AC @ \$595.65/AC	= \$202.52
Temp 38 3E 13-2 Seed and Mulch: 0.32 AC @ \$595.65/AC	= \$190.61

(5.2H) Decommissioning Total \$8,896.81



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: Griffin Half Moon Tract No: 18-15 Sale Date: Sept 2018  
Prepared by: Josh R Ph: 2258 Print Date: 7/20/2018 9:05:19 AM  
Construction: 0.00 sta  
Improve: 0.00 sta Renov: 1101.41 sta Decom: 0.00 sta Temp: 20.59 sta

200 Clearing and Grubbing: 1.0 acres .....	\$2,232.29
300 Excavation: .....	\$0.00
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage: .....	\$0.00
Culvert: 0 lf                      DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$21,015.35
Blading 12.96 mi	
700-1200 Surfacing: .....	\$225,824.55
Commercial Quarry Name: Knife Riv Dry Creek   6,690 LCY	
Grid Rolled / Pitrun Quarry Name: Knife R. - Dry Cr PR 300 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: .....	\$10,895.69
Manual Brushing: 19.1 acres	
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$2,814.98
Mobilization: Const. \$3,540.00 Surf. \$1,588.00.....	\$5,128.00
Quarry Development: .....	\$0.00

Total: 9,638 mbf @ \$27.797/mbf = \$267,910.86

Notes:

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



ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-03.00** Road Name: Indian Flt

Road Renovation: 0.30 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: .....	\$483.66
Blading 0.30 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):0.3 acres .....	\$199.01
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$9.20 Surf. \$0.00.....	\$9.20
Quarry Development: .....	\$0.00
Total:	\$691.86

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-03.00 Road Name: Indian Flt

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.30 \text{ mi} = \$257.35$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.30 \text{ mi} = \$128.67$ Compaction: $\$325.47/\text{mi} \times 0.30 \text{ mi} = \$97.64$	Subtotal:	\$483.66
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.30 \text{ acres} = \$199.01$	Subtotal:	\$199.01
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.26% of total Costs = \$9.20 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$9.20
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-3E-03.00 Indian Flt Continued

Total: \$691.86

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-09.00** Road Name: Owens Rd

Road Renovation: 1.37 mi 16 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: .....	\$1,898.53
Blading 1.37 mi	
700-1200 Surfacing: .....	\$83,017.41
Quarry Name: Knife Riv Dry Creek 2,851 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):1.3 acres .....	\$862.37
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$1,155.54 Surf. \$647.69.....	\$1,803.23
Quarry Development: .....	\$0.00

Total: \$87,581.55

Notes:

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

Road Construction Worksheet

Road Number: 38-3E-09.00 Road Name: Owens Rd

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: \$694.50/mi x 1.37 mi = \$951.47

Compaction: \$325.47/mi x 1.37 mi = \$445.89

Clean Culverts: \$365.82/mi x 1.37 mi = \$501.17

Subtotal: \$1,898.53

Section 700-1200 Surfacing:

Commercial Quarry Name: Knife Riv Dry Creek

Length TopW BotW Depth CWid #TOs Width F.W.L Taper Other

1.37mi 16ft 16ft 6in

Rock Volume = 2,851 LCY

Purchase Price / Royalty: \$10.66/LCY x 2,851 LCY = \$30,391.66

Processing: \$0.88/LCY x 2,851 LCY = \$2,508.88

Compaction: \$1.08/LCY x 2,851 LCY = \$3,079.08

Basic Rock Haul cost: \$0.58/LCY x 2,851 LCY = \$1,653.58

Rock Haul -15% grades: \$0.88/LCY-mi x 2,851 LCY x 7.59 mi= \$19,042.40

Rock Haul St& Co Roads: \$0.39/LCY-mi x 2,851 LCY x 20.69 mi= \$23,005.00

Basic Water Haul cost: \$0.53/LCY x 2,851 LCY = \$1,511.03

Water Haul -15% grades: \$0.12/LCY-mi x 2,851 LCY x 2.63 mi= \$899.78

Water Haul St&Co Roads: \$0.07/LCY-mi x 2,851 LCY x 4.64 mi= \$926.00

Subtotal: \$83,017.41

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: \$663.36/acre x 1.30 acres = \$862.37

Subtotal: \$862.37

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Road Number: 38-3E-09.00 Owens Rd Continued

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 32.64% of total Costs = \$1,155.54

Surfacing - 40.79% by rock volume = \$647.69

Subtotal: \$1,803.23

Quarry Development:

Based on 40.79% of total rock volume

Subtotal: \$0.00

Total: \$87,581.55



ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-11.01** Road Name: Shell Peak A Spur

Road Renovation: 0.32 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: .....	\$515.90
Blading 0.32 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):0.3 acres .....	\$199.01
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$9.63 Surf. \$0.00.....	\$9.63
Quarry Development: .....	\$0.00
Total:	\$724.54

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-11.01 Road Name: Shell Peak A Spur

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.32 \text{ mi} = \$274.50$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.32 \text{ mi} = \$137.25$ Compaction: $\$325.47/\text{mi} \times 0.32 \text{ mi} = \$104.15$	Subtotal:	\$515.90
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.30 \text{ acres} = \$199.01$	Subtotal:	\$199.01
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.27% of total Costs = \$9.63 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$9.63
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-3E-11.01 Shell Peak A Spur Continued

Total: \$724.54

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-11.02** Road Name: Shell Peak Spur

Road Renovation: 0.09 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: .....	\$145.10
Blading 0.09 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):0.1 acres .....	\$132.67
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$3.74 Surf. \$0.00.....	\$3.74
Quarry Development: .....	\$0.00
Total:	\$281.51

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-11.02 Road Name: Shell Peak Spur

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.09 \text{ mi} = \$77.20$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.09 \text{ mi} = \$38.60$ Compaction: $\$325.47/\text{mi} \times 0.09 \text{ mi} = \$29.29$	Subtotal:	\$145.10
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Heavy: $\$1326.72/\text{acre} \times 0.10 \text{ acres} = \$132.67$	Subtotal:	\$132.67
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.11% of total Costs = \$3.74 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$3.74
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-3E-11.02 Shell Peak Spur Continued

Total: \$281.51

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-11.04** Road Name: Shell Peak B Spur

Road Renovation: 0.80 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: .....	\$1,794.89
Blading 0.80 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. \$31.33 Surf. \$0.00.....	\$31.33
Quarry Development: .....	\$0.00
Total:	\$2,356.90

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-11.04 Road Name: Shell Peak B Spur

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Blading: $\$694.50/\text{mi} \times 0.80 \text{ mi} = \$555.60$ Scarification: $\$857.82/\text{mi} \times 0.80 \text{ mi} = \$686.26$ Compaction: $\$325.47/\text{mi} \times 0.80 \text{ mi} = \$260.38$ Clean Culverts: $\$365.82/\text{mi} \times 0.80 \text{ mi} = \$292.66$	Subtotal:	\$1,794.89
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.80 \text{ acres} = \$530.69$	Subtotal:	\$530.69
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.88% of total Costs = \$31.33 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$31.33
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00



Road Number: 38-3E-11.04 Shell Peak B Spur Continued

Total: \$2,356.90

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-11.06** Road Name:

Road Renovation: 0.59 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: .....	\$951.20
Blading 0.59 mi	
700-1200 Surfacing: .....	\$41,827.67
Quarry Name: Knife Riv Dry Creek 1,074 LCY	
Quarry Name: Knife R. - Dry Cr PR 120 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 (NONE):0.0 acres .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$930.06
Mobilization: Const. \$588.81 Surf. \$271.25.....	\$860.07
Quarry Development: .....	\$0.00

Total: \$44,568.99

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-11.06 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification: \$857.82/mi x 0.59 mi = \$506.11

Blading w/o Ditches: \$428.91/mi x 0.59 mi = \$253.06

Compaction: \$325.47/mi x 0.59 mi = \$192.03

Subtotal: \$951.20

Section 700-1200 Surfacing:

Commercial Quarry Name: Knife Riv Dry Creek

<u>Length</u>	<u>TopW</u>	<u>BotW</u>	<u>Depth</u>	<u>CWid</u>	<u>#TOs</u>	<u>Width</u>	<u>F.W.L</u>	<u>Taper</u>	<u>Other</u>
0.59mi	14ft	14ft	6in						

Rock Volume = 1,074 LCY

Purchase Price / Royalty: \$10.66/LCY x 1,074 LCY = \$11,448.84

Processing: \$0.88/LCY x 1,074 LCY = \$945.12

Compaction: \$1.08/LCY x 1,074 LCY = \$1,159.92

Basic Rock Haul cost: \$0.58/LCY x 1,074 LCY = \$622.92

Rock Haul -15% grades: \$0.88/LCY-mi x 1,074 LCY x 11.77 mi= \$11,124.06

Rock Haul St& Co Roads: \$0.39/LCY-mi x 1,074 LCY x 25.30 mi= \$10,597.16

Basic Water Haul cost: \$0.53/LCY x 1,074 LCY = \$569.22

Water Haul -15% grades: \$0.12/LCY-mi x 1,074 LCY x 1.21 mi= \$155.94

Water Haul St&Co Roads: \$0.07/LCY-mi x 1,074 LCY x 0.03 mi= \$2.26

Grid Rolled / Pitrun Quarry Name: Knife R. - Dry Cr PR

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

Rock Volume = 120 LCY

Production: \$1.24/LCY x 120 LCY = \$148.80

Purchase Price / Royalty: \$18.67/LCY x 120 LCY = \$2,240.40

Processing: \$0.88/LCY x 120 LCY = \$105.60

Compaction: \$1.08/LCY x 120 LCY = \$129.60

Basic Rock Haul cost: \$0.58/LCY x 120 LCY = \$69.60

Rock Haul -15% grades: \$0.88/LCY-mi x 120 LCY x 11.77 mi= \$1,242.91

Rock Haul St& Co Roads: \$0.39/LCY-mi x 120 LCY x 25.30 mi= \$1,184.04

Basic Water Haul cost: \$0.53/LCY x 120 LCY = \$63.60

Water Haul -15% grades: \$0.12/LCY-mi x 120 LCY x 1.21 mi= \$17.42

Water Haul St&Co Roads: \$0.07/LCY-mi x 120 LCY x 0.03 mi= \$0.25

Subtotal: \$41,827.67

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Road Number: 38-3E-11.06 Continued

Section 2100 Roadside Brushing:	Subtotal:	\$0.00
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous: Construct Armored Water Dip Tractor: D7 with winch 6 hr x \$155.01/hr = \$930.06	Subtotal:	\$930.06
Mobilization: Construction - 16.63% of total Costs = \$588.81 Surfacing - 17.08% by rock volume = \$271.25	Subtotal:	\$860.07
Quarry Development: Based on 17.08% of total rock volume	Subtotal:	\$0.00
	Total:	\$44,568.99

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-11.07** Road Name:

Road Renovation: 0.14 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: .....	\$225.71
Blading 0.14 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):0.1 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. \$3.93 Surf. \$0.00.....	\$3.93
Quarry Development: .....	\$0.00
Total:	\$295.98

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-11.07 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: \$857.82/mi x 0.14 mi = \$120.09 Blading w/o Ditches: \$428.91/mi x 0.14 mi = \$60.05 Compaction: \$325.47/mi x 0.14 mi = \$45.57	Subtotal:	\$225.71
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: \$663.36/acre x 0.10 acres = \$66.34	Subtotal:	\$66.34
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.11% of total Costs = \$3.93 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$3.93
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-3E-11.07 Continued

Total: \$295.98

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-13.06** Road Name: Keno Spur

Road Renovation: 0.49 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: .....	\$210.17
Blading 0.49 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):0.5 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. \$7.30 Surf. \$0.00.....	\$7.30
Quarry Development: .....	\$0.00
Total:	\$549.15

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.



Road Construction Worksheet

Road Number: 38-3E-13.06 Road Name: Keno Spur

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Blading w/o Ditches: $\$428.91/\text{mi} \times 0.49 \text{ mi} = \$210.17$	Subtotal:	\$210.17
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.50 \text{ acres} = \$331.68$	Subtotal:	\$331.68
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.21% of total Costs = \$7.30 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$7.30
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00
	Total:	\$549.15

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-15.02** Road Name:

Road Renovation: 0.16 mi 16 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: .....	\$257.95
Blading 0.16 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):0.2 acres .....	\$132.67
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$5.26 Surf. \$0.00.....	\$5.26
Quarry Development: .....	\$0.00
Total:	\$395.89

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-15.02 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.16 \text{ mi} = \$137.25$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.16 \text{ mi} = \$68.63$ Compaction: $\$325.47/\text{mi} \times 0.16 \text{ mi} = \$52.08$	Subtotal:	\$257.95
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.20 \text{ acres} = \$132.67$	Subtotal:	\$132.67
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.15% of total Costs = \$5.26 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$5.26
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-3E-15.02 Continued

Total: \$395.89

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-15.04** Road Name: Conde Spur

Road Renovation: 0.18 mi 16 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: .....	\$290.20
Blading 0.18 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):0.2 acres .....	\$132.67
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$5.70 Surf. \$0.00.....	\$5.70
Quarry Development: .....	\$0.00
Total:	\$428.56

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-3E-15.04 Road Name: Conde Spur

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.18 \text{ mi} = \$154.41$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.18 \text{ mi} = \$77.20$ Compaction: $\$325.47/\text{mi} \times 0.18 \text{ mi} = \$58.58$	Subtotal:	\$290.20
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.20 \text{ acres} = \$132.67$	Subtotal:	\$132.67
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.16% of total Costs = \$5.70 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$5.70
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-3E-15.04 Conde Spur Continued

Total: \$428.56

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-3E-15.07** Road Name:

Road Renovation: 0.52 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: .....	\$838.34
Blading 0.52 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):0.5 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. \$15.76 Surf. \$0.00.....	\$15.76
Quarry Development: .....	\$0.00
Total:	\$1,185.79

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.



Road Construction Worksheet

Road Number: 38-3E-15.07 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.52 \text{ mi} = \$446.07$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.52 \text{ mi} = \$223.03$ Compaction: $\$325.47/\text{mi} \times 0.52 \text{ mi} = \$169.24$	Subtotal:	\$838.34
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.50 \text{ acres} = \$331.68$	Subtotal:	\$331.68
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.45% of total Costs = \$15.76 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$15.76
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-3E-15.07 Continued

Total: \$1,185.79

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-07.00** Road Name: Guard Station Rd

Road Renovation: 0.80 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: .....	\$292.66
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. \$11.09 Surf. \$0.00.....	\$11.09
Quarry Development: .....	\$0.00
Total:	\$834.44

Notes:

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

Road Construction Worksheet

Road Number: 38-4E-07.00 Road Name: Guard Station Rd

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Clean Culverts: $\$365.82/\text{mi} \times 0.80 \text{ mi} = \$292.66$	Subtotal:	\$292.66
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.80 \text{ acres} = \$530.69$	Subtotal:	\$530.69
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.31% of total Costs = \$11.09 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$11.09
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00
	Total:	\$834.44

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-07.01** Road Name: Moon Prairie Hook Up

Road Renovation: 0.97 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: .....	\$731.75
Blading 0.97 mi	
700-1200 Surfacing: .....	\$60,598.35
Quarry Name: Knife Riv Dry Creek 1,766 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):0.9 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. \$834.23 Surf. \$401.20.....	\$1,235.44
Quarry Development: .....	\$0.00

Total: \$63,162.56

Notes:

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

Road Construction Worksheet

Road Number: 38-4E-07.01 Road Name: Moon Prairie Hook Up

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation:		
Blading w/o Ditches: \$428.91/mi x 0.97 mi = \$416.04		
Compaction: \$325.47/mi x 0.97 mi = \$315.71	Subtotal:	\$731.75
Section 700-1200 Surfacing:		
Commercial Quarry Name: Knife Riv Dry Creek		
<u>Length</u> <u>TopW</u> <u>BotW</u> <u>Depth</u> <u>CWid</u> <u>#TOs</u> <u>Width</u> <u>F.W.L</u> <u>Taper</u> <u>Other</u>		
0.97mi 14ft    14ft    6in		
Rock Volume = 1,766 LCY		
Purchase Price / Royalty: \$10.66/LCY x 1,766 LCY = \$18,825.56		
Processing: \$0.88/LCY x 1,766 LCY = \$1,554.08		
Compaction: \$1.08/LCY x 1,766 LCY = \$1,907.28		
Basic Rock Haul cost: \$0.58/LCY x 1,766 LCY = \$1,024.28		
Rock Haul -15% grades: \$0.88/LCY-mi x 1,766 LCY x 11.34 mi= \$17,623.27		
Rock Haul St& Co Roads: \$0.39/LCY-mi x 1,766 LCY x 26.71 mi= \$18,396.25		
Basic Water Haul cost: \$0.53/LCY x 1,766 LCY = \$935.98		
Water Haul -15% grades: \$0.12/LCY-mi x 1,766 LCY x 0.76 mi= \$161.06		
Water Haul St&Co Roads: \$0.07/LCY-mi x 1,766 LCY x 1.38 mi= \$170.60	Subtotal:	\$60,598.35
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing:		
Manual Brushing		
RoadSide Brushing Medium: \$663.36/acre x 0.90 acres = \$597.02	Subtotal:	\$597.02
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:		

Road Number: 38-4E-07.01 Moon Prairie Hook Up Continued

Subtotal: \$0.00

Mobilization:

Construction - 23.57% of total Costs = \$834.23

Surfacing - 25.26% by rock volume = \$401.20

Subtotal: \$1,235.44

Quarry Development:

Based on 25.26% of total rock volume

Subtotal: \$0.00

Total: \$63,162.56

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-07.02** Road Name:

Road Renovation: 0.45 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: .....	\$725.49
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. \$13.35 Surf. \$0.00.....	\$13.35
Quarry Development: .....	\$0.00
Total:	\$1,004.18

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.



Road Construction Worksheet

Road Number: 38-4E-07.02 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.45 \text{ mi} = \$386.02$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.45 \text{ mi} = \$193.01$ Compaction: $\$325.47/\text{mi} \times 0.45 \text{ mi} = \$146.46$	Subtotal:	\$725.49
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.40 \text{ acres} = \$265.34$	Subtotal:	\$265.34
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.38% of total Costs = \$13.35 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$13.35
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number : 38-4E-07.02    Continued

Total :        \$1,004.18

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-07.03** Road Name:

Road Renovation: 0.27 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.2 acres .....	\$388.69
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$435.29
Blading 0.27 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 (NONE):0.0 acres .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$11.10 Surf. \$0.00.....	\$11.10
Quarry Development: .....	\$0.00
Total:	\$835.08

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-4E-07.03 Road Name:

Section 200 Clearing and Grubbing:

Clearing - Light (Clearing): Adjustment Factor (0.93)

1-15% (Avg Side Slopes): Adjustment Factor (0)

Scatter (Slash): Adjustment Factor (1)

less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)

Total Adjustment Factor:  $0.93 + 0 + 1 + 0.25 = 2.18$

Base Cost/Acre: \$891.49 x Adjustment Factor: 2.18 x Total Acres: 0.2 = \$388.69

Subtotal: \$388.69

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification:  $\$857.82/\text{mi} \times 0.27 \text{ mi} = \$231.61$

Blading w/o Ditches:  $\$428.91/\text{mi} \times 0.27 \text{ mi} = \$115.81$

Compaction:  $\$325.47/\text{mi} \times 0.27 \text{ mi} = \$87.88$

Subtotal: \$435.29

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.31% of total Costs = \$11.10

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$11.10

Road Number: 38-4E-07.03 Continued

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$835.08

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-07.04** Road Name:

Road Renovation: 0.14 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: .....	\$225.71
Blading 0.14 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):0.1 acres .....	\$132.67
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$4.83 Surf. \$0.00.....	\$4.83
Quarry Development: .....	\$0.00
Total:	\$363.21

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-4E-07.04 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.14 \text{ mi} = \$120.09$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.14 \text{ mi} = \$60.05$ Compaction: $\$325.47/\text{mi} \times 0.14 \text{ mi} = \$45.57$	Subtotal:	\$225.71
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Heavy: $\$1326.72/\text{acre} \times 0.10 \text{ acres} = \$132.67$	Subtotal:	\$132.67
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.14% of total Costs = \$4.83 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$4.83
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 38-4E-07.04 Continued

Total: \$363.21



ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-07.05** Road Name:

Road Renovation: 0.48 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.4 acres .....	\$777.38
300 Excavation: .....	\$0.00
400 Drainage: .....	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation: .....	\$773.86
Blading 0.48 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 (NONE):0.0 acres .....	\$0.00
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$20.90 Surf. \$0.00.....	\$20.90
Quarry Development: .....	\$0.00
Total:	\$1,572.13

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-4E-07.05 Road Name:

Section 200 Clearing and Grubbing:

Clearing - Light (Clearing): Adjustment Factor (0.93)

1-15% (Avg Side Slopes): Adjustment Factor (0)

Scatter (Slash): Adjustment Factor (1)

less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)

Total Adjustment Factor:  $0.93 + 0 + 1 + 0.25 = 2.18$

Base Cost/Acre: \$891.49 x Adjustment Factor: 2.18 x Total Acres: .4 = \$777.38

Subtotal: \$777.38

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification:  $\$857.82/\text{mi} \times 0.48 \text{ mi} = \$411.75$

Blading w/o Ditches:  $\$428.91/\text{mi} \times 0.48 \text{ mi} = \$205.88$

Compaction:  $\$325.47/\text{mi} \times 0.48 \text{ mi} = \$156.23$

Subtotal: \$773.86

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.59% of total Costs = \$20.90

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$20.90

Road Number: 38-4E-07.05 Continued

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$1,572.13

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-32.02** Road Name: Grizzly Creek Mainli

Road Renovation: 3.16 mi 16 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: .....	\$1,155.99
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):3.1 acres .....	\$2,056.42
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$43.27 Surf. \$0.00.....	\$43.27
Quarry Development: .....	\$0.00
<b>Total:</b>	<b>\$3,255.68</b>

Notes:

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

Road Construction Worksheet

Road Number: 38-4E-32.02 Road Name: Grizzly Creek Mainli

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Clean Culverts: $\$365.82/\text{mi} \times 3.16 \text{ mi} = \$1,155.99$	Subtotal:	\$1,155.99
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 3.10 \text{ acres} = \$2,056.42$	Subtotal:	\$2,056.42
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 1.22% of total Costs = \$43.27 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$43.27
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00
	Total:	\$3,255.68

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 38-4E-35.00** Road Name: Nameless Springs

Road Renovation: 3.28 mi 16 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: .....	\$3,093.52
Blading 1.79 mi	
700-1200 Surfacing: .....	\$40,381.12
Quarry Name: Knife Riv Dry Creek 999 LCY	
Quarry Name: Knife R. - Dry Cr PR 180 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):3.2 acres .....	\$1,061.38
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$620.04
Mobilization: Const. \$608.31 Surf. \$267.85.....	\$876.15
Quarry Development: .....	\$0.00

Total: \$46,032.21

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 38-4E-35.00 Road Name: Nameless Springs

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: \$694.50/mi x 1.79 mi = \$1,243.16  
 Scarification: \$857.82/mi x 0.48 mi = \$411.75  
 Compaction: \$325.47/mi x 1.79 mi = \$582.59  
 Clean Culverts: \$365.82/mi x 2.34 mi = \$856.02

Subtotal: \$3,093.52

Section 700-1200 Surfacing:

Commercial Quarry Name: Knife Riv Dry Creek

<u>Length</u>	<u>TopW</u>	<u>BotW</u>	<u>Depth</u>	<u>CWid</u>	<u>#TOs</u>	<u>Width</u>	<u>F.W.L</u>	<u>Taper</u>	<u>Other</u>
0.48mi	16ft	16ft	6in						

Rock Volume = 999 LCY  
 Purchase Price / Royalty: \$10.66/LCY x 999 LCY = \$10,649.34  
 Processing: \$0.88/LCY x 999 LCY = \$879.12  
 Compaction: \$1.08/LCY x 999 LCY = \$1,078.92  
 Basic Rock Haul cost: \$0.58/LCY x 999 LCY = \$579.42  
 Rock Haul -15% grades: \$0.88/LCY-mi x 999 LCY x 9.54 mi= \$8,386.80  
 Rock Haul St& Co Roads: \$0.39/LCY-mi x 999 LCY x 25.33 mi= \$9,868.82  
 Basic Water Haul cost: \$0.53/LCY x 999 LCY = \$529.47  
 Water Haul -15% grades: \$0.12/LCY-mi x 999 LCY x 9.00 mi= \$1,078.92

Grid Rolled / Pitrun Quarry Name: Knife R. - Dry Cr PR

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

Rock Volume = 180 LCY  
 Production: \$1.24/LCY x 180 LCY = \$223.20  
 Purchase Price / Royalty: \$18.67/LCY x 180 LCY = \$3,360.60  
 Processing: \$0.88/LCY x 180 LCY = \$158.40  
 Compaction: \$1.08/LCY x 180 LCY = \$194.40  
 Basic Rock Haul cost: \$0.58/LCY x 180 LCY = \$104.40  
 Rock Haul -15% grades: \$0.88/LCY-mi x 180 LCY x 9.54 mi= \$1,511.14  
 Rock Haul St& Co Roads: \$0.39/LCY-mi x 180 LCY x 25.33 mi= \$1,778.17  
 Subtotal: \$40,381.12

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

Brushing width Left: 4ft. Right: 4ft.

Road Number: 38-4E-35.00 Nameless Springs Continued

RoadSide Brushing Light: \$331.68/acre x 3.20 acres = \$1,061.38	Subtotal:	\$1,061.38
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous: Construct Armored Waterdip Tractor: D7 with winch 4 hr x \$155.01/hr = \$620.04	Subtotal:	\$620.04
Mobilization: Construction - 17.18% of total Costs = \$608.31 Surfacing - 16.87% by rock volume = \$267.85	Subtotal:	\$876.15
Quarry Development: Based on 16.87% of total rock volume	Subtotal:	\$0.00
	Total:	\$46,032.21



ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 39-4E-01.00** Road Name:

Road Renovation: 0.45 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: .....	\$725.49
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. \$13.35 Surf. \$0.00.....	\$13.35
Quarry Development: .....	\$0.00
Total:	\$1,004.18

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 39-4E-01.00 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.45 \text{ mi} = \$386.02$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.45 \text{ mi} = \$193.01$ Compaction: $\$325.47/\text{mi} \times 0.45 \text{ mi} = \$146.46$	Subtotal:	\$725.49
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.40 \text{ acres} = \$265.34$	Subtotal:	\$265.34
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.38% of total Costs = \$13.35 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$13.35
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 39-4E-01.00 Continued

Total: \$1,004.18

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 39-4E-01.01** Road Name:

Road Renovation: 0.28 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: .....	\$451.42
Blading 0.28 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):0.3 acres .....	\$199.01
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$8.76 Surf. \$0.00.....	\$8.76
Quarry Development: .....	\$0.00
Total:	\$659.19

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 39-4E-01.01 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.28 \text{ mi} = \$240.19$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.28 \text{ mi} = \$120.09$ Compaction: $\$325.47/\text{mi} \times 0.28 \text{ mi} = \$91.13$	Subtotal:	\$451.42
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.30 \text{ acres} = \$199.01$	Subtotal:	\$199.01
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.25% of total Costs = \$8.76 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$8.76
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 39-4E-01.01 Continued

Total: \$659.19

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 39-4E-10.01** Road Name: Moon Prairie

Road Renovation: 2.45 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: .....	\$896.26
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):2.5 acres .....	\$812.62
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$23.02 Surf. \$0.00.....	\$23.02
Quarry Development: .....	\$0.00
Total:	\$1,731.90

Notes:

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

Road Construction Worksheet

Road Number: 39-4E-10.01 Road Name: Moon Prairie

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Clean Culverts: \$365.82/mi x 2.45 mi = \$896.26	Subtotal:	\$896.26
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing Brushing width Left: 4ft. Right: 4ft. RoadSide Brushing Light: \$331.68/acre x 2.45 acres = \$812.62	Subtotal:	\$812.62
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.65% of total Costs = \$23.02 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$23.02
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00
	Total:	\$1,731.90



ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 39-4E-11.01** Road Name: Jenny Thin

Road Renovation: 0.40 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: .....	\$644.88
Blading 0.40 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. \$12.26 Surf. \$0.00.....	\$12.26
Quarry Development: .....	\$0.00
Total:	\$922.49

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 39-4E-11.01 Road Name: Jenny Thin

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.40 \text{ mi} = \$343.13$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.40 \text{ mi} = \$171.56$ Compaction: $\$325.47/\text{mi} \times 0.40 \text{ mi} = \$130.19$	Subtotal:	\$644.88
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.40 \text{ acres} = \$265.34$	Subtotal:	\$265.34
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.35% of total Costs = \$12.26 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$12.26
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 39-4E-11.01 Jenny Thin Continued

Total: \$922.49

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: 39-4E-14.01** Road Name: Donnaker

Road Renovation: 0.82 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: .....	\$1,322.00
Blading 0.82 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. \$24.96 Surf. \$0.00.....	\$24.96
Quarry Development: .....	\$0.00
Total:	\$1,877.65

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 39-4E-14.01 Road Name: Donnaker

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.82 \text{ mi} = \$703.41$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.82 \text{ mi} = \$351.71$ Compaction: $\$325.47/\text{mi} \times 0.82 \text{ mi} = \$266.89$	Subtotal:	\$1,322.00
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.80 \text{ acres} = \$530.69$	Subtotal:	\$530.69
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.71% of total Costs = \$24.96 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$24.96
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: 39-4E-14.01 Donnaker Continued

Total: \$1,877.65

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: Lily Glen UCT** Road Name:

Road Renovation: 0.23 mi 10 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: .....	\$370.81
Blading 0.23 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):0.2 acres .....	\$132.67
2300 Engineering: 0.00 sta. ....	\$0.00
2400 Minor Concrete: .....	\$0.00
2500 Gabions: .....	\$0.00
8000 Miscellaneous: .....	\$0.00
Mobilization: Const. \$6.78 Surf. \$0.00.....	\$6.78
Quarry Development: .....	\$0.00
Total:	\$510.26

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: Lily Glen UCT Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.23 \text{ mi} = \$197.30$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.23 \text{ mi} = \$98.65$ Compaction: $\$325.47/\text{mi} \times 0.23 \text{ mi} = \$74.86$	Subtotal:	\$370.81
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.20 \text{ acres} = \$132.67$	Subtotal:	\$132.67
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.19% of total Costs = \$6.78 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$6.78
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00



Road Number: Lily Glen UCT Continued

Total: \$510.26

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: T38 R3E Sp 13-3** Road Name:

Road Renovation: 0.07 mi 12 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: .....	\$112.85
Blading 0.07 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):0.1 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. \$2.41 Surf. \$0.00.....	\$2.41
Quarry Development: .....	\$0.00
Total:	\$181.60

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: T38 R3E Sp 13-3 Road Name:

Section 200 Clearing and Grubbing:	Subtotal:	\$0.00
Section 300 Excavation:	Subtotal:	\$0.00
Section 400 Drainage:	Subtotal:	\$0.00
Section 500 Renovation: Scarification: $\$857.82/\text{mi} \times 0.07 \text{ mi} = \$60.05$ Blading w/o Ditches: $\$428.91/\text{mi} \times 0.07 \text{ mi} = \$30.02$ Compaction: $\$325.47/\text{mi} \times 0.07 \text{ mi} = \$22.78$	Subtotal:	\$112.85
Section 700-1200 Surfacing: Surfacing:	Subtotal:	\$0.00
Section 1300 Geotextiles:	Subtotal:	\$0.00
Section 1400 Slope Protection:	Subtotal:	\$0.00
Section 1800 Soil Stabilization:	Subtotal:	\$0.00
Section 1900 Cattleguards:	Subtotal:	\$0.00
Section 2100 Roadside Brushing: Manual Brushing RoadSide Brushing Medium: $\$663.36/\text{acre} \times 0.10 \text{ acres} = \$66.34$	Subtotal:	\$66.34
Section 2300 Engineering:	Subtotal:	\$0.00
Section 2400 Minor Concrete:	Subtotal:	\$0.00
Section 2500 Gabions:	Subtotal:	\$0.00
Section 8000 Miscellaneous:	Subtotal:	\$0.00
Mobilization: Construction - 0.07% of total Costs = \$2.41 Surfacing - 0.00% by rock volume = \$0.00	Subtotal:	\$2.41
Quarry Development: Based on 0.00% of total rock volume	Subtotal:	\$0.00

Road Number: T38 R3E Sp 13-3 Continued

Total: \$181.60

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: Temp 38 3E 13-2** Road Name:

Temporary Road: 0.19 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.2 acres .....	\$533.11
300 Excavation: .....	\$0.00
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: .....	\$632.44
Mobilization: Const. \$15.70 Surf. \$0.00.....	\$15.70
Quarry Development: .....	\$0.00
<b>Total:</b>	<b>\$1,181.25</b>

Notes:

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

Road Construction Worksheet

Road Number: Temp 38 3E 13-2 Road Name:

Section 200 Clearing and Grubbing:

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

1-15% (Avg Side Slopes): Adjustment Factor (0)

Windrow (Slash): Adjustment Factor (1.07)

less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)

Total Adjustment Factor:  $1.67 + 0 + 1.07 + 0.25 = 2.99$

Base Cost/Acre: \$891.49 x Adjustment Factor: 2.99 x Total Acres: 0.2 = \$533.11

Subtotal: \$533.11

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Temp Road Construction

Tractor: D7 with rippers 4 hr x \$158.11/hr = \$632.44

Subtotal: \$632.44

Mobilization:

Construction - 0.44% of total Costs = \$15.70

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$15.70

Quarry Development:

Road Number: Temp 38 3E 13-2 Continued

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$1,181.25

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

Road Number: Temp 39 4E 13-1 Road Name:

Temporary Road: 0.20 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 0.2 acres .....	\$533.11
300 Excavation: .....	\$0.00
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: .....	\$632.44
Mobilization: Const. \$15.70 Surf. \$0.00.....	\$15.70
Quarry Development: .....	\$0.00
Total:	\$1,181.25

Notes:

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



Road Construction Worksheet

Road Number: Temp 39 4E 13-1 Road Name:

Section 200 Clearing and Grubbing:

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

1-15% (Avg Side Slopes): Adjustment Factor (0)

Windrow (Slash): Adjustment Factor (1.07)

less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)

Total Adjustment Factor:  $1.67 + 0 + 1.07 + 0.25 = 2.99$

Base Cost/Acre: \$891.49 x Adjustment Factor: 2.99 x Total Acres: 0.2 = \$533.11

Subtotal: \$533.11

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Temp Road Construction

Tractor: D7 with rippers 4 hr x \$158.11/hr = \$632.44

Subtotal: \$632.44

Mobilization:

Construction - 0.44% of total Costs = \$15.70

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$15.70

Quarry Development:

Road Number: Temp 39 4E 13-1 Continued

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$1,181.25

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: USFS 100** Road Name:

Road Renovation: 0.43 mi 16 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: .....	\$455.94
Blading 0.43 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. \$9.72 Surf. \$0.00.....	\$9.72
Quarry Development: .....	\$0.00
Total:	\$731.00

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: USFS 100 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading:  $\$694.50/\text{mi} \times 0.43 \text{ mi} = \$298.64$

Clean Culverts:  $\$365.82/\text{mi} \times 0.43 \text{ mi} = \$157.30$

Subtotal: \$455.94

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium:  $\$663.36/\text{acre} \times 0.40 \text{ acres} = \$265.34$

Subtotal: \$265.34

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.27% of total Costs = \$9.72

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$9.72

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$731.00

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: USFS 800** Road Name:

Road Renovation: 0.11 mi 16 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: .....	\$152.44
Blading 0.11 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):0.1 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. \$2.95 Surf. \$0.00.....	\$2.95
Quarry Development: .....	\$0.00
Total:	\$221.72

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: USFS 800 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading:  $\$694.50/\text{mi} \times 0.11 \text{ mi} = \$76.40$

Compaction:  $\$325.47/\text{mi} \times 0.11 \text{ mi} = \$35.80$

Clean Culverts:  $\$365.82/\text{mi} \times 0.11 \text{ mi} = \$40.24$

Subtotal: \$152.44

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium:  $\$663.36/\text{acre} \times 0.10 \text{ acres} = \$66.34$

Subtotal: \$66.34

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.08% of total Costs = \$2.95

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$2.95

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Road Number: USFS 800 Continued

Total: \$221.72

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Griffin Half Moon Sale Date: Sept 2018

**Road Number: USFS 890** Road Name:

Road Renovation: 1.11 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: .....	\$837.36
Blading 1.11 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):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. \$21.11 Surf. \$0.00.....	\$21.11
Quarry Development: .....	\$0.00
Total:	\$1,588.17

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.



Road Construction Worksheet

Road Number: USFS 890 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches:  $\$428.91/\text{mi} \times 1.11 \text{ mi} = \$476.09$

Compaction:  $\$325.47/\text{mi} \times 1.11 \text{ mi} = \$361.27$

Subtotal: \$837.36

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium:  $\$663.36/\text{acre} \times 1.10 \text{ acres} = \$729.70$

Subtotal: \$729.70

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.60% of total Costs = \$21.11

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$21.11

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$1,588.17



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 ORM06-TS-2018.0015
Sale Name Griffin Half Moon
Sale Notice (dated) August 16, 2018
BLM District Medford

<input type="checkbox"/> Sealed Bid for Sealed Bid Sale	<input checked="" type="checkbox"/> Written Bid for Oral Auction Sale
---	---

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 \$**267,300.00** 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
white fir	MBF	5,517	X	=	X	=
Douglas-fir	MBF	3,037	X\$401.30	=\$1,218,748.10	X	=
ponderosa pine	MBF	330	X\$135.30	=\$44,649.00	X	=
incense-cedar	MBF	60	X\$288.20	=\$17,292.00	X	=
sugar pine	MBF	26	X\$107.70	=\$2,800.20	X	=
<b>Total</b>		<b>8,970</b>	X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
			X	=	X	=
TOTAL PURCHASE PRICE						

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.	<b>Sealed Bid</b> – 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.