

EXTENDED 29-DAY SEALED BID SALE

P R O S P E C T U S

Lump Sum Sale

GRANTS PASS RESOURCE AREA
JOSEPHINE MASTER UNIT
JACKSON MASTER UNIT

Medford Sale # ORM07-TS-18-06

July 26, 2018 (DES)

- #1. Savage Murph Timber Sale,
Josephine and Jackson Counties, O&C

BID DEPOSIT REQUIRED: \$29,500.00

All timber designated for cutting in SW1/4NE1/4, SE1/4NW1/4, E1/2SW1/4, NW1/4SE1/4, SE1/4SE1/4 Sec. 17, E1/2NE1/4, SW1/4NE1/4 Sec. 20, SW1/4 Sec.21, T.37 S., R 4 W., W1/2NE1/4 Sec. 14, W1/2NE1/4, SE1/4NW1/4, E1/2SW1/4, W1/2SE1/4 Sec. 23, NE1/4, NE1/4NW1/4 Sec. 26, T.37 S., R 5 W., Willamette Meridian.

Approx. Number Merch. Trees	Est. Volume MBF 32' Log	Species	Est. Volume MBF 16' Log	Appr. Price Per MBF*	Est. Volume Times Appraised Price
9,888	1,055	Douglas-fir	1,286	\$228.00	\$293,208.00
350	26	Ponderosa pine	35	\$40.40	\$1,414.00
10,238	1,081	Totals	1,321		\$294,622.00

*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.

**The purchase of biomass material is optional. If the Purchaser chooses to purchase biomass/ firewood, then it will be modified into the timber sale contract and a fair market price will be established at that time.

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

CRUISE INFORMATION – The Douglas-fir have been cruised using the 3P sampling method to select sample trees. Maps showing the location and description of these sample trees are available at the Grants Pass Interagency Office. The sample trees have been measured, utilizing the VOLT system of measurement, and the volume expanded to a total sale volume. The volume of all other species in this sale has been derived from individual tree measurements taken during a 100% cruise using form class tables for estimating board foot volume of trees in 16-foot logs. Five (5) sugar pine trees were included in the ponderosa pine strata for cruise value purposes.

Approximately 0 trees which are considered to be nonmerchantable are designated for cutting. With respect to merchantable trees of all conifer species: the average tree is 13.0 inches DBHOB; the average gross merchantable log contains 45 bd. ft.; the total gross volume is approximately 1,546 M bd. ft; and 85% recovery is expected. (Average DF is 13.1 inches DBHOB; average gross merchantable log DF contains 45 bd. ft.)

LOG EXPORT AND SUBSTITUTION RESTRICTIONS - All timber sold to the Purchaser under the terms of the contract, except exempted species, is restricted from export under the United

States in the form of unprocessed timber and is prohibited from use as a substitute for exported private timber.

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 – six (6) units containing one hundred ninety-one (191) acres must be partial cut, one (1) temporary route right-of-way must be clear-cut, and one (1) existing road right-of-way must be clear-cut.

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

ACCESS - Access to the sale area is available via a public road system through the contract area; via existing BLM roads; via Right-of-Way and Road Use Agreement M-660 with Murphy Timber Investments and via Right-of-Way and Road Use Agreement M-660 with AP Timber. Among other conditions, Right-of-Way and Road Use Agreement M-660 with Murphy Timber Investments requires, but is not limited to: road maintenance to be completed by the Purchaser and completion of an agreement between the Purchaser and Permittee. The Permittee has indicated they require a rockwear obligation of \$172.26. Among other conditions, Right-of-Way and Road Use Agreement M-660 with AP Timber requires, but is not limited to: road maintenance to be completed by the Purchaser and completion of an agreement between the Purchaser and Permittee. The Permittee has indicated they require a rockwear obligation of \$7.42.

ROAD MAINTENANCE - The Purchaser will be required to maintain all of the roads which he constructs plus 15.67 miles of existing BLM and private road. The Purchaser will be required to pay a rockwear fee of \$2,566.62 for the use of these roads listed in the contract.

ROAD CONSTRUCTION - The contract will require the Purchaser to renovate 827.38 stations of existing road, and construct/decommission 21.0 stations of temporary route. Additional information is available in the timber sale prospectus.

SOIL DAMAGE PREVENTION - Pursuant to Section 26 of Form 5450-25, Timber Sale Contract, the Purchaser shall not conduct mechanical ground based harvesting, ground based yarding, skid trail and landing rehabilitation, road construction, temporary route construction, temporary route reconstruction, or temporary route and landing decommissioning in all Harvest Units between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

Pursuant to Section 26 of Form 5450-25, Timber Sale Contract, the Purchaser shall not conduct any haul on natural surface and rocked roads on the Contract Area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If the Authorized Officer determines that hauling would not result in road damage or the transport of sediment to nearby stream channels based on soil moisture conditions or rain events, Contracting Officer may approve a conditional waiver for hauling. If soil moisture conditions or rain events are anticipated to cause impacts to roads or stream water quality resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

EQUIPMENT REQUIREMENTS - A yarding tractor not greater than 9 feet wide as measured from the outer edges of standard width shoes and equipped with an integral arch and a winch for lining logs seventy-five (75) feet. A harvester with a self leveling cab and an arm capable of reaching at least 20 feet, equipped with a synchronized winch system capable of tethering 1,800 feet on slopes up to 70%. A forwarder with a self leveling cab and an arm capable of reaching at least 20 feet, equipped with a synchronized winch system capable of tethering 1,800 feet on slopes up to 70%. Forwarders shall be capable of minimal ground pressure, not to exceed 6 pounds per square inch (PSI). Steel tracks and/or chains for bogie wheels may be required to minimize ground pressure. The winch system shall be capable of passing through a block mid-span to keep the forwarder perpendicular to the contours where possible. In addition, a research variance form must be obtained by Oregon OSHA prior to operations on slopes over 50%. A minimum two hundred (200) flywheel horsepower tractor with mounted rippers no more than thirty six (36) inches apart and capable of ripping to a depth of eighteen (18) inches will be required for decommissioning temporary routes, utilized skid roads and forwarder trails within Riparian Reserves and access to harvest units.

SLASH DISPOSAL - Slash disposal will consist of handpile and cover, handpile burn and mop-up, machine pile and cover, machine pile burn and mop up, cover and burn landing decks, and underburning as described in SD-5 of the Special Provisions. An option to buyout of slash disposal is included in SD-5 of the Special Provisions.

MACHINE PILE AND BURN all slash reachable from designated skidtrails, the 37-5-14.0 and the 37-5-14.2 roads located in or adjacent to harvest unit 14-5, all slash reachable from the 37-4-4.1 associated with harvest unit 17-5, all slash generated within Temp Route 20-5 and associated landing, all slash reachable from the forwarder trails in the eastern portion of harvest unit 21-13, and all slash along the ridgetop portion of harvest unit 23-7. **HAND PILE AND BURN** all slash located in harvest unit 17-5 and the western portion of harvest unit 21-13. Perform **BROADCAST BURNING** on the eastern portion of harvest unit 23-7. **MACHINE PILE AND BURN LANDING DECK** in harvest unit 14-5. A post logging assessment shall be conducted to determine treatment needs in all units. The initial appraisal prescribed fifty-four and one-half (54.50) acres of hand pile, cover, burn, and mop-up handpiles, forty-three (43) acres of machine pile, cover, burn, and mop-up machine piles, one quarter (0.25) acres of pile, cover, burn, and mop-up landing decks, one thousand eight hundred-forty (1,840) feet of fire line construction, one (1) acre of fuels pullback, and twenty-one (21) acres of broadcast burning.

CONTRACT TERMINATION - A Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to comply with the Endangered Species Act, or comply with a court order. 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. An occupied Northern Spotted Owl site near harvest unit 17-5 restricts harvest of this unit until surveys determine the site is unoccupied, at least two (2) years from the sale date.

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. In tractor harvest unit 14-5 shown on Exhibit A, all trees designated for cutting shall be felled and whole tree yarded or yarded with tops attached except when excessive stand damage occurs as determined by the Authorized Officer.

4. A harvester, feller-processor, or feller-buncher with purpose built carriers with boom-mounted felling heads and a boom with a minimum lateral reach of twenty (20) feet may be used in the ground based units. See the Savage Murph Special Provisions for full ground based harvesting restrictions.
5. Forwarder trails that are hydrologically connected; or are perpendicular to and within one hundred eighty five (185) feet of streams shown on Exhibit A shall be water-barred and shall have slash placed over them prior to winter rain events to protect water quality.
6. No tree felling, yarding, burning, heavy equipment use or muffled blasting within harvest units 17-5 and 20-5 shown on Exhibit A shall be conducted between March 1 and June 30 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from Northern Spotted Owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that Northern Spotted Owl nesting and/or fledging activities are not occurring during the time of harvest. An occupied Northern Spotted Owl site near harvest unit 17-5 restricts harvest of this unit until surveys determine the site is unoccupied, at least two (2) years from the sale date.
7. The License Agreement fees and conditions listed in the Prospectus are pending and are not final. Final fees are dependent on final signed License Agreements.

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

To access harvest units 14-5, 23-7 and 26-7: From Grants Pass, take highway 99 southbound. Turn right on Savage Creek Rd. Travel approximately 5 miles up Savage Creek Rd. Harvest unit 14-5 is on the left. Continue 1 mile and turn right on 37-5-23.1 road to harvest unit 23-7. Harvest unit 26-7 is accessible by foot from the end of the 37-5-23.1 road. A BLM key is required to access harvest units 23-7 and 26-7.

To access harvest units 17-5 and 20-5 : From Grants Pass, take Interstate 5 southbound. Take exit 48 to Rogue River. Turn left on Highway 99. Travel south to Birdseye Creek Rd. Turn right and travel 6.5 miles on Birdseye Creek Rd. Harvest unit 17-5 is on the left, below the road, and accessible by foot. To access harvest unit 20-5 travel 1 mile back down Birdseye Creek Rd. and turn right on 37-4-9.1 road. Travel 0.75 miles until the road is burned on the left. Access is by foot on the 37-4-17.2 road (burned) to Temp Route 20-5, approximately 1.5 miles, to harvest unit 20-5. Units are accessible via BLM roads.

To access harvest unit 21-13: From Grants Pass, take Interstate 5 southbound. Take exit 48 to Rogue River. Turn left on Highway 99. Travel south to Foothills Creek Rd. Turn right and travel approximately 3.5 miles to Right Fork Foothills Creek Rd. Travel 6.5 miles on Right Fork Foothills Creek Rd. Harvest unit 21-11 is on the left. A BLM key is required to access Foothills Creek Rd.

ENVIRONMENTAL ASSESSMENT - An environmental assessment DOI-BLM-OR-M070-2016-0001-EA was prepared for this sale, and a Finding of No Significant Impact has been documented. This document is available for inspection as background for this sale at the Medford District Office.

SAVAGE MURPH TIMBER SALE

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 Areas as shown on Exhibit A and all trees marked with a combination of orange paint, orange flagging, and/or posters which are on or mark the boundaries of the Reserve Areas.
- (B) IR-1 Approximately four thousand eight hundred sixty-two (4,862) Douglas-fir, one thousand one hundred forty-nine (1,149) Oregon white oak, seven hundred twenty-two (722) ponderosa pine, four hundred twenty-one (421) pacific madrone, twenty-six (26) sugar pine, four (4) incense cedar trees and one hundred sixty-three (163) snags marked with yellow paint above and below stump height in the Harvest Area shown on Exhibit A (Trees marked as above may not be cut under Section 42(17) unless specifically approved in advance by the Contracting Officer.).
- (C) IR-2 All timber except approximately one hundred thirty-seven (137) Douglas-fir and twenty-four (24) Ponderosa pine trees marked for cutting heretofore by the Government with blue paint above and below stump height in 37-5-23.1 Right-of-Way and Temp Route 20-5 units shown on Exhibit A.
- (D) IR-13 All snags and hardwoods in the Harvest Area shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. All snags felled for safety reasons shall be retained on site. Hardwoods not marked with yellow paint above and below stump height, which are found to restrict yarding operations, may be yarded to the landing, as approved by the Authorized Officer. Hardwood logs would be decked separately and left on site.
- (E) IR-14 All pre-existing dead and down logs in the Harvest Area shown on Exhibit A.

SAVAGE MURPH
SPECIAL PROVISIONS

Section 42

(A) LOGGING

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if he intends to cease operations for any period of seven (7) or more days.
- (2) L-2 Prior to the commencement of operations the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract, which shall include measures needed to ensure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan.
- (3) L-4 All trees designated for cutting shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.
- (4) L-8 Where hand falling occurs in ground based harvest units shown on Exhibit A, all trees designated for cutting shall be felled and whole tree yarded or yarded with tops attached except when excessive stand damage occurs or the resulting continuous slash depth is expected to exceed eighteen (18) inches as determined by the Authorized Officer. If excessive stand damage occurs or continuous slash depth is expected to exceed eighteen (18) inches, all trees shall be bucked into log lengths not to exceed forty one (41) feet prior to being yarded.
- (5) L-10 In the Harvest Area shown on Exhibit A, all trees designated for cutting shall be directionally felled away from streams, unit boundaries and resource buffers. Use of jacks, wedges, and/or tree pulling with cables or lines shall be employed when necessary to meet this requirement.
- (6) L-12 In the Harvest Area shown on Exhibit A, Yarding shall be done in accordance with the yarding requirements or limitations for the designated area listed below.

SAVAGE MURPH
SPECIAL PROVISIONS

Designated Area	Yarding Requirements or Limitations
<u>Ground Based Harvest Units</u>	Mechanized harvesting operations are optional. All ground-based harvest units may be manually felled.
All Units	<p>Mechanized felling operations shall be limited to slopes of thirty-five (35) percent or less, unless tethered. Tethered equipment is limited to 70% slopes.</p> <p>Mechanized felling operations are subject to seasonal operating restrictions as described in Section 42(A)(12) of this contract.</p> <p>The harvester, feller-processor, or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose built carriers with boom-mounted felling heads may be approved. The boom must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible. The purpose-built carrier may be of the articulated, rubber-tired design, or the zero-clearance tail swing leveling track-mounted design.</p> <p>The harvest equipment shall walk on existing or created slash as directed by the Authorized Officer. If Purchaser is required to create slash to walk on, then Purchaser shall not be required to whole-tree-yard.</p> <p>Directional falling to lead and away from streams, unit boundaries, and resource buffers shown on Exhibit A will be required.</p> <p>New skid roads must be located on ground less than thirty-five (35) percent slope. Rehabilitate all utilized skid roads that are within one hundred eighty-five (185) feet of streams.</p>

SAVAGE MURPH
SPECIAL PROVISIONS

Designated Area	Yarding Requirements or Limitations
<u>Ground Based</u> <u>(Tractor) Yard Units</u> <u>Cont.</u> 14-5	<p>Existing skid roads shall be used when possible. Skid roads shall not exceed a width of twelve (12) feet on average per unit and new skid roads shall be placed at least one hundred fifty (150) feet apart where topography will allow, unless the Purchaser proposes an alternate logging plan that limits soil compaction to less than twelve (12) percent, limits soil productivity loss to less than five (5) percent of the harvest unit, and is approved by the Authorized Officer.</p> <p>Landing size shall not exceed one-quarter ($\frac{1}{4}$) acre, shall be located along existing roads, temporary routes, and/or cable-tractor swing routes within unit boundaries, and shall be approved by the Authorized Officer. Design landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads.</p> <p>Yarding tractor width shall not be greater than nine (9) feet track width and shall be equipped with an integral arch.</p> <p>A forwarder may be used in place of a skidder in Unit 14-5. The forwarder shall walk on existing or created slash as directed by the Authorized Officer. If Purchaser is required to create slash to walk on, then Purchaser shall not be required to whole-tree-yard.</p> <p>The use of blades while tractor yarding will be limited, equipment shall walk over as much ground litter as possible.</p>

Designated Area	Yarding Requirements or Limitations
<u>Tethered Assist</u> <u>Units</u> 17-5, 20-5, 21-13, 23-7, 26-7	<p>Yarding shall be done using a forwarder that will fully suspend logs from the ground during in haul. Forwarders shall be equipped with a synchronized winch system capable of reaching 1,800 feet while tethered. The winch system shall be capable of passing through a block mid-span to keep the forwarder perpendicular to the contours where possible.</p>

SAVAGE MURPH
SPECIAL PROVISIONS

<p style="text-align:center"><u>Tethered Assist</u> <u>Units Cont.</u></p> <p>17-5, 20-5, 21-13, 23-7, 26-7</p>	<p>Forwarder trails shall be spaced 60-75 feet apart on average at the tail end of the unit. Forwarder trails shall not exceed 12 feet in width and shall be covered with enough slash to minimize soil compaction and disturbance as approved by the Authorized Officer.</p> <p>On slopes over 35% where adverse yarding is occurring, the forwarder shall be tethered to prevent resource damage from rutting or slippage as approved by the Authorized Officer. On slopes over 50%, tethering is required by Oregon OSHA. In addition, a research variance form must be obtained by Oregon OSHA prior to operations.</p> <p>Forwarder trails will be located perpendicular to the contours where possible. Forwarder trails shall not exceed 12 % side slope.</p> <p>Forwarders shall be rubber-tired, capable of minimal ground pressure, and equipped with four (4) axles. Steel tracks and/or chains for bogie wheels may be required to minimize ground pressure.</p> <p>Prior to falling any timber in the unit, all anchor trees and/or intermediate block trees shall be pre-designated by the Purchaser and approved by the Authorized Officer.</p> <p>Landing size shall not exceed one-quarter ($\frac{1}{4}$) acre, shall be located along existing roads, temporary routes, and/or forwarder trails within unit boundaries where possible, and shall be approved by the Authorized Officer. Design landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads.</p> <p>Directional falling to lead and away from streams, unit boundaries, and resource buffers shown on Exhibit A will be required. Manual falling of oversized trees may be required.</p> <p>Forwarder trails that are hydrologically connected; or are perpendicular to and within one hundred eighty-five (185) feet of streams shown on Exhibit A shall be water-barred and shall have additional slash placed over them,</p>
---	---

SAVAGE MURPH
SPECIAL PROVISIONS

	as directed by the Authorized Officer, prior to winter rain events to protect water quality.
--	--

- (7) L-14 No falling, yarding, or loading is permitted in or through the Reserve Area, unless otherwise approved by the Authorized Officer.
- (8) L-14 No falling, yarding or loading is permitted in or through the streams, seeps, wetlands, or resource buffers shown on Exhibit A.
- (9) L-19 No mechanical ground based harvesting, ground based yarding, skid trail and landing rehabilitation, machine piling, road and temporary route construction, road and temporary route reconstruction, temporary route decommissioning, or non-emergency road maintenance shall be conducted in the sale area units between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Winterization of temporary routes greater than 0.25 miles in length shall occur prior to October 15 of the same operating year. Rehabilitation of temporary routes greater than 0.25 miles in length shall not occur until after pile burning is complete, prior to October 15. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. The use of slash mats in forwarder trails shall be considered in the waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
- (10) L-19 No haul shall be conducted in the Contract Area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If the Authorized Officer determines that hauling would not result in road damage or the transport of sediment to nearby stream channels based on soil moisture conditions or rain events, Contracting Officer may approve a conditional waiver for hauling. If soil moisture conditions or rain events are anticipated to cause impacts to roads or stream water quality resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
- (11) L-20 No tree felling, yarding, burning, heavy equipment use or muffled blasting within units 17-5 and 20-5 shown on Exhibit A shall be conducted between March 1 and June 30 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from Northern Spotted Owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that

SAVAGE MURPH
SPECIAL PROVISIONS

Northern Spotted Owl nesting and/or fledging activities are not occurring during the time of harvest.

- (12) L-22 During logging operations, the Purchaser shall keep the 37-5-14.0 and 37-4-4.1 road, where it passes through the contract area, clear of trees, rock, dirt, and other debris so far as is practicable. The road shall not be blocked by such operations for more than 30 minutes.
- (13) L-24 Before cutting and removing any trees necessary to facilitate logging in the Harvest Area shown on Exhibit A, the Purchaser shall identify the location of the skid and/or forwarder trails, anchor, intermediate block, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:
- (a) All skid and/or forwarder trails 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 Contracting Officer, the width of each skid road and/or forwarder trail shall be limited to twelve (12) feet.
- (b) The Purchaser may immediately cut and remove additional timber to clear skid and/or forwarder trails; and provide anchor and intermediate block trees; and clear danger trees when the trees have been marked with pink paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.(b). of the contract or sufficient bonding has been provided in accordance with Section 3.(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 Section 9 of the contract; or, the Authorized Officer determines that the species of trees are not listed in Exhibit B of this contract shall be appraised and sold

SAVAGE MURPH
SPECIAL PROVISIONS

by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.

- (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.
 - (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.
 - (f) The Government may reserve trees previously designated for cutting and removal by blacking out blue paint, and/or applying orange or yellow 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 prescriptions. This may include the replacement of trees damaged by storm events, or insects or disease. 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.
- (14) 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 in the Contract Area. Purchaser has all responsibility for compliance with safety requirements for Purchaser's employees, contractors and subcontractors.

SAVAGE MURPH
SPECIAL PROVISIONS

In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified. If the cost of such contract modification is of a substantial nature (\$2,000.00 or more), the Purchaser may request, in writing, an adjustment in the Total Purchase Price specified in Section 2 of the timber sale contract, as amended, to compensate for the changed conditions.

Unless otherwise specified in writing, when operations are in progress adjacent to or on roads and/or trails in the harvest unit area, Purchaser shall furnish, install, and maintain all temporary traffic controls that provide the road or trail user with adequate warning of and protection from hazardous or potentially hazardous conditions associated with its operations. Purchaser shall prepare a Traffic Control Plan, which the Purchaser has determined is compliant with state and local OSHA and Transportation standards no later than the pre-work meeting and prior to commencing operations. Traffic control devices shall be appropriate to current operating and/or weather conditions and shall be covered or removed when not needed., Flagmen and devices shall be as specified in state OSHA and Transportation standards for logging roads or the "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD) published by the U.S. Department of Transportation - Federal Highway Administration. Included in the Traffic Control Plan, Purchaser shall note traffic control device locations on a Purchaser produced copy of the contract Exhibit "A" Map.

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

- (1) R-1: The Purchaser shall construct, improve, renovate, and/or decommission all roads, structures, and temporary routes listed for use under this contract in accordance with the plans and specifications shown on Exhibits C and D, which is attached hereto and made a part hereof.
- (2) R-1a: Any required renovation of roads and structures shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.
- (3) R-1b: The Purchaser shall construct, reconstruct, use, and decommission temporary routes by October 15th of the same respective operating season.
- (4) R-1c: The Purchaser shall not commence work on road renovation and reconstruction until receipt of written notice to do so from the Authorized Officer. Work shall commence no later than 5 days after such notice, and shall be completed within 1 year after such notice.

SAVAGE MURPH
SPECIAL PROVISIONS

- (5) R-2: The Purchaser is authorized to use the roads listed below and shown on Exhibits C and D for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 42(B)(6), Section 42(B)(9), and Section 42(B)(10). Any road listed on Exhibit C and D and requiring construction, improvement, or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the construction, improvement, or renovation from the Contracting Officer. The Purchaser shall pay current Bureau of Land Management maintenance and rockwear fees for the sale of additional timber under modification to the contract.

Road No. and Segment	Length in Miles	Road Control	Surface Type	Maintenance Responsibility
37-5-1.0(A-B1)	1.32	BLM	BST	Purchaser
37-5-1.0(B2-C)	2.08	BLM	ASC	Purchaser
37-5-14.0(A)	0.44	BLM	ASC	Purchaser
37-5-14.0(B)	0.55	MTI	ASC	Purchaser
37-5-14.0(C)	0.77	BLM	ASC	Purchaser
37-5-23.1	0.92	BLM	NAT	Purchaser
37-5-14.2	0.24	BLM	NAT	Purchaser
37-4-4.0(A)	0.11	BLM	ASC	Purchaser
37-4-4.1(A-D)	4.54	BLM	ASC	Purchaser
37-4-17.3	0.03	BLM	NAT	Purchaser
37-4-17.4	0.21	BLM	NAT	Purchaser
37-4-9.1(A1-A3)	0.77	BLM	ASC	Purchaser
37-4-17.2	0.64	BLM	NAT	Purchaser
37-4-15.0 (A)	1.12	BLM	ASC	Purchaser
37-4-15.0 (B)	0.06	AP Timber	ASC	Purchaser
37-4-15.0(C1-C2)	1.87	BLM	ASC	Purchaser
Total	15.67			

- (6) R-2b: The Purchaser shall pay the Government a road rockwear fee of **two thousand five hundred sixty six and 82/100 dollars (\$2,566.62)** for the transportation of timber included in this contract price over said roads. The above rockwear amount is for the use of 15.67 miles of road or less. The total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), therefore the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligations.

SAVAGE MURPH
SPECIAL PROVISIONS

- (7) R-2e: The Contracting Officer may at any time, by written notice, terminate the Purchaser's operator road maintenance obligations and require instead payment of current Bureau of Land Management road maintenance and rockwear fees for the particular surface type of the roads involved. These fees will be applied to the remaining contract volume on the sale area, as determined by the Authorized Officer, to be transported over the roads listed in Section 42(B)(5). If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligations.
- (8) R-2f: The Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D, Road Maintenance Specifications, of this contract, which is attached hereto and made a part hereof.
- (9) R-3: In the use of Road No. 37-5-14.0(B), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660 dated October 5th, 1962, between the United States of America and **Murphy Timber Investments (MTI)**. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Payment of a road rockwear obligation of **one hundred seventy two and 26/100 dollars (\$172.26)** to Murphy Timber Investments, payable at the time indicated in the License Agreement.
- (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (c) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
- (10) R-3: In the use of Road No. 37-4-15.0 (B), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660 dated October 5th, 1962, between the United States of America and **AP Timber, LLC (Hancock)**. This document is available for inspection at the Medford District Office.

These conditions include:

SAVAGE MURPH
SPECIAL PROVISIONS

- (a) Payment of a road rockwear obligation of seven and 22/100 dollars (\$7.42) to AP Timber (Hancock), payable at the time indicated in the License Agreement.
 - (b) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
 - (c) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
- (11) R-3c: The Purchaser agrees that if they elect to use any other private road(s), which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, the Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.
- (12) R-4: The Purchaser shall be required to secure written approval to use vehicles or haul forest products and equipment over Government owned or controlled roads when such vehicles or equipment exceeds the maximum allowable weights or dimensions established by the State for vehicles operating without a permit or if vehicles meet allowable non-permitted State vehicle weights, but the haul route crosses a structure or segment of road that is posted for reduced weights. The Purchaser agrees to abide by any special requirements included in said written approval.

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

Details shall include:

- A. Axle weights when fully loaded.
- B. Axle spacing.
- C. Transverse wheel spacing.
- D. Tire size.
- E. Outside width of vehicle.
- F. Operating speed.
- G. Frequency of use.
- H. Special features (e.g., running tracks, overhang loads, etc.).

The Purchaser shall be responsible for repair of any damage to roads or structures

SAVAGE MURPH
SPECIAL PROVISIONS

caused by the use of overweight or over-dimension vehicles or equipment: (1) without written approval; (2) in violation of the conditions of a written approval; or, (3) in a negligent manner.

The amount of actual damage shall be determined by the Authorized Officer following a technical inspection and evaluation.

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

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

(C) ENVIRONMENTAL PROTECTION

- (1) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:
- (a) In order to prevent the potential spread of noxious weeds into the Medford District BLM, the operator would be required to clean all logging, construction, chipping, grinding, shredding, rock crushing, and transportation equipment prior to entry on BLM lands.
 - (b) Cleaning shall be defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds into BLM lands. Cleaning prior to entry onto BLM lands may be accomplished by using a pressure hose.
 - (c) Only equipment inspected by the BLM would be allowed to operate within the Analysis Area. All subsequent move-ins of equipment as described above shall be treated the same as the initial move-in.
 - (d) Prior to initial move-in of any equipment, and all subsequent move-ins, the operator shall make the equipment available for BLM inspection at an agreed upon location off Federal lands.
 - (e) Equipment would be visually inspected by the Authorized Officer to verify that the equipment has been reasonably cleaned.

SAVAGE MURPH
SPECIAL PROVISIONS

- (2) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall only use certified weed-free hay and native grass seed species approved by the Authorized Officer for rehabilitation activities. All seeding shall be contingent upon seed availability.
- (3) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan for all hazardous substances to be used in the contract area, as directed by the Authorized Officer. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements.
- (4) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not refuel equipment, store, or cause to have stored, any fuel or other petroleum products within one hundred fifty (150) feet of all riparian management or wet areas. All Petroleum products shall be stored in durable containers and located so that any accidental releases will be contained and not drain into any stream system. Hydraulic fluid and fuel lines on heavy mechanized equipment would be in proper working condition in order to minimize potential for leakage into streams. Absorbent materials shall be onsite to allow for immediate containment of any accidental spills. Spilled fuel and oil shall be cleaned up and disposed of at an approved disposal site.
- (5) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not locate new landings in areas that contribute eroded fines to streams, wet areas, dry draws and swales. If these landing locations cannot be avoided, ensure that properly installed sediment control measures are placed and maintained, as needed, to keep eroded material onsite.
- (6) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use when utilizing landings, skid tails, forwarder trails or temp routes that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines. Any project-related activity would be suspended if conditions develop that cause a potential for sediment laden runoff to enter a wetland, floodplain or waters of the state. Operations can resume when sediment control devices are in place and conditions allow turbidity standards to be met.
- (7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, prior to October 15 of the same operating season, winterize temporary routes, landings, skid trails, forwarder trails and other areas of exposed soils by properly installing and/or using water bars, berms, sediment basins, gravel pads, hay bales,

SAVAGE MURPH
SPECIAL PROVISIONS

small dense woody debris, seeding and/or mulching, to reduce sediment runoff and divert runoff water away from stream channels, headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes as directed by the Authorized Officer.

- (8) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall as directed by the Authorized Officer rehabilitate all ground based skid trails utilized within one hundred eighty five (185) feet of streams, all forwarder trails shown on Exhibit A, all temporary routes, and all landings outside of the road prism by one of the following methods:
- (a) If the Authorized Officer deems ripping will not cause unacceptable damage to the root systems of residual trees the Purchaser shall discontinuously subsoil with winged ripper teeth, simultaneously water bar, seed, mulch, and barricade.
 - 1. Use a minimum 200 flywheel horsepower tractor with mounted rippers having shanks and teeth consistent with drawings and specifications shown on Exhibit R of this contract, which, is attached hereto and made a part hereof.
 - 2. Rip to a depth of twelve (12) inches, and no further than thirty six (36) inches apart.
 - 3. Ripping will occur prior to the end of the operating season.
 - 4. Any step landings shall be re-contoured following use, prior to the end of the operating season.
 - (b) If the Authorized Officer deems ripping will cause an unacceptable amount of damage to the root systems of residual trees the Purchaser shall scarify to a depth of up to six (6) inches and simultaneously water bar, seed, mulch, and barricade.

Rehabilitation of temporary routes greater than 0.25 miles in length (unit 20-5) shall not occur until after pile burning is complete, prior to October 15.

- (9) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall place material removed during excavation in locations where it cannot enter streams or other water bodies.

SAVAGE MURPH
SPECIAL PROVISIONS

- (10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, upon completion of yarding, pull vegetation over and block skid and/or forwarder trails to keep unauthorized off-highway vehicles (OHV) from utilizing the skid and/or forwarder trails.
- (11) 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 C6-1 which is attached hereto and made a part hereof.
- (12) E-3 The Purchaser shall immediately discontinue specified construction or 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) when, in order to comply with the Endangered Species Act, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - (c) 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;
 - (d) 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;
 - (e) 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;
 - (f) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
 - 1. species have been discovered which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;

SAVAGE MURPH
SPECIAL PROVISIONS

2. when, in order to protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

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

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

SAVAGE MURPH
SPECIAL PROVISIONS

approximately equal to the expenses associated with the timber for which payment is due.

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

The Contracting Officer may determine that it is necessary to terminate the cutting and removal rights under the contract in order to comply with the Endangered Species Act, protect species that have been discovered which were identified for protection through survey and manage and/or protection buffer 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, 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.

SAVAGE MURPH
SPECIAL PROVISIONS

- (13) E-5 The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area between March 1 and September 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting northern spotted owls (owls) may not be allowed during this time period.

Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls are nesting within 0.25 miles of Units 17-5 and 20-5. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations (in writing). Without this approval, such operations are prohibited from March 1 through June 30 of each year.

- (14) E-6 In Harvest Unit 17-5 and 20-5 shown on Exhibit A, no tree felling, yarding, burning, heavy equipment use or muffled blasting shall be conducted from March 1 to June 30 of the same calendar year, both days inclusive.
- (a) This is a seasonal restriction to protect northern spotted owls. The Purchaser may, at their own expense and risk, conduct surveys in order to potentially waive or modify this restriction.
- (b) If the Purchaser elects to conduct surveys, the Purchaser must notify the Authorized Officer by February 15 of any calendar year that the Purchaser desires to conduct such surveys. Surveys must be completed to strict protocols and procedures that will be provided by the Authorized Officer. Survey plans and results must be approved by the Authorized Officer prior to issuance of any modification or reduction of the restrictions. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations (in writing) or depending upon the results, surveys may result in the Contracting Officer invoking Section 42(C)(12) including suspension of operations or increasing restrictions for the calendar year.

(D) MISCELLANEOUS PROVISIONS

- (1) M-2 The Government, at its option, may administratively check scale any portion of the timber removed from the contract area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to make such contract timber available for such scaling at a location or locations to be approved in writing by the Authorized Officer. At the approved location or locations, the Purchaser shall provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, place logs in

SAVAGE MURPH
SPECIAL PROVISIONS

a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively 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 nine hundred ninety-one dollars (\$991.00). In the event that only a portion of the contract timber is scaled, the purchase price shall be reduced by that portion of nine hundred ninety-one dollars (\$991.00), 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. Scaling shall be conducted in accordance with the Northwest Log Rules Eastside Log Scaling Handbook, as amended, or supplemented by BLM before the first advertisement date of the sale, by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to the Purchaser upon request.

(E) FIRE PREVENTION

- (1) F-1 Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer.
- (2) F-1a Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall comply with the following provisions:
 - (a) At least three (3) days prior to the operation of power-driven equipment during any operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer and the State of Oregon Department of Forestry.
 - (b) Provide and maintain on the contract area in good working order, and immediately available, the following equipment for use during closed fire season or periods of fire danger:
 1. F-2a Fire fighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever employees are working on the contract area. All fire fighting tools shall be kept in a sturdily constructed box which shall be painted red and lettered on the front or top in large letters, "For Fire Only." The box shall

SAVAGE MURPH
SPECIAL PROVISIONS

have a hinged lid and a hasp by which the lid can be sealed. One box may serve two landings not over six hundred (600) feet apart. When filled, the box shall not weigh over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and have sharp cutting edges. There shall be not less than four (4) tools in each box nor less than one (1) tool for each employee working on the contract area. Three-fourths (3/4) of all fire tools shall be shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire.

2. F-2b At each landing or such other place as the Authorized Officer shall designate during periods of operation one (1) tank truck of three hundred (300) gallons or more capacity with a minimum of five hundred (500) feet of 1½ inch hose (must be adequate length to reach 200 feet beyond active work sites), six (6) 1½ inch wyes, six (6) 1½ inch to 1 inch reducers, three (3) 1½ inch nozzles and three (3) 1 inch nozzles. One (1) three hundred (300) gallon fire engine may be substituted for each required 300 gallon tank truck, provided that the total capability to pump and deliver water remains unchanged. Each fire engine / tank truck shall be equipped with a pump capable of delivering a minimum of forty (40) gallons per minute (gpm) water flow at one hundred fifty (150) pounds per square inch (psi) engine pressure through fifty (50) feet of 1½ inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable. All equipment shall be acceptable to and approved by the Authorized Officer and shall conform to the standards set forth in Oregon Revised Statutes 477.645 through 477.670. All hose couplings shall have the standard thread adopted by the BLM (1 ½ inches National Hose Thread (NH), 1 inch National Pipe Straight Hose Thread (NPSH) or be provided with suitable adapters. At the close of each working day, all bulldozers and fire/tank trucks shall be filled with fuel and made ready for immediate use. All fire/tank trucks shall be filled with water and made available for immediate use.
3. F-2c Serviceable cell phone or radio equipment able to provide prompt and reliable communication between the contract area, Medford BLM District Office, and Oregon Department of Forestry. Such communication shall be available during periods of operation including the time watchman service is required.
4. F-2d A pair of headlights capable of being quickly attached to each bulldozer used on the contract area. The headlights shall be adequate

SAVAGE MURPH
SPECIAL PROVISIONS

to provide illumination sufficient to allow use of the bulldozers for fire fighting and construction of fire lines at night.

5. F-2f A headlamp for each employee in the woods crew adequate to provide sufficient illumination for night firefighting. A headlight shall be of the type that can be fastened to the head so as to allow independent use of the hands. At least one extra set of batteries shall be provided for each such headlight.
 6. F-2f Two (2) back-pack pumps at each landing and one (1) at each tail block, all to be kept full of water and in good operating condition.
 7. F-2g A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Authorized Officer and a size 0 or larger shovel shall be carried during the closed fire season or periods of fire danger by each falling crew and each buckner using a power saw on the contract area. Such fire extinguisher shall be filled and in effective operating condition and shall at all times be immediately available to the operator when the saw is being fueled or the motor of the saw is running. Any fueling of a power saw shall be done in an area which has first been cleared of all flammable material. Power saws shall be moved at least twenty (20) feet from the place of fueling before the engine is started. Each power saw shall be equipped with an exhaust system and a spark arresting device which are of types approved by the Authorized Officer.
- (c) F-5 Where blocks and cables are used on the contract area during periods of fire danger, the Purchaser shall remove all flammable material at least ten (10) feet from the place where the tail or any other block will hang when the cable is tight. Such clearings shall be inspected periodically by the Purchaser and shall be kept free of flammable material.
- (3) F-9 During Oregon Department of Forestry regulated use closure, no smoking shall be permitted outside of closed vehicles.

(F) SLASH DISPOSAL

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

SAVAGE MURPH
SPECIAL PROVISIONS

for performance of the following hazard reduction measures required by this contract:

- (a) SD-1a MACHINE PILE AND BURN all slash located in unit 14-5 and the ground based accessible portion of units 21-13 and 23-7 shown on Exhibit S. Machine pile and burn all slash located within twenty-five (25) feet of where roads 37-4-4.1 and 37-4-17.4 coincide with harvest unit boundaries. Machine pile and burn all slash located within twenty-five (25) feet of 37-5-23.1 road and unit 20-5 proposed temporary route. Slash shall be piled by machine. Piling shall be completed in accordance with Exhibit S as directed by the Authorized Officer. Finished piles shall be tight and free of earth.
1. The BLM will prepare a fire burn plan. The purchaser shall obtain smoke clearance before ignition of piles.
 2. Slash includes woody material (brush, limbs, tops, unmerchantable stems, or chunks severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract.
 3. All equipment shall be approved by the Authorized Officer. Piling shall be accomplished using a track mounted hydraulic excavator or equivalent with at least a five (5) tooth brush rake. The excavator shall have a minimum reach of twenty (20) feet. The excavator shall be equipped with a hydraulic thumb or rotating controllable grapple head. Finished piles shall be tight and free of dirt and other non woody debris.
 4. Machine piling operations are limited to existing skid or forwarder trails; to slopes less than thirty five (35) percent slope in unit 14-5; and to seasonal restrictions described in Sec. 42(A)(12)(I-19). Machine piling on forwarder trails is limited to fifty (50) percent slope in unit 21-13, shown on Exhibit S.
 5. Machine piles shall be constructed as compactly as possible. There should be an adequate supply of fine fuels located within and under the covered area of the pile to ensure ignition of the larger fuels. Completed piles shall be free of projecting limbs or slash which would interfere with adequate covering of the piles.
 6. Machine piles shall be adequately covered with a cap of ten (10) feet by ten (10) feet of four (4) millimeter black polyethylene plastic. The plastic shall be held in place with woody debris or tied with rope

SAVAGE MURPH
SPECIAL PROVISIONS

or twine to ensure coverage. Coverage shall be completed when piles are constructed, or as directed by the Authorized Officer.

7. All areas that are identified in Exhibit A for ground based yarding that cannot be machine piled would be hand piled.
8. Machine piles will be burned within twenty-four (24) months of harvest completion.
9. Machine piles shall not be placed within fifteen (15) feet of snags, stumps, reserve trees or large woody debris.
10. Machine piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
11. The purchaser shall burn one hundred (100) percent of machine piles with a minimum consumption of ninety (90) percent.
12. The Purchaser is required to furnish the fuel and equipment for machine pile burning.

(b) SD-1b HAND PILE AND BURN all slash located in units 17-5. Hand pile and burn all slash in portion of unit 21-13, shown on Exhibit S. Slash shall be piled by hand. Piling shall be completed in accordance with Exhibit S as directed by the Authorized Officer. Finished piles shall be tight and free of earth.

1. The BLM will prepare a fire burn plan. The purchaser shall obtain smoke clearance before ignition of piles.
2. Slash includes woody material (brush, limbs, tops, non-merchantable stems, or chunks severed, uprooted, or broken from live plants) as a result of Purchaser's operations under the terms of this contract.
3. Hand pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds two (2) feet in length, or as directed by the Authorized Officer
4. Hand piles shall be constructed as compactly as possible. There should be an adequate supply of fine fuels located within and under the covered area of the pile to ensure ignition of the larger fuels. Completed piles shall be free of projecting limbs or slash which would interfere with adequate covering of the piles.

SAVAGE MURPH
SPECIAL PROVISIONS

5. Hand piles shall be placed within unit boundaries, however, outside of wildlife buffers, roadways, turnouts, shoulders, or cut banks, No hand piles shall be located in any stream channel, down logs, stumps or within ten (10) feet of any other pile or trunk of the nearest reserve tree. No portion of the pile will be under the crown of any living tree. No piles shall be placed adjacent to or within twenty five (25) feet of unit boundaries.
 6. Hand piles shall be adequately covered with a minimum cap of five (5) feet by five (5) feet of four (4) millimeter black polyethylene plastic that is large enough to cover eighty (80) percent of the pile to ensure ignition. The plastic shall be held in place with woody debris or tied with rope or twine to ensure coverage. Coverage shall be completed when piles are constructed, or as directed by the Authorized Officer.
 7. Hand piles would not be constructed on roadways, turnouts, shoulders, or on the cut bank, unless authorized by the Authorized officer.
 8. Hand piles will be burned within eighteen (18) months of harvest completion.
 9. Hand piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 10. The purchaser shall burn ninety (100) percent of hand piles with ninety (90) percent consumption for satisfactory completion of treatment.
 11. The Purchaser is required to furnish the fuel and equipment for hand pile burning.
- (c) SD-1c LANDINGS Within twenty (20) feet of the edge of landings for unit 14-5, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than two (2) feet in length shall be piled within fourteen (14) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located off of the driving surface of roads and at least fifteen (15) feet from any Reserve Tree and/or as directed by the Authorized Officer.

Upon completion of landing piling, the Purchaser shall prepare the landing piles for burning by constructing a fireline by hand or machine

SAVAGE MURPH
SPECIAL PROVISIONS

approximately eighteen (18) inches wide and down to mineral soil around each pile to prevent escaped fire. Cover piles with large enough piece of four (4) millimeter thick black plastic to ensure a dry ignition spot, generally ten (10) foot by ten (10) foot. The Purchaser is required to furnish the covering materials. The timing of this covering work shall be in accordance with instructions from the Authorized Officer. If the structure of the landing piles will not permit adequate consumption of piled debris by burning, the Purchaser shall re-pile them at the direction of the Authorized Officer.

1. Landing piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 2. Landing piles will be burned within twenty-four (24) months of harvest completion.
 3. If purchaser elects to set aside pole/firewood decks and not put the material in piles, the purchaser will be required to remove decks before the expiration of cutting rights.
- (2) SD-2 Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and mop up assistance as required herein, and measures required in Sections 42(F)(1)(SD-1) and 42(F)(3)(SD-4). In accordance with written instruction to be issued by the Authorized Officer at least ten (10) days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at his own expense, the services of personnel and equipment on each unit as shown below.

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

(a) For Igniting and Burning Hand Pile Units 17-5 and 21-13

1. One (1) person to supervise crew and equipment operators, and to serve as Purchaser's representative.
2. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

SAVAGE MURPH
SPECIAL PROVISIONS

3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.
5. Ten (10) drip torches, Forester Sealtite, or equivalent.
6. Hand ignition with drip torches is required in pile burn units.
7. All ignition personnel will be directly supervised by a BLM representative.

(b) For Mop-up of Hand Pile Units 17-5 and 21-13

1. One (1) person to supervise crew and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or other scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

(c) For Igniting and Burning Machine Pile Units 14-5, 17-5, 20-5, 21-13 and 23-7

SAVAGE MURPH
SPECIAL PROVISIONS

1. One (1) person to supervise crew and equipment operators, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.
5. Six (6) drip torches, Forester Sealtite, or equivalent.
6. Hand ignition with drip torches is required in underburn units.

(d) Mop-up of Machine Pile Units 14-5, 17-5, 20-5, 21-13 and 23-7

1. One (1) person to supervise crew and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant

SAVAGE MURPH
SPECIAL PROVISIONS

to those statutes. Truck and tank shall be in good working order and shall be filled with water.

(e) For Igniting and Burning Landing Piles in Units 14-5

1. One (1) person to supervise crew and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

(f) For Mop-up Landing Piles in Units 14-5

1. One (1) person to supervise crew and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant

SAVAGE MURPH
SPECIAL PROVISIONS

to those statutes. Truck and tank shall be in good working order and shall be filled with water.

(g) For Igniting and Holding Underburn Unit 23-7

1. One (1) person to supervise crews and equipment operators, and to serve as Purchaser's representative.
2. Two (2) crews with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) tractor/dozer operator.
4. Three (3) tank truck drivers.
5. One (1) tractor (Caterpillar D6 or equivalent) equipped with straight solid blade.
6. Three (3) tank trucks. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck(s) and tank(s) shall be in good working order and shall be filled with water.
7. Sixteen (16) drip torches, Forester Sealtite, or equivalent.
8. Hand ignition with drip torches is required in underburn units.
9. All ignition personnel will be directly supervised by a BLM representative.

(h) For Mop-up of Underburn Unit 23-7

1. One (1) person to supervise crew and equipment operators, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis

SAVAGE MURPH
SPECIAL PROVISIONS

or other scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

3. One (1) tank truck driver.
4. One (1) tank truck. Each truck shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each truck shall be equipped with a mounted pump conforming to the standards set forth in ORS 477.645 through ORS 477.670 and any rule promulgated pursuant to those statutes. Truck and tank shall be in good working order and shall be filled with water.

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

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

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

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop up on each underburn unit shown on Exhibit S for six hundred forty (640) hours; on each hand/machine piled unit and landing decks, four hundred fifty (450) hours as directed by the Authorized Officer within a 10 days beginning 8:00 a.m. the day following completion of ignition in that unit or until released from such services by the Authorized Officer, whichever occurs first.

SAVAGE MURPH
SPECIAL PROVISIONS

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

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

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

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

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

- (3) SD-4 Logging Residue Reduction. In addition to the requirements of Secs. 15 and 25 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 Purchaser from liability for such hazard, the Purchaser shall remain responsible to the

SAVAGE MURPH
SPECIAL PROVISIONS

Government for performance of the following logging residue reduction and site preparation measures required by this contract:

- (a) Perform UNDERBURNING in units 23-7 as shown on Exhibit S.
1. Underburn units shall follow the Resource, Prescribed Fire Objectives and Constraints (Element 5 Objectives) for each underburn unit as outlined in Prescribed Fire Burn Plan and as directed by the Authorized Officer or BLM representative.
 2. Smoke clearance will be obtained the day prior to planned ignition for all burn units.
 3. Prescribed burning shall be conducted in a manner that will minimize damage to reserve trees, duff, soil, and to avoid loss of large/coarse woody debris and will be consistent with ecosystem management objectives out-lined in the burn plan.
 4. Firelines will be constructed by hand mineral soil to a minimum of eighteen (18) inches wide and a maximum of three (3) feet wide.
 5. Create a minimum fuel break (pullback) of ten (10) feet on the underburn side of the fire line and six (6) feet on the unburned side of the fire line by removing logging slash or live vegetation under eight (8) inches diameter at the large end or at eight (8) inch diameter at breast height.
 6. Slash shall be dispersed in a discontinuous pattern a minimum of fifteen (15) feet away from the fire line within or outside the unit boundary as directed by the Authorized Officer or BLM representative.
 7. Scatter all removed fuels and avoid concentrating the fuel. On sloping ground, fuel shall be scattered uphill or sidehill from the tree/snag. No removed fuel shall be below the tree/snag on a slope. On flat ground, any direction is acceptable.
 8. Fire lines shall be constructed within thirty (30) days of notification by the Authorized Officer. Water bars shall be constructed and maintained on the fire lines to the satisfaction of the Authorized Officer.
 9. The Purchaser is required to furnish the fuel and equipment for underburning.

SAVAGE MURPH
SPECIAL PROVISIONS

- 4) SD-5 The Purchaser shall perform logging residue reduction and site preparation work on approximately one hundred-seventeen (117) acres of harvest area located in or adjacent to Harvest Unit Nos.14-5, 17-5, 20-5, 21-13, 23-7 and 26-7 as shown on Exhibit A.

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

Treatment	Cost/Acre
Lop and Scatter	\$42.00
Selective Slashing	\$300.00
Handpile and Cover	\$325.00
Handpile Burn and Mop-up	\$42.00
Machine Pile and Cover	\$375.00
Machine Pile Burn and Mop-up	\$28.00
Machine Pile Landing Decks	\$100.00/Hour
Cover and Burn Landing Decks	\$56.00
Fire line Construction	\$.80/LF
Fuels Pullback	\$40.00
Underburning	\$225.00

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

Appraised Treatment	Acres	Cost/Acre	Total Cost Per Treatment
Handpile and Cover	54.5	\$325.00	\$17,712.50
Handpile Burn and Mop-up	54.5	\$42.00	\$2,289.00
Machine Pile and Cover	43	\$375.00	\$16,125.00
Machine Pile Burn and Mop-up	43	\$28.00	\$1,204.00

SAVAGE MURPH
SPECIAL PROVISIONS

Machine Pile Landing Decks	0.25	\$100.00/Hr	\$25.00
Cover and Burn Landing Decks	0.25	\$56.00	\$14.00
Fire line Construction	1,840 Linear Feet	\$.80/LF	\$1,472.00
Fuels Pullback	1	\$40.00	\$40.00
Underburning	21	\$225.00	\$4,725.00
Total Appraised Cost			\$43,606.50

- (c) The Total Purchase Price set forth in Section 2 shall be adjusted in a unilateral modification executed by the Contracting Officer by the amount that the total cost of the site preparation treatments designated pursuant to Section 42(F)(4)(SD-5)(a) differs from forty three thousand six hundred-six dollars and 50/100 (\$43,606.50) as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 42(F)(4)(SD-5)(a).
- (d) Handpile and handpile burning shall be done in accordance with Sections 42(F)(1)(b)(SD-1b) and 42(F)(2)(SD-2)(a&b), machine pile and machine pile burning shall be done in accordance with Sections 42(F)(1)(b)(SD-1c) and 42(F)(2)(SD-2)(c&d), machine pile and burn landing decks shall be done in accordance with Sections 42(F)(1)(d)(SD-1c) and 42(F)(2)(SD-2)(e&f), fire line construction shall be in accordance with Section 42(F)(3)(SD-4)(a), fuels pullback shall be done in accordance with Section 42(F)(3)(SD-4)(a), underburning and mop-up will be in accordance with Sections 42(F)(2)(SD-2)(g&h) and 42(F)(3)(SD-4)(a).

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

SAVAGE MURPH
SPECIAL PROVISIONS

(G) LOG EXPORTS

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

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

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

In the event the Purchaser elects to sell any or all of the timber sold under this contract in the form of unprocessed timber, the Purchaser shall require each party buying, exchanging, or receiving such timber to execute a Form 5460-16

SAVAGE MURPH
SPECIAL PROVISIONS

(Certificate as to Nonsubstitution and the Domestic Processing of Timber). The original of such certification shall be filed with the Authorized Officer. Additionally, when the other party is an affiliate of the Purchaser, the Purchaser will be required to update information under item (2) of Form 5450-17 (Export Determination) and file the form with the Authorized Officer.

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

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

Savage Murph T.S. Seasonal Restriction Matrix ORM07-TS-18-06

	Unrestricted Period
	Restricted To Dry Condition
	Restricted To Dry Condition Waiver Required
	Restricted Period (Spotted owl, may be waived with surveys)

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

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

Dry Condition Haul Waiver Required = Loading and hauling, and road maintenance (including blading of aggregate roads, rocking, and cross drain installation) would not occur on rocked or natural surface roads when water is flowing in the ditchlines or during any conditions that would result in any of the following: surface displacement such as rutting or ribbons; continuous mud splash or tire slide; fines being pumped through road surfacing from the subgrade and resulting in a layer of surface sludge; road drainage causing a visible increase in stream turbidities, or any condition that would result in water being chronically routed into tire tracks or away from designed road drainage during precipitation events. Hauling on natural surface or rocked roads would not resume for a minimum of 48 hours following any storm event that results in 1/2 inch or more precipitation within a 24 hour period, and until road surface is sufficiently dry to prevent any of the above conditions from reoccurring.

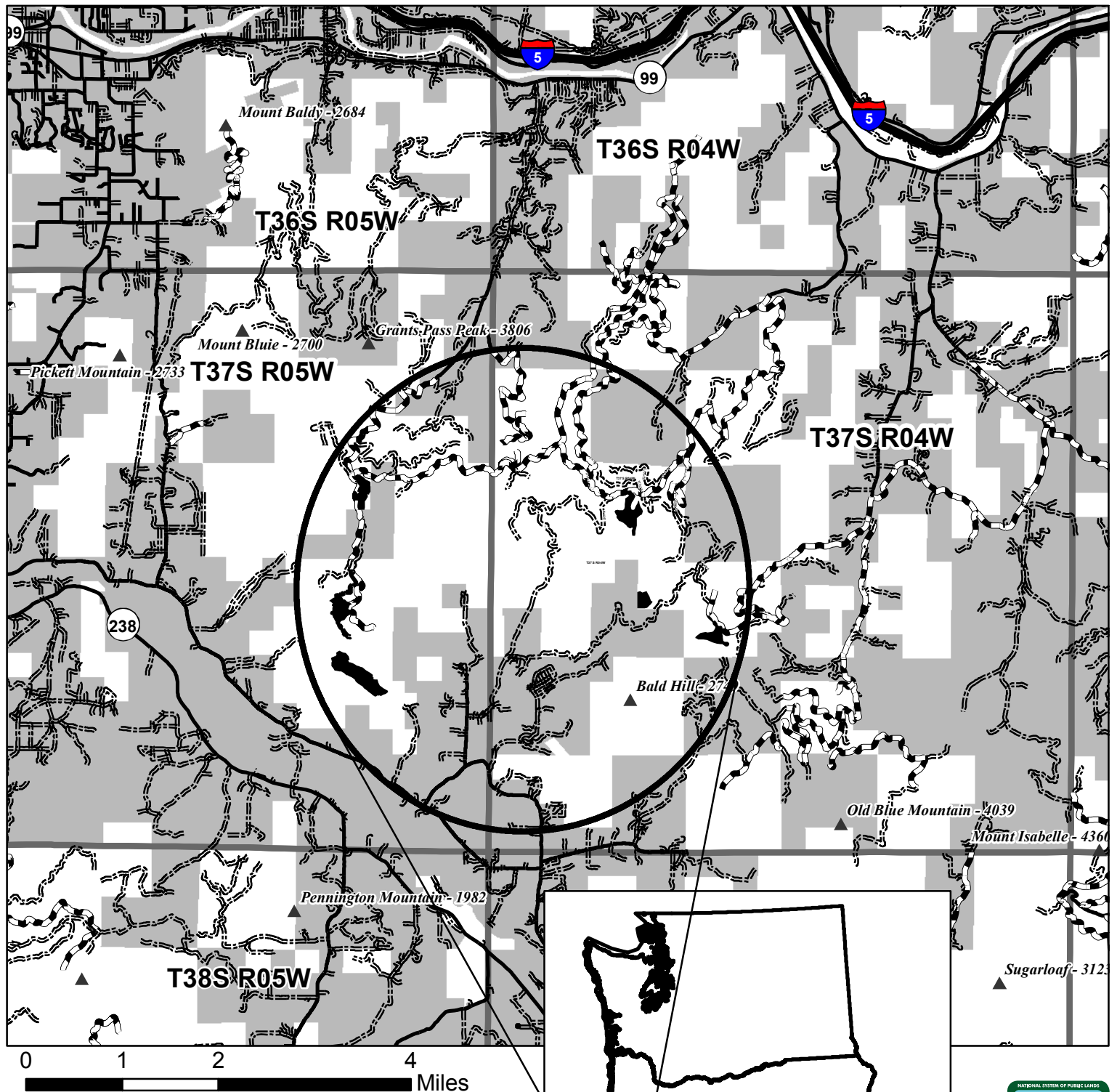
Ditch Maintenance= Is allowed during the dry season, generally May 15th through October 15th, or dry condition as stated above.

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

[illegible]

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-18-06
T. 37 S., R. 4 W., SEC.17, 20, 21 WILL. MER.
T. 37 S., R. 5 W., SEC. 14, 23, 26 WILL. MER.
SAVAGE MURPH TIMBER SALE
JACKSON AND JOSEPHINE COUNTIES

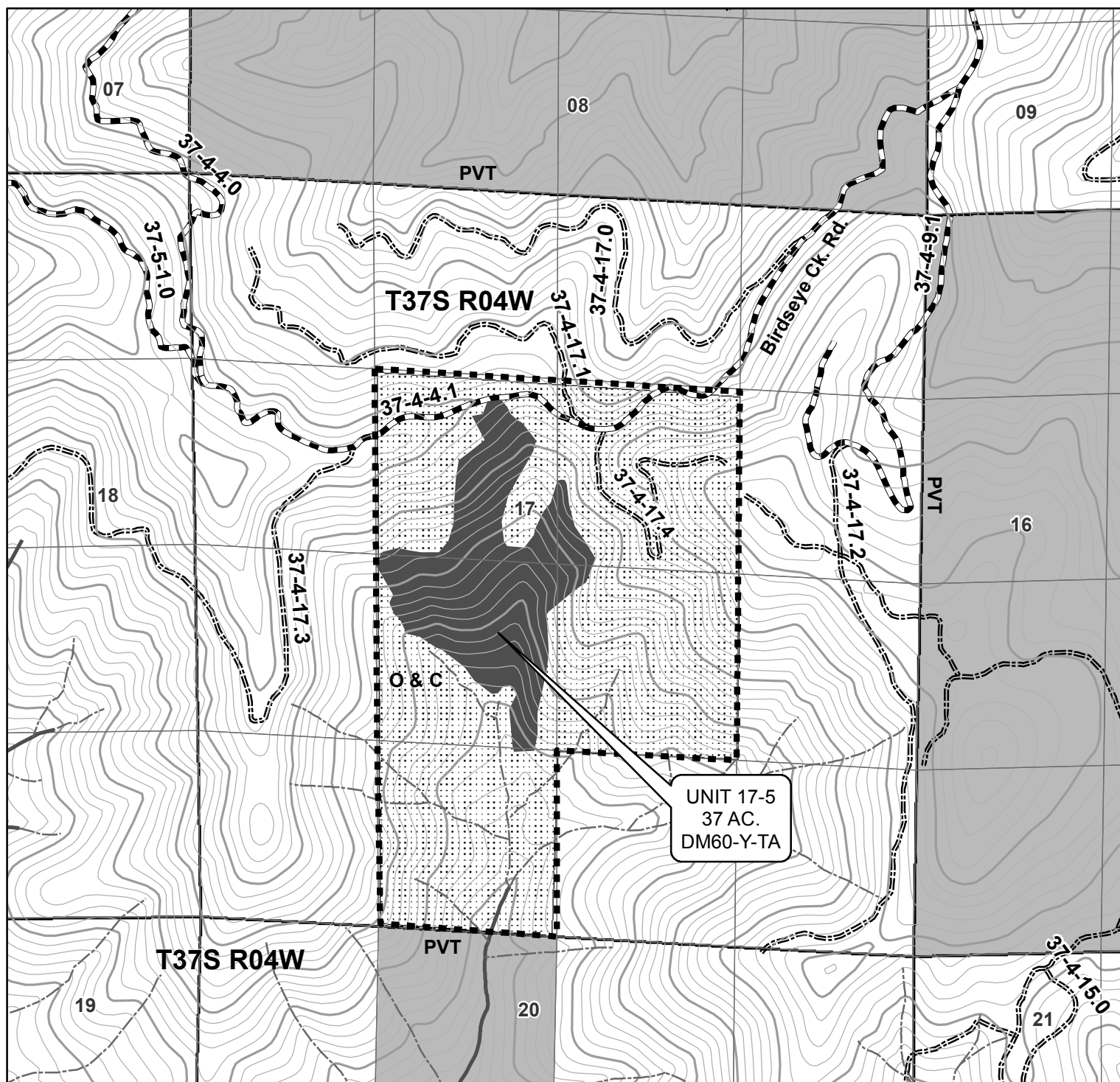
TIMBER SALE LOCATION MAP
PAGE 1 OF 1



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

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.

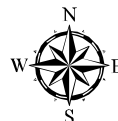




0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

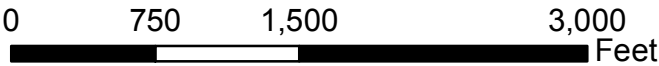
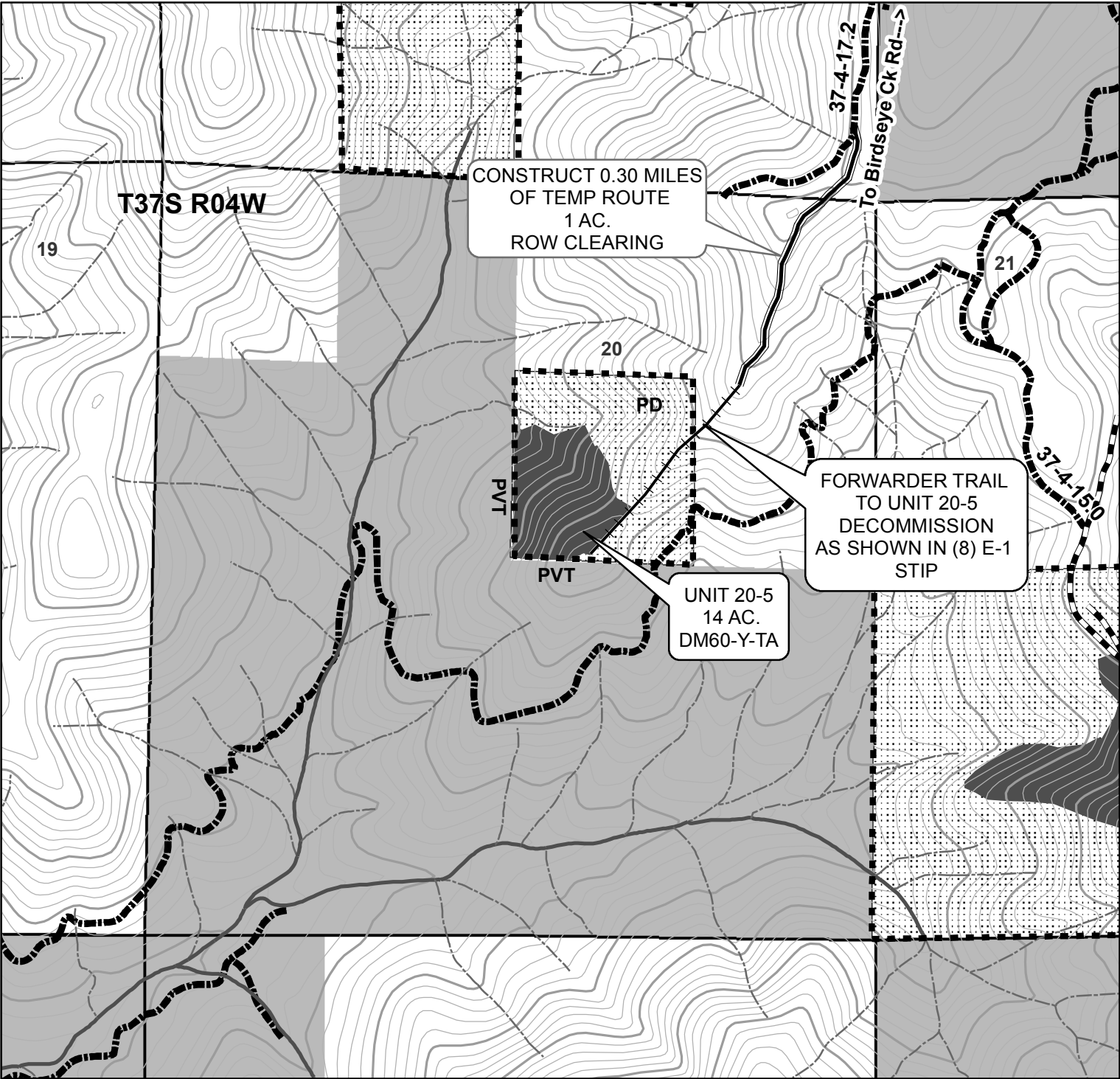


United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

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.

Map created by DES
5/7/18





1 inch = 1,000 feet



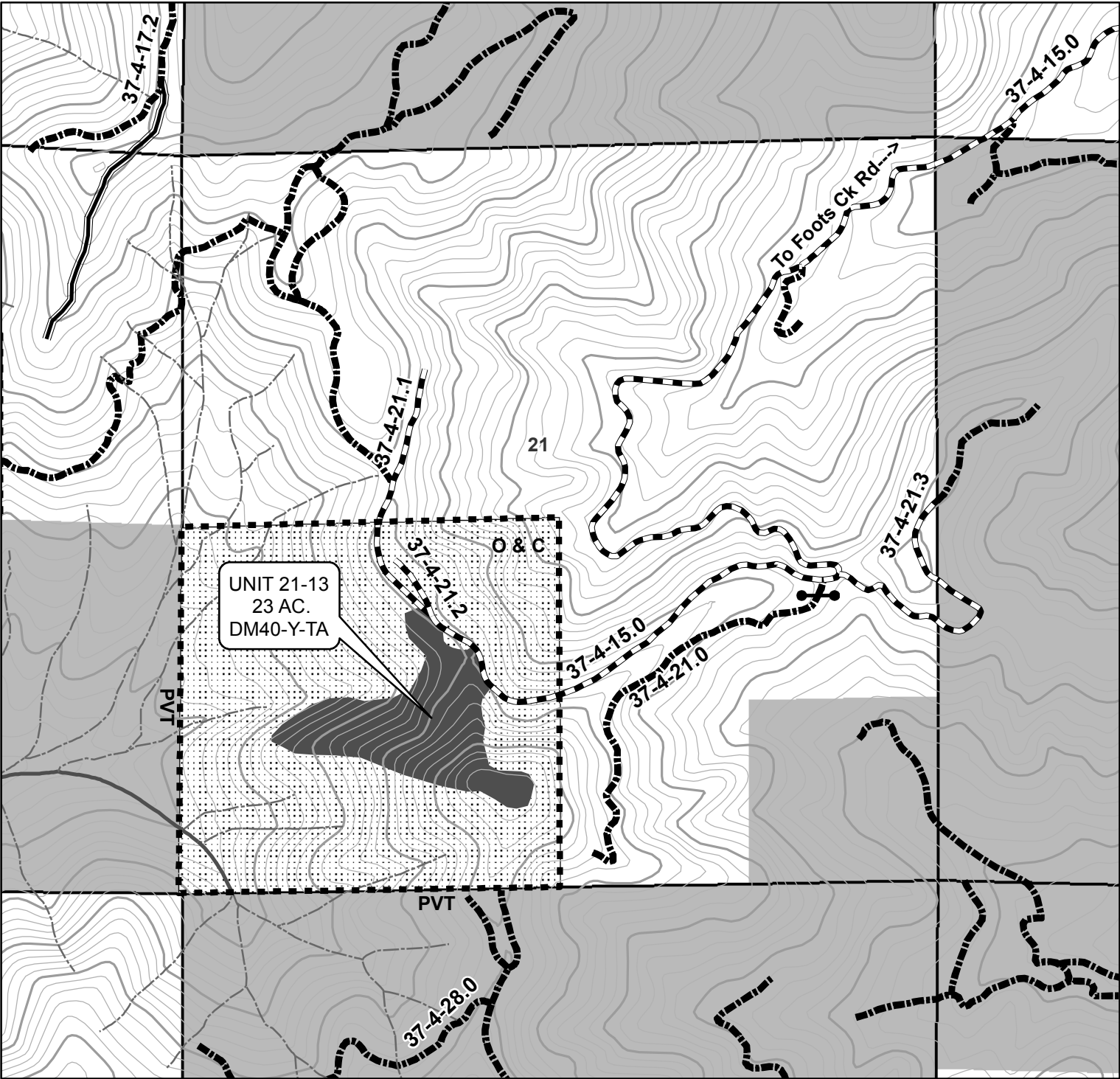
United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

40 FOOT CONTOUR INTERVAL

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.

Map created by DES
5/7/18





0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

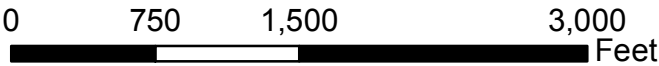
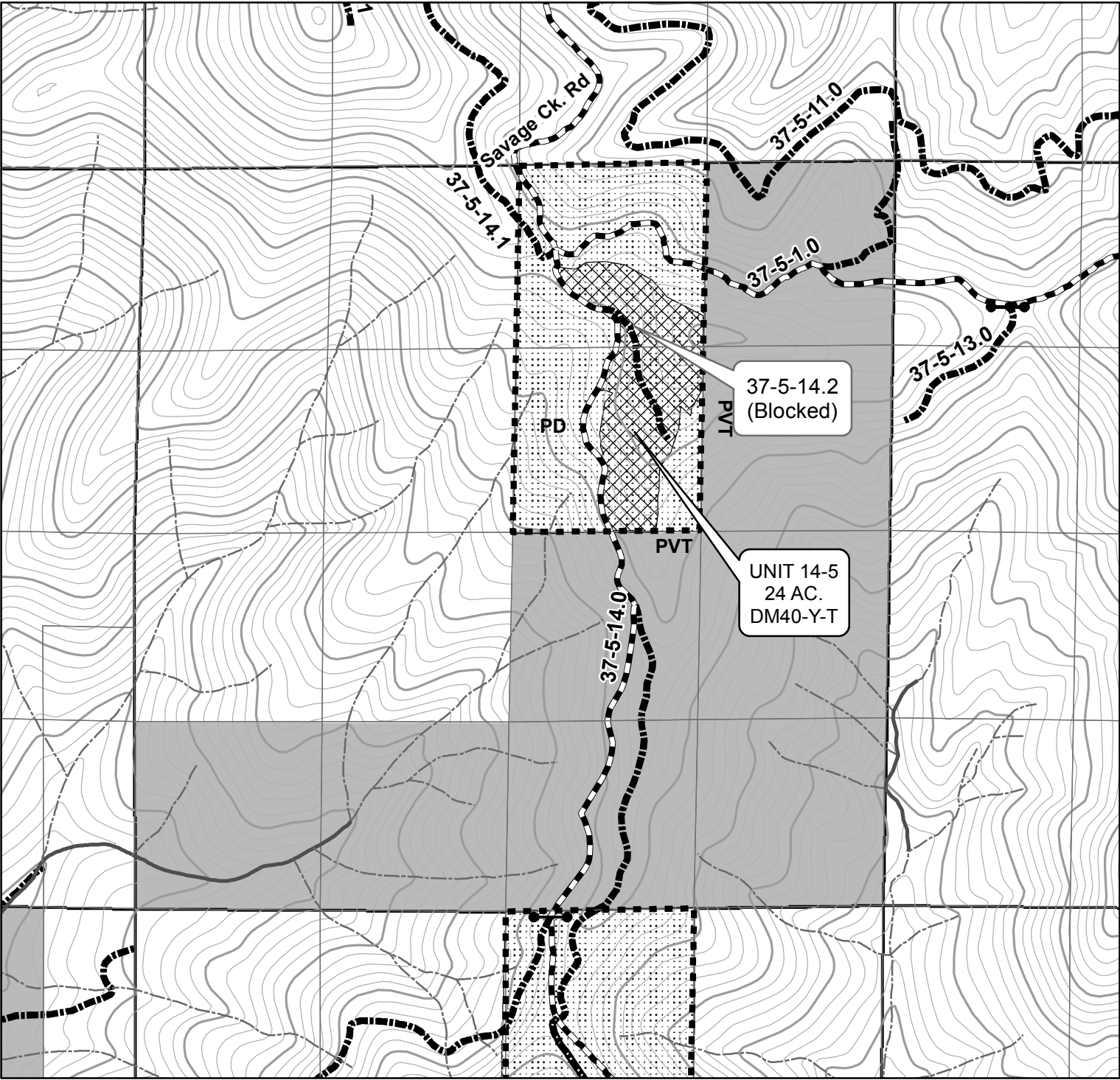
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

Map created by DES
5/7/18



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





1 inch = 1,000 feet



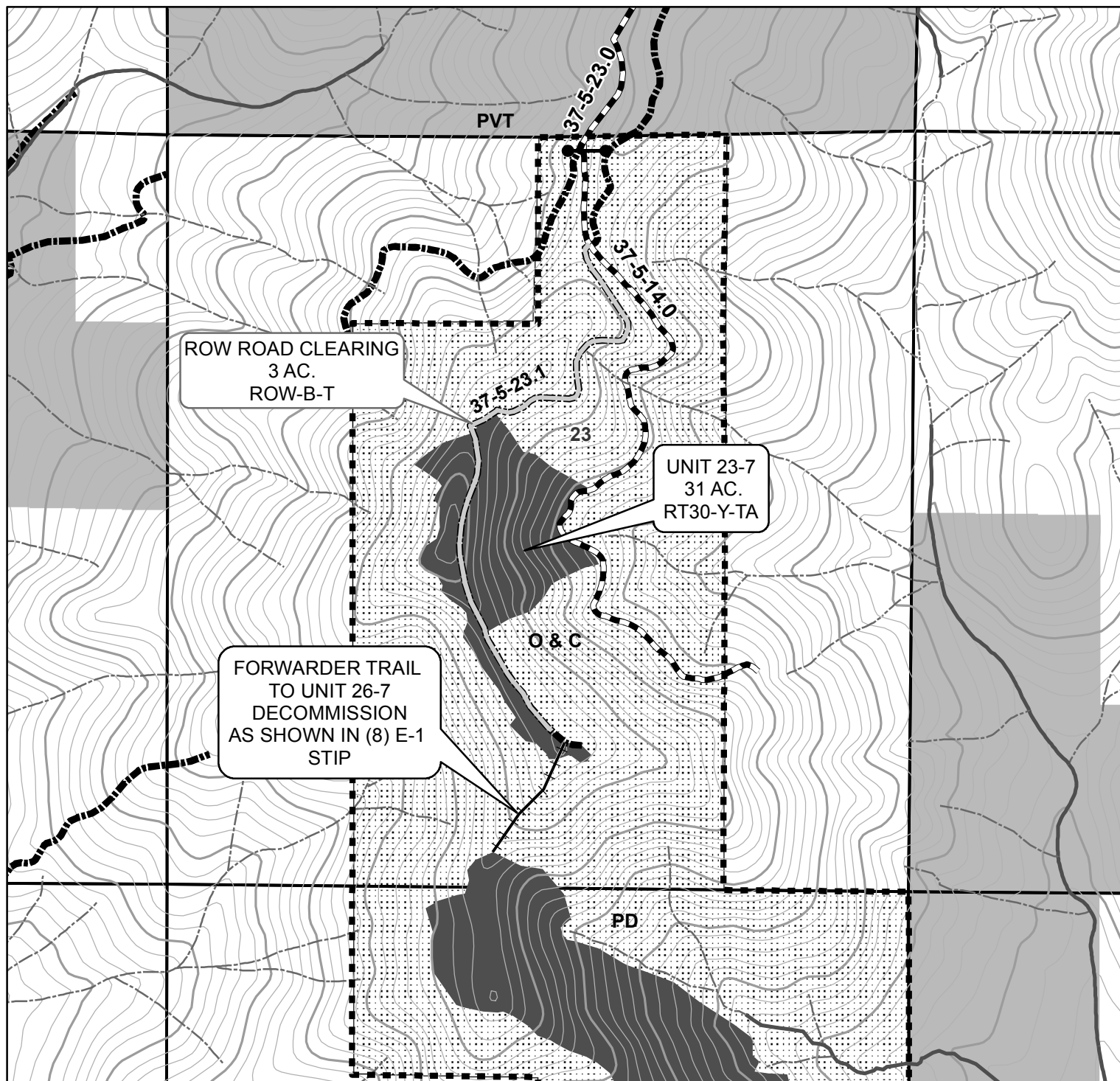
United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

40 FOOT CONTOUR INTERVAL

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.

Map created by DES
5/7/18

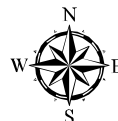




0 750 1,500 3,000
Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

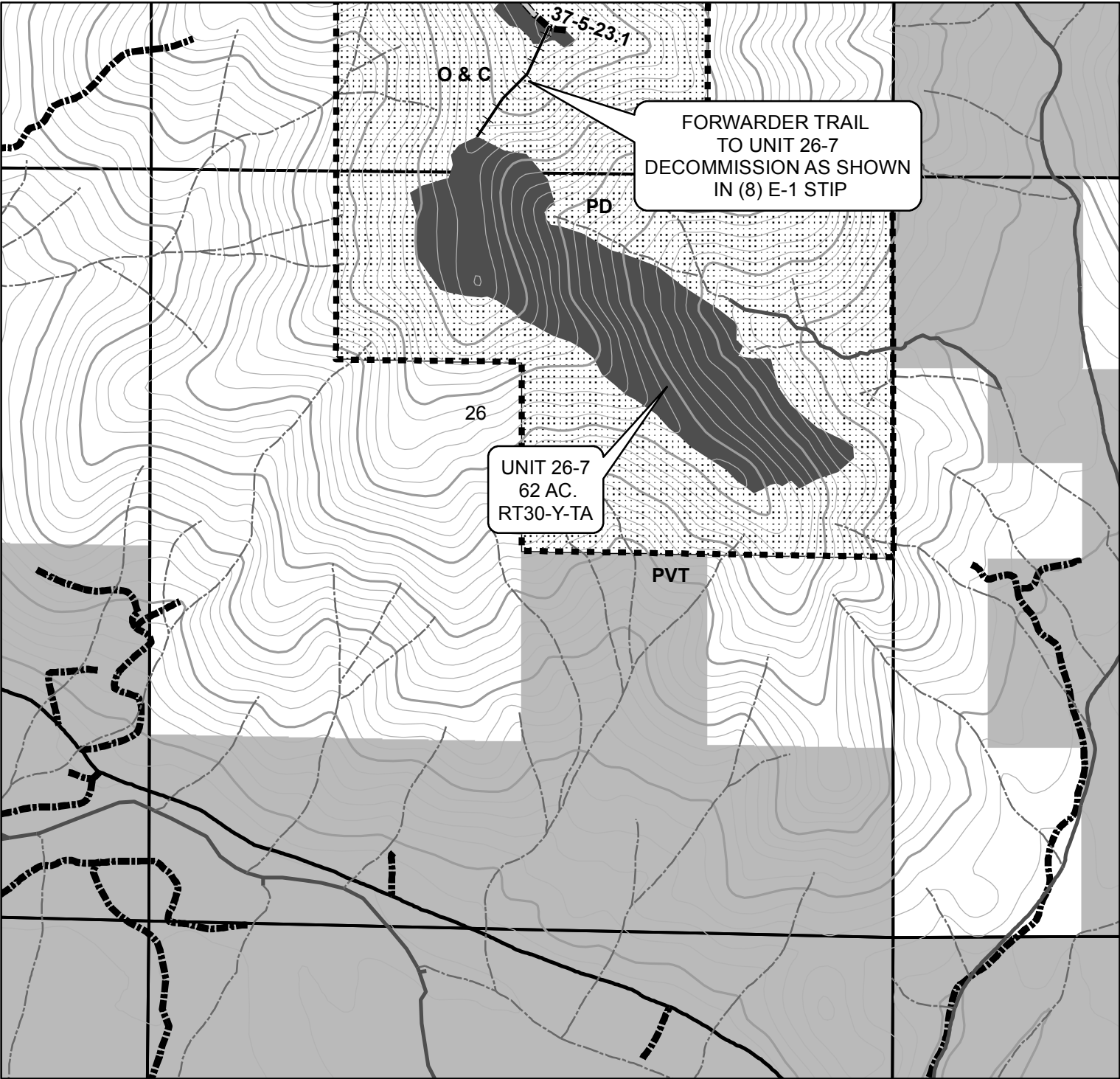


United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

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.

Map created by DES
5/7/18





0 750 1,500 3,000
Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

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.

Map created by DES
5/7/18



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



Legend

Unit 20-5 Temp Route

Savage Murph Access Forwarder Trails

Contract Area Boundary

Savage Murph Streams

Intermittent

Perennial

Road Surface Type

Paved

Rocked

Natural Surface

200' Index Contours

40' Intermediate Contours



Tractor Yarding



Tethered Assist Yarding



37-5-23.1 ROW



Reserve Area



Township and Range



Sections

Ownership

PROPERTY_STATUS

Bureau of Land Management



Private Individual or Company

	Summary	Acres
DM40-Y-T	Density Management to 40% Canopy Cover-Yellow Mark-Ground Based Yard (Unit 14-5)	24
DM60-Y-TA	Density Management to 60% Canopy Cover-Yellow Mark-Tethered Assist Yard (Units 17-5 and 20-5)	51
DM40-Y-TA	Density Management Thinning to 40% Canopy Cover- Yellow Mark-Tethered Assist Yard (Unit 21-13)	23
RT30-Y-TA	Restoration Thinning to 30% Canopy Cover- Yellow Mark-Tethered Assist Yard (Units 23-7 and 26-7)	93
ROW-B-T	Right Of Way Road Clearing-Blue Mark-Tractor Yard (37-5-23.1 and Temp Route Unit 20-5)	4
	Total Timber Sale Unit Area	195
	Reserve Area	767.0
	Total Contract area	960.0

0 750 1,500 3,000 Feet

1 inch = 1,000 feet



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

40 FOOT CONTOUR INTERVAL

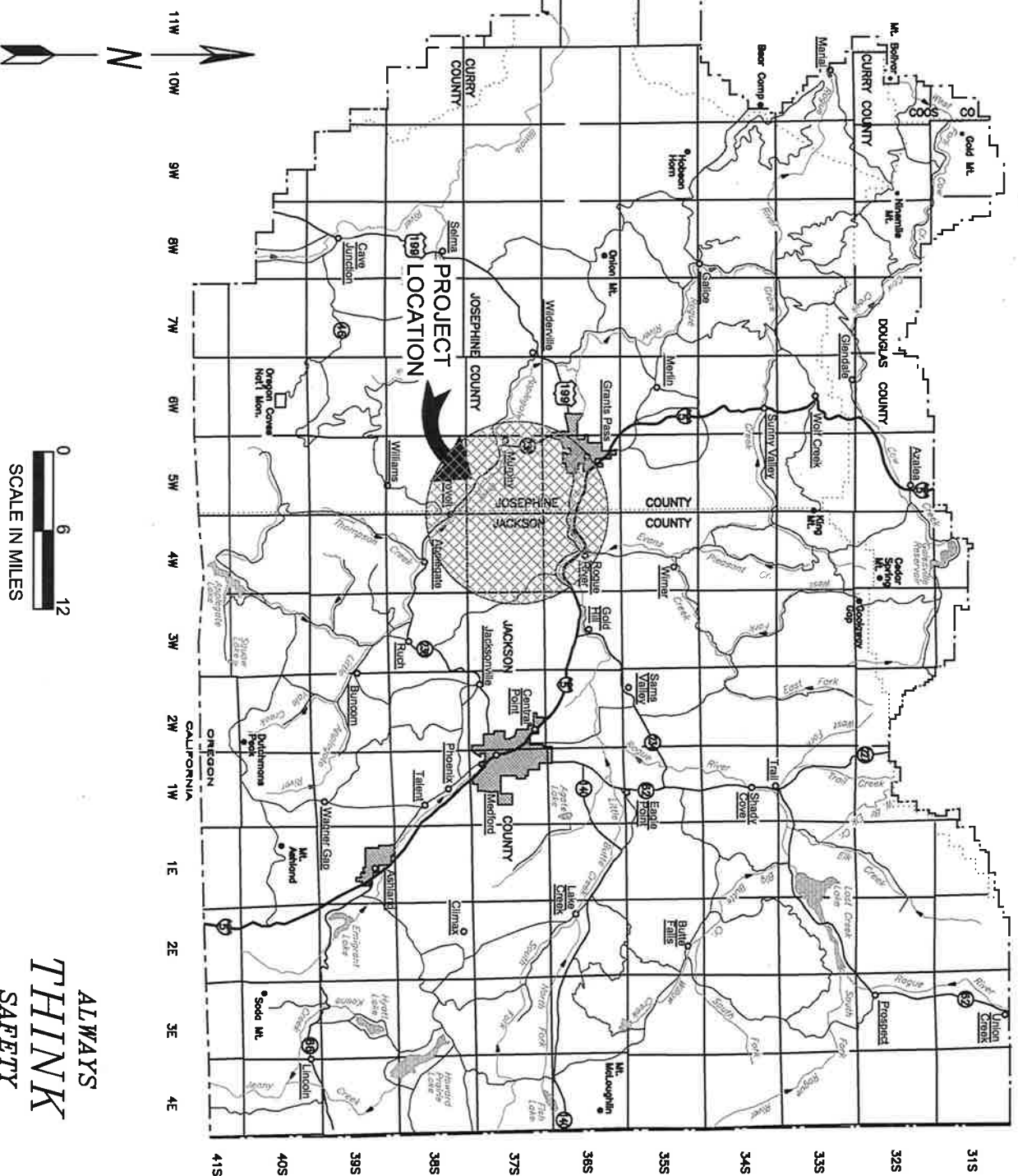
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

Map created by DES
5/7/18



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

EXHIBIT C1 SAVAGE MURPH TIMBER SALE TRACT NO. ORM07-TS-18-06



ALWAYS
THINK
SAFETY

EXHIBIT NO.	DESCRIPTION
C1	TITLE SHEET
C2	ROAD RENOVATION MAPS
C3	ESTIMATE OF QUANTITIES SHEETS
C4	TYPICAL ROAD DATA SHEET
C5	ROADSIDE BRUSHING DETAILS
C6	DRAINAGE & EROSION CONTROL DETAILS
C7	ROADS WORK LIST
C8	ROAD SPECIFICATIONS
C9	SPECIAL PROVISIONS
D1	ROAD MAINTENANCE SPECIFICATIONS
D2	ROAD MAINTENANCE MAPS

REV. NO.	DESCRIPTION	DATE	APPROV.

DESIGNED:	
REVIEWED:	
APPROVED:	
DRAFTED BY: ELF	
DATE: JUN 2018	
DRAWING NO.: OR-11-91134-1	

SAVAGE MURPH TIMBER SALE TITLE SHEET	SCALE: 1" = 12 MI
	SHEET: 1 OF 1

EXHIBIT C2-1

LEGEND

LAND OWNERSHIP

- BLM
- NON-BLM

PROPOSED TIMBER SALE UNITS

ROADS - SURFACE TYPE

- Bituminous
- Aggregate
- Natural
- Unknown

ROAD RENOVATION RESPONSIBILITY

- PURCHASER
- PROPOSED TEMP ROUTES
- GATE
- COUNTY BOUNDARY
- RESOURCE AREA BOUNDARY

ALWAYS
THINK
SAFETY

Rev No.	Description	Date	Approval

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

SAVAGE MURPH TIMBER SALE
ROAD RENOVATION MAP
OVERALL SALE AREA

DESIGNED: *Steen*

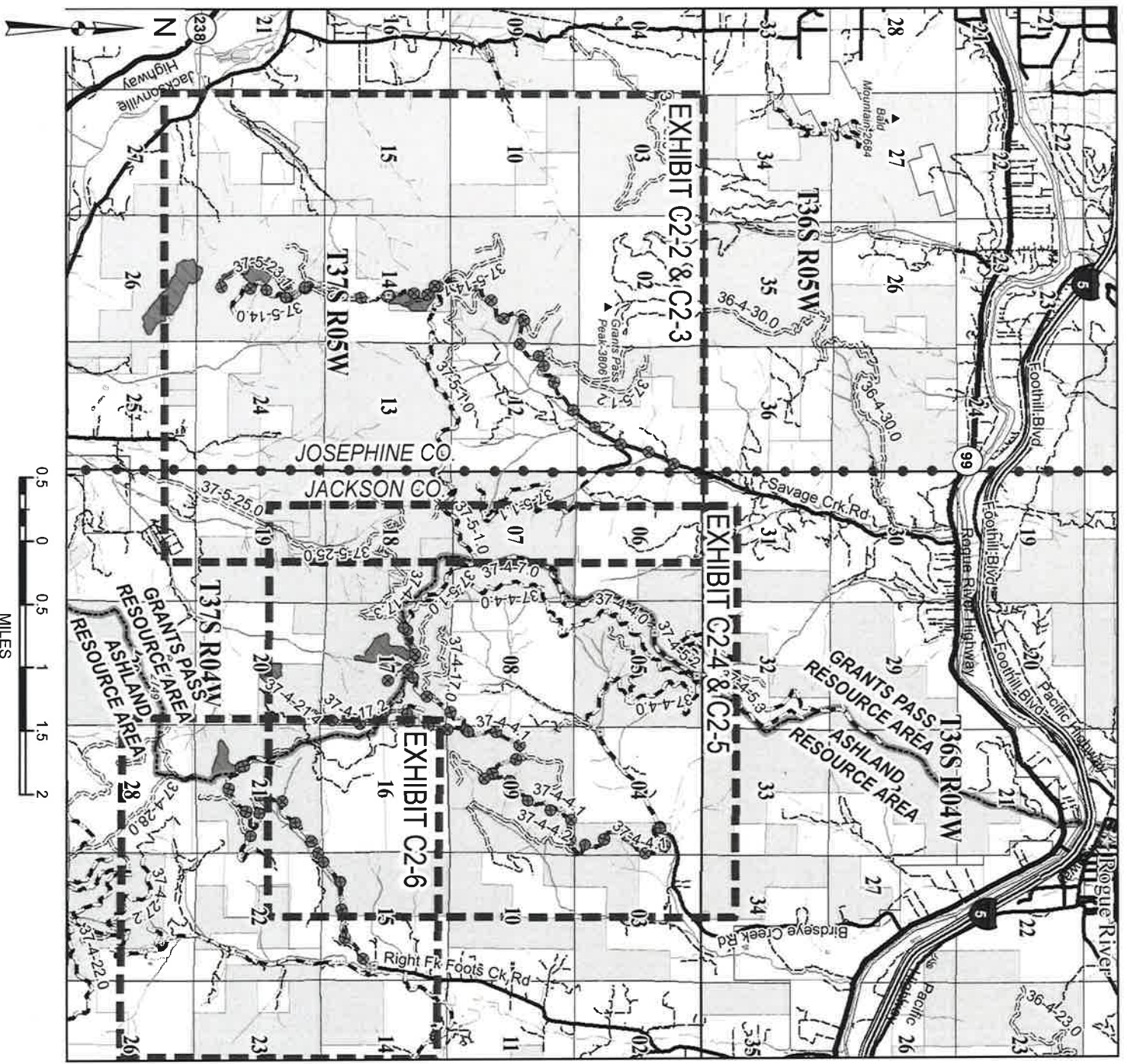
REVIEWED: *Steen*

APPROVED: *Paul 6/19/18*

DRAFTED BY: ELF

DATE: MAR 2018

SHEET: 1 OF 6



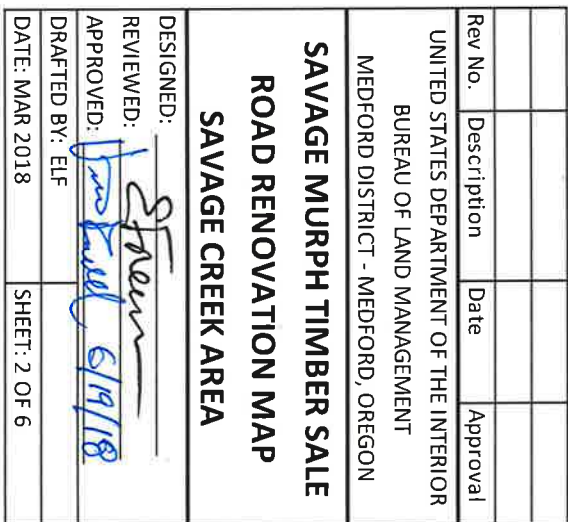


EXHIBIT C2-3

LEGEND

LAND OWNERSHIP

- BLM
- NON-BLM
- PROPOSED TIMBER SALE UNITS

ROADS - SURFACE TYPE

- Bituminous
- Aggregate
- Natural
- Unknown

ROAD RENOVATION RESPONSIBILITY

- PURCHASER
- GATE
- RECONSTRUCT WATER DIP

ALWAYS
THINK
SAFETY

Rev No.	Description	Date	Approval

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

Savage Murph Timber Sale Road Renovation Map Savage Creek Area

DESIGNED: *[Signature]*

REVIEWED: *[Signature]*

APPROVED: *[Signature]* 6/19/18

DRAFTED BY: ELF

DATE: MAR 2018

SHEET: 3 OF 6

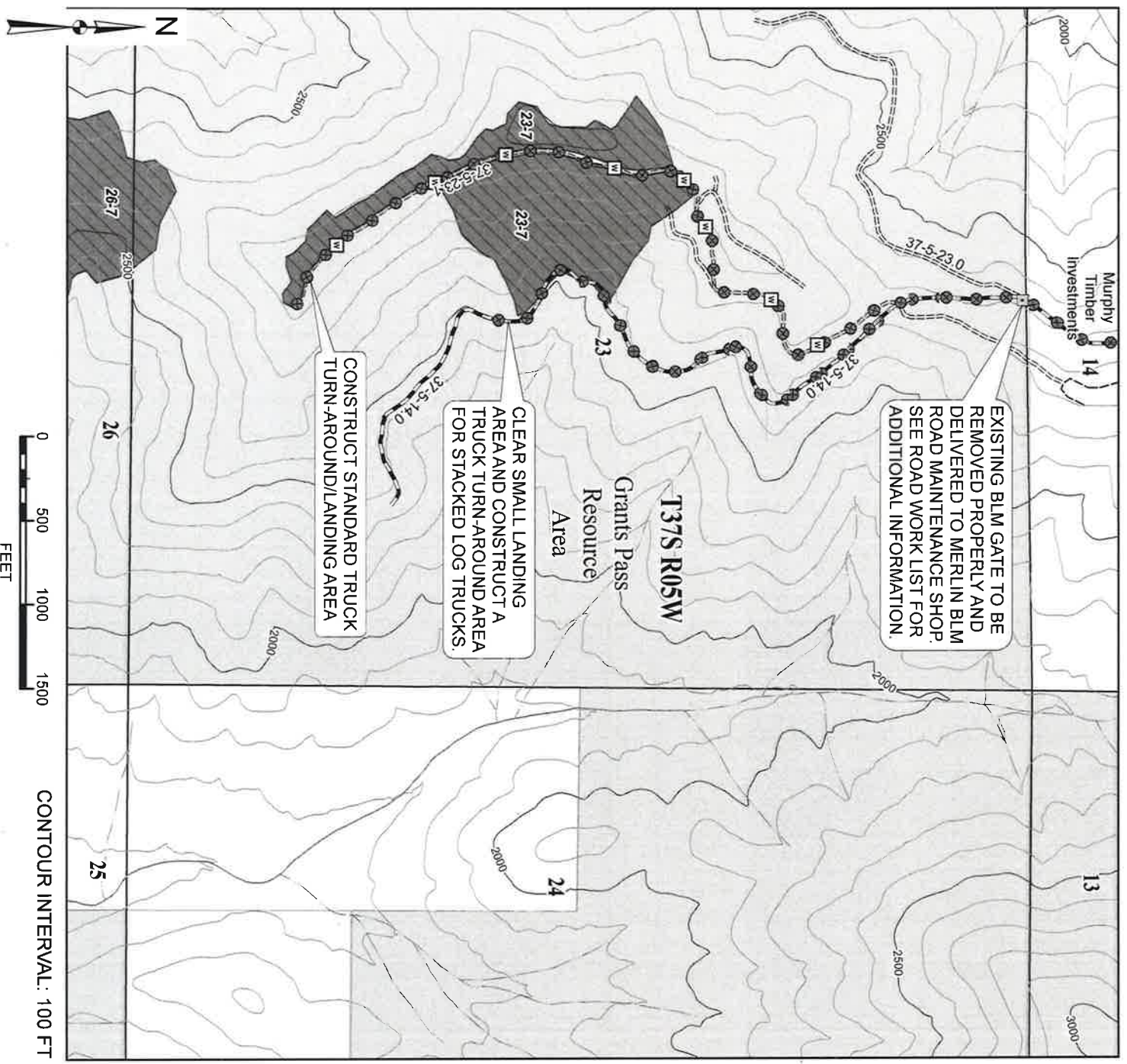


EXHIBIT C2-4

LEGEND

LAND OWNERSHIP

BLM
NON-BLM

PROPOSED TIMBER SALE UNITS

ROADS - SURFACE TYPE

Bituminous
Aggregate
Natural
Unknown

ROAD RENOVATION RESPONSIBILITY

PURCHASER

PROPOSED TEMP ROUTES

GATE

RECONSTRUCT WATER DIP

RESOURCE AREA BOUNDARY

ALWAYS
THINK
SAFETY

Rev No.	Description	Date	Approval

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

SAVAGE MURPH TIMBER SALE

ROAD RENOVATION MAP

BIRDSEYE CREEK AREA

DESIGNED:

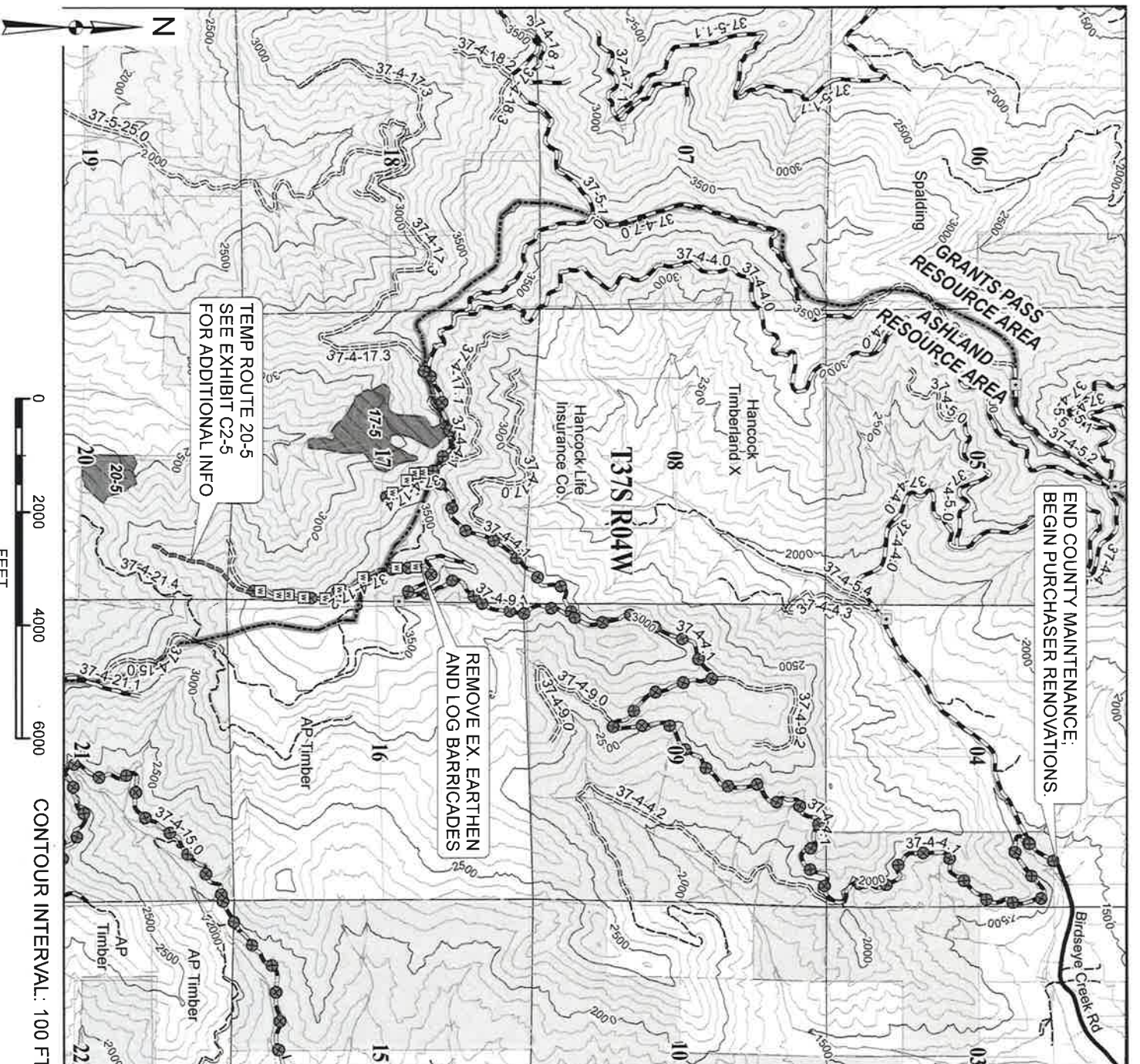
REVIEWED:

APPROVED:

DRAFTED BY: ELF

DATE: MAR 2018

SHEET: 4 OF 6



LEGEND

BLM
NON-BLM

Bituminous
Aggregate
Natural
Unknown

PURCHASER
PROPOSED TEMP ROUTES
GATE
RECONSTRUCT EX WATER DIP
CONSTRUCT WATER DIP
RESOURCE AREA BOUNDARY

TEMP ROUTE 20-5
 LENGTH: 2.100 LF/0.4 MI
 SUBGRADE WIDTH: 14 FT
 SURFACE TYPE: NATURAL
 ROAD SECTION: OUT-SLOPED
 DRAINAGE FEATURES: WATER-DIPS
 CONSTRUCTION TYPE: CUT/FILL

REMOVE EX. EARTHEN AND LOG BARRICADES, REGRADE AND COMPACT ROAD AT ENTRANCE.

GRANTS PASS RESOURCE AREA
ASHLAND RESOURCE AREA

AP Timber
AP 16
AP 17
AP 17.5

0 500 1000 1500 FEET

CONTOUR INTERVAL: 100 FT

20
21

37-4-17.3
37-4-17.1
37-4-17.0
37-4-9.1
37-4-17.2
37-4-17.4
37-4-17.5
37-4-17.6
37-4-17.7
37-4-17.8
37-4-17.9
37-4-18.0
37-4-18.1
37-4-18.2
37-4-18.3
37-4-18.4
37-4-18.5
37-4-18.6
37-4-18.7
37-4-18.8
37-4-18.9
37-4-19.0
37-4-19.1
37-4-19.2
37-4-19.3
37-4-19.4
37-4-19.5
37-4-19.6
37-4-19.7
37-4-19.8
37-4-19.9
37-4-20.0
37-4-20.1
37-4-20.2
37-4-20.3
37-4-20.4
37-4-20.5
37-4-20.6
37-4-20.7
37-4-20.8
37-4-20.9
37-4-21.0
37-4-21.1
37-4-21.2
37-4-21.3
37-4-21.4
37-4-21.5
37-4-21.6
37-4-21.7
37-4-21.8
37-4-21.9
37-4-22.0
37-4-22.1
37-4-22.2
37-4-22.3
37-4-22.4
37-4-22.5
37-4-22.6
37-4-22.7
37-4-22.8
37-4-22.9
37-4-23.0
37-4-23.1
37-4-23.2
37-4-23.3
37-4-23.4
37-4-23.5
37-4-23.6
37-4-23.7
37-4-23.8
37-4-23.9
37-4-24.0
37-4-24.1
37-4-24.2
37-4-24.3
37-4-24.4
37-4-24.5
37-4-24.6
37-4-24.7
37-4-24.8
37-4-24.9
37-4-25.0
37-4-25.1
37-4-25.2
37-4-25.3
37-4-25.4
37-4-25.5
37-4-25.6
37-4-25.7
37-4-25.8
37-4-25.9
37-4-26.0
37-4-26.1
37-4-26.2
37-4-26.3
37-4-26.4
37-4-26.5
37-4-26.6
37-4-26.7
37-4-26.8
37-4-26.9
37-4-27.0
37-4-27.1
37-4-27.2
37-4-27.3
37-4-27.4
37-4-27.5
37-4-27.6
37-4-27.7
37-4-27.8
37-4-27.9
37-4-28.0
37-4-28.1
37-4-28.2
37-4-28.3
37-4-28.4
37-4-28.5
37-4-28.6
37-4-28.7
37-4-28.8
37-4-28.9
37-4-29.0
37-4-29.1
37-4-29.2
37-4-29.3
37-4-29.4
37-4-29.5
37-4-29.6
37-4-29.7
37-4-29.8
37-4-29.9
37-4-30.0
37-4-30.1
37-4-30.2
37-4-30.3
37-4-30.4
37-4-30.5
37-4-30.6
37-4-30.7
37-4-30.8
37-4-30.9
37-4-31.0
37-4-31.1
37-4-31.2
37-4-31.3
37-4-31.4
37-4-31.5
37-4-31.6
37-4-31.7
37-4-31.8
37-4-31.9
37-4-32.0
37-4-32.1
37-4-32.2
37-4-32.3
37-4-32.4
37-4-32.5
37-4-32.6
37-4-32.7
37-4-32.8
37-4-32.9
37-4-33.0
37-4-33.1
37-4-33.2
37-4-33.3
37-4-33.4
37-4-33.5
37-4-33.6
37-4-33.7
37-4-33.8
37-4-33.9
37-4-34.0
37-4-34.1
37-4-34.2
37-4-34.3
37-4-34.4
37-4-34.5
37-4-34.6
37-4-34.7
37-4-34.8
37-4-34.9
37-4-35.0
37-4-35.1
37-4-35.2
37-4-35.3
37-4-35.4
37-4-35.5
37-4-35.6
37-4-35.7
37-4-35.8
37-4-35.9
37-4-36.0
37-4-36.1
37-4-36.2
37-4-36.3
37-4-36.4
37-4-36.5
37-4-36.6
37-4-36.7
37-4-36.8
37-4-36.9
37-4-37.0
37-4-37.1
37-4-37.2
37-4-37.3
37-4-37.4
37-4-37.5
37-4-37.6
37-4-37.7
37-4-37.8
37-4-37.9
37-4-38.0
37-4-38.1
37-4-

Rev No.	Description	Date	Approval

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

SAVAGE MURPH TIMBER SALE
ROAD RENOVATION MAP
BIRDSEYE CREEK AREA

DESIGNED: EF
REVIEWED: EF
APPROVED: Juan F. Wolf 6/19/18
DRAFTED BY: ELF

DATE: MAR 2018

SHEET: 5 OF 6

EXHIBIT C2-6

LEGEND

LAND OWNERSHIP

- BLM
- NON-BLM

PROPOSED TIMBER SALE UNITS

ROADS - SURFACE TYPE

- Bituminous
- Aggregate
- Natural
- Unknown

ROAD RENOVATION RESPONSIBILITY

- PURCHASER
- PROPOSED TEMP ROUTES
- GATE
- RECONSTRUCT WATER DIP
- RESOURCE AREA BOUNDARY

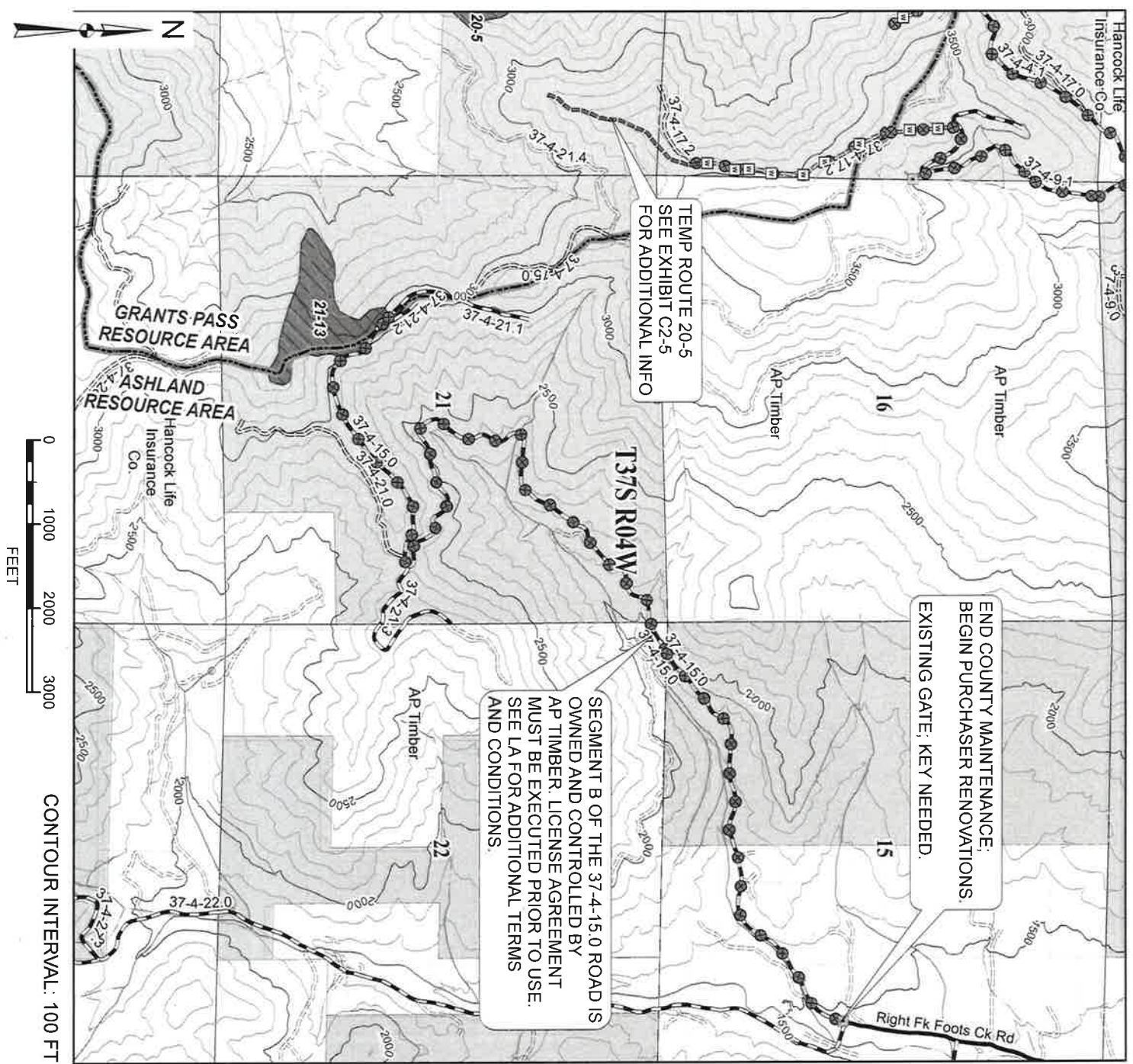
ALWAYS
THINK
SAFETY

Rev No.	Description	Date	Approval

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

SAVAGE MURPH TIMBER SALE
ROAD RENOVATION MAP
FOOTS CREEK AREA

DESIGNED: *[Signature]*
 REVIEWED: *[Signature]*
 APPROVED: *[Signature]* 6/19/18
 DRAFTED BY: ELF
 DATE: MAR 2018 SHEET: 6 OF 6



TEMP ROUTE 20-5
SEE EXHIBIT C2-5
FOR ADDITIONAL INFO

END COUNTY MAINTENANCE:
BEGIN PURCHASER RENOVATIONS.
EXISTING GATE, KEY NEEDED.

SEGMENT B OF THE 37-4-15.0 ROAD IS
OWNED AND CONTROLLED BY
AP TIMBER. LICENSE AGREEMENT
MUST BE EXECUTED PRIOR TO USE.
SEE LA FOR ADDITIONAL TERMS
AND CONDITIONS.

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION			DRAINAGE						RENOVATION				AGGREGATE			ROADSIDE BRUSHING AND CHIPPING	MISCELLANEOUS							
					ROCK	COMMON	CORRUGATED METAL PIPE 18 GA						BLADING, WATERING, & ROLLING	DITCH AND/OR CULVERT CLEANING	SCARIFICATION AND/OR HEAVY BLADING	SLIDE REMOVAL	CRUSHED ROCK BASE (3"minus)	CRUSHED ROCK SURF(1-1/2"minus)	SLOPE PROTECTION	SOIL STABILIZATION		INSTALL BMPs® HYDRO POINTS OF CONCERN	RECONSTRUCT WATER DIPS	RECONSTRUCT WATER BARS	CONSTRUCT WATER DIPS	CONSTRUCT WATER BARS	REMOVE/REPLACE EX. BARRICADES	(RE)CONSTRUCT TURNAROUND	REMOVE EXISTING GATE
							SIZE			ELBOWS	DOWNSPOUT																		
							18"	24"	36"		18"	HAIF ROUND																	
SPECIFICATION NO.				200	300	400						500				1000	1200	1400	1800	2100	8000								
UNITS	MP	MP	MILE	ACRE	CY	CY	LF	LF	LF	EA	LF	LF	MILE	MILE	MILE	CY	CY	CY	ACRE	MILE	EA	EA	EA	EA	EA	EA	EA	EA	
37-5-1.0 (A-B1)	0.00	1.32	1.32											1.32						1.32									
37-5-1.0 (B2-C)	1.32	3.40	2.08										2.08	2.08						2.08	3								
37-5-14.0 (A-C)	0.00	1.76	1.76										1.76	1.76						1.76						1	1	1	
37-5-23.1	0.00	0.92	0.92	2.5									0.92		0.92		24	0.8	0.92	0.92		8					1		
37-5-14.2	0.00	0.24	0.24	0.6									0.24		0.24	6	0.2	0.24	0.24	0.24		2							
37-4-4.0 (A)	0.00	0.11	0.11										0.11	0.11						0.11	2								
37-4-4.1 (A-D)	0.00	4.54	4.54										4.54	4.54						4.54	3								
37-4-17.3	0.00	0.03	0.03										0.03		0.03					0.03									
37-4-17.4	0.00	0.21	0.21	0.5									0.21		0.21	12	0.4	0.21	0.21	0.21	4								
37-4-9.1 (A1-A3)	0.00	0.77	0.77										0.77	0.77	0.10	20				0.77	1								
37-4-17.2	0.00	0.64	0.64	1.6									0.64		0.64					0.64		9			1				
37-4-15.0 (A-C2)	0.00	3.05	3.05										3.05	3.05						3.05	2								
TOTALS	15.67	5.2											14.35	13.63	2.14		20	69	2.3	15.67	11	23			1	2	1		

DESIGNED:	<u>CFR</u>
REVIEWED:	
APPROVED:	<u>Don Ford</u>
DRAFTED BY:	ELF
DATE:	JUN 2018
DRAWING NO.:	OR-11-9134-1
	SHEET: 1 OF 2

EXHIBIT C3-2

ROAD NUMBER	FROM (STA)	TO (STA)	LENGTH (MILES)	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						RENOVATION			AGGREGATE		DECOMMISSIONING							
					RIPPABLE ROCK	COMMON	POLY PIPE (HDPE)			ELBOWS	DOWNSPOUT HALF ROUND	LIGHT BLADING (DOZER)	HEAVY BLADING (DOZER)	SLIDE REMOVAL	PIT RUN	CRUSHED BASE ROCK	SLOPE PROTECTION (RIPRAP)	SOIL STABILIZATION	CONSTRUCT WATER DIP	CONSTRUCT TRUCK TURNAROUND	BARRICADES	RIPPING SUBGRADE	CONSTRUCT WATER BARS	SEED AND MULCH	
							SIZE																		
							18"	24"	30"																
SPECIFICATION NO. —————→				200	300	400						500			700	1200	1400	1800	8000			2600			
UNITS —————→	STA	STA	MILE	ACRE	CY	CY	LF	LF	LF	EA	LF	LF	MILE	MILE	CY	CY	CY	ACRE	EA	EA	EA	STA	EA	ACRE	EA
TEMPORARY ROUTES																									
Temp Rte 20-5	0+00	21+00	0.40	2.0		3 492													5	1		21	8	2.0	
											</														

RENOVATION NOTES

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




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

AGGREGATE GRADATION REQUIREMENTS

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

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

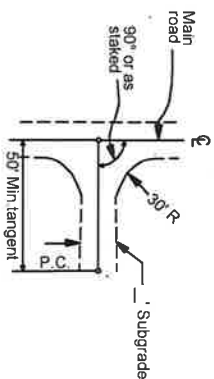
ALWAYS
THINK
SAFETY

DESIGNED: 
 REVIEWED: 
 APPROVED: 
 DRAFTED BY: ELF
 DATE: JUN 2018
 SHEET: 2 OF 2
 DRAWING NO.: OR-11-913-4-1

SAVAGE MURPH
TIMBER SALE
ESTIMATE OF QUANTITIES

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

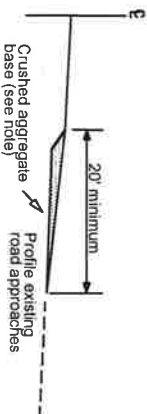
TYPICAL ROAD APPROACHES



PLAN



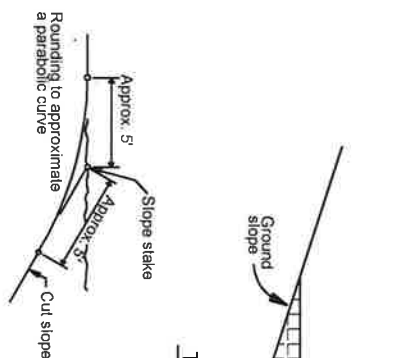
PROFILE



TYPICAL SURFACING SECTION

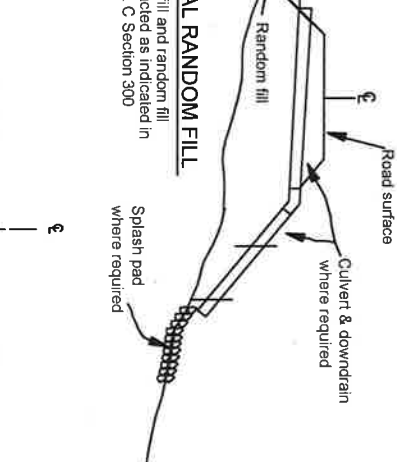
NOTES:

1. The profile of the existing approach roads shall be tapered to meet the shoulder line of the main roadway and shall receive the same wearing surface.
2. The crushed aggregate base shall be of the same gradation as used in the adjacent roadbed.
3. Approaches shall be finished with the same treatment as shown for the adjacent roadbed.

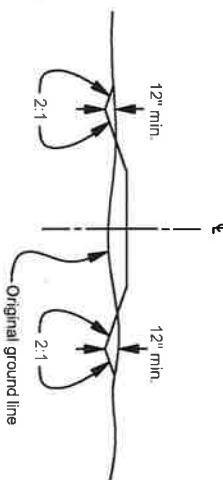


TYPICAL RANDOM FILL

Road fill and random fill compacted as indicated in Exhibit C Section 300



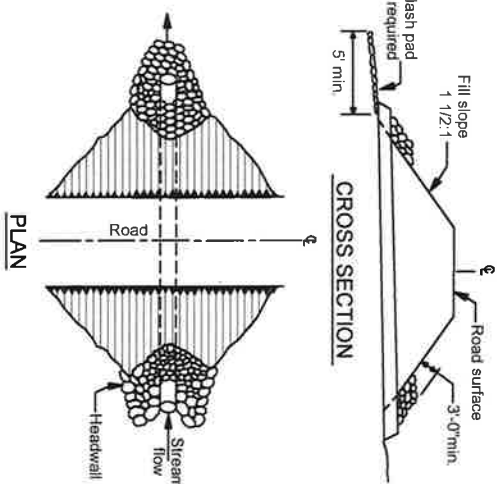
CUT SLOPE ROUNDING



TYPICAL ROAD SECTION FOR TURNPIKE CONSTRUCTION

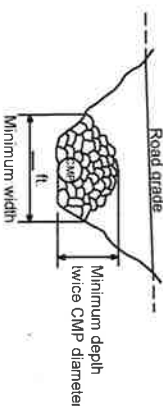
NOTES: RIPRAP AT CULVERTS

1. Riprap shall be placed in such a manner that it will not damage the culvert.
2. Trenching will be done as required by the Authorized Officer.
3. Minimum depth of splash pads shall be 1' FT.
4. Minimum quantity shall be 1 CY per culvert.
5. Riprap shall be placed before October 1st of the year the culvert is installed.



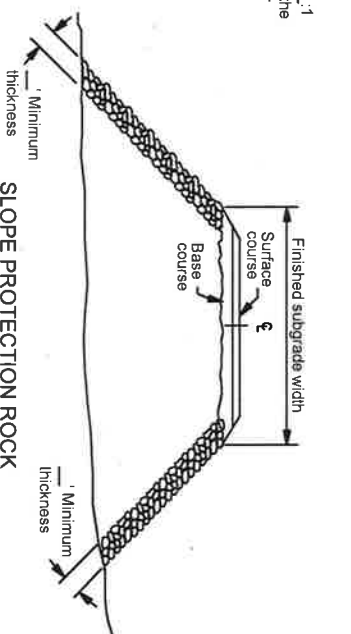
CROSS SECTION

PLAN



ELEVATION

RIPRAP AT CULVERTS



SLOPE PROTECTION ROCK

see Exhibit C Section 1400

Minimum thickness

Minimum thickness

TYPICAL ROAD DATA

Savage Murph
Timber Sale

REV NO.	DESCRIPTION	DATE	APPROV

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

TYPICAL ROAD DATA

DESIGNED:

REVIEWED:

APPROVED:

DRAFTED BY: ELF

DATE: JUN 2018

DRAWING NO.: OR-11-91344

SCALE: NONE

SHEET: 1 OF 1

DATE: JUN 2018

DRAWING NO.: OR-11-91344

ALWAYS
THINK
SAFETY

Brushing Diagram

Cutting Limit = C + D + B + F
 B = Road Bed Subgrade (includes turnouts)
 Cut all vegetation to maximum height of 1" flush with the running surface.
 C = 6 ft - Distance to be brushed on cut slope beyond centerline
 of ditch. Cut all vegetation to maximum height of 4".
 D = Centerline of ditch to inside shoulder. Cut all vegetation to maximum height of 1".
 F = 6 ft - Distance to be brushed on fill slope beyond outside shoulder
 Cut all vegetation to maximum height of 4".
 V = 14 ft - Height of vertical cutting limit

$V = 14$ ft - Height of vertical cutting limit

Diagram illustrating the cross-section of a road bed sub-grade, showing the area to be cut and the dimensions for the crown and shoulders.

Key dimensions and labels:

- 200 ft. (chord distance)**: The width of the road bed.
- 25 ft. (middle ordinate)**: The height of the crown.
- Road Bed Sub-grade**: The outer boundary of the road bed.
- Inside shoulder**: The inner boundary of the road bed.
- Thin, space and sections of road Thinning and sp minimum (10) ft crown shall be**: The area between the road bed and the shoulder.
- Area to be cut**: The area to be removed from the road bed.
- Culvert**: The structure for water flow.
- Catchbasin**: The structure for collecting water.
- Culvert Outlet**: The point where water exits the culvert.

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.

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

revised 08/2010

All distances shown are horizontal except for V

ALWAYS
THINK
SAFETY

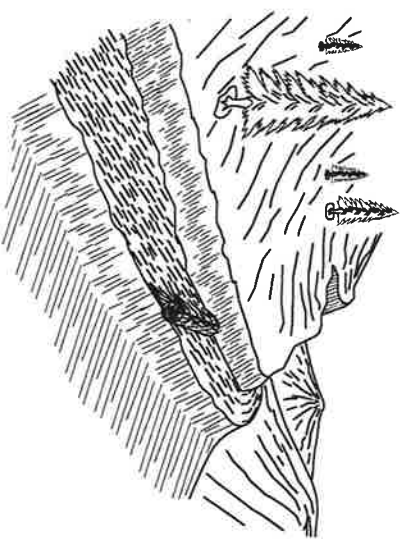
REV NO	DESCRIPTION	DATE	APPROV

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

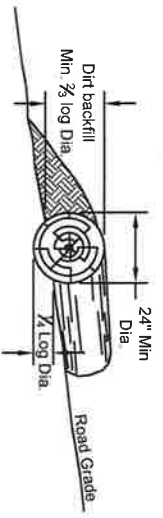
**Savage Murph
Timber Sale
Roadside Brushing Detail**

DESIGNED:	
REVIEWED:	
APPROVED:	<i>[Signature]</i>
DRAFTED BY:	ELF
DATE:	JUN 2018
DRAWING NO.:	OR-11-913.44
SHEET:	1 OF 1

EXHIBIT C6-1



LOG BARRICADE

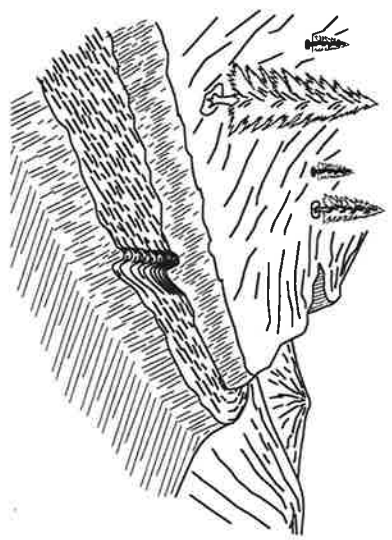


1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Roads Work List.
3. All barricades shall be skewed 30 degrees.
4. The length shall be sufficient to extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".

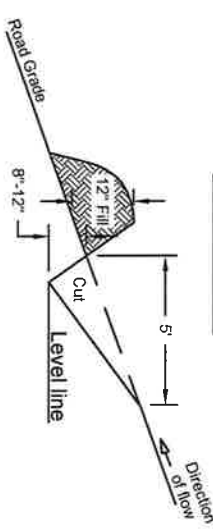
WATER BAR SPACING* BY EROSION CLASS^a

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

*Spacing is determined by slope distance and is the maximum allowed for the grade.
^a The erosion classes include the following rock types:
High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.
Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.
Low: Metasediments, metavolcanics, and hard shale.



WATER BAR



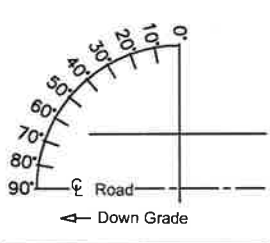
1. Water bars shall be constructed as shown above.
2. Exact location will be flagged by the Authorized Officer prior to construction.
3. All water bars shall be skewed 30 degrees.
4. Upon completion of skidding logs, for the logging season, each skid road will have cross drainage constructed as shown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

WATER DIP SPACING*

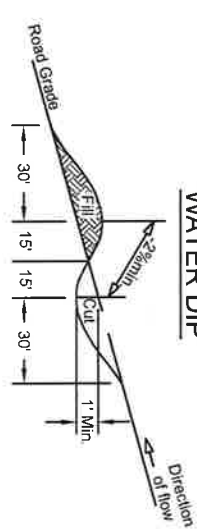
ROAD GRADE	SANDY LOAM LOAM	DECOMPOSED GRANITE/SAND	CLAY & SILTY SOILS
%	FEET	FEET	FEET
2-3	-	2000-1000	1200-600
4-7	1200-600	950-450	600-300
8-10	550-450	450-350	300-200
11-15	450-300	350-200	200-100
16+	300-250	200-150	100

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

SKEW DIAGRAM



WATER DIP



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

ARMOR FILL SLOPE WITH CLASS 2 RIPRAP MATERIAL AT OUTLET (3 CYS)

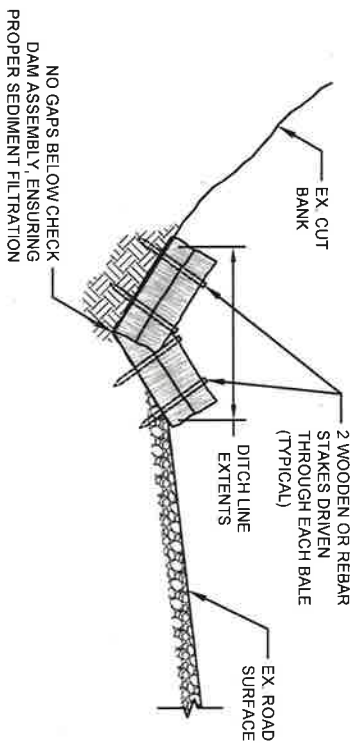
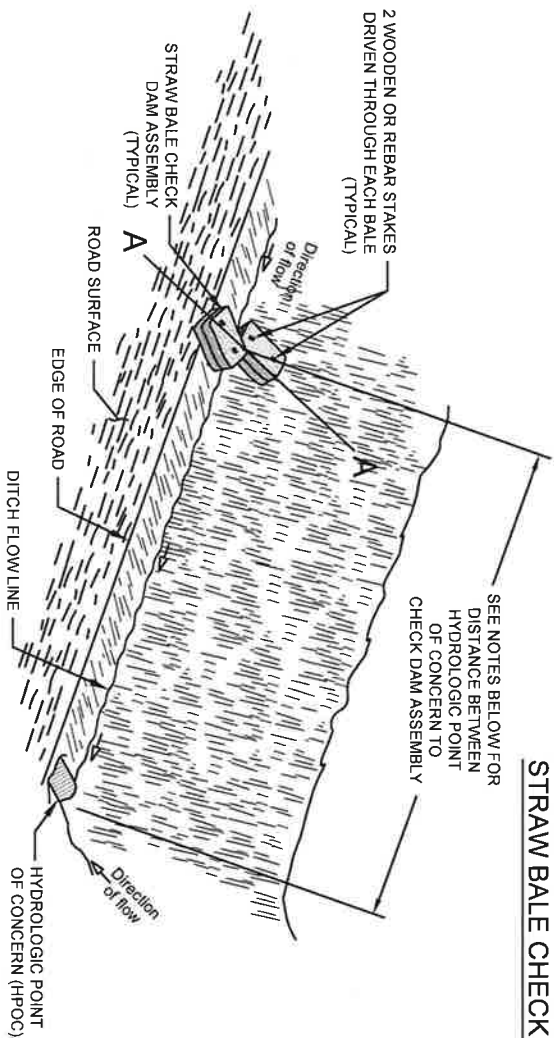
REV NO	DESCRIPTION	DATE	APPROV
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
Savage Murph Timber Sale Drainage & Erosion Control Details			

ALWAYS
THINK
SAFETY

DESIGNED:	REVIEWED:
DRAFTED BY: ELF	APPROVED: <i>[Signature]</i>
DATE: JUN 2018	SCALE: NONE
DRAWING NO.: OR-11-9T1344	SHEET: 1 OF 2

STRAW BALE CHECK DAM ASSEMBLY

EXHIBIT C6-2



PLAN

SECTION A-A

NOTES:

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

INSTALLATION NOTES:

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

INSPECTION/MAINTENANCE NOTES:

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

ALWAYS
THINK
SAFETY

DESIGNED:			
REVIEWED:			
APPROVED:			
DRAFTED BY: ELF		SCALE: NONE	
DATE: JUN 2018		SHEET: 2 OF 2	
DRAWING NO.: OR-11-91344			

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

Savage Murph
Timber Sale
Drainage & Erosion Control Installation

Exhibit C7

Sale Name: Savage Murph T.S.

Page 1 of 9

Roads Work List

Definitions:

ABC = Aggregate Base Course
ASC = Aggregate Surface Course
BST = Bituminous
CL = Center Line
CMP = Corrugated Metal Pipe
CY = Cubic Yard
GRR = Grid Rolled Rock

Jct = Junction/Intersection
MP = Mile Post
NAT = Natural or Native Surface
PRR = Pit Run Rock
Pvt = Private (Industry or Citizen)
Seg = Segment

Existing Road Renovation

The existing road renovation work list consists of road work to be performed by the Purchaser's Representative and/or Contractor **prior** to timber hauling per Section 42(B)(2) of the contract Special Provisions. All road work shall comply with the contract Special Provisions, Specifications, and Exhibits.

Savage Creek Area – See Exhibit C2-2 & C2-3 for Maps:

37-5-1.0 Road (A-B1) – Savage Crk Road – BST

<u>MP</u>	<u>Description</u>
	<i>County Road maintenance and ownership ends approximately 2.17 miles from Rogue River Hwy.</i>
0.00	Begin BST road renovation which includes clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing.
0.23	Existing CMP
0.27	Jct w/ Pvt Road on right.
0.37	Existing CMP
0.53	Existing CMP
0.59	Jct w/ Pvt Road on right.
0.67	Jct w/ Pvt Road on right.
0.70	Jct w/ 37-5-1.1 Road on left.
0.71	Existing CMP
0.88	Jct w/ Pvt Road on right.
0.92	Existing CMP
1.06	Jct w/ Pvt Road on right.
1.08	Existing CMP
1.18	Existing CMP
1.27	Existing CMP
1.31	Jct w/ Pvt Road on left.
1.32	End BST road renovation.

37-5-1.0 Road (B2-C) – Savage Crk Road – ASC

<u>MP</u>	<u>Description</u>
1.32	Begin ASC road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. The Purchaser shall be required to furnish and apply non-saline water, or approved equal, during dry hauling periods (dust abatement), when directed by the Contract Officer, for the purpose of laying nuisance dust and to prevent loss of surface material over the next 0.80 miles of road.
1.33	Existing CMP

Exhibit C7

Sale Name: Savage Murph T.S.

Page 2 of 9

1.40	Existing CMP
1.50	Existing CMP
1.70	Existing CMP
1.79	Jct w/ 37-5-12.0 Road on right
1.80	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
1.91	Existing CMP
1.98	Existing CMP
2.12	End dust abatement requirements.
2.15	Existing CMP
2.22	Existing CMP
2.35	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
2.36	Jct w/ 37-5-11.1 Road on right.
2.41	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
2.62	Existing CMP
2.75	Existing CMP
2.78	Jct w/ 37-5-11.0 Road on left.
2.93	Existing CMP
3.00	Existing CMP
3.22	Existing CMP
3.40	Jct w/ 37-5-14.0 Road on right. End road renovation. Waste disposal site at road intersection/large landing area. Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.

37-5-14.0 Road (A-C) – Oscar Crk Road – ASC

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 37-5-1.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing.
0.01	Jct w/ 37-5-14.1 Road on right.
0.03	Unit 14-5 boundary on left.
0.10	Existing CMP
0.11	Jct w/ 37-5-14.2 Road on left.
0.15	Existing CMP
0.21	Existing CMP
0.23	Unit 14-5 boundary on left.
0.28	Existing CMP
0.34	Unit 14-5 boundary on left.
0.35	Existing CMP
0.43	Existing CMP
0.435	Unit 14-5 boundary on left.
0.44	Existing MTI gate (green). End BLM controlled Seg A and begin Pvt controlled Seg B. See License Agreement with Murphy Timber Investments for additional requirements on this road segment.
0.47	Existing CMP
0.48	Jct w/ Pvt road on left.
0.54	Existing CMP
0.60	Existing CMP
0.66	Existing CMP

Exhibit C7

Sale Name: Savage Murph T.S.

Page 3 of 9

0.73	Existing CMP
0.80	Existing CMP
0.85	Jct w/ Pvt road on right.
0.86	Existing CMP
0.92	Existing CMP
0.97	Existing CMP
0.99	Existing BLM gate (yellow) to be removed. End Pvt controlled Seg B and begin BLM controlled Seg C. Properly remove the existing BLM gate and gate posts in such a manner that does not cause damage to the gate integrity and deliver the gate to the Merlin BLM Road Maintenance Shop located at the Charles Sprague Seed Orchard, 1980 Russell Road, Merlin, Oregon, 97532. Coordinate drop off with project engineer. Immediately upon removal of BLM gate, properly backfill and compact the open post holes within the road prism with native material.
1.01	Existing CMP
1.02	Jct w/ 37-5-23.0 Road on right.
1.07	Existing CMP
1.13	Jct w/ Pvt Road on left.
1.14	Jct w/ 37-5-23.1 Road on right.
1.15	Waste Disposal Site on left. Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.
1.22	Existing CMP
1.29	Existing CMP
1.41	Existing CMP
1.51	Existing CMP
1.58	Existing CMP
1.60	Unit 23-7 boundary on right.
1.62	Existing CMP
1.67	Existing CMP
1.74	Unit 23-7 boundary on right.
1.76	Construct truck turnaround area. End road renovation.

37-5-23.1 Road – Savage Pass C Sp – NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 37-5-14.0 Road. Begin road renovation which includes clearing and grubbing of the existing overgrown road prism; reshaping road surface (blading and rolling) to road specifications; reshaping and reconstructing existing water dips; and roadside brushing.
0.10	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.20	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.26	Jct w/ old spur road on right.
0.34	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.37	Jct w/ old spur road on right.
0.38	Unit 23-7 boundary on left.
0.40	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.42	Unit 23-7 boundary on right.
0.49	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.61	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.

Exhibit C7

Sale Name: Savage Murph T.S.

Page 4 of 9

- 0.69 Unit 23-7 boundary on left.
- 0.70 Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 0.83 Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
- 0.88 Construct truck turnaround/landing area.
- 0.92 End road renovations. Unit 23-7 boundary on right. Waste disposal site at end of road. Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic.

37-5-14.2 Road – Savage Pass B Sp – NAT

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 37-5-14.0 Road. Begin road renovation which includes clearing and grubbing of the existing overgrown road prism; reshaping road surface (blading and rolling) to road specifications; reshaping and reconstructing existing water dips; and roadside brushing. |
| 0.07 | Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.17 | Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material. |
| 0.24 | End road renovations at large landing area. Waste disposal site at end of road. Place waste material on stable area well off of road surface and outside of turnaround/landing area so not to impede drivability of traffic. |

Birdseye Creek Area – See Exhibit C2-4 & C2-5 for Maps:

37-4-4.0 Road (A) – Birdseye Crk W Road – ASC

- | <u>MP</u> | <u>Description</u> |
|-----------|--|
| | <i>County Road maintenance and ownership ends approximately 2.56 miles from Rogue River Hwy.</i> |
| 0.00 | Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. The Purchaser shall be required to furnish and apply non-saline water, or approved equal, during dry hauling periods (dust abatement), when directed by the Contract Officer, for the purpose of laying nuisance dust and to prevent loss of surface material over the next 0.11 miles of road. |
| 0.01 | Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2. |
| 0.09 | Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2. |
| 0.11 | Jct w/ 37-4-4.1 Road on left. End road renovation. End dust abatement requirements. |

Exhibit C7

Sale Name: Savage Murph T.S.

Page 5 of 9

37-4-4.1 Road (A-D) – Birdseye Crk Road – ASC

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 37-4-4.0 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. The Purchaser shall be required to furnish and apply non-saline water, or approved equal, during dry hauling periods (dust abatement), when directed by the Contract Officer, for the purpose of laying nuisance dust and to prevent loss of surface material over the next 0.60 miles of road.
0.04	Existing Metal Pipe Arch at the Birdseye Creek crossing. This creek crossing is noted for critical fish habitat protection (<i>Coho</i>) as well as a Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2. The Purchaser shall ensure all erosion and sediment control measures, BMP's, are in place prior to any hauling operations. This site shall be inspected/accepted in writing by the Contracting Officer or project engineer.
0.18	Existing CMP
0.24	Existing CMP
0.31	Existing CMP
0.52	Existing CMP w/ downspout
0.60	End dust abatement requirements.
0.67	Existing CMP
0.85	Existing CMP
0.90	Existing CMP w/ downspout
1.05	Existing CMP
1.10	Existing CMP
1.14	Existing CMP
1.18	Existing CMP
1.19	Jct w/ 37-4-4.2 Road on left.
1.33	Existing CMP
1.50	Existing CMP
1.57	Existing CMP
1.68	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
1.74	Existing CMP
1.85	Existing CMP w/ downspout
1.89	Existing CMP
2.02	Existing CMP
2.10	Existing CMP
2.21	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
2.36	Existing CMP
2.46	Jct w/ 37-4-9.0 Road on left.
2.56	Existing CMP
2.66	Existing CMP
2.78	Existing CMP
2.85	Jct w/ 37-4-9.2 Road on right.
3.06	Existing CMP
3.20	Existing CMP
3.33	Existing CMP
3.41	Jct w/ 37-4-9.1 Road on left.
3.48	Existing CMP

Exhibit C7

Sale Name: Savage Murph T.S.

Page 6 of 9

3.59	Existing CMP
3.67	Existing CMP
3.74	Jct w/ 37-4-17.0 Road on right.
3.88	Existing CMP
3.97	Existing CMP
4.08	Existing CMP
4.17	Jct w/ 37-4-17.4 Road on left.
4.18	Jct w/ 37-4-17.1 Road on right.
4.21	Existing CMP
4.25	Existing CMP
4.31	Unit 17-5 boundary on left.
4.33	Unit 17-5 boundary on left. Jct w/ old spur road on left.
4.34	Existing CMP
4.38	Jct w/ old spur road on left.
4.49	Existing CMP
4.54	Jct w/ 37-4-17.3 Road on left. End road renovation.

37-4-17.3 Road – Upper Miners Crk – NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 37-4-4.1 Road. Begin road renovation which includes clearing and grubbing of the existing overgrown road prism; reshaping road surface (blading and rolling) to road specifications and roadside brushing.
0.03	End road renovation at large landing/turnout area.

37-4-17.4 Road – Upper Caris Crk Sp – NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 37-4-4.1 Road. Begin road renovation which includes clearing and grubbing of the existing overgrown road prism; reshaping road surface (blading and rolling) to road specifications; reshaping and reconstructing existing water dips; and roadside brushing.
0.01	Large landing area.
0.05	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.08	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.12	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.18	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.21	End road renovation at large landing/turnout area.

37-4-9.1 Road (A1-A3) – Birdseye Crk East Sp – ASC

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 37-4-4.1 Road. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing.
0.15	Existing CMP.
0.32	Existing CMP.
0.46	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
0.65	Jct w/ Pvt road on right.

Exhibit C7

Sale Name: Savage Murph T.S.

Page 7 of 9

- 0.66 Heavy blading/scarification along hairpin corner. Properly place, grade, water, and compact 20 CY's (27.6 Tons) of 1-1/2-minus crushed rock, from a certified weed free source, in a 4" lift (compacted in place).
- 0.77 Jct w/ 37-4-17.2 Road on left. End road renovation.

37-4-17.2 Road – Burnt Eye Sp – NAT

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 37-4-9.1 Road. Begin road renovation which includes clearing and grubbing of the existing overgrown road prism; reshaping road surface (blading and rolling) to road specifications; reshaping and reconstructing existing water dips; and roadside brushing.
0.01	Remove existing earthen/log barricade and reshape road per specifications.
0.06	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.13	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.25	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.34	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.39	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.47	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.52	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.55	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.62	Reconstruct/reshape existing water dip and armor fill slope per specifications and details on Exhibit C6-1. Apply seed and mulch to fill slope area to stabilize side cast material.
0.64	Jct w/ proposed Temp Route 20-5 on left. End road renovation. See Exhibit C2-5 for Temp Route map and specifications and see Temp Route 20-5 work list data for work continuation.

Right Fork Footh Creek Area – See Exhibit C2-6 for Map:

37-4-15.0 Road (A-C2) – Long Gulch Road – ASC

<u>MP</u>	<u>Description</u>
0.00	Jct w/ Right Fk Footh Creek Road (County). Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing. The Purchaser shall be required to furnish and apply non-saline water, or approved equal, during dry hauling periods (dust abatement), when directed by the Contract Officer, for the purpose of laying nuisance dust and to prevent loss of surface material over the next 0.50 miles of road.
0.01	Existing Pvt gate w/ BLM lock on it.
0.04	Existing CMP.
0.11	Existing CMP.
0.18	Existing CMP.
0.34	Existing CMP.
0.37	Existing CMP.
0.50	End dust abatement requirements.
0.55	Existing CMP.
0.60	Existing CMP.

Exhibit C7

Sale Name: Savage Murph T.S.

Page 8 of 9

0.66	Existing CMP.
0.75	Existing CMP.
0.80	Existing CMP.
0.86	Existing CMP.
0.92	Existing CMP.
0.96	Jct w/ Pvt Rd on left.
1.03	End BLM controlled Seg A and begin Pvt controlled Seg B. See License Agreement with AP Timber additional requirements on this road segment.
1.09	End Pvt controlled Seg B and begin BLM controlled Seg C1.
1.14	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
1.23	Existing CMP.
1.28	Existing CMP.
1.33	Jct w/ old jeep road on left.
1.36	Existing CMP.
1.46	Existing CMP.
1.55	Existing CMP.
1.67	Existing CMP. Hydrologic Point of Concern: Install check dams, or other approved BMP's, per contract specifications and Exhibit C6-2.
1.77	Existing CMP.
1.89	Existing CMP.
1.92	Existing CMP.
1.96	Existing CMP.
2.03	Existing CMP.
2.08	Existing CMP.
2.14	Existing CMP.
2.19	Existing CMP.
2.28	Existing CMP.
2.36	Jct w/ 37-4-21.3 Road on left.
2.39	Jct w/ 37-4-21.0 Road on left.
2.42	Existing CMP.
2.52	Existing CMP.
2.66	Existing CMP.
2.78	Existing CMP.
2.87	Existing CMP.
2.90	Unit 21-13 boundary on left.
2.99	Reconstruct/grade large landing area.
3.03	Jct w/ 37-4-21.2 Road on right.
3.05	Unit 21-13 boundary on left. End road renovation.

Exhibit C7

Sale Name: Savage Murph T.S.

Page 9 of 9

Temporary Routes

All Temporary Routes are NAT surface, unless noted otherwise. Upon completion of timber operations, all Temporary Routes are to be decommissioned/winterized. Decommissioning/winterizing consists of installation of water bars, placing of native seed and mulch or slash, and constructing earthen berm or log barricade at the entrance to deter future public vehicular use.

Birdseye Creek Area – See Exhibit C2-4 & C2-5 for Maps:

Temp Route 20-5

STA	Description
0+00	Jct w/ 37-4-17.2 Road. Begin temp route new construction. See Exhibit C2-5 for additional temp route specifications.
2+50	Construct water dip per specifications and details on Exhibit C6-1 with the exception of armoring the fill slope.
3+50	Begin saddle area transition.
5+00	High point/crest in p-line.
6+30	End saddle area transition.
9+50	Construct water dip per specifications and details on Exhibit C6-1 with the exception of armoring the fill slope.
12+75	Construct water dip per specifications and details on Exhibit C6-1 with the exception of armoring the fill slope.
15+50	Construct water dip per specifications and details on Exhibit C6-1 with the exception of armoring the fill slope.
18+50	Construct water dip per specifications and details on Exhibit C6-1 with the exception of armoring the fill slope.
20+40	Begin truck turnaround area.
20+70	Center of truck turnaround; 60FT radius.
21+00	End truck turnaround area. End temp route construction.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 1 of 22

ROAD RENOVATION AND IMPROVEMENT SPECIFICATIONS**TABLE OF CONTENTS**

SECTION	DESCRIPTION
100	General
200	Clearing and Grubbing
300	Excavation and Embankment
500	Renovation and Improvements of Existing Roads
600	Watering
1200	Aggregate Surface Course – Crushed Rock
1400	Slope Protection
1700	Erosion Control
1800	Soil Stabilization
2100	Roadside Brushing

GENERAL – 100

101 - Prework Conference(s):

A prework conference will be held prior to the start of any work or harvesting operations. The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representative(s), subcontractor(s) and/or his or their representative(s) and the Authorized Officer and/or his representative(s).

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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

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

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

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

Exhibit C8

Sale Name: Savage Murph T.S.

Page 3 of 22

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Exhibit C8

Sale Name: Savage Murph T.S.

Page 4 of 22

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

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

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

Road Centerline - The longitudinal center of a roadbed.

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

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

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

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

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

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

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

Spalls - Flakes or chips of stone.

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

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

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

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

Surface Course - Top layer of a road structure consisting of finely crushed gravels or asphalt designed to provide a smooth running surface for traffic load.

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

Exhibit C8

Sale Name: Savage Murph T.S.

Page 5 of 22

constructed.

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

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

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

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

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

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

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

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

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

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

102a - Tests Used in These Specifications:

<u>AASHTO T 11</u>	Quantity of rock finer than No. 200 sieve.
<u>AASHTO T 27</u>	Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.
<u>AASHTO T 89</u>	Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.
<u>AASHTO T 90</u>	Plastic limits and plasticity index of soil. a. Plastic limit - lowest water content at which the soil remains plastic. b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.
<u>AASHTO T 96</u>	Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
<u>AASHTO T 99</u>	Relationship between soil moisture and maximum density of soil. Method A - 4" mold, soil passing a No. 4 Sieve.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 6 of 22

25 blows/layer & 3 layers.

Method D - 6" mold, soil passing a 19.00mm (3/4 inches) sieve. 56 blows/layer & 5 layers.

- 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-inch drop.
- AASHTO T 191 Sand Cone. Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.
- AASHTO T 205 Rubber balloon. Density of soil in place. Use for compacted or firmly bonded soil.
- AASHTO T 210 Durability of aggregates based on resistance to produce fines.
- AASHTO T 224 Correction for coarse particles in the soil.
- AASHTO T 310 Determination of density of soil and soil-aggregates 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.
- 103i - Other. Compaction equipment approved by the Authorized Officer.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 7 of 22

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.
- 202 - Where clearing limits have not been posted, established by these specifications or shown on the plans, the limits shall extend 8 feet back of the top of the cut slope and 8 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.
- 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 204c and 204e. Undisturbed stumps, roots and other solid objects which will be a minimum of 3 feet below subgrades or slope surfaces or embankments are excluded.
- 204e - Roots and embedded wood material shall be removed to a depth not less than 1 foot below embankment subgrades or slope surfaces.
- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections. Such debris will, however, be permitted to remain under waste material from full-bench construction on steep side slopes.
- 206 - Clearing and grubbing debris shall be disposed of by scattering in accordance with Subsection 210 and as shown on the plans.
- 206a - Notwithstanding Subsections 204 and 205, clearing and grubbing debris resulting from landing construction as shown on Exhibit A, shall be placed at disposal sites and shall not be covered with excavated material. Location of disposal sites are listed in the Road Work List and/or as 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.
- 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.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 8 of 22

EXCAVATION AND EMBANKMENT - 300

- 301 - This work shall consist of excavating; overhaul, placement of embankments, backfilling, leveling, ditching, grading, insloping, outsloping, crowning and scarification of the subgrade, compaction, disposal of excess and unsuitable materials, and other earth-moving work in accordance with these specifications and conforming to the typical cross sections shown on the plans.
- 302 - Excavation shall also consist of the excavation of roads, temporary routes, turnaround areas, and landing cut sections, backfilling, leveling, grading, compaction, and other earth moving work necessary for the construction of the roadway and temporary route in accordance with these specifications and conforming to the lines and typical cross sections shown on the plans.
- 303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.
- 305 - Embankment construction shall consist of the placement of excavated materials, backfilling, leveling, grading, compaction, and other earth-moving work necessary for the construction of the roadway, temporary routes, turnaround areas, and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.
- 305a - Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, frozen material, and other deleterious materials and shall be placed and compacted as specified.
- 305b - Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Roadway and temporary route embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth for each lift.
- 305c - Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock not larger than 12 inches in the greatest dimension shall be placed in successive layers not exceeding 18 inches in thickness. Individual rocks and boulders greater than 12 inches in diameter may be used to construct embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.
- 306a - Minimum compaction for each layer of temporary route embankment and selected excavation material placed at optimum moisture shall be 1 hour of continuous compacting for each 4 stations of road, or fraction thereof.
- 306c - Compacted roadway materials shall have a uniform density of not less than 85 percent of the

Exhibit C8

Sale Name: Savage Murph T.S.

Page 9 of 22

maximum density as determined by AASHTO T 99, Method A or Method D.

- 306e - The final roadway subgrade and turnaround areas shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103f, 103g, and 103i. Minimum compaction shall be 1 hour of continuous compacting for each 4 stations of road or a fraction of as measured along the center line of the constructed road.
- 306g - All fill slopes shall be compacted to 85% of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.
- 309 - The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance not less than 1 foot and not more than 3 feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or blasting.
- 312 - When material, except solid rock, encountered in cuts at subgrade, is suitable for use in forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with these specifications.
- 314 - When heavy clays, muck, clay shale, or other deleterious material for forming the temporary route roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected excavated material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306g. Unsuitable material shall be disposed of as directed by the Authorized Officer.
- 320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.
- 321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be end dumped and disposed of as directed by the Authorized Officer.
- 321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are not required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 322 - Selected coarse rock encountered in the excavation shall be conserved for slope protection or special rock embankment purposes and placed in accordance with the requirements and details of section 1400 of these specifications and as shown on the plans.
- 324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess

Exhibit C8

Sale Name: Savage Murph T.S.

Page **10** of **22**

- of 2 feet on the uphill side.
- 327 - The finished grading shall be approved in writing by the Authorized Officer in segments or for the total road. The Purchaser shall give the Authorized Officer a 3 day notice prior to final inspection of the grading operations and start of spot surfacing operations.
 - 328 - The Purchaser shall adopt methods and procedures in using explosives, which will prevent damage to adjacent landscape features, and which will minimize scattering rocks and other debris outside the road prism.
 - 328a - The Purchaser shall establish and be responsible for blasting techniques and shall furnish the Authorized Officer, prior to starting drilling operations, a blasting plan specifying drill-hole diameter, drill-hole spacing, depth of drilling, type of explosive to be used, loading pattern, sequence of firing, the location where the plan is to be used, and other relevant data. Acceptance of the drilling and blasting plan does not relieve the Purchaser of responsibility or liability for the results of the blasting.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 11 of 22

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. This work shall include the removal and disposal of slide material in accordance with these specifications.
- 502 - The existing road surface shall be scarified to its full width and to a depth of 6 inches, or more where necessary, to eliminate surface irregularities, bladed, shaped, watered, and rolled to the lines, grades, dimensions, and typical cross sections shown on the plans at the following location(s):

Road No.	From M.P.	To M.P.
37-5-23.1	0.00	0.92
37-5-14.2	0.00	0.24
37-4-17.3	0.00	0.03
37-4-17.4	0.00	0.21
37-4-9.1(A3)	0.61	0.71
37-4-17.2	0.00	0.64
	TOTAL	2.14 MI

- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the 37-4-9.1(A3) roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 503 - Debris from slides/slumps shall be disposed of at approved waste disposal locations as shown on the plans and as directed by the Authorized Officer.
- 504 - Existing road surfaces shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f, 103g, and 103i.
- 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 all existing drainage structures shall be cleared of vegetative debris and

Exhibit C8

Sale Name: Savage Murph T.S.

Page **12** of **22**

- boulders that obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of all 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 5 days prior to surfacing operations. The Purchaser shall give the Authorized Officer 3 days' notice prior to final inspection of the grading operations.

Exhibit C8

Sale Name: Savage Murph T.S.

Page **13** of **22**

WATERING - 600

- 601 - This work shall consist of furnishing and applying water required for the compaction of roadbeds, backfills, 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.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 14 of 22

AGGREGATE SURFACE COURSE – 1200 – CRUSHED ROCK MATERIAL

- 1201 - This work shall consist of furnishing, hauling, and placing one or more layers of crushed rock material on roadbeds 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.
- 1202a - Crushed rock materials used in this work may be obtained from commercial sources selected by the Purchaser at his option and expense, providing the rock materials furnished comply with the specifications.
- 1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.
- 1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1204

AGGREGATE SURFACE COURSE **CRUSHED ROCK MATERIAL**

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

GRADATION

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

- 1205 - Crushed rock material 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.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 15 of 22

- 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:

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

- 1208 - If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials
- 1209 - Shaping and compacting of roadbed shall be completed and approved in writing, prior to placing crushed rock material, in accordance to the requirements of Subsections 300 and 500. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 5 days prior to start of surfacing operations.
- 1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved 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, or 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 16 of 22

SLOPE PROTECTION - 1400

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

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

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

- 1403 - Individual machine-placed stones shall vary in weight from 10 to 750 pounds each. Not less than 25 percent of the individual stones shall weigh from 110 to 270 pounds each.
- 1404 - The material shall be well graded from the smallest to the maximum size specified. Stones smaller than the specified 10 percent size shall consist of spalls and fine rock fragments so distributed as to provide a stable compact mass.
- 1405 - Rip rap shall conform to the following gradations:

Exhibit C8

Sale Name: Savage Murph T.S.

Page 17 of 22

TABLE 1405¹

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

¹Gradation includes spalls and rock fragments to provide a stable, dense mass.²The intermediate dimension is the longest straight-line distance across the rock that is perpendicular to the rock's longest axis on the rock face with the largest projection plane.³Rock mass is based on a specific gravity of 2.65 (165#/cu.ft.) and 85 percent of the cubic volume as calculated using the intermediate dimension.

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

1410 - The embankment slopes at the water dip locations specified in the Road Work List and as shown on the plans shall be protected and stabilized by placement of rock materials to form a slope-protection structure conforming to the construction requirements and details of these specifications.

Exhibit C8

Sale Name: Savage Murph T.S.

Page **18** of **22**

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 details 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 (0.5 acres) after October 15th without prior approval by the Authorized Officer.
- 1706 - The surface area of erodible earth material exposed at any one time by excavation or fill shall not exceed 21,780 square feet (0.5 acres) after October 15th without prior approval by the Authorized Officer.
- 1707 - Completed and partially completed segments of roads carried over the winter and early spring periods shall be stabilized by seeding and mulching in accordance with Section 1800.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.
- 1711 - The Purchaser shall construct sediment check dams or other approved erosion control devices conforming to the requirements, locations, and details shown on the respective exhibits and on the plans.
- 1712 - Where shown on the plans, the Purchaser shall provide erosion control measures for newly reconstructed ditches on steep grades which include but is not limited to, dumped stone, jute mesh, sod, check dams consisting of hay bales, and earth or stone. Width of protective lining or dam should extend far enough up the ditch slopes to effectively contain the runoff and prevent erosion and washout at the edges and prevent sediment from reaching live water.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 19 of 22

SOIL STABILIZATION – 1800

- 1801 - This work shall consist of seeding and mulching on designated cut, fill, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is required for road acceptance under Section 18 of this contract.
- 1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, road renovation, landings, disturbed areas, and disposal sites in accordance with these specifications and as shown on the plans.
- 1803 - Soil stabilization work as specified under Subsection 1802a shall be performed during the following seasonal period (within the same calendar year):

From: August 1st	To: October 15th
------------------	------------------

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas and then complete the requirements of Soil Stabilization 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 Section 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 Cost Schedule.
- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.
- 1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.
- 1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 20 of 22

- 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 4.3 acres designated for treatment as shown on the plans and as specified under Subsections 1802a and 1806a, a mixture of grass seed and mulch material at the following rate of application:

Two Stage – Dry:

Native Grass Seed	20 lbs./acre
Mulch (weed free)	2,000 lbs./acre

- The above proportion and application rate are subject to adjustment by the Authorized Officer during the application operation.
- 1812 - The Purchaser shall furnish and apply to the area designated for treatment as shown on the plans and as specified under Subsections 1802a and 1806a, native grass seed and mulch material at the application rate to be determined by the Authorized Officer based on visual observation of trial applications.
- Mulches shall be spread/placed in treatment areas to a depth of 2 inches to allow seed germination or as directed by the Authorized Officer. Treatment area will be covered evenly and completely. Mulch can be broadcast onto the soil surface by hand or with hand/mechanical operated spreaders.
- 1814 - The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.
- 1815 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.
- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipacker seeders, or other approved mechanical seeding equipment may be used when seed is 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

Exhibit C8

Sale Name: Savage Murph T.S.

Page **21** of **22**

treatment area.

- 1824 - Twine, rope, sacks, and other debris resulting from the soil-stabilization operations shall be picked up and disposed of to the satisfaction of the Authorized Officer.

Exhibit C8

Sale Name: Savage Murph T.S.

Page 22 of 22

ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing shall be performed manually with hand tools, including chain saws.
- 2103 - Vegetation cut less than 6 inches in diameter when measured at DBH shall be cut to a maximum height of 1 inch above the ground surface or above obstructions such as rocks or stumps on cut and fill sloped and all limbs below the 1 inch area will be severed from the trunk.
- 2103a - Vegetation shall be cut and removed from the road prism between 6 feet beyond the outside shoulders (down the fill slope) and 6 feet beyond the ditch centerline (up the cut-bank) 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 on cut vegetation will not be permitted within road surface, including shoulders and turnout areas. Cuts shall be parallel to the ground line or running surface.**
- 2104 - Trees in excess of 6 inches in diameter at DBH shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 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 inch of the trunk to produce a smooth vertical face.
- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.
- 2110 - Vegetation 6 inches and smaller in diameter shall be chipped. Chips shall be scattered downslope from the roadway. Vegetation over 6 inches in diameter shall be removed from within the clearing limits by direction of the Authorized Officer. **Chips are never allowed on the road surface.**
- 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the current version of the Manual on Uniform Traffic Devices.

Exhibit C9

Sale Name: Savage Murph T.S.

Page 1 of 1

SPECIAL PROVISIONS

1. Before the initial start of road renovation, construction, reconstruction, or surfacing operations, or after a shutdown of 7 or more days, the Purchaser shall notify the Authorized Officer 48 hours in advance of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer if they intend to cease operations for any period of 30 or more days.
2. The Purchaser shall protect, and is responsible for, any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements 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, as good or better condition than just prior to such damage occurring.
3. All disturbed soil shall be seeded and mulched. The Purchaser shall furnish and apply native grass seed and certified weed free straw mulch for soil stabilization operations. Seed and mulch shall be acquired from a BLM approved source.
4. All stream channel culverts and inlets shall be cleared and cleaned between **June 15th and September 15th** in accordance with Oregon Department of Fish and Wildlife (ODFW) in-stream work period guidelines.
5. Ensure that all large wood is retained in the stream channel during culvert cleaning activities by moving logs which had accumulated on the upstream side of a culvert to the downstream side of the culvert.
6. Roadside brushing cutting limits beneath or adjacent to bridges shall extend 8 feet horizontally from each side of the outermost projected line of the bridge including abutments, curbs, rails or decks. Cut brush and trees shall be removed from beneath the bridge and from the stream channel.
7. While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed. All debris resulting from roadside brushing activities shall be manually cut and chipped. **All culvert inlets and outlets shall be brushed for a radius of 4 feet.**
8. While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C7) shall have the branches pruned rather than being felled.
9. All stumps, designated by the Authorized Officer, which would interfere with normal blading and road renovation operations (including turnouts), shall be removed in such a way as to not cause damage to the drainage ditch or the road bed. Stumps that are ground-down, shall be ground to a minimum of 3 inches below existing grade.

ROAD MAINTENANCE SPECIFICATIONS

TABLE OF CONTENTS

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

Exhibit D1

Sale Name: Savage Murph
T.S.

Page 2 of 8

GENERAL - 3000

- 3001 - The Purchaser shall be required to maintain all roads listed and/or as shown in Exhibit D maps of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 of this exhibit.
- 3003 - The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.
- 3004 - The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one 1 mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

- 3101 - The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 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.
- 3105 - The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water-bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.
- 3106 - The Purchaser shall be responsible for repair and replacement of all materials eroded from road shoulders and fill slopes, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the Purchaser. Prior to repair and replacement of eroded material exceeding fifteen station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, borrow source and method of repair. Work may commence immediately after agreement.

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

Exhibit D1

Sale Name: Savage Murph
T.S.

Page 3 of 8

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

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

- 3108 - The Purchaser shall avoid fouling gravel or bituminous surfaces. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.

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

SEASONAL MAINTENANCE - 3200

- 3201 - The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.
- 3202 - The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 1st of 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 Section 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

Exhibit D1

Sale Name: Savage Murph
T.S.

Page 4 of 8

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 Section 16(b), Special Provisions, and Sections 3000, 3100, 3200 and 3300 of the maintenance specifications have been completed and a relinquishment of cutting and removal rights on cutting units tributary to these roads is signed by the Purchaser. Request for partial acceptance must be submitted in writing by the Purchaser.

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

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

OTHER MAINTENANCE - 3400

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

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

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

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

The following roads shall be watered:

Road Number	From M.P.	To M.P.
37-5-1.0	1.32	2.12
37-4-4.0	0.00	0.11
37-4-4.1	0.00	0.50
37-4-15.0	0.00	0.50

Exhibit D1

Sale Name: Savage Murph
T.S.

Page 5 of 8

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

- 3404 - The Purchaser may at his option and expense substitute lignin sulfonate or magnesium chloride for water on any or all road segments listed in the contract provided that written approval is received from the Authorized Officer. Such authorization shall include the approval of product specifications for the application of the product to be used. Multiple applications may be required to maintain the conditions specified in Subsection 3403.
- 3405a - Additional lignin sulfonate or magnesium chloride dust palliative may be required at the option of the Authorized Officer when the functional qualities of the dust palliative have been reduced or become ineffective due to third party damage, rain, or other events not under the control of the purchaser.

If additional dust palliative is required due to events controlled by the Purchaser, such as split hauling season, the Purchaser shall furnish and place such material at his own expense.
- 3405b - The Purchaser shall notify affected residents along the roads to be treated of the planned application of lignin sulfonate or magnesium chloride dust palliatives at least 3 days prior to the work by posting warning signs at key intersections to alert users that the road is being treated. All signs shall be removed by the Purchaser within thirty days of treatment.
- 3406 - Prior to the application of lignin sulfonate or magnesium chloride dust palliative, the roadbed shall be bladed and shaped to remove surface irregularities and excess loose material. The prepared surface must be visibly moist and drying.
- 3406b - A light application of water to promote penetration shall be made in advance of the application of the specified dust palliative to allow the drying process to begin and to eliminate any saturated surface conditions.
- 3406c - The prepared roadbed shall be approved by the Authorized Officer prior to application of the specified dust palliative.
- 3407 - The Purchaser shall furnish in duplicate, commercial certification signed by vendor of compliance with the lignin sulfonate or magnesium chloride dust palliative material requirements specified under Subsection 3412b and 3412c. Commercial certification includes the date, identification number of truck or trailer, net mass, and brand name with each shipment. Also provide the net volume and specific gravity at 60°F, percent solids by mass, and PH.
- 3408 - Dust palliatives shall be applied with standard commercial distribution equipment operated in a manner that the material is uniformly applied on variable widths of surface at controlled rates.
- 3409 - The Purchaser shall notify the Authorized Officer a minimum of 3 days in advance of application of required dust palliative.
- 3410 - The Purchaser shall submit an application schedule for all dust palliative work to the Authorized Officer for approval. All work shall be in accordance with the approved plan.
- 3411 - Required lignin sulfonate or magnesium chloride dust palliative shall only be applied when

Exhibit D1

Sale Name: Savage Murph

T.S.

Page 6 of 8

the atmospheric temperature is 45°F and steady or rising and when the weather is not foggy or rainy. Do not apply dust palliative if rain is anticipated within 24 hours of application or when the ground is frozen.

- 3412 - The Purchaser shall apply to the prepared roadbed, a lignin sulfonate or magnesium chloride dust palliative conforming to the material requirements of Subsection 3412b and 3412c. The rate of application shall be 0.5 gallons per yd² surface. A second application at the rate of 0.3 gallons per yd² shall be applied at a time designated by the Authorized Officer.

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

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

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

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

- 3412b - Specifications for Lignin Sulfonate:

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

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

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

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

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

- 3412c - Specifications for Magnesium Chloride:

Exhibit D1

Sale Name: Savage Murph
T.S.

Page 7 of 8

The material shall consist of a brine containing 29 to 35 percent magnesium chloride by weight and 62 to 72 percent water by weight. Ensure that the material does not exceed the following chemical constituents:

phosphorous	25.00 ppm
cyanide	0.20 ppm
arsenic	5.00 ppm
copper	0.20 ppm
lead	1.00 ppm
mercury	0.05 ppm
chromium	0.50 ppm
cadmium	0.20 ppm
barium	10.00 ppm
selenium	5.00 ppm
zinc	10.00 ppm
sulfate	4.3 percent maximum
nitrate	5.0 percent maximum.

Concentration specifications for Magnesium chloride:

Magnesium chloride by mass	28% minimum
Water by mass	72% maximum
Specific gravity, AASHTO T 227	1.290 to 1.330

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

DECOMMISSIONING – 3500

- 3501 - Decommissioning shall consist of removing draw crossings by excavating fill material and placing in locations to form partially recontoured roadway sections. Work includes ripping, installing water bars, placement of slash and placement of soil stabilization material, and blocking road from access by vehicles. This work is required for road acceptance under Section 18 of this contract.
- 3503 Decommissioning shall be performed on all temporary routes in accordance with these specifications.
- 3504 - Decommissioning work shall be completed after timber extraction, logging activities, and after road use.
- 3505- Where draw crossing fill material is to be excavated and removed, the finished bottom of draw profile shall be re-established to its original channel grade and resulting adjacent banks shall be re-established to their original backslope ratios.
- 3506 - Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. All slash stockpiles created by the purchaser shall be utilized for decommissioning operations. Where slash is not available or no longer remaining, exposed soil areas shall be stabilized in accordance with section 1800 – Soil Stabilization.

Exhibit D1

Sale Name: Savage Murph

T.S.

Page **8** of **8**

- 3508 - Protect areas mulched and treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 3511 - Ripping and water barring shall be done on all temporary routes, disturbed areas outside of the roadway, and landings.
- 3513 - Water bars shall be installed across full width of temporary routes. Water bars shall be constructed as shown on Exhibit C6.
- 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 section 2606 on temporary routes, disturbed areas, landings, cut banks, fill slopes and other areas disturbed by the purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

EXHIBIT D2-1

LEGEND

LAND OWNERSHIP

- BLM
- NON-BLM

PROPOSED TIMBER SALE UNITS

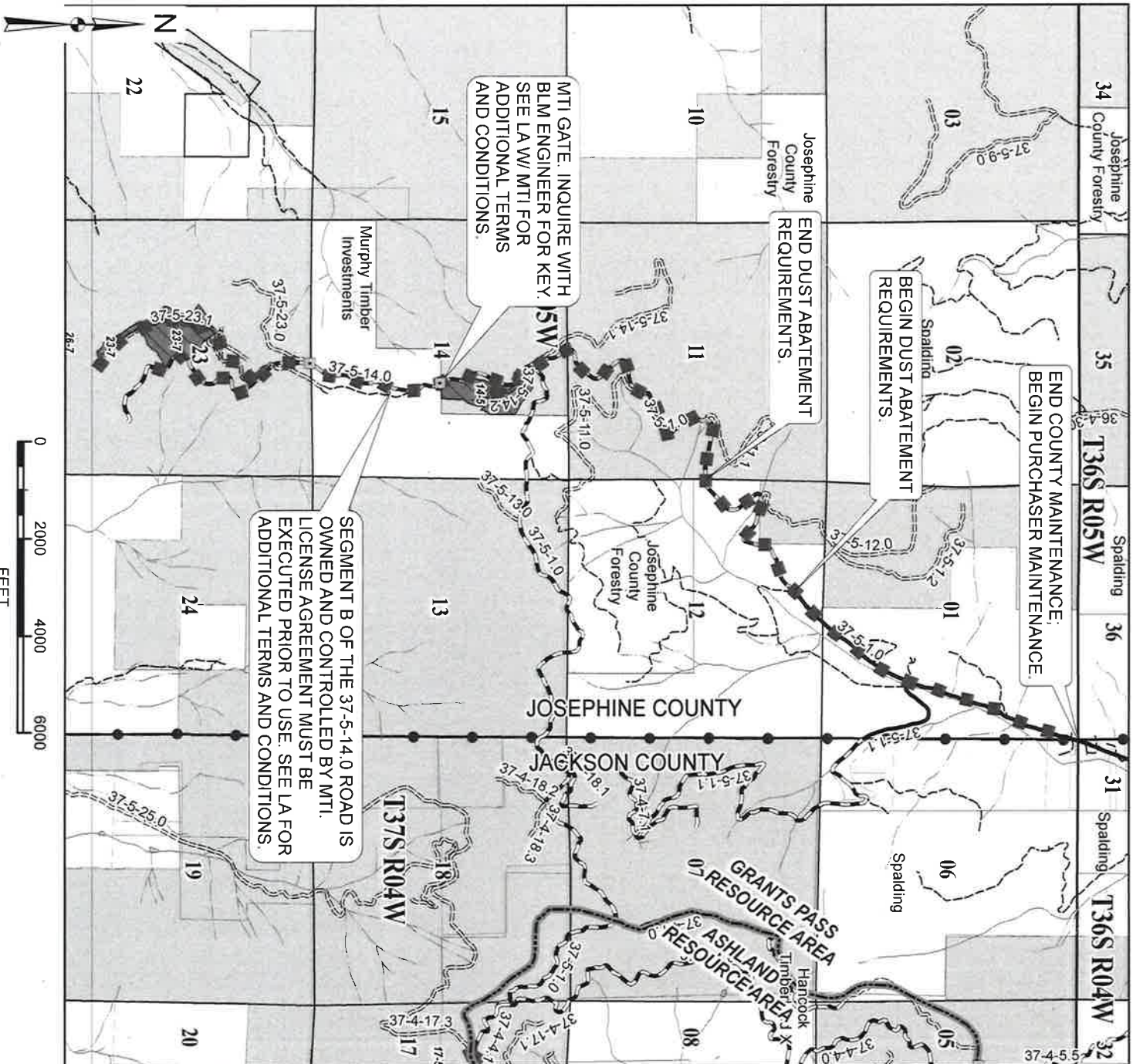
ROADS - SURFACE TYPE

- Bituminous
- Aggregate
- Natural
- Unknown

ROAD MAINTENANCE RESPONSIBILITY

- PURCHASER
- GATE
- COUNTY BOUNDARY
- RESOURCE AREA BOUNDARY

ALWAYS
THINK
SAFETY



Rev No.	Description	Date	Approval
1	DESIGNED: <i>[Signature]</i>		
2	REVIEWED: <i>[Signature]</i>		
3	APPROVED: <i>[Signature]</i>		
4	DRAFTED BY: ELF		
5	DATE: JUN 2018		

UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

MEDFORD DISTRICT - MEDFORD, OREGON

SAVAGE MURPH TIMBER SALE

ROAD MAINTENANCE MAP

SAVAGE CREEK AREA

DESIGNED: *[Signature]*

REVIEWED: *[Signature]*

APPROVED: *[Signature]*

DRAFTED BY: ELF

DATE: JUN 2018

SHEET: 1 OF 3

EXHIBIT D2-2

LEGEND

LAND OWNERSHIP

- BLM
- NON-BLM

- PROPOSED TIMBER SALE UNITS

ROADS - SURFACE TYPE

- Bituminous
- Aggregate
- Natural
- Unknown

ROAD MAINTENANCE RESPONSIBILITY

- PURCHASER
- PROPOSED TEMP ROUTES
- GATE
- RESOURCE AREA BOUNDARY

ALWAYS
THINK
SAFETY

Rev No.	Description	Date	Approval

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

SAVAGE MURPH TIMBER SALE
ROAD MAINTENANCE MAP
BIRDSEYE CREEK AREA

DESIGNED: _____
 REVIEWED: _____
 APPROVED: *[Signature]* 6/19/18
 DRAFTED BY: ELF
 DATE: JUN 2018 SHEET: 2 OF 3

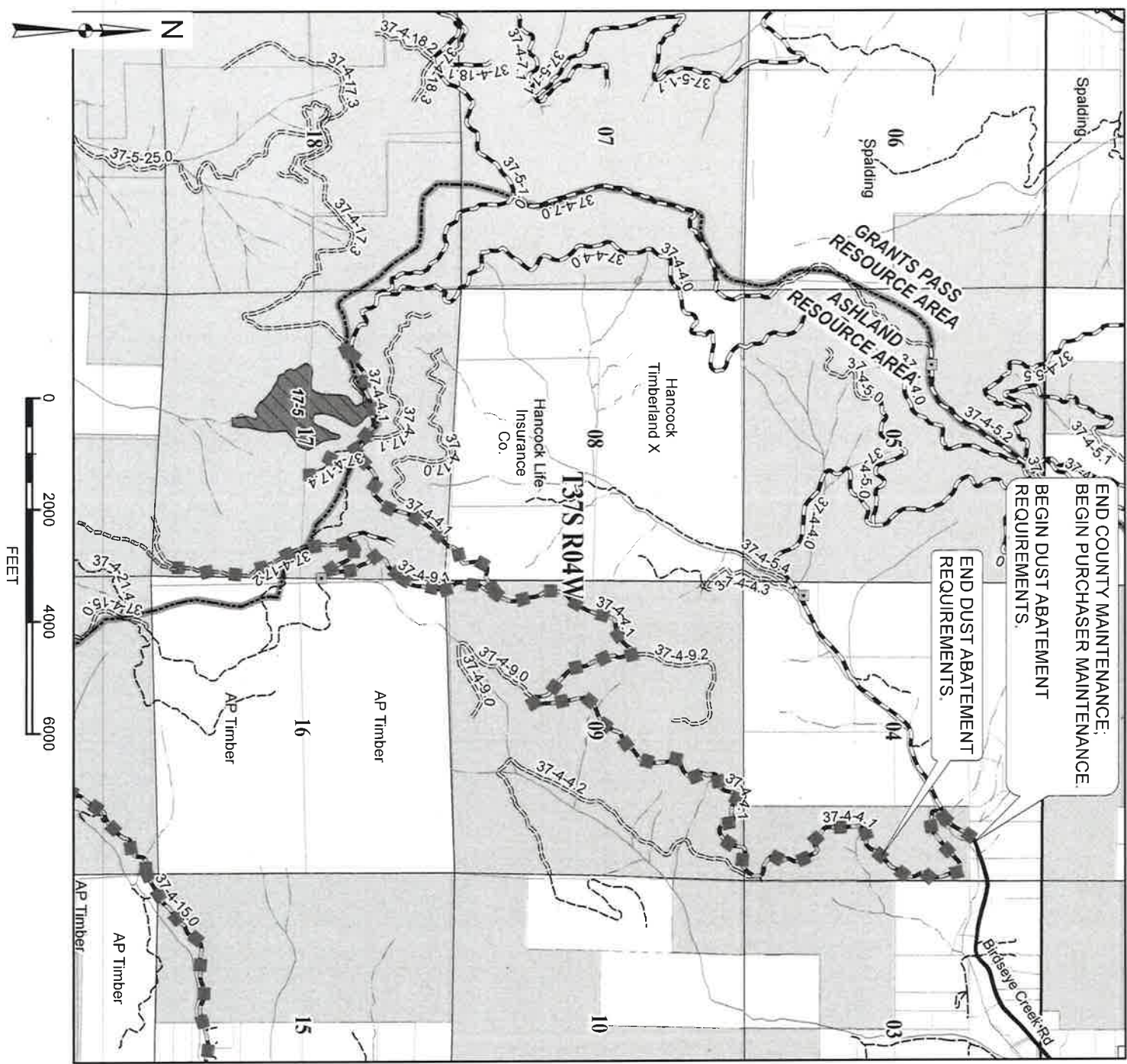


EXHIBIT D2-3

LEGEND





LAND OWNERSHIP

-  BLM
-  NON-BLM
-  PROPOSED TIMBER SALE UNITS

ROADS - SURFACE TYPE

-  Bituminous
-  Aggregate
-  Natural
-  Unknown

ROAD MAINTENANCE RESPONSIBILITY


-  PURCHASER
-  PROPOSED TEMP ROUTES
-  GATE
-  RESOURCE AREA BOUNDARY


ALWAYS
THINK
SAFETY


Rev No.	Description	Date	Approval

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

SAVAGE MURPH TIMBER SALE ROAD MAINTENANCE MAP FOOTS CREEK AREA

DESIGNED: 

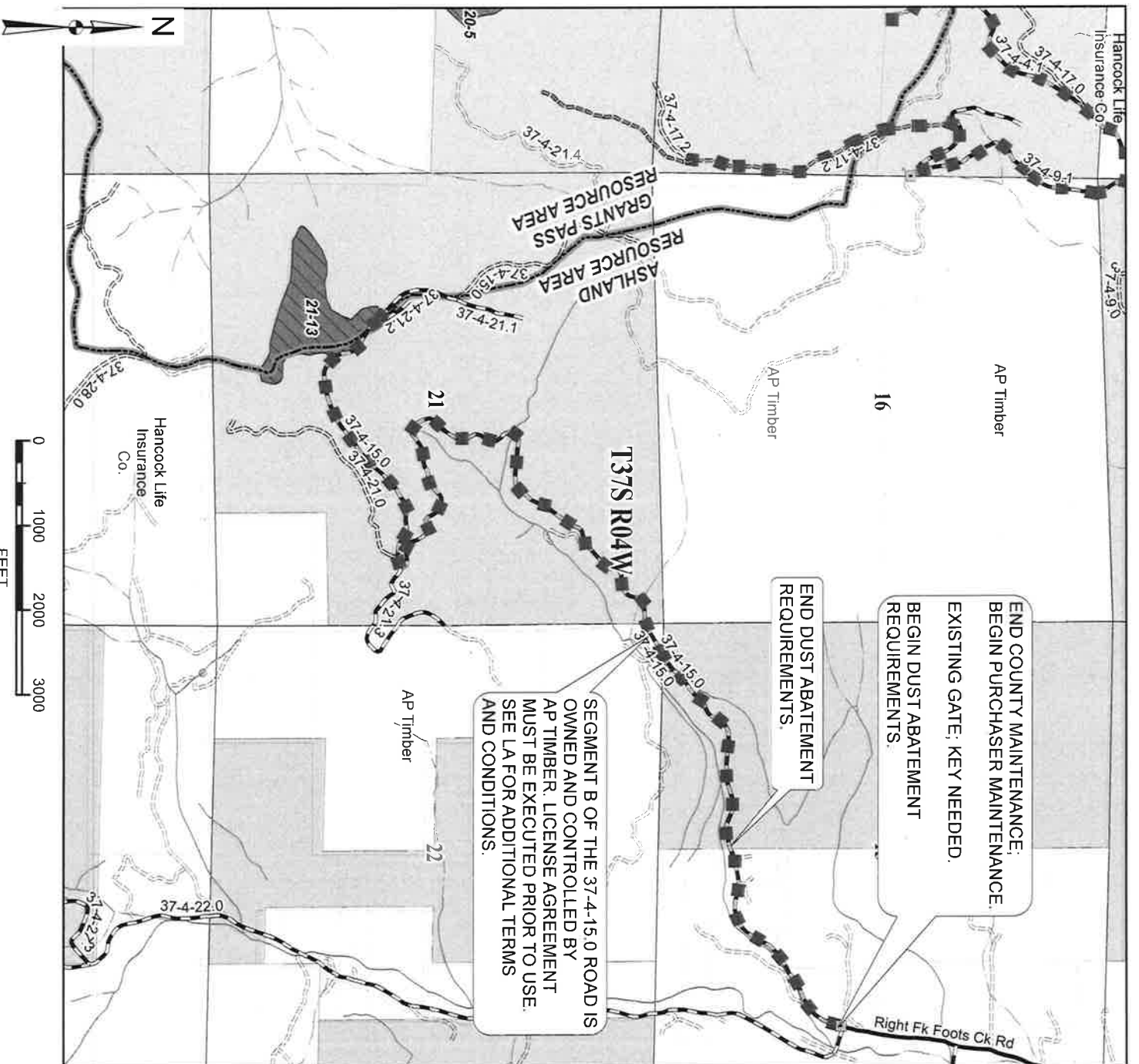
REVIEWED: 

APPROVED: 

DRAFTED BY: ELF

DATE: JUN 2018

SHEET: 3 OF 3





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

Timber Appraisal

Sale Name: Savage Murph	Sale Date: Thursday, July 26, 2018
BLM District: Medford DO	Unit of Measure: 16' MBF
Contract #: ORM07-TS-2018.0006	Contract Term: 36 months
Sale Type: Advertised	Contract Mechanism: 5450-3
	Sale of Timber - Lump Sum

Content

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

Prepared By: Caulfield, David J

Approved By: Rentz, George C

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Jackson	37S	4W	17	SW1/4NE1/4, SE1/4NW1/4, E1/2SW1/4, NW1/4SE1/4, SE1/4SE1/4	Willamette
PD	Jackson	37S	4W	20	E1/2NE1/4, SW1/4NE1/4	Willamette
O&C	Jackson	37S	4W	21	SW1/4	Willamette
PD	Josephine	37S	5W	14	W1/2NE1/4	Willamette
O&C	Josephine	37S	5W	23	W1/2NE1/4, SE1/4NW1/4, E1/2SW1/4, W1/2SE1/4	Willamette
PD	Josephine	37S	5W	26	NE1/4, NE1/4NW1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	1,286.0	1,424.0	1,506.0	31,482	887	9,888
Ponderosa Pine	35.0	37.0	40.0	801	92	350
Totals	1,321.0	1,461.0	1,546.0	32,283	979	10,238

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	191.0	4.0	195.0	6.8

Logging Costs

Stump to Truck	\$343,485.47
Transportation	\$55,737.15
Road Construction	\$86,360.28
Maintenance/Rockwear	\$18,994.41
Road Use	\$0.00
Other Allowances	\$53,367.50
Total:	\$557,944.81
Total Logging Cost per MBF:	\$422.37

Utilization Centers

Location	Distance	% of Net Volume
White City	25.0 miles	100 %

Profit & Risk

Basic Profit & Risk	9 %
Additional Risk	1 %
Total Profit & Risk	10 %

Tract Features

Quadratic Mean DBH	13.0 in
Average GM Log	45 bf
Average Volume per Acre	6.8 mbf
Recovery	85 %
<u>Net MBF volume:</u>	
Green	1,321.0 mbf
Salvage	0 mbf
Export	0 mbf
<u>Ground Base Logging:</u>	
Percent of Sale Volume	100 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft
<u>Cable Logging:</u>	
Percent of Sale Volume	0 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft
<u>Aerial Logging:</u>	
Percent of Sale Volume	0 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft

Cruise

Cruise Completed	February 2018
Cruised By	Caulfield/Cannon
Cruise Method	
3P for DF & BLM 100% for all other Species. 5 Sugar Pines were cruised as Ponderosa Pines as prices are the same.	

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF	Appraised Value
Douglas Fir	9,888	1,286.0	\$722.62	\$72.26	\$422.37	\$0.00	\$228.00	\$293,208.00
Ponderosa Pine	350	35.0	\$403.39	\$40.34	\$422.37	\$0.00	\$40.40 *	\$1,414.00
Totals	10,238	1,321.0						\$294,622.00

* Minimum Stumpage values were used to compute the Appraised Price/MBF (10% of Pond Value)

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir			1.0 %	34.0 %	54.0 %	11.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Ponderosa Pine				28.0 %	60.0 %	12.0 %	

Savage Murph**Unit Summary****ORM07-TS-2018.0006****Unit: 14-5**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	200.0	222.0	237.0	1,867
Ponderosa Pine	7.0	7.0	7.0	83
Totals:	207.0	229.0	244.0	1,950

Net Volume/Acre: 8.6 MBF

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

Unit: 17-5

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	298.0	331.0	354.0	1,448
Ponderosa Pine	2.0	2.0	3.0	17
Totals:	300.0	333.0	357.0	1,465

Net Volume/Acre: 8.1 MBF

Regeneration Harvest	0.0
Partial Cut	37.0
Right of Way	0.0
Total Acres:	37.0

Unit: 20-5

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	78.0	87.0	93.0	458
Ponderosa Pine	2.0	2.0	2.0	13
Totals:	80.0	89.0	95.0	471

Net Volume/Acre: 5.7 MBF

Regeneration Harvest	0.0
Partial Cut	14.0
Right of Way	0.0
Total Acres:	14.0

Unit: 21-13

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	199.0	217.0	219.0	1,541
Ponderosa Pine	7.0	7.0	8.0	134
Totals:	206.0	224.0	227.0	1,675

Net Volume/Acre: 9.0 MBF

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

Unit: 23-7

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	145.0	161.0	172.0	1,493
Ponderosa Pine	1.0	2.0	2.0	13
Totals:	146.0	163.0	174.0	1,506

Net Volume/Acre: 4.7 MBF

Regeneration Harvest	0.0
Partial Cut	31.0
Right of Way	0.0
Total Acres:	31.0

Unit: 26-7

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	350.0	387.0	412.0	2,944
Ponderosa Pine	11.0	11.0	12.0	66
Totals:	361.0	398.0	424.0	3,010

Net Volume/Acre: 5.8 MBF

Regeneration Harvest	0.0
Partial Cut	62.0
Right of Way	0.0
Total Acres:	62.0

Unit: RS

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	13.0	15.0	15.0	107
Ponderosa Pine	2.0	2.0	2.0	12
Totals:	15.0	17.0	17.0	119

Net Volume/Acre: 5.0 MBF

Regeneration Harvest	0.0
Partial Cut	0.0
Right of Way	3.0
Total Acres:	3.0

Unit: TR20.5

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	3.0	4.0	4.0	30
Ponderosa Pine	3.0	4.0	4.0	12
Totals:	6.0	8.0	8.0	42

Net Volume/Acre: 6.0 MBF

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

Total Stump To Truck	Net Volume	\$/MBF
\$343,485.47	1,321.0	\$260.02

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

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Harvester/Forwarder	GM MBF	1,461.0	\$231.27	\$337,885.47	80% of volume is tethered assist.
Subtotal				\$337,885.47	

Additional Costs

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

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Harvester/Forwarder Side	Total	1.0	\$5,600.00	\$5,600.00	2 Additional Moves
Subtotal				\$5,600.00	

Total	Net Volume	\$/MBF
\$55,737.15	1,321.0	\$42.19

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
White City	25.0	All Species	GM MBF	1,461.0	\$38.15	\$55,737.15	100 %

Engineering Allowances

Total	Net Volume	\$/MBF
\$105,354.69	1,321.0	\$79.75

Cost Item	Total Cost
Road Construction:	\$86,360.28
Road Maintenance/Rockwear:	\$18,994.41
Road Use Fees:	\$0.00

Total	Net Volume	\$/MBF
\$53,367.50	1,321.0	\$40.40

Environmental Protection

Cost item	Total Cost
Barricades	\$225.00
Equipment Washing	\$1,500.00
Ripping	\$1,245.00
Seed & Mulching	\$2,460.00
Subtotal	\$5,430.00

Logging

Cost item	Total Cost
Waterbar Forwarder Trails	\$1,200.00
Landing Construction	\$1,425.00
Subtotal	\$2,625.00

Road Construction, Maintenance, Use, & Decommissioning

Cost item	Total Cost
Stream & Culvert Cleaning	\$256.00
Subtotal	\$256.00

Slash Disposal & Site Prep

Cost item	Total Cost
Fire Line Construction	\$1,472.00
Fuel Adjustment	\$7.80
Machine Pile Burn & Mop-up	\$1,204.00
Fuels Pullback	\$40.00
Handpile Burn & Mop-up	\$2,289.00
Cover & Burn Landing Decks	\$11.20
Machine Pile Landing Decks	\$20.00
Landing Clean-up	\$1,900.00

Underburning	\$4,275.00
Handpile & Cover	\$17,712.50
Machine Pile & Cover	\$16,125.00
Subtotal	\$45,056.50

Comments:

-Fuel Adjustment for rounding acres (program doesn't allow 1/4 acre to be entered).

Landing Clean-up with Loader

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sale: Savage Murph TS
Sale Date: 07/26/2018
Prep. By : EFreeman
Tract No: 18-06

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: **\$0.00/1321 MBF = \$0.00/MBF**

Road Maintenance Obligation:

(2.1) BLM Maintenance	\$0.00
(2.2) BLM Rockwear	\$0.00
(5.1) Purchaser Maintenance Rockwear	\$2,566.63
Total Rockwear Payable to BLM	\$2,566.63
(3.1) 3rd Party Maintenance	\$0.00
(3.2) 3rd Party Rockwear	\$179.68
(4.1) Other Maintenance Payments	\$0.00
Total Maintenance Fee Obligation (2.1-5.1)	<u>\$2,746.30</u>

Purchaser Maintenance Allowances:

(5.2A) Move In	\$3,012.66
(5.2B) Culverts, Catch Basins, Downspouts	\$2,926.56
(5.2C) Grading, Ditching	\$5,984.91
(5.2D) Slide Removal and Slump Repair	\$655.94
(5.2E) Dust Palliative (Water)	\$788.10
(5.2F) Surface Repair (Aggregate)	\$0.00
(5.2G) Other	\$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	<u>\$13,368.17</u>

(2.1-5.2G) Cost (\$2,746.30 + \$13,368.17) = \$16,114.47
Cost/MBF \$16,114.47 / 1321 MBF = \$12.20/MBF

(5.2H) Decommissioning \$2,879.94

(5.2H) Cost/MBF \$2,879.94/1321 MBF = \$2.18/MBF

(2.1-5.2H) Cost (\$2,746.30 + \$13,368.17 + \$2,879.94) = \$18,994.41

Total Cost/MBF (Excluding Road Use) **\$18,994.41/1321 MBF = \$14.38/MBF**

1) Road Use Fees - Amortization

Details

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

Subtotal by agreement number

(1.1) Subtotal \$0.00**2) BLM Maintenance - Timber Haul**

MAINTENANCE (2.1)					ROCKWEAR (2.2)		
Road Number	A Surf	Maint	Vol				
and Segment	N Type	Mi	x Fee x	MBF =	Maint	Fee x MBF =	Rkwear

(2.1) Subtotal \$0.00(2.2) Subtotal \$0.00**3) Third Party Maintenance and Rockwear**

MAINTENANCE (3.1)					ROCKWEAR (3.2)		
Agrmnt	Surface	Road					
Number	Type	Number	Mi	x Fee x MBF =	Maint	Fee x MBF =	Rkwear
M-660	ASC	37-4-15.0(B)	0.06			0.60 206	\$7.42
M-660	ASC	37-5-14.0(B)	0.55			0.60 522	\$172.26

*Subtotal of maintenance fees by agreement number:**Subtotal of rockwear fees by agreement number:*M-660 \$179.68(3.1) Subtotal \$0.00(3.2) Subtotal \$179.68**4) Other Maintenance Payments - USFS or Others Perform Maintenance**

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

(4.1) Subtotal \$0.00

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)

Road No and Segment	A N	Mi	x	RkWear Fee x	Vol MBF	Total = RkWear
37-5-01.0(B2-C)	A	2.08		0.60	729	\$909.79
37-5-14.0(A)	A	0.11		0.60	729	\$48.11
37-5-14.0(A)	A	0.33		0.60	522	\$103.36
37-5-14.0(C)	A	0.14		0.60	522	\$43.85
37-5-14.0(C)	A	0.63		0.60	146	\$55.19
37-5-23.1	A	0.92		0.00	376	\$0.00
37-5-14.2	A	0.24		0.00	207	\$0.00
37-4-04.0(A)	A	0.11		0.60	386	\$25.48
37-4-04.1(A-C)	A	3.41		0.60	386	\$789.76
37-4-04.1(D)	A	0.77		0.60	300	\$138.60
37-4-04.1(D)	A	0.36		0.60	200	\$43.20
37-4-17.3	A	0.03		0.00	20	\$0.00
37-4-17.4	A	0.21		0.00	100	\$0.00
37-4-09.1(A1-3)	A	0.77		0.60	86	\$39.73
37-4-17.2	A	0.64		0.00	86	\$0.00
37-4-15.0(C1-2)	A	1.87		0.60	206	\$231.13
37-5-01.0(A-B1)	A	1.32		0.00	729	\$0.00
37-4-15.0(A)	A	1.12		0.60	206	\$138.43

(5.1) Subtotal \$2,566.63

Purchaser Operational Maintenance

Move In

Equipment	No Units	Move x in	Cost/ 50 Mi	Dist x Factor	Sub- total
Motor Grader:	1	3	\$410.00	0.63	\$774.90
Back Hoe:	1	3	\$305.00	0.63	\$576.45
Loader:			\$410.00	0.63	\$0.00
Water Truck:	1	3	\$95.00	0.63	\$179.55
Dump Truck:	8	1	\$89.00	0.63	\$448.56
Excavator:	1	1	\$410.00	0.63	\$258.30
Roller:	1	3	\$410.00	0.63	\$774.90

(5.2A) Total \$3,012.66

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x	Cost/Mi	=	Subtotal
8		\$365.82		\$2,926.56

(5.2B) Total \$2,926.56

Grading (Includes Ditches and Shoulders)

Miles	x	Cost/Mi	x	Freq	=	Subtotal
Blade w/ Ditch:	8.00		\$694.50	1		\$5,556.00
Blade w/o Ditch:	1.00		\$428.91	1		\$428.91

(5.2C) Total \$5,984.91

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

Type	No Slides	Hours	Equip		
Equipment	/Slumps	x Each	x Cost	=	Subtotal
Grader:	2		1	\$140.96	\$281.92
Loader:	2	1		\$101.17	\$202.34
Backhoe:	2	1		\$85.84	\$171.68

(5.2D) Total \$655.94

Dust Palliative (Water)

Spreading Hours

	No	Freq	Truck					
	Miles	/	MPH	=	Hours	x	Days	x /Day = Hours
	5.00		1		5.0		2	1 10
Load & Haul =					0.0		0	0 0
Total Hours =					10			

Truck Cost: \$78.81/Hr. x 10.0 Hours = \$788.10

(5.2E) Total \$788.10

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

Ripping

Road Number	Ripping Cost	x	(NumSta or CuYds)	= Total
Temp Route 20-5	\$30.34	x	21	= \$637.14

(Ripping) Total \$637.14

Other Costs

Road Number	Cubic Yds Pullback Material	Qty Waterbars	Qty Earthen Barriers	= Total
Temp Route 20-5	(0x\$1.77)	+	(8x\$55.35) + (0x\$166.04)	= \$442.80

(Other Cost) Total \$442.80

Time & Equipment

Temp Route 20-5 Dry Method w/ Material Costs: 2 AC @ \$900.00/AC = \$1,800.00

(5.2H) Decommissioning Total \$2,879.94

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 5.2.0.99

Summary of All Roads and Projects

Updated: 6/14/2017

T.S. Contract Name: Savage Murph TS Tract No: 18-06 Sale Date: 07/26/2018

Prepared by: EFreeman Ph: x6601 Print Date: 6/7/2018 10:29:42 AM

Construction: 0.00 sta

Improve: 0.00 sta Renov: 827.38 sta Decom: 0.00 sta Temp: 21.00 sta

200 Clearing and Grubbing: 7.2 acres	\$17,380.49
300 Excavation: 3,492 cy	\$10,382.04
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:	\$23,513.81
Blading 14.35 mi	
700-1200 Surfacing:	\$306.20
Commercial Quarry Name: Commercial 20 LCY	
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$1,579.77
Gradation Class 2: 69 cy	
1800 Soil Stabilization: 2.3 acres	\$2,291.43
Includes Small Quantity Factor of 1.46	
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing:	\$16,915.68
Manual Brushing: 22.7 acres	
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$9,513.42
Mobilization: Const. \$4,172.18 Surf. \$305.26.....	\$4,477.44
Quarry Development:	\$0.00

Total: 1,321 mbf @ \$65.375/mbf = \$86,360.28

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities are loose cubic yards.

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-4-04.0(A) Road Name: Birdseye Crk W Rd

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:	\$231.25
Blading 0.11 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):0.2 acres	\$132.67
8000 Miscellaneous:	\$183.68
Mobilization: Const. \$27.90 Surf. \$0.00.....	\$27.90
Quarry Development:	\$0.00

Total: \$575.50

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-4-04.0(A) Road Name: Birdseye Crk W 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/\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

Water for Compaction

Water Truck 3000 Gal 1 hr x $\$78.81/\text{hr} = \78.81

Subtotal: \$231.25

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

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 8000 Miscellaneous:

Install BMP's at HPOC

Crew Cab or 3/4 Ton Pickup 2 hr x $\$57.75/\text{hr} = \115.50

General Laborer 2 hr x $\$34.09/\text{hr} = \68.18

Subtotal: \$183.68

Mobilization:

Construction - 0.67% of total Costs = \$27.90

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$27.90

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$575.50

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-4-04.1(A-D) Road Name: Birdseye Crk Road

Road Renovation: 4.54 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:	\$7,000.78
Blading 4.54 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):6.6 acres	\$4,378.18
8000 Miscellaneous:	\$275.52
Mobilization: Const. \$593.83 Surf. \$0.00.....	\$593.83
Quarry Development:	\$0.00

Total: \$12,248.30

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-4-04.1(A-D) Road Name: Birdseye Crk Road

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: $\$694.50/\text{mi} \times 4.54 \text{ mi} = \$3,153.03$

Compaction: $\$325.47/\text{mi} \times 4.54 \text{ mi} = \$1,477.63$

Clean Culverts: $\$365.82/\text{mi} \times 4.54 \text{ mi} = \$1,660.82$

Watering for Compaction

Water Truck 3000 Gal 9 hr x $\$78.81/\text{hr} = \709.29

Subtotal: \$7,000.78

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: $\$663.36/\text{acre} \times 6.60 \text{ acres} = \$4,378.18$

Subtotal: \$4,378.18

Section 8000 Miscellaneous:

Install BMP's at HPOC's

Crew Cab or 3/4 Ton Pickup 2 hr x $\$57.75/\text{hr} = \115.50

General Laborer 2 hr x $\$34.09/\text{hr} = \68.18

Install BMP's @ Creek Crossing

Crew Cab or 3/4 Ton Pickup 1 hr x $\$57.75/\text{hr} = \57.75

General Laborer 1 hr x $\$34.09/\text{hr} = \34.09

Subtotal: \$275.52

Mobilization:

Construction - 14.23% of total Costs = \$593.83

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$593.83

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$12,248.30

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-4-09.1(A1-3) Road Name: Birdseye Crk East Sp

Road Renovation: 0.77 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:	\$1,389.27
Blading 0.77 mi	
700-1200 Surfacing:	\$306.20
Quarry Name: Commercial 20 LCY	
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):1.1 acres	\$729.70
8000 Miscellaneous:	\$91.84
Mobilization: Const. \$128.25 Surf. \$305.26.....	\$433.51
Quarry Development:	\$0.00

Total: \$2,950.52

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-4-09.1(A1-3) Road Name: Birdseye Crk East Sp

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 0.77 mi = \$534.77

Scarification: \$857.82/mi x 0.10 mi = \$85.78

Compaction: \$325.47/mi x 0.77 mi = \$250.61

Clean Culverts: \$365.82/mi x 0.77 mi = \$281.68

Water for Compaction

Water Truck 3000 Gal 3 hr x \$78.81/hr = \$236.43

Subtotal: \$1,389.27

Section 700-1200 Surfacing:

Commercial Quarry Name: Commercial

Comment: MP 0.66

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

Rock Volume = 20 LCY

Basic Rock Haul cost: \$0.58/LCY x 20 LCY = \$11.60

Rock Haul -15% grades: \$0.88/LCY-mi x 20 LCY x 5.00 mi= \$88.00

Rock Haul St& Co Roads: \$0.39/LCY-mi x 20 LCY x 20.00 mi= \$156.00

Basic Water Haul cost: \$0.53/LCY x 20 LCY = \$10.60

Water Haul -15% grades: \$0.12/LCY-mi x 20 LCY x 5.00 mi= \$12.00

Water Haul St&Co Roads: \$0.07/LCY-mi x 20 LCY x 20.00 mi= \$28.00

Subtotal: \$306.20

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: \$663.36/acre x 1.10 acres = \$729.70

Subtotal: \$729.70

Section 8000 Miscellaneous:

Install BMP's @ HPOC

Crew Cab or 3/4 Ton Pickup 1 hr x \$57.75/hr = \$57.75

General Laborer 1 hr x \$34.09/hr = \$34.09

Subtotal: \$91.84

Mobilization:

Construction - 3.07% of total Costs = \$128.25

Surfacing - 100.00% by rock volume = \$305.26

Subtotal: \$433.51

Quarry Development:

Subtotal: \$0.00

Total: \$2,950.52

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-4-15.0(A-C2) Road Name: Long Gulch Road

Road Renovation: 3.05 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:	\$4,699.52
Blading 3.05 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):4.4 acres	\$2,918.78
8000 Miscellaneous:	\$747.52
Mobilization: Const. \$426.26 Surf. \$0.00.....	\$426.26
Quarry Development:	\$0.00

Total: \$8,792.09

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-4-15.0(A-C2) Road Name: Long Gulch Road

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 3.05 mi = \$2,118.23

Compaction: \$325.47/mi x 3.05 mi = \$992.68

Clean Culverts: \$365.82/mi x 3.05 mi = \$1,115.75

Water for Compaction

Water Truck 3000 Gal 6 hr x \$78.81/hr = \$472.86

Subtotal: \$4,699.52

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: \$663.36/acre x 4.40 acres = \$2,918.78

Subtotal: \$2,918.78

Section 8000 Miscellaneous:

Install BMP's @ HPOC

Crew Cab or 3/4 Ton Pickup 2 hr x \$57.75/hr = \$115.50

General Laborer 2 hr x \$34.09/hr = \$68.18

Reconstruct/grade lrg landing

Motor Grader 14M 4 hr x \$140.96/hr = \$563.84

Subtotal: \$747.52

Mobilization:

Construction - 10.22% of total Costs = \$426.26

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$426.26

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$8,792.09

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-4-17.2 Road Name: Burnt Eye Sp

Road Renovation: 0.64 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.6 acres	\$3,109.52
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,031.81
Blading 0.64 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$595.51
Gradation Class 2: 27 cy	
1800 Soil Stabilization: 0.9 acres	\$896.65
Includes Small Quantity Factor of 1.46	
2100 RoadSide Brushing (Manual):0.9 acres	\$1,194.05
8000 Miscellaneous:	\$1,976.15
Mobilization: Const. \$448.57 Surf. \$0.00.....	\$448.57
Quarry Development:	\$0.00

Total: \$9,252.26

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-4-17.2 Road Name: Burnt Eye Sp

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: 1.6 = \$3,109.52

Subtotal: \$3,109.52

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification: $\$857.82/\text{mi} \times 0.64 \text{ mi} = \549.00

Blading w/o Ditches: $\$428.91/\text{mi} \times 0.64 \text{ mi} = \274.50

Compaction: $\$325.47/\text{mi} \times 0.64 \text{ mi} = \208.30

Subtotal: \$1,031.81

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Comment: Water Dip Outlet Protection

Rock Source: Commercial

Furnish Class 2 type rock

Basic Rock Haul cost: $\$1.05/\text{cy} \times 27\text{cy} = \28.35

Rock Haul +15% grades: $\$2.10/\text{cy-mi} \times 27\text{cy} \times 1.00 \text{ mi} = \56.70

Rock Haul -15% grades: $\$1.05/\text{cy-mi} \times 27\text{cy} \times 4.00 \text{ mi} = \113.40

Rock Haul St& Co Roads: $\$0.47/\text{cy-mi} \times 27\text{cy} \times 25.00 \text{ mi} = \317.25

Placement on Fill slopes: $27\text{cy} \times (\$2.87/\text{cy} \times 1.03) = \79.81

Subtotal: \$595.51

Section 1800 Soil Stabilization:

Comment: 9 water dip stabilization sites @ 0.1 acres/site

Dry Method with Mulch: $\$544.27/\text{acre} \times 0.90 \text{ acres} = \489.85

Includes Small Quantity Factor of 1.46

+ Seed Cost: $\$132.00/\text{acre} \times 0.90 \text{ acres} = \118.80

+ Mulch Cost: $\$320.00/\text{acre} \times 0.90 \text{ acres} = \288.00

Subtotal: \$896.65

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Heavy: $\$1326.72/\text{acre} \times 0.90 \text{ acres} = \$1,194.05$

Subtotal: \$1,194.05

Section 8000 Miscellaneous:

Reconstruct Water Dip

Tractor: D5 with winch 9 hr x $\$93.81/\text{hr} = \844.29

Backhoe 9 hr x $\$85.84/\text{hr} = \772.56

Remove Earthen/Log Barricade

Tractor: D5 with winch 2 hr x $\$93.81/\text{hr} = \187.62

Backhoe 2 hr x $\$85.84/\text{hr} = \171.68

Subtotal: \$1,976.15

Road Number: 37-4-17.2 Burnt Eye Sp Continued

Mobilization:

Construction - 10.75% of total Costs = \$448.57

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$448.57

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$9,252.26

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-4-17.3 Road Name: Upper Miners Crk

Road Renovation: 0.03 mi 14 ft Subgrade 0 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:	\$48.37
Blading 0.03 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):0.1 acres	\$66.34
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$5.84 Surf. \$0.00.....	\$5.84
Quarry Development:	\$0.00

Total: \$120.55

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-4-17.3 Road Name: Upper Miners Crk

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: $0.93 + 0 + 1 + 0.25 = 2.18$

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification: $\$857.82/\text{mi} \times 0.03 \text{ mi} = \25.73
Blading w/o Ditches: $\$428.91/\text{mi} \times 0.03 \text{ mi} = \12.87
Compaction: $\$325.47/\text{mi} \times 0.03 \text{ mi} = \9.76

Subtotal: \$48.37

Section 700-1200 Surfacing:
Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

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 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.14% of total Costs = \$5.84
Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$5.84

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$120.55

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-4-17.4 Road Name: Upper Caris Crk Sp

Road Renovation: 0.21 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.5 acres	\$1,301.58
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$338.56
Blading 0.21 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$264.67
Gradation Class 2: 12 cy	
1800 Soil Stabilization: 0.4 acres	\$398.51
Includes Small Quantity Factor of 1.46	
2100 RoadSide Brushing (Manual):0.3 acres	\$398.02
8000 Miscellaneous:	\$718.60
Mobilization: Const. \$174.26 Surf. \$0.00.....	\$174.26
Quarry Development:	\$0.00

Total: \$3,594.19

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-4-17.4 Road Name: Upper Caris Crk Sp

Section 200 Clearing and Grubbing:

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

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: $1.67 + 0 + 1 + 0.25 = 2.92$

Base Cost/Acre: \$891.49 x Adjustment Factor: 2.92 x Total Acres: 0.5 = \$1,301.58

Subtotal: \$1,301.58

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification: $\$857.82/\text{mi} \times 0.21 \text{ mi} = \180.14

Blading w/o Ditches: $\$428.91/\text{mi} \times 0.21 \text{ mi} = \90.07

Compaction: $\$325.47/\text{mi} \times 0.21 \text{ mi} = \68.35

Subtotal: \$338.56

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Comment: Water Dip Outlet Protection

Rock Source: Commercial

Furnish Class 2 type rock

Basic Rock Haul cost: $\$1.05/\text{cy} \times 12\text{cy} = \12.60

Rock Haul +15% grades: $\$2.10/\text{cy-mi} \times 12\text{cy} \times 1.00 \text{ mi} = \25.20

Rock Haul -15% grades: $\$1.05/\text{cy-mi} \times 12\text{cy} \times 4.00 \text{ mi} = \50.40

Rock Haul St& Co Roads: $\$0.47/\text{cy-mi} \times 12\text{cy} \times 25.00 \text{ mi} = \141.00

Placement on Fill slopes: $12\text{cy} \times (\$2.87/\text{cy} \times 1.03) = \35.47

Subtotal: \$264.67

Section 1800 Soil Stabilization:

Comment: 4 water dip stabilization sites @ 0.1 acres/site

Dry Method with Mulch: $\$544.27/\text{acre} \times 0.40 \text{ acres} = \217.71

Includes Small Quantity Factor of 1.46

+ Seed Cost: $\$132.00/\text{acre} \times 0.40 \text{ acres} = \52.80

+ Mulch Cost: $\$320.00/\text{acre} \times 0.40 \text{ acres} = \128.00

Subtotal: \$398.51

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Heavy: $\$1326.72/\text{acre} \times 0.30 \text{ acres} = \398.02

Subtotal: \$398.02

Section 8000 Miscellaneous:

Reconstruct Water Dip

Tractor: D5 with winch 4 hr x $\$93.81/\text{hr} = \375.24

Backhoe 4 hr x $\$85.84/\text{hr} = \343.36

Subtotal: \$718.60

Road Number: 37-4-17.4 Upper Caris Crk Sp Continued

Mobilization:

Construction - 4.18% of total Costs = \$174.26

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$174.26

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$3,594.19

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-5-01.0(A-B1) Road Name: Savage Crk Rd

Road Renovation: 1.32 mi 18 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:	\$991.60
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):1.9 acres	\$1,260.38
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$114.75 Surf. \$0.00.....	\$114.75
Quarry Development:	\$0.00

Total: \$2,366.73

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-5-01.0(A-B1) Road Name: Savage Crk 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 1.32 \text{ mi} = \482.88

Ditch line cleaning/reshaping

Motor Grader 14M 3 hr x $\$140.96/\text{hr} = \422.88

Backhoe 1 hr x $\$85.84/\text{hr} = \85.84

Subtotal: \$991.60

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: $\$663.36/\text{acre} \times 1.90 \text{ acres} = \$1,260.38$

Subtotal: \$1,260.38

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.75% of total Costs = \$114.75

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$114.75

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$2,366.73

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-5-01.0(B2-C) Road Name: Savage Crk Rd

Road Renovation: 2.08 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:	\$3,197.68
Blading 2.08 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):3.0 acres	\$1,990.08
8000 Miscellaneous:	\$275.52
Mobilization: Const. \$278.37 Surf. \$0.00.....	\$278.37
Quarry Development:	\$0.00

Total: \$5,741.65

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-5-01.0(B2-C) Road Name: Savage Crk 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 2.08 mi = \$1,444.56

Compaction: \$325.47/mi x 2.08 mi = \$676.98

Clean Culverts: \$365.82/mi x 2.08 mi = \$760.91

Water for Compaction

Water Truck 3000 Gal 4 hr x \$78.81/hr = \$315.24

Subtotal: \$3,197.68

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: \$663.36/acre x 3.00 acres = \$1,990.08

Subtotal: \$1,990.08

Section 8000 Miscellaneous:

Install BMP's @ HPOC

Crew Cab or 3/4 Ton Pickup 3 hr x \$57.75/hr = \$173.25

General Laborer 3 hr x \$34.09/hr = \$102.27

Subtotal: \$275.52

Mobilization:

Construction - 6.67% of total Costs = \$278.37

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$278.37

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$5,741.65

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-5-14.0(A-C) Road Name: Oscar Crk Rd

Road Renovation: 1.76 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$2,714.83
Blading 1.76 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (Manual):2.6 acres	\$1,724.74
8000 Miscellaneous:	\$939.06
Mobilization: Const. \$274.06 Surf. \$0.00.....	\$274.06
Quarry Development:	\$0.00

Total: \$5,652.68

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-5-14.0(A-C) Road Name: Oscar Crk 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: $\$694.50/\text{mi} \times 1.76 \text{ mi} = \$1,222.32$

Compaction: $\$325.47/\text{mi} \times 1.76 \text{ mi} = \572.83

Clean Culverts: $\$365.82/\text{mi} \times 1.76 \text{ mi} = \643.84

Water for Compaction

Water Truck 3000 Gal 3.5 hr x $\$78.81/\text{hr} = \275.84

Subtotal: \$2,714.83

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Medium: $\$663.36/\text{acre} \times 2.60 \text{ acres} = \$1,724.74$

Subtotal: \$1,724.74

Section 8000 Miscellaneous:

Remove Existing BLM Gate

Backhoe 2 hr x $\$85.84/\text{hr} = \171.68

Flatbed truck -1 Ton 4 hr x $\$61.40/\text{hr} = \245.60

General Laborer 2 hr x $\$34.09/\text{hr} = \68.18

Construct Truck Turnaround

Backhoe 2 hr x $\$85.84/\text{hr} = \171.68

Motor Grader 14M 2 hr x $\$140.96/\text{hr} = \281.92

Subtotal: \$939.06

Mobilization:

Construction - 6.57% of total Costs = \$274.06

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$274.06

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$5,652.68

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-5-14.2 Road Name: Savage Pass B Sp

Road Renovation: 0.24 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.6 acres	\$1,166.07
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$386.93
Blading 0.24 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$133.84
Gradation Class 2: 6 cy	
1800 Soil Stabilization: 0.2 acres	\$199.25
Includes Small Quantity Factor of 1.46	
2100 RoadSide Brushing (Manual):0.3 acres	\$398.02
8000 Miscellaneous:	\$359.30
Mobilization: Const. \$134.69 Surf. \$0.00.....	\$134.69
Quarry Development:	\$0.00

Total: \$2,778.09

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-5-14.2 Road Name: Savage Pass B Sp

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: 0.6 = \$1,166.07

Subtotal: \$1,166.07

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification: $\$857.82/\text{mi} \times 0.24 \text{ mi} = \205.88

Blading w/o Ditches: $\$428.91/\text{mi} \times 0.24 \text{ mi} = \102.94

Compaction: $\$325.47/\text{mi} \times 0.24 \text{ mi} = \78.11

Subtotal: \$386.93

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Comment: Water Dip Outlet Protection

Rock Source: Commercial

Furnish Class 2 type rock

Basic Rock Haul cost: $\$1.05/\text{cy} \times 6\text{cy} = \6.30

Rock Haul -15% grades: $\$1.05/\text{cy-mi} \times 6\text{cy} \times 4.00 \text{ mi} = \25.20

Rock Haul St& Co Roads: $\$0.47/\text{cy-mi} \times 6\text{cy} \times 30.00 \text{ mi} = \84.60

Placement on Fill slopes: $6\text{cy} \times (\$2.87/\text{cy} \times 1.03) = \17.74

Subtotal: \$133.84

Section 1800 Soil Stabilization:

Comment: 2 water dip stabilization sites @ 0.1 acres/site

Dry Method with Mulch: $\$544.27/\text{acre} \times 0.20 \text{ acres} = \108.85

Includes Small Quantity Factor of 1.46

+ Seed Cost: $\$132.00/\text{acre} \times 0.20 \text{ acres} = \26.40

+ Mulch Cost: $\$320.00/\text{acre} \times 0.20 \text{ acres} = \64.00

Subtotal: \$199.25

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Heavy: $\$1326.72/\text{acre} \times 0.30 \text{ acres} = \398.02

Subtotal: \$398.02

Section 8000 Miscellaneous:

Reconstruct Water Dips

Tractor: D5 with winch 2 hr x $\$93.81/\text{hr} = \187.62

Backhoe 2 hr x $\$85.84/\text{hr} = \171.68

Subtotal: \$359.30

Road Number: 37-5-14.2 Savage Pass B Sp Continued

Mobilization:

Construction - 3.23% of total Costs = \$134.69

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$134.69

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$2,778.09

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: 37-5-23.1 Road Name: Savage Pass C Sp

Road Renovation: 0.92 mi 16 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 2.5 acres	\$6,507.88
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$1,483.22
Blading 0.92 mi	
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$585.75
Gradation Class 2: 24 cy	
1800 Soil Stabilization: 0.8 acres	\$797.02
Includes Small Quantity Factor of 1.46	
2100 RoadSide Brushing (Manual):1.3 acres	\$1,724.74
8000 Miscellaneous:	\$1,890.80
Mobilization: Const. \$661.85 Surf. \$0.00.....	\$661.85
Quarry Development:	\$0.00

Total: \$13,651.25

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 37-5-23.1 Road Name: Savage Pass C Sp

Section 200 Clearing and Grubbing:

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

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: $1.67 + 0 + 1 + 0.25 = 2.92$

Base Cost/Acre: \$891.49 x Adjustment Factor: 2.92 x Total Acres: 2.5 = \$6,507.88

Subtotal: \$6,507.88

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Scarification: $\$857.82/\text{mi} \times 0.92 \text{ mi} = \789.19

Blading w/o Ditches: $\$428.91/\text{mi} \times 0.92 \text{ mi} = \394.60

Compaction: $\$325.47/\text{mi} \times 0.92 \text{ mi} = \299.43

Subtotal: \$1,483.22

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Comment: Water Dip Outlet Protection

Rock Source: Commercial

Furnish Class 2 type rock

Basic Rock Haul cost: $\$1.05/\text{cy} \times 24\text{cy} = \25.20

Rock Haul -15% grades: $\$1.05/\text{cy-mi} \times 24\text{cy} \times 6.00 \text{ mi} = \151.20

Rock Haul St& Co Roads: $\$0.47/\text{cy-mi} \times 24\text{cy} \times 30.00 \text{ mi} = \338.40

Placement on Fill slopes: $24\text{cy} \times (\$2.87/\text{cy} \times 1.03) = \70.95

Subtotal: \$585.75

Section 1800 Soil Stabilization:

Comment: 8 water dip stabilization sites @ 0.1 acres/site

Dry Method with Mulch: $\$544.27/\text{acre} \times 0.80 \text{ acres} = \435.42

Includes Small Quantity Factor of 1.46

+ Seed Cost: $\$132.00/\text{acre} \times 0.80 \text{ acres} = \105.60

+ Mulch Cost: $\$320.00/\text{acre} \times 0.80 \text{ acres} = \256.00

Subtotal: \$797.02

Section 2100 Roadside Brushing:

Manual Brushing

RoadSide Brushing Heavy: $\$1326.72/\text{acre} \times 1.30 \text{ acres} = \$1,724.74$

Subtotal: \$1,724.74

Section 8000 Miscellaneous:

Reconstruct Water Dips

Tractor: D5 with winch 8 hr x $\$93.81/\text{hr} = \750.48

Backhoe 8 hr x $\$85.84/\text{hr} = \686.72

Construct Truck Turnaround

Motor Grader 14M 2 hr x $\$140.96/\text{hr} = \281.92

Backhoe 2 hr x $\$85.84/\text{hr} = \171.68

Subtotal: \$1,890.80

Road Number: 37-5-23.1 Savage Pass C Sp Continued

Mobilization:

Construction - 15.86% of total Costs = \$661.85

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$661.85

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$13,651.25

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number: Temp Route 20-5 Road Name:

Temporary Road: 0.40 mi 14 ft Subgrade ft ditch

200 Clearing and Grubbing: 2.0 acres	\$5,295.45
300 Excavation: 3,492 cy	\$10,382.04
400 Drainage:	\$0.00
Culvert: 0 lf	
DownSpout: 0 lf	
PolyPipe: 0 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.0 acres	\$0.00
2100 RoadSide Brushing (NONE):0.0 acres	\$0.00
8000 Miscellaneous:	\$2,055.43
Mobilization: Const. \$903.55 Surf. \$0.00.....	\$903.55
Quarry Development:	\$0.00

Total: \$18,636.47

Notes:

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

Road Construction Worksheet

Road Number: Temp Route 20-5 Road Name:

Section 200 Clearing and Grubbing:

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

31-45% (Avg Side Slopes): Adjustment Factor (0.2)

Scatter (Slash): Adjustment Factor (1)

20-40' (Avg Clearing Widths): Adjustment Factor (0.1)

Total Adjustment Factor: $1.67 + 0.2 + 1 + 0.1 = 2.97$

Base Cost/Acre: \$891.49 x Adjustment Factor: 2.97 x Total Acres: 2.0 = \$5,295.45

Subtotal: \$5,295.45

Section 300 Excavation:

Excavation - Common: $\$2.01/\text{cy} \times 3,492 \text{ cy} = \$7,018.92$

Subgrade Compaction: 4 Sta/hr $\$27.12/\text{sta.} \times 21.0 \text{ sta} = \569.52

Embankment Placement & Compaction 306.a - Common: $\$0.80/\text{cy} \times 3,492 \text{ cy} = \$2,793.60$

Subtotal: \$10,382.04

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Construct Water Dips

Tractor: D7 with rippers 10 hr x $\$158.11/\text{hr} = \$1,581.10$

Construct Truck Turnaround

Tractor: D7 with rippers 3 hr x $\$158.11/\text{hr} = \474.33

Subtotal: \$2,055.43

Mobilization:

Construction - 21.66% of total Costs = \$903.55

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$903.55

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$18,636.47

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Average Mobilization distance = 30 miles Factor = 0.67

Mobilization: Construction

Graders-all: 1 ea x (0.67 x \$410.00/ea + 14 mi x \$14.10/mi)= \$472.10
Rollers & Comp: 1 ea x (0.67 x \$410.00/ea + 14 mi x \$21.70/mi)= \$578.50
Excavators: 1 ea x (0.67 x \$861.00/ea = \$576.87
RTBackhoes 24/30: 1 ea x (0.67 x \$305.00/ea + 14 mi x \$5.65/mi)= \$283.45
Tractors <= D7: 1 ea x (0.67 x \$635.00/ea + 7 mi x \$31.00/mi)= \$642.45
Water Truck: 1 ea x (0.67 x \$95.00/ea + 14 mi x \$3.94/mi)= \$118.81
Equipment Washing: 6 ea x (\$250.00) /ea = \$1,500.00

Subtotal: \$4,172.18

Mobilization: Surfacing

Dump Truck<=15cy: 2ea x (0.67 x \$89.00/ea + 25 mi x \$3.72/mi)= \$305.26

Subtotal: \$305.26

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Savage Murph TS Sale Date: 07/26/2018

Road Number	Const	Improv	Renov	Decomm	Temp
37-4-04.0(A)			5.81		
37-4-04.1(A-D)			239.71		
37-4-09.1(A1-3)			40.66		
37-4-15.0(A-C2)			161.04		
37-4-17.2			33.79		
37-4-17.3			1.58		
37-4-17.4			11.09		
37-5-01.0(A-B1)			69.70		
37-5-01.0(B2-C)			109.82		
37-5-14.0(A-C)			92.93		
37-5-14.2			12.67		
37-5-23.1			48.58		
Temp Route 20-5					21.00
Total Sta:			827.38		21.00

200 Clearing and Grubbing	Clearing acres
37-4-04.0(A)	0.0
37-4-04.1(A-D)	0.0
37-4-09.1(A1-3)	0.0
37-4-15.0(A-C2)	0.0
37-4-17.2	1.6
37-4-17.3	0.0
37-4-17.4	0.5
37-5-01.0(A-B1)	0.0
37-5-01.0(B2-C)	0.0
37-5-14.0(A-C)	0.0
37-5-14.2	0.6
37-5-23.1	2.5
Temp Route 20-5	2.0
Totals:	7.2

300 Excavation	Excav LCY.s	Haul sta-yds	Haul yd-mi
Temp Route 20-5	3,492	0	0
Totals:	3,492	0	0

400 Drainage

Road Number	Culvert	Polypipe	Downspout
Total Drainage:			
Totals:			No Quantities

Continuation of Construction Quantities

500 Renovation	Blade Miles	Slide cy
37-4-04.0(A)	0.11	0
37-4-04.1(A-D)	4.54	0
37-4-09.1(A1-3)	0.77	0
37-4-15.0(A-C2)	3.05	0
37-4-17.2	0.64	0
37-4-17.3	0.03	0
37-4-17.4	0.21	0
37-5-01.0(B2-C)	2.08	0
37-5-14.0(A-C)	1.76	0
37-5-14.2	0.24	0
37-5-23.1	0.92	0
Totals:	14.35	0

Ditch line cleaning/reshaping	37-5-01.0(A-B1)	
Motor Grader 14M		3 hr
Backhoe		1 hr
Water for Compaction	37-4-15.0(A-C2)	
Water Truck 3000 Gal		6 hr
Water for Compaction	37-4-09.1(A1-3)	
Water Truck 3000 Gal		3 hr
Water for Compaction	37-5-14.0(A-C)	
Water Truck 3000 Gal		3.5 hr
Water for Compaction	37-5-01.0(B2-C)	
Water Truck 3000 Gal		4 hr
Water for Compaction	37-4-04.0(A)	
Water Truck 3000 Gal		1 hr
Watering for Compaction	37-4-04.1(A-D)	
Water Truck 3000 Gal		9 hr

Surfacing (Loose Cubic Yards)

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

Quarry Name: Commercial

Commercial	Roadway	Turnouts	Other	
37-4-09.1(A1-3)	0	0	20	20
Totals:	0	0	20	20

1400 Slope Protection

37-4-17.2	Gradation Class 2: 27 cy
37-4-17.4	Gradation Class 2: 12 cy
37-5-14.2	Gradation Class 2: 6 cy
37-5-23.1	Gradation Class 2: 24 cy
Totals:	69 cy

1800 Soil stabilization - acres

	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
37-4-17.2	0.0	0.9	
37-4-17.4	0.0	0.4	
37-5-14.2	0.0	0.2	
37-5-23.1	0.0	0.8	
Totals:	0.0	2.3	0.0

Small Quantity Factor of 1.46 used

Continuation of Construction Quantities

2100 RoadSide Brushing	acres
37-4-04.0(A) - Manual Brushing	0.2
37-4-04.1(A-D) - Manual Brushing	6.6
37-4-09.1(A1-3) - Manual Brushing	1.1
37-4-15.0(A-C2) - Manual Brushing	4.4
37-4-17.2 - Manual Brushing	0.9
37-4-17.3 - Manual Brushing	0.1
37-4-17.4 - Manual Brushing	0.3
37-5-01.0(A-B1) - Manual Brushing	1.9
37-5-01.0(B2-C) - Manual Brushing	3.0
37-5-14.0(A-C) - Manual Brushing	2.6
37-5-14.2 - Manual Brushing	0.3
37-5-23.1 - Manual Brushing	1.3
Totals:	<hr/> 22.7

8000 Miscellaneous

Construct Truck Turnaround	37-5-14.0(A-C)	
Backhoe		2 hr
Motor Grader 14M		2 hr
Construct Truck Turnaround	37-5-23.1	
Motor Grader 14M		2 hr
Backhoe		2 hr
Construct Truck Turnaround	Temp Route 20-5	
Tractor: D7 with rippers		3 hr
Construct Water Dips	Temp Route 20-5	
Tractor: D7 with rippers		10 hr
Install BMP's @ Creek Crossing	37-4-04.1(A-D)	
Crew Cab or 3/4 Ton Pickup		1 hr
General Laborer		1 hr
Install BMP's @ HPOC	37-4-15.0(A-C2)	
Crew Cab or 3/4 Ton Pickup		2 hr
General Laborer		2 hr
Install BMP's @ HPOC	37-4-09.1(A1-3)	
Crew Cab or 3/4 Ton Pickup		1 hr
General Laborer		1 hr
Install BMP's @ HPOC	37-5-01.0(B2-C)	
Crew Cab or 3/4 Ton Pickup		3 hr
General Laborer		3 hr
Install BMP's at HPOC	37-4-04.0(A)	
Crew Cab or 3/4 Ton Pickup		2 hr
General Laborer		2 hr
Install BMP's at HPOC's	37-4-04.1(A-D)	
Crew Cab or 3/4 Ton Pickup		2 hr
General Laborer		2 hr
Reconstruct Water Dip	37-4-17.2	
Tractor: D5 with winch		9 hr
Backhoe		9 hr
Reconstruct Water Dip	37-4-17.4	
Tractor: D5 with winch		4 hr
Backhoe		4 hr
Reconstruct Water Dips	37-5-14.2	
Tractor: D5 with winch		2 hr
Backhoe		2 hr
Reconstruct Water Dips	37-5-23.1	
Tractor: D5 with winch		8 hr
Backhoe		8 hr

Continuation of Construction Quantities

Reconstruct/grade lrg landing	37-4-15.0(A-C2)	
Motor Grader 14M		4 hr
Remove Earthen/Log Barricade	37-4-17.2	
Tractor: D5 with winch		2 hr
Backhoe		2 hr
Remove Existing BLM Gate	37-5-14.0(A-C)	
Backhoe		2 hr
Flatbed truck -1 Ton		4 hr
General Laborer		2 hr

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

LUMP SUM SALE

Name of Bidder
Tract Number ORM07-TS-18-06
Sale Name Savage Murph
Sale Notice (dated) 6/28/2018
BLM District Medford

<input checked="" type="checkbox"/> Sealed Bid for Sealed Bid Sale	<input 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 **\$29,600.00** and is enclosed in the form of ☐ cash ☐ money order ☐ bank draft
☐ cashier's check ☐ certified check ☐ bid bond of corporate surety on approved list of the United States Treasury
☐ guaranteed remittance approved by the authorized officer.

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

BID SCHEDULE – LUMP SUM SALE

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

BID SUBMITTED					ORAL BID MADE	
PRODUCT SPECIES	UNIT	ESTIMATED VOLUME OR QUANTITY	UNIT PRICE	TOTAL VALUE	UNIT PRICE	TOTAL VALUE
Douglas-fir	MBF	1,286	X	=\$	X	=
Ponderosa pine	MBF	35	X	=\$	X	=
Total		1,321	X	=\$	X	=
			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						

(Continued on reverse)

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

Bid submitted on *(date)*

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

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

NOTICE

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

AUTHORITY: 38 FR 6280 and 43 CFR 5442.1

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

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

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

INSTRUCTIONS TO BIDDERS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10. PERFORMANCE BOND-

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

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

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

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

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

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

*Applies to Timber Only

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

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

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

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

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