P R O S P E C T U S
SCALE SALE
ORAL AUCTION

GRANTS PASS RESOURCE AREA
JOSEPHINE MASTER UNIT

Medford Sale # ORM07-TS-2024.0003
May 23, 2024 (DES)

#1. Penn Butte Timber Sale
Josephine County, O&C

BID DEPOSIT REQUIRED: $84,000.00

All timber designated for cutting in S1/2SE1/4 Sec. 7, Lot 1, Lot 2, W1/2NE1/4, W1/2NW1/4, SE1/4NW1/4, N1/2SW1/4 Sec. 17, NE1/4, SE1/4NW1/4, E1/2SW1/4, SE1/4 Sec. 18, Lot 2, Lot 3, W1/2NE1/4, E1/2NW1/4 Sec. 19, Lot 2, Lot 3, Lot 6, Lot 7, Lot 8, NE1/4SW1/4 Sec. 30, Unnumbered Lot SW1/4NW1/4, Unnumbered Lot NW1/4SW1/4, Unnumbered Lot SW1/4SW1/4, S1/2NE1/4, NE1/4NW1/4, E1/2SW1/4, N1/2SE1/4, SW1/4SE1/4 Sec. 31, T. 38 S., R. 5 W., S1/2SW1/4 Sec. 23, NE1/4, NE1/4NW1/4, S1/2NW1/4, SW1/4, NW1/4SE1/4 Sec 25., S1/2NE1/4, N1/2NW1/4, SE1/4NW1/4, SE1/4SE1/4 Sec. 26, NE1/4, NE1/4NW1/4 Sec. 35, T. 38 S., R. 6 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
26,917	4,616	Douglas- fir	5,714	$141.20	$806,816.80
2,799	388	White Fir	501	$40.10+	$20,090.10
1,217	133	Ponderosa Pine	185	$31.30+	$5,790.50
1,040	83	Incense-cedar	118	$29.90+	$3,528.20
744	45	Sugar Pine	58	$33.80+	$1,960.40
90	15	Western redcedar	20	$48.80+	$976.00
5	0.8	Port Orford Cedar	1	$42.00+	$42.00
32,812	**5,280.8**	**Total**	**6,597**		**$839,204.00**
Other Wood Products		**Species**	**Est. Green Tons**	**Appr. Price Per Green Ton**	**Est. Tons Times Appraised Price**
Biomass		All Species	100	$1.00	$100.00
				Total Appraised Purchase Price	**$839,304.00**

*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.

+Minimum Stumpage values were used to compute the Appraised Price/MBF (10% of Pond Value). Reduced Douglas fir value by $169,475.33 to pay for deficit species White Fir, Ponderosa Pine, Sugar Pine Incense-cedar, Western redcedar and Port Orford Cedar.

TIMBER AUCTION LOCATION – ORAL BIDS will be received by the District Manager, or her representative, at the Bureau of Land Management MEDFORD INTERAGENCY OFFICE, 3040 Biddle Rd., Medford, Oregon 97504, at 9:00 am, PACIFIC TIME, on Thursday May 23rd, 2024.

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 Penn Butte timber sale was cruised using the PCMTRE, 3P and BLM100 cruise methods. The 423 acres of PCMTRE were cruised using a 40BAF and a 1 in 8 sampling frequency on 241 plots installed in a grid pattern. The Douglas fir had an average of 80 basal area per acre and a VBAR of 161.9. The 67 acres of roadside clearing units were cruised using the 3P cruise method resulting in 35 sample trees (22 Douglas fir, 9 Ponderosa Pine and 4 White Fir) and the BLM100 cruise method on the rest of species (Sugar Pine, Incense-cedar and Port Orford Cedar).

Approximately 0 trees which are considered to be nonmerchantable are designated for cutting. Approximately 0% of the sale volume is salvage material. With respect to merchantable trees of all conifer species: the average tree is 15.4 inches DBHOB; the average gross merchantable log contains 62 bd. ft.; the total gross volume is approximately 7,526.0 M bd. ft; and 88% recovery is expected. Average DF is 15.4 inches DBHOB; average gross merchantable DF log contains 63 bd. ft. Cruise plot maps showing the location of these sample tree plots are available at the Medford District Office.

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

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

CUTTING AREA – The sale contains a total of twenty-three (23) units totaling four hundred ninety (490) acres. Thirteen (13) units containing four hundred sixty-seven (467) acres must be partial cut. One (1) unit containing two (2) acres must be group selection harvested. Four (4) right-of-way units containing three (3) acres must be clear-cut. Five (5) units containing eighteen (18) acres must be treated for roadside management.

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

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

ROAD MAINTENANCE – The Purchaser will be required to maintain all temporary roads (29+67 stations) they construct plus 16.77 miles of existing BLM roads listed in Exhibit D6. An allowance in the amount of $68,294.24 has been made for the final maintenance of these roads. The Purchaser will be required to pay an estimated rockwear fee of $5,217.83 for the use of these rocked roads. BLM will maintain the 11.64 miles of existing BST and aggregate surface road listed in Exhibit D6. The Purchaser will be required to pay an estimated maintenance and rockwear fee of $22,798.62 for the use of the BLM maintained roads.

ROAD CONSTRUCTION – The Purchaser will be required to construct 29+67 stations of temporary road.

DECOMMISSIONING – An allowance in the amount of $13,730.65 has been made for temporary route decommissioning. Decommissioning work to be performed is described in Section 3500 of Exhibit D2, Decommissioning Worklist in Exhibit D4, Decommissioning Maps in Exhibit D5, and Estimate of Quantities in Exhibit D6.

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

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

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, log haul shall not be conducted on hydrologically connected natural surface roads during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud splash or tire slides, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer.

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

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, perform all non-emergency road maintenance as directed by the Authorized Officer.

EQUIPMENT REQUIREMENTS - A yarding tractor equipped with an integral arch capable of one-end log suspension and a winch for lining logs seventy-five (75) feet. A skyline yarder with a medium (40-50 foot) tower; capable of one-end log suspension with a minimum lateral yarding

capability of seventy-five (75) feet while maintaining a fixed position during inhaul; capable of multi-span; and capable of an external yarding distance of one thousand two hundred eighty (1,280) feet slope distance. A piece of equipment capable of sub-soiling to a depth of twelve (12) inches will be required for fully decommissioning any landings or skid roads within ground based units as necessary to achieve no more than twenty (20) percent detrimental soil compaction within the unit. A piece of equipment with a self-leveling cab capable of lifting and moving cut logs or trees to roads or landings. A fire engine of three hundred (300) gallons or more capacity with five hundred (500) feet of 1½ inch hose (must be adequate length to reach two hundred (200) feet beyond active work sites), six (6) 1½ inch wyes, six (6) 1½ inch to 1 inch reducers, three (3) 1½ inch nozzels and three (3) 1 inch nozzles will be required for fire prevention and control. Each fire engine shall be equipped with a pump capable of delivering a minimum of forty (40) gallons per minute (gpm) water flow at one hundred fifty (150) pounds per square inch (psi) engine pressure through fifty (50) feet of 1½ inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable.

SLASH DISPOSAL - Slash disposal will consist of a combination of lop and scatter, machine pile, cover, and burn machine piles, hand pile, cover, and burn hand piles, and machine pile, cover, and burn landing decks as described in SD-1, SD-2, and SD-4 of the Special Provisions. A post logging assessment shall be conducted to determine treatment needs in all units. The initial slash disposal appraisal described in SD-5 prescribed one hundred seventy-one and one-half (171.5) acres of lop and scatter, fifty-nine (59) acres hand pile, cover, and burn hand piles, one hundred fifty-four and one-half (154.5) acres of machine pile, cover, and burn machine piles, and forty-one and three-quarters (41.75) acres of cover and burn landing decks.

OPTIONAL CONTRIBUTION - The purchaser will have the option of performing machine pile burning requirements or contributing twelve thousand one hundred nine and 25/100 dollars ($12,109.25) in lieu thereof. The purchaser will have the option of performing hand pile burning requirements or contributing five thousand three hundred thirty-five and 67/100 dollars ($5,335.67) in lieu thereof. The purchaser will have the option of performing landing deck burning requirements or contributing two thousand eight hundred nineteen and 16/100 dollars ($2,819.16) in lieu thereof. The option must be declared upon execution of the contract. The optional contribution(s) must be paid in installments payable in the same manner as and together with payments required in Section 3 of the contract.

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, in accordance with the Standards and Guidelines of the Medford District Record of Decision (ROD) and Resource Management Plan (RMP). This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

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

OTHER -

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

2. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource

Management Plan (RMP), or; (2) Comply with a stay or remedy issued by the Interior Board of Land Appeals or a court order, or; (3) Protect species which were identified for protection in accordance with management direction established in the ROD and RMP.

3. The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area between March 1 and September 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting northern spotted owls may not be allowed between March 1 and September 30, both days inclusive. Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls have moved into harvest units. If northern spotted owls are detected in or adjacent to the units, operations would be restricted until northern spotted owl occupancy and nesting status has been determined. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations in writing. Without this approval, such operations are prohibited from March 1 through July 15 of each year.

4. 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 units 18-1, 18-2, 25-1, 26-1, 30-2, 31-1, 31-2, 31-3, 18-1 ROW, 25-1 ROW, 26-1 ROW and 30-2 ROW 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.

5. No ground-based harvesting, yarding, temporary route or road construction, machine piling, and rehabilitation operations shall be conducted in units 19-1, 25-2, 25-3, 35-1, 19-1 RS, 25-1 RS and 35-1 RS 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 first fall rain has not yet occurred, soil moisture is low, and the likelihood of spreading phytophthora lateralis (Port-Orford-cedar root disease) is low, the Contracting Officer may approve a conditional waiver. Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks. Low soil moisture limits will be determined by the Authorized Officer. If the first fall rain is forecasted to occur and/or the moisture conditions described above resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked. If dry season rain events result in unacceptable said moisture conditions, cessation of above operations will be required until moisture conditions are acceptable as determined by the Authorized Officer. See Exhibit P and seasonal restriction matrix for full restrictions, including waiver requirements.

6. No road construction, road maintenance/renovation, hauling, and/or transportation of personnel and equipment shall be conducted on roads Op. Spur 26-1D, TR 25-1D, TR

26-1A, TR 30-2, 38-5-15.0, 38-5-19.1, 38-5-30.0, 38-6-25.0, 38-6-25.2, 38-6-25.4, 38-6-25.5, 38-6-35.2, 38-6-26.0, and 38-6-36.0 (for units 19-1, 19-1 RS, 25-1, 25-1 RS, 25-1 ROW, 25-2, 25-3, 26-1, 26-1 ROW, 30-2, 30-2 ROW, 35-1, and 35-1 RS) between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. This includes wet periods during the dry season, that receive one-half (½) inch or more precipitation within a twenty-four (24) hour period, where continuous mud splash may occur. Haul shall not resume for a minimum of forty-eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. Purchaser may request, in writing, a conditional waiver of this restriction. If the first fall rain has not yet occurred, puddles are not present in roads, water is not running in ditches, and the likelihood of spreading phytophthora lateralis (Port-Orford-cedar root disease) is low, the Contracting Officer may approve a conditional waiver. If the first fall rain is forecasted to occur and/or the moisture conditions described above resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked. See Exhibit P and seasonal restriction matrix for full restrictions, including waiver requirements.

7. No haul on natural surface roads shall be conducted 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.

8. In order to prevent the spread of *phytophthora lateralis* (Port-Orford-cedar root disease), the Purchaser shall steam clean or pressure wash all vehicles and equipment prior to entering uninfested areas (Units 19-1, 19-1 RS, 25-1, 25-1 RS, 25-1 ROW, 25-2, 25-3, 26-1, 26-1 ROW, 30-2, 30-2 ROW, 35-1, and 35-1 RS and roads Op. Spur 26-1D, TR 25-1D, TR 26-1A, TR 30-2, 38-5-15.0, 38-5-19.1, 38-5-30.0, 38-6-25.0, 38-6-25.2, 38-6-25.4, 38-6-25.5, 38-6-35.2, 38-6-26.0, and 38-6-36.0) as directed by the Authorized Officer in accordance with the requirements shown on Exhibit P.

9. No work in the stream channel shall be conducted between September 15 of one calendar year and July 1 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.

10. No non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.

11. 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 portion of harvest units. Mechanized equipment as stated above with self-leveling cabs may be used on slopes up to fifty (50) percent, as approved by the Authorized Officer.

12. In the Riparian Reserve and Late-Successional Reserve portion of all units as shown on Exhibit A, the Purchaser shall create a total of eight hundred sixty-two (862) snags via girdling. See Special Provision L-32 and Exhibit A for more details.

13. In units 18-1, 25-1, 30-2 and 31-1, it is acceptable to have yarding corridors outside of

unit boundaries, as approved by the Authorized Officer.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA –
To access units 17-1 and 17-1 RS: Take I-5 to exit 55 for S. Grants Pass. Continue onto US-199 S/Redwood Hwy. Turn left onto OR-238 E. Continue straight onto Water Gap Rd. Turn right onto Upper Powell Creek Rd (38-5-15.0 road). Continue on Upper Powell Creek Rd for about 2.5 miles. Turn right onto the 38-5-17.2 road and proceed to Unit 17-1 and 17-1 RS. Unit 17-1 will be on the right.

To access units 18-1, 18-2, 18-1 ROW, and 18-1 RS: Take I-5 to exit 55 for S. Grants Pass. Continue onto US-199 S/Redwood Hwy. Turn left onto OR-238 E. Continue straight onto Water Gap Rd. Turn right onto Upper Powell Creek Rd (38-5-15.0 road). Continue on Upper Powell Creek Rd for about 3 miles. Turn right onto the 38-5-17.0 road. 18-1 RS is along the 38-5-17.0 road and about .6 miles of the 38-5-7.1 road. From Upper Powell Creek Rd, continue about .8 miles to Unit 18-2 on the left. From Upper Powell Creek Rd, continue about 1.2 miles to Unit 18-1, which begins on the right, but is on both sides of the 38-5-17.0 road, on the right side of the 38-5-18.0 road, and on both sides of the 38-5-7.1 road. From Upper Powell Creek Rd, continue about 2.7 miles and turn right onto the 38-5-7.1 road and continue about .3 miles to 18-1 ROW. **A BLM lock key will be needed to access portions of Unit 18-1 and 18-1 ROW.**

To access units 19-1 and 19-1 RS: Take I-5 to exit 55 for S. Grants Pass. Continue onto US-199 S/Redwood Hwy. Turn left onto OR-238 E. Continue straight onto Water Gap Rd. Turn right onto Upper Powell Creek Rd (38-5-15.0 road). Continue on Upper Powell Creek Rd for about 4.3 miles. Turn right onto the 38-5-19.1 road and proceed to Unit 19-1 and 19-1 RS. Unit 19-1 is on either side of the road. **A BLM lock key will be needed to access Unit 19-1 and 19-1 RS.**

To access units 25-2, 25-3, 26-1, 30-2, 25-1 ROW, 26-1 ROW, 30-2 ROW, and 25-1 RS: Take I-5 to exit 55 for S. Grants Pass. Continue onto US-199 S/Redwood Hwy. Turn left onto OR-238 E. Continue straight onto Water Gap Rd. Turn right onto Upper Powell Creek Rd (38-5-15.0 road). Continue on Upper Powell Creek Rd for about 6.2 miles to Unit 25-2 and 25-1 RS. Take a left onto the 38-6-25.2 road and continue about .2 miles to Unit 25-3. From Upper Powell Creek Rd, turn left onto the 38-6-25.5 road and continue about 1.3 miles to Unit 30-2 and 30-2 ROW. At the beginning of the 38-6-25.5 road, take a right onto the 38-6-25.0 road, 25-1 RS continues about .7 miles down this road and continue on for about .3 miles and 25-1 ROW will be on the left. Continue on Upper Powell Creek Rd for about 7.3 miles to Unit 26-1. Continue on Upper Powell Creek Rd for about 8.8 miles and take a left onto the 37-6-36.0 road. Continue on the 37-6-36.0 road for about .7 miles to the E. portion of Unit 26-1 and 26-1 ROW. **A BLM lock key will be needed to access the S. portion of Unit 25-2, the S. portion of Unit 25-3, Unit 30-2, 25-1 ROW, 30-2 ROW, and the S. portion of 25-1 RS.**

To access units 26-1 and 26-1 ROW: Take I-5 to exit 55 for S. Grants Pass. Continue onto US-199 S/Redwood Hwy. Turn left onto OR-238 E. Continue straight onto Water Gap Rd. Turn right onto Upper Powell Creek Rd (38-5-15.0 road). Continue on Upper Powell Creek Rd for about 7.3 miles to Unit 26-1. Continue on Upper Powell Creek Rd for about 8.8 miles and take a left onto the 37-6-36.0 road. Continue on the 37-6-36.0 road for about .7 miles to the E. portion of Unit 26-1 and 26-1 ROW.

To access units 25-1, 35-1, and 35-1 RS: Take I-5 to exit 55 for S. Grants Pass. Continue onto US-199 S/Redwood Hwy. Turn left onto OR-238 E. Continue straight onto Water Gap Rd. Turn right onto Upper Powell Creek Rd (38-5-15.0 road). Continue on Upper Powell Creek Rd for about 6.2 miles and Unit 25-1 will begin on the right and continue on either side of the road. Turn left onto the 38-6-25.5 road and then turn right onto the 38-6-25.0 road and continue about .3 miles and portions of Unit 25-1 will begin on the left and continue on either side of the road. To access the S. portion of Unit 25-1, Unit 35-1, and 35-1 RS, from Water Gap Rd, continue straight

onto Williams Hwy. Continue onto Cedar Flat Rd. Continue onto Old Munger Creek Rd. Continue onto Cedar Flat Rd. Continue onto Munger Creek Rd/the 39-5-6.1 road for about 1.2 miles and turn right onto the 38-6-36.0 road. Proceed on this road to the S. portion of Unit 25-1, Unit 35-1, and 35-1 RS. **A BLM lock key will be needed to access portions of Unit 25-1, Unit 35-1, and 35-1 RS.**

To access units 30-1, 31-1, 31-2, and 31-3: Take I-5 to exit 55 for S. Grants Pass. Continue onto US-199 S/Redwood Hwy. Turn left onto OR-238 E. Continue straight onto Water Gap Rd. Continue straight onto Williams Hwy. Continue onto Cedar Flat Rd. Turn right onto Kincaid Rd and continue for about 1.8 miles and turn right onto the 39-5-5.0 road. Proceed along the 39-5-5.0 road to Unit 31-1. Continue along the 39-5-5.0 road for about .4 miles and take a right onto the 38-5-31.3 road and proceed to Unit 31-2. Continue along the 39-5-5.0 road for about 2.1 miles and take a right onto the 38-5-31.1 road and proceed to units 30-1 and 31-3. **A BLM lock key will be needed to access units 30-1, 31-1, 31-2, and 31-3.**

ENVIRONMENTAL ASSESSMENT - An environmental assessment (DOI-BLM-ORWA-M000-2020-001-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.

PENN BUTTE TIMBER SALE

SPECIAL PROVISIONS

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

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

(A) AR-1 All timber on the Reserve Areas as shown on Exhibit A and all trees marked with a combination of orange paint, orange flagging, and/or posters which are on or mark the boundaries of the Reserve Areas.

(B) AR-2 All timber on the Reserve Areas shown on Exhibit A and all blazed, painted, or posted trees which are on or mark the boundaries of the Reserve Areas, except approximately three hundred fifty-two (352) Douglas-fir, two hundred twenty-two (222) ponderosa pine, seven (7) incense-cedar, six (6) white fir, five (5) Port-Orford-cedar, and one (1) sugar pine trees marked for cutting heretofore by the Government with blue paint above and below stump height in right-of-way units 18-1 ROW, 25-1 ROW, and 30-2 ROW and roadside maintenance units 17-1 RS, 18-1 RS, 19-1 RS, 25-1 RS and 35-1 RS, shown on Exhibit A.

(C) IR-1 Approximately eight thousand two hundred ninety-nine (8,299) Douglas-fir, one thousand five hundred ninety-six (1,596) ponderosa pine, six hundred sixty-four (664) sugar pine, three hundred eighty (380) incense-cedar, one thousand two hundred ninety-six (1,296) oak, five hundred five (505) hardwoods and eight hundred thirty-seven (837) white fir trees marked with yellow paint above and below stump height in units 17-1, 18-1, 18-2, 19-1, 25-1, 25-2, 26-1, 30-1, 31-2, 31-3 and 35-1, shown on Exhibit A.

(D) IR-1 All orange marked double-banded Douglas-fir, sugar pine, ponderosa pine and incense-cedar trees marked above and below breast height in unit 25-3, shown on Exhibit A.

(E) IR-1 All trees located more than sixty (60) feet, horizontal distance, from all double banded orange marked trees in unit 25-3. Horizontal distance shall be measured between boles at D.B.H.

(F) IR-6 All Pacific yew trees in the Contract Area shown on Exhibit A.

(G) IR-13 All trees greater than thirty-six (36) inches D.B.H.O.B that were established prior to 1850 in the contract as shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. All trees that are greater than thirty-six (36) inches D.B.H.O.B. that are cut for safety or operational purposes, and do not present a safety hazard on the ground, shall be retained on site as directed by the Authorized Officer.

(H) IR-13 All existing snags and coarse woody debris in all units shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. All snags that are felled for safety reasons, and do not present a safety hazard on the ground, shall be retained on site.

SPECIAL PROVISIONS

Section 44

(A) LOGGING

1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if he intends to cease operations for any period of seven (7) or more days.

2) L-2 Prior to the commencement of operations the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract, which shall include measures needed to ensure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan.

3) L-4 All trees designated for cutting shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.

4) L-5 All conifer trees eight (8) inches or larger D.B.H.O.B., which are not reserved shall be felled in all units shown on Exhibit A.

5) L-8 In all units as 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. If excessive stand damage occurs, all trees shall be bucked into log lengths not to exceed forty-one (41) feet prior to being yarded.

6) L-11 No trees may be felled into the stream, or other resource buffers designated on Exhibit A.

7) L-12 In the Units shown on Exhibit A, yarding/felling shall be done in accordance with the requirements for the designated area listed below.

Designated Area	Yarding Requirements or Limitations
Roadside Maintenance Units 17-1 RS 18-1 RS 19-1 RS 25-1 RS 35-1 RS	Mechanical felling required with a single-grip felling head (a head that can hold and fully suspend the tree after it is cut). 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. Directional falling by hand may be permitted, so long as limbs and tops can be machine piled from the road.

Roadside Maintenance Units Continued 17-1 RS 18-1 RS 19-1 RS 25-1 RS 35-1 RS	Yarding shall be done with equipment which will fully suspend both ends of the log clear of the ground during inhaul. Landing size shall not exceed one-quarter (¼) acre, shall be located along existing roads, and shall be approved by the Authorized Officer. No landing creation or expansion shall occur without prior approval from the Authorized Officer. Design landings with adequate drainage. Conifer tops and limbs, hardwoods, brush, and other cut vegetation created from the roadway clearing treatment shall be machine piled concurrently with felling operations and shall be treated according to the roadway clearing prescriptions found in Exhibit C and according to the machine pile and cover slash disposal stipulations found in Sec. 44(E)(1)(b)(SD-1b). All mechanized equipment shall only operate on existing road surfaces. Mechanized felling operations are subject to seasonal operating restrictions as described in Section 44(A)(11)(L-19) and Section 44(A)(12)(L-19) of this contract. See Exhibit C in the Engineering package for more details on the roadside maintenance requirements.
Designated Area	Yarding Requirements or Limitations
Ground Based Harvest & Ground Based (Tractor) Yard Units 18-1, 18-2 19-1, 25-1 25-2, 25-3 26-1, 30-2 31-1, 31-2 31-3, 35-1 18-1 ROW 25-1 ROW 26-1 ROW 30-2 ROW	Mechanized harvesting operations are optional. All ground-based harvest units may be manually felled. 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.

Ground Based Harvest & Ground Based (Tractor) Yard Units Continued 18-1, 18-2 19-1, 25-1 25-2, 25-3 26-1, 30-2 31-1, 31-2 31-3, 35-1 18-1 ROW 25-1 ROW 26-1 ROW 30-2 ROW	Directional falling to lead and away from streams, unit boundaries, and resource buffers shown on Exhibit A will be required. Trees shall be felled toward the skid trail. 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. Non-specialized ground-based equipment (without a self-leveling cab) shall be limited to slopes of thirty-five (35) percent or less. Specialized ground-based equipment (with a self-leveling cab) shall be limited to slopes of fifty (50) percent or less. This equipment can operate on steeper ground if it is operating on previously constructed skid trails or accessing isolated ground-based harvest areas requiring short distances over steeper pitches. Mechanized ground-based felling and yarding operations are subject to dry condition operating restrictions as described in Section 44(A)(11)(L-19) and Section 44(A)(12)(L-19) of this contract. Yarding tractor shall be equipped with an integral arch and yard with one-end log suspension. 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 from skids trails to less than fifteen (15) percent over the harvest unit and is approved by the Authorized Officer. Designate skid trails in locations that do not channel water into waterbodies, floodplains, and wetlands, or unstable areas. Rehabilitate utilized skid roads, landings, cable tractor swing routes, and/or temporary routes as necessary to achieve no more than twenty (20) percent detrimental soil conditions in the ground-based harvest unit, as specified in Sec. 44(C)(12)(E-1).

Ground Based Harvest & Ground Based (Tractor) Yard Units Continued 18-1, 18-2 19-1, 25-1 25-2, 25-3 26-1, 30-2 31-1, 31-2 31-3, 35-1 18-1 ROW 25-1 ROW 26-1 ROW 30-2 ROW	Block skid trails following use. Landing size shall generally not exceed one-quarter (¼) acre, shall be located along existing roads, temporary 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. Minimize disturbance to existing coarse woody debris. Where skid trails encounter large coarse woody debris, the Purchaser shall buck out a portion for equipment access. The use of blades while tractor yarding will be limited, equipment shall walk over as much ground litter as possible. Skid trails may be needed outside of unit boundaries in units 18-1and 25-1. These skid trails shall not be located in any of the buffers shown on Exhibit A and shall be approved by the Authorized Officer prior to use.
Designated Area	Yarding Requirements or Limitations
Cable Yard Units 17-1 18-1 19-1 25-1 26-1 30-1 30-2 31-1 31-3	Yarding will be done with a cable yarding system which will suspend one end of the log clear of the ground during inhaul on the yarding corridor. The cable yarding system shall be capable of yarding one thousand two hundred eighty (1,280) feet slope distance. Skyline equipment shall be capable of yarding in a multispan configuration. A carriage is required which will maintain a fixed position on the skyline during lateral yarding and has a minimum lateral yarding capability of seventy-five (75) feet. Yarding corridors will be perpendicular to the contours. Prior to falling any timber in the unit, all tail/lift trees and/or intermediate support trees shall be pre-designated by the Purchaser and approved by the Authorized Officer.

Cable Yard Units Continued 17-1 18-1 19-1 25-1 26-1 30-1 30-2 31-1 31-3	Existing cable corridors shall be used whenever possible. Yarding corridors shall be approximately one hundred fifty (150) feet apart, measured at the tailholds. Yarding corridor widths shall not exceed six (6) feet either side of the skyline centerline. Landing size shall not exceed one-quarter (¼) acre, shall be located along existing roads, temporary routes, within unit boundaries where possible, and shall be approved by the Authorized Officer. Short purchaser spurs into units may be necessary to achieve one-end log suspension. Design landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads. Corridors may be needed outside of unit boundaries in units 18-1, 25-1, 30-2 and 31-1. These corridors shall not be located in any of the buffers shown on Exhibit A and shall be approved by the Authorized Officer prior to use. Yarding over streams shall be avoided unless it is the only viable option. If yarding is needed over streams shown on Exhibit A, it shall be done with full suspension within fifty (50) feet of and over streams and shall be approved by the Authorized Officer. Any trees cut for the yarding corridor outside of unit boundaries within one hundred ninety-five (195) feet of streams shown on Exhibit A shall be retained on site as coarse woody debris. Directional falling to the lead and away from streams, and unit boundaries shown on Exhibit A will be required. Trees shall be felled toward the yarding corridor. Cable corridors that are hydrologically connected to 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.

8) L-14 No falling, yarding or loading is permitted in or through the stream buffers as shown on Exhibit A.

9) L-19 No work in the stream channel shall be conducted between September 16 of one calendar year and June 30 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.

10) L-19 No non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.

11) L-19 No mechanical ground based harvesting, ground based yarding, 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 units 18-1, 18-2, 19-1, 25-1, 26-1, 30-2, 31-1, 31-2, 31-3, 18-1 ROW, 25-1 ROW, 26-1 ROW and 30-2 ROW between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

12) L-19 No ground-based harvesting, yarding, temporary route or road construction, machine piling, and rehabilitation operations shall be conducted in units 25-2, 25-3, 35-1, 19-1 RS, 25-1 RS and 35-1 RS 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 first fall rain has not yet occurred, soil moisture is low, and the likelihood of spreading *phytophthora lateralis* (Port-Orford-cedar root disease) is low, the Contracting Officer may approve a conditional waiver. Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks. Low soil moisture limits will be determined by the Authorized Officer. If the first fall rain is forecasted to occur and/or the moisture conditions described above resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked unless the Purchaser washes all equipment prior to entering the uninfested units/roads as described in Exhibit P. If dry season rain events result in unacceptable said moisture conditions, cessation of above operations will be required until moisture conditions are acceptable as determined by the Authorized Officer. See Exhibit P and seasonal restriction matrix for full restrictions, including waiver requirements.

13) L-19 No road construction, road maintenance/renovation, hauling, and/or transportation of personnel and equipment shall be conducted on roads Op. Spur 26-1D, TR 25-1D, TR 26-1A, TR 30-2, 38-5-15.0, 38-5-19.1, 38-5-30.0, 38-6-25.0, 38-6-25.2, 38-6-25.4, 38-6-25.5, 38-6-35.2, 38-6-26.0, and 38-6-36.0 (for units 19-1, 19-1 RS, 25-1, 25-1 RS, 25-1 ROW, 25-2, 25-3, 26-1, 26-1 ROW, 30-2, 30-2 ROW, 35-1, and 35-1 RS) between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. This includes wet periods during the dry season, that receive one-half (½) inch or more precipitation within a twenty-four (24) hour

period, where continuous mud splash may occur. Haul shall not resume for a minimum of forty-eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. Purchaser may request, in writing, a conditional waiver of this restriction. If the first fall rain has not yet occurred, puddles are not present in roads, water is not running in ditches, and the likelihood of spreading *phytophthora lateralis* (Port-Orford-cedar root disease) is low, the Contracting Officer may approve a conditional waiver. If the first fall rain is forecasted to occur and/or the moisture conditions described above resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked, unless the Purchaser washes all equipment prior to entering the uninfested roads/units as described in Exhibit P. See Exhibit P and seasonal restriction matrix for full restrictions, including waiver requirements.

14) L-19 No haul on natural surface roads shall be conducted 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.

15) L-22 During logging operations, the Purchaser shall keep the 38-5-15.0 and 38-6-36.0 roads where the road passes through the contract area, clear of trees, rock, dirt, and other debris so far as is practicable. The road shall not be blocked by such operations for more than thirty (30) minutes.

16) L-24 Before cutting and removing any trees necessary to facilitate logging in the harvest units shown on Exhibit A, the Purchaser shall identify the location of the skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:

(a) All skid roads and/or cable yarding roads 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 contact 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 cable yarding road shall be limited to twelve (12) feet.

(b) The Purchaser may immediately cut and remove additional timber to clear skid roads and cable yarding roads; and provide tailhold, tieback, guyline, lift and intermediate support trees; and clear danger trees when the trees have been marked with paint (color to be determined at pre-work) 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.(d). of the contract.

(c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section. 9 of the contract; or, the Authorized Officer determines that the species of trees are not listed in Exhibit B of this contract shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.

(d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.

(e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.

(f) The Government may reserve trees previously designated for cutting and removal by blacking out blue paint, and/or applying orange or pink 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.

17) L-32 In all harvest units, as shown on Exhibit A, the Purchaser shall create snags via girdling, or other method as approved by the Authorized Officer. The total number of snags to create per unit is listed below, and is as follows: 17-1 (72 snags), 18-1 (176 snags), 18-2 (4 snags), 19-1 (86 snags), 25-1 (192 snags), 25-2 (26 snags), 25-3 (16 snags), 26-1 (86 snags), 30-1 (8 snags), 30-2

(22 snags), 31-1 (56 snags), 31-2 (36 snags), 31-3 (10 snags) and 35-1 (72 snags). A total of eight hundred sixty-two (862) snags shall be created in the Late-Seral Reserve (LSR) and Riparian Reserve (RR) portion of units. Of this total, one-half (½) of the snags required in each unit shall be greater than ten (10) inches diameter at breast height outside bark and one-half (½) of the snags required in each unit shall be greater than twenty (20) inches diameter at breast height outside bark. All snags created shall come from reserve marked trees (including hardwoods) as described in Section 43(B)(AR-1), Section 43(D)(IR-1), or Section 43(G)(IR-13) and shall be distributed in a variety of spatial patterns including aggregated groups and individual trees. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all girdled trees by diameter class and species per unit. At the end of girdling operations a completed tree tally shall be submitted to the Authorized Officer. The Purchaser shall not create snags in locations that may be hazardous to roads or powerlines.

UNIT	Total # of snags to create in LSR	Total # of snags to create in RR	Total # of snags to create in the Unit
17-1	68	4	72
18-1	176	0	176
18-2	4	0	4
19-1	86	0	86
25-1	188	4	192
25-2	26	0	26
25-3	16	0	16
26-1	86	0	86
30-1	8	0	8
30-2	22	0	22
31-1	56	0	56
31-2	36	0	36
31-3	10	0	10
35-1	64	8	72
Total	846	16	862

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

In the event that the Authorized Officer identifies a conflict between the requirements of this contract or agreed upon methods of proceeding hereunder and State or Federal safety requirements, the contract may be modified. If the cost of such contract modification is of a substantial nature ($2,000.00 or more), the Purchaser may request, in writing, an adjustment in the Total Actual 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

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

(2) R-1a: Any required construction, improvement, or renovation of structures and roads shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.

(3) R-1b: The Purchaser shall construct, use, and decommission temporary roads TR 18-1F, TR 25-1D, TR 26-1A, TR 30-2, Op. Spur 18-1E, and Op. Spur 26-1D by October 15th of the same respective operating season. If temporary roads are used over two dry seasons, temporary routes must be winterized by October 15th.

(4) R-1d: Prior to completion and approval of sub-grade construction from all proposed temporary road construction and reconstruction, as shown on Exhibit C, all logs shall be removed from the designated right-of-way.

(5) R-2: The Purchaser is authorized to use the road listed and shown on Exhibits C for the removal of Government timber sold under the terms of this contract and/or the hauling of rock as required in Exhibits C, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 44 (C)(7). Any road listed on Exhibits C & 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 Miles Used	Road Control	Road Surface Type	Maintenance Responsibility
37-6-36.00 H	0.66	BLM	AGG	BLM
38-5-07.01	0.60	BLM	AGG	Purchaser
38-5-15.00 A-I	7.50	BLM	BST	BLM
38-5-15.00 J	1.35	BLM	AGG	BLM
38-5-17.00 A-B	2.68	BLM	AGG	Purchaser
38-5-17.00 C	0.92	BLM	NAT	Purchaser
38-5-17.02	1.26	BLM	AGG	Purchaser
38-5-18.00 A	0.29	BLM	AGG	Purchaser
38-5-18.02	0.51	BLM	NAT	Purchaser
38-5-19.01	0.84	BLM	AGG	Purchaser
38-5-30.00	0.27	BLM	NAT	Purchaser
38-5-31.01 A-B	1.53	BLM	AGG	Purchaser
38-5-31.03 A	0.24	BLM	AGG	Purchaser
38-5-31.03 B	0.87	BLM	NAT	Purchaser
38-6-25.00 A	0.76	BLM	NAT	Purchaser
38-6-25.02	0.67	BLM	NAT	Purchaser
38-6-25.04	0.17	BLM	NAT	Purchaser
38-6-25.05	0.87	BLM	NAT	Purchaser
38-6-26.00	0.24	BLM	NAT	Purchaser
38-6-35.02	0.95	BLM	AGG	Purchaser
38-6-36.00 A	0.33	BLM	BST	BLM
38-6-36.00 B	0.97	BLM	AGG	Purchaser
39-5-05.00 A	0.30	BLM	BST	Purchaser
39-5-05.00 B	1.83	BLM	AGG	Purchaser
39-5-06.01 A-B	1.80	BLM	BST	BLM
OS 18-1E	0.02	BLM	NAT	Purchaser
OS 26-1D	0.02	BLM	NAT	Purchaser
TR 18-1 F	0.22	BLM	NAT	Purchaser
TR 25-1 D	0.10	BLM	NAT	Purchaser
TR 26-1 A	0.16	BLM	NAT	Purchaser
TR 30-2	0.12	BLM	NAT	Purchaser
TOTAL	**29.05**			

(6) R-2a: With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of roads included in Section 44 (C)(5) of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.

(7) R-2d: The Purchaser shall pay a road maintenance fee of $0.82 per thousand board feet log scale per mile for the use of roads 38-5-15.00 A-I, 38-6-36.00 A, and 39-5-06.01 A-B, the Purchaser shall pay a road maintenance fee of $0.77 per thousand board feet log scale per mile for the use of roads 37-6-36.00 H and 38-5-15.00 J, and the Purchaser shall pay a road rockwear fee of $0.85 per thousand board feet log scale per mile for the use of all rocked roads maintained by the Bureau of Land Management or the Purchaser within the sale area. The Purchaser will be required to label, with a permanent marker, each load ticket with the corresponding unit number as directed by the Authorized Officer. The total maintenance fee due shall be based upon volumes determined pursuant to Exhibit B of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. The Authorized Officer shall establish an installment schedule of payment of the maintenance obligation. If it is determined by the Authorized Officer, after all merchantable timber has been cut and scaled, that the total maintenance payments made under this contract exceed the total maintenance and rockwear payment due, such excess shall be returned to the Purchaser after such determination is made.

(8) 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 44(C)(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 obligation(s).

(9) R-2f: The Purchaser shall perform any required road repair and maintenance work on roads identified as Purchaser maintenance, under the terms of Exhibit D, Road Maintenance Specifications, of this contract, which is attached hereto and made a part hereof.

(10) R-3c: The Purchaser agrees that if they elect to use any other private road, which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, 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.

(11) 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 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.

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

The Purchaser shall be responsible for repair of any damage to roads or structures caused by the use tracked vehicles or equipment: (1) without written approval; (2) in violation of the conditions of a written approval; or, (3) in a negligent manner.

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

(C) ENVIRONMENTAL PROTECTION

1) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall restrict non-road, in unit, ground-based equipment used for harvesting, yarding, machine piling, and rehabilitation operations (including temporary routes, tractor swing routes, and landings) to periods of low soil moisture (dry conditions). Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks. Low soil moisture limits will be determined by the Authorized Officer. Ground-based equipment shall be allowed to operate when the ground is frozen or adequate snow exists to prevent soil compaction and displacement, as determined by the Authorized Officer.

2) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on hydrologically connected natural surface or rocked roads during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud splash or tire slide, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer.

3) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on all natural surface roads that receive one-half (½) inch or more precipitation within a twenty-four (24) hour period. Haul shall not resume for a minimum of forty-eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. The Purchaser may elect, at their own expense, to apply rock surfacing to these roads to bring them up to wet weather haul standards, as approved by the Authorized Officer.

4) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:

(a) In order to prevent the potential spread of noxious weeds into the Medford District BLM, the operator would be required to clean all logging, construction, chipping, grinding, shredding, rock crushing, and transportation equipment prior to entry on BLM lands.

(b) Cleaning shall be defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds into BLM lands. Cleaning prior to entry onto BLM lands may be accomplished by using a pressure hose.

(c) Only equipment inspected by the BLM would be allowed to operate within the Analysis Area. All subsequent move-ins of equipment as described above shall be treated the same as the initial move-in.

(d) Prior to initial move-in of any equipment, and all subsequent move-ins, the operator shall make the equipment available for BLM inspection at an agreed upon location off Federal lands.

(e) Equipment would be visually inspected by the Authorized Officer to verify that the equipment has been reasonably cleaned.

(f) Equipment, vehicles, and personnel will avoid working within flagged noxious weed sites. Orange flagging labeled in black with "NOXIOUS WEEDS" will be used to delineate avoidance boundaries.

5) E-1 In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:

Upon decommissioning and prior to fall rains, the Purchaser shall scarify landings (outside of the driving surface) and temporary routes to provide for adequate drainage, then stabilize and revegetate all bare soil with certified weed free straw mulch and a native seed mixture approved

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

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

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

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

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

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

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

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

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

to the Authorized Officer for inspection at least 5 days in advance of commencing revegetation work.

6) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan (SPCC) for all hazardous substances to be used in the contract area, as directed by the Authorized Officer. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements. All operators shall have a Spill Containment Kit (SCK) as described in the SPCC plan on-site during any operation with potential for run-off to adjacent waterbodies. The SCK shall be appropriate in size and type for the oil or hazardous material carried by the Purchaser.

7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not store any fuel or other petroleum products or refuel heavy mechanized equipment within one hundred fifty (150) feet of all riparian management or wet areas. The Purchaser shall not refuel or maintain handheld equipment such as drip torches and chainsaw within one hundred (100) feet of waterbodies. Portable pumps may be refueled onsite within a spill containment system. 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.

8) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall prevent the delivery of chemical retardant foam or additives to waterbodies, and wetlands. Ignition devices/materials shall be stored and disposed of at least one hundred fifty (150) feet away from streams and wetlands.

9) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not locate new landings in areas that contribute eroded fines to streams, wet areas, dry draws and swales. If these landing locations cannot be avoided, ensure that properly installed sediment control measures are placed and maintained, as needed, to keep eroded material onsite.

10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use when utilizing landings, skid trails, temp routes, or haul 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.

11) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, prior to October 15 of the same operating season, winterize and rehabilitate temporary routes, landings, hydrologically connected corridors and skid trails and other areas of exposed soils by properly

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

12) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall fully decommission: temporary routes 18-1, 25-1, 26-1 and 30-2 and rehabilitate ground based skid trails and landings outside of the road prism, within ground-based yarding areas **as needed to achieve no more than twenty (20) percent detrimental soil compaction within the unit**, as directed by the Authorized Officer, by one of the following methods:

(a) If the Authorized Officer deems subsoiling will not cause unacceptable damage to the root systems of residual trees the Purchaser shall discontinuously subsoil, simultaneously water bar, seed, mulch, and barricade. Subsoil to a depth of twelve (12) inches, and no further than thirty-six (36) inches apart. If the Authorized Officer deems subsoiling to this depth will cause an unacceptable amount of damage to the root system of residual trees, the Purchaser shall scarify to a depth of up to six (6) inches and simultaneously water bar, seed, mulch, and barricade.

(b) All rehabilitation shall occur within eighteen (18) months of harvest, during dry conditions.

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

14) E-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the spacing described in the table below and to the specifications shown on Exhibit C which is attached hereto and made a part hereof.

Gradient (Percent)	Water Bar Spacing By Erosion Class		
	High (Feet) Unit 25-1	Moderate (Feet) Unit 35-1	Low (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
36+%	50	50	50

15) E-3 The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:

(a) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;

(b) when, in order to comply with the Endangered Species Act, or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of

Decision (ROD) and Resource Management Plan (RMP), the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

(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) when, in order to comply with a court order, which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;

(e) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

(f) when, in order to comply with a stay or other remedy issued by the Interior Board of Land Appeals (IBLA) the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

(g) species have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;

(h) when, in order to protect species which were identified for protection in accordance with management direction established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

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

During any period of suspension, the Purchaser may withdraw performance and payment bond coverage aside from that deemed necessary by the Authorized Officer to secure cut and/or removed timber for which the Bureau of Land Management has not received payment, and/or unfulfilled contract requirements associated with harvest operations that have already occurred and associated 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.a. 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.a. of the contract within 15 days after the bill for collection is issued, subject to Section 3.i. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

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, court-ordered injunctions, or an IBLA issued stay or remedy, the Purchaser agrees that an extension of time, without reappraisal, will constitute a full and complete remedy for any claim that delays due to the suspension hindered performance of the contract or resulted in damages of any kind to the Purchaser.

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

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

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

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

Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls have moved into harvest units. If northern spotted owls are detected in or adjacent to the units, operations would be restricted until northern spotted owl occupancy and nesting status has been determined. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations in writing. Without this approval, such operations are prohibited from March 1 through June 30 of each year.

17) E-7 In order to prevent the spread of *phytophthora lateralis* (Port-Orford-cedar root disease), the Purchaser shall steam clean or pressure wash all vehicles and equipment prior to entering uninfested areas or prior to leaving infested areas as directed by the Authorized Officer in accordance with the requirements shown on Exhibit P.

(D) FIRE PREVENTION

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

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

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

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

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

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

3. F-2c Serviceable cell phone or radio equipment able to provide prompt and reliable communication between the contract area, Medford BLM District Office and Oregon Department of Forestry. Such communication shall be available during periods of operation including the time watchman service is required.

4. F-2d A pair of headlights capable of being quickly attached to each bulldozer used on the contract area. The headlights shall be adequate to provide illumination sufficient to allow use of the bulldozers for fire fighting and construction of fire lines at night.

5. F-2f A headlamp for each employee in the woods crew adequate to provide sufficient illumination for night firefighting. A headlight shall be of the type that can be fastened to the head so as to allow independent use of the hands. At least one extra set of batteries shall be provided for each such headlight.

6. F-2f Two (2) back-pack pumps at each landing and one (1) at each tail block, all to be kept full of water and in good operating condition.

7. F-2g A chemical fire extinguisher of at least eight (8) ounces minimum capacity of a type approved by the Authorized Officer and a size 0 or larger shovel shall be carried during the closed fire season or periods of fire danger by each falling crew and each bucker using a power saw on the contract area. Such fire extinguisher shall be filled and in effective operating condition and shall at all times be immediately available to the operator when the saw is being fueled or the motor of the saw is running. Any fueling of a power saw shall be done in an area which has first been cleared of all flammable material. Power saws shall be moved at least twenty (20) feet from the place of fueling before the engine is started. Each power saw shall be equipped with an exhaust system and a spark arresting device which are of types approved by the Authorized Officer.

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

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

(E) SLASH DISPOSAL

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

(a) SD-1a Lop and scatter all slash in the south half of unit 17-1; lop and scatter all slash in ground-based portions of unit 18-1 that is not designated for machine piling; lop and scatter all slash in the shovel and cable yarding portions of unit 19-1 that is not designated for machine piling; lop and scatter all slash not designated for machine piling in units 25-1, 26-1, 30-2, and 31-3; lop and scatter all slash within the cutting circles in unit 25-3; and lop and scatter all slash within unit 30-1, as shown on Exhibit S. All top and side branches must be free of the central stem so that such stem is reduced to the extent that it is within eighteen (18) inches of the ground at all points. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted,

or broken from live plants as a result of Purchaser's operations under the terms of this contract. Lop and scatter shall be completed in accordance with Exhibit S as directed by the Authorized Officer.

1. All slash shall be arranged in a discontinuous pattern across the forest floor.

2. All slash shall be lopped to no more than eight (8) feet in length.

(b) SD-1b Machine pile, cover, and burn all slash within one hundred (100) feet of roads 38-5-17.0, and 38-5-18.0 where the road coincides with the unit boundary, within one hundred (100) feet and north of road 38-5-7.1 where the road coincides with the unit boundary, and in ground-based gaps off the reconstructed segment of the 38-5-17.0 road in unit 18-1; machine pile, cover, and burn all slash in units 18-2 and 25-2; machine pile, cover, and burn all slash within one hundred (100) feet off road 38-5-19.1 where the road coincides with the unit boundary, and the ground-based portion (excluding the shovel ground) of unit 19-1; machine pile, cover, and burn all slash in the ground-based portions of unit 25-1 and within one hundred (100) feet of roads 38-5-15.0, 38-6-35.2, and 38-6-25.4 where the road coincides with the unit 25-1 boundary; machine pile, cover, and burn all slash in the ground-based portion of unit 26-1 accessed from reconstructed road 38-6-26.0, within the ground-based portion of unit 26-1 accessed from temporary route TR 26-1A, and within one hundred (100) feet of road 38-5-15.0 where the road coincides with the unit boundary; machine pile, cover, and burn all slash in ground-based portion of unit 30-2; machine pile, cover, and burn all slash in the ground-based portions of unit 31-1 and within one hundred (100) feet of road 39-5-5.0 where the road coincides with the 31-1 unit boundary; machine pile, cover, and burn all slash in unit 31-2; machine pile, cover, and burn all slash one hundred (100) feet off road 38-5-31.1 in unit 31-3; machine pile, cover, and burn all slash outside of skips in unit 35-1; and machine pile, cover, and burn all slash within the clearing limits of all permanent roads, temporary routes and Roadside Maintenance Units as shown on Exhibit S. 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. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.

2. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract. Do not pile pieces of slash with a diameter greater than twelve (12) inches.

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. Piles shall be less than sixteen (16) feet in height and width.

5. Machine piling operations are limited to slopes less than thirty five (35) percent slope when using non-specialized equipment (without a self-leveling cab) or to slopes less than fifty (50) percent slope when using specialized equipment (with a self-leveling cab); and to seasonal restrictions as described in Sec. 44(A)(11)(L-19) and Sec. 44(A)(12)(L-19) and dry conditions as described in Sec. 44(C)(1)(E-1). All areas that are identified in Exhibit A as ground based yarding that cannot be machine piled would be hand piled.

6. 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.

7. Machine piles shall be adequately covered with a cap of ten (10) feet by ten (10) feet of four (4) mil polyethylene sheeting. The polyethylene sheeting 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.

8. Machine piles shall not be placed within fifteen (15) feet of snags, stumps, reserve trees or large woody debris.

9. Prior to burning the piles, the Authorized Officer and a wildlife biologist will survey machine piles within twenty (20) feet of roads to ensure they are not compatible with fisher denning habitat and/or use.

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 is required to furnish the fuel and equipment for machine pile burning.

(c) SD-1c Hand pile, cover, and burn all slash in the north half of unit 17-1; hand pile, cover, and burn all slash in cable yarding portions of unit 18-1 outside of the machine pile, cover, and burn areas and skips; and hand pile, cover, and burn all slash not designated for machine piling in unit 31-1 as shown on Exhibit S. Slash shall be piled by hand. Finished piles shall be tight and free of earth.

1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.

2. Slash includes woody material (brush, limbs, tops, unmerchantable stems, or chunks severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract.

3. Hand pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds two (2) feet in length, or as directed by the Authorized Officer.

4. Hand piles shall be covered with a large enough piece of four (4) mil polyethylene sheeting to ensure a dry ignition spot, generally five (5) feet by five (5) feet or large enough to cover eighty (80) percent of the pile.

5. Hand piles shall not be placed adjacent to or within ten (10) feet of leave trees or large woody debris.

6. Hand piles shall not be located on roadways, turnouts, shoulders, or cut banks, unless authorized by the Authorized Officer.

7. Burning of hand piles would occur after a sufficient period of curing (generally over a year) and adequate seasonal moisture.

(d) SD-1f Within twenty (20) feet of the edge of each landing pile, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than two (2) feet in length shall be piled within fourteen (14) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located off of the driving surface of roads and at least fifteen (15) feet from any Reserve Tree and/or as directed by the Authorized Officer.

Landing piles shall be less than sixteen (16) feet in height and width. Cover piles with large enough piece of four (4) mil polyethylene sheeting to ensure a dry ignition spot, 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. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.

2. Prior to burning the piles, the Authorized Officer and a wildlife biologist will survey landing piles to ensure they are not compatible with fisher denning habitat and/or use.

3. Landing piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.

4. Landing piles will be burned within twenty-four (24) months of harvest completion.

5. If purchaser elects to set aside pole/firewood decks and not put the material in landing piles, the purchaser will be required to remove decks before the expiration

of cutting rights. Material will be hauled off site for processing. The Authorized Officer will determine location of pole/hardwood decks.

2) SD-2 Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and mop up assistance as required herein, and measures required in Sections 44(E)(1)(SD-1) and 44(E)(3)(SD-5). 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 machine piles in units 18-1, 18-2, 19-1, 25-1, 25-2, 26-1, 30-2, 31-1, 31-2, 31-3, 35-1 and within the clearing limits of all permanent roads, temporary routes and Roadside Maintenance Units as shown on Exhibit S:

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

2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

3. One (1) Wildland Fire Engine Boss.

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

5. Six (6) drip torches.

6. Hand ignition with drip torches is required in machine pile units.

7. All ignition personnel will be directly supervised by a BLM representative.

(b) For mop-up of machine piles in units 18-1, 18-2, 19-1, 25-1, 25-2, 26-1, 30-2, 31-1, 31-2, 31-3, 35-1 and within the clearing limits of all permanent roads, temporary routes and Roadside Maintenance Units as shown on Exhibit S:

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

2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

3. One (1) Wildland Fire Engine Boss.

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

(c) For igniting and burning hand piles in units 17-1, 18-1 and 31-1:

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

2. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

3. One (1) Wildland Fire Engine Boss.

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

5. Ten (10) drip torches.

6. Hand ignition with drip torches is required in pile burn units.

7. All ignition personnel will be directly supervised by a BLM representative.

(d) For mop up of hand piles in units 17-1, 18-1 and 31-1:

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

2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

3. One (1) Wildland Fire Engine Boss.

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

(e) For igniting and burning landing piles:

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

2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

3. One (1) Wildland Fire Engine Boss.

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

(f) For mop-up landing piles:

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

2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.

3. One (1) Wildland Fire Engine Boss.

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

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

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

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-5 The Purchaser shall perform logging residue reduction on approximately four hundred twenty-six and three quarter (426.75) acres of harvest area located in all units as shown on Exhibit A.

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

Treatment	Treatment Description	Cost/Acre
Lop and Scatter	0-12 tons/acre	$48.00
Hand Pile and Cover	0-25 piles/acre	$545.00
Hand Pile Burn and Mop-up	0-25 piles/acre	$75.00
Machine Pile and Cover	Cost per acre	$550.00
Machine Pile Burn and Mop-up	0-20 piles/acre	$65.00
Cover and Burn Landing Decks	Cost per acre	$56.00

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

Appraised Treatment	Acres	Cost/Ac.	Total Cost Per Treatment
Lop and Scatter	171.50	$48.00	$8,232.00
Hand Pile and Cover	59.00	$545.00	$32,155.00
Hand Pile Burn and Mop-up	59.00	$75.00	$4,425.00
Machine Pile and Cover	154.50	$550.00	$84,975.00
Machine Pile Burn and Mop-up	154.50	$65.00	$10,042.50
Cover and Burn Landing Decks	41.75	$56.00	$2,338.00
Total Appraised Cost	**426.75**		**$142,167.50**

(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 44(E)(4)(SD-5)(a&b) differs from one hundred forty two thousand one hundred sixty-seven and 50/100 dollars ($142,167.50), as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 44(E)(4)(SD-5)(a&b).

(d) Lop and scatter shall be done in accordance with Section 44(E)(1)(SD-1)(a)(SD-1a); Hand piling and burning shall be done in accordance with Section 44(E)(1)(SD-1)(c)(SD-1c) and Section 44(E)(2)(SD-2)(c&d); Machine piling and burning shall be done in accordance with Section 44(E)(1)(SD-1)(b)(SD-1b) and Section 44(E)(2)(SD-2)(a&b); Pile and burn landing decks shall be done in accordance with Section 44(E)(1)(SD-1)(d)(SD-1f) and Section 44(E)(2)(SD-2)(e&f).

(F) BUYOUT SECURITIES

1) B-1 The Purchaser shall perform machine pile burning in accordance with Section 44(E)(1)(SD-1)(b)(SD-1b) and Section 44(E)(2)(SD-2)(a&b). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of twelve thousand one hundred nine and 25/100 dollars ($12,109.25), and upon making

such deposit, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Purchaser shall pay such amount in full prior to the commencement of operations.

2) B-1 The Purchaser shall perform hand pile burning in accordance with Section 44(E)(1)(SD-1)(c)(SD-1c) and Section 44(E)(2)(SD-2)(c&d). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of five thousand three hundred thirty-five and 67/100 dollars ($5,335.67), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Purchaser shall pay such amount in full prior to the commencement of operations.

3) B-1 The Purchaser shall perform landing pile burning in accordance with Section 44(E)(1)(SD-1)(d)(SD-1f) and Section 44(E)(2)(SD-2)(e&f). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of two thousand eight hundred nineteen and 16/100 dollars ($2,819.16), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Purchaser shall pay such amount in full prior to the commencement of operations.

(G) LOG EXPORTS

1) LE-2 Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs on timber loads. 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.

The Purchaser shall be required to label with a permanent ink marker, each load ticket with the corresponding unit number, as directed by the Authorized Officer.

If contract area is within a State that maintains a log brand register, brands shall be registered with the State and Purchaser shall use assigned brand(s) exclusively on logs from this contract until the Authorized Officer releases the brand(s).

This page intentionally left blank

Penn Butte Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2024.0003

Unrestricted Period
Operations Restricted To Dry Condition, Waiver Required
Operations Restricted To Dry Condition in the Dry Season for POC, Waiver Required to Extend Operations Until First Rain Event Occurs
Operations Restricted

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

** In-stream work periods for culvert cleaning are July 1st - September 15th.

*** **All road maintenance and improvements must be completed before wet season haul can occur on that road. Haul will be suspended if the road begins to show damage or conditions develop that could cause damage to the road as described in Sec. 44(C)(1)(E-1).**

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

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

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

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Cable Yard Units w/ All Season Haul: 17-1, 30-1	Manual Falling and Bucking*																								
	Cable Yarding*																								
	Landing Construction and Rehabilitation Activities Involving Heavy Equipment																								
	Road Maintenance**																								
	Loading and Hauling***																								
Ground Based Yard Units w/ All Season Haul: 17-1 RS, 18-2	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Road Maintenance**																								
	Loading and Hauling***																								

This page intentionally left blank

Penn Butte Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2024.0003

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Cable & Ground Based Yard Units w/ All Season Haul: 31-1, 31-3	Manual Falling and Bucking*																								
	Cable Yarding*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Road Maintenance**																								
	Loading and Hauling***																								
Ground Based Yard Units w/ Dry Condition Haul: 31-2, 18-1 RS	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Road Maintenance**																								
	Loading and Hauling on Natural Surface Roads***																								
	Loading and Hauling on Rocked & Paved Roads***																								
Cable & Ground Based Yard Units w/ Road Construction and Dry Condition Haul: 18-1, 18-1 ROW	Manual Falling and Bucking*																								
	Cable Yarding*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Road Maintenance**																								
	Loading and Hauling on Natural Surface Roads***																								
	Loading and Hauling on Rocked & Paved Roads***																								

This page intentionally left blank

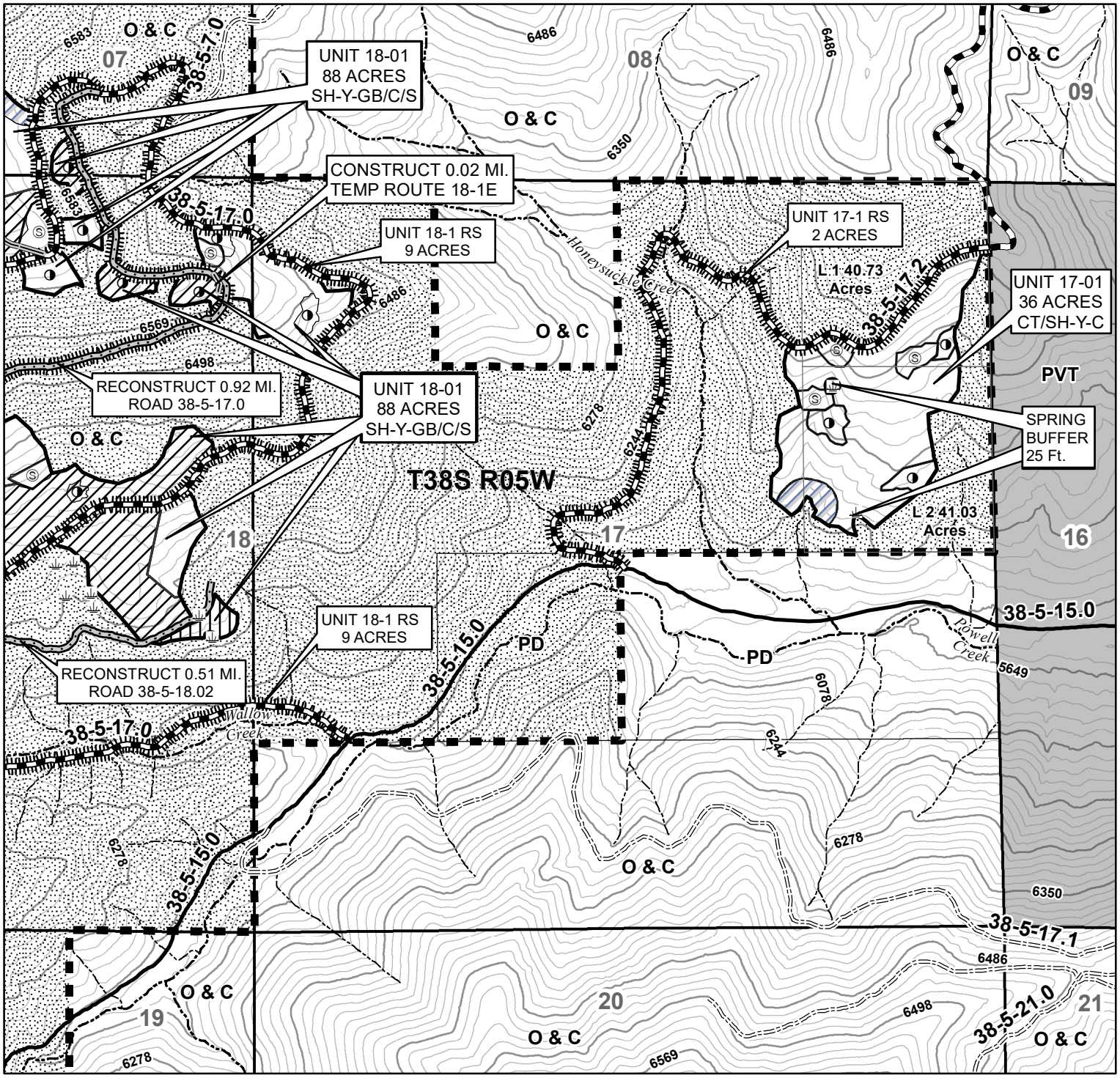
Penn Butte Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2024.0003

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Ground Based Yard Units w/ POC Restricted GB Yarding & Hauling: 19-1 RS, 25-1 RS, 25-2, 25-3, 35-1, 35-1 RS	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Road Maintenance**																								
	Loading and Hauling***																								
Cable & Ground Based Yard Units w/ Road Construction & POC Restricted GB Yarding & Hauling: 19-1, 25-1, 25-1 ROW, 26-1, 26-1 ROW, 30-2, 30-2 ROW	Manual Falling and Bucking*																								
	Cable Yarding*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Road Maintenance**																								
	Loading and Hauling***																								

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 17 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT A



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

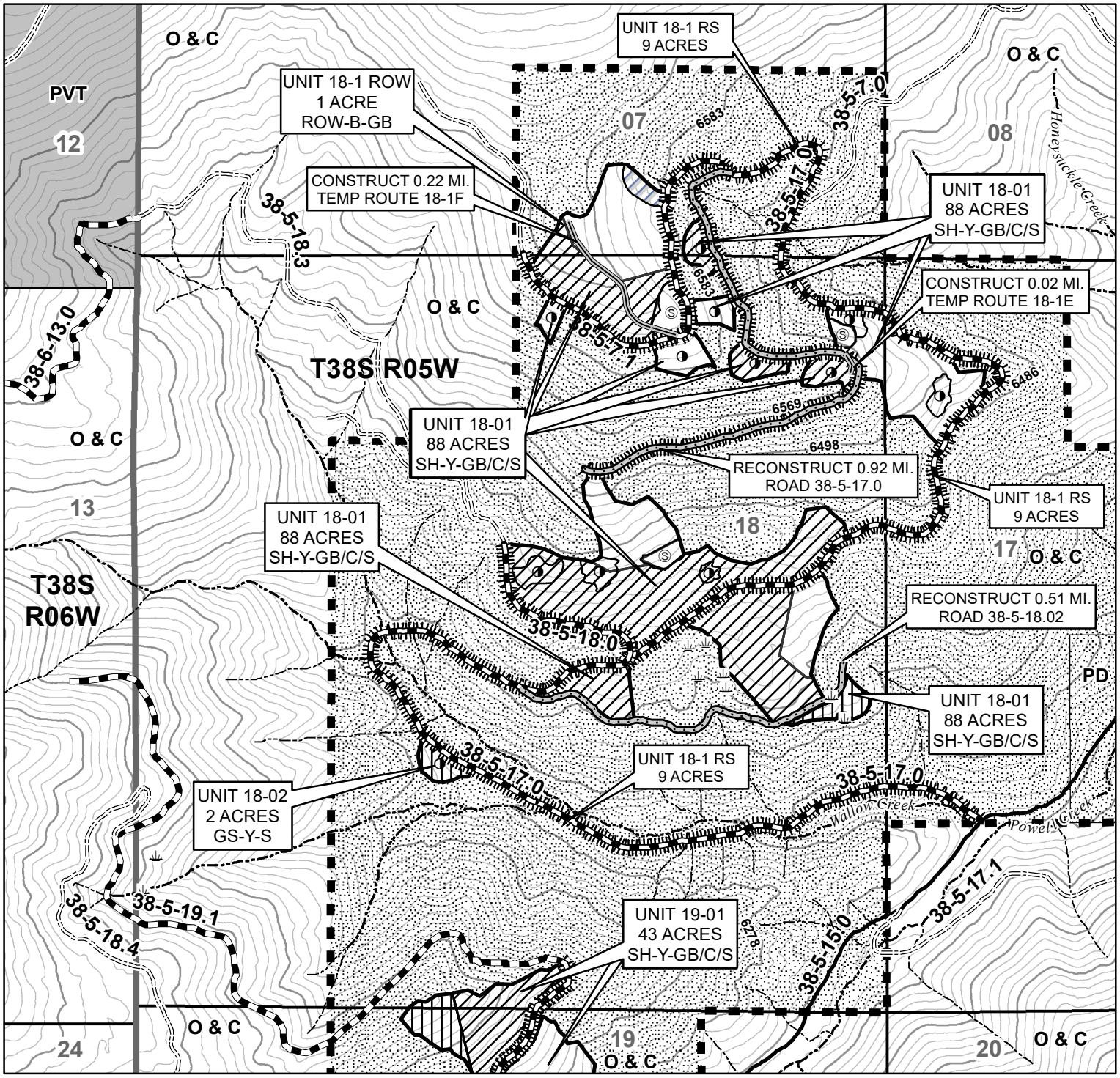
United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

Map created by SDT
2/15/2023

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 18 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT A



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

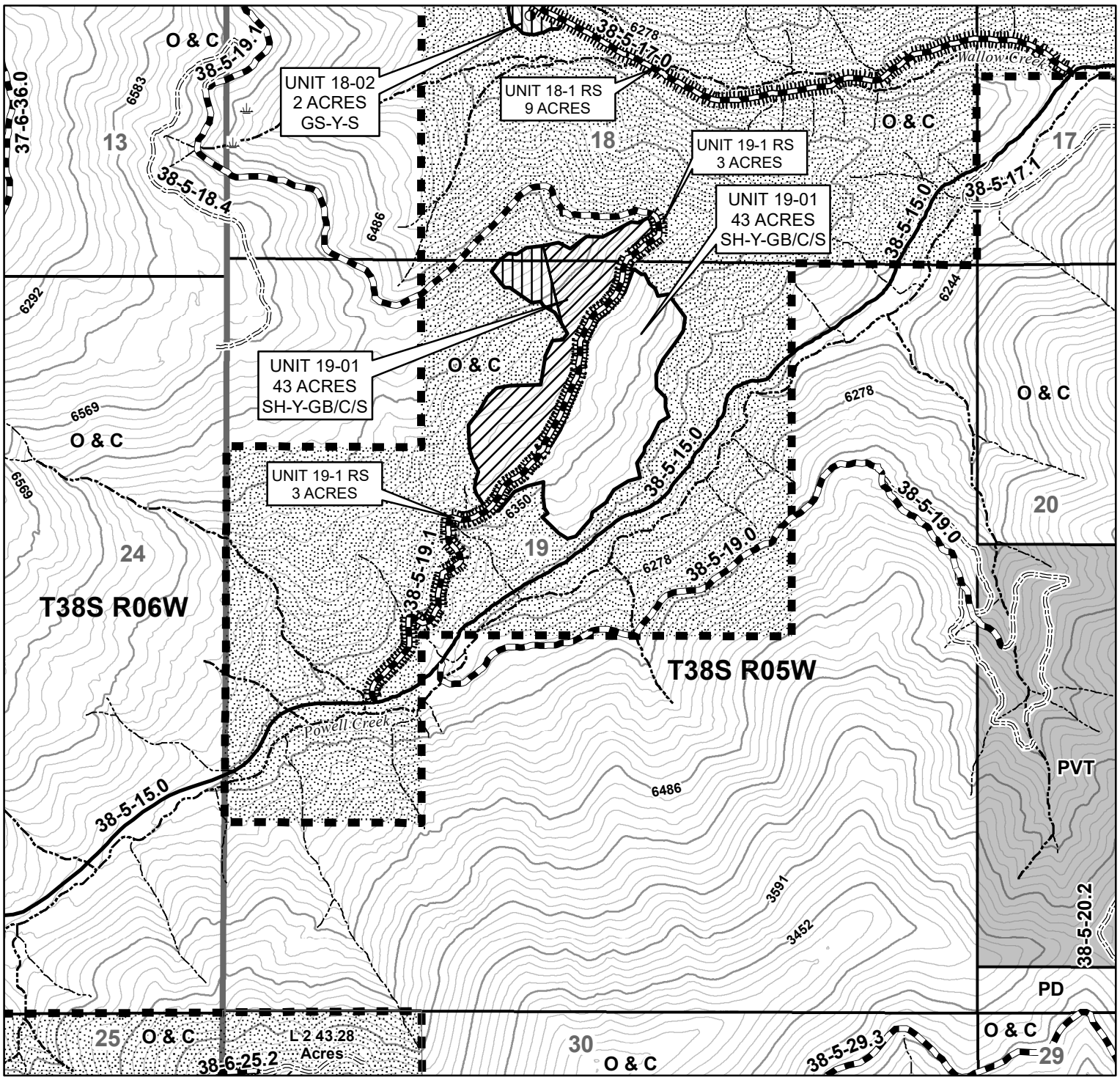
Map created by SDT
2/15/2023

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

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 19 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT A



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

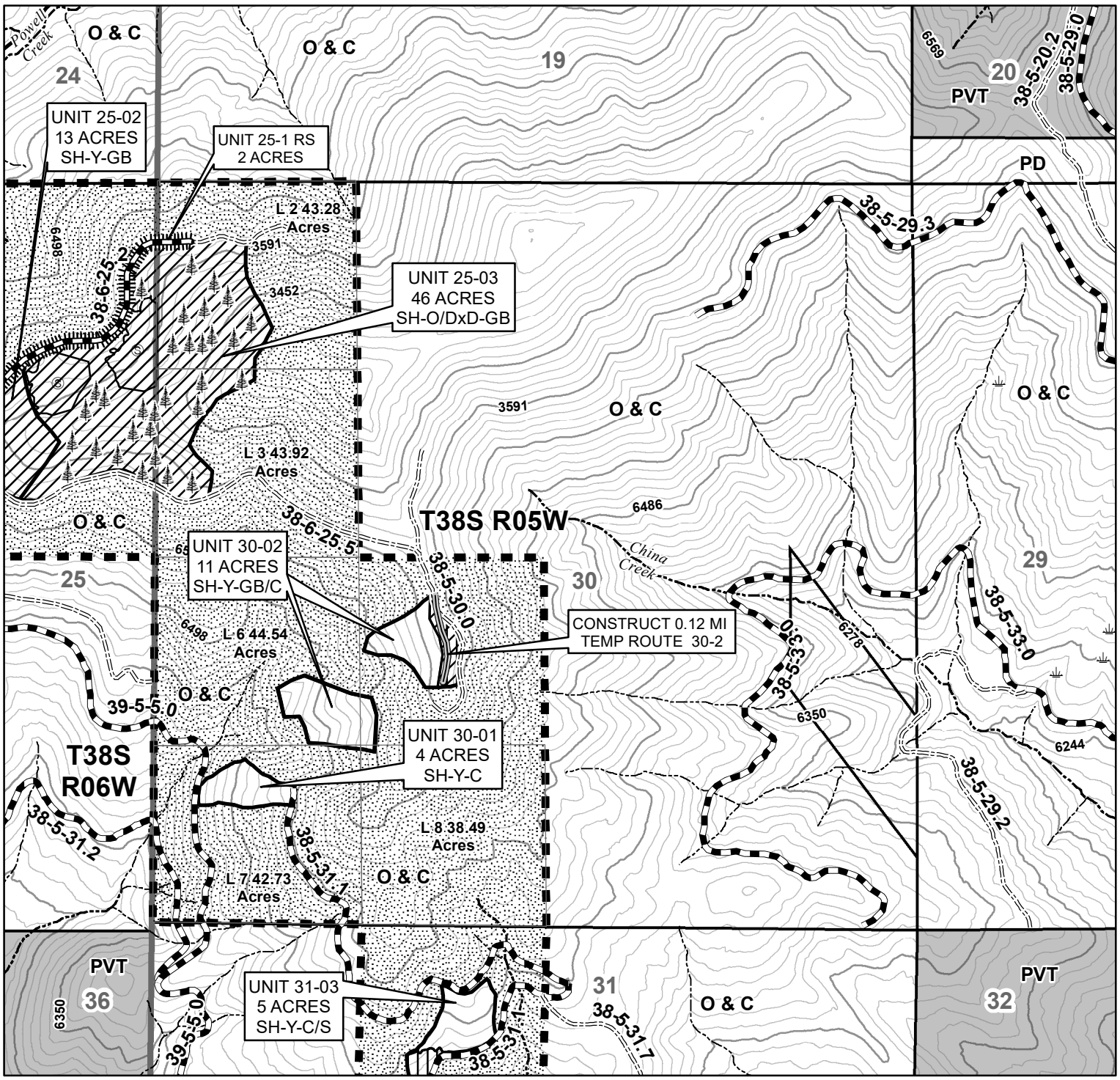
United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

Map created by SDT
2/15/2023

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 30 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT A



0 750 1,500 3,000 Feet

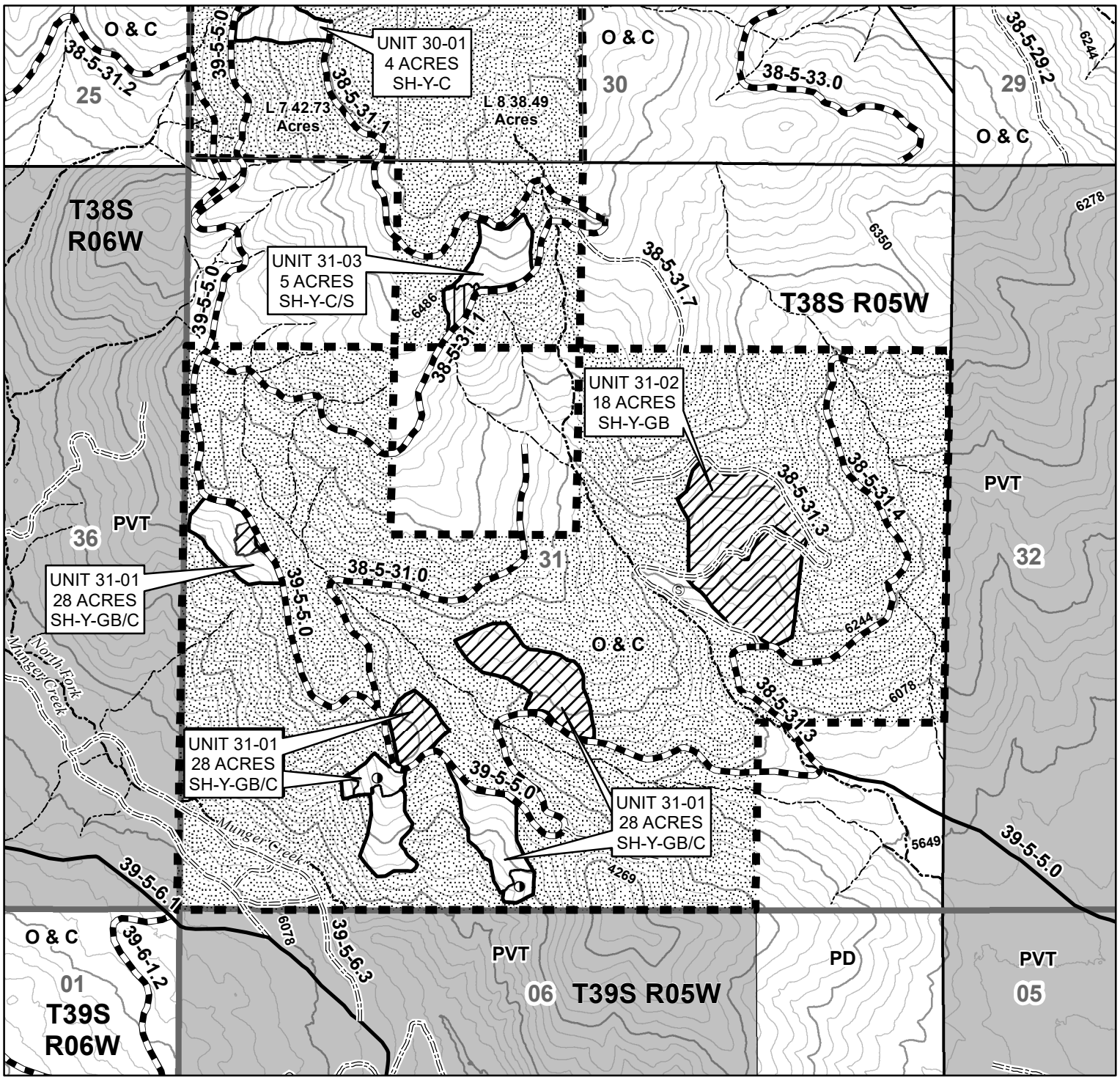
1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

Map created by SDT
2/15/2023

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

This page intentionally left blank



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

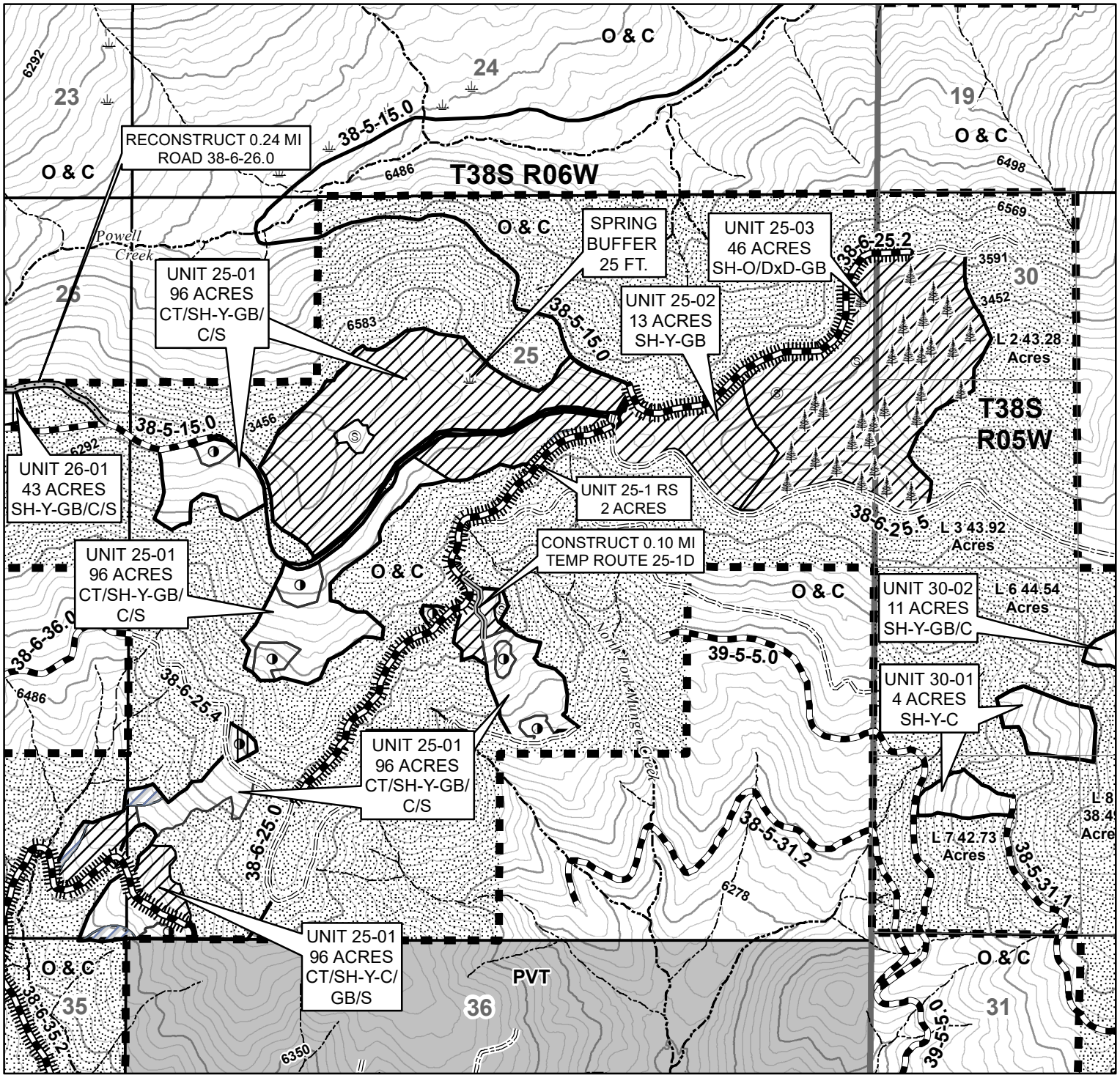
United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

Map created by SDT
2/15/2023

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 6 W., SEC. 25 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT A



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

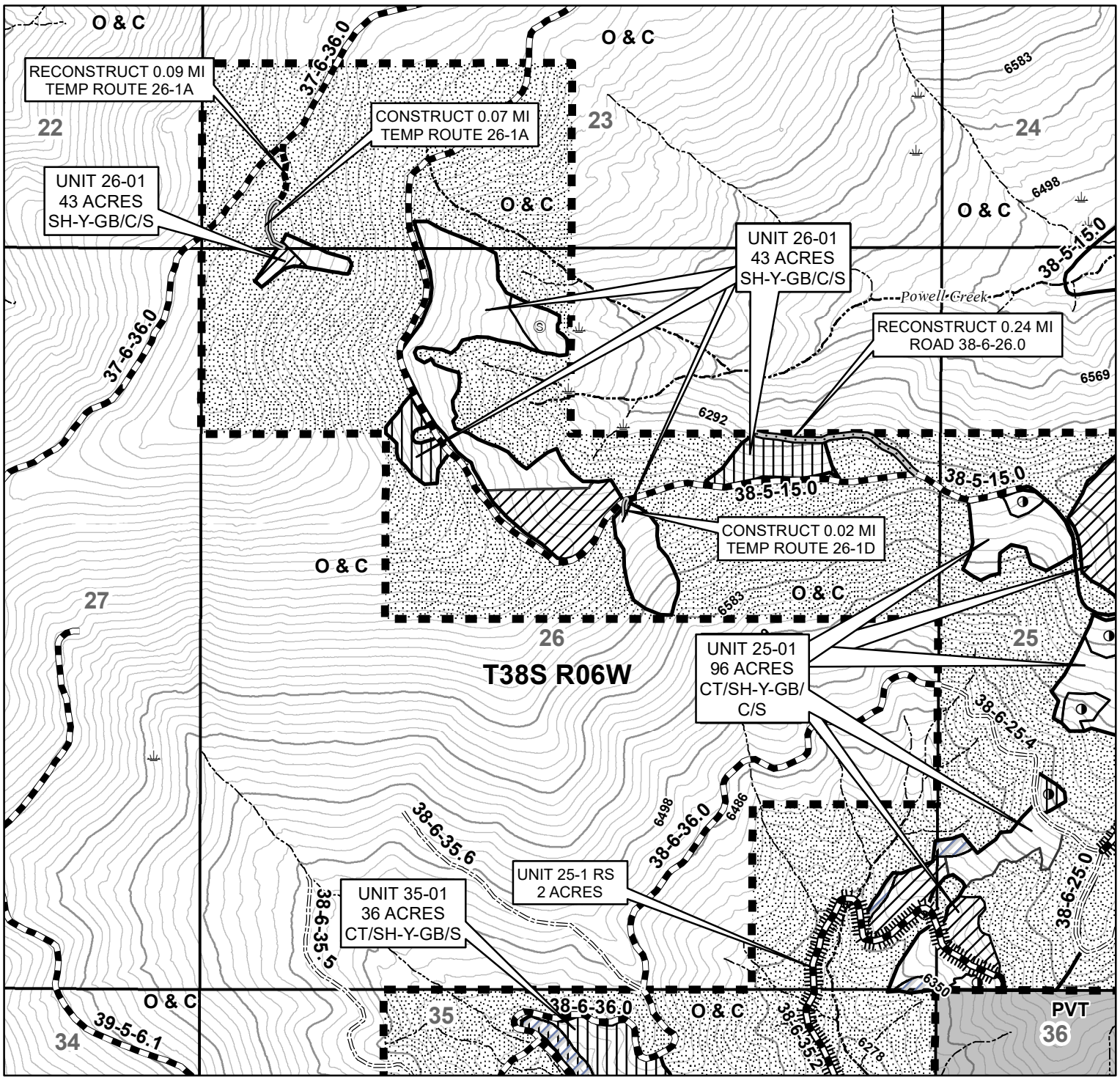
United States Department of the Interior
Bureau of Land Management
Medford District Office
3040 Biddle Road
Medford, OR 97504
(541) 618-2200

Map created by SDT
2/15/2023

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 6 W., SEC. 26 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT A



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.

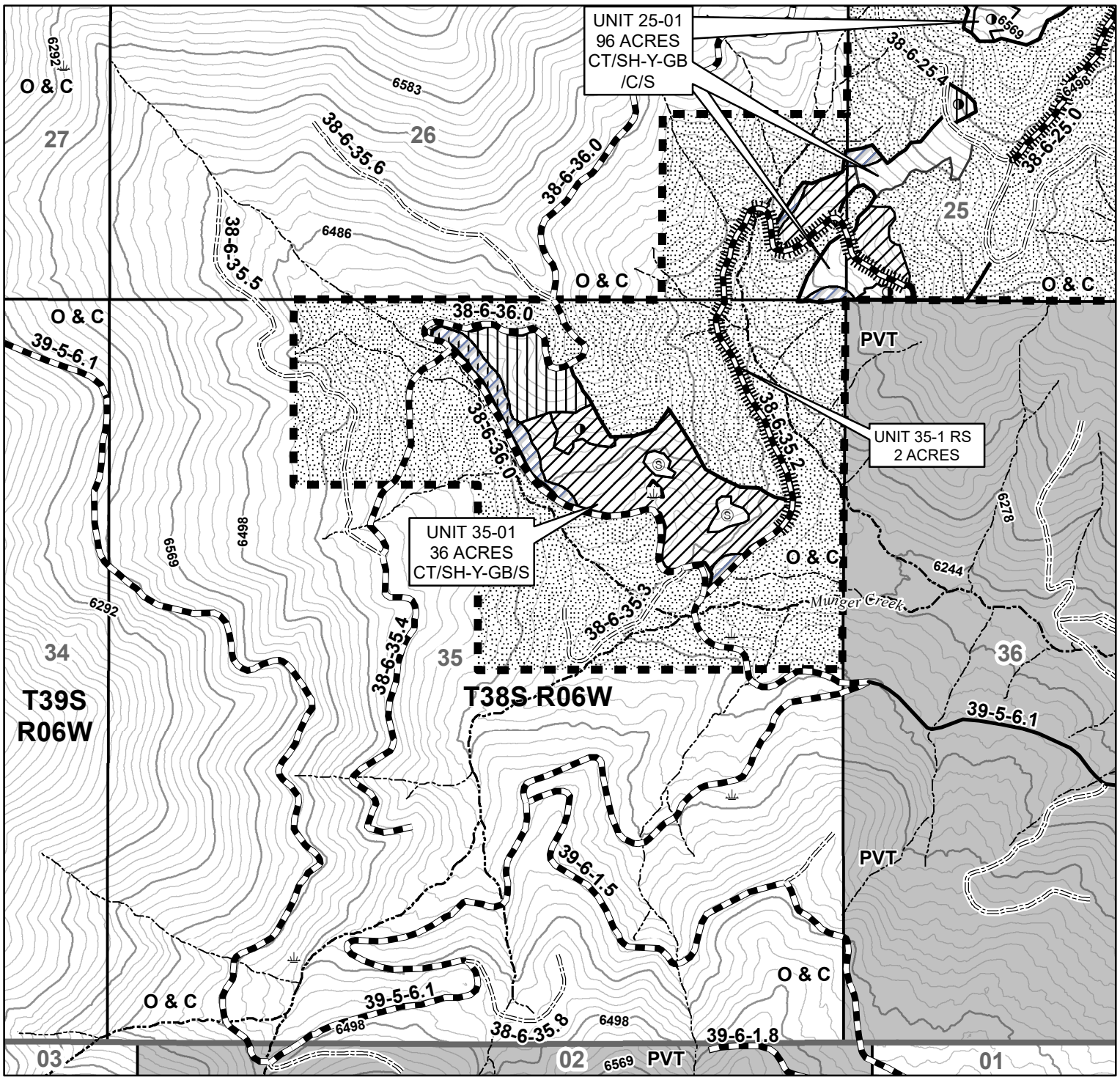
Map created by SDT
2/15/2023

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

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 6 W., SEC. 35 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT A



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

Map created by SDT
2/15/2023

This page intentionally left blank

LEGEND

- Springs
- Gaps
- Skips
- Legacy Tree Culturing
- Road Side Clearing

Logging Systems

- Cable Yard
- Shovel Yard
- Ground Base Yard

Road Surface Type

- Natural
- Paved Road
- Rocked Road

Road Work Type

- Road Reconstruction
- Temp Route Construction
- Temp Route Reconstruction

Streams

- Perennial
- Intermittant

- Contract Area Boundary
- Reserve Area Boundary
- Riparian Reserves

- Township and Range
- Sections

Ownership

- O & C — Bureau of Land Management O & C Lands
- PD — Bureau of Land Management Public Domain Lands
- ODF — Oregon Department of Forestry
- PVT — Private
- Government Lots

Contour

- Intermediate 40-ft contour
- Index 200-ft contour

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

Map created by SDT
2/15/2023

This page intentionally left blank

LEGEND

UNIT	UNIT ACRES	LOGGING SYSTEM
17-01	36	C
18-01	88	GB/C/S
18-02	2	S
19-01	43	GB/C/S
25-01	96	GB/C/S
25-02	13.0	GB
25-03	46.0	GB
26-01	43.0	GB/C/S
30-01	4.0	C
30-02	11.0	GB/C
31-01	28.0	GB/C
31-02	18.0	GB
31-03	5.0	C/S
35-01	36.0	GB/S
18-1 ROW	1.0	GB
25-1 ROW	1.0	GB
26-1 ROW	N/A	GB
30-2 ROW	1.0	GB
17-1 RS	2.0	GB
18-1 RS	9.0	GB
19-1 RS	3.0	GB
25-1 RS	2.0	GB
35-1 RS	2.0	GB
TOTAL	**490**	

* BOUNDARIES OF HARVEST UNITS ARE POSTED AND PAINTED IN ORANGE

S = SHOVEL YARD
GB = GROUND BASE YARD
C = CABLE YARD
Y = YELLOW MARK LEAVE TREE
O = ORANGE MARK LEAVE TREE (DOUBLE BAND)
DxD = DESIGNATION BY DESCRIPTION

SUMMARY

	PRESCRIPTION - PAINT COLOR - LOGGING SYSTEM	TOTAL ACRES
SH-Y-GB	SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE YARD (UNITS 25-2 AND 31-2)	31 ACRES
CT/SH-Y-GB/S	COMMERCIAL THINNING & SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE YARD & SHOVEL YARD (UNIT 35-1)	36 ACRES
SH-Y-GB/C/S	SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE YARD, CABLE YARD & SHOVEL YARD (UNITS 19-1, 26-1, and 18-1)	174 ACRES
SH-Y-C	SELECTION HARVEST - YELLOW MARK LEAVE TREE - CABLE YARD (UNIT 30-1)	4 ACRES
SH-Y-GB/C	SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE YARD & CABLE YARD (UNITS 30-2 AND 31-1)	39 ACRES
SH-Y-C/S	SELECTION HARVEST - YELLOW MARK LEAVE TREE - CABLE YARD & SHOVEL YARD (31-3)	5 ACRES
CT/SH-Y-C	COMMERCIAL THINNING & SELECTION HARVEST - YELLOW MARK LEAVE TREE - CABLE YARD (UNIT 17-1)	36 ACRES
CT/SH-Y-GB/C/S	COMMERCIAL THINNING & SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE YARD, CABLE YARD & SHOVEL YARD (UNIT 25-1)	96 ACRES
GS-Y-S	GROUP SELECTION HARVEST-YELLOW MARK LEAVE TREE- SHOVEL YARD (UNIT 18-2)	2 ACRES
SH-O/DxD-GB	SELECTION HARVEST - ORANGE MARK LEAVE TREE (DOUBLE BAND)/DESIGNTION BY DESCRIPTION - GROUND BASE YARD (UNIT 25-3)	46 ACRES (8 CUTTING ACRES)
ROW-B-GB	RIGHT OF WAY CLEARING - BLUE MARK CUT TREE - GROUND BASE YARD (UNIT 18-1 ROW)	1 ACRE
ROW-GB	RIGHT OF WAY CLEARING - GROUND BASE YARD (UNITS 25-1 ROW, 26-1 ROW AND 30-2 ROW)	2 ACRES
RS-B-GB	ROADSIDE CLEARING - BLUE MARK CUT TREE - GROUND BASE YARD (UNITS 17-1 RS, 18-1 RS, 19-1 RS, 25-1 RS AND 35-1 RS)	18 ACRES
	TOTAL TIMBER SALE UNIT AREA	490 ACRES
	RESERVE AREA	1,394.42 ACRES
	TOTAL CONTRACT AREA	1,882.42 ACRES

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

Created by SDT
2/15/2023

This page intentionally left blank

Information for Timber Sale Notice, Prospectus, Sec. 43 & 44
Penn Butte Timber Sale
ORM07-TS-2024.0003

Approx # of trees	Est Volume MBF 32'	Species	Est Volume MBF 16'	Stumpage Adjustment	Appraised $/MBF		Appraised Value ($)
26,917	4,616.0	Douglas Fir	5,714.0	($29.09)	$141.20		$806,816.80
2,799	388.0	White Fir	501.0	$0.00	$40.10	*	$20,090.10
1,217	133.0	Ponderosa Pine	185.0	$0.00	$31.30	*	$5,790.50
1,040	83.0	Incense-cedar	118.0	$0.00	$29.90	*	$3,528.20
744	45.0	Sugar Pine	58.0	$0.00	$33.80	*	$1,960.40
90	15.0	Western Redcedar	20.0	$0.00	$48.80	*	$976.00
5	0.8	Port Orford Cedar	1.0	$0.00	$42.00	*	$42.00
32,812	**5,280.8**		**6,597.0**				**$839,204.00**

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

CRUISED BY:	Caulfield, Cannon, Darner
CRUISE COMPLETED:	June 2022
COMBINED SAMPLING ERROR:	17.01%

CRUISE DESIGN/METHOD Description:

The Penn Butte timber sale was cruised using the PCMTRE and 3P cruise methods. The 423 acres of PCMTRE were cruised using a 40BAF and a 1 in 8 sampling frequency on 241 plots installed in a grid pattern. The Douglas fir had an average of 80 basal area per acre and a VBAR of 161.9. The 67 acres of roadside clearing units were cruised using the 3P cruise method resulting in 35 sample trees (22 Douglas fir, 9 ponderosa pine and 4 white fir).

TRACT FEATURES

ALL SPECIES

QM DBH	15.4	INCHES
GM LOG	62	BD FT
Total Gross Volume	7,526	MBF
Recovery	88	%

Salvage	0	MBF
Export	0	MBF

Dominant Species: **Douglas Fir**

QM DBH	15.4	INCHES
GM Log	63	BD FT
Recovery	87	%
Salvage	0	MBF

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

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

Reserve Tree Paint Color	**Reserve Tree Count**
	0

Harvest Tree Paint Color	**Harvest Tree Count**
	0

This page intentionally left blank

United States
Department of the Interior
Bureau of Land Management

Timber Appraisal

Sale Name:	Penn Butte	**Sale Date:**	Thursday, May 23, 2024
BLM District:	Medford DO	**Unit of Measure:**	16' MBF
Contract #:	ORM07-TS-2024.0003	**Contract Term:**	36 months
Sale Type:	Advertised	**Contract Mechanism:**	5450-004 Scale Sale of Timber and other Wood Products

Content

Prepared By: Cannon, Grant P - 2/21/2024
Approved By: Worman, Aaron S - 2/21/2024

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Josephine	38S	5W	7	S1/2SE1/4	Willamette
O&C	Josephine	38S	5W	17	lot 1, lot 2, W1/2NE1/4, W1/2NW1/4, SE1/4NW1/4, N1/2SW1/4	Willamette
O&C	Josephine	38S	5W	18	NE1/4, SE1/4NW1/4, E1/2SW1/4, SE1/4	Willamette
O&C	Josephine	38S	5W	19	lot 2, lot 3, W1/2NE1/4, E1/2NW1/4	Willamette
O&C	Josephine	38S	5W	30	lot 2, lot 3, lot 6, lot 7, lot 8, NE1/4SW1/4	Willamette
O&C	Josephine	38S	5W	31	unnumbered lot SW1/4NW1/4, unnumbered lot NW1/4SW1/4, unnumbered lot SW1/4SW1/4, S1/2NE1/4, NE1/4NW1/4, E1/2SW1/4, N1/2SE1/4, SW1/4SE1/4	Willamette
O&C	Josephine	38S	6W	23	S1/2SW1/4	Willamette
O&C	Josephine	38S	6W	25	NE1/4, NE1/4NW1/4, S1/2NW1/4, SW1/4, NW1/4SE1/4	Willamette
O&C	Josephine	38S	6W	26	S1/2NE1/4, N1/2NW1/4, SE1/4NW1/4, SE1/4SE1/4	Willamette
O&C	Josephine	38S	6W	35	NE1/4, NE1/4NW1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	5,714.0	6,256.0	6,547.0	98,874	1,355	26,917
White Fir	501.0	536.0	549.0	9,326	442	2,799
Ponderosa Pine	185.0	201.0	201.0	3,569	0	1,217
Incense-cedar	118.0	133.0	133.0	2,716	0	1,040
Sugar Pine	58.0	71.0	74.0	995	124	744
Western Redcedar	20.0	21.0	21.0	324	0	90
Port Orford Cedar	1.0	1.0	1.0	7	1	5
Totals	**6,597.0**	**7,219.0**	**7,526.0**	**115,811**	**1,922**	**32,812**

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	469.0	21.0	490.0	13.5

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

Logging Costs

Stump to Truck	$1,822,725.60
Transportation	$430,180.21
Road Construction	$536,926.58
Maintenance/Rockwear	$110,041.34
Road Use	$0.00
Other Allowances	$202,845.71
Total:	**$3,102,719.44**
Total Logging Cost per MBF:	**$470.32**

Utilization Centers

Location	Distance	% of Net Volume
White City	43.0 miles	100%

Profit & Risk

Profit	11%
Risk	2%
Total Profit & Risk	**13%**

Tract Features

Quadratic Mean DBH	15.4 in
Average GM Log	62 bf
Average Volume per Acre	13.5 mbf
Recovery	88%
Net MBF volume:	
Green	6,597.0 mbf
Salvage	0 mbf
Export	0 mbf
Ground Base Logging:	
Percent of Sale Volume	56%
Average Yarding Slope	25%
Average Yarding Distance	593 ft
Cable Logging:	
Percent of Sale Volume	44%
Average Yarding Slope	60%
Average Yarding Distance	239 ft
Aerial Logging:	
Percent of Sale Volume	0%
Average Yarding Slope	0%
Average Yarding Distance	0 ft

Cruise

Cruise Completed	June 2022
Cruised By	Caulfield, Cannon, Darner

Cruise Method

The Penn Butte timber sale was cruised using the PCMTRE and 3P cruise methods. The 423 acres of PCMTRE were cruised using a 40BAF and a 1 in 8 sampling frequency on 241 plots installed in a grid pattern. The Douglas fir had an average of 80 basal area per acre and a VBAR of 161.9. The 67 acres of roadside clearing units were cruised using the 3P cruise method resulting in 35 sample trees (22 Douglas fir, 9 ponderosa pine and 4 white fir).

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Stumpage Adjustment	Appraised Price/MBF		Appraised Value ($)
Douglas Fir	26,917	5,714.0	$736.37	$95.73	$470.32	$0.00	($29.09)	$141.20		$806,816.80
White Fir	2,799	501.0	$400.35	$52.05	$470.32	$0.00	$0.00	$40.10	*	$20,090.10
Ponderosa Pine	1,217	185.0	$312.72	$40.65	$470.32	$0.00	$0.00	$31.30	*	$5,790.50
Incense-cedar	1,040	118.0	$298.94	$38.86	$470.32	$0.00	$0.00	$29.90	*	$3,528.20
Sugar Pine	744	58.0	$337.52	$43.88	$470.32	$0.00	$0.00	$33.80	*	$1,960.40
Western Redcedar	90	20.0	$487.50	$63.38	$470.32	$0.00	$0.00	$48.80	*	$976.00
Port Orford Cedar	5	1.0	$420.00	$54.60	$470.32	$0.00	$0.00	$42.00	*	$42.00
Totals	**32,812**	**6,597.0**								**$839,204.00**

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

Other Wood Products

Product	Unit of Measure	# of Units	$/Unit	Appraised Value
Biomass	Green Tons	100	$1.00	$100.00
Totals				**$100.00**

Total Appraised Value: $839,304.00

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%	2.0%	49.0%	44.0%	4.0%	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir				49.0%	47.0%	4.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Ponderosa Pine				37.0%	58.0%	5.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Incense-cedar				41.0%	51.0%	8.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Sugar Pine				72.0%	14.0%	14.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill			Camp Run
Western Redcedar				100.0%			

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Port Orford Cedar					58.0%	42.0%	

Unit: 17-1

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	466.0	511.0	536.0	2,207
White Fir	38.0	40.0	41.0	216
Ponderosa Pine	13.0	14.0	14.0	85
Incense-cedar	10.0	11.0	11.0	88
Sugar Pine	5.0	6.0	6.0	63
Western Redcedar	2.0	2.0	2.0	8
Totals:	**534.0**	**584.0**	**610.0**	**2,667**

Regeneration Harvest	0.0
Partial Cut	36.0
Right of Way	0.0
Total Acres:	**36.0**

Unit: 17-1RS

Net Volume/Acre: 2.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	3.0	3.0	3.0	17
Ponderosa Pine	1.0	1.0	1.0	8
Totals:	**4.0**	**4.0**	**4.0**	**25**

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

Unit: 18-1

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1,140.0	1,249.0	1,310.0	5,395
White Fir	92.0	98.0	101.0	528
Ponderosa Pine	31.0	34.0	34.0	207
Incense-cedar	25.0	28.0	28.0	215
Sugar Pine	12.0	15.0	15.0	155
Western Redcedar	4.0	4.0	4.0	19
Totals:	**1,304.0**	**1,428.0**	**1,492.0**	**6,519**

Regeneration Harvest	0.0
Partial Cut	88.0
Right of Way	0.0
Total Acres:	**88.0**

Unit: 18-1RS

Net Volume/Acre: 3.7 MBF

Species	Net	Gross Merch	Gross	# of Trees
Ponderosa Pine	17.0	18.0	18.0	116
Douglas Fir	13.0	14.0	14.0	84
White Fir	1.0	1.0	1.0	1
Incense-cedar	1.0	1.0	1.0	3
Sugar Pine	1.0	1.0	1.0	1
Totals:	**33.0**	**35.0**	**35.0**	**205**

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

Unit: 18-1RW

Net Volume/Acre: 16.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	11.0	12.0	12.0	96
Ponderosa Pine	4.0	4.0	4.0	38
White Fir	1.0	1.0	1.0	5
Totals:	**16.0**	**17.0**	**17.0**	**139**

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

Unit: 18-2

Net Volume/Acre: 16.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	26.0	28.0	30.0	123
White Fir	2.0	2.0	2.0	12
Incense-cedar	1.0	1.0	1.0	5
Sugar Pine	1.0	1.0	1.0	4
Ponderosa Pine	1.0	1.0	1.0	5
Western Redcedar	1.0	1.0	1.0	1
Totals:	**32.0**	**34.0**	**36.0**	**150**

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

Unit: 19-1

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	557.0	611.0	640.0	2,636
White Fir	45.0	48.0	49.0	258
Ponderosa Pine	15.0	17.0	17.0	101
Incense-cedar	12.0	13.0	13.0	105
Sugar Pine	6.0	7.0	7.0	76
Western Redcedar	2.0	2.0	2.0	9
Totals:	**637.0**	**698.0**	**728.0**	**3,185**

Regeneration Harvest	0.0
Partial Cut	43.0
Right of Way	0.0
Total Acres:	**43.0**

Unit: 19-1RS

Net Volume/Acre: 0.7 MBF

Species	Net	Gross Merch	Gross	# of Trees
Ponderosa Pine	1.0	1.0	1.0	5
Douglas Fir	1.0	1.0	1.0	6
Totals:	**2.0**	**2.0**	**2.0**	**11**

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

Unit: 25-1

Net Volume/Acre: 14.7 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1,245.0	1,361.0	1,427.0	5,885
White Fir	98.0	108.0	110.0	575
Ponderosa Pine	33.0	36.0	36.0	225
Incense-cedar	23.0	28.0	28.0	234
Sugar Pine	10.0	14.0	17.0	167
Western Redcedar	1.0	2.0	2.0	19
Totals:	**1,410.0**	**1,549.0**	**1,620.0**	**7,105**

Regeneration Harvest	0.0
Partial Cut	96.0
Right of Way	0.0
Total Acres:	**96.0**

Unit: 25-1RS

Net Volume/Acre: 7.5 MBF

Species	Net	Gross Merch	Gross	# of Trees
Ponderosa Pine	8.0	8.0	8.0	39
Douglas Fir	6.0	6.0	6.0	35
Incense-cedar	1.0	1.0	1.0	3
Totals:	**15.0**	**15.0**	**15.0**	**77**

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

Unit: 25-1RW

Net Volume/Acre: 9.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	6.0	7.0	7.0	36
Ponderosa Pine	3.0	3.0	3.0	13
Totals:	**9.0**	**10.0**	**10.0**	**49**

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

Unit: 25-2

Net Volume/Acre: 14.9 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	168.0	185.0	194.0	797
White Fir	14.0	15.0	15.0	78
Ponderosa Pine	5.0	5.0	5.0	31
Incense-cedar	4.0	4.0	4.0	32
Sugar Pine	2.0	2.0	2.0	23
Western Redcedar	1.0	1.0	1.0	3
Totals:	**194.0**	**212.0**	**221.0**	**964**

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

Unit: 25-3

Net Volume/Acre: 5.1 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	176.0	188.0	188.0	633
White Fir	59.0	62.0	62.0	256
Totals:	**235.0**	**250.0**	**250.0**	**889**

Regeneration Harvest	0.0
Partial Cut	46.0
Right of Way	0.0
Total Acres:	**46.0**

Unit: 26-1

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	557.0	611.0	640.0	2,636
White Fir	45.0	48.0	49.0	258
Ponderosa Pine	15.0	17.0	17.0	101
Incense-cedar	12.0	13.0	13.0	105
Sugar Pine	6.0	7.0	7.0	76
Western Redcedar	2.0	2.0	2.0	9
Totals:	**637.0**	**698.0**	**728.0**	**3,185**

Regeneration Harvest	0.0
Partial Cut	43.0
Right of Way	0.0
Total Acres:	**43.0**

Unit: 30-1

Net Volume/Acre: 15.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	52.0	57.0	60.0	245
White Fir	4.0	4.0	5.0	24
Incense-cedar	1.0	1.0	1.0	10
Sugar Pine	1.0	1.0	1.0	7
Ponderosa Pine	1.0	2.0	2.0	9
Western Redcedar	1.0	1.0	1.0	1
Totals:	**60.0**	**66.0**	**70.0**	**296**

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

Unit: 30-2

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	142.0	156.0	164.0	674
White Fir	11.0	12.0	13.0	66
Ponderosa Pine	4.0	4.0	4.0	26
Incense-cedar	3.0	3.0	3.0	27
Sugar Pine	2.0	2.0	2.0	19
Western Redcedar	1.0	1.0	1.0	2
Totals:	**163.0**	**178.0**	**187.0**	**814**

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

Unit: 30-2RW

Net Volume/Acre: 16.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	15.0	16.0	16.0	58
Ponderosa Pine	1.0	1.0	1.0	1
Totals:	**16.0**	**17.0**	**17.0**	**59**

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

Unit: 31-1

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	363.0	398.0	417.0	1,717
White Fir	29.0	31.0	32.0	168
Ponderosa Pine	10.0	11.0	11.0	66
Incense-cedar	8.0	9.0	9.0	68
Sugar Pine	4.0	5.0	5.0	49
Western Redcedar	1.0	1.0	1.0	6
Totals:	**415.0**	**455.0**	**475.0**	**2,074**

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

Unit: 31-2

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	233.0	256.0	268.0	1,103
White Fir	19.0	20.0	21.0	108
Ponderosa Pine	6.0	7.0	7.0	42
Incense-cedar	5.0	6.0	6.0	44
Sugar Pine	2.0	3.0	3.0	32
Western Redcedar	1.0	1.0	1.0	4
Totals:	**266.0**	**293.0**	**306.0**	**1,333**

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

Unit: 31-3

Net Volume/Acre: 15.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	65.0	71.0	74.0	307
White Fir	5.0	6.0	6.0	30
Ponderosa Pine	2.0	2.0	2.0	12
Incense-cedar	1.0	2.0	2.0	12
Sugar Pine	1.0	1.0	1.0	9
Western Redcedar	1.0	1.0	1.0	1
Totals:	**75.0**	**83.0**	**86.0**	**371**

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

Unit: 35-1

Net Volume/Acre: 14.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	466.0	511.0	536.0	2,207
White Fir	38.0	40.0	41.0	216
Ponderosa Pine	13.0	14.0	14.0	85
Incense-cedar	10.0	11.0	11.0	88
Sugar Pine	5.0	6.0	6.0	63
Western Redcedar	2.0	2.0	2.0	8
Totals:	**534.0**	**584.0**	**610.0**	**2,667**

Regeneration Harvest	0.0
Partial Cut	36.0
Right of Way	0.0
Total Acres:	**36.0**

Unit: 35-1RS

Net Volume/Acre: 3.0 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	3.0	4.0	4.0	20
Port Orford Cedar	1.0	1.0	1.0	5
Incense-cedar	1.0	1.0	1.0	1
Ponderosa Pine	1.0	1.0	1.0	2
Totals:	**6.0**	**7.0**	**7.0**	**28**

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

Comments:
1MBF of POC added as it rounded to 0.

Total Stump To Truck	Net Volume	$/MBF
$1,822,725.60	6,597.0	$276.30

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

Yarding System	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Cable: Medium Yarder	GM MBF	3,154.0	$269.69	$850,602.26	
Track Skidder	GM MBF	3,613.0	$235.14	$849,560.82	
Shovel	GM MBF	452.0	$221.26	$100,009.52	
Subtotal				**$1,800,172.60**	

Additional Costs

Item	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Intermediate Support	Each	12.0	$250.00	$3,000.00	
Lift Tree	Each	11.0	$150.00	$1,650.00	
Skid Construction	Hour	4.0	$98.00	$392.00	
Subtotal				**$5,042.00**	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Cable: Medium Yarder	Hour	13.0	$169.00	$2,197.00	
Loader	Hour	26.0	$169.00	$4,394.00	
Shovel	Hour	13.0	$169.00	$2,197.00	
Harvester/Forwarder	Hour	26.0	$169.00	$4,394.00	
Track Skidder	Hour	39.0	$111.00	$4,329.00	Appraised for 2 Tracked Skidders
Subtotal				**$17,511.00**	

Total	Net Volume	$/MBF
$430,180.21	6,597.0	$65.21

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	$/Unit of Measure	Total Cost	% of Sale Volume
White City	43.0	All Species	GM MBF	7,219.0	$59.59	$430,180.21	100%

Engineering Allowances

Total	Net Volume	$/MBF
$646,967.92	6,597.0	$98.07

Cost Item	Total Cost
Road Construction:	$536,926.58
Road Maintenance/Rockwear:	$110,041.34
Road Use Fees:	$0.00

Total	Net Volume	$/MBF
$202,845.71	6,597.0	$30.75

Environmental Protection

Cost item	Total Cost
Snag Creation	$21,550.00
Waterbar Corridors	$360.00
Waterbar Skids	$750.00
Barricade Skids	$2,160.00
Equipment Washing-Small	$1,000.00
Seed and Mulch	$1,500.00
Equipment Washing-Large	$1,500.00
Ripping-Landings and Skids	$2,526.00
Subtotal	**$31,346.00**

Logging

Cost item	Total Cost
Corridor Location	$1,500.00
Skid Location	$1,200.00
Landing Construction	$6,600.00
Directional Falling	$12,952.21
Subtotal	**$22,252.21**

Miscellaneous

Cost item	Total Cost
Fuels adjustment for Rounding	$14.00
Subtotal	**$14.00**

Road Construction, Maintenance, Use, & Decommissioning

Cost item	Total Cost
Culvert Cleaning	$480.00

Subtotal	**$480.00**

Slash Disposal & Site Prep

Cost item	Total Cost
Lop and Scatter	$8,232.00
Cover and Burn Landing Decks	$2,324.00
Machine Pile Burn and Mop-up	$10,042.50
Handpile Burn and Mop-Up	$4,425.00
Landing Clean-Up	$6,600.00
Handpile and Cover	$32,155.00
Machine Pile and Cover	$84,975.00
Subtotal	**$148,753.50**

This page intentionally left blank

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Contract No.: ORM07-TS-2024.0003

Sale Name: Penn Butte

Issuing Office: Medford

EXHIBIT B
SCALE SALE

PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS

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

Timber Schedule		
Species	**Unit of Measure**	**Price Per Measurement Unit**
Douglas fir	MBF	$
White fir	MBF	$40.10
Ponderosa pine	MBF	$31.30
Incense-cedar	MBF	$29.90
Sugar pine	MBF	$33.80
Western redcedar	MBF	$48.80
Port Orford cedar	MBF	$42.00
Other Wood Products Schedule		
Product/Species	**Unit of Measure**	**Price Per Measurement Unit**
Biomass	Green Tons	$1.00

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

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

All logs defined below, which have not been reserved to Government in Section 43 of the contract, shall be designated as timber under this contract. Logs or portions of logs which equal or exceed all the following minimum log specifications shall be considered timber sold. The Purchaser shall pay for all timber removed in accordance with Section 3 of the contract at the price per measurement unit shown in Section I of this Exhibit.

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

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

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

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

Left Standing Timber	Felled Timber Not Removed
Diameter at Breast Height (DBH): 8”	Small End DIB: 6”
Log Height: 17’	Log Length: 8’
% Sound: 33.3	% Sound: 33.3
Net Tree Volume: 10 bdft	Net Log Volume: 10 bdft

V. **Measurement Standards**

1. **Log Scaling Loads:** All species or products in Section I, with MBF as the Unit of Measure shall be designated as log scaling loads.

   a. Log scaling services shall be provided and performed by BLM Certified Scalers or BLM-authorized Third-Party Scaling Organizations (TPSO), as determined by the Authorized Officer. The Purchaser’s employees or contractors may not perform log scaling.

   b. All logs shall be scaled in Eastside Scribner Log Rules according to the Official Log Scaling and Grading Bureaus, Northwest Log Rules Eastside and Westside Log Scaling Handbook, as amended or supplemented, at the time the logs are scaled.

   c. All logs shall be scaled using an authorized BLM log scaling method approved by the Authorized Officer in accordance with BLM prescribed procedures. A list of

authorized BLM log scaling methods is available upon request.

d. Purchaser shall ensure all logs are presented so that they may be scaled in an economical and safe manner.

e. Scaling deductions made for rot, check or other defect resulting from abnormal delay in scaling caused by Purchaser shall be recorded separately and charged to the Purchaser in accordance with Section 3(g) of the contract when applicable. Avoidable delay in log scaling caused by the Purchaser that results in a measurable reduction in timber volume or quality would generally be considered abnormal delay, as determined by the Authorized Officer.

f. Mechanical damage to logs that occurs during unloading identified by the TPSO will not be considered a deductible defect.

g. The BLM will conduct check scaling using the following standards:
Gross Scale - A variance of one and ½ percent (1.5%) in gross scale is the standard unless otherwise justified.
Net scale - The allowable variance is as follows:

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

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

2. **Weight Loads:** All species or products in Section I, with Tons as the Unit of Measure shall be designated as weight loads.

a. All weight loads shall be weighed on State certified scales.
b. Scales must have a current inspection tag or seal posted which shows the date of the most recent test by the State weights and measures agency.
c. No load shall be presented for weighing that exceeds the certified capacity of the scales in use.

d. Each load shall be weighed as a single unit. Gross and tare weight must be machine printed on a weight receipt. Average tare weights shall not be used, unless approved by the Authorized Officer. In addition to the gross and tare weight, the following shall be recorded with each weight receipt:
   - Contract name and number
   - Load Ticket number
   - Date, time, and location the load was weighed

VI. **Accountability**

1. Purchaser shall notify the Authorized Officer seven (7) business days prior to starting or stopping of hauling operations performed under the contract.

2. The Purchaser must provide the following information to the Authorized Officer seven (7) business days prior to the commencement of haul: log scaling and weighing location(s), planned beginning haul dates, anticipated number of loads per day to each scaling or weighing location, logger name and contact information, and log brands to be used, and the log brand registration number(s).

3. A Scaling Authorization Form(s) must be completed and approved by the Contracting Officer prior to beginning of hauling operations. The Scaling Authorization(s) will include approved measurement methods, merchantability standards, sort descriptions, and authorized delivery locations for all loads hauled from the contract area. For log scale loads, all log scaling locations on the Scaling Authorization(s) are required to have a Log Yard Authorization with the BLM. Approved Scaling Authorizations will be provided to the Purchaser upon request.

4. All loads will be scaled and/or weighed at locations listed on the Scaling Authorization as approved by the Authorized Officer.

5. Purchaser shall notify the Authorized Officer seven (7) business days in advance to request additional log scaling and/or weighing locations for approval on the Scaling Authorization(s).

6. Purchaser shall not intermingle BLM timber and other wood products with any other timber or wood products before log scaling and/or weighing occurs.

7. All logs on timber loads will be painted and branded at the landing and accounted for accordance with Section 44 of the contract. If contract area is within a State that maintains a log brand register, brands shall be registered with the State and Purchaser shall use assigned brand(s) exclusively on logs from this contract until the Authorized Officer releases the brand(s).

8. The Authorized Officer shall issue the Purchaser serially numbered load ticket books prior to any haul operations. The Purchaser shall sign a receipt for all ticket books

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

9. The Purchaser must account for all load receipts from each load ticket book. For all load receipts not accounted for, the Contracting Officer, at their sole discretion, will determine if the receipts are void or if the Purchaser shall pay damages for lost products. The value of lost products shall be equal to the highest value load for the month in which the receipt is lost. If no loads have been hauled in that month, value will be determined from the closest month in which loads were hauled. In the event a load receipt or load ticket book is lost or stolen, the Purchaser must immediately notify the Authorized Officer, and provide a complete explanation.

10. The Purchaser shall furnish BLM a map showing the route which shall be used to haul loads from the timber sale area to the log scaling/weighing location. Upon loading timber or other wood products in the contract area, all loads shall be hauled directly to the authorized scaling or weighing location as stated on the load receipt. The route of haul may be changed only with advance notice to and approval by BLM.

11. The Purchaser shall notify the Authorized Officer and receive advance authorization if any loads will arrive at an authorized scaling or weighing locations outside of their normal operating hours. No loads will be left on the truck for overnight storage without advance permission from the Authorized Officer.

12. If scaling or weighing services are unavailable, delayed or interrupted for any reason, hauling operations will cease immediately until services resume or an alternate scaling or weighing location is approved by the Authorized Officer.

13. Any removal of wood products from loaded trucks before being accounted for as required by the contract shall be considered a trespass and render the Purchaser liable for damages under applicable law in accordance with Section 13 of the contract. Any payment made for purchase of such loads shall be deducted from amount due because of trespass.

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

1. When payments are made under Section 3 of the contract, the Authorized Officer shall determine the value of removed timber and other wood products using the Government's records of log scale and/or weight volumes removed from the contract area.

2. The estimated value of timber and other wood products not yet removed from the contract area will be determined by subtracting the Government's records for value of removed timber and other wood products from the estimated total purchase price as shown in the table below. The estimated Total Purchase price is calculated by multiplying the estimated volume or weight for all species/products, listed below, by the bid prices in Section 1.

Total Estimated Purchase Price for Timber and Other Wood Products			
Species/Product	**Estimated Volume (MBF or Tons)**	**Bid Price ($/MBF or $/Ton)**	**Estimated Value**
Douglas fir	5,714 MBF	$	$
White fir	501 MBF	$38.60	$19,338.60
Ponderosa pine	185 MBF	$31.30	$5,790.50
Incense-cedar	118 MBF	$29.90	$3,528.20
Sugar pine	58 MBF	$33.80	$1,960.40
Western redcedar	20 MBF	$48.80	$976.00
Port Orford cedar	1 MBF	$42.00	$42.00
Biomass	100 Green Tons	$1.00	$100.00
Total Estimated Purchase Price:			**$**

OVERNIGHT LOAD CONTROL RECORD	
Log Delivery Location	
Timber Sale	
1	Time and Date Load Delivered
2	Truck Name
3	Load Receipt No.
4	Number of Logs
5	Signature of Person Receiving the Load
6	Date and Time Load Released
7	Signature of Person Releasing the Load

Instructions:

1. Designated individual fills out the heading and lines 1 through 5 (including FULL SIGNATURE in ink on line 5.)

2. Contractor or BLM scaler will fill out lines 6 and 7 (including FULL SIGNATURE in ink) when loads are released for scaling, otherwise the BLM and/or yard owner will be required to sign.

3. Unless otherwise agreed, scaler will attach this form to the Load Receipt.

OVERNIGHT LOAD CONTROL RECORD	
Log Delivery Location	
Timber Sale	
1	Time and Date Load Delivered
2	Truck Name
3	Load Receipt No.
4	Number of Logs
5	Signature of Person Receiving the Load
6	Date and Time Load Released
7	Signature of Person Releasing the Load

Instructions:

1. Designated individual fills out the heading and lines 1 through 5 (including FULL SIGNATURE in ink on line 5.

2. Contractor or BLM scaler will fill out lines 6 and 7 (including FULL SIGNATURE in ink) when loads are released for scaling, otherwise the BLM and/or yard owner will be required to sign.

3. Unless otherwise agreed, scaler will attach this form to the Load Receipt.

This page intentionally left blank

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

EXHIBIT C1

PENN BUTTE TIMBER SALE
TRACT NO. ORM07-TS-2024.0003

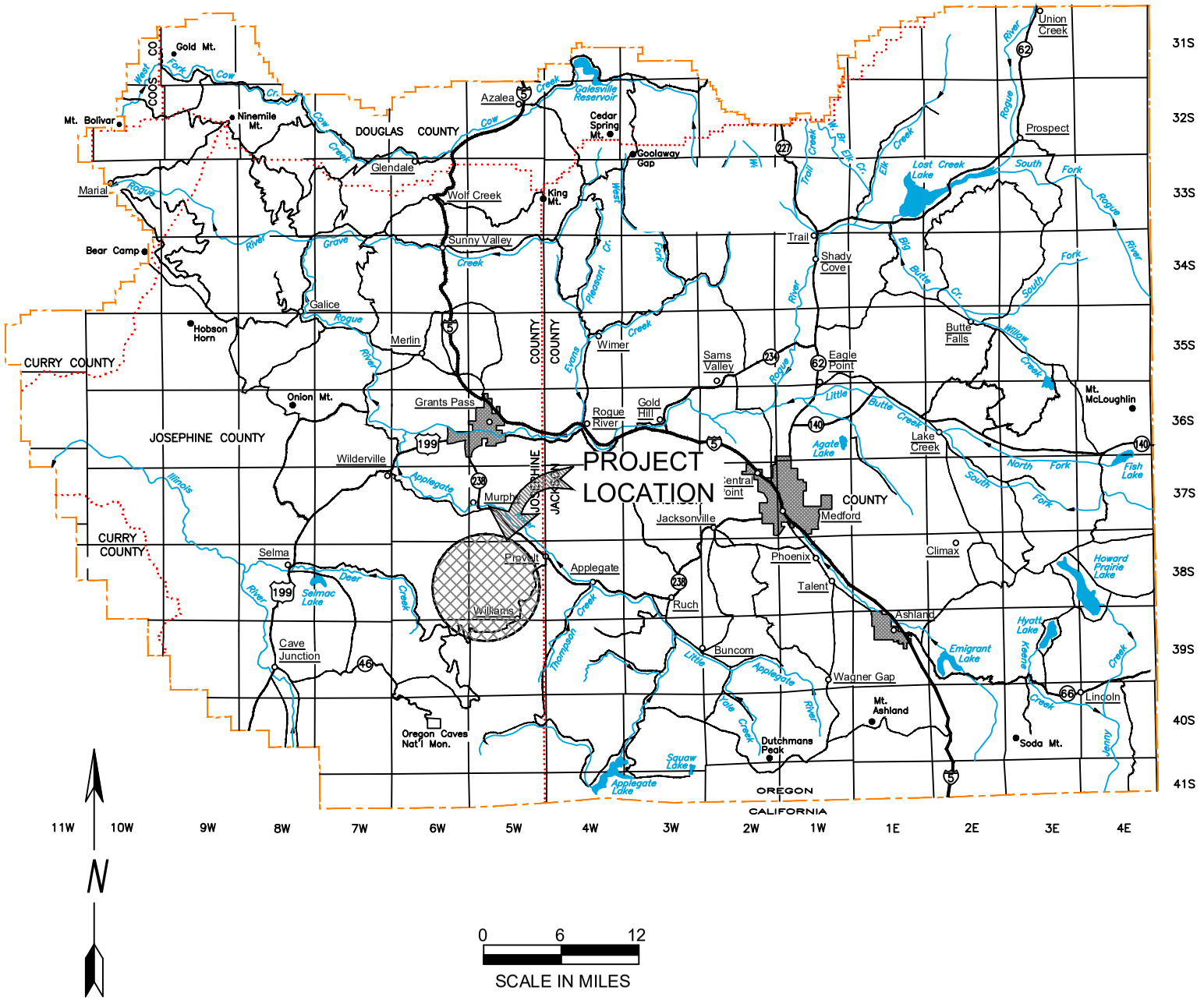


Exhibit No.	Description
C-1	TITLE SHEET
C-2	ROAD RENOVATION MAPS AND ROADSIDE MANAGEMENT UNIT MAPS
C-3	ESTIMATE OF QUANTITIES
C-4	SPECIFICATION SHEET
C-5	TYPICAL ROAD RENOVATION DETAILS
C-6	ROADSIDE BRUSHING DETAILS
C-7	ROADSIDE MANAGEMENT UNIT DETAIL
C-8	CULVERT REPLACEMENT LIST
C-9	CULVERT INSTALLATION DETAILS
C-10	CULVERT BAND DETAILS
C-11	DOWNSPOUT INSTALLATION DETAILS
C-12	DRAINAGE & EROSION CONTROL DETAILS
C-13	ROAD RENOVATION WORKLIST
C-14	SPECIAL PROVISIONS
C-15	ROAD SPECIFICATIONS

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE TITLE SHEET

DRAFTED BY: BLM	SCALE: 1" = 12 MI
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-C1	

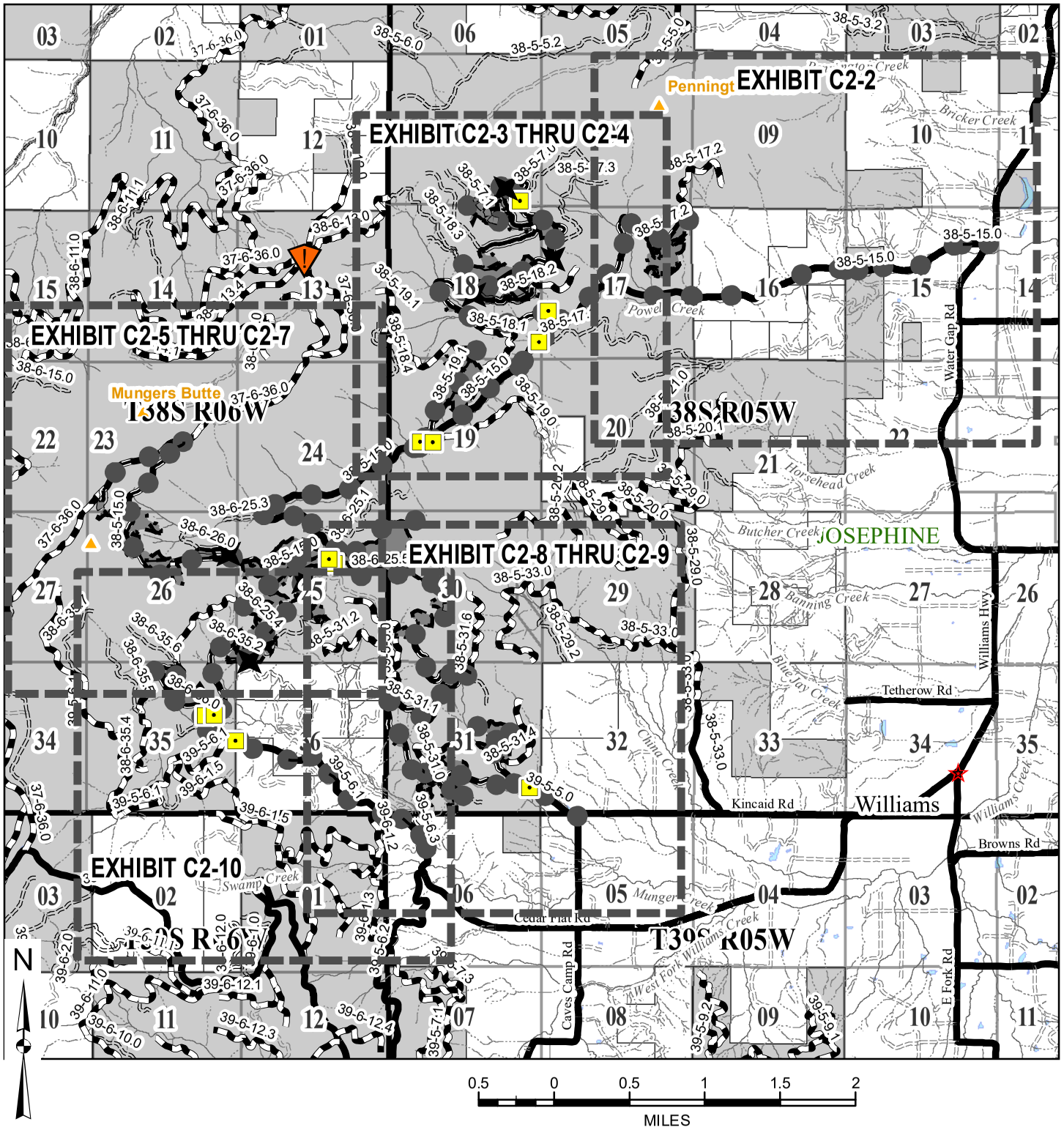


EXHIBIT C-2-1

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate
- BLM Stockpiles

Penn Butte Haul Routes

Road_Work

- Purchaser Renovation
- Road Reconstruction
- Temp Construction
- Operator Spur

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE OVERALL SALE AREA

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 1 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-1	

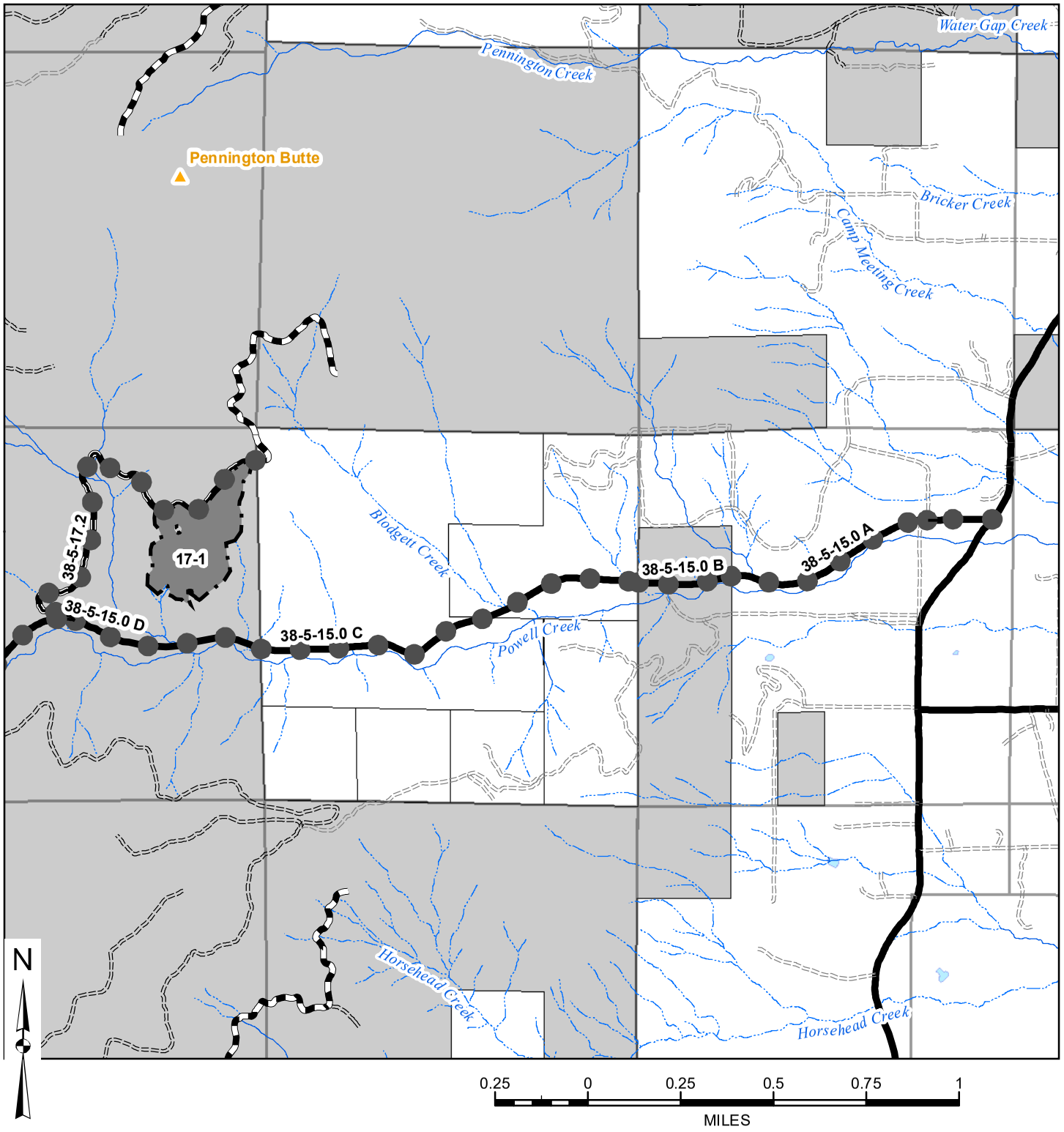


EXHIBIT C2-2

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

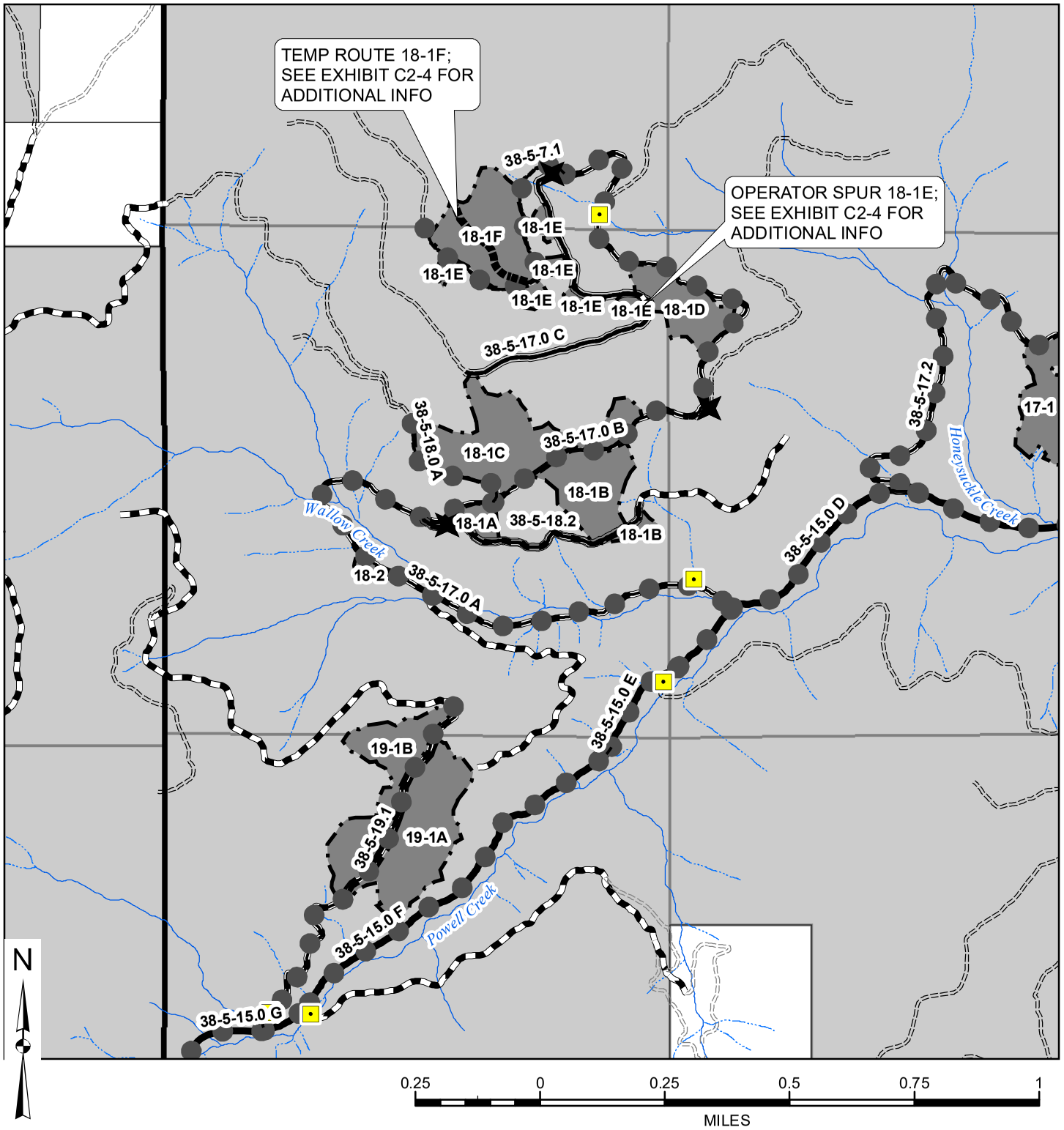
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD RENOVATION MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 2 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-2	

EXHIBIT C2-3



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

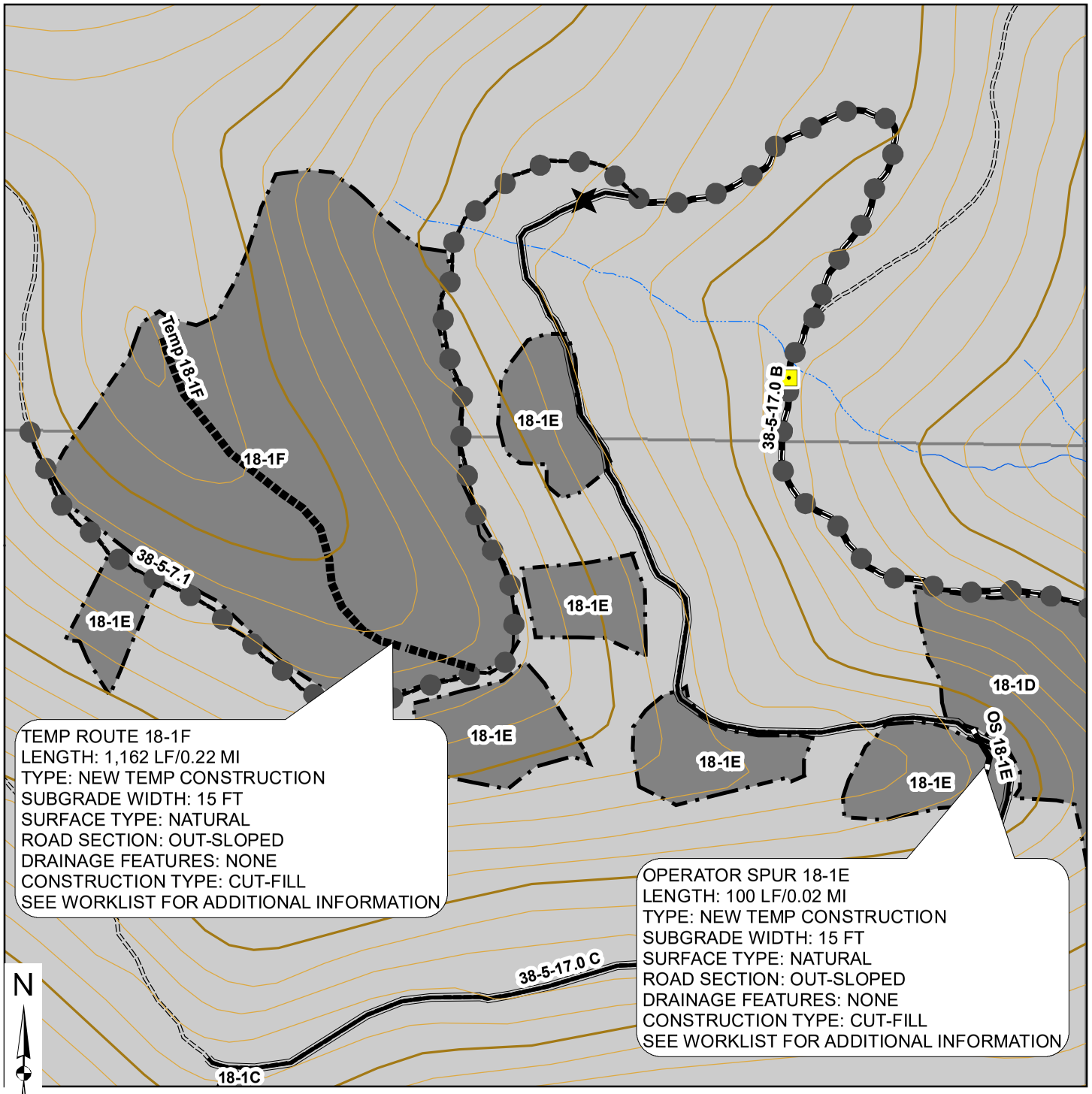
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD RENOVATION MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 3 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-3	

EXHIBIT C2-4



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE TEMP ROAD 18-1F MAP & OPERATOR SPUR 18-1E

DRAFTED BY: BLM	
DATE: DECEMBER 2032	SHEET: 4 OF 15
DRAWING NO.: ORM07-TS- 2024.000 3-C2-4	

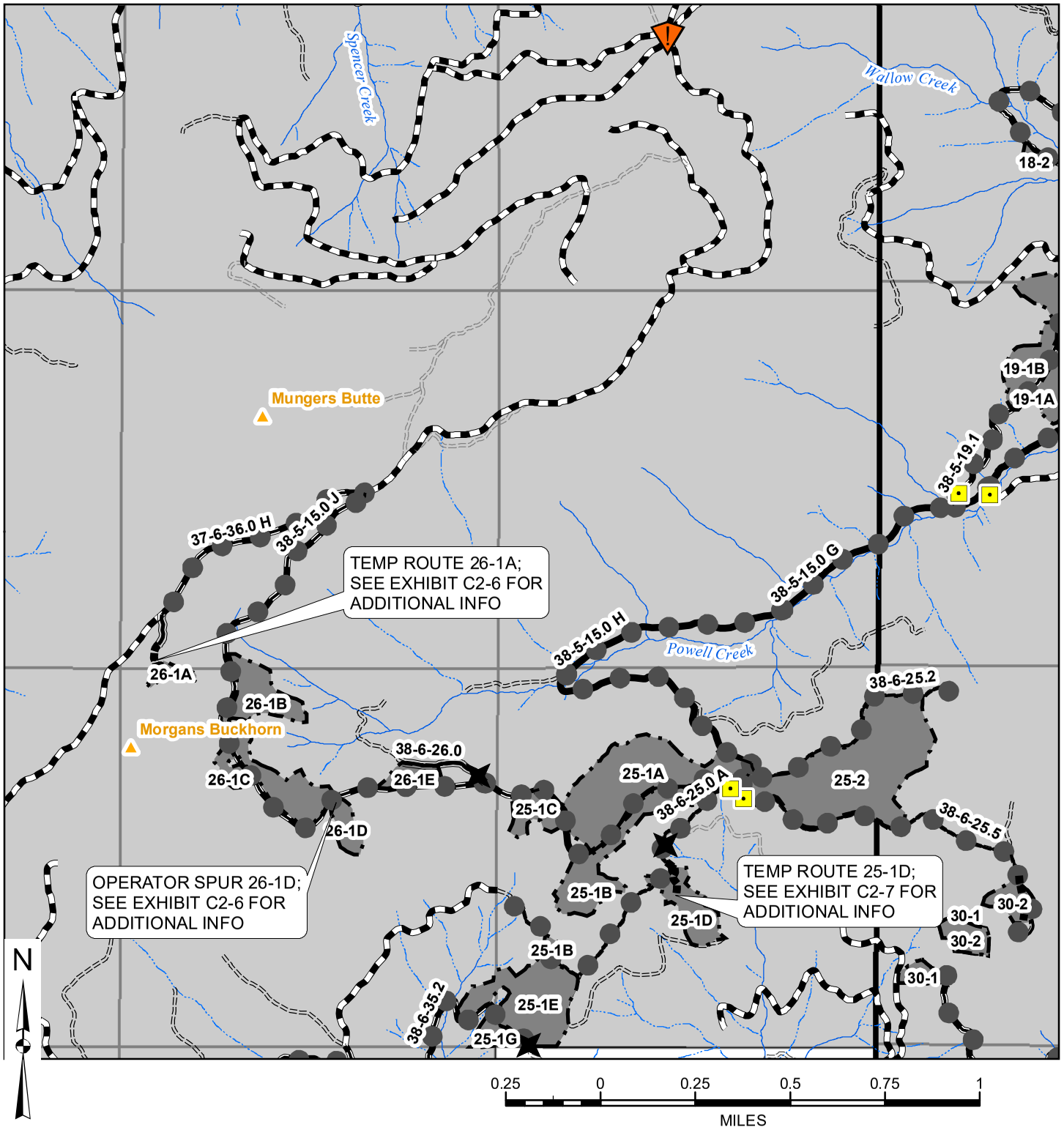


EXHIBIT C2-5

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate
- BLM Stockpiles

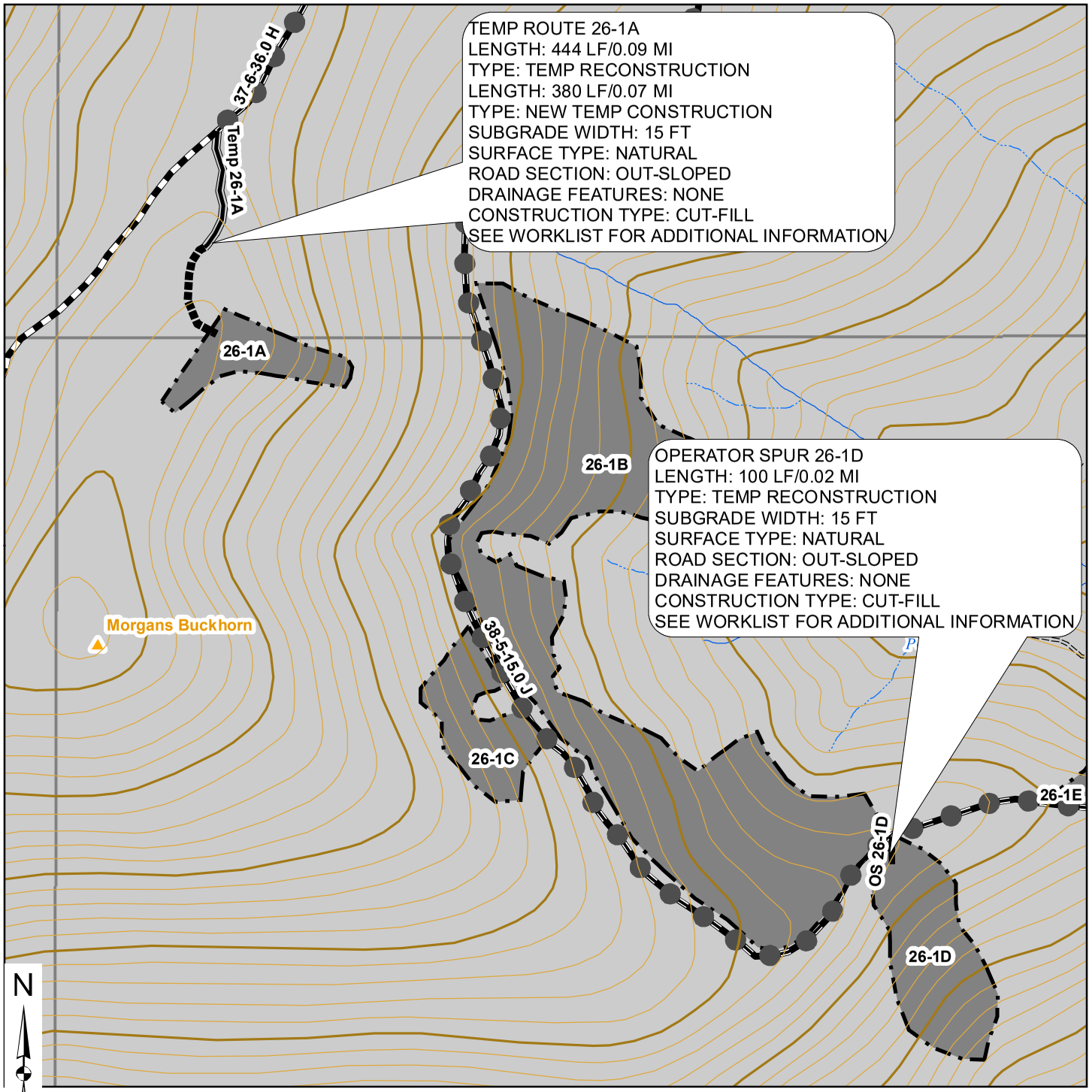
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD RENOVATION MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 5 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-5	

EXHIBIT C2-6



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE TEMP ROAD 26-1A MAP & OPERATOR SPUR 26-1D

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 6 OF 15
DRAWING NO.: ORM07-TS -2024.0003-C2-6	

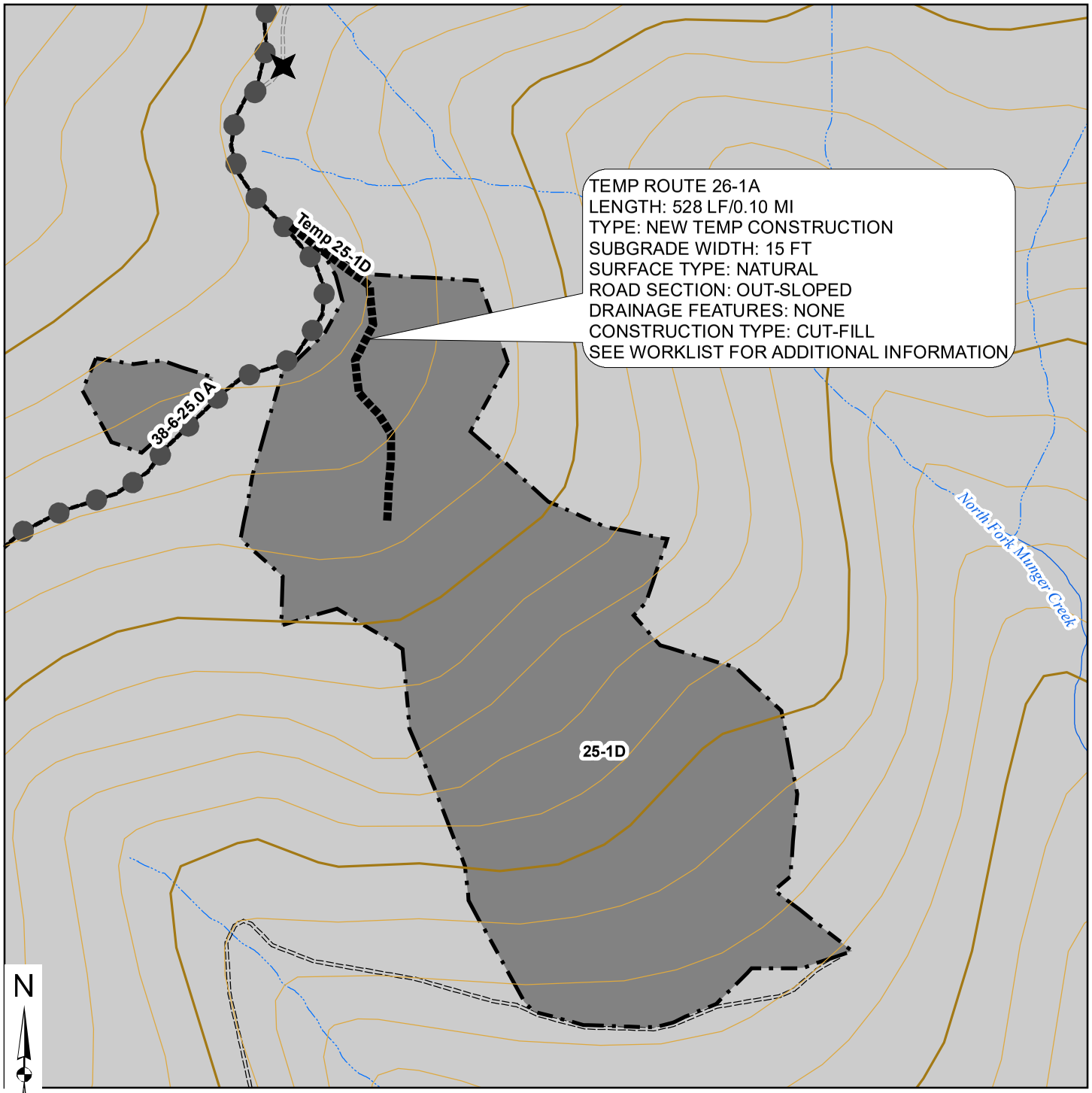


EXHIBIT C2-7

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE TEMP ROAD 25-1D MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 7 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-7	

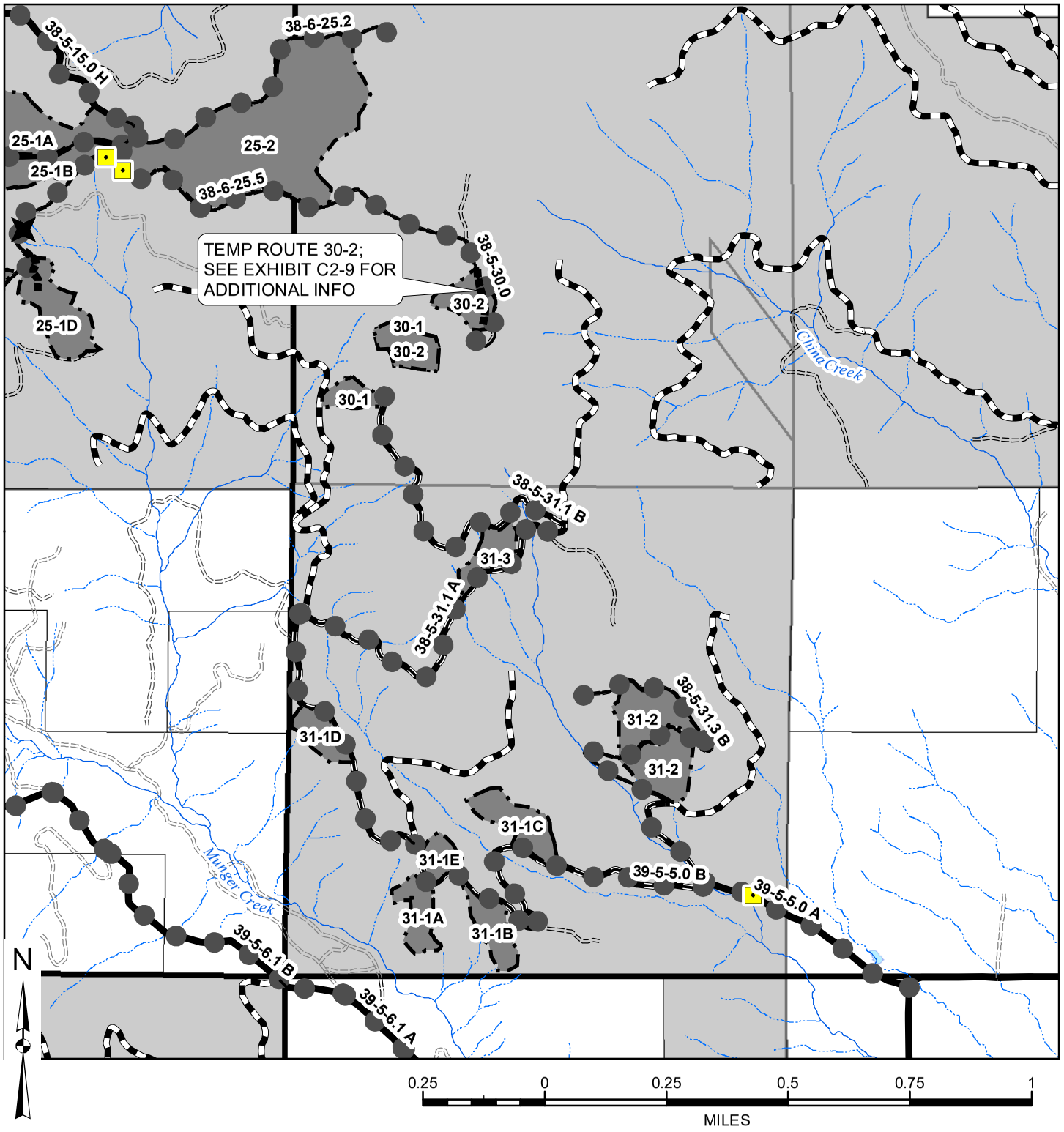


EXHIBIT C2-8

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

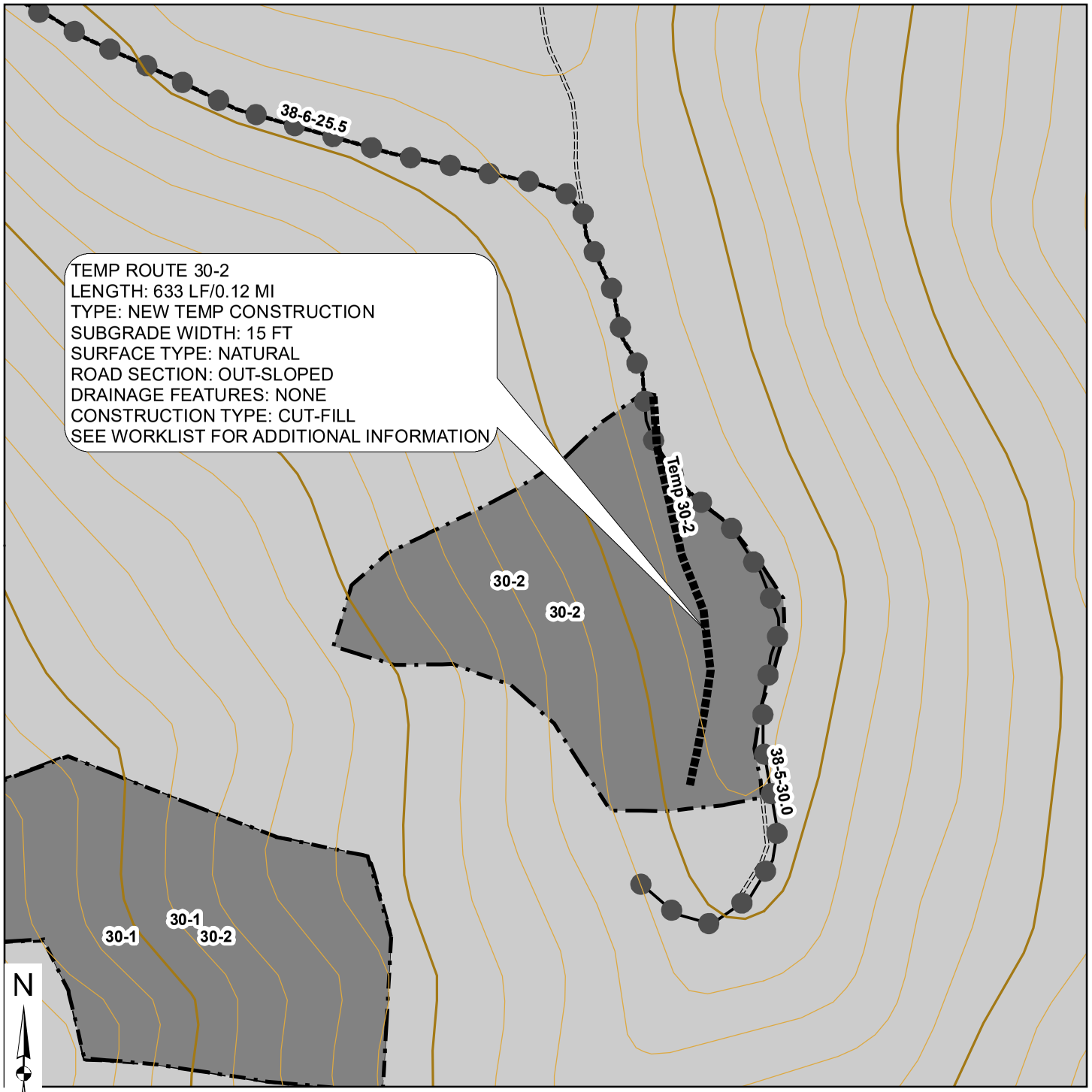
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD RENOVATION MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 8 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-8	

EXHIBIT C2-9



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE TEMP ROAD 30-2 MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2032	SHEET: 9 OF 15
DRAWING NO.: ORM07-T S-2024.0003-C2-9	

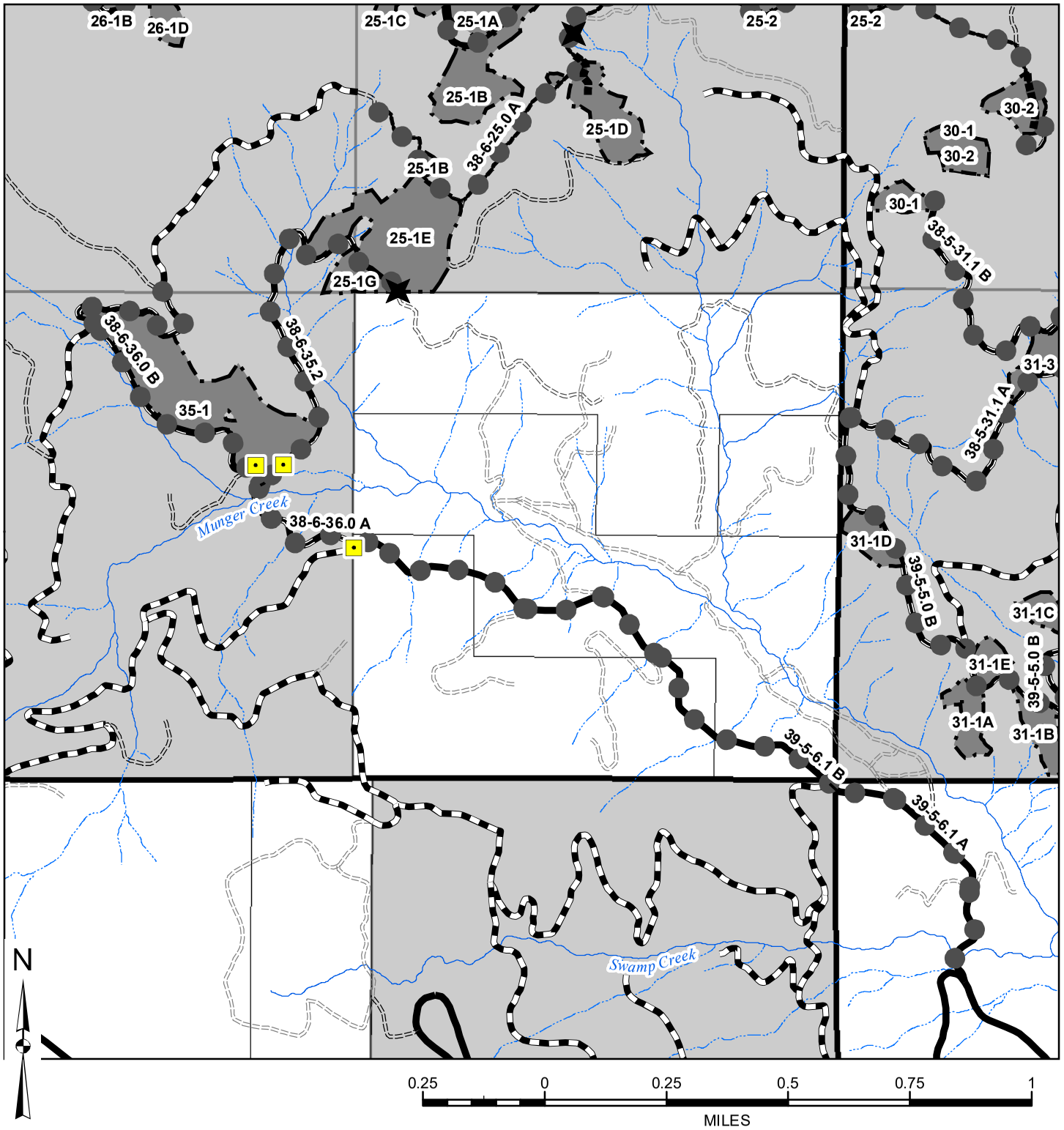


EXHIBIT C2-10

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD RENOVATION MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 10 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-10	

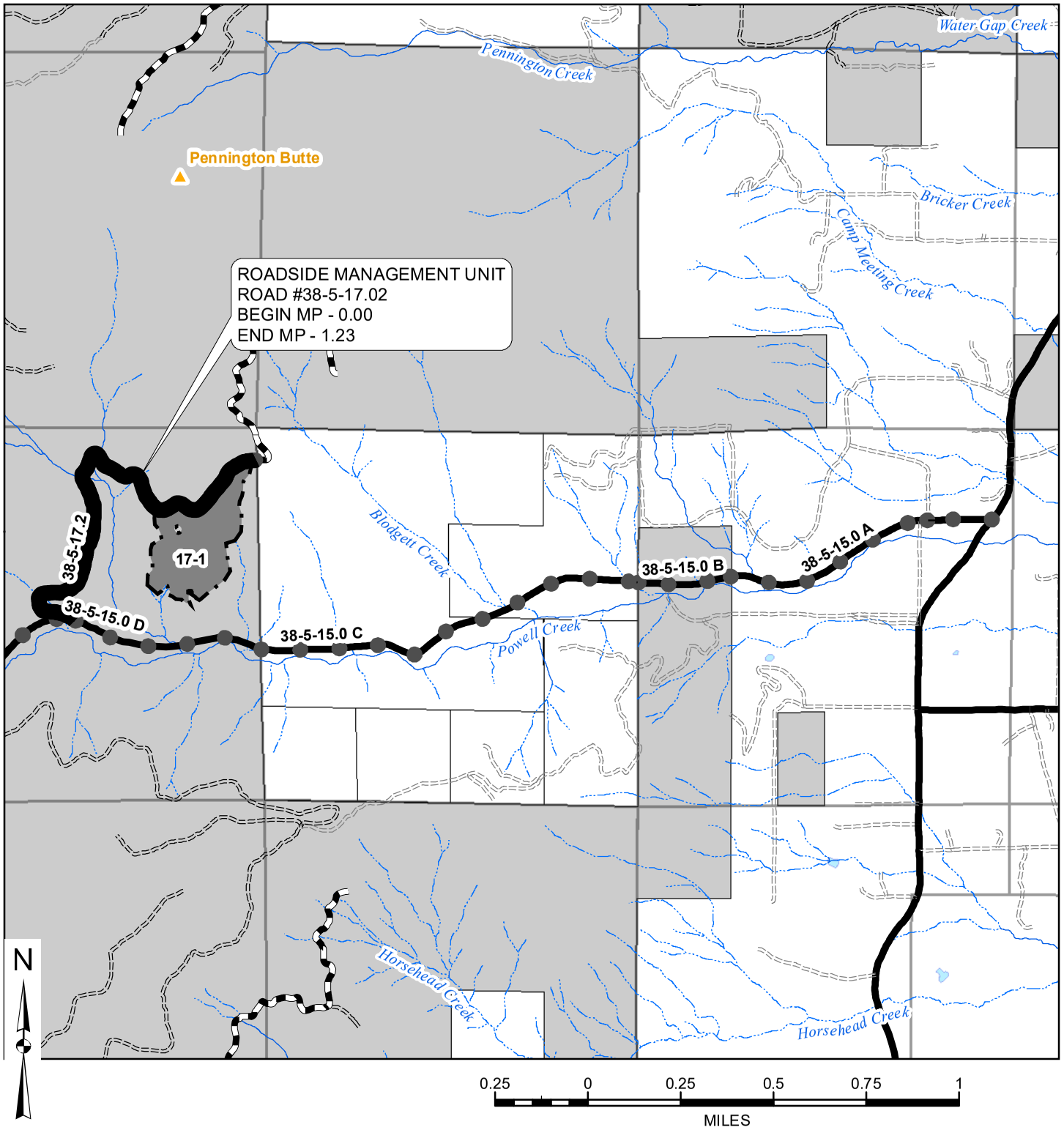


EXHIBIT C2-11

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte Roadside Management Units
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

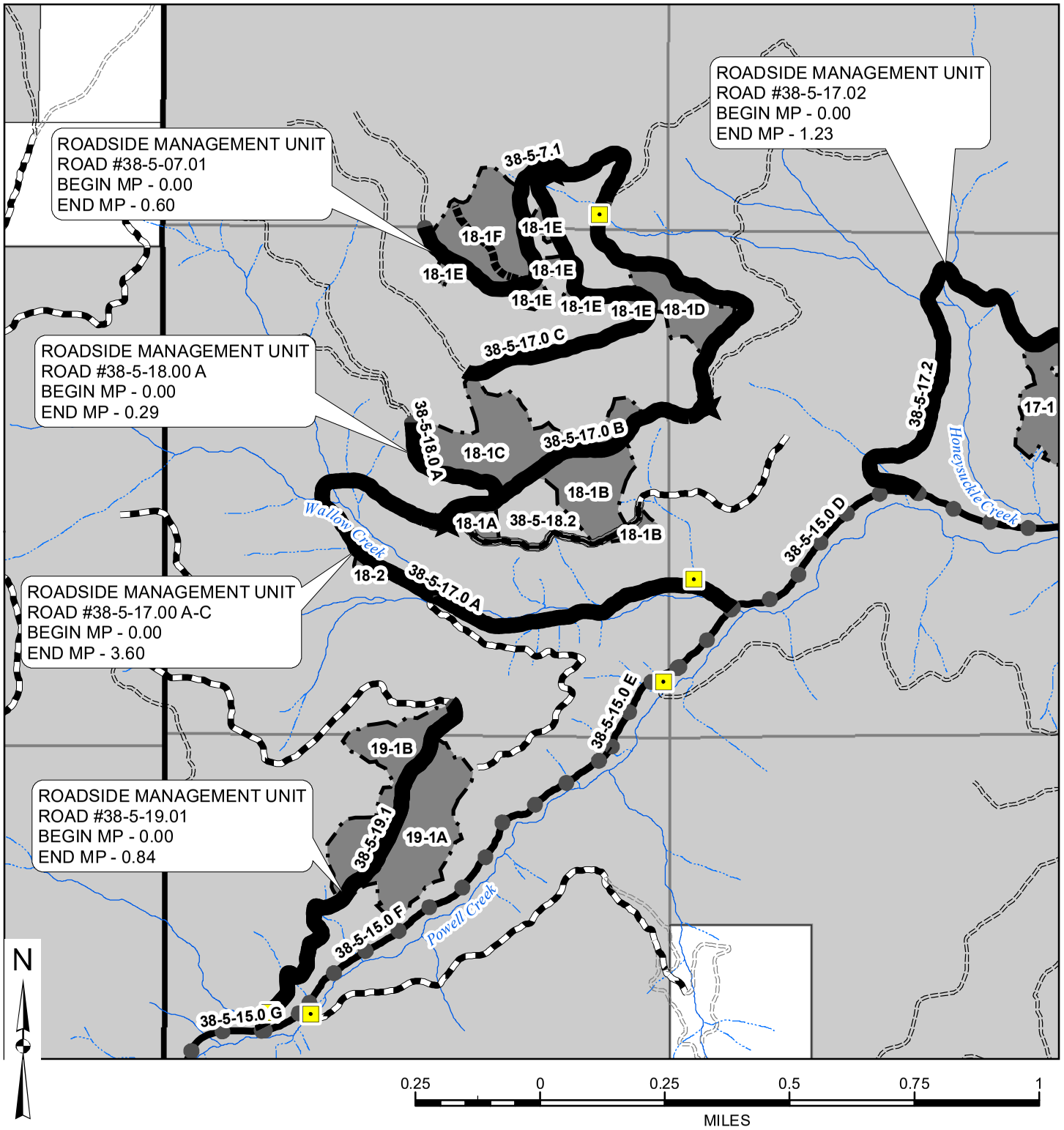
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROADSIDE MANAGEMENT UNIT MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 11 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-11	

EXHIBIT C2-12



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte Roadside Management Units
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

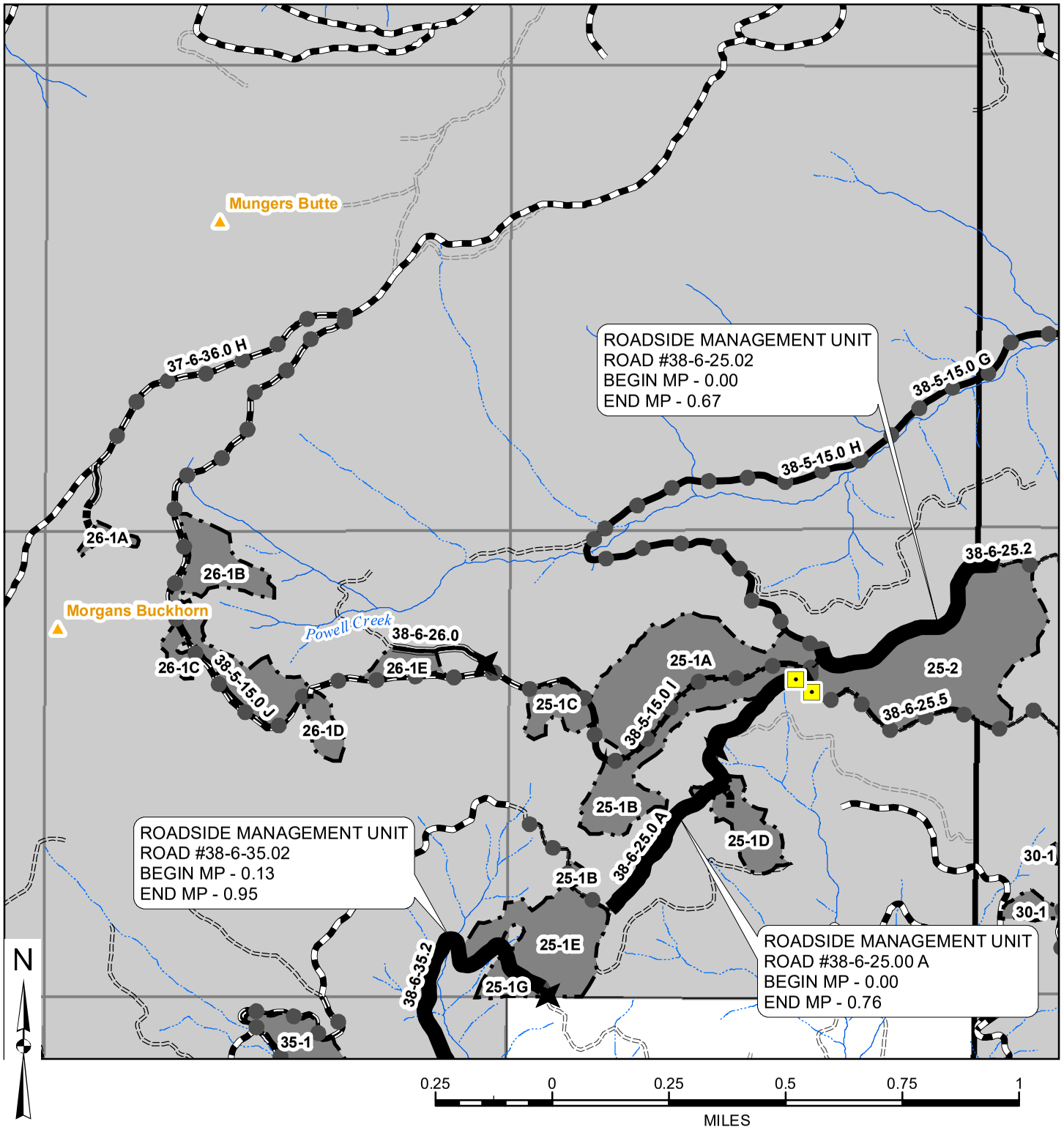
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROADSIDE MANAGEMENT UNIT MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 12 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-12	

EXHIBIT C2-13



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte Roadside Management Units
- Pen Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROADSIDE MANAGEMENT UNIT MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 13 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-13	

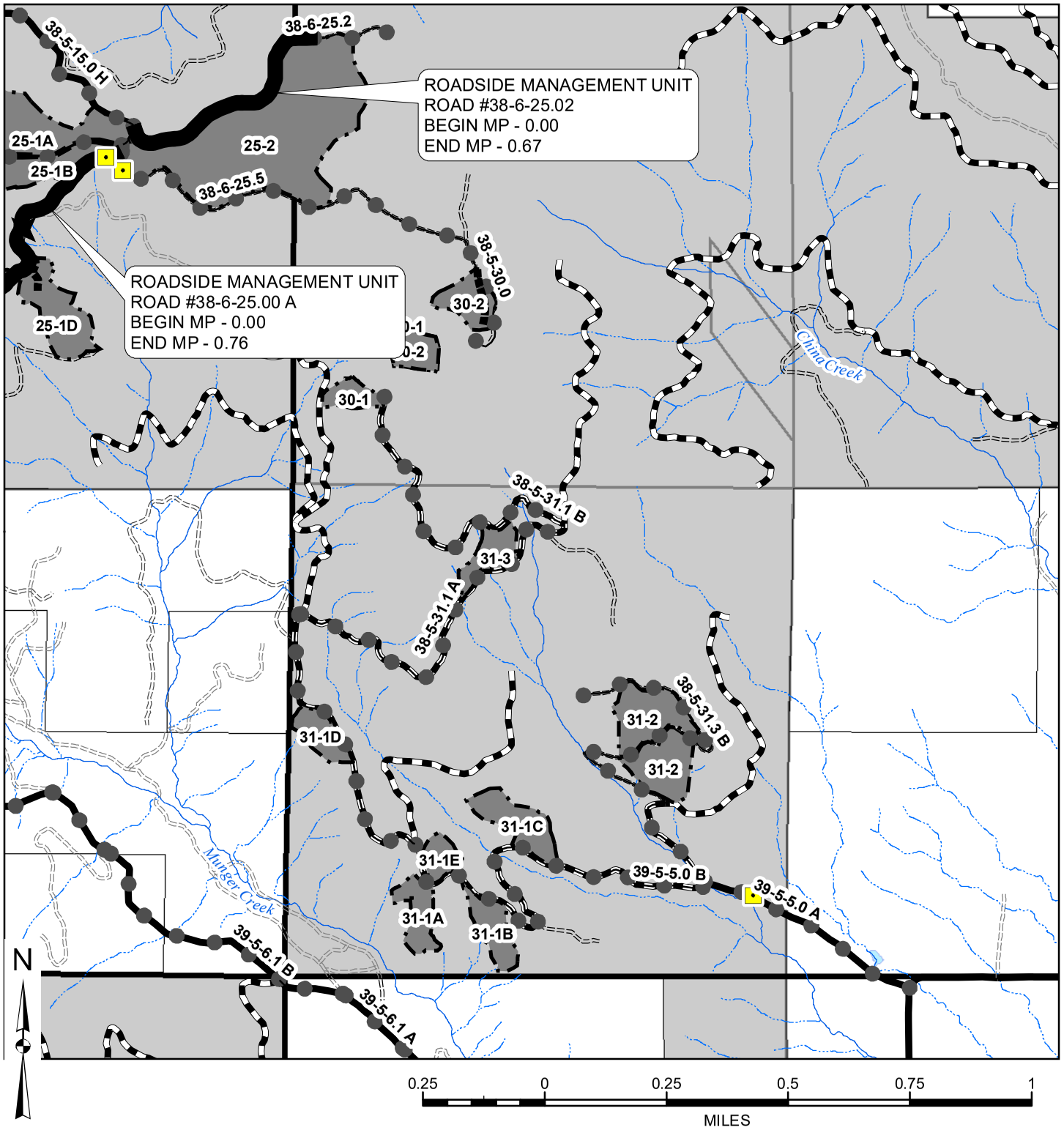


EXHIBIT C2-14

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte Roadside Management Units
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

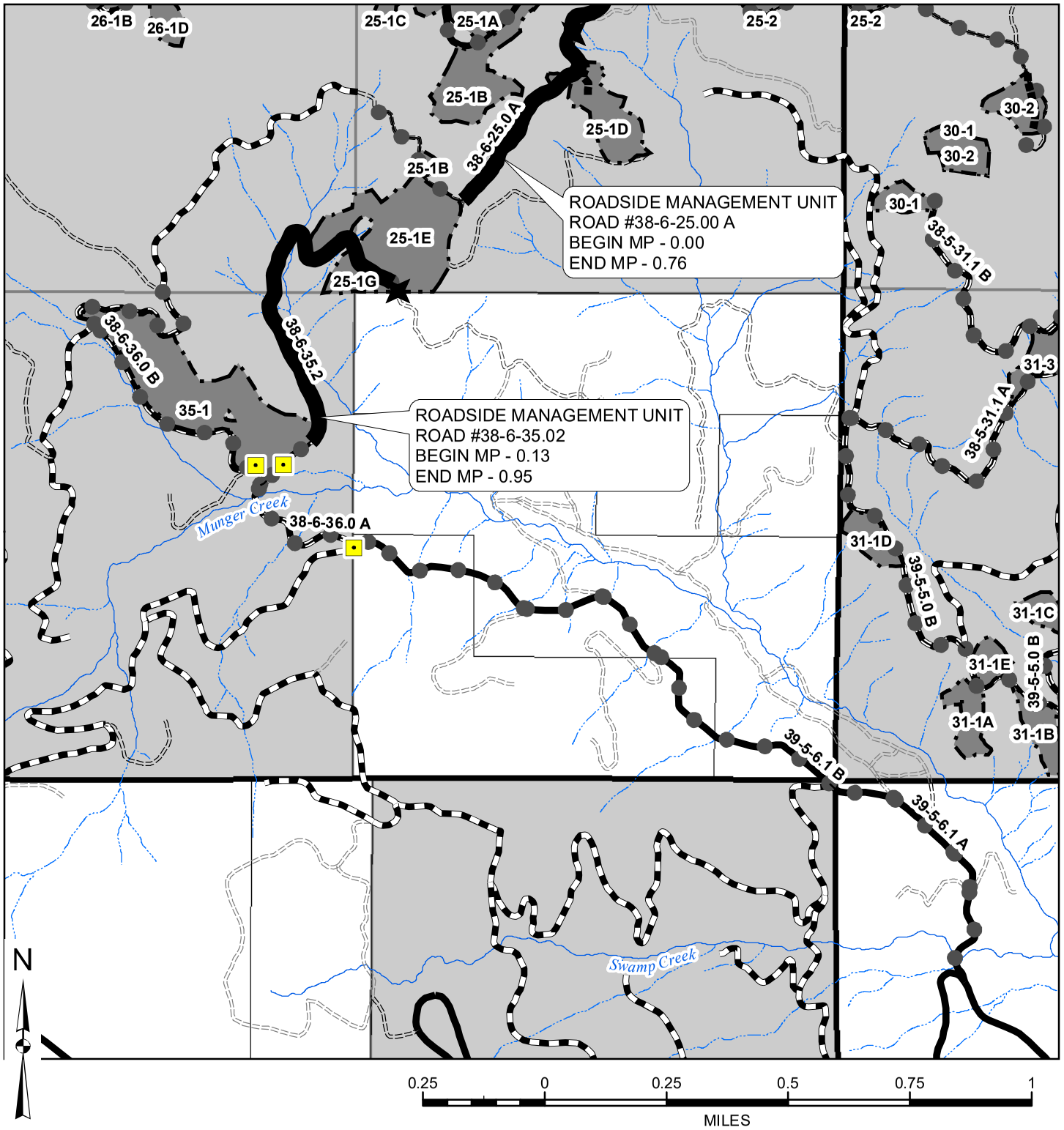
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROADSIDE MANAGEMENT UNIT MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 14 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-14	

EXHIBIT C2-15



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte Roadside Management Units
- Penn Butte TS Units

Penn Butte Haul Routes

Road_Work

- Maintenance
- Reconstruction
- Temp Construction
- Operator Spur

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROADSIDE MANAGEMENT UNIT MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 15 OF 15
DRAWING NO.: ORM07-TS-2024.0003-C2-15	

EXHIBIT C3-1

ROAD NUMBER	FROM	TO	LENGTH***	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						CONSTRUCTION AND RENOVATION							AGGREGATE**			MISCELLANEOUS							
					ROCK	COMMON	18"	24"	30"	36"	48"	18" Full Round Downspout	NEW CONSTRUCTION – TEMPORARY	ROAD RECONSTRUCTION	ROAD RENOVATION	CLEAN DITCHES & CULVERTS – BUNCH AND HAUL MATERIAL ONLY	CONSTRUCT ARMORED WATER DIPS****	SCARIFICATION AND/OR HEAVY BLADING	SLIDE REMOVAL	4" MINUS SCREENED BASE GRADE A	CRUSHED SURFACE GRADE C–1	SLOPE PROTECTION ****	SOIL STABILIZATION	ROADSIDE MANAGEMENT	ROADSIDE BRUSHING – HAUL	ROADSIDE BRUSHING – CHIP	REMOVE BARRICADE	CONSTRUCT BARRICADE	CONSTRUCT / RECONSTRUCT WATER BARS	CONSTRUCT / RECONSTRUCT WATER DIPS
SPECIFICATION NO.				200	300		400						300		500					900	1200	1400	1800	500	2100	2100	500	500	500	500
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	ACRE	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	STA	STA	MILE	STA	EA	MILE	C.Y.	C.Y.	C.Y.	C.Y.	ACRE	MILE	MILE	MILE	EA	EA	EA	EA
37–6–36.00 H	0.00	0.66	0.66					44							0.66			0.66			20	2	0.05			0.66				
38–5–07.01	0.00	0.60	0.60	0.90			40	130							0.60						80	8	0.20	0.60		0.60				
38–5–15.00 A–I	0.00	7.50	7.50													7.50														
38–5–15.00 J	7.50	8.85	1.35				38	206							1.35			0.70			120	12	0.30							
38–5–17.00 A–B	0.00	2.68	2.68	3.90				224	60						2.68			0.50			120	112	0.30	2.68		2.68				
38–5–17.00 C	2.68	3.60	0.92	1.35			74	44						0.92				0.92				32		0.92		0.92	1	1	10	8
38–5–17.02	0.00	1.26	1.26	1.80			40	110							1.26			0.65			633	6	0.15	1.23		1.26				
38–5–18.00 A	0.00	0.29	0.29	0.45											0.29			0.29						0.29		0.29				
38–5–18.02	0.00	0.51	0.51				160							0.51				0.51				50				0.51	1	1	11	
38–5–19.01	0.00	0.84	0.84	1.25			40	110							0.84			0.84			60	6	0.15	0.84		0.84				
38–5–30.00	0.00	0.27	0.27												0.27			0.27								0.27			6	
38–5–31.01 A–B	0.00	1.53	1.53				76	488							1.53			0.50			260	26	0.65			1.53				1
38–5–31.03 A–B	0.00	1.11	1.11					40							1.11			0.50			380	2	0.05			1.11			9	
38–6–25.00 A	0.00	0.76	0.76	1.10				138							0.76			0.76			60	6	0.15	0.76		0.76				
38–6–25.02	0.00	0.67	0.67	1.00			36								0.67			0.67			20	52	0.05	0.67		0.67				
38–6–25.04	0.00	0.17	0.17												0.17			0.17								0.17				
38–6–25.05	0.00	0.87	0.87				80								0.87			0.25			40	4	0.10			0.87			3	
38–6–26.00	0.00	0.24	0.24											0.24				0.24								0.24	1			
38–6–35.02	0.00	0.95	0.95	1.20											0.95			0.25						0.82		0.95				
38–6–36.00 A–B	0.00	1.30	1.30												0.97	0.33		0.50								1.30				
39–5–05.00 A–B	0.00	2.13	2.13				76	40				20			1.83	0.30		0.50			60	4	0.15		0.30	1.83				
39–5–06.01 A–B	0.00	1.80	1.80													1.80										1.80				
PAGE 1 TOTALS			28.41	12.95			660	1574	60			20		1.67	16.81	9.93		9.68			1853	322	2.30	8.81	0.30	19.26	3	2	39	9

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

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.

**Indicate gradation.

ITEM 900 SIZE	ITEM 900 GRADE
4 inch	(A)
3 inch	(B)
2 inch	(C)
1 1/2 inch	(D)

ITEM 1200 SIZE	ITEM 1200 GRADE
1 1/2inch	C,C–1
1 inch	D,F
3/4inch	E,E–1

*** Total length includes permanent and temporary roads to be constructed.

**** Quantities include fill repairs, splash pad (2CY per site) for culvert replacements, and water dip outfall slope protection material (4CY per site).

			DATE	APPROV.

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

PENN BUTTE
ESTIMATE OF QUANTITIES*

DRAWN:	JAB	SCALE: NONE
DATE:	DECEMBER 2023	SHEET: 1 OF 2
DRAWING NO.	ORM07–TS–2024.0003–C3–1	

EXHIBIT C3-2

ROAD NUMBER	FROM	TO	LENGTH***	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						CONSTRUCTION AND RENOVATION							AGGREGATE**			MISCELLANEOUS							
					ROCK	COMMON	18"	24"	30"	36"	48"	18" Full Round Downspout	NEW CONSTRUCTION – TEMPORARY	ROAD RECONSTRUCTION	ROAD RENOVATION	CLEAN DITCHES & CULVERTS – BUNCH AND HAUL MATERIAL ONLY	CONSTRUCT ARMORED WATER DIPS****	SCARIFICATION AND/OR HEAVY BLADING	SLIDE REMOVAL	4" MINUS SCREENED BASE GRADE A	CRUSHED SURFACE GRADE C–1	SLOPE PROTECTION ****	SOIL STABILIZATION	ROADSIDE MANAGEMENT	INSTALL BMPs @ HYDRO POINTS OF CONCERN	ROADSIDE BRUSHING – CHIP	REMOVE BARRICADE	CONSTRUCT BARRICADE	CONSTRUCT / RECONSTRUCT WATER BARS	CONSTRUCT / RECONSTRUCT WATER DIPS
SPECIFICATION NO.				200	300		400						300		500					900	1200	1400	1800	500	2100	2100	500	500	500	500
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	ACRE	C.Y.	C.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	STA	STA	MILE	STA	EA	MILE	C.Y.	C.Y.	C.Y.	C.Y.	ACRE	MILE	MILE	MILE	EA	EA	EA	EA
TR 18–1F	0+00	11+62	0.22	1.00		600							11+62										0.50							
TR 25–1D	0+00	5+28	0.10	0.50		775							5+28										0.25							
TR 26–1A	0+00	8+24	0.16	0.35	125	150							4+44	0.08				0.08					0.20							
TR 30–2	0+00	6+33	0.12	0.60		425							6+33										0.30							
OS 18–1E	0+00	1+00	0.02	0.10		50							1+00										0.05							
OS 26–1D	0+00	1+00	0.02	0.10		50							1+00										0.05							
PAGE 1 TOTALS			28.41	12.95			660	1574	60			20		1.67	16.81	9.93		9.68			1853	322	2.30	8.81	0.30	19.26	3	2	39	9
PAGE 2 TOTALS			0.64	2.65	125	2050							29+67	0.08				0.08					1.35							
PROJECT TOTALS			29.05	15.60	125	2050	660	1574	60			20	29+67	1.75	16.81	9.93		9.76			1853	322	3.65	8.81	0.30	19.26	3	2	39	9
																									DATE					APPROV.

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

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.

**Indicate gradation.

ITEM 900

SIZE	GRADE
4 inch	(A)
3 inch	(B)
2 inch	(C)
1 1/2 inch	(D)

ITEM 1200

SIZE	GRADE
1 1/2inch	C,C–1
1 inch	D,F
3/4inch	E,E–1

*** Total length includes permanent and temporary roads to be constructed.

**** Quantities include fill repairs, splash pad (2CY per site) for culvert replacements, and water dip outfall slope protection material (4CY per site).

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

PENN BUTTE
ESTIMATE OF QUANTITIES*

DRAWN:	JAB	SCALE: NONE
DATE:	DECEMBER 2023	SHEET: 2 OF 2
DRAWING NO.	ORM07–TS–2024.0003–C3–2	

EXHIBIT C4-1

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	TYPICAL SECTION TYPE	EXISTING ROAD SURFACE[2]	ROAD WIDTH[1 & 3]		GRADIENT		CLEARING WIDTH[5]				SURFACING[4]								REMARKS
										BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
						SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE[2]	GRADING	MINIMUM WIDTH	COMPACTION DEPTH	TYPE[2]	GRADING	
37-6-36.00 H	0.00	0.66	0.66	6	D	16'	3'					4'	4'									
38-5-07.01	0.00	0.60	0.60	6	D	14'	3'					4'	4'									
38-5-15.00 A	0.00	0.74	0.74	6	E	16'	3'					4'	4'									
38-5-15.00 B	0.74	1.01	0.27	6	E	16'	3'					4'	4'									
38-5-15.00 C	1.01	2.09	1.08	6	E	16'	3'					4'	4'									
38-5-15.00 D	2.09	3.07	0.98	6	E	16'	3'					4'	4'									
38-5-15.00 E	3.07	3.45	0.38	6	E	16'	3'					4'	4'									
38-5-15.00 F	3.45	4.27	0.82	6	E	16'	3'					4'	4'									
38-5-15.00 G	4.27	4.93	0.66	6	E	16'	3'					4'	4'									
38-5-15.00 H	4.93	6.28	1.35	6	E	16'	3'					4'	4'									
38-5-15.00 I	6.28	7.03	0.75	6	E	16'	3'					4'	4'									
38-5-15.00 J	7.03	7.50	0.47	6	E	16'	3'					4'	4'									
38-5-15.00 J	7.50	8.85	1.35	6	D	16'	3'					4'	4'									Spot rock for culvert replacements 3/4" minus - Spencer Cr BLM Stockpile
38-5-17.00 A	0.00	1.29	1.29	6	D	14'	3'					4'	4'									Spot rock for culvert replacements 3/4" minus - Spencer Cr BLM Stockpile

NOTES

1. EXTRA SUB-GRADE WIDTHS
   TO EACH FILL SHOULDER, ADD 1 FOOT FOR FILLS OF 1-6 FEET AND 2 FEET FOR FILLS OVER 6 FEET. WIDEN THE INSIDE SHOULDER OF ALL CURVES AS FOLLOWS WHEN THE DEGREE OF CURVE EQUALS:
   - 7-21 ADD 1 FT.
   - 22-35 ADD 2 FT.
   - 36-48 ADD 3 FT.
   - 49-64 ADD 4 FT.
   - 65-96 ADD 5 FT.

MATERIALS	CUT SLOPE	FILL SLOPE
COMMON	1/2 : 1	1 1/2 : 1
SOFT ROCK & SHALE	1/2 : 1	1 1/2 : 1
SOLID ROCK	1/2 : 1	angle of repose

2. SURFACING TYPES
   - A. PIT RUN ROCK
   - B. GRID ROLLED ROCK MATERIAL
   - C. SCREENED ROCK MATERIAL
   - D. CRUSHED ROCK MATERIAL
   - E. BST
   - F. NATURAL

3. TURNOUTS
   - A. WIDTH 10 FT. IN ADDITION TO SUB-GRADE WIDTH, OR AS SHOWN ON THE PLANS.
   - B. LOCATED APPROXIMATELY, AS SHOWN ON THE ROAD PLANS.
   - C. INVISIBLE AND NOT MORE THAN 750 FT. APART.

4. SURFACING
   TURNOUTS, CURVE WIDENING, AND ROAD APPROACH APRONS SHALL BE SURFACED.

5. CLEARING WIDTH
   SEE SUBSECTIONS 300 & 2100

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE SPECIFICATION SHEET

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 4
DRAWING NO.: ORM07-TS-2024.0003-C4-1	

EXHIBIT C4-2

ROAD NUMBER	FROM (M.P.)	TO (M.P.)	LENGTH (MILES)	TYPICAL SECTION TYPE	EXISTING ROAD SURFACE[2]	ROAD WIDTH[1 & 3]		GRADIENT		CLEARING WIDTH[5]				SURFACING[4]								REMARKS
										BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
						SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE[2]	GRADING	MINIMUM WIDTH	COMPACTION DEPTH	TYPE[2]	GRADING	
38-5-17.00 B	1.29	2.68	1.39	6	D	14'	3'					4'	4'									Spot rock for culvert replacements 3/4" minus - Spencer Cr BLM Stockpile
38-5-17.00 C	2.68	3.60	0.92	3	F	14'	0'					4'	4'									
38-5-17.02	0.00	1.26	1.26	6	D	14'	3'					4'	4'					14'	4"	D	1.5"-	Surfacing and spot rock for culvert replacements 1.5" minus - Use commercial source
38-5-18.00 A	0.00	0.29	0.29	6	D	15'	3'					4'	4'									
38-5-18.02	0.00	0.51	0.51	5	F	16'	3'					4'	4'									
38-5-19.01	0.00	0.84	0.84	6	D	15'	3'					4'	4'									Spot rock for culvert replacements 3/4" minus - Spencer Cr BLM Stockpile
38-5-30.00	0.00	0.27	0.27	5	F	15'	3'					4'	4'									
38-5-31.01 A	0.00	0.77	0.77	6	D	14'	3'					4'	4'									Spot rock for culvert replacements 1.5" minus - Use commercial source
38-5-31.01 B	0.77	1.53	0.76	6	D	14'	3'					4'	4'									Spot rock for culvert replacements 1.5" minus - Use commercial source
38-5-31.03 A	0.00	0.24	0.24	6	D	14'	3'					4'	4'									Spot rock for culvert replacements 1.5" minus - Use commercial source
38-5-31.03 B	0.24	1.11	0.87	5	F	14'	3'					4'	4'					14'	4"	D	1.5"-	Surfacing - 1.5" minus - Use commercial source
38-6-25.00 A	0.00	0.76	0.76	5	F	14'	3'					4'	4'									Spot rock for culvert replacements 3/4" minus - Spencer Cr BLM Stockpile
38-6-25.02	0.00	0.67	0.67	3	F	14'	0'					4'	4'									Spot rock for culvert replacements 3/4" minus - Spencer Cr BLM Stockpile
38-6-25.04	0.00	0.17	0.17	3	F	14'	0'					4'	4'									

NOTES

1. EXTRA SUB-GRADE WIDTHS
   TO EACH FILL SHOULDER, ADD 1 FOOT FOR FILLS OF 1-6 FEET AND 2 FEET FOR FILLS OVER 6 FEET. WIDEN THE INSIDE SHOULDER OF ALL CURVES AS FOLLOWS WHEN THE DEGREE OF CURVE EQUALS:
   - 7-21 ADD 1 FT.
   - 22-35 ADD 2 FT.
   - 36-48 ADD 3 FT.
   - 49-64 ADD 4 FT.
   - 65-96 ADD 5 FT.

MATERIALS	CUT SLOPE	FILL SLOPE
COMMON	1/2 : 1	1 1/2 : 1
SOFT ROCK & SHALE	1/2 : 1	1 1/2 : 1
SOLID ROCK	1/2 : 1	angle of repose

2. SURFACING TYPES
   - A. PIT RUN ROCK
   - B. GRID ROLLED ROCK MATERIAL
   - C. SCREENED ROCK MATERIAL
   - D. CRUSHED ROCK MATERIAL
   - E. BST
   - F. NATURAL

3. TURNOUTS
   - A. WIDTH 10 FT. IN ADDITION TO SUB-GRADE WIDTH, OR AS SHOWN ON THE PLANS.
   - B. LOCATED APPROXIMATELY, AS SHOWN ON THE ROAD PLANS.
   - C. INVISIBLE AND NOT MORE THAN 750 FT. APART.

4. SURFACING
   TURNOUTS, CURVE WIDENING, AND ROAD APPROACH APRONS SHALL BE SURFACED.

5. CLEARING WIDTH
   SEE SUBSECTIONS 300 & 2100

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE SPECIFICATION SHEET

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 2 OF 4
DRAWING NO.: ORM07-TS-2024.0003-C4-2	

EXHIBIT C4-3

ROAD NUMBER	FROM (STA)	TO (STA)	LENGTH (MILES)	TYPICAL STATION TYPE	ALIGNMENT	ROAD WIDTH [1 & 3]		GRADIENT		CLEARING WIDTH [5]				SURFACING [4]								REMARKS
										BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE [2]	GRADING	MINIMUM WIDTH	COMPACTION DEPTH	TYPE [2]	GRADING	
38-6-25.05	0.00	0.87	0.87	5	F	14'	3'					4'	4'									Spot rock for culvert replacements 3/4" minus - Spencer Cr BLM Stockpile
38-6-26.00	0.00	0.24	0.24	3	F	14'	0'					4'	4'									
38-6-35.02	0.00	0.95	0.95	6	D	14'	3'					4'	4'									1.5" minus - Use commercial source
38-6-36.00 A	0.00	0.33	0.33	6	E	15'	3'					4'	4'									
38-6-36.00 B	0.33	1.30	0.97	6	D	15'	3'					4'	4'									Spot rock for culvert replacements 1.5" minus - Use commercial source
39-5-05.00 A	0.00	0.30	0.30	6	E	15'	3'					4'	4'									
39-5-05.00 B	0.30	2.13	1.83	6	D	15'	3'					4'	4'									Spot rock for culvert replacements 1.5" minus - Use commercial source
39-5-06.01 A	0.00	0.60	0.60	6	E	15'	3'					4'	4'									
39-5-06.01 B	0.60	1.80	1.20	6	E	15'	3'					4'	4'									
TR 18-1F	0+00	11+62	0.22	3		14'				5'	5'		Temp Road to be constructed. Fully decommission upon haul completion.									See Exhibit D
TR 25-1D	0+00	5+28	0.10	3		14'				5'	5'		Temp Road to be constructed. Fully decommission upon haul completion.									See Exhibit D
TR 26-1A	0+00	8+24	0.16	3		14'				5'	5'		Temp Road to be constructed. Fully decommission upon haul completion.									See Exhibit D
TR 30-2	0+00	6+33	0.12	3		14'				5'	5'		Temp Road to be constructed. Fully decommission upon haul completion.									See Exhibit D
OS 18-1E	0+00	1+00	0.02	3		14'				5'	5'		Temp Road to be constructed. Fully decommission upon haul completion.									See Exhibit D
OS 26-1D	0+00	1+00	0.02	3		14'				5'	5'		Temp Road to be constructed. Fully decommission upon haul completion.									See Exhibit D

NOTES

1. EXTRA SUB-GRADE WIDTHS
   TO EACH FILL SHOULDER, ADD 1 FOOT FOR FILLS OF 1-6 FEET AND 2 FEET FOR FILLS OVER 6 FEET. WIDEN THE INSIDE SHOULDER OF ALL CURVES AS FOLLOWS WHEN THE DEGREE OF CURVE EQUALS:
   - 7-21 ADD 1 FT.
   - 22-35 ADD 2 FT.
   - 36-48 ADD 3 FT.
   - 49-64 ADD 4 FT.
   - 65-96 ADD 5 FT.

MATERIALS	CUT SLOPE	FILL SLOPE
COMMON	1/2 : 1	1 1/2 : 1
SOFT ROCK & SHALE	1/2 : 1	1 1/2 : 1
SOLID ROCK	1/2 : 1	angle of repose

2. SURFACING TYPES
   - A. PIT RUN ROCK
   - B. GRID ROLLED ROCK MATERIAL
   - C. SCREENED ROCK MATERIAL
   - D. CRUSHED ROCK MATERIAL
   - E. BST
   - F. NATURAL
3. TURNOUTS
   - A. WIDTH 10 FT. IN ADDITION TO SUB-GRADE WIDTH, OR AS SHOWN ON THE PLANS.
   - B. LOCATED APPROXIMATELY, AS SHOWN ON THE ROAD PLANS.
   - C. INVISIBLE AND NOT MORE THAN 750 FT. APART.
4. SURFACING
   TURNOUTS, CURVE WIDENING, AND ROAD APPROACH APRONS SHALL BE SURFACED.
5. CLEARING WIDTH
   SEE SUBSECTIONS 300 & 2100

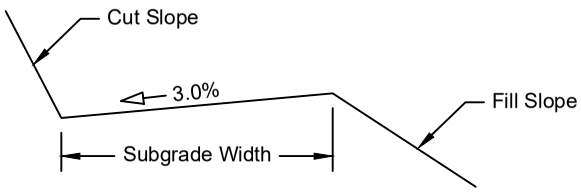
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE SPECIFICATION SHEET

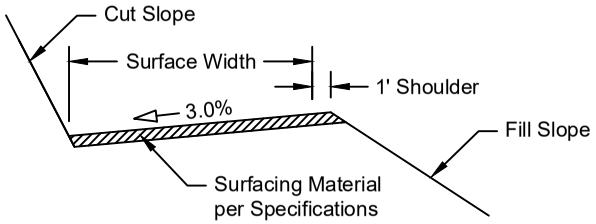
DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 3 OF 4
DRAWING NO.: ORM07-TS-2024.0003-C4-3	

EXHIBIT C4-4



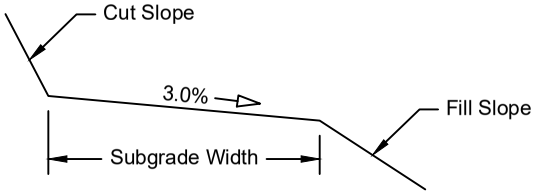
TYPICAL GRADING SECTION

TYPE 1



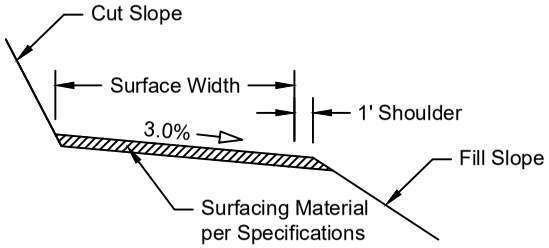
TYPICAL SURFACING SECTION

TYPE 2



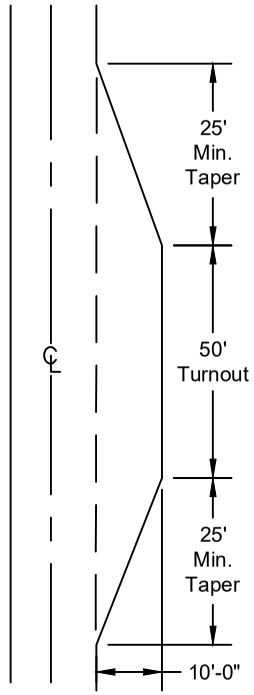
TYPICAL GRADING SECTION

TYPE 3



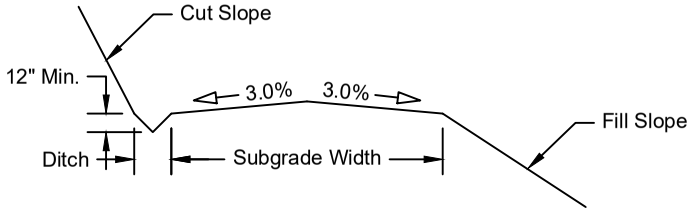
TYPICAL SURFACING SECTION

TYPE 4



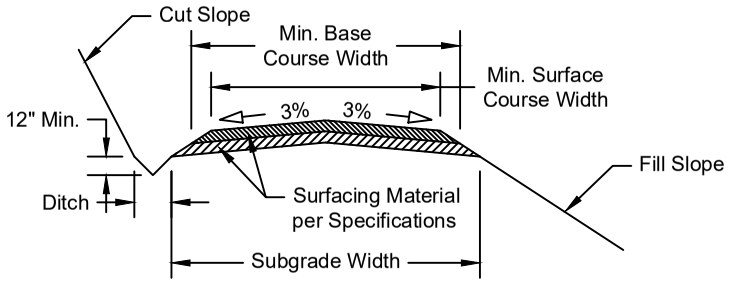
TYPICAL TURNOUT

PLAN VIEW



TYPICAL GRADING SECTION

TYPE 5



TYPICAL SURFACING SECTION

TYPE 6

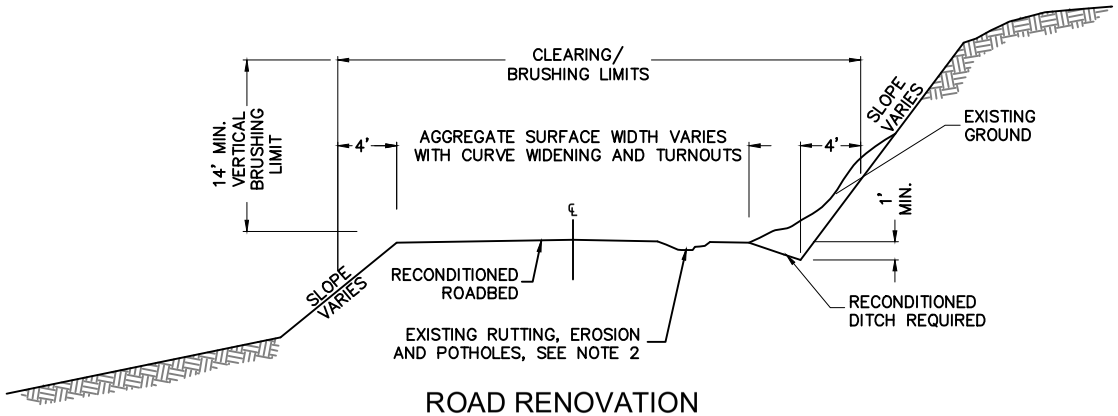
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE SPECIFICATION SHEET

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 4 OF 4
DRAWING NO.: ORM07-TS-2024.0003-C4-4	

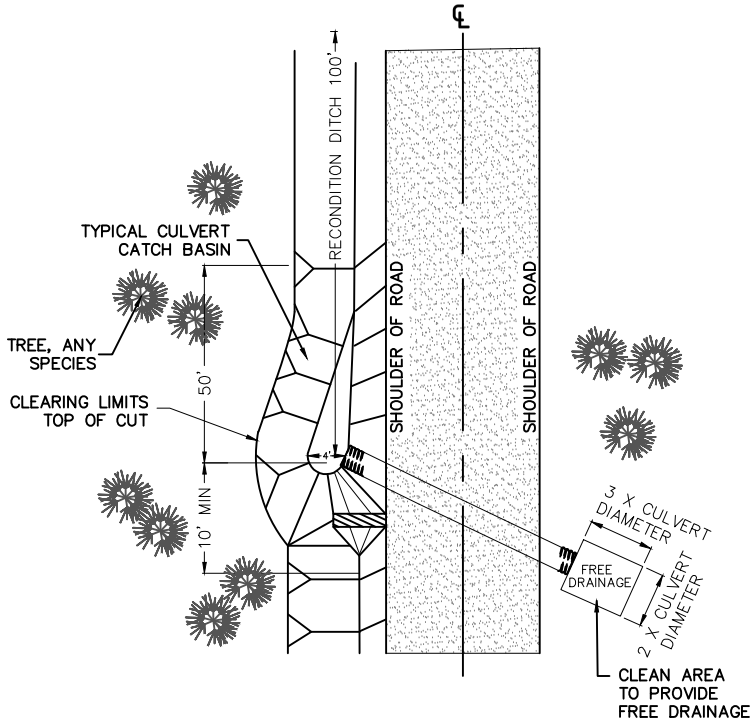
EXHIBIT C5



ROAD RENOVATION

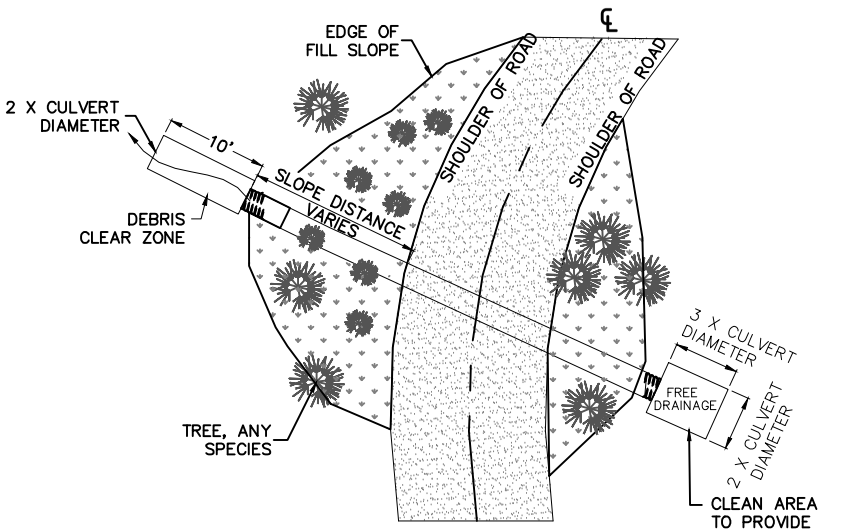
NOTES:

1. RECONDITION ROADS AS SHOWN AND IN ACCORDANCE WITH SECTION 500 OF THE SPECIFICATIONS. REQUIRED RECONDITIONING INCLUDES CURVE WIDENING AND TURNOUTS. DITCH RECONDITIONING INCLUDES CLEANING CULVERT INLETS AND OUTLETS.
2. WHERE RUTTING, EROSION AND POTHOLES EXIST, SCARIFY TO DEPTH OF RUT/EROSION/POTHOLE, BLADE, SHAPE AND COMPACT EXISTING AGGREGATE OR NATIVE SURFACE MATERIAL.
3. REMOVE AND DISPOSE OF SLIDE, DITCH, AND CATCH BASIN MATERIAL. DISPOSAL SITE LOCATIONS AS STAKED ON THE GROUND. DISPOSAL/WASTE SITES SHALL BE APPROVED BY THE AUTHORIZED OFFICER PRIOR TO USE. SEE VICINITY MAP FOR DISPOSAL SITE LOCATIONS/ OR AS STAKED ON GROUND.
4. MATCH EXISTING TRAVEL WAY CROSS SLOPE. THE TRAVELED WAY SHALL BE SHAPED TO THE EXISTING CROSS SLOPE. EXISTING ROADS WHICH ARE CROWNED SHALL BE AT 3% FROM CENTERLINE ROAD, INSLOPED AS IS, OUTSLOPED AS IS.



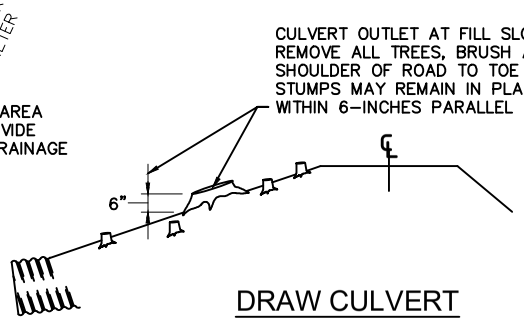
CROSS DRAIN CULVERT
PLAN VIEW

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



DRAW CULVERT
PLAN VIEW

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



DRAW CULVERT
PROFILE

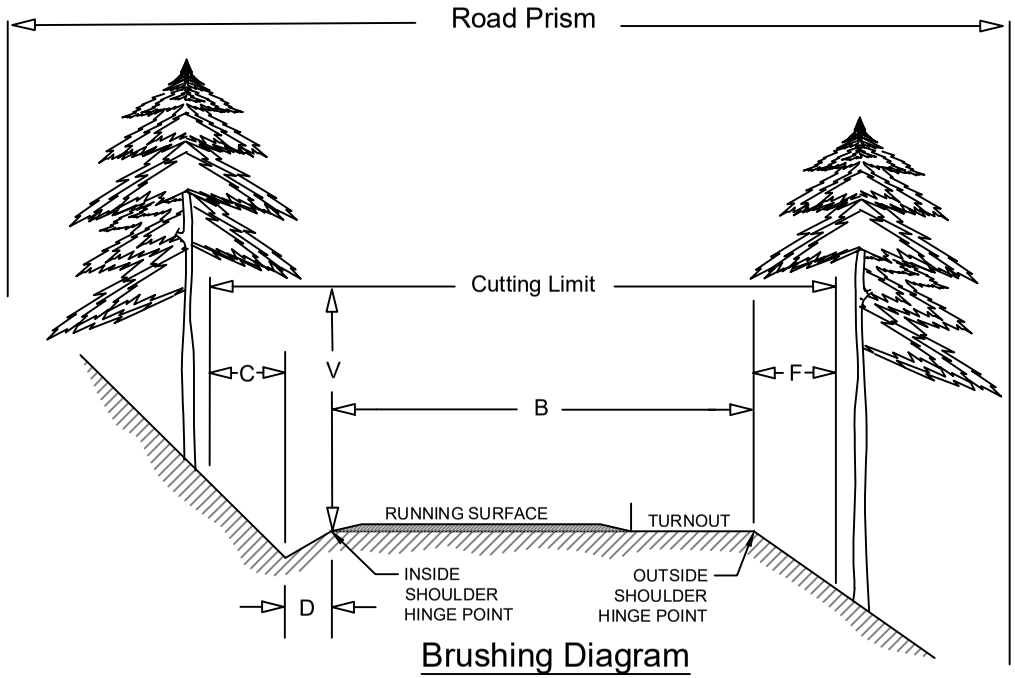
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE
TIMBER SALE
TYPICAL ROAD RENOVATION

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-C5	

EXHIBIT C6



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.

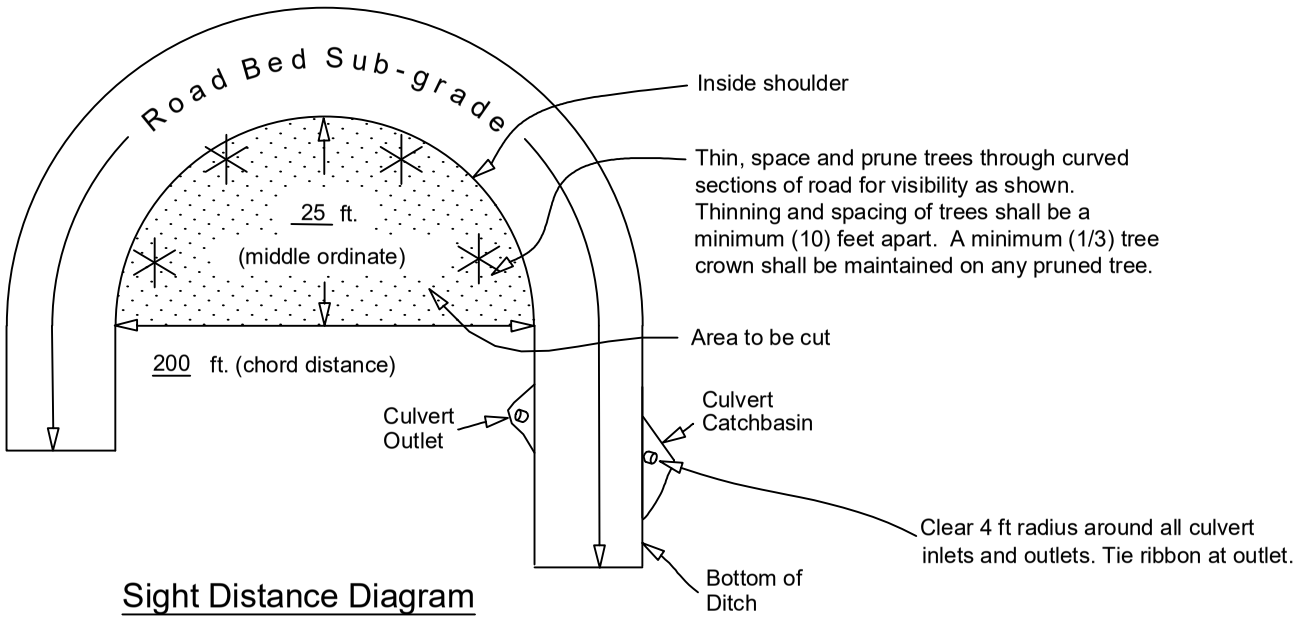
C = 4 ft - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to maximum height of 4".

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

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

V = 14 ft - Height of vertical cutting limit

Inside Corner



Sight Distance Diagram

All distances shown are horizontal except for V

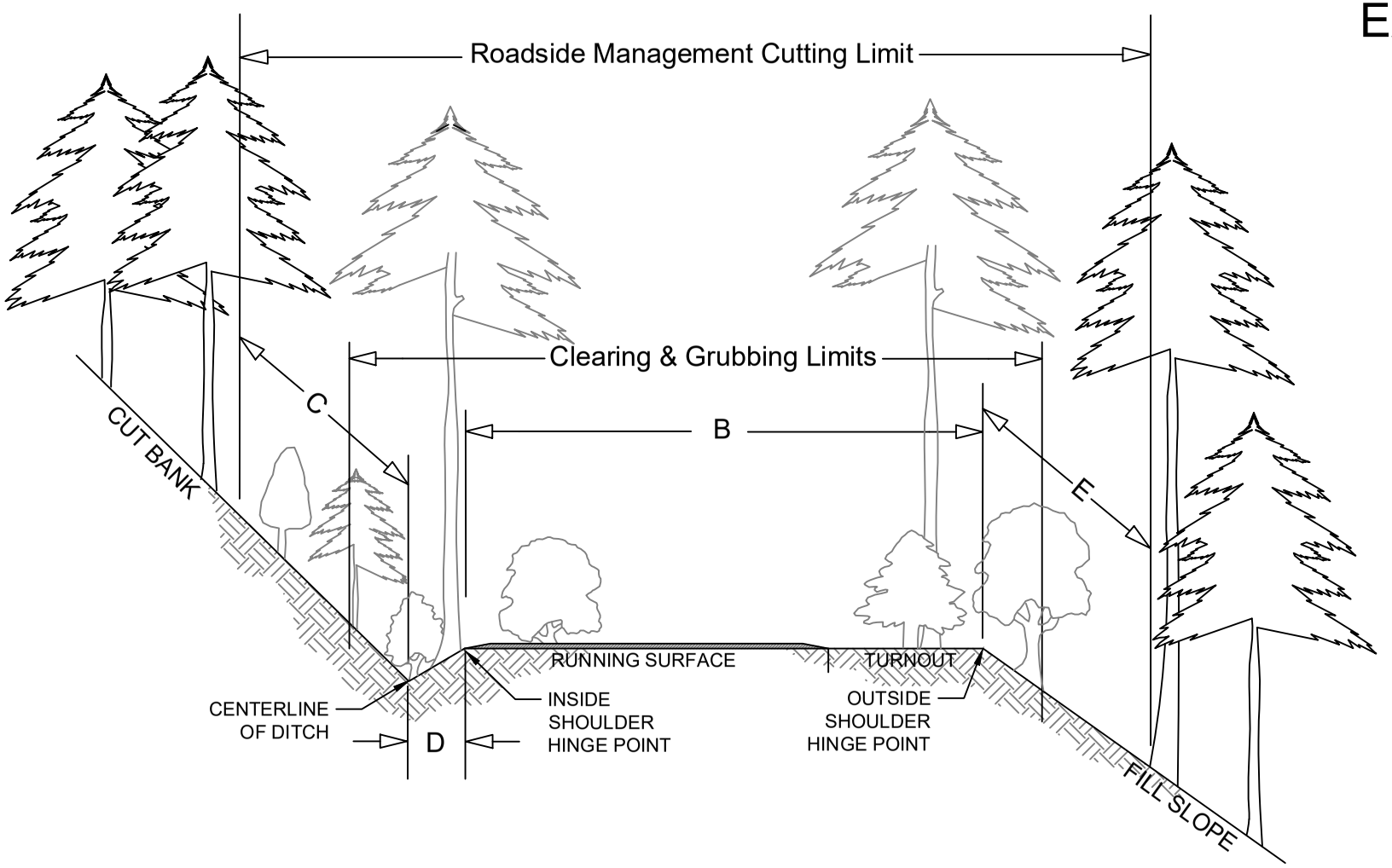
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TYPICAL ROADSIDE BRUSHING DETAIL

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-C6	

EXHIBIT C7



Roadside Management Unit Cutting Limits = C + D + B + E

C = 15 ft - Distance to remove all trees on cut slope beyond centerline of ditch. Variable slope distance as specified in timber sale specifications. Cut all trees. Remove all tree stumps from centerline of ditch to 4 ft slope distance up the cut bank (grind/pop).

D = Centerline of ditch to inside shoulder hinge point. Cut all trees. Remove all tree stumps from inside shoulder hinge point to centerline of ditch (grind/pop).

B = Road Running Surface (includes turnouts). Cut all trees. Remove all tree stumps from road running surface and turnouts.

E = 15 ft - Distance to remove all trees on fill slope beyond outside shoulder hinge point. Variable slope distance as specified in timber sale specifications. Cut all trees. Remove all tree stumps from outside shoulder hinge point to 4 ft slope distance down the fill slope (grind/pop).

NOTES:

1. All stumps shall be grubbed and disposed of at a waste disposal site or other approved locations. Stump holes shall be filled (if needed) with suitable material and compacted.
2. Any stumps along cut banks and fill slopes that will impede road maintenance equipment shall be removed (grind/pop).
3. Seed and mulch disturbed areas along cut banks and fill slopes in accordance with the Soil Stabilization Specifications (1800).

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE ROADSIDE MANAGEMENT UNIT DETAIL

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-C7	

CULVERT LOCATIONS										DOWNSPOUTS						PADS –	
DESIGNED						AS BUILT				1/2 ROUND		FULL ROUND		RECT. FLUME			
ROAD NO.	STATION OR M.P.	SIZE	GAGE	LENGTH	SKEW ANGLE	STATION OR M.P.	SIZE	GAGE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SPLASH NEEDED YES/NO	REMARKS
37–6–36.00 H	0.43	24"	16	44'												YES	Installation Type 3
38–5–07.01	0.04	24"	16	40'												YES	Installation Type 3
	0.08	24"	16	40'												YES	Installation Type 3
	0.10	24"	16	50'												YES	Installation Type 1
	0.19	18"	16	40'												YES	Installation Type 2
38–5–15.00 J	7.60	24"	16	42'												YES	Installation Type 3
	7.78	24"	16	36'												YES	Installation Type 3
	7.95	24"	16	44'												YES	Installation Type 3
	8.29	24"	16	42'												YES	Installation Type 2
	8.33	24"	16	42'												YES	Installation Type 3
	8.64	18"	16	38'												YES	Installation Type 3
38–5–17.00 A–B	0.09	24"	16	40'												YES	Installation Type 1
	0.43	24"	16	60'												YES	Installation Type 3
	0.68	24"	16	40'												YES	Installation Type 3
	0.77	30"	14	60'												YES	Installation Type 1
	1.00	24"	16	40'												YES	Installation Type 1
	1.20	24"	16	44'												YES	Installation Type 3
38–5–17.00 C	2.74	18"	16	34'												NO	TEMPORARY INSTALL
	2.77	18"	16	40'												NO	TEMPORARY INSTALL
	2.85	24"	16	44'												NO	TEMPORARY INSTALL
38–5–17.02	0.05	24"	16	60'												YES	Installation Type 1
	0.13	24"	16	50'												YES	Installation Type 1
	0.78	18"	16	40'												YES	Installation Type 2
38–5–18.02	0.10	18"	16	40'												NO	TEMPORARY INSTALL
	0.21	18"	16	40'												NO	TEMPORARY INSTALL
	0.23	18"	16	40'												NO	TEMPORARY INSTALL
	0.29	18"	16	40'												NO	TEMPORARY INSTALL
38–5–19.01	0.12	24"	16	60'												YES	Installation Type 1
	0.28	18"	16	40'												YES	Installation Type 3
	0.32	24"	16	50'												YES	Installation Type 2

NOTES:

A. Designed culvert lengths and locations are approximate. Actual lengths and locations will be staked in the field.
B. Summary of quantities are shown on drawing Exhibit C–3 (Estimate of Quantities).
C. All culverts and bands shall be aluminized.
D. Downspouts shall be connected to culvert outlets via Turner Style connection.
E. All downspouts are 16 guage unless otherwise noted.
F. Splash pads are estimated at 2CY each.
G. See Exhibit C–9 for Culvert Installation Types.
H. Temporary culverts to be removed after completion of log haul.

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

PENN BUTTE CULVERT LIST

DRAWN: JAB SCALE: AS SHOWN
DATE: DECEMBER 2023 SHEET 1 OF 2
DRAWING NO. ORM07-TS-2024.0003-C8-1

CULVERT LOCATIONS										DOWNSPOUTS						SPLASH PADS -	REMARKS
DESIGNED						AS BUILT				1/2 ROUND		FULL ROUND		RECT. FLUME			
ROAD NO.	STATION OR M.P.	SIZE	GAGE	LENGTH	SKEW ANGLE	STATION OR M.P.	SIZE	GAGE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SIZE	LENGTH	SPLASH NEEDED YES/NO	
38–5–31.01 A–B	0.01	18"	16	36'												YES	Installation Type 3
	0.07	24"	16	44'												YES	Installation Type 1
	0.19	24"	16	40'												YES	Installation Type 1
	0.29	18"	16	40'												YES	Installation Type 3
	0.42	24"	16	40'												YES	Installation Type 3
	0.50	24"	16	44'												YES	Installation Type 3
	0.59	24"	16	44'												YES	Installation Type 1
	0.74	24"	16	50'												YES	Installation Type 1
	0.92	24"	16	54'												YES	Installation Type 1
	0.94	24"	16	40'												YES	Installation Type 1
	1.05	24"	16	40'												YES	Installation Type 1
	1.24	24"	16	48'												YES	Installation Type 1
	1.32	24"	16	44'												YES	Installation Type 1
38–5–31.03 A–B	0.13	24"	16	40'												YES	Installation Type 3
38–6–25.00 A	0.25	24"	16	48'												YES	Installation Type 1
	0.32	24"	16	50'												YES	Installation Type 1
	0.55	24"	16	40'												YES	Installation Type 2
38–6–25.02	0.34	18"	16	36'												YES	Installation Type 3
38–6–25.05	0.09	18"	16	40'												YES	Installation Type 2
	0.14	18"	16	40'												YES	Installation Type 3
39–5–05.00 A–B	0.76	24"	16	40'												YES	Installation Type 3
	1.05	18"	16	36'								18"	20'			NO	Installation Type 2
	1.52	18"	16	40'												YES	Installation Type 3
	TOTAL 18" CMP: 426 LF																
	TOTAL 18" CMP (TEMPORARY): 278 LF																
	TOTAL 24" CMP: 1,530 LF																
	TOTAL 30" CMP: 60 LF																
	TOTAL 18" Full Round: 20 LF																
	TOTAL Splash Pad Quantity: 90 CY																

NOTES:

A. Designed culvert lengths and locations are approximate. Actual lengths and locations will be staked in the field.
B. Summary of quantities are shown on drawing Exhibit C–3 (Estimate of Quantities).
C. All culverts and bands shall be aluminized.
D. Downspouts shall be connected to culvert outlets via Turner Style connection.
E. All downspouts are 16 guage unless otherwise noted.
F. Splash pads are estimated at 2CY each.
G. See Exhibit C–9 for Culvert Installation Types.
H. Temporary culverts to be removed after completion of log haul.

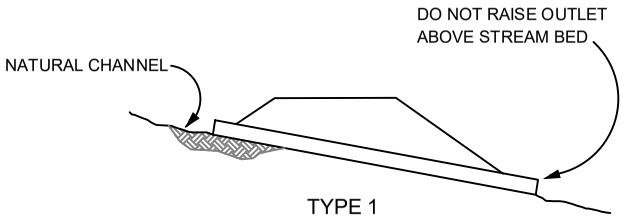
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT – MEDFORD, OREGON

PENN BUTTE CULVERT LIST

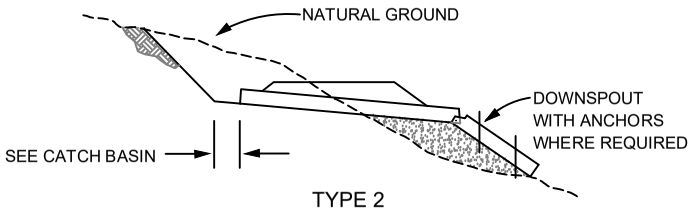
DRAWN: JAB SCALE: AS SHOWN
DATE: DECEMBER 2023 SHEET 2 OF 2
DRAWING NO. ORM07-TS-2024.0003-C8-2

EXHIBIT C9-1

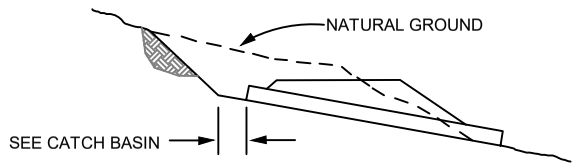
CULVERT INSTALLATION TYPES



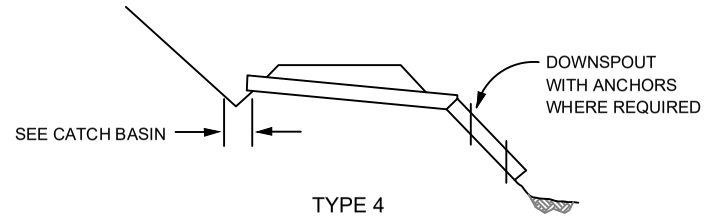
TYPE 1



TYPE 2

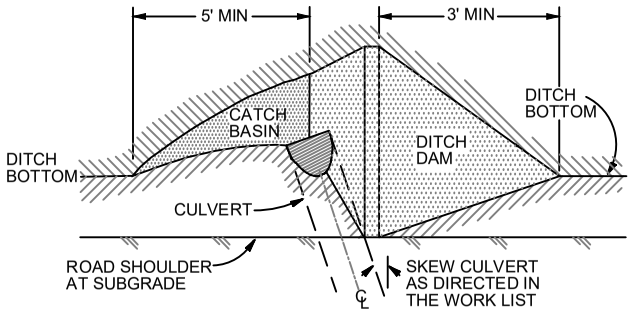


TYPE 3

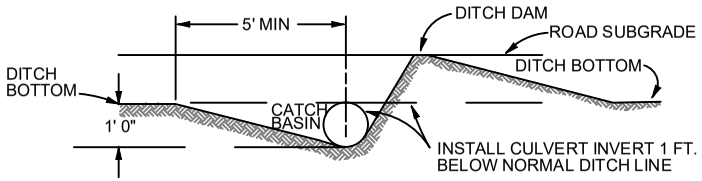


TYPE 4

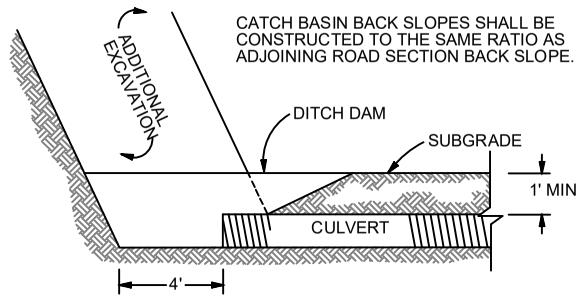
CATCH BASIN



PLAN VIEW

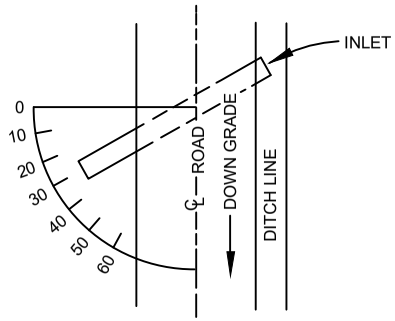


ELEVATION



CROSS SECTION AT CATCH BASIN

SKEW DIAGRAM



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

REV. NO.	DESCRIPTION	DATE	APPROV.

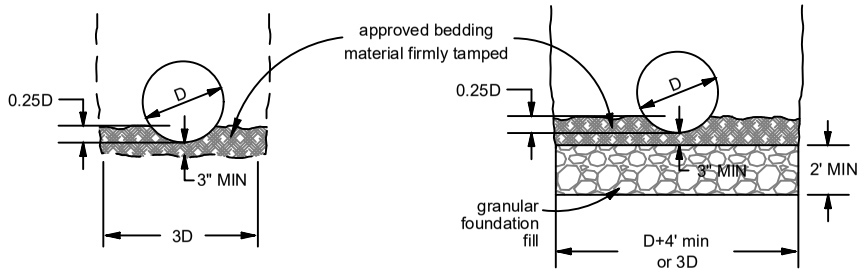
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

PENN BUTTE CULVERT INSTALLATION DETAILS

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 2
DRAWING NO.: ORM07-TS-2024.0003-C9-1	

EXHIBIT C9-2

BEDDING OF CULVERTS



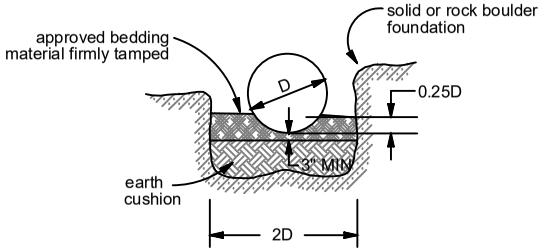
BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT.

BEDDING OF CULVERTS ON STABLE NATURAL GROUND FOUNDATION OR COMPACTED EMBANKMENT

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

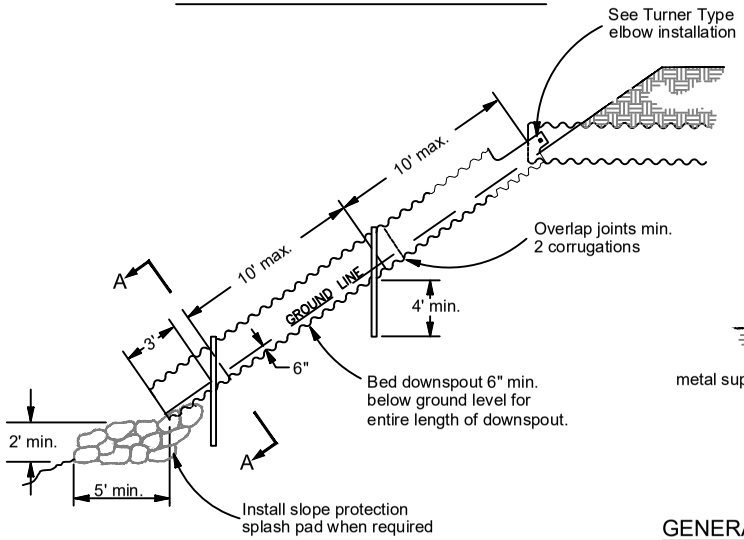
BEDDING OF CULVERTS ON SOFT SPONGY OR UNSTABLE SOIL FOUNDATION

BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION

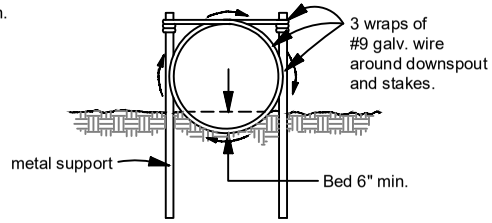


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS AND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

FULL ROUND DOWNSPOUT



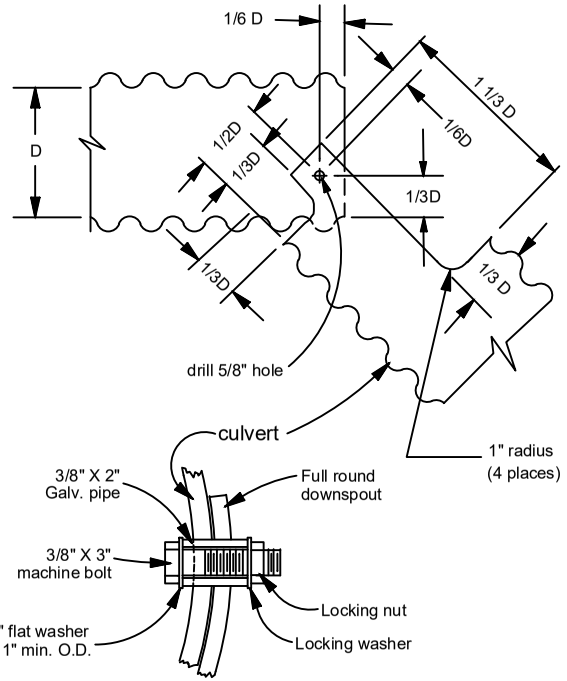
SECTION A-A



GENERAL NOTES:

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

TURNER TYPE ELBOW



BOLT DETAIL

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

REV. NO.	DESCRIPTION	DATE	APPROV.

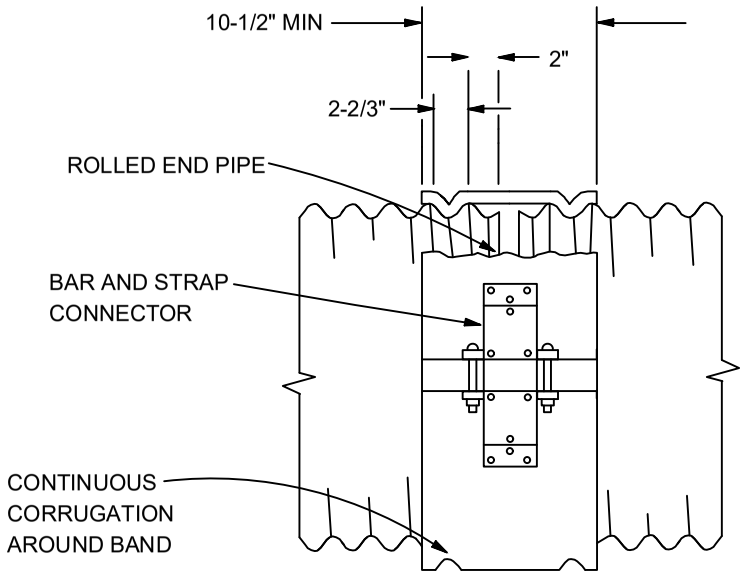
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

PENN BUTTE CULVERT INSTALLATION DETAILS

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 2 OF 2
DRAWING NO.: ORM07-TS-2024.0003-C9-2	

EXHIBIT C10

CSP "HUGGER" COUPLER BANDS



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

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

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

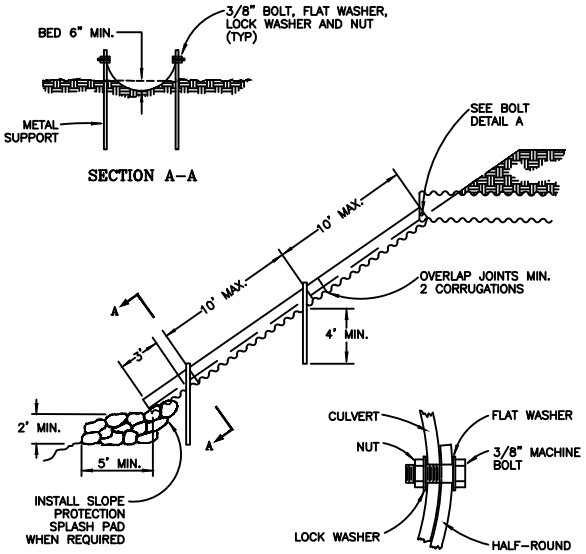
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE CULVERT BAND DETAIL

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-C10	

EXHIBIT C11

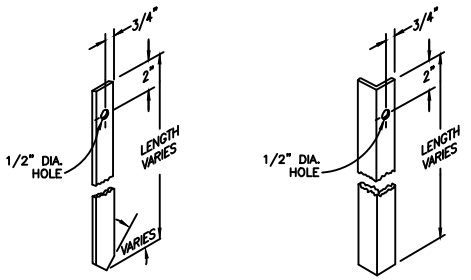


JOIN PIPE CULVERT TO STARTER SECTION AS SHOWN. FIELD DRILL 5/8" DIA. THRU STARTER SECTION AND CULVERT AND INSTALL 3/8" X 2" BOLTS, FLAT WASHERS, LOCK WASHERS AND NUTS.

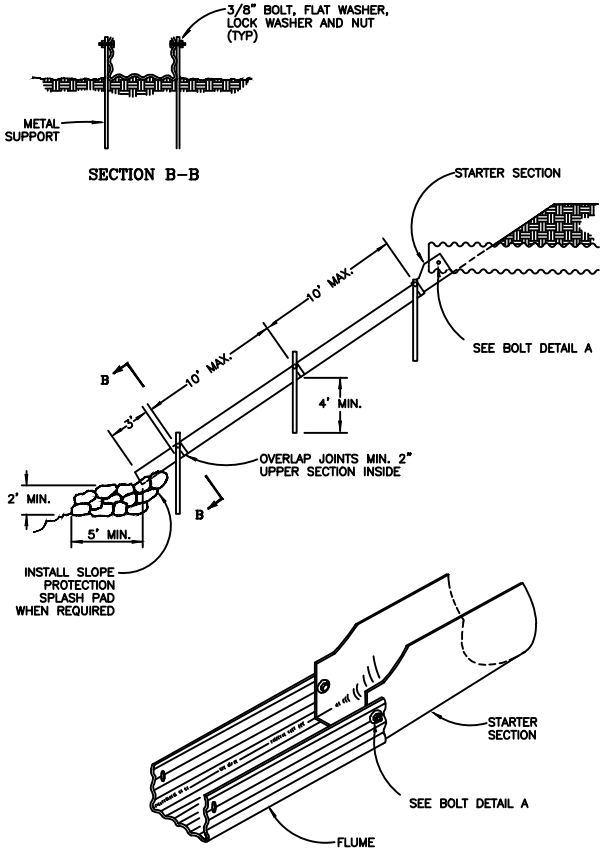
HALF ROUND DOWNSPOUT

NOTE:

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



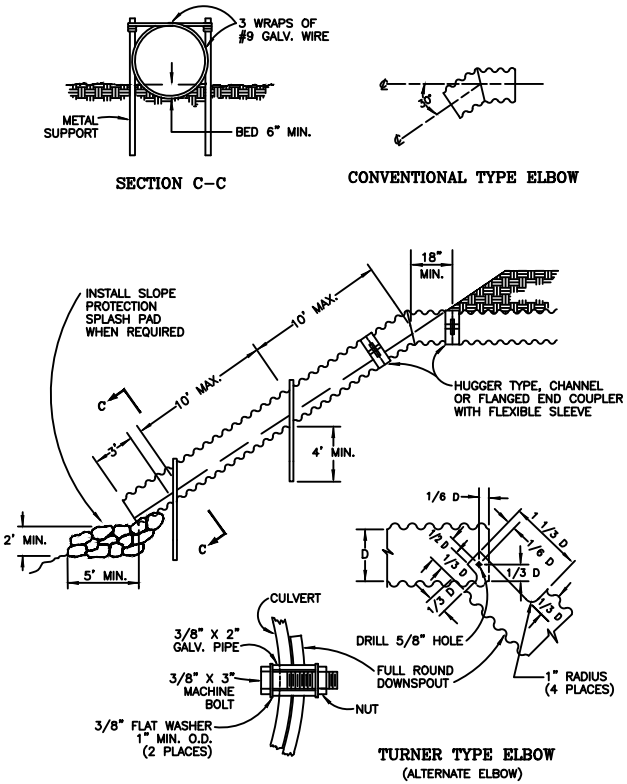
METAL SUPPORT DETAIL



RECTANGULAR FLUME

NOTE:

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



FULL ROUND DOWNSPOUT

NOTE:

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

GENERAL NOTES

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

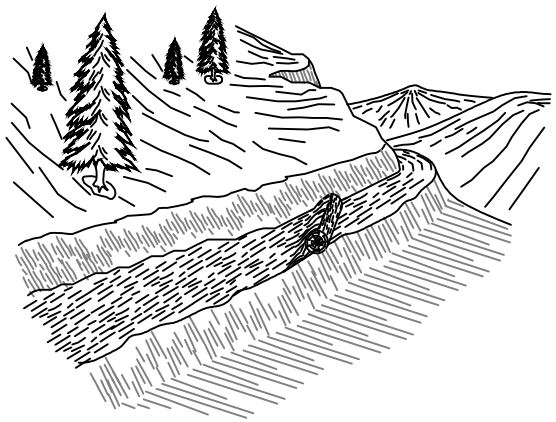
REV. NO.	DESCRIPTION	DATE	APPROV.

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

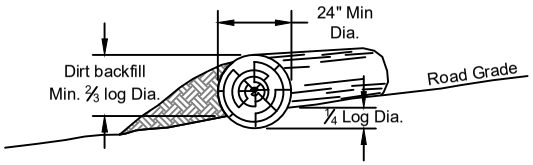
PENN BUTTE DOWNSPOUT INSTALLATION DETAILS

DRAWN BLM	SCALE NONE
DATE DECEMBER 2023	SHEET 1 OF 1
DRAWING NO. ORM07–TS–2024.0003–C11	

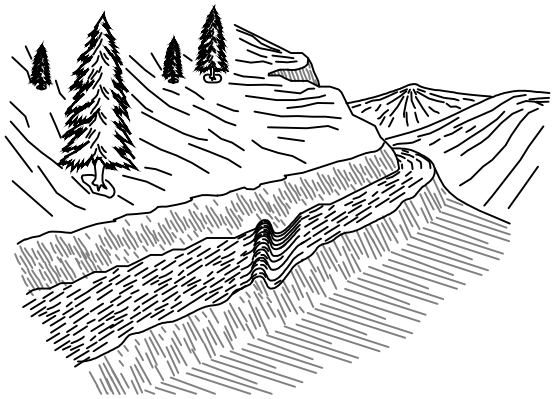
EXHIBIT C12-1



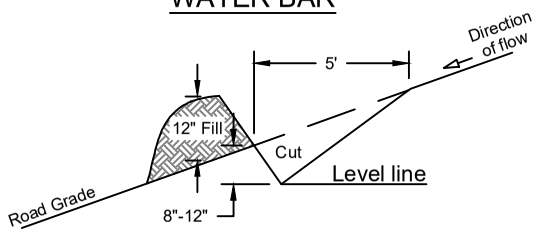
LOG BARRICADE



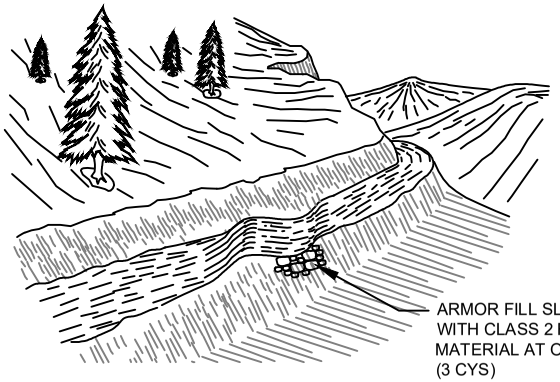
1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Roads Work List.
3. All barricades shall be skewed 30 degrees.
4. The log length shall extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".



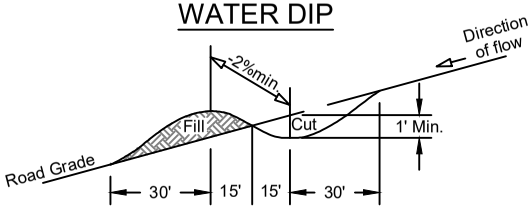
WATER BAR



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



WATER DIP



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

WATER BAR SPACING* BY EROSION CLASS^

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

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

^ The erosion classes include the following rock types:

High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.

Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.

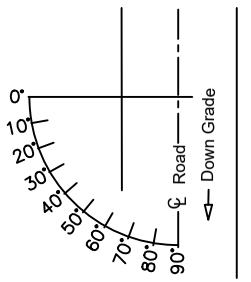
Low: Metasediments, metavolcanics, and hard shale.

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



REV. NO.	DESCRIPTION	DATE	APPROV.

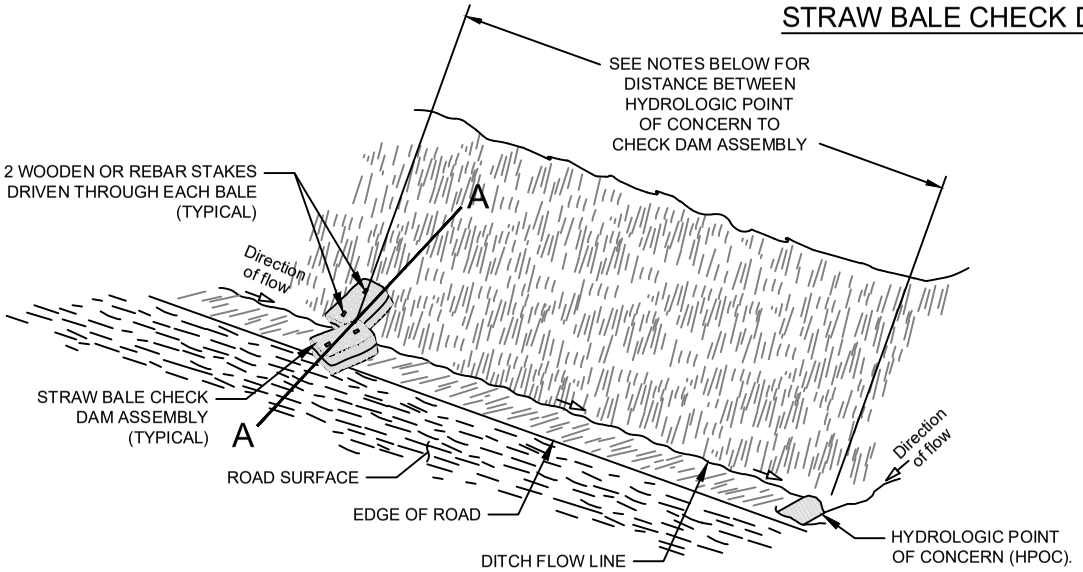
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

PENN BUTTE DRAINAGE & EROSION CONTROL DETAILS

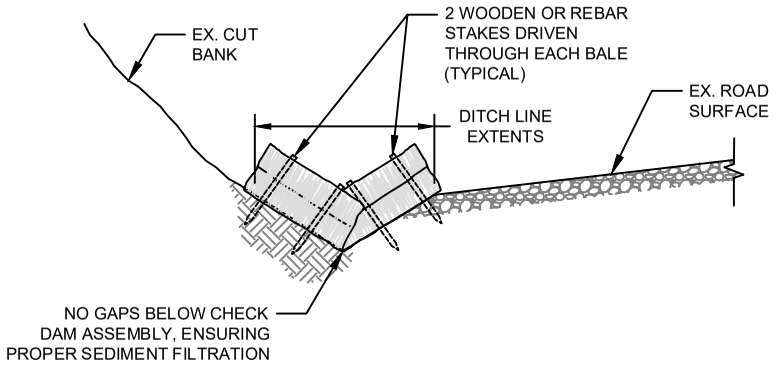
DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 2
DRAWING NO.: ORM07-TS-2024.0003-C12-1	

EXHIBIT C12-2

STRAW BALE CHECK DAM ASSEMBLY



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.

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE DRAINAGE & EROSION CONTROL DETAILS

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 2 OF 2
DRAWING NO.: ORM07-TS-2024.0003-C12-2	

This page intentionally left blank

Road Renovation Work List

Definitions:

AGG = Aggregate	DO = Ditch out	Pvt = Private (Industry, Citizen)
BST = Bituminous	JCT = Junction/Intersection	SEG = Segment
CMP = Corrugated Metal Pipe	MP = Mile Post	STA = Station
CY = Cubic Yard	NAT = Natural Surface	WDS = Waste Disposal Site

Road Renovation/Construction

The road renovation/construction work list consists of road work to be performed by the Purchaser's Representative and/or Contractor prior to timber hauling per Section 42(B)(2) of the contract Special Provisions. This work includes, but not limited to, clearing and grubbing; excavation for road construction; compacting, watering, blading and/or rolling the road surface; clearing and reshaping ditch lines; cleaning or enlarging catch basins and outlets; cleaning the entire barrel of all culverts; furnishing and replacing corrugated metal pipes (culverts); constructing armored water dips (AWDs); maintaining and/or constructing water dips; spot rocking, surfacing or resurfacing roads with crushed rock aggregate; slide removal; seeding and mulching; constructing barricades; and removing all down trees from roadways. All road work shall comply with the contract Special Provisions, Specifications, and Exhibits. Outfall protection for all water dips and armored water dips shall have 3 CY of class II riprap used.

Roadside Brushing

This consists of work to be performed by the Purchaser's Representative and/or Contractor prior to timber hauling per Section 42(B)(2) of the contract Special Provisions. This work includes, but not limited to, brushing 4 horizontal feet up the cut bank slope from the centerline of ditch and 4 horizontal feet down the fill slope from the outside shoulder hinge point of the road; removing brush at the inlet and outlet of existing culverts; and removing brush, limbs, and small diameter trees along the roadway to improve sight distance. All vegetation to be cut and disposed of will be 7 inches in diameter at breast height or less (≤ 7" DBH). Disposal from roadside brushing will be lop and scatter unless otherwise noted as chipping in the work list. **In areas where the road crosses through private (industry or civilian) property, conifer trees shall be pruned rather than cut down.** Brush shall be cut to meet regular specifications. All work shall comply with the contract Special Provisions, Specifications, and Exhibits.

Roadside Management Units

This work includes, but not limited to, removing merchantable and non-merchantable trees 15 feet up the cut bank slope from the centerline of ditch and 15 feet down the fill slope from the outside shoulder hinge point of the road as designated in the contract as Roadside Management Units. All vegetation to be cut and removed will be greater than 12 inches in height and less than 25 inches (*in general**) in diameter at breast height (DBH). All roadside management units will be tagged and marked with beginning and ending locations. Merchantable trees in sections outside of identified timber sale units are marked with blue tracer paint. Sections within timber sale units will not be marked with paint, but will also have tags identifying beginning and ending locations.

**In general refers to any tree ≥ 24" DBH hindering culvert replacements or road renovation/construction activities (typically within the 4' Roadside Brushing extents) can be cut and removed.*

All stumps left after removal of trees that may hinder road maintenance operations, including culvert replacements and road renovation/construction activities, will be removed. Any damage that occurs to the road subgrade during stump removal will be properly repaired. Any loose material that remains on site shall be compacted or disposed of at areas designated by the Authorized Officer. Stumps that will

not hinder road maintenance operations can be left in place. All disturbed areas shall be seeded and mulched. All remaining brush and limbs from tree removal operations shall either be chipped or piled and burned in locations designated by the Authorized Officer in accordance with roadside brushing disposal methods in the Roadside Brushing Specifications (2100). All work shall comply with the contract Special Provisions, Specifications, and Exhibits.

37-6-36.00 H Road – Spencer Creek – AGG – Sub: 16Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-15.00. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface.
0.10	Existing CMP.
0.25	Existing CMP.
0.43	Replace existing 18” cross drain culvert with a 24” x 44’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.66	Jct. w/ TR 26-1A left. End road renovation and brushing and chipping.

38-5-07.01 Road – Honey Wallow A Sp – AGG – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-17.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Begin roadside management unit.
0.04	Replace existing 18” cross drain culvert with a 24” x 40’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.08	Replace existing 18” cross drain culvert with a 24” x 40’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.10	Replace existing 18” draw culvert with a 24” x 50’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.12	Timber unit 18-1F boundary right.
0.16	Reshape water dip.
0.19	Replace existing 18” cross drain culvert with an 18” x 40’ CMP with a splash pad. Culvert installation shall be a Type 2 (refer to Culvert Installation Details Sheet for installation type).
0.21	Existing CMP.
0.23	Timber unit 18-1F boundary right.
0.26	Timber unit 18-1E boundary left.
0.27	Reshape water dip.
0.29	Timber unit 18-1E boundary left.
0.30	Timber unit 18-1E boundary left.
0.32	Jct. w/ TR 18-1F right (new temporary road construction).
0.35	Reshape water dip. Timber unit 18-1F boundary right.
0.36	Timber unit 18-1E boundary left.
0.38	Existing CMP.
0.47	Existing CMP.

0.49 Timber unit 18-1E boundary left.
0.51 Timber unit 18-1E boundary left.
0.56 Reshape water dip.
0.57 Existing CMP. Timber unit boundary 18-1F right.
0.60 End road renovation and roadside brushing and chipping. End roadside management unit.

38-5-15.00 A-I Road – Powell Creek – BST – Sub: 16Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ Water Gap Road (County). Begin road renovation which includes clearing and reshaping ditch lines; clearing all culvert inlets and outlets; and cleaning all debris or obstructions from inside culverts. Ditch material should be bunched, loaded, and hauled to waste disposal sites approved by the Authorized Office.
0.17	Existing cattleguard.
0.74	Property line (into BLM). Existing cattleguard. End segment A.
0.93	Jct. w/ un-numbered road left.
1.01	Property line (into private). End segment B.
2.09	Property line (into BLM). End segment C.
2.61	Jct. w/ 38-5-17.02 right.
3.07	Jct. w/ 38-5-17.00 right. End segment D.
3.23	Jct. w/ 38-5-17.01 left (gated).
3.45	End segment E.
4.27	Jct. w/ 38-5-19.00 left (gated). End segment F.
4.38	Jct. w/ 38-5-19.01 right (gated).
4.93	End segment G.
5.55	Jct. w/ 38-6-25.03 right (barricaded).
5.95	Jct. w/ 38-6-25.01 left (gated).
6.14	Timber unit 25-1A boundary right.
6.23	Jct. w/ 38-6-25.02 left. Timber unit 25-2 boundary left.
6.28	Jct. w/ 38-6-25.00 left (gated) and 38-6-25.05 left (gated). Timber unit 25-2 boundary left. Timber unit 25-1B boundary left. End segment H.
6.76	Timber unit 25-1A boundary right.
6.80	Timber unit 25-1B boundary left.
6.86	Timber unit 25-1A boundary right.
6.88	Timber unit 25-1C boundary left.
6.93	Timber unit 25-1A boundary right.
7.03	End segment I.
7.08	Timber unit 25-1C boundary left.
7.16	Jct. w/ 38-6-26.00 right (barricaded).
7.26	Timber unit 26-1E boundary right.
7.44	Timber unit 26-1E boundary right.
7.50	End BST. Designated waste disposal site left.

38-5-15.00 J Road – Powell Creek – AGG – Sub: 16Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
7.50	Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface.

7.55 Jct. w/ operator spur 26-1D left. Timber unit 26-1B right. Timber unit 26-1D boundary left. Begin scarifying ruts.
7.58 Timber unit 26-1D boundary left.
7.60 Replace existing 18" cross drain culvert with a 24" x 42' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
7.78 Replace existing 18" cross drain culvert with a 24" x 36' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
7.88 Timber unit 26-1C boundary left.
7.91 End scarifying ruts. Timber unit 26-1C boundary left.
7.93 Timber unit 26-1C boundary left.
7.95 Replace existing 18" cross drain culvert with a 24" x 44' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
7.98 Timber unit 26-1C boundary left.
8.04 Existing CMP.
8.16 Existing CMP.
8.23 Timber unit 26-1B boundary right.
8.29 Replace existing 18" cross drain culvert with a 24" x 42' CMP with a splash pad. Culvert installation shall be a Type 2 (refer to Culvert Installation Details Sheet for installation type).
8.33 Replace existing 18" cross drain culvert with a 24" x 42' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
8.45 Existing CMP.
8.56 Existing CMP.
8.64 Replace existing 18" cross drain culvert with an 18" x 38' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
8.85 Jct. w/ 37-6-36.00 left and right. End road renovation.

38-5-17.00 A-C Road –Wallow Creek ML – AGG/NAT – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-17.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Begin roadside management unit.
0.01	Existing CMP.
0.09	Replace existing 24" draw culvert with a 24" x 40' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type). Old existing gate.
0.15	Existing CMP.
0.22	Existing CMP.
0.27	Existing CMP.
0.32	Jct. w/ un-numbered road right.
0.33	Existing CMP – Wallow Creek.
0.43	Replace existing 18" cross drain culvert with a 24" x 60' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.49	Existing CMP.
0.59	Existing CMP.
0.63	Jct. w/ 38-5-18.01 left (barricaded).
0.65	Existing CMP.
0.67	Timber unit 18-2 boundary left.

0.68 Replace existing 18" cross drain culvert with a 24" x 40' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.76 Timber unit 18-2 boundary left.
0.77 Replace existing 24" draw culvert with a 30" x 60' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.89 Existing CMP. Wallow Creek.
0.93 Existing CMP.
1.00 Replace existing 18" draw culvert with a 24" x 40' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
1.10 Existing CMP.
1.14 Jct. w/ 38-5-18.02 right (barricaded). Timber unit 18-1A boundary right.
1.20 Replace existing 18" cross drain culvert with a 24" x 44' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
1.26 Existing CMP.
1.29 Jct. w/ 38-5-18.00 left. Timber unit 18-1C boundary left. Timber unit 18-1A boundary right. End segment A.
1.31 Existing CMP.
1.38 Existing CMP. Timber unit 18-1B boundary right.
1.49 Existing CMP.
1.54 Repair failing shoulder. Rebuild fill failure by benching out and rebuilding fill with 100CY of riprap.
1.58 Existing CMP.
1.59 Timber unit 18-1B boundary right.
1.65 Timber unit 18-1C boundary left.
1.69 Existing CMP.
1.75 Jct. w/ 38-5-17.03 right (barricaded).
1.78 Existing CMP.
1.87 Existing CMP.
1.89 Timber unit 18-1D boundary left.
1.97 Timber unit 18-1D boundary left.
1.98 Existing CMP.
2.07 Existing CMP.
2.19 Existing CMP.
2.32 Existing CMP.
2.39 Existing CMP.
2.41 Existing BLM pipe gate (seasonally closed).
2.43 Existing CMP.
2.45 Jct. w/ 38-5-07.00 right.
2.53 Existing CMP.
2.57 Ditch out right.
2.61 Existing CMP.
2.68 Jct. w/ 38-5-07.01 right. End AGG surface, begin NAT surface. End road renovation. End segment B. Begin road reconstruction which includes removing and re-establishing earthen barricades, blading, watering, and rolling, installing temporary culverts, constructing water dips, and removing water bars and re-installing after use. Water dips shall have 4CY of riprap placed at outfalls to protect slopes.
2.70 Remove earth barricade. Replace after use.
2.74 Install temporary 18" x 34' CMP. Remove after use.
2.77 Install temporary 18" x 40' CMP. Remove after use.

2.79 Timber unit 18-1E boundary right.
2.85 Install temporary 24" x 44' CMP. Remove after use.
2.88 Timber unit 18-1E boundary right.
2.94 Construct water dip where culvert had been previously removed.
2.98 Water bar – replace after use.
3.00 Timber unit 18-1E boundary right.
3.03 Construct water dip where culvert had been previously removed.
3.07 Water bar – replace after use. Timber unit 18-1E boundary right.
3.10 Water bar – replace after use. Timber unit 18-1E boundary right.
3.13 Construct water dip where culvert had been previously removed. Timber unit 18-1D boundary left.
3.14 Jct. w/ operator spur 18-1E right.
3.16 Water bar – replace after use.
3.18 Timber unit 18-1D boundary left.
3.21 Timber unit 18-1E boundary right.
3.23 Construct water dip where culvert had been previously removed.
3.27 Water bar – replace after use.
3.31 Construct water dip where culvert had been previously removed.
3.34 Construct water dip where culvert had been previously removed.
3.38 Construct water dip where culvert had been previously removed.
3.42 Water bar – replace after use.
3.46 Water bar – replace after use.
3.49 Water bar – replace after use.
3.51 Construct water dip where culvert had been previously removed.
3.55 Water bar – replace after use.
3.57 Timber unit 18-1C boundary left.
3.58 Water bar – replace after use.
3.59 Timber unit 18-1C boundary left.
3.60 End road reconstruction and roadside brushing and chipping. End roadside management unit.

38-5-17.02 Road – Honeysuckle P Line – AGG – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-15.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface. Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-15. Begin roadside management unit.
0.04	Jct. w/ un-numbered road right.
0.05	Replace existing 18" draw culvert with a 24" x 60' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.09	Begin scarifying ruts.
0.13	Replace existing 18" draw culvert with a 24" x 50' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.14	End scarifying ruts.
0.20	End surfacing.
0.33	Existing CMP.

0.45 Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-15.
0.53 Existing CMP.
0.61 Existing CMP.
0.65 End surfacing.
0.72 Existing CMP.
0.78 Replace existing 18" cross drain culvert with an 18" x 40' CMP with a splash pad. Culvert installation shall be a Type 2 (refer to Culvert Installation Details Sheet for installation type).
0.89 Timber unit 17-1 boundary right.
0.92 Timber unit 17-1 boundary right.
0.95 Existing CMP.
0.99 Timber unit 17-1 boundary right.
1.15 Existing CMP.
1.23 Property boundary (into private). Timber unit 17-1 boundary right. End roadside management unit.
1.26 Large turnaround. End road renovation and roadside brushing and chipping.

38-5-18.00 A Road – Wallow Creek C Spur – AGG – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-17.00. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; and cleaning all debris or obstructions from inside culverts. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface. Timber unit 18-1C boundary right. Begin roadside management unit.
0.29	Timber unit 18-1C boundary right. End road renovation and roadside brushing and chipping. End roadside management unit.

38-5-18.02 Road – Wallow Creek Spur B – NAT – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-17.00. Begin road reconstruction which includes removing and re-establishing earthen barricades, blading, watering, and rolling, installing temporary culverts, constructing armored water dips, and removing water bars and re-installing after use, and roadside brushing and chipping. Timber unit 18-1A boundary left.
0.02	Remove earth barricade. Replace after use.
0.07	Water bar – replace after use.
0.10	Install temporary 18" x 40' CMP. Remove after use.
0.16	Water bar – replace after use.
0.18	Water bar – replace after use. Timber unit 18-1A boundary left.
0.21	Install temporary 18" x 40' CMP. Remove after use.
0.23	Install temporary 18" x 40' CMP. Remove after use.
0.26	Water bar – replace after use.
0.27	Water bar – replace after use.
0.29	Install temporary 18" x 40' CMP. Remove after use.
0.30	Water bar – replace after use.
0.33	Water bar – replace after use.
0.37	Water bar – replace after use.
0.38	Timber unit 18-1B boundary left.
0.39	Timber unit 18-1B boundary right.

0.41 Repair failing shoulder. Rebuild fill failure by benching out and rebuilding fill with 50CY of riprap.
0.43 Water bar – replace after use.
0.46 Timber unit 18-1B boundary left.
0.47 Water bar – replace after use.
0.50 Timber unit 18-1B boundary right.
0.51 Water bar – replace after use. End road reconstruction and roadside brushing and chipping.

38-5-19.01 Road – Powell Wallow Creek – AGG – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-15.00. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; and cleaning all debris or obstructions from inside culverts. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface. Begin roadside management unit.
0.01	Existing BLM pipe gate (seasonally closed).
0.04	Existing CMP.
0.12	Replace existing 18" draw culvert with a 24" x 60' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.20	Existing CMP.
0.28	Replace existing 18" cross drain culvert with an 18" x 40' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.32	Replace existing 18" draw culvert with a 24" x 50' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.36	Timber unit 19-1A boundary right. Timber unit 19-1B boundary left.
0.37	Existing CMP.
0.48	Existing CMP.
0.62	Existing CMP.
0.75	Timber unit 19-1A boundary right.
0.76	Existing CMP.
0.84	Timber unit 19-1B boundary left. End road renovation and roadside brushing and chipping. End roadside management unit.

38-5-30.00 Road – Powell Creek Spur – NAT – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-6-25.05. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading) to road specifications; clearing and reshaping ditch lines; and removing/replacing water bars. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface.
0.03	Water bar – replace after use.
0.06	Jct. w/ TR 30-2 right (new temporary road construction).
0.08	Water bar – replace after use.
0.12	Water bar – replace after use.
0.16	Water bar – replace after use.
0.19	Water bar – replace after use.
0.22	Water bar – replace after use.
0.27	End road renovation and roadside brushing and chipping.

38-5-31.01 A-B Road –Mungers Mule B Spur – AGG – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 39-5-5.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface.
0.01	Replace existing 18” cross drain culvert with an 18” x 36’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.07	Replace existing 18” draw culvert with a 24” x 44’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.19	Replace existing 18” draw culvert with a 24” x 40’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.29	Replace existing 18” cross drain culvert with an 18” x 40’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.42	Replace existing 18” cross drain culvert with a 24” x 40’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.47	Reshape existing water dip.
0.50	Replace existing 18” cross drain culvert with a 24” x 44’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.51	Timber unit 31-3 boundary left.
0.59	Replace existing 18” draw culvert with a 24” x 44’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.66	Timber unit 31-3 boundary left.
0.74	Replace existing 24” draw culvert with a 24” x 50’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.77	Jct. w/ 38-5-31.07 right. End segment A.
0.82	Jct. w/ 38-5-31.06 right (barricaded).
0.92	Replace existing 24” draw culvert with a 24” x 54’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.94	Replace existing 18” draw culvert with a 24” x 40’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.97	Timber unit 31-3 boundary left.
1.03	Timber unit 31-3 boundary left.
1.05	Replace existing 18” draw culvert with a 24” x 40’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
1.24	Replace existing 18” draw culvert with a 24” x 48’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
1.32	Replace existing 18” draw culvert with a 24” x 44’ CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
1.50	Timber unit 30-1 boundary left.
1.53	Timber unit 30-1 boundary left. End road renovation and roadside brushing and chipping.

38-5-31.03 A-B Road –Marble Gulch Mine – AGG/NAT – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 39-5-5.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions

from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface.

0.08 Existing CMP.
0.13 Replace existing 18" cross drain with a 24" x 40' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.24 Jct. w/ 38-5-31.04 right. Timber unit 31-2 boundary right. End existing AGG surface; Begin existing NAT surfacing. End segment A. Begin surfacing 14' wide with a 4" compacted depth using gradation C-1 from Table 1204 in Exhibit C-15.
0.29 Timber unit 31-2 boundary right.
0.32 Reshape existing water dip.
0.50 Jct. w/ un-numbered road left (barricaded). End surfacing.
0.51 Timber unit 31-2 boundary left and right.
0.52 Water bar – replace after use.
0.56 Water bar – replace after use.
0.60 Water bar – replace after use.
0.63 Water bar – replace after use.
0.67 Water bar – replace after use.
0.72 Water bar – replace after use. Timber unit 31-2 boundary left and right.
0.82 Timber unit 31-2 boundary left.
0.86 Water bar – replace after use.
0.91 Water bar – replace after use.
1.08 Water bar – replace after use.
1.11 End road renovation and roadside brushing and chipping.

38-6-25.00 A Road – Powell Creek Spur D – NAT – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP Description

0.00 Jct. w/ 38-5-15.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Begin roadside management unit.
0.01 Jct. w/ 38-6-25.05 left (gated).
0.02 Existing BLM pipe gate.
0.25 Replace existing 18" draw culvert with a 24" x 48' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type).
0.30 Jct. w/ un-numbered road left (barricaded).
0.32 Replace existing 18" draw culvert with a 24" x 50' CMP with a splash pad. Culvert installation shall be a Type 1 (refer to Culvert Installation Details Sheet for installation type). Rebuild fill failure with 30 CY of suitable material from cutbank at milepost 0.30.
0.35 Jct. w/ Temp 25-1D left (new temporary road construction). Timber unit 25-1D boundary left.
0.40 Timber unit 25-1D boundary left.
0.42 Existing CMP. Timber unit 25-1D boundary right.
0.45 Timber unit 25-1D boundary right.
0.55 Replace existing 18" cross drain culvert with a 24" x 40' CMP with a splash pad. Culvert installation shall be a Type 2 (refer to Culvert Installation Details Sheet for installation type).
0.63 Existing CMP.
0.76 Jct. w/ 38-6-25.04 right. End road renovation and roadside brushing and chipping. End roadside management unit.

38-6-25.02 Road – Silvertip Spur Po – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

MP	Description
0.00	Jct. w/ 38-5-15.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Remove all down logs from road prism. Begin roadside management unit.
0.25	Repair failing shoulder. Rebuild fill failure by benching out and rebuilding fill with 50CY of riprap.
0.34	Replace existing 18" cross drain culvert with an 18" x 36' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.67	End road renovation and roadside brushing and chipping. End roadside management unit.

38-6-25.04 Road –Silvertip Munger – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

MP	Description
0.00	Jct. w/ 38-6-25.00. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading) to road specifications; clearing and reshaping ditch lines; and removing/replacing water bars.
0.06	Timber unit 25-1E boundary left.
0.10	Timber unit 15-1B boundary right.
0.12	Timber unit 25-1E boundary left.
0.16	Timber unit 25-1B boundary right.
0.17	Existing CMP. End road renovation and roadside brushing and chipping.

38-6-25.05 Road –Powell Creek Spur – NAT – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-15.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements.
0.02	Existing BLM pipe gate.
0.09	Replace existing 18" cross drain culvert with an 18" x 40' CMP with a splash pad. Culvert installation shall be a Type 2 (refer to Culvert Installation Details Sheet for installation type).
0.14	Replace existing 18" cross drain culvert with an 18" x 40' CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.17	Existing CMP.
0.31	Existing CMP.
0.44	Existing CMP.
0.53	Existing CMP.
0.54	Timber unit 25-2 boundary left.
0.55	Water bar – replace after use.
0.58	Water bar – replace after use.
0.62	Existing CMP.
0.78	Existing CMP.
0.80	Water bar – replace after use.
0.87	Jct. w/ 38-5-30.00 right. End road renovation and roadside brushing and chipping.

38-6-26.00 Road – Powell Creek D Spur – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

MP	Description

0.00 Jct. w/ 38-5-15.00 road. Begin road reconstruction which includes roadside brushing and chipping; and reshaping road surface (blading) to road specifications. Scarify road ruts, potholes, wash boards, or rough areas where needed to properly reshape road surface.
0.02 Remove earth barricade. Replace after use.
0.24 End road reconstruction and roadside brushing and chipping.

38-6-35.02 Road – Munger Creek C Spur– AGG – Sub: 14Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-6-36.00 road. Begin road renovation which includes roadside brushing and chipping; reshaping road surface (blading, watering, and rolling) to road specifications; clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Timber unit 35-1 boundary left.
0.04	Existing CMP.
0.07	Existing BLM pipe gate.
0.10	Existing CMP.
0.13	Begin roadside management unit.
0.16	Existing CMP.
0.17	Timber unit 35-1 boundary left.
0.22	Existing CMP.
0.31	Existing CMP.
0.46	Existing CMP.
0.57	Existing CMP.
0.63	Existing CMP.
0.66	Timber unit 25-1E boundary left.
0.77	Timber unit 25-1E boundary left.
0.78	Existing CMP.
0.81	Timber unit 25-1E boundary left and timber unit 25-1G boundary right.
0.92	Timber unit 25-1E boundary left.
0.95	Property line (into private). Timber unit 25-1G boundary right. End road renovation and roadside brushing and chipping. End roadside management unit.

38-6-36.00 A-B Road – Munger Creek North – BST/AGG – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 39-5-06.01 road. Begin road renovation which includes roadside brushing and chipping, clearing and reshaping ditch lines; clearing all culvert inlets and outlets; and cleaning all debris or obstructions from inside culverts. Ditch material should be bunched, loaded, and hauled to waste disposal sites approved by the Authorized Office.
0.31	Existing bridge.
0.33	Jct. w/ 38-6-35.02 right (gated). End segment A. End BST. Begin aggregate surface. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications. Continue clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements. Continue roadside brushing and chipping.
0.38	Existing BLM pipe gate.
0.40	Jct. w/ 38-6-35.03 left.
0.67	Existing CMP.
0.82	Existing CMP.
0.90	Jct. w/ 38-6-35.04 left.

1.03 Existing CMP.
1.09 Existing CMP.
1.19 Timber unit 35-1 boundary right.
1.28 Designated waste disposal site left.
1.30 Jct. w/ 38-6-35.06 left. End road renovation and roadside brushing and chipping.

39-5-05.00 A-B Road – Marble Gulch – BST/AGG – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ Caves Camp Road (County). Begin road renovation which includes roadside brushing and hauling debris off; clearing and reshaping ditch lines; clearing all culvert inlets and outlets; and cleaning all debris or obstructions from inside culverts. Ditch material should be bunched, loaded, and hauled to waste disposal sites approved by the Authorized Office.
0.07	Jct. w/ driveway left.
0.08	Jct. w/ driveway left.
0.24	Jct. w/ driveway right.
0.25	Jct. w/ driveway left and Jct. w/ driveway right.
0.30	Property line (into BLM). Existing cattleguard. End segment A. End BST. Begin aggregate surface. Begin road renovation which includes reshaping road surface (blading, watering, and rolling) and roadside brushing and chipping (end hauling brush) to road specifications. Continue clearing and reshaping ditch lines; cleaning all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; replacing culverts; and spot rocking with 20CY of ASC over culvert replacements.
0.41	Existing BLM pipe gate.
0.47	Jct. w/ 38-5-31.03 right.
0.48	Existing CMP.
0.57	Existing CMP.
0.68	Existing CMP.
0.76	Replace existing 18” cross drain culvert with a 24” x 40’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
0.89	Existing CMP.
0.95	Existing CMP.
1.05	Replace existing 18” cross drain culvert with an 18” x 36’ CMP with a 20’ full round downspout. Culvert installation shall be a Type 2 (refer to Culvert Installation Details Sheet for installation type).
1.13	Jct. w/ 38-5-31.05 left.
1.15	Designated waste disposal site left.
1.22	Timber unit 31-1B boundary left.
1.34	Timber unit 31-1B boundary left.
1.37	Timber unit 31-1E boundary right.
1.41	Timber unit 31-1A boundary left.
1.43	Timber unit 31-1A boundary left.
1.49	Timber unit 31-1E boundary right.
1.51	Jct. w/ 38-5-31.00 right.
1.52	Replace existing 18” cross drain culvert with an 18” x 40’ CMP with a splash pad. Culvert installation shall be a Type 3 (refer to Culvert Installation Details Sheet for installation type).
1.63	Existing CMP.
1.77	Timber unit 31-1D boundary left.
1.95	Existing CMP.
2.07	Jct. w/ un-numbered private road left (gated).

2.13 Jct. w/ 38-5-31.01 right. End road renovation and roadside brushing and chipping.

39-5-06.01 A-B Road – Mungers Creek – BST – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ Cedar Flat Road (County) and 39-5-06.00. Begin road renovation which includes clearing and reshaping ditch lines; clearing all culvert inlets and outlets; and cleaning all debris or obstructions from inside culverts. Ditch material should be bunched, loaded, and hauled to waste disposal sites approved by the Authorized Office.
0.30	Jct. w/ 39-6-06.01 right.
0.60	Jct. w/ 39-6-01.02 left. End segment A.
1.80	Jct. w/ 38-6-36.00 right. End road renovation and roadside brushing and chipping.

Temporary Routes and Operator Spurs

All Temporary Roads and Operator Spurs are NAT surface, unless noted otherwise. Subgrade width shall not exceed 15 feet (not including turnouts and truck turnarounds). Slash from clearing operations can be scattered to a maximum depth of 8" over fill slopes in lieu of seeding and mulching or can be scattered over roadbed after use is complete to a maximum depth of 8" in lieu of seeding and mulching (See Exhibit D2, Specification 3506).

OS 18-1E Operator Spur – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-17.00. Begin operator spur construction to road specifications.
1+00	Construct end landing area. End operator spur construction.

TR 18-1F Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-07.01. Begin temp road construction to road specifications.
11+62	Construct end landing area. End temp road construction.

TR 25-1D Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-6-25.00. Begin temp road construction to road specifications.
5+28	Construct end landing area. End temp road construction.

TR 26-1A Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 37-6-36.00 road. Begin temp road reconstruction to road specifications, which includes, but is not limited to shaping road surface to road specifications.
4+44	End temp road reconstruction. Begin temp road construction to road specifications.
8+24	Construct end landing area. End temp road construction.

OS 26-1D Operator Spur – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-15.00. Begin operator spur construction to road specifications.
1+00	Construct end landing area. End operator spur construction.

TR 30-2 Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-30.00. Begin temp road construction to road specifications.
6+33	Construct end landing area. End temp road construction.

This page intentionally left blank

SPECIAL PROVISIONS

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

2. DAMAGE:
   - The Purchaser's Representative/Contractor shall protect, and is responsible for, any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements as required in Section 14. Damage to utilities and 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. PERMITS:
   - All permits required are the responsibility of the Purchaser.

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

ACTIVITY	START DATE	END DATE
Road renovation	May 15	Oct. 15
In stream	July 1	Sept. 15

5. STREAMS:
   - All stream channel culverts and inlets shall be cleared and cleaned between **July 1st and September 15th** in accordance with Oregon Department of Fish and Wildlife (ODFW) in-stream work period guidelines.
   - Construct silt fences 25 and 50 feet below culvert replacement sites (on live streams) to trap sediment and prevent it from entering nearby stream channels.
   - Live streams shall be diverted around or through the work area in a manner that will minimize sedimentation downstream. Keep excavation site dewatered so that installation of culverts can be carried out only under dry conditions. Dispose of excess water by using natural drainage ways or devices near the site to the extent of their natural capacity and in a manner that will avoid damage to adjacent property. Utilize dewatering methods such as temporary sediment traps and/or silt fences for areas to be excavated. Provide for downstream water flow without significant transport of excavated material or sediment during construction. At no time shall turbidity limits exceed DEQ's water quality standards.
   - Ensure that all large wood is retained in the stream channel during culvert cleaning activities by moving logs which had accumulated on the upstream side of a culvert to the downstream side of the culvert.

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

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

8. SOIL STABILIZATION:
   - All disturbed soil shall be seeded and mulched. The Purchaser's Representative/Contractor shall apply native grass seed and certified weed free straw mulch for soil stabilization operations. The Purchaser shall supply native seed and certified weed free straw. Native seed and certified weed free straw may be purchased from the BLM, **if available**.

9. ROAD RENOVATION:
   - Road renovation shall generally take place between May 15th and October 15th of the same year. Waivers may be granted from the Authorized Officer for working outside of this time period. Seasonal restrictions for stream work and wildlife may still apply.
   - Loose material cleaned from ditch lines and/or slide material shall not be sidecast or placed where it can enter wetlands, riparian reserves, floodplains, and waters of the State.
   - Suspend ground-disturbing activity if projected forecasted rain will saturate soils to the extent that there is potential for movement of sediment from the road to wetlands, floodplains, and waters of the State. Cover or temporarily stabilize exposed soils during work suspension. Upon completion of ground-disturbing activities, immediately stabilize fill material over stream crossing structures. Measures could include but are not limited to erosion control blankets and mats, soil binders, soil tackifiers, or placement of slash.

10. ROADSIDE BRUSHING
    - 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 scattered downslope or chipped according to Exhibit C-15. Use of Excavators for brush removal will be at the discretion of the Authorized Officer. **All culvert inlets and outlets shall be brushed for a radius of 4 feet.**
    - While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C-6) shall have the branches pruned rather than being felled.
    - All stumps, designated by the Authorized Officer, which would interfere with normal blading and road renovation operations (including turnouts), shall be removed in such a way as to not cause damage to the drainage ditch or the roadbed.

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

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

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

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

15. CULVERT REMOVAL:
    - When removing culverts unless constructing armored water dips, pull slopes back to the natural slope, or at least 1.5:1, to minimize sloughing, erosion, and the potential for the stream to undercut stream banks during periods of high stream flows. Remove excess sediment from stream channels during culvert removal, replacement, and installation activities. Apply seed and mulch to all disturbed or exposed soils at each stream culvert removal site.

16. WET SEASON HAUL
    - The Purchaser may wet season haul, with the Authorized Officer's approval, on roads with durable rock surfacing and sufficient rock depth to resist rutting or development of sediment on road surfaces that drain directly to wetlands, floodplains, and waters of the State.

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

TIMBER SALE ROAD SPECIFICATIONS

TABLE OF CONTENTS

GENERAL – 100

101 - Prework Conference(s):

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

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Road Centerline - The longitudinal center of a roadbed.

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

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

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

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

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

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

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

Spalls - Flakes or chips of stone.

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

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

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

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

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

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

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

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

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

Timber - Standing trees, downed trees, or logs which can be measured in board feet.
Traveled Way - The portion of the roadbed used for the movement of vehicles, exclusive of shoulders.

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

fill.

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

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

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

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

102a - Tests Used in These Specifications:

AASHTO T 11	Quantity of rock finer than No. 200 sieve.
AASHTO T 27	Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.
AASHTO T 89	Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.
AASHTO T 90	Plastic limits and plasticity index of soil. a. Plastic limit - lowest water content at which the soil remains plastic. b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.
AASHTO T 96	Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.
AASHTO T 99	Relationship between soil moisture and density of soil. Method A - 4" mold, soil passing a No. 4 sieve 25 blows/layer & 3 layers. Method C - 4" mold, soil passing a 3/4 inch sieve 25 blows/layer & 3 layers. Method D - 6" mold, soil passing a 3/4 inch sieve. 56 blows/layer & 3 layers.
AASHTO T 119	Slump of hydraulic cement concrete.
AASHTO T 152	Air content of freshly mixed concrete.

AASHTO T 166 Specific Gravity of compacted Bituminous Mixtures.

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

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

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

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

AASHTO T 209 Maximum Specific Gravity of Bituminous Paving Mixtures.

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

AASHTO T 224 Correction for coarse particles in the soil.

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

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

ASTM D 4564 Determination of relative density of cohensionless soils.

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

103 - Compaction equipment shall meet the following requirements:

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

The distance between circumferential rows of tamper feet shall be such that the diagonal distance from any foot to the nearest foot in each adjacent row shall be not more than 12 inches. The cross-sectional area of the face of each tamper foot, measured

perpendicular to the axis of the stud, shall be not less than 5-1/2 square inches nor more than 8 square inches.

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

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

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

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

103h - Drum drive self-propelled vibratory grid roller. The unit shall consist of one cylindrical drum with a drum diameter of not less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibratory frequency shall be regulated in seeps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of not less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced not more than 8-1/2 inches apart.

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

CLEARING AND GRUBBING - 200

201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions

and typical cross sections shown on the plans and as staked on the ground.

202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 10 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.

202b - Where clearing limits for **roadside management units** have not been staked or shown on the plans, the limits shall extend 4 feet back of the top of the cut slope and 4 feet outside of the outside slope lines.

203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsections 202 and 202b as shown on the plans.

203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.

204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a, 204c, 204d, and 204e between the top of the cut slope and the toe of the fill slope.

204a - Stumps **including those overhanging cut banks**, shall be removed within the required excavation limits.

204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.

204d - On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.

204e - Roots and embedded wood material shall be removed to a depth not less than 1 foot below embankment subgrades or slope surfaces.

205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections.

206 - Clearing and grubbing debris shall be disposed of by burning in accordance with Subsection 207 and/or piling in accordance with Subsection 211 at the following road locations.

Road No.	From M.P./Sta	To M.P./Sta	Activity Type	Disposal Method
38-5-07.01	0.00	0.60	Roadside Management Unit	Pile
38-5-17.00 A-B	0.00	2.68	Roadside Management Unit	Pile
38-5-17.00 C	2.68	3.60	Roadside Management Unit	Pile
38-5-17.02	0.00	1.2	Roadside Management Unit	Pile
38-5-18.00 A	0.00	0.29	Roadside Management Unit	Pile
38-5-19.01	0.00	0.84	Roadside Management Unit	Pile
38-6-25.00 A	0.00	0.76	Roadside Management Unit	Pile
38-6-25.02	0.00	0.67	Roadside Management Unit	Pile
38-6-35.02	0.13	0.95	Roadside Management Unit	Pile
TR 18-1F	0+00	11+62	Road Construction	Pile
TR 25-1D	0+00	5+28	Road Construction	Pile
TR 26-1A	0+00	8+24	Road Construction	Pile
TR 30-2	0+00	6+33	Road Construction	Pile
OS 18-1E	0+00	1+00	Road Construction	Pile
OS 26-1D	0+00	1+00	Road Construction	Pile

207 - The Purchaser shall prepare a burning plan for the disposal of clearing and grubbing debris in accordance with local and state laws, rules, and regulations and complying with the requirements for burning operations as set forth under Subsections 207a and 207b of these specifications. The plan shall be approved in writing by the Authorized Officer prior to burning.

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

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

207b - The Purchaser may use a burning method of his own choosing which complies with the requirements of Subsection 207a and has the prior written approval of the Authorized Officer.

208b - Trees, firm logs, and other firm large pieces, 4 inches in diameter and 8 feet in length and larger and not removed from the contract area by the Purchaser, shall be piled at locations determined by the Authorized Officer.

209 - Clearing and grubbing debris shall be reduced to chips of an acceptable size and disposed of by scattering.

211 - Disposal of clearing and grubbing debris and stumps and cull logs shall be by piling on government lands outside of established clearing limits in an area and in a manner acceptable to the Authorized Officer.

212 - No grading will be permitted prior to completion and approval by the Authorized Officer of the required clearing and grubbing work, except that stump grubbing may proceed with the excavation of the road prism.

213 - No clearing or grubbing debris shall be left lodged against standing trees.

EXCAVATION AND EMBANKMENT - 300

301 - This work shall consist of excavating, overhaul, placement of embankments, backfilling, borrowing, leveling, ditching, grading, insloping, outsloping, crowning and scarification of the subgrade, compaction, disposal of excess and unsuitable materials, and other earth-moving work in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

302 - Excavation shall also consist of the excavation of road and landing cut sections, borrow sites, backfilling, leveling, ditching, grading, compaction, and other earth moving work necessary for the construction of the roadway in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.

303 - Suitable material removed from the excavation shall be used in the formation of embankment subgrade, shoulders, slopes, bedding, backfill for structures, and for other purposes as shown on the plans.

304 - Borrow shall consist of suitable material required for the construction of embankments or for other portions of the work; such material shall be obtained from sources selected by the Purchaser at his option and approved by the Authorized Officer.

305 - Embankment construction shall consist of the placement of excavated and borrowed materials, backfilling, leveling, grading, compaction, and other earth- moving work necessary for the construction of the roadway and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.

305a - Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, frozen material, and other deleterious materials

and shall be placed and compacted as specified.

305b - Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Roadway embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth.

305c - Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock not larger than 12 inches in the greatest dimension shall be placed in successive layers not exceeding 2 feet in thickness.

306 - Layers of embankment material, final subgrade, and selected roadway excavation material as specified under Subsections 305a, 305b, and 317 shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f, 103g, 103h, and 103i.

306e - The final subgrade shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103f, 103g, 103h, and 103i. Minimum compaction shall be 1 hour of continuous compacting for each 6 stations of road or a fraction of as measured along the center line of the constructed road.

306f - Compaction of embankment layers placed as specified under Subsection 305b above shall be accomplished by routing construction equipment over full width of embankment structures.

306g - All fill slopes shall be compacted to 75 percent of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.

308 - In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.

309 - The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance not less than 1 foot and not more than 3 feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or blasting.

311 - In solid rock cuts where pockets that will not drain are formed by blasting below the subgrade elevation, drainage shall be provided by ditching to the edge of the subgrade and backfilling to grade, and compacting the pockets and the ditch with rock fragments, gravel, or other suitable porous material.

312 - When material, except solid rock, encountered in cuts at subgrade, is suitable for use in

forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with these specifications.

313 - In cut areas where solid rock is encountered at, or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.

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

316 - Borrow material from sources selected at the Purchaser's option shall be inspected and approved in writing by the Authorized Officer prior to placement.

317 - Selected borrow shall consist of talus material, finely broken rock, gravel, or other material of granular or favorable characteristics from sources shown on the plans.

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

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

320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.

321 - Excess excavated, unsuitable, or slide materials shall not be disposed on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsection 321c. Materials not disposed of in this manner shall be retrieved and disposed of at the Purchaser’s expense and at the direction of the Authorized Officer.

321c - End-dumping will be permitted for the placement of excess materials under

Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.

323 - In the construction of channel changes and stream-crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.

324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.

327 - The finished grading shall be approved in writing by the Authorized Officer for the total project. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

PIPE CULVERTS – 400

401 - This work shall consist of furnishing and installing pipe culverts, full round downspouts, and splash pads in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer upon installation of the appurtenance structures. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.

403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.

404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated, steel pipe and aluminum-rich paint on aluminum or aluminum-coated pipe.

405a - Corrugated-**aluminized** steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218, AASHTO M 274, or AASHTO M 289 as specified on the plans.

406 - Coupling bands shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 with the exception of band widths and the "Hugger"-type band which shall conform to the details, dimensions, and typical diagram shown on

the plans.

406a - "Hugger"-type coupling bands shall only be used with annular corrugated pipe and pipe-arch culverts, or helically corrugated pipe and pipe-arch culverts having annular reformed ends. Annular reformed ends shall consist of two annular corrugations.

407b - Full round culvert downspouts conforming to the material and construction requirements shall be constructed for culverts as shown on the plans and at the following locations:

Road No.	M.P.	Connection Type
39-5-05.00 B	1.05	Turner Style

408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.

410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.

411 - Trenches necessary for the installation of pipe culverts shall conform to the lines, grades, dimensions, and typical diagram included in the plans and in Exhibit C9, the Culvert Installation Detail Sheet.

412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with BLM stockpiled crushed rock or crushed rock material in accordance with Section 1200 gradation C-1.

413 - Pipe culverts shall be bedded on BLM stockpiled crushed rock, crushed rock material in accordance with Section 1200 gradation C-1, or fine readily compactable soil material having a depth of not less than 6 inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with fine, readily compactable soil, crushed rock material from stockpiles shown on the plans, or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or

otherwise interfere with proper compaction.

417 - For pipe culvert, side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in layers not exceeding 6 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers until a uniform density of 85 percent of the maximum density, is attained as determined by AASHTO T 99, Method C.

418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.

419 - The pipe culverts after being bedded and backfilled as required by these specifications shall be protected by a 2-foot cover of fill before heavy equipment is permitted to cross the drainage structures. Removal of the protection fill shall be as directed by the Authorized Officer.

423 - Construction of catch basins and ditch dams conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for all culverts.

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

425 - Where pervious materials are used for backfill and bedding, collars consisting of selected impervious material shall be placed at the inlet and at various intervals along the pipe barrel as shown on the plans and as directed by the Authorized Officer.

427 - Record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.

428 - Remove and dispose of old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the work site within 3 working days of completion of the culvert replacement work for each road.

429 - Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site in a manner that will avoid damage to adjacent property. Provide for downstream waterflow with no more that 10% increase in natural stream turbidity due to transport of excavated material or sediment during construction. Diversion streams shall not be returned to the natural channel until all in-stream work has been completed.

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans, and as marked on the ground with stakes.

501a - This work shall include the removal and disposal of slides in accordance with these specifications and as marked on the ground with stakes.

502 - The existing road surface shall be scarified (where needed) to its full width and to a depth of 6 inches to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.

502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.

502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.

504 - Scarified material and existing road surfaces shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f, 103g, 103h, and 103i and as specified in the worklist.

504a - Minimum compaction required shall be 1 hour of continuous rolling for each 5 stations of road, or fraction thereof, as measured along the centerline per layer of material.

506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

507 - Existing and new drainage structures listed in Exhibit C8 (culvert list), shall be replaced and placed with structures of the type, gauge, diameter, and length shown on the plans and in accordance with the placement requirements set forth under section 400 of these specifications.

508 - Vegetation encroaching on the roadbed and the drainage ditches of existing roads shall be removed by cutting and disposed of in accordance with Subsection 2100 of these

specifications.

509 - The finished grading shall be approved in writing by the Authorized Officer 3 days prior to surfacing operations. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations.

WATERING - 600

601 - This work shall consist of furnishing and applying water required for the compaction of embankments, roadbeds, backfills, base courses, surface courses, finishing and reconditioning of existing roadbeds, laying dust, or for other uses in accordance with these specifications.

602 - Water, when needed for compaction or laying dust, shall be applied at the locations, in the amounts, and during the hours as directed by the Authorized Officer. Amounts of water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications, and for laying dust during work periods.

603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the road bed.

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

AGGREGATE BASE COURSE - 900
SCREENED ROCK MATERIAL

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

902a - Screened rock materials to be used in this work may be obtained from commercial sources selected by the Purchaser, at his option, providing the rock materials furnished comply with these specifications and the sources are approved in writing by the Authorized Officer prior to use.

903 - Screened rock material shall conform to the following gradation requirements:

Table 903

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

Sieve Designation	Gradation			
	A	B	C	D
4 inch	**100**			
3 inch	**95-100**	100		
2 inch		95-100	100	
1-1/2 inch			95-100	100
1 inch				95-100
No. 4	**11-44**	16-49	21-54	26-59
No. 200	**2-15**	2-15	0-15	0-15

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

904a - Screened rock material shall show a durability value of not less than 35 as determined by AASHTO T 210.

905 - The roadbed as shaped and compacted under sections 300 and 500 of these specifications, shall be approved in writing by the Authorized Officer prior to placement of screened rock materials. Notification for final inspection, prior to rocking, shall be 72 hours prior to that inspection and shall be 5 days prior to start of rock operations.

906 - Screened rock material shall be placed in layers not to exceed 6 inches in thickness. Where the required total thickness is more than 6 inches, the rock material shall be shaped and compacted in two or more layers of approximately equal thickness.

906a - Screened rock materials used to repair or reinforce a soft, muddy, frozen, yielding, or rutted subgrades shall not be construed as surfacing under this specification.

907 - Filler or binder material obtained from sources shown on the plans and approved by the Authorized Officer shall be uniformly blended with the screened rock material on

the road. Filler or binder materials shall be free from stones, vegetative matter, and other deleterious materials.

908 - Screened rock material shall be blade-processed and spread to required dimensions. Processing shall be performed in such a manner as to minimize aggregate segregation.

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

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

1201 - This work shall consist of furnishing, loading, hauling and placing one or more layers of crushed rock material on roadbeds and base courses approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the road at the purchaser's expense.

1202 - Crushed rock materials used in this work shall consist of quarry rock, stone, gravel, or other approved materials obtained from BLM stockpiles shown on the plans.

1202a - Crushed rock materials used in this work may be obtained from commercial source(s) selected by the Purchaser, providing the rock materials furnished comply with these specifications.

1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.

1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1204

AGGREGATE SURFACE COURSE
CRUSHED ROCK MATERIAL
Percentage by weight passing square mesh sieves
AASHTO T 11 & T 27
GRADATION

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

1204a - The Purchaser shall be required to take one sample for each 1,000 cubic yards of crushed rock material to be utilized or a minimum of 1 sample per day, using AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures. Prior to testing, each sample shall be split, making one half of the sample, with proper identification, available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within 24 hours of sampling. The Purchaser shall provide test results for the first 500 cubic yards produced prior to commencing production crushing and hauling.

1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of 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.

1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than 35 and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.

1208 - If additional binder or filler material is necessary to meet the grading or plasticity

requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.

1208a - Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.

1209 - Shaping and compacting of roadbed or base course shall be completed and approved in writing, prior to placing crushed rock material, in accordance to the requirements of Subsections 300 and 500 for placing on the roadbed and landings and Subsection 900 for placing on the base course. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 5 days prior to start of surfacing operations.

1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed and base course in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and staked on the ground. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved in writing by the Authorized Officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.

1210a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification.

1212 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to the requirements of Subsections 103f, 103g, 103h, or 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

SLOPE PROTECTION - 1400

1401 - This work shall consist of furnishing, hauling, and placing stone materials for splash pads in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross- sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the

slope protection structure at the purchaser's expense and as directed by the Authorized Officer.

1402 - Stone material shall consist of hard angular quarry rock of such quality that it will not disintegrate on exposure to water or weathering and shall be graded in accordance with these specifications.

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

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

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

1405 - Rip rap shall conform to the following gradations:

TABLE 1405

Class	Approx. Cubic Dimension (inches)	Sphere Diameter (inches)	% of Total Volume Smaller than Size of Stone
1	6-8	8	100
	5-6	6	80
	2-5	6	50
	0-2	2	10
2	**8-10**	**12**	**100**
	6-8	**8**	**80**
	3-6	**6**	**50**
	0-3	**4**	**10**
	14-16	21	100
	10-14	18	80

3	5-10	12	50
	0-5	6	10
4	18-20	24	100
	14-18	22	80
	6-14	18	50
	0-6	8	10
5	26-28	36	100
	20-26	32	80
	8-20	25	50
	0-8	10	10
6	28-34	42	100
	22-28	34	80
	10-22	27	50
	0-10	12	10

*Rocks smaller than six inches in diameter are not counted.

1406 - The placement of slope protection stones by the end dumping method shall be conducted to prevent the stones from escaping beyond the embankment toe.

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

1410 - The embankment slopes at the following locations:

Road No.	From M.P.	To M.P.
38-5-18.02	0.41	0.41

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.

EROSION CONTROL - 1700

1701 - This work shall consist of measures to control soil erosion or water pollution during the maintenance, reconstruction, and construction operations through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.

1703 - This work shall consist of furnishing and installing sediment fences below draw culvert replacements in accordance with these specifications and in reasonably close conformity with the lines and grades as directed by the Authorized Officer.

1704 - The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800.

1705 - The surface area of erodible earth material exposed at any one time by clearing and grubbing shall not exceed 21,780 square feet (0.50 acres) after October 15 without prior approval by the Authorized Officer.

1706 - The surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way shall not exceed 21,780 square feet (0.50 acres) after October 15 without prior approval by the Authorized Officer.

1706a - The Purchaser shall perform, during the same construction season, erosion control measures, on all exposed excavation, borrow, and embankment areas.

1707 - Completed and partially completed segments of roads at the following locations:

Road No.	From M.P.	To M.P.
TR 18-1F	0+00	11+62
TR 25-1D	0+00	5+28
TR 26-1A	0+00	8+24
TR 30-2	0+00	6+33
OS 18-1E	0+00	1+00
OS 26-1D	0+00	1+00

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

1708 - Newly constructed roads to be carried over the winter period, shall be blocked to vehicular traffic.

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

1711 - The Purchaser shall construct catch basins and energy dissipators (splash pads) for pipe culverts conforming to the requirements and details shown on the respective exhibits and on the plans.

1713 - Where newly constructed logging spur roads join with existing surfaced roads, the

Purchaser shall construct a sag in the spur road profile and install a culvert in accordance with the requirements and details as shown on the plans.

SOIL STABILIZATION – 1800

1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications. This work is required for road acceptance under Section 18 of this contract.

1802 - Soil stabilization work consisting of seeding and mulching shall be performed on existing roads and designated locations in accordance with these specifications at the following locations:

Road No.	From M.P./Sta	To M.P./Sta	Activity Type
37-6-36.00 H	0.00	0.66	Culvert Replacements
38-5-07.01	0.00	0.60	Culvert Replacements
38-5-15.00 J	7.50	8.85	Culvert Replacements
38-5-17.00 A-B	0.00	2.68	Culvert Replacements
38-5-17.02	0.00	1.26	Culvert Replacements
38-5-19.01	0.00	0.84	Culvert Replacements
38-5-31.01 A-B	0.00	1.53	Culvert Replacements
38-5-31.03 A-B	0.00	1.11	Culvert Replacements
38-6-25.00 A	0.00	0.76	Culvert Replacements
38-6-25.02	0.00	0.67	Culvert Replacements
38-6-25.05	0.00	0.87	Culvert Replacements
39-5-05.00 A-B	0.00	2.13	Culvert Replacements
TR 18-1F	0+00	11+62	Road Construction
TR 25-1D	0+00	5+28	Road Construction
TR 26-1A	0+00	8+24	Road Construction
TR 30-2	0+00	6+33	Road Construction
OS 18-1E	0+00	1+00	Road Construction
OS 26-1D	0+00	1+00	Road Construction

1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, culvert replacements, landings, disturbed areas, and disposal sites in accordance with these specifications and as shown on the plans.

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

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

If soil stabilization of disturbed areas is not completed by the specified fall date, the

Purchaser shall treat disturbed areas in accordance with Subsection 1707 and then complete the requirements of Section 1800 the next construction season. The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

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

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

1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser in the amounts specified under Subsection 1811 and applied in accordance with Subsection 1812.

1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.

1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.

1810 - Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.

1811 - The Purchaser shall furnish and apply to approximately **3.55** acres designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806a, a mixture of grass seed and mulch material at the following rate of application:

a. Two Stage:

Grass Seed	20 lbs./acre
Mulch	2,000 lbs./acre

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

1814 - The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.

1815 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.

1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipaker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.

1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.

1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.

1822 - No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.

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

ROADSIDE BRUSHING - 2100

2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet (Exhibit C-6) of this exhibit, at designated locations as shown in the plans.

2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment and/or manually with hand tools, including chain saws.

2103 - Vegetation cut manually and/or mechanically less than 6 inches in diameter when measured at D.B.H. shall be cut to a maximum height of 1 inch above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 2-inch area will be severed from the trunk.

2103a - Vegetation shall be cut and removed from the roadbed between the outside shoulder(s) and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. Limbs below the 1-inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts

shall be parallel to the ground line or running surface.

2104 - Trees more than 7 inches in diameter at D.B.H. shall be delimbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 7 inches in diameter for sight distance or safety may be directed by the Authorized Officer.

2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inches of the trunk to produce a smooth vertical face.

2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.

2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation more than 1 foot in height, shall be cut within these areas.

2108 - Self-propelled equipment shall not be permitted on cut and fill slopes or in ditches.

2110 - Vegetation 7 inches and smaller in diameter shall be chipped where indicated in the work list. Chips shall be scattered downslope from the roadway. Vegetation over 7 inches in diameter shall be disposed of by direction of the Authorized Officer.

2111 - Vegetation cut in the following locations shall be loaded and hauled to the designated disposal site indicated on the plans.

Road Number	From M.P.	To M.P.
39-5-05.00 A	0.00	0.30

2114 - Sections of roadway to have vegetation removed will be marked at start and stop points with one piece each of white and red ribbon and red-topped painted stakes.

2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.

2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

This page intentionally left blank

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 8.0.0.14

Summary of All Roads and Projects Updated: 11/4/2022

T.S. Contract Name: Penn Butte Tract No: ORM07-TS-24-03 Sale Date: 1/2024

Prepared by: Brown Ph: x6630 Print Date: 12/1/2023 11:46:09 AM Construction: 2.00 sta

Improve: 88.18 sta Renov: 1411.88 sta Decom: 0.00 sta Temp: 31.47 sta

200 Clearing and Grubbing: 15.6 acres $78,153.39

300 Excavation: 2175 cy $13,461.17
Haul < 500 ft: 0 sta-yds
Haul > 500 ft: 0 yd-mi

400 Drainage: $151,771.42
Culvert: 2,294.00 lf DownSpout: 20.00 lf
PolyPipe: 0.00 lf

500 Renovation: $95,345.24
Blading 18.56 mi

700-1200 Surfacing: $94,737.63
2 Stage Crushed Quarry Name: Spencer Cr Stockpile 520.00 LCY
Commercial Quarry Name: Robco 1.5" 1,333.00 LCY

1300 Geotextiles: $0.00

1400 Slope Protection: $12,748.79
Gradation Class 2: 232.00 cy

1800 Soil Stabilization: 3.65 acres $4,151.56
Includes Small Quantity Factor of 1.38

1900 Cattleguards: $0.00

2100 RoadSide Brushing: $52,765.39
Manual Brushing: 29.48 acres

2300 Engineering: 0.00 sta. $0.00

2400 Minor Concrete: $0.00

2500 Gabions: $0.00

8000 Miscellaneous: $0.00

Mobilization: Const. $31,024.00 Surf. $2,768.00..... $33,792.00

Quarry Development: $0.00

Total: 6,597 mbf @ $81.390/mbf = $536,926.58

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 37-6-36.00 H Road Name: Spencer Creek
Road Renovation: 0.66 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$2,996.10
Culvert: 44.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$2,220.15
Blading 0.66 mi	
700-1200 Surfacing:	$453.85
Quarry Name: Spencer Cr Stockpile 20.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.05 acres	$59.13
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):1.00 acres	$1,633.76
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $454.01 Surf. $29.88	$483.89
Quarry Development:	$0.00
Total:	$7,846.88

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

Road Construction Worksheet

Road Number: 37-6-36.00 H Road Name: Spencer Creek

Section 400 Drainage:
  Aluminized M.P. 0.43 24 inch 16 ga 44 lf x $63.16/lf = $2,779.04
  Splash Pads 1 ea x $217.06/ea = $217.06
  Subtotal: $2,996.10

Section 500 Renovation:
  Blading: $923.61/mi x 0.66 mi = $609.58
  Scarification: $1118.88/mi x 0.66 mi = $738.46
  Compaction: $415.02/mi x 0.66 mi = $273.91
  Clean Culverts: $501.63/mi x 0.66 mi = $331.08
  Water for Blading
   Water Truck 3000 Gal 3 hr x $89.04/hr = $267.12
  Subtotal: $2,220.15

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile
 Comment: Culvert Replacement

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

  Rock Volume = 20.00 LCY
  Production: $6.64/LCY x 20.00 LCY = $132.80
  Processing: $1.20/LCY x 20.00 LCY = $24.00
  Compaction: $1.38/LCY x 20.00 LCY = $27.60
  Grid Rolling: $3.02/LCY x 20.00 LCY = $60.40
  Basic Rock Haul cost: $1.62/LCY x 20.00 LCY = $32.40
  Rock Haul +15% grades: $2.43/LCY-mi x 20.00 LCY x 2.75 mi= $133.65
  Basic Water Haul cost: $0.79/LCY x 20.00 LCY = $15.80
  Water Haul +15% grades: $0.34/LCY-mi x 20.00 LCY x 4.00 mi= $27.20
  Subtotal: $453.85

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.05 acres = $36.53
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.05 acres = $6.60
        + Mulch Cost: $320.00/acre x 0.05 acres = $16.00
  Subtotal: $59.13

Section 2100 Roadside Brushing:
Manual Brushing
  RoadSide Brushing Medium: $948.60/acre x 1.00 acres = $948.60
  Chipping Brush
   Brush Chipper 7 hr x $97.88/hr = $685.16
  Subtotal: $1,633.76

Mobilization:
  Construction - 1.46% of total Costs = $454.01
  Surfacing - 1.08% by rock volume = $29.88
  Subtotal: $483.89

  Total: $7,846.88

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-07.01 Road Name: Honey Wallow A Sp
Road Renovation: 0.6 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.90 acres	$4,583.85
300 Excavation:	$0.00
400 Drainage:	$11,355.84
Culvert: 170.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$2,168.89
Blading 0.60 mi	
700-1200 Surfacing:	$3,462.00
Quarry Name: Spencer Cr Stockpile 80.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.20 acres	$236.52
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.90 acres	$1,441.02
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,433.51 Surf. $119.50	$1,553.02
Quarry Development:	$0.00
Total:	$24,801.14

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

Road Construction Worksheet

Road Number: 38-5-07.01 Road Name: Honey Wallow A Sp

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 0.90 = $3,666.03
Additional Roadside Work
Excavator - Large (3 CY) 6 hr x $152.97/hr = $917.82
Subtotal: $4,583.85

Section 400 Drainage:

Aluminized Milepost 0.04	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized Milepost 0.08	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized Milepost 0.10	24 inch 16 ga 50 lf x $63.16/lf	= $3,158.00
Aluminized Milepost 0.19	18 inch 16 ga 40 lf x $56.92/lf	= $2,276.80
Splash Pads	4 ea x $217.06/ea	= $868.24

Subtotal: $11,355.84

Section 500 Renovation:
Blading: $923.61/mi x 0.60 mi = $554.17
Compaction: $415.02/mi x 0.60 mi = $249.01
Clean Culverts: $501.63/mi x 0.60 mi = $300.98
Watering for Blading
Water Truck 3000 Gal 3 hr x $89.04/hr = $267.12
Additional Roadside Work
Backhoe 3 hr x $95.15/hr = $285.45
Motor Grader 14M 3 hr x $170.72/hr = $512.16
Subtotal: $2,168.89

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile
Comment: Culvert Replacements

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

Rock Volume = 80.00 LCY
Production: $6.64/LCY x 80.00 LCY = $531.20
Processing: $1.20/LCY x 80.00 LCY = $96.00
Compaction: $1.38/LCY x 80.00 LCY = $110.40
Grid Rolling: $3.02/LCY x 80.00 LCY = $241.60
Basic Rock Haul cost: $1.62/LCY x 80.00 LCY = $129.60
Rock Haul +15% grades: $2.43/LCY-mi x 80.00 LCY x 11.50 mi= $2,235.60
Basic Water Haul cost: $0.79/LCY x 80.00 LCY = $63.20
Water Haul +15% grades: $0.34/LCY-mi x 80.00 LCY x 2.00 mi= $54.40
Subtotal: $3,462.00

Section 1800 Soil Stabilization:
Dry Method with Mulch: $730.62/acre x 0.20 acres = $146.12
Includes Small Quantity Factor of 1.38
+ Seed Cost: $132.00/acre x 0.20 acres = $26.40
+ Mulch Cost: $320.00/acre x 0.20 acres = $64.00
Subtotal: $236.52

Section 2100 Roadside Brushing:
Manual Brushing
RoadSide Brushing Medium: $948.60/acre x 0.90 acres = $853.74
Chipping Brush

Road Number: 38-5-07.01 Honey Wallow A Sp Continued

Brush Chipper 6 hr x $97.88/hr = $587.28

Subtotal: $1,441.02

Mobilization:
Construction - 4.62% of total Costs = $1,433.51
Surfacing - 4.32% by rock volume = $119.50

Subtotal: $1,553.02

Total: $24,801.14

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-15.00 A-I Road Name: Powell Creek
Road Renovation: 7.5 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$12,993.91
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $801.22 Surf. $0.00	$801.22
Quarry Development:	$0.00
Total:	$13,795.13

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

Road Construction Worksheet

Road Number: 38-5-15.00 A-I Road Name: Powell Creek

Section 500 Renovation:
  Clean Culverts: $501.63/mi x 7.50 mi = $3,762.23
  Cleaning Ditches/Haul Material
   Motor Grader 14M 32 hr x $154.22/hr = $4,935.04
   Backhoe 16 hr x $99.10/hr = $1,585.60
   Dump Truck 10 cy - 2 trucks 32 hr x $84.72/hr = $2,711.04

Subtotal: $12,993.91

Section 700-1200 Surfacing:
Surfacing:
Mobilization:
  Construction - 2.58% of total Costs = $801.22

Subtotal: $801.22

Total: $13,795.13

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-15.00 J Road Name: Powell Creek
Road Renovation: 1.35 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$16,476.28
Culvert: 244.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$4,514.13
Blading 1.35 mi	
700-1200 Surfacing:	$2,988.48
Quarry Name: Spencer Cr Stockpile 120.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.30 acres	$354.79
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,500.45 Surf. $179.26	$1,679.70
Quarry Development:	$0.00
Total:	$26,013.38

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

Road Construction Worksheet

Road Number: 38-5-15.00 J Road Name: Powell Creek

Section 400 Drainage:

Aluminized Milepost 7.60	24 inch 16 ga 42 lf x $63.16/lf	= $2,652.72
Aluminized Milepost 7.78	24 inch 16 ga 36 lf x $63.16/lf	= $2,273.76
Aluminized Milepost 7.95	24 inch 16 ga 44 lf x $63.16/lf	= $2,779.04
Aluminized Milepost 8.29	24 inch 16 ga 42 lf x $63.16/lf	= $2,652.72
Aluminized Milepost 8.33	24 inch 16 ga 42 lf x $63.16/lf	= $2,652.72
Aluminized Milepost 8.64	18 inch 16 ga 38 lf x $56.92/lf	= $2,162.96
Splash Pads	6 ea x $217.06/ea	= $1,302.36

Subtotal: $16,476.28

Section 500 Renovation:
- Blading: $923.61/mi x 1.35 mi = $1,246.87
- Scarification: $1118.88/mi x 0.70 mi = $783.22
- Compaction: $415.02/mi x 1.35 mi = $560.28
- Clean Culverts: $501.63/mi x 1.35 mi = $677.20
- Water for Blading
  - Water Truck 3000 Gal 14 hr x $89.04/hr = $1,246.56

Subtotal: $4,514.13

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile

Comment: Culvert Replacements

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

- Rock Volume = 120.00 LCY
- Production: $6.64/LCY x 120.00 LCY = $796.80
- Processing: $1.20/LCY x 120.00 LCY = $144.00
- Compaction: $1.38/LCY x 120.00 LCY = $165.60
- Grid Rolling: $3.02/LCY x 120.00 LCY = $362.40
- Basic Rock Haul cost: $1.62/LCY x 120.00 LCY = $194.40
- Rock Haul +15% grades: $2.43/LCY-mi x 120.00 LCY x 3.80 mi= $1,108.08
- Basic Water Haul cost: $0.79/LCY x 120.00 LCY = $94.80
- Water Haul +15% grades: $0.34/LCY-mi x 120.00 LCY x 3.00 mi= $122.40

Subtotal: $2,988.48

Section 1800 Soil Stabilization:
- Dry Method with Mulch: $730.62/acre x 0.30 acres = $219.19
  - Includes Small Quantity Factor of 1.38
  - + Seed Cost: $132.00/acre x 0.30 acres = $39.60
  - + Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $354.79

Mobilization:
- Construction - 4.84% of total Costs = $1,500.45
- Surfacing - 6.48% by rock volume = $179.26

Subtotal: $1,679.70

Total: $26,013.38

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-17.00 A-B Road Name: Wallow Creek ML
Road Renovation: 2.68 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 3.90 acres	$18,945.54
300 Excavation:	$0.00
400 Drainage:	$20,295.20
Culvert: 284.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$12,214.72
Blading 2.68 mi	
700-1200 Surfacing:	$4,872.24
Quarry Name: Spencer Cr Stockpile 120.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$5,500.11
Gradation Class 2: 100.00 cy	
1800 Soil Stabilization: 0.30 acres	$354.79
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):2.60 acres	$2,239.78
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $3,972.38 Surf. $179.26	$4,151.63
Quarry Development:	$0.00
Total:	$68,574.01

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

Road Construction Worksheet

Road Number: 38-5-17.00 A-B Road Name: Wallow Creek ML

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 3.90 = $15,886.14
Roadside Additional Work
Excavator - Large (3 CY) 20 hr x $152.97/hr = $3,059.40
Subtotal: $18,945.54

Section 400 Drainage:

Aluminized Milepost 0.09	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized Milepost 0.43	24 inch 16 ga 60 lf x $63.16/lf	= $3,789.60
Aluminized Milepost 0.68	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized Milepost 0.77	30 inch 14 ga 60 lf x $80.75/lf	= $4,845.00
Aluminized Milepost 1.00	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized Milepost 1.20	24 inch 16 ga 44 lf x $63.16/lf	= $2,779.04
Splash Pads	6 ea x $217.06/ea	= $1,302.36

Subtotal: $20,295.20

Section 500 Renovation:
Blading: $923.61/mi x 2.68 mi = $2,475.27
Scarification: $1118.88/mi x 0.50 mi = $559.44
Compaction: $415.02/mi x 2.68 mi = $1,112.25
Clean Culverts: $501.63/mi x 2.68 mi = $1,344.37
Water for Blading
Water Truck 3000 Gal 27 hr x $89.04/hr = $2,404.08
Rebuild Fill Failure MP 1.54
Excavator - Large (3 CY) 8 hr x $147.20/hr = $1,177.60
Vibratory roller, Steel Drum 4 hr x $120.75/hr = $483.00
Roadside Additional Work
Backhoe 10 hr x $95.15/hr = $951.50
Motor Grader 14M 10 hr x $170.72/hr = $1,707.20
Subtotal: $12,214.72

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile
Comment: Culvert Replacements

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

Rock Volume = 120.00 LCY
Production: $6.64/LCY x 120.00 LCY = $796.80
Processing: $1.20/LCY x 120.00 LCY = $144.00
Compaction: $1.38/LCY x 120.00 LCY = $165.60
Grid Rolling: $3.02/LCY x 120.00 LCY = $362.40
Basic Rock Haul cost: $1.62/LCY x 120.00 LCY = $194.40
Rock Haul +15% grades: $2.43/LCY-mi x 120.00 LCY x 10.40 mi= $3,032.64
Basic Water Haul cost: $0.79/LCY x 120.00 LCY = $94.80
Water Haul +15% grades: $0.34/LCY-mi x 120.00 LCY x 2.00 mi= $81.60
Subtotal: $4,872.24

Section 1400 Slope Protection:
Comment: Fill Failure Repair MP 1.54
Rock Source: Robco
Purchase Price / Royalty: $20.00/cy x 100.00cy = $2,000.00
Furnish Class 2 type rock

Road Number: 38-5-17.00 A-B Wallow Creek ML Continued

Basic Rock Haul cost: $1.63/cy x 100.00cy = $163.00
Rock Haul +15% grades: $2.44/cy-mi x 100.00cy x 5.00 mi= $1,220.00
Rock Haul -15% grades: $1.22/cy-mi x 100.00cy x 7.70 mi= $939.40
Rock Haul St& Co Roads: $0.54/cy-mi x 100.00cy x 15.00 mi= $810.00
Placement on Fill slopes: 100.00cy x ($3.57/cy x 1.03) = $367.71

Subtotal: $5,500.11

Section 1800 Soil Stabilization:
Dry Method with Mulch: $730.62/acre x 0.30 acres = $219.19
Includes Small Quantity Factor of 1.38
+ Seed Cost: $132.00/acre x 0.30 acres = $39.60
+ Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $354.79

Section 2100 Roadside Brushing:
Manual Brushing
Brushing width Left: 4ft. Right: 4ft.
RoadSide Brushing Light: $474.30/acre x 2.60 acres = $1,233.18
Chipping brush
Brush Chipper 10 hr x $100.66/hr = $1,006.60

Subtotal: $2,239.78

Mobilization:
Construction - 12.80% of total Costs = $3,972.38
Surfacing - 6.48% by rock volume = $179.26

Subtotal: $4,151.63

Total: $68,574.01

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-17.00 C Road Name: Wallow Creek ML
Road Improvement: 0.92 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.35 acres	$6,722.81
300 Excavation:	$0.00
400 Drainage:	$6,850.20
Culvert: 118.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$6,439.35
Blading 0.92 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$1,791.27
Gradation Class 2: 32.00 cy	
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):2.90 acres	$7,067.96
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,780.26 Surf. $0.00	$1,780.26
Quarry Development:	$0.00
Total:	$30,651.85

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

Road Construction Worksheet

Road Number: 38-5-17.00 C Road Name: Wallow Creek ML

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 1.35 = $5,499.05
Additional Roadside Work
Excavator - Large (3 CY) 8 hr x $152.97/hr = $1,223.76
Subtotal: $6,722.81

Section 400 Drainage:
Galvanized milepost 2.74 TEMP 18 inch 16 ga 34 lf x $55.86/lf = $1,899.24
Galvanized milepost 2.77 TEMP 18 inch 16 ga 40 lf x $55.86/lf = $2,234.40
Galvanized milepost 2.85 TEMP 24 inch 16 ga 44 lf x $61.74/lf = $2,716.56
Subtotal: $6,850.20

Section 500 Renovation:
Scarification: $1118.88/mi x 0.92 mi = $1,029.37
Blading w/o Ditches: $559.44/mi x 0.92 mi = $514.68
Compaction: $415.02/mi x 0.92 mi = $381.82
Construct water dips
Construct Water Dip 8 EA x $400.00/EA = $3,200.00
Remove Earth Barricade
Remove Earth Barricade 1 EA x $250.00/EA = $250.00
Additional Roadside Work
Backhoe 4 hr x $95.15/hr = $380.60
Motor Grader 14M 4 hr x $170.72/hr = $682.88
Subtotal: $6,439.35

Section 700-1200 Surfacing:
Surfacing:
Section 1400 Slope Protection:
Rock Source: Robco
Purchase Price / Royalty: $20.00/cy x 32.00cy = $640.00
Furnish Class 2 type rock
Basic Rock Haul cost: $1.63/cy x 32.00cy = $52.16
Rock Haul +15% grades: $2.44/cy-mi x 32.00cy x 5.00 mi= $390.40
Rock Haul -15% grades: $1.22/cy-mi x 32.00cy x 8.50 mi= $331.84
Rock Haul St& Co Roads: $0.54/cy-mi x 32.00cy x 15.00 mi= $259.20
Placement on Fill slopes: 32.00cy x ($3.57/cy x 1.03) = $117.67
Subtotal: $1,791.27

Section 2100 Roadside Brushing:
Manual Brushing
RoadSide Brushing Heavy: $1897.20/acre x 2.90 acres = $5,501.88
Chipping Brush
Brush Chipper 16 hr x $97.88/hr = $1,566.08
Subtotal: $7,067.96

Mobilization:
Construction - 5.74% of total Costs = $1,780.26
Subtotal: $1,780.26

Total: $30,651.85

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-17.02 Road Name: Honeysuckle P Line
Road Renovation: 1.26 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 1.80 acres	$9,077.42
300 Excavation:	$0.00
400 Drainage:	$9,875.58
Culvert: 150.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$5,532.87
Blading 1.26 mi	
700-1200 Surfacing:	$35,876.36
Quarry Name: Robco 1.5" 633.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.15 acres	$177.39
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):1.22 acres	$1,081.95
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $3,799.67 Surf. $945.57	$4,745.25
Quarry Development:	$0.00
Total:	$66,366.81

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

Road Construction Worksheet

Road Number: 38-5-17.02 Road Name: Honeysuckle P Line

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
46+% (Avg Side Slopes): Adjustment Factor (0.3)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.3 + 1.28 + 0.25 = 3.50
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.50 x Total Acres: 1.80 = $7,547.72
Additional Roadside Work
Excavator - Large (3 CY) 10 hr x $152.97/hr = $1,529.70

Subtotal: $9,077.42

Section 400 Drainage:

Aluminized Milepost 0.05	24 inch 16 ga 60 lf x $63.16/lf	= $3,789.60
Aluminized Milepost 0.13	24 inch 16 ga 50 lf x $63.16/lf	= $3,158.00
Aluminized Milepost 0.78	18 inch 16 ga 40 lf x $56.92/lf	= $2,276.80
Splash Pads	3 ea x $217.06/ea	= $651.18

Subtotal: $9,875.58

Section 500 Renovation:
Blading: $923.61/mi x 1.26 mi = $1,163.75
Scarification: $1118.88/mi x 0.65 mi = $727.27
Compaction: $415.02/mi x 1.26 mi = $522.93
Clean Culverts: $501.63/mi x 1.26 mi = $632.05
Water for Blading
Water Truck 3000 Gal 13 hr x $89.04/hr = $1,157.52
Additional Roadside Work
Backhoe 5 hr x $95.15/hr = $475.75
Motor Grader 14M 5 hr x $170.72/hr = $853.60

Subtotal: $5,532.87

Section 700-1200 Surfacing:

Commercial Quarry Name: Robco 1.5"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.40mi	14ft	15ft	4in	10%					60 LCY

Rock Volume = 613.00 LCY
Purchase Price / Royalty: $19.00/LCY x 613.00 LCY = $11,647.00
Processing: $1.20/LCY x 613.00 LCY = $735.60
Compaction: $1.38/LCY x 613.00 LCY = $845.94
Grid Rolling: $3.02/LCY x 613.00 LCY = $1,851.26
T11 & T27 Testing: $0.10/LCY x 613.00 LCY = $61.30
Basic Rock Haul cost: $1.62/LCY x 613.00 LCY = $993.06
Rock Haul +15% grades: $2.43/LCY-mi x 613.00 LCY x 5.00 mi= $7,447.95
Rock Haul -15% grades: $1.21/LCY-mi x 613.00 LCY x 8.00 mi= $5,933.84
Rock Haul St& Co Roads: $0.54/LCY-mi x 613.00 LCY x 15.00 mi= $4,965.30
Basic Water Haul cost: $0.79/LCY x 613.00 LCY = $484.27
Water Haul +15% grades: $0.34/LCY-mi x 613.00 LCY x 2.00 mi= $416.84

Commercial Quarry Name: Robco 1.5"

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

Rock Volume = 20.00 LCY
Purchase Price / Royalty: $19.00/LCY x 20.00 LCY = $380.00
Processing: $1.20/LCY x 20.00 LCY = $24.00
Compaction: $1.38/LCY x 20.00 LCY = $27.60
Grid Rolling: $3.02/LCY x 20.00 LCY = $60.40
T11 & T27 Testing: $0.10/LCY x 20.00 LCY = $2.00

Subtotal: $35,876.36

Road Number: 38-5-17.02 Honeysuckle P Line Continued

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.15 acres = $109.59
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.15 acres = $19.80
        + Mulch Cost: $320.00/acre x 0.15 acres = $48.00

Subtotal: $177.39

Section 2100 Roadside Brushing:
Manual Brushing
  Brushing width Left: 4ft. Right: 4ft.
  RoadSide Brushing Light: $474.30/acre x 1.22 acres = $578.65
  Chipping brush
   Brush Chipper 5 hr x $100.66/hr = $503.30

Subtotal: $1,081.95

Mobilization:
  Construction - 12.25% of total Costs = $3,799.67
  Surfacing - 34.16% by rock volume = $945.57

Subtotal: $4,745.25

Total: $66,366.81

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-18.00 A Road Name: Wallow Creek C Spur
Road Renovation: 0.29 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.45 acres	$2,138.96
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,495.67
Blading 0.29 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.28 acres	$334.12
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $244.72 Surf. $0.00	$244.72
Quarry Development:	$0.00
Total:	$4,213.47

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

Road Construction Worksheet

Road Number: 38-5-18.00 A Road Name: Wallow Creek C Spur

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 0.45 = $1,833.02
Additional Roadside Work
Excavator - Large (3 CY) 2 hr x $152.97/hr = $305.94

Subtotal: $2,138.96

Section 500 Renovation:
Blading: $923.61/mi x 0.29 mi = $267.85
Scarification: $1118.88/mi x 0.29 mi = $324.48
Compaction: $415.02/mi x 0.29 mi = $120.36
Water for Blading
Water Truck 3000 Gal 3 hr x $89.04/hr = $267.12
Remove Earth Barricade
Remove Earth Barricade 1 EA x $250.00/EA = $250.00
Additional Roadside Work
Backhoe 1 hr x $95.15/hr = $95.15
Motor Grader 14M 1 hr x $170.72/hr = $170.72

Subtotal: $1,495.67

Section 700-1200 Surfacing:
Surfacing:
Section 2100 Roadside Brushing:
Manual Brushing
Brushing width Left: 4ft. Right: 4ft.
RoadSide Brushing Light: $474.30/acre x 0.28 acres = $132.80
Chipping brush
Brush Chipper 2 hr x $100.66/hr = $201.32

Subtotal: $334.12

Mobilization:
Construction - 0.79% of total Costs = $244.72

Subtotal: $244.72

Total: $4,213.47

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butt Sale Date: 1/2024
Road Number: 38-5-18.02 Road Name: Wallos Creek Spur B
Road Improvement: 0.51 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$8,937.60
Culvert: 160.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$2,333.63
Blading 0.51 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$2,750.06
Gradation Class 2: 50.00 cy	
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):1.61 acres	$4,033.29
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,113.27 Surf. $0.00	$1,113.27
Quarry Development:	$0.00
Total:	$19,167.85

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

Road Construction Worksheet

Road Number: 38-5-18.02 Road Name: Wallos Creek Spur B

Section 400 Drainage:
  Galvanized milepost 0.10 TEMP 18 inch 16 ga 40 lf x $55.86/lf = $2,234.40
  Galvanized milepost 0.21 TEMP 18 inch 16 ga 40 lf x $55.86/lf = $2,234.40
  Galvanized milepost 0.23 TEMP 18 inch 16 ga 40 lf x $55.86/lf = $2,234.40
  Galvanized milepost 0.29 TEMP 18 inch 16 ga 40 lf x $55.86/lf = $2,234.40
Subtotal: $8,937.60

Section 500 Renovation:
  Blading: $923.61/mi x 0.51 mi = $471.04
  Scarification: $1118.88/mi x 0.51 mi = $570.63
  Compaction: $415.02/mi x 0.51 mi = $211.66
  Remove Earth Barricade
   Remove Earth Barricade 1 EA x $250.00/EA = $250.00
  Rebuild Fill Failure MP 0.41
   Excavator - Large (3 CY) 4 hr x $147.20/hr = $588.80
   Vibratory roller, Steel Drum 2 hr x $120.75/hr = $241.50
Subtotal: $2,333.63

Section 700-1200 Surfacing:
Surfacing:
Section 1400 Slope Protection:
  Rock Source: Robco
  Purchase Price / Royalty: $20.00/cy x 50.00cy = $1,000.00
  Furnish Class 2 type rock
  Basic Rock Haul cost: $1.63/cy x 50.00cy = $81.50
  Rock Haul +15% grades: $2.44/cy-mi x 50.00cy x 5.00 mi= $610.00
  Rock Haul -15% grades: $1.22/cy-mi x 50.00cy x 7.70 mi= $469.70
  Rock Haul St& Co Roads: $0.54/cy-mi x 50.00cy x 15.00 mi= $405.00
  Placement on Fill slopes: 50.00cy x ($3.57/cy x 1.03) = $183.86
Subtotal: $2,750.06

Section 2100 Roadside Brushing:
Manual Brushing
  RoadSide Brushing Heavy: $1897.20/acre x 1.61 acres = $3,054.49
  Chipping Brush
   Brush Chipper 10 hr x $97.88/hr = $978.80
Subtotal: $4,033.29

Mobilization:
  Construction - 3.59% of total Costs = $1,113.27
Subtotal: $1,113.27

Total: $19,167.85

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butt Sale Date: 1/2024
Road Number: 38-5-19.01 Road Name: Powell Wallow Creek
Road Renovation: 0.84 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 1.25 acres	$6,315.47
300 Excavation:	$0.00
400 Drainage:	$9,875.58
Culvert: 150.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$3,905.32
Blading 0.84 mi	
700-1200 Surfacing:	$2,294.70
Quarry Name: Spencer Cr Stockpile 60.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.15 acres	$177.39
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.81 acres	$786.82
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,440.12 Surf. $89.63	$1,529.75
Quarry Development:	$0.00
Total:	$24,885.03

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

Road Construction Worksheet

Road Number: 38-5-19.01 Road Name: Powell Wallow Creek

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 1.25 = $5,091.71
Additional Roadside Work
Excavator - Large (3 CY) 8 hr x $152.97/hr = $1,223.76
Subtotal: $6,315.47

Section 400 Drainage:
Aluminized milepost 0.12 24 inch 16 ga 60 lf x $63.16/lf = $3,789.60
Aluminized milepost 0.28 18 inch 16 ga 40 lf x $56.92/lf = $2,276.80
Aluminized milepost 0.32 24 inch 16 ga 50 lf x $63.16/lf = $3,158.00
Splash Pads 3 ea x $217.06/ea = $651.18
Subtotal: $9,875.58

Section 500 Renovation:
Blading: $923.61/mi x 0.84 mi = $775.83
Scarification: $1118.88/mi x 0.84 mi = $939.86
Compaction: $415.02/mi x 0.84 mi = $348.62
Clean Culverts: $501.63/mi x 0.84 mi = $421.37
Water for Blading
Water Truck 3000 Gal 4 hr x $89.04/hr = $356.16
Additional Roadside Work
Backhoe 4 hr x $95.15/hr = $380.60
Motor Grader 14M 4 hr x $170.72/hr = $682.88
Subtotal: $3,905.32

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile

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

Rock Volume = 60.00 LCY
Production: $6.64/LCY x 60.00 LCY = $398.40
Processing: $1.20/LCY x 60.00 LCY = $72.00
Compaction: $1.38/LCY x 60.00 LCY = $82.80
Grid Rolling: $3.02/LCY x 60.00 LCY = $181.20
Basic Rock Haul cost: $1.62/LCY x 60.00 LCY = $97.20
Rock Haul +15% grades: $2.43/LCY-mi x 60.00 LCY x 9.50 mi= $1,385.10
Basic Water Haul cost: $0.79/LCY x 60.00 LCY = $47.40
Water Haul +15% grades: $0.34/LCY-mi x 60.00 LCY x 1.50 mi= $30.60
Subtotal: $2,294.70

Section 1800 Soil Stabilization:
Dry Method with Mulch: $730.62/acre x 0.15 acres = $109.59
Includes Small Quantity Factor of 1.38
+ Seed Cost: $132.00/acre x 0.15 acres = $19.80
+ Mulch Cost: $320.00/acre x 0.15 acres = $48.00
Subtotal: $177.39

Section 2100 Roadside Brushing:
Manual Brushing
Brushing width Left: 4ft. Right: 4ft.
RoadSide Brushing Light: $474.30/acre x 0.81 acres = $384.18
Chipping Brush

Road Number: 38-5-19.01 Powell Wallow Creek Continued

Brush Chipper 4 hr x $100.66/hr = $402.64

Subtotal: $786.82

Mobilization:
Construction - 4.64% of total Costs = $1,440.12
Surfacing - 3.24% by rock volume = $89.63

Subtotal: $1,529.75

Total: $24,885.03

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn ButtE Sale Date: 1/2024
Road Number: 38-5-30.00 Road Name: Powell Creek Spur
Road Renovation: 0.27 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$841.61
Blading 0.27 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.26 acres	$223.98
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $65.71 Surf. $0.00	$65.71
Quarry Development:	$0.00
Total:	$1,131.29

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

Road Construction Worksheet

Road Number: 38-5-30.00 Road Name: Powell Creek Spur

Section 500 Renovation:
  Blading: $923.61/mi x 0.27 mi = $249.37
  Scarification: $1118.88/mi x 0.27 mi = $302.10
  Compaction: $415.02/mi x 0.27 mi = $112.06
  Water for blading
   Water Truck 3000 Gal 2 hr x $89.04/hr = $178.08

Subtotal: $841.61

Section 700-1200 Surfacing:
Surfacing:
Section 2100 Roadside Brushing:
Manual Brushing
  Brushing width Left: 4ft. Right: 4ft.
  RoadSide Brushing Light: $474.30/acre x 0.26 acres = $123.32
  Chipping brush
   Brush Chipper 1 hr x $100.66/hr = $100.66

Subtotal: $223.98

Mobilization:
  Construction - 0.21% of total Costs = $65.71

Subtotal: $65.71

Total: $1,131.29

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-31.01 A-B Road Name: Mungers Mule B Spur
Road Renovation: 1.53 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$37,969.78
Culvert: 564.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$4,087.36
Blading 1.53 mi	
700-1200 Surfacing:	$15,636.40
Quarry Name: Robco 1.5" 260.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.65 acres	$768.70
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):2.23 acres	$4,848.24
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $3,903.81 Surf. $388.39	$4,292.20
Quarry Development:	$0.00
Total:	$67,602.68

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

Road Construction Worksheet

Road Number: 38-5-31.01 A-B Road Name: Mungers Mule B Spur

Section 400 Drainage:

Aluminized milepost 0.01	18 inch 16 ga 36 lf x $56.92/lf	= $2,049.12
Aluminized milepost 0.07	24 inch 16 ga 44 lf x $63.16/lf	= $2,779.04
Aluminized milepost 0.19	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized milepost 0.29	18 inch 16 ga 40 lf x $56.92/lf	= $2,276.80
Aluminized milepost 0.42	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized milepost 0.50	24 inch 16 ga 44 lf x $63.16/lf	= $2,779.04
Aluminized milepost 0.59	24 inch 16 ga 44 lf x $63.16/lf	= $2,779.04
Aluminized milepost 0.74	24 inch 16 ga 50 lf x $63.16/lf	= $3,158.00
Aluminized milepost 0.92	24 inch 16 ga 54 lf x $63.16/lf	= $3,410.64
Aluminized milepost 0.94	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized milepost 1.05	24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized milepost 1.24	24 inch 16 ga 48 lf x $63.16/lf	= $3,031.68
Aluminized milepost 1.32	24 inch 16 ga 44 lf x $63.16/lf	= $2,779.04
Splash Pads	13 ea x $217.06/ea	= $2,821.78

Subtotal: $37,969.78

Section 500 Renovation:
  Blading: $923.61/mi x 1.53 mi = $1,413.12
  Scarification: $1118.88/mi x 0.50 mi = $559.44
  Compaction: $415.02/mi x 1.53 mi = $634.98
  Clean Culverts: $501.63/mi x 1.53 mi = $767.49
  Water for blading
   Water Truck 3000 Gal 8 hr x $89.04/hr = $712.32

Subtotal: $4,087.36

Section 700-1200 Surfacing:

Commercial Quarry Name: Robco 1.5"

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

  Rock Volume = 260.00 LCY
  Purchase Price / Royalty: $19.00/LCY x 260.00 LCY = $4,940.00
  Processing: $1.20/LCY x 260.00 LCY = $312.00
  Compaction: $1.38/LCY x 260.00 LCY = $358.80
  Grid Rolling: $3.02/LCY x 260.00 LCY = $785.20
  T11 & T27 Testing: $0.10/LCY x 260.00 LCY = $26.00
  Basic Rock Haul cost: $1.62/LCY x 260.00 LCY = $421.20
  Rock Haul +15% grades: $2.43/LCY-mi x 260.00 LCY x 5.00 mi= $3,159.00
  Rock Haul -15% grades: $1.21/LCY-mi x 260.00 LCY x 10.00 mi= $3,146.00
  Rock Haul St& Co Roads: $0.54/LCY-mi x 260.00 LCY x 15.00 mi= $2,106.00
  Basic Water Haul cost: $0.79/LCY x 260.00 LCY = $205.40
  Water Haul +15% grades: $0.34/LCY-mi x 260.00 LCY x 2.00 mi= $176.80

Subtotal: $15,636.40

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.65 acres = $474.90
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.65 acres = $85.80
        + Mulch Cost: $320.00/acre x 0.65 acres = $208.00

Subtotal: $768.70

Section 2100 Roadside Brushing:
Manual Brushing
  RoadSide Brushing Medium: $948.60/acre x 1.00 acres = $948.60
  RoadSide Brushing Heavy: $1897.20/acre x 1.23 acres = $2,333.56
  Chipping Brush
   Brush Chipper 16 hr x $97.88/hr = $1,566.08

Road Number: 38-5-31.01 A-B Mungers Mule B Spur Continued

Subtotal: $4,848.24

Mobilization:
  Construction - 12.58% of total Costs = $3,903.81
  Surfacing - 14.03% by rock volume = $388.39

Subtotal: $4,292.20

Total: $67,602.68

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-5-31.03 A-B Road Name: Marble Gulch Mine
Road Renovation: 1.11 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$2,743.46
Culvert: 40.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$3,314.45
Blading 1.11 mi	
700-1200 Surfacing:	$22,393.40
Quarry Name: Robco 1.5" 380.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.05 acres	$59.13
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):1.61 acres	$3,372.29
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,965.93 Surf. $567.64	$2,533.58
Quarry Development:	$0.00
Total:	$34,416.31

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

Road Construction Worksheet

Road Number: 38-5-31.03 A-B Road Name: Marble Gulch Mine

Section 400 Drainage:
  Aluminized milepost 0.13 24 inch 16 ga 40 lf x $63.16/lf = $2,526.40
  Splash Pads 1 ea x $217.06/ea = $217.06
  Subtotal: $2,743.46

Section 500 Renovation:
  Blading: $923.61/mi x 1.11 mi = $1,025.21
  Scarification: $1118.88/mi x 0.50 mi = $559.44
  Compaction: $415.02/mi x 1.11 mi = $460.67
  Clean Culverts: $501.63/mi x 1.11 mi = $556.81
  Water for Blading
   Water Truck 3000 Gal 8 hr x $89.04/hr = $712.32
  Subtotal: $3,314.45

Section 700-1200 Surfacing:

Commercial Quarry Name: Robco 1.5"

Length	TopW	BotW	Depth	CWid	#TOs	Width	F.W.L	Taper	Other
0.26mi	14ft	15ft	4in	10%					20 LCY

  Rock Volume = 380.00 LCY
  Purchase Price / Royalty: $19.00/LCY x 380.00 LCY = $7,220.00
  Processing: $1.20/LCY x 380.00 LCY = $456.00
  Compaction: $1.38/LCY x 380.00 LCY = $524.40
  Grid Rolling: $3.02/LCY x 380.00 LCY = $1,147.60
  T11 & T27 Testing: $0.10/LCY x 380.00 LCY = $38.00
  Basic Rock Haul cost: $1.62/LCY x 380.00 LCY = $615.60
  Rock Haul +15% grades: $2.43/LCY-mi x 380.00 LCY x 5.00 mi= $4,617.00
  Rock Haul -15% grades: $1.21/LCY-mi x 380.00 LCY x 9.00 mi= $4,138.20
  Rock Haul St& Co Roads: $0.54/LCY-mi x 380.00 LCY x 15.00 mi= $3,078.00
  Basic Water Haul cost: $0.79/LCY x 380.00 LCY = $300.20
  Water Haul +15% grades: $0.34/LCY-mi x 380.00 LCY x 2.00 mi= $258.40
  Subtotal: $22,393.40

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.05 acres = $36.53
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.05 acres = $6.60
        + Mulch Cost: $320.00/acre x 0.05 acres = $16.00
  Subtotal: $59.13

Section 2100 Roadside Brushing:
Manual Brushing
  RoadSide Brushing Medium: $948.60/acre x 0.80 acres = $758.88
  RoadSide Brushing Heavy: $1897.20/acre x 0.81 acres = $1,536.73
  Chipping Brush
   Brush Chipper 11 hr x $97.88/hr = $1,076.68
  Subtotal: $3,372.29

Mobilization:
  Construction - 6.34% of total Costs = $1,965.93
  Surfacing - 20.51% by rock volume = $567.64
  Subtotal: $2,533.58

Total: $34,416.31

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-6-25.00 A Road Name: Powell Creek Spur D
Road Renovation: 0.76 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 1.10 acres	$5,398.53
300 Excavation:	$0.00
400 Drainage:	$9,367.26
Culvert: 138.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$4,589.18
Blading 0.76 mi	
700-1200 Surfacing:	$1,648.80
Quarry Name: Spencer Cr Stockpile 60.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.15 acres	$177.39
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.74 acres	$753.62
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,352.53 Surf. $89.63	$1,442.16
Quarry Development:	$0.00
Total:	$23,376.94

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

Road Construction Worksheet

Road Number: 38-6-25.00 A Road Name: Powell Creek Spur D

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 1.10 = $4,480.71
Additional Roadside Work
Excavator - Large (3 CY) 6 hr x $152.97/hr = $917.82
Subtotal: $5,398.53

Section 400 Drainage:
Aluminized milepost 0.25 24 inch 16 ga 48 lf x $63.16/lf = $3,031.68
Aluminized milepost 0.32 24 inch 16 ga 50 lf x $63.16/lf = $3,158.00
Aluminized milepost 0.55 24 inch 16 ga 40 lf x $63.16/lf = $2,526.40
Splash Pads 3 ea x $217.06/ea = $651.18
Subtotal: $9,367.26

Section 500 Renovation:
Blading: $923.61/mi x 0.76 mi = $701.94
Scarification: $1118.88/mi x 0.76 mi = $850.35
Compaction: $415.02/mi x 0.76 mi = $315.42
Clean Culverts: $501.63/mi x 0.76 mi = $381.24
Water for blading
Water Truck 3000 Gal 8 hr x $89.04/hr = $712.32
Fill Failure Repair MP 0.32
Excavator - Large (3 CY) 4 hr x $147.20/hr = $588.80
Vibratory roller, Steel Drum 2 hr x $120.75/hr = $241.50
Additional Roadside Work
Backhoe 3 hr x $95.15/hr = $285.45
Motor Grader 14M 3 hr x $170.72/hr = $512.16
Subtotal: $4,589.18

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile

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

Rock Volume = 60.00 LCY
Production: $6.64/LCY x 60.00 LCY = $398.40
Processing: $1.20/LCY x 60.00 LCY = $72.00
Compaction: $1.38/LCY x 60.00 LCY = $82.80
Grid Rolling: $3.02/LCY x 60.00 LCY = $181.20
Basic Rock Haul cost: $1.62/LCY x 60.00 LCY = $97.20
Rock Haul +15% grades: $2.43/LCY-mi x 60.00 LCY x 5.00 mi= $729.00
Basic Water Haul cost: $0.79/LCY x 60.00 LCY = $47.40
Water Haul +15% grades: $0.34/LCY-mi x 60.00 LCY x 2.00 mi= $40.80
Subtotal: $1,648.80

Section 1800 Soil Stabilization:
Dry Method with Mulch: $730.62/acre x 0.15 acres = $109.59
Includes Small Quantity Factor of 1.38
+ Seed Cost: $132.00/acre x 0.15 acres = $19.80
+ Mulch Cost: $320.00/acre x 0.15 acres = $48.00
Subtotal: $177.39

Section 2100 Roadside Brushing:
Manual Brushing

Road Number: 38-6-25.00 A Powell Creek Spur D Continued

Brushing width Left: 4ft. Right: 4ft.
RoadSide Brushing Light: $474.30/acre x 0.74 acres = $350.98
Chipping Brush
Brush Chipper 4 hr x $100.66/hr = $402.64

Subtotal: $753.62

Mobilization:
Construction - 4.36% of total Costs = $1,352.53
Surfacing - 3.24% by rock volume = $89.63

Subtotal: $1,442.16

Total: $23,376.94

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-6-25.02 Road Name: Silvertip Spur Po
Road Renovation: 0.67 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.00 acres	$4,991.19
300 Excavation:	$0.00
400 Drainage:	$2,266.18
Culvert: 36.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$3,722.70
Blading 0.67 mi	
700-1200 Surfacing:	$549.60
Quarry Name: Spencer Cr Stockpile 20.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$2,707.36
Gradation Class 2: 50.00 cy	
1800 Soil Stabilization: 0.05 acres	$59.13
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.65 acres	$610.28
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $919.15 Surf. $29.88	$949.03
Quarry Development:	$0.00
Total:	$15,855.46

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

Road Construction Worksheet

Road Number: 38-6-25.02 Road Name: Silvertip Spur Po

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 1.00 = $4,073.37
Additional Roadside Work
Excavator - Large (3 CY) 6 hr x $152.97/hr = $917.82
Subtotal: $4,991.19

Section 400 Drainage:
Aluminized milepost 0.34 18 inch 16 ga 36 lf x $56.92/lf = $2,049.12
Splash Pads 1 ea x $217.06/ea = $217.06
Subtotal: $2,266.18

Section 500 Renovation:
Scarification: $1118.88/mi x 0.67 mi = $749.65
Blading w/o Ditches: $559.44/mi x 0.67 mi = $374.82
Compaction: $415.02/mi x 0.67 mi = $278.06
Clean Culverts: $501.63/mi x 0.67 mi = $336.09
Water for Blading
Water Truck 3000 Gal 4 hr x $89.04/hr = $356.16
Rebuild Fill Failure MP 0.25
Excavator - Large (3 CY) 4 hr x $147.20/hr = $588.80
Vibratory roller, Steel Drum 2 hr x $120.75/hr = $241.50
Additional Roadside Work
Backhoe 3 hr x $95.15/hr = $285.45
Motor Grader 14M 3 hr x $170.72/hr = $512.16
Subtotal: $3,722.70

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile

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

Rock Volume = 20.00 LCY
Production: $6.64/LCY x 20.00 LCY = $132.80
Processing: $1.20/LCY x 20.00 LCY = $24.00
Compaction: $1.38/LCY x 20.00 LCY = $27.60
Grid Rolling: $3.02/LCY x 20.00 LCY = $60.40
Basic Rock Haul cost: $1.62/LCY x 20.00 LCY = $32.40
Rock Haul +15% grades: $2.43/LCY-mi x 20.00 LCY x 5.00 mi= $243.00
Basic Water Haul cost: $0.79/LCY x 20.00 LCY = $15.80
Water Haul +15% grades: $0.34/LCY-mi x 20.00 LCY x 2.00 mi= $13.60
Subtotal: $549.60

Section 1400 Slope Protection:
Rock Source: Robco
Purchase Price / Royalty: $20.00/cy x 50.00cy = $1,000.00
Furnish Class 2 type rock
Basic Rock Haul cost: $1.63/cy x 50.00cy = $81.50
Rock Haul +15% grades: $2.44/cy-mi x 50.00cy x 5.00 mi= $610.00
Rock Haul -15% grades: $1.22/cy-mi x 50.00cy x 7.00 mi= $427.00
Rock Haul St& Co Roads: $0.54/cy-mi x 50.00cy x 15.00 mi= $405.00
Placement on Fill slopes: 50.00cy x ($3.57/cy x 1.03) = $183.86
Subtotal: $2,707.36

Road Number: 38-6-25.02 Silvertip Spur Po Continued

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.05 acres = $36.53
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.05 acres = $6.60
        + Mulch Cost: $320.00/acre x 0.05 acres = $16.00

Subtotal: $59.13

Section 2100 Roadside Brushing:
Manual Brushing
  Brushing width Left: 4ft. Right: 4ft.
  RoadSide Brushing Light: $474.30/acre x 0.65 acres = $308.30
  Chipping Brush
   Brush Chipper 3 hr x $100.66/hr = $301.98

Subtotal: $610.28

Mobilization:
  Construction - 2.96% of total Costs = $919.15
  Surfacing - 1.08% by rock volume = $29.88

Subtotal: $949.03

Total: $15,855.46

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-6-25.04 Road Name: Silvertip Munger
Road Renovation: 0.17 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$533.95
Blading 0.17 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.54 acres	$1,416.01
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $120.24 Surf. $0.00	$120.24
Quarry Development:	$0.00
Total:	$2,070.19

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

Road Construction Worksheet

Road Number: 38-6-25.04 Road Name: Silvertip Munger

Section 500 Renovation:
  Scarification: $1118.88/mi x 0.17 mi = $190.21
  Blading w/o Ditches: $559.44/mi x 0.17 mi = $95.10
  Compaction: $415.02/mi x 0.17 mi = $70.55
  Water for Blading
   Water Truck 3000 Gal 2 hr x $89.04/hr = $178.08

Subtotal: $533.95

Section 700-1200 Surfacing:
Surfacing:
Section 2100 Roadside Brushing:
Manual Brushing
  RoadSide Brushing Heavy: $1897.20/acre x 0.54 acres = $1,024.49
  Chipping Brush
   Brush Chipper 4 hr x $97.88/hr = $391.52

Subtotal: $1,416.01

Mobilization:
  Construction - 0.39% of total Costs = $120.24

Subtotal: $120.24

Total: $2,070.19

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-6-25.05 Road Name: Powell Creek Spur
Road Renovation: 0.87 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$4,987.72
Culvert: 80.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$2,593.07
Blading 0.87 mi	
700-1200 Surfacing:	$1,099.20
Quarry Name: Spencer Cr Stockpile 40.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.10 acres	$118.26
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.84 acres	$801.05
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $591.91 Surf. $59.75	$651.66
Quarry Development:	$0.00
Total:	$10,250.96

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

Road Construction Worksheet

Road Number: 38-6-25.05 Road Name: Powell Creek Spur

Section 400 Drainage:
  Aluminized milepost 0.09 18 inch 16 ga 40 lf x $56.92/lf = $2,276.80
  Aluminized milepost 0.14 18 inch 16 ga 40 lf x $56.92/lf = $2,276.80
  Splash Pads 2 ea x $217.06/ea = $434.12
  Subtotal: $4,987.72

Section 500 Renovation:
  Blading: $923.61/mi x 0.87 mi = $803.54
  Scarification: $1118.88/mi x 0.25 mi = $279.72
  Compaction: $415.02/mi x 0.87 mi = $361.07
  Clean Culverts: $501.63/mi x 0.87 mi = $436.42
  Water for Blading
   Water Truck 3000 Gal 8 hr x $89.04/hr = $712.32
  Subtotal: $2,593.07

Section 700-1200 Surfacing:

2 Stage Crusher Quarry Name: Spencer Cr Stockpile

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

  Rock Volume = 40.00 LCY
  Production: $6.64/LCY x 40.00 LCY = $265.60
  Processing: $1.20/LCY x 40.00 LCY = $48.00
  Compaction: $1.38/LCY x 40.00 LCY = $55.20
  Grid Rolling: $3.02/LCY x 40.00 LCY = $120.80
  Basic Rock Haul cost: $1.62/LCY x 40.00 LCY = $64.80
  Rock Haul +15% grades: $2.43/LCY-mi x 40.00 LCY x 5.00 mi= $486.00
  Basic Water Haul cost: $0.79/LCY x 40.00 LCY = $31.60
  Water Haul +15% grades: $0.34/LCY-mi x 40.00 LCY x 2.00 mi= $27.20
  Subtotal: $1,099.20

Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.10 acres = $73.06
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.10 acres = $13.20
        + Mulch Cost: $320.00/acre x 0.10 acres = $32.00
  Subtotal: $118.26

Section 2100 Roadside Brushing:
Manual Brushing
  Brushing width Left: 4ft. Right: 4ft.
  RoadSide Brushing Light: $474.30/acre x 0.84 acres = $398.41
  Chipping brush
   Brush Chipper 4 hr x $100.66/hr = $402.64
  Subtotal: $801.05

Mobilization:
  Construction - 1.91% of total Costs = $591.91
  Surfacing - 2.16% by rock volume = $59.75
  Subtotal: $651.66

Total: $10,250.96

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-6-26.00 Road Name: Powell Creek D Spur
Road Improvement: 0.24 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$1,196.35
Blading 0.24 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):0.76 acres	$1,833.39
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $186.82 Surf. $0.00	$186.82
Quarry Development:	$0.00
Total:	$3,216.56

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

Road Construction Worksheet

Road Number: 38-6-26.00 Road Name: Powell Creek D Spur

Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40

Section 500 Renovation:
Scarification: $1118.88/mi x 0.24 mi = $268.53
Blading w/o Ditches: $559.44/mi x 0.24 mi = $134.27
Compaction: $415.02/mi x 0.24 mi = $99.60
Water for Blading
Water Truck 3000 Gal 2 hr x $89.04/hr = $178.08
Remove Earth Barricade
Remove Earth Barricade 1 EA x $250.00/EA = $250.00
Additional Roadside Work
Backhoe 1 hr x $95.15/hr = $95.15
Motor Grader 14M 1 hr x $170.72/hr = $170.72

Subtotal: $1,196.35

Section 700-1200 Surfacing:
Surfacing:
Section 2100 Roadside Brushing:
Manual Brushing
RoadSide Brushing Heavy: $1897.20/acre x 0.76 acres = $1,441.87
Chipping Brush
Brush Chipper 4 hr x $97.88/hr = $391.52

Subtotal: $1,833.39

Mobilization:
Construction - 0.60% of total Costs = $186.82

Subtotal: $186.82

Total: $3,216.56

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-6-35.02 Road Name: Munger Creek C Spur
Road Renovation: 0.95 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 1.20 acres	$6,111.80
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$3,803.77
Blading 0.95 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):1.38 acres	$2,287.87
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $752.48 Surf. $0.00	$752.48
Quarry Development:	$0.00
Total:	$12,955.92

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

Road Construction Worksheet

Road Number: 38-6-35.02 Road Name: Munger Creek C Spur

Section 200 Clearing and Grubbing:
Clearing - Medium (Clearing): Adjustment Factor (1.67)
31-45% (Avg Side Slopes): Adjustment Factor (0.2)
Pile and Burn (Slash): Adjustment Factor (1.28)
less than 20' (Avg Clearing Widths): Adjustment Factor (0.25)
Total Adjustment Factor:1.67 + 0.2 + 1.28 + 0.25 = 3.40
Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.40 x Total Acres: 1.20 = $4,888.04
Additional Roadside Work
Excavator - Large (3 CY) 8 hr x $152.97/hr = $1,223.76

Subtotal: $6,111.80

Section 500 Renovation:
Blading: $923.61/mi x 0.95 mi = $877.43
Scarification: $1118.88/mi x 0.25 mi = $279.72
Compaction: $415.02/mi x 0.95 mi = $394.27
Clean Culverts: $501.63/mi x 0.95 mi = $476.55
Water for Blading
Water Truck 3000 Gal 8 hr x $89.04/hr = $712.32
Additional Roadside Work
Backhoe 4 hr x $95.15/hr = $380.60
Motor Grader 14M 4 hr x $170.72/hr = $682.88

Subtotal: $3,803.77

Section 700-1200 Surfacing:
Surfacing:
Section 2100 Roadside Brushing:
Manual Brushing
RoadSide Brushing Medium: $948.60/acre x 1.38 acres = $1,309.07
Chipping Brush
Brush Chipper 10 hr x $97.88/hr = $978.80

Subtotal: $2,287.87

Mobilization:
Construction - 2.43% of total Costs = $752.48

Subtotal: $752.48

Total: $12,955.92

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 38-6-36.00 A-B Road Name: Munger Creek North
Road Renovation: 1.3 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$5,926.67
Blading 0.97 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):3.53 acres	$8,199.39
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $871.03 Surf. $0.00	$871.03
Quarry Development:	$0.00
Total:	$14,997.09

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

Road Construction Worksheet

Road Number: 38-6-36.00 A-B Road Name: Munger Creek North

Section 500 Renovation:
  Blading: $923.61/mi x 0.97 mi = $895.90
  Scarification: $1118.88/mi x 0.50 mi = $559.44
  Compaction: $415.02/mi x 0.97 mi = $402.57
  Clean Culverts: $501.63/mi x 1.30 mi = $652.12
  Water for Blading
   Water Truck 3000 Gal 8 hr x $89.04/hr = $712.32
  Cleaning Ditches/Haul Material
   Motor Grader 14M 8 hr x $154.22/hr = $1,233.76
   Backhoe 8 hr x $99.10/hr = $792.80
   Dump Truck 10 cy 8 hr x $84.72/hr = $677.76

Subtotal: $5,926.67

Section 700-1200 Surfacing:
Surfacing:
Section 2100 Roadside Brushing:
Manual Brushing
  RoadSide Brushing Medium: $948.60/acre x 0.48 acres = $455.33
  RoadSide Brushing Heavy: $1897.20/acre x 3.05 acres = $5,786.46
  Chipping Brush
   Brush Chipper 20 hr x $97.88/hr = $1,957.60

Subtotal: $8,199.39

Mobilization:
  Construction - 2.81% of total Costs = $871.03

Subtotal: $871.03

Total: $14,997.09

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 39-5-05.00 A-B Road Name: Marble Gulch
Road Renovation: 2.13 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$7,774.64
Culvert: 116.00 lf	
DownSpout: 20.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$6,498.24
Blading 1.83 mi	
700-1200 Surfacing:	$3,462.60
Quarry Name: Robco 1.5" 60.00 LCY	
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.15 acres	$177.39
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):3.00 acres	$5,553.40
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $1,446.96 Surf. $89.63	$1,536.59
Quarry Development:	$0.00
Total:	$25,002.87

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

Road Construction Worksheet

Road Number: 39-5-05.00 A-B Road Name: Marble Gulch

Section 400 Drainage:

Aluminized milepost 0.76		24 inch 16 ga 40 lf x $63.16/lf	= $2,526.40
Aluminized milepost 1.05		18 inch 16 ga 36 lf x $56.92/lf	= $2,049.12
Aluminized milepost 1.52		18 inch 16 ga 40 lf x $56.92/lf	= $2,276.80
Full Round	milepost 1.05	18 inch 20 lf x $24.41/lf	= $488.20
Splash Pads		2 ea x $217.06/ea	= $434.12

Subtotal: $7,774.64

Section 500 Renovation:

Blading: $923.61/mi x 1.83 mi = $1,690.21
Scarification: $1118.88/mi x 0.50 mi = $559.44
Compaction: $415.02/mi x 1.83 mi = $759.49
Clean Culverts: $501.63/mi x 2.13 mi = $1,068.47
Water for Blading
 Water Truck 3000 Gal 12 hr x $89.04/hr = $1,068.48
Cleaning Ditches/Haul Material
 Motor Grader 14M 4 hr x $154.22/hr = $616.88
 Backhoe 4 hr x $99.10/hr = $396.40
 Dump Truck 10 cy 4 hr x $84.72/hr = $338.88

Subtotal: $6,498.24

Section 700-1200 Surfacing:

Commercial Quarry Name: Robco 1.5"

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

Rock Volume = 60.00 LCY
Purchase Price / Royalty: $19.00/LCY x 60.00 LCY = $1,140.00
Processing: $1.20/LCY x 60.00 LCY = $72.00
Compaction: $1.38/LCY x 60.00 LCY = $82.80
Grid Rolling: $3.02/LCY x 60.00 LCY = $181.20
T11 & T27 Testing: $0.10/LCY x 60.00 LCY = $6.00
Basic Rock Haul cost: $1.62/LCY x 60.00 LCY = $97.20
Rock Haul +15% grades: $2.43/LCY-mi x 60.00 LCY x 4.00 mi= $583.20
Rock Haul -15% grades: $1.21/LCY-mi x 60.00 LCY x 10.00 mi= $726.00
Rock Haul St& Co Roads: $0.54/LCY-mi x 60.00 LCY x 15.00 mi= $486.00
Basic Water Haul cost: $0.79/LCY x 60.00 LCY = $47.40
Water Haul +15% grades: $0.34/LCY-mi x 60.00 LCY x 2.00 mi= $40.80

Subtotal: $3,462.60

Section 1800 Soil Stabilization:

Dry Method with Mulch: $730.62/acre x 0.15 acres = $109.59
      Includes Small Quantity Factor of 1.38
      + Seed Cost: $132.00/acre x 0.15 acres = $19.80
      + Mulch Cost: $320.00/acre x 0.15 acres = $48.00

Subtotal: $177.39

Section 2100 Roadside Brushing:

Manual Brushing
RoadSide Brushing Medium: $948.60/acre x 3.00 acres = $2,845.80
Chipping Brush
 Brush Chipper 20 hr x $97.88/hr = $1,957.60
Haul Material MP 0 - 0.30
 Haul Material From MP 0 to MP 0.30 1 EA x $750.00/EA = $750.00

Subtotal: $5,553.40

Mobilization:

Construction - 4.66% of total Costs = $1,446.96

Road Number: 39-5-05.00 A-B Marble Gulch Continued

Surfacing - 3.24% by rock volume = $89.63

Subtotal: $1,536.59

Total: $25,002.87

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: 39-5-06.01 A-B Road Name: Mungers Creek
Road Renovation: 1.8 mi 15 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	$0.00
300 Excavation:	$0.00
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$4,285.01
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.00 acres	$0.00
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (Manual):2.62 acres	$4,247.17
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $526.11 Surf. $0.00	$526.11
Quarry Development:	$0.00
Total:	$9,058.29

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

Road Construction Worksheet

Road Number: 39-5-06.01 A-B Road Name: Mungers Creek

Section 500 Renovation:
  Clean Culverts: $501.63/mi x 1.80 mi = $902.93
  Cleaning Ditches/Haul Material
   Motor Grader 14M 8 hr x $154.22/hr = $1,233.76
   Backhoe 8 hr x $99.10/hr = $792.80
   Dump Truck 10 cy   16 hr x $84.72/hr = $1,355.52

Subtotal: $4,285.01

Section 700-1200 Surfacing:
Surfacing:
Section 2100 Roadside Brushing:
Manual Brushing
  RoadSide Brushing Medium: $948.60/acre x 2.62 acres = $2,485.33
  Chipping Brush
   Brush Chipper 18 hr x $97.88/hr = $1,761.84

Subtotal: $4,247.17

Mobilization:
  Construction - 1.70% of total Costs = $526.11

Subtotal: $526.11

Total: $9,058.29

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: OS 18-1E Road Name: Operator Spur 18-1E
Road Construction: 0.02 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.10 acres	$377.39
300 Excavation: Standard cy	$300.44
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.05 acres	$59.13
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $45.44 Surf. $0.00	$45.44
Quarry Development:	$0.00
Total:	$782.40

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

Road Construction Worksheet

Road Number: OS 18-1E Road Name: Operator Spur 18-1E

Section 200 Clearing and Grubbing:
   Clearing - Medium (Clearing): Adjustment Factor (1.67)
   16-30% (Avg Side Slopes): Adjustment Factor (0.1)
   Pile and Burn (Slash): Adjustment Factor (1.28)
   20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
   Total Adjustment Factor:1.67 + 0.1 + 1.28 + 0.1 = 3.15
   Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.15 x Total Acres: 0.10 = $377.39

Subtotal: $377.39

Section 300 Excavation:
  Excavation - Common: $2.66/cy x 50.00 cy = $133.00
  Embankment Placement & Compaction 306.f - Common: $0.39/cy x 50.00 cy = $19.50
  Subgrade Compaction: 4 Sta/hr $34.59/sta. x 1.0 sta = $34.59
  Slope Rounding: $0.40/lf x 100.00 lf = $40.00
  Embankment Placement & Compaction 306.a - Common: $1.16/cy x 50.00 cy = $58.00
  Blading without ditch: $15.35/station x 1.00 stations = $15.35

Subtotal: $300.44

Section 700-1200 Surfacing:
Surfacing:
Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.05 acres = $36.53
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.05 acres = $6.60
        + Mulch Cost: $320.00/acre x 0.05 acres = $16.00

Subtotal: $59.13

Mobilization:
  Construction - 0.15% of total Costs = $45.44

Subtotal: $45.44

Total: $782.40

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: OS 26-1D Road Name: Operator Spur 26-1D
Road Construction: 0.02 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.10 acres	$377.39
300 Excavation: Standard cy	$300.44
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.05 acres	$59.13
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $45.44 Surf. $0.00	$45.44
Quarry Development:	$0.00
Total:	$782.40

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

Road Construction Worksheet

Road Number: OS 26-1D Road Name: Operator Spur 26-1D

Section 200 Clearing and Grubbing:
   Clearing - Medium (Clearing): Adjustment Factor (1.67)
   16-30% (Avg Side Slopes): Adjustment Factor (0.1)
   Pile and Burn (Slash): Adjustment Factor (1.28)
   20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
   Total Adjustment Factor:1.67 + 0.1 + 1.28 + 0.1 = 3.15
   Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.15 x Total Acres: 0.10 = $377.39

Subtotal: $377.39

Section 300 Excavation:
  Excavation - Common: $2.66/cy x 50.00 cy = $133.00
  Embankment Placement & Compaction 306.f - Common: $0.39/cy x 50.00 cy = $19.50
  Subgrade Compaction: 4 Sta/hr $34.59/sta. x 1.0 sta = $34.59
  Slope Rounding: $0.40/lf x 100.00 lf = $40.00
  Embankment Placement & Compaction 306.a - Common: $1.16/cy x 50.00 cy = $58.00
  Blading without ditch: $15.35/station x 1.00 stations = $15.35

Subtotal: $300.44

Section 700-1200 Surfacing:
Surfacing:
Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.05 acres = $36.53
        Includes Small Quantity Factor of 1.38
        + Seed Cost: $132.00/acre x 0.05 acres = $6.60
        + Mulch Cost: $320.00/acre x 0.05 acres = $16.00

Subtotal: $59.13

Mobilization:
  Construction - 0.15% of total Costs = $45.44

Subtotal: $45.44

Total: $782.40

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: TR 18-1F Road Name:
Temporary Road: 0.22 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 1.00 acres	$6,187.12
300 Excavation: Standard cy	$3,571.10
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.50 acres	$525.31
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $634.10 Surf. $0.00	$634.10
Quarry Development:	$0.00
Total:	$10,917.63

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

Road Construction Worksheet

Road Number: TR 18-1F Road Name:

Section 200 Clearing and Grubbing:
Clearing - Heavy (Clearing): Adjustment Factor (2.54)
16-30% (Avg Side Slopes): Adjustment Factor (0.1)
Pile and Burn (Slash): Adjustment Factor (1.28)
20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0.1 = 4.02
Base Cost/Acre: $1,198.05 x Adjustment Factor: 4.02 x Total Acres: 1.00 = $4,816.16
Grubbing Larger Stumps
Tractor: D7 with rippers 8 hr x $171.37/hr = $1,370.96

Subtotal: $6,187.12

Section 300 Excavation:
Excavation - Common: $2.66/cy x 600.00 cy = $1,596.00
Embankment Placement & Compaction 306.f - Common: $0.39/cy x 600.00 cy = $234.00
Subgrade Compaction: 4 Sta/hr $34.59/sta. x 11.6 sta = $401.94
Slope Rounding: $0.40/lf x 1,162.00 lf = $464.80
Embankment Placement & Compaction 306.a - Common: $1.16/cy x 600.00 cy = $696.00
Blading without ditch: $15.35/station x 11.62 stations = $178.37

Subtotal: $3,571.10

Section 700-1200 Surfacing:
Surfacing:
Section 1800 Soil Stabilization:
Dry Method with Mulch: $730.62/acre x 0.50 acres = $365.31
Includes Small Quantity Factor of 1.38
+ Mulch Cost: $320.00/acre x 0.50 acres = $160.00

Subtotal: $525.31

Mobilization:
Construction - 2.04% of total Costs = $634.10

Subtotal: $634.10

Total: $10,917.63

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: TR 25-1D Road Name:
Temporary Road: 0.1 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.50 acres	$2,467.98
300 Excavation: Standard cy	$5,108.59
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.25 acres	$262.65
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $483.38 Surf. $0.00	$483.38
Quarry Development:	$0.00
Total:	$8,322.61

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

Road Construction Worksheet

Road Number: TR 25-1D Road Name:

Section 200 Clearing and Grubbing:
   Clearing - Heavy (Clearing): Adjustment Factor (2.54)
   31-45% (Avg Side Slopes): Adjustment Factor (0.2)
   Pile and Burn (Slash): Adjustment Factor (1.28)
   20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
   Total Adjustment Factor:2.54 + 0.2 + 1.28 + 0.1 = 4.12
   Base Cost/Acre: $1,198.05 x Adjustment Factor: 4.12 x Total Acres: 0.50 = $2,467.98
Subtotal: $2,467.98

Section 300 Excavation:
  Excavation - Common: $2.66/cy x 775.00 cy = $2,061.50
  Embankment Placement & Compaction 306.f - Common: $0.39/cy x 775.00 cy = $302.25
  Subgrade Compaction: 4 Sta/hr $34.59/sta. x 5.3 sta = $182.64
  Slope Rounding: $0.40/lf x 528.00 lf = $211.20
  Embankment Placement & Compaction 306.a - Common: $1.16/cy x 775.00 cy = $899.00
  Blading without ditch: $15.35/station x 5.28 stations = $81.05
  Excavation Coming off Road
   Tractor: D7 with rippers 8 hr x $171.37/hr = $1,370.96
Subtotal: $5,108.59

Section 700-1200 Surfacing:
Surfacing:
Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.25 acres = $182.65
        Includes Small Quantity Factor of 1.38
        + Mulch Cost: $320.00/acre x 0.25 acres = $80.00
Subtotal: $262.65

Mobilization:
  Construction - 1.56% of total Costs = $483.38
Subtotal: $483.38

Total: $8,322.61

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: TR 26-1A Road Name:
Temporary Road: 0.16 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.35 acres	$1,568.25
300 Excavation: Standard cy	$1,822.02
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$134.27
Blading 0.08 mi	
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.20 acres	$210.12
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $230.28 Surf. $0.00	$230.28
Quarry Development:	$0.00
Total:	$3,964.94

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

Road Construction Worksheet

Road Number: TR 26-1A Road Name:

Section 200 Clearing and Grubbing:
   Clearing - Heavy (Clearing): Adjustment Factor (2.54)
   16-30% (Avg Side Slopes): Adjustment Factor (0.1)
   Scatter (Slash): Adjustment Factor (1)
   20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
   Total Adjustment Factor:2.54 + 0.1 + 1 + 0.1 = 3.74
   Base Cost/Acre: $1,198.05 x Adjustment Factor: 3.74 x Total Acres: 0.35 = $1,568.25
                                                                Subtotal: $1,568.25

Section 300 Excavation:
  Excavation - Common: $2.66/cy x 150.00 cy = $399.00
  Excavation - Rippable: $5.31/cy x 125.00 cy = $663.75
  Embankment Placement & Compaction 306.f - Common: $0.39/cy x 150.00 cy = $58.50
  Embankment Placement & Compaction 306.f - Rock: $0.39/cy x 125.00 cy = $48.75
  Subgrade Compaction: 4 Sta/hr $34.59/sta. x 3.8 sta = $131.44
  Slope Rounding: $0.40/lf x 380.00 lf = $152.00
  Embankment Placement & Compaction 306.a - Common: $1.16/cy x 150.00 cy = $174.00
  Embankment Placement & Compaction 306.a - Rock: $1.09/cy x 125.00 cy = $136.25
  Blading without ditch: $15.35/station x 3.80 stations = $58.33
                                                                Subtotal: $1,822.02

Section 500 Renovation:
  Scarification: $1118.88/mi x 0.08 mi = $89.51
  Blading w/o Ditches: $559.44/mi x 0.08 mi = $44.76
                                                                Subtotal: $134.27

Section 700-1200 Surfacing:
Surfacing:
Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.20 acres = $146.12
        Includes Small Quantity Factor of 1.38
        + Mulch Cost: $320.00/acre x 0.20 acres = $64.00
                                                                Subtotal: $210.12

Mobilization:
  Construction - 0.74% of total Costs = $230.28
                                                                Subtotal: $230.28

                                                                Total: $3,964.94

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Penn Butte Sale Date: 1/2024
Road Number: TR 30-2 Road Name:
Temporary Road: 0.12 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.60 acres	$2,889.70
300 Excavation: Standard cy	$2,358.57
400 Drainage:	$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	$0.00
700-1200 Surfacing:	$0.00
1300 Geotextiles:	$0.00
1400 Slope Protection:	$0.00
1800 Soil Stabilization: 0.30 acres	$315.19
Includes Small Quantity Factor of 1.38	
1900 Cattleguards:	$0.00
2100 RoadSide Brushing (NONE):0.00 acres	$0.00
2300 Engineering: 0.00 sta.	$0.00
2400 Minor Concrete:	$0.00
2500 Gabions:	$0.00
8000 Miscellaneous:	$0.00
Mobilization: Const. $343.05 Surf. $0.00	$343.05
Quarry Development:	$0.00
Total:	$5,906.50

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

Road Construction Worksheet

Road Number: TR 30-2 Road Name:

Section 200 Clearing and Grubbing:
   Clearing - Heavy (Clearing): Adjustment Factor (2.54)
   16-30% (Avg Side Slopes): Adjustment Factor (0.1)
   Pile and Burn (Slash): Adjustment Factor (1.28)
   20-40' (Avg Clearing Widths): Adjustment Factor (0.1)
   Total Adjustment Factor:2.54 + 0.1 + 1.28 + 0.1 = 4.02
   Base Cost/Acre: $1,198.05 x Adjustment Factor: 4.02 x Total Acres: 0.60 = $2,889.70

Subtotal: $2,889.70

Section 300 Excavation:
  Excavation - Common: $2.66/cy x 425.00 cy = $1,130.50
  Embankment Placement & Compaction 306.f - Common: $0.39/cy x 425.00 cy = $165.75
  Subgrade Compaction: 4 Sta/hr $34.59/sta. x 6.3 sta = $218.95
  Slope Rounding: $0.40/lf x 633.00 lf = $253.20
  Embankment Placement & Compaction 306.a - Common: $1.16/cy x 425.00 cy = $493.00
  Blading without ditch: $15.35/station x 6.33 stations = $97.17

Subtotal: $2,358.57

Section 700-1200 Surfacing:
Surfacing:
Section 1800 Soil Stabilization:
  Dry Method with Mulch: $730.62/acre x 0.30 acres = $219.19
        Includes Small Quantity Factor of 1.38
        + Mulch Cost: $320.00/acre x 0.30 acres = $96.00

Subtotal: $315.19

Mobilization:
  Construction - 1.11% of total Costs = $343.05

Subtotal: $343.05

Total: $5,906.50

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Penn Butte Sale Date: 1/2024

Average Mobilization distance = 50 miles Factor = 1.00

Mobilization: Construction

Graders-all:	8 ea x (1.00 x $536.00/ea +	0 mi x $18.44/mi)= $4,288.00
Rollers & Comp:	8 ea x (1.00 x $536.00/ea +	0 mi x $27.67/mi)= $4,288.00
Excavators (Lg):	8 ea x (1.00 x $1176.00/ea +	0 mi x $33.32/mi)= $9,408.00
RTBackhoes 24/30:	8 ea x (1.00 x $399.00/ea +	0 mi x $7.16/mi)= $3,192.00
Tractors <= D7:	8 ea x (1.00 x $856.00/ea +	0 mi x $48.94/mi)= $6,848.00
Equipment Washing:	12 ea x ($250.00) /ea = $3,000.00	

Subtotal: $31,024.00

Mobilization: Surfacing

Fire Equipment:	8ea x (1.00 x $91.00/ea +	0 mi x $5.06/mi)= $728.00
Dump Truck<=15cy:	8ea x (1.00 x $124.00/ea +	0 mi x $5.15/mi)= $992.00
Water Truck:	8ea x (1.00 x $131.00/ea +	0 mi x $5.47/mi)= $1,048.00

Subtotal: $2,768.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Penn Butte Sale Date: 1/2024

Road Number	Const	Improv	Renov	Decomm	Temp
37-6-36.00 H			34.85		
38-5-07.01			31.68		
38-5-15.00 A-I			396		
38-5-15.00 J			71.28		
38-5-17.00 A-B			141.5		
38-5-17.00 C		48.58			
38-5-17.02			66.53		
38-5-18.00 A			15.31		
38-5-18.02		26.93			
38-5-19.01			44.35		
38-5-30.00			14.26		
38-5-31.01 A-B			80.78		
38-5-31.03 A-B			58.61		
38-6-25.00 A			40.13		
38-6-25.02			35.38		
38-6-25.04			8.98		
38-6-25.05			45.94		
38-6-26.00		12.67			
38-6-35.02			50.16		
38-6-36.00 A-B			68.64		
39-5-05.00 A-B			112.46		
39-5-06.01 A-B			95.04		
OS 18-1E	1				
OS 26-1D	1				
TR 18-1F					11.62
TR 25-1D					5.28
TR 26-1A					8.24
TR 30-2					6.33
Total Sta:	2.00	88.18	1,411.88		31.47

200 Clearing and Grubbing	Clearing acres
37-6-36.00 H	0.0
38-5-07.01	0.9
38-5-15.00 A-I	0.0
38-5-15.00 J	0.0
38-5-17.00 A-B	3.9
38-5-17.00 C	1.4
38-5-17.02	1.8
38-5-18.00 A	0.5
38-5-18.02	0.0
38-5-19.01	1.3
38-5-30.00	0.0
38-5-31.01 A-B	0.0
38-5-31.03 A-B	0.0
38-6-25.00 A	1.1
38-6-25.02	1.0
38-6-25.04	0.0
38-6-25.05	0.0
38-6-26.00	0.0
38-6-35.02	1.2
38-6-36.00 A-B	0.0
39-5-05.00 A-B	0.0

Continuation of Construction Quantities

39-5-06.01 A-B	0.0
OS 18-1E	0.1
OS 26-1D	0.1
TR 18-1F	1.0
TR 25-1D	0.5
TR 26-1A	0.4
TR 30-2	0.6
Totals:	15.60

Additional Roadside Work 38-6-35.02
Excavator - Large (3 CY) . . . . . 8 hr

Additional Roadside Work 38-6-25.02
Excavator - Large (3 CY) . . . . . 6 hr

Additional Roadside Work 38-6-25.00 A
Excavator - Large (3 CY) . . . . . 6 hr

Additional Roadside Work 38-5-07.01
Excavator - Large (3 CY) . . . . . 6 hr

Additional Roadside Work 38-5-19.01
Excavator - Large (3 CY) . . . . . 8 hr

Additional Roadside Work 38-5-18.00 A
Excavator - Large (3 CY) . . . . . 2 hr

Additional Roadside Work 38-5-17.02
Excavator - Large (3 CY) . . . . . 10 hr

Additional Roadside Work 38-5-17.00 C
Excavator - Large (3 CY) . . . . . 8 hr

Grubbing Larger Stumps TR 18-1F
Tractor: D7 with rippers . . . . . 8 hr

Roadside Additional Work 38-5-17.00 A-B
Excavator - Large (3 CY) . . . . . 20 hr

300 Excavation

	Excav LCY.s	Haul sta-yds	Haul yd-mi
OS 18-1E	50	0	0
OS 26-1D	50	0	0
TR 18-1F	600	0	0
TR 25-1D	775	0	0
TR 26-1A	275	0	0
TR 30-2	425	0	0
Totals:	2,175	0	0

Excavation Coming off Road TR 25-1D
Tractor: D7 with rippers . . . . . 8 hr

400 Drainage

Road Number	CMP Culvert	Polypipes	Downspouts
37-6-36.00 H	44 lf	0 lf	0 lf
38-5-07.01	170 lf	0 lf	0 lf
38-5-15.00 J	244 lf	0 lf	0 lf
38-5-17.00 A-B	284 lf	0 lf	0 lf
38-5-17.00 C	118 lf	0 lf	0 lf
38-5-17.02	150 lf	0 lf	0 lf
38-5-18.02	160 lf	0 lf	0 lf
38-5-19.01	150 lf	0 lf	0 lf
38-5-31.01 A-B	564 lf	0 lf	0 lf
38-5-31.03 A-B	40 lf	0 lf	0 lf
38-6-25.00 A	138 lf	0 lf	0 lf
38-6-25.02	36 lf	0 lf	0 lf
38-6-25.05	80 lf	0 lf	0 lf
39-5-05.00 A-B	116 lf	0 lf	20 lf

Continuation of Construction Quantities

Total Drainage:	2,294 lf		20 lf

Culvert Qty	Aluminized	Galvanized	Poly Pipe
12 inch	0 lf	0 lf	
18 inch	426 lf	234 lf	0 lf
24 inch	1530 lf	44 lf	0 lf
30 inch	60 lf	0 lf	0 lf
36 inch	0 lf	0 lf	0 lf
42 inch	0 lf	0 lf	
48 inch	0 lf	0 lf	

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

500 Renovation	Blade Miles	Slide cy
37-6-36.00 H	0.66	0
38-5-07.01	0.60	0
38-5-15.00 J	1.35	0
38-5-17.00 A-B	2.68	0
38-5-17.00 C	0.92	0
38-5-17.02	1.26	0
38-5-18.00 A	0.29	0
38-5-18.02	0.51	0
38-5-19.01	0.84	0
38-5-30.00	0.27	0
38-5-31.01 A-B	1.53	0
38-5-31.03 A-B	1.11	0
38-6-25.00 A	0.76	0
38-6-25.02	0.67	0
38-6-25.04	0.17	0
38-6-25.05	0.87	0
38-6-26.00	0.24	0
38-6-35.02	0.95	0
38-6-36.00 A-B	0.97	0
39-5-05.00 A-B	1.83	0
TR 26-1A	0.08	0
Totals:	18.56	0

Additional Roadside Work 38-6-26.00
- Backhoe . . . . . 1 hr
- Motor Grader 14M . . . . . 1 hr

Additional Roadside Work 38-6-25.02
- Backhoe . . . . . 3 hr
- Motor Grader 14M . . . . . 3 hr

Additional Roadside Work 38-6-25.00 A
- Backhoe . . . . . 3 hr
- Motor Grader 14M . . . . . 3 hr

Additional Roadside Work 38-5-07.01
- Backhoe . . . . . 3 hr
- Motor Grader 14M . . . . . 3 hr

Additional Roadside Work 38-5-19.01
- Backhoe . . . . . 4 hr
- Motor Grader 14M . . . . . 4 hr

Additional Roadside Work 38-5-18.00 A
- Backhoe . . . . . 1 hr

Motor Grader 14M . . . . . 1 hr
Additional Roadside Work 38-5-17.02
Backhoe . . . . . 5 hr
Motor Grader 14M . . . . . 5 hr
Additional Roadside Work 38-5-17.00 C
Backhoe . . . . . 4 hr
Motor Grader 14M . . . . . 4 hr
Additional Roadside Work 38-6-35.02
Backhoe . . . . . 4 hr
Motor Grader 14M . . . . . 4 hr
Cleaning Ditches/Haul Material 38-5-15.00 A-I
Motor Grader 14M . . . . . 32 hr
Backhoe . . . . . 16 hr
Dump Truck 10 cy - 2 trucks . . . . . 32 hr
Cleaning Ditches/Haul Material 38-6-36.00 A-B
Motor Grader 14M . . . . . 8 hr
Backhoe . . . . . 8 hr
Dump Truck 10 cy . . . . . 8 hr
Cleaning Ditches/Haul Material 39-5-05.00 A-B
Motor Grader 14M . . . . . 4 hr
Backhoe . . . . . 4 hr
Dump Truck 10 cy . . . . . 4 hr
Cleaning Ditches/Haul Material 39-5-06.01 A-B
Motor Grader 14M . . . . . 8 hr
Backhoe . . . . . 8 hr
Dump Truck 10 cy . . . . . 16 hr
Construct water dips 38-5-17.00 C
Construct Water Dip . . . . . 8 EA
Fill Failure Repair MP 0.32 38-6-25.00 A
Excavator - Large (3 CY) . . . . . 4 hr
Vibratory roller, Steel Drum . . . . . 2 hr
Rebuild Fill Failure MP 0.25 38-6-25.02
Excavator - Large (3 CY) . . . . . 4 hr
Vibratory roller, Steel Drum . . . . . 2 hr
Rebuild Fill Failure MP 0.41 38-5-18.02
Excavator - Large (3 CY) . . . . . 4 hr
Vibratory roller, Steel Drum . . . . . 2 hr
Rebuild Fill Failure MP 1.54 38-5-17.00 A-B
Excavator - Large (3 CY) . . . . . 8 hr
Vibratory roller, Steel Drum . . . . . 4 hr
Remove Earth Barricade 38-5-18.02
Remove Earth Barricade . . . . . 1 EA
Remove Earth Barricade 38-5-17.00 C
Remove Earth Barricade . . . . . 1 EA
Remove Earth Barricade 38-6-26.00
Remove Earth Barricade . . . . . 1 EA
Remove Earth Barricade 38-5-18.00 A
Remove Earth Barricade . . . . . 1 EA
Roadside Additional Work 38-5-17.00 A-B
Backhoe . . . . . 10 hr
Motor Grader 14M . . . . . 10 hr
Water for Blading 38-5-15.00 J
Water Truck 3000 Gal . . . . . 14 hr
Water for Blading 38-5-17.02
Water Truck 3000 Gal . . . . . 13 hr
Water for Blading 38-5-17.00 A-B
Water Truck 3000 Gal . . . . . 27 hr
Water for Blading 38-5-18.00 A
Water Truck 3000 Gal . . . . . 3 hr
Water for Blading 38-5-19.01
Water Truck 3000 Gal . . . . . 4 hr
Water for blading 38-5-30.00
Water Truck 3000 Gal . . . . . 2 hr

Water for blading 38-5-31.01 A-B
Water Truck 3000 Gal . . . . . 8 hr
Water for Blading 38-5-31.03 A-B
Water Truck 3000 Gal . . . . . 8 hr
Water for blading 38-6-25.00 A
Water Truck 3000 Gal . . . . . 8 hr
Water for Blading 38-6-25.02
Water Truck 3000 Gal . . . . . 4 hr
Water for Blading 37-6-36.00 H
Water Truck 3000 Gal . . . . . 3 hr
Water for Blading 38-6-25.05
Water Truck 3000 Gal . . . . . 8 hr
Water for Blading 38-6-26.00
Water Truck 3000 Gal . . . . . 2 hr
Water for Blading 38-6-35.02
Water Truck 3000 Gal . . . . . 8 hr
Water for Blading 38-6-36.00 A-B
Water Truck 3000 Gal . . . . . 8 hr
Water for Blading 39-5-05.00 A-B
Water Truck 3000 Gal . . . . . 12 hr
Water for Blading 38-6-25.04
Water Truck 3000 Gal . . . . . 2 hr
Watering for Blading 38-5-07.01
Water Truck 3000 Gal . . . . . 3 hr

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

Quarry Name: Spencer Cr Stockpile

2 Stage Crusher	Roadway	Turnouts	Other	
37-6-36.00 H	0	0	20	20
38-5-07.01	0	0	80	80
38-5-15.00 J	0	0	120	120
38-5-17.00 A-B	0	0	120	120
38-5-19.01	0	0	60	60
38-6-25.00 A	0	0	60	60
38-6-25.02	0	0	20	20
38-6-25.05	0	0	40	40
Totals:	0	0	520	520

Quarry Name: Robco

Screened	Roadway	Turnouts	Other	
Totals:	0	0	0	0

Quarry Name: Robco 1.5"

Commercial	Roadway	Turnouts	Other	
38-5-17.02	553	0	60	613
38-5-31.01 A-B	0	0	260	260
38-5-31.03 A-B	360	0	20	380
39-5-05.00 A-B	0	0	60	60
38-5-17.02	0	0	20	20
Totals:	913	0	420	1,333

1300 Geotextiles

1400 Slope Protection

Continuation of Construction Quantities

38-5-17.00 A-B	Gradation Class 2:	100 cy
38-5-17.00 C	Gradation Class 2:	32 cy
38-5-18.02	Gradation Class 2:	50 cy
38-6-25.02	Gradation Class 2:	50 cy
	Totals:	232 cy

1800 Soil stabilization - acres	Dry W/O Mulch	Dry/with Mulch	Hydro Mulch
37-6-36.00 H	0.0	0.0	0.0
38-5-07.01	0.0	0.0	0.0
38-5-15.00 J	0.0	0.0	0.0
38-5-17.00 A-B	0.0	0.0	0.0
38-5-17.02	0.0	0.0	0.0
38-5-19.01	0.0	0.0	0.0
38-5-31.01 A-B	0.0	0.0	0.0
38-5-31.03 A-B	0.0	0.0	0.0
38-6-25.00 A	0.0	0.0	0.0
38-6-25.02	0.0	0.0	0.0
38-6-25.05	0.0	0.0	0.0
39-5-05.00 A-B	0.0	0.0	0.0
OS 18-1E	0.0	0.0	0.0
OS 26-1D	0.0	0.0	0.0
TR 18-1F	0.0	0.0	0.0
TR 25-1D	0.0	0.0	0.0
TR 26-1A	0.0	0.0	0.0
TR 30-2	0.0	0.0	0.0
Totals:	0.00	3.65	0.00

Small Quantity Factor of 1.38 used

1900 Cattleguards

2100 RoadSide Brushing	acres
37-6-36.00 H - Manual Brushing	1.0
38-5-07.01 - Manual Brushing	0.9
38-5-17.00 A-B - Manual Brushing	2.6
38-5-17.00 C - Manual Brushing	2.9
38-5-17.02 - Manual Brushing	1.2
38-5-18.00 A - Manual Brushing	0.3
38-5-18.02 - Manual Brushing	1.6
38-5-19.01 - Manual Brushing	0.8
38-5-30.00 - Manual Brushing	0.3
38-5-31.01 A-B - Manual Brushing	2.2
38-5-31.03 A-B - Manual Brushing	1.6
38-6-25.00 A - Manual Brushing	0.7
38-6-25.02 - Manual Brushing	0.7
38-6-25.04 - Manual Brushing	0.5
38-6-25.05 - Manual Brushing	0.8
38-6-26.00 - Manual Brushing	0.8
38-6-35.02 - Manual Brushing	1.4
38-6-36.00 A-B - Manual Brushing	3.5
39-5-05.00 A-B - Manual Brushing	3.0
39-5-06.01 A-B - Manual Brushing	2.6
Totals:	29.48

Chipping Brush 39-5-06.01 A-B

Brush Chipper . . . . . 18 hr

Chipping Brush 38-5-07.01

Brush Chipper . . . . . 6 hr
Chipping Brush 38-5-17.00 C
Brush Chipper . . . . . 16 hr
Chipping Brush 38-5-18.02
Brush Chipper . . . . . 10 hr
Chipping Brush 38-5-31.01 A-B
Brush Chipper . . . . . 16 hr
Chipping Brush 38-5-31.03 A-B
Brush Chipper . . . . . 11 hr
Chipping Brush 38-6-25.04
Brush Chipper . . . . . 4 hr
Chipping Brush 38-6-26.00
Brush Chipper . . . . . 4 hr
Chipping Brush 38-6-35.02
Brush Chipper . . . . . 10 hr
Chipping Brush 37-6-36.00 H
Brush Chipper . . . . . 7 hr
Chipping Brush 39-5-05.00 A-B
Brush Chipper . . . . . 20 hr
Chipping Brush 38-6-25.00 A
Brush Chipper . . . . . 4 hr
Chipping brush 38-5-17.00 A-B
Brush Chipper . . . . . 10 hr
Chipping brush 38-5-17.02
Brush Chipper . . . . . 5 hr
Chipping brush 38-5-18.00 A
Brush Chipper . . . . . 2 hr
Chipping Brush 38-5-19.01
Brush Chipper . . . . . 4 hr
Chipping brush 38-5-30.00
Brush Chipper . . . . . 1 hr
Chipping brush 38-6-25.05
Brush Chipper . . . . . 4 hr
Chipping Brush 38-6-25.02
Brush Chipper . . . . . 3 hr
Chipping Brush 38-6-36.00 A-B
Brush Chipper . . . . . 20 hr
Haul Material MP 0 - 0.30 39-5-05.00 A-B
Haul Material From MP 0 to MP 0.30 . . . . . 1 EA

2300 Engineering stations

Totals: 0.00

2400 Minor Concrete

2500 Gabions

8000 Miscellaneous

This page intentionally left blank

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

EXHIBIT D1

PENN BUTTE TIMBER SALE
TRACT NO. ORM07-TS-2024.0003

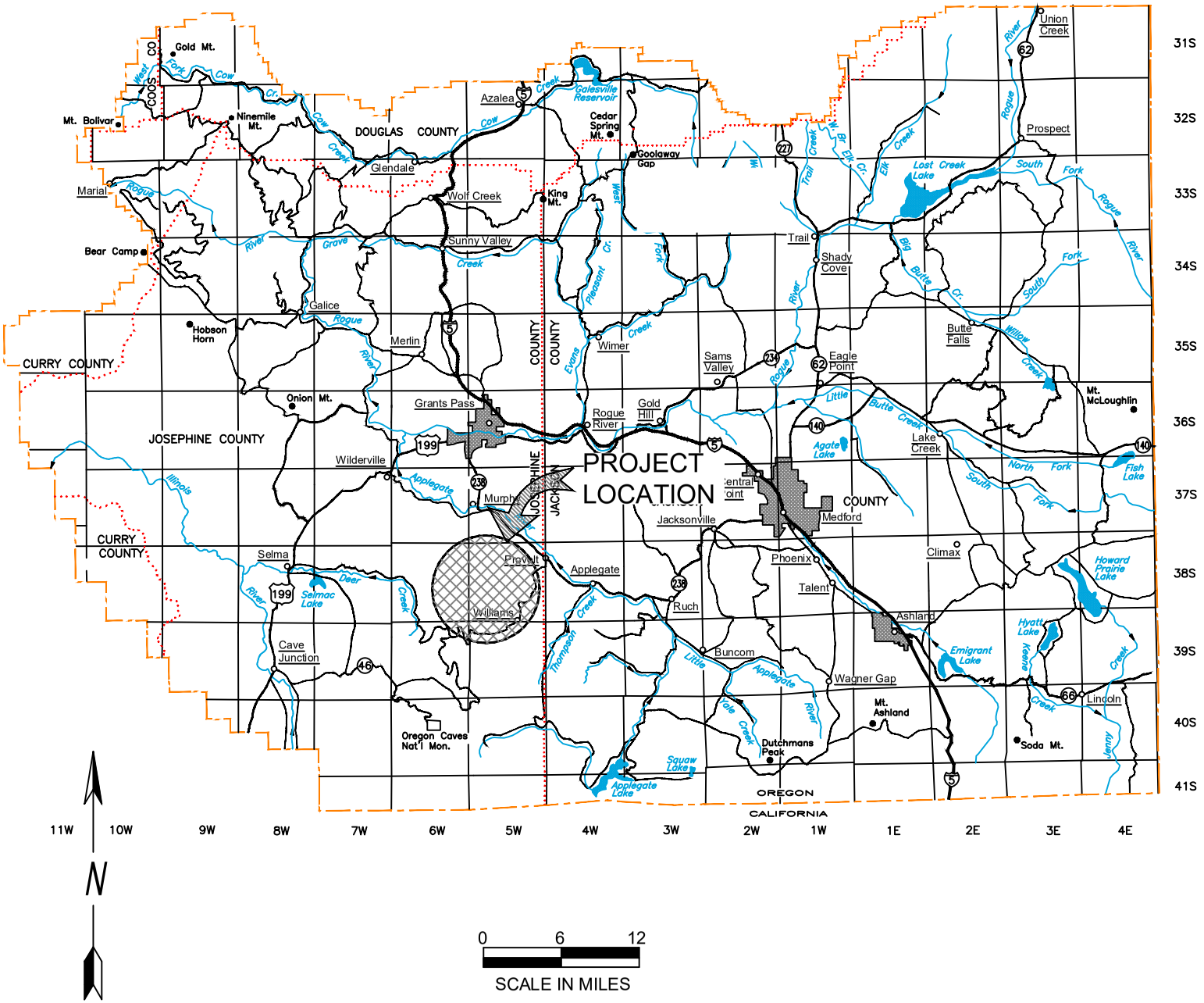


Exhibit No.	Description
D-1	TITLE SHEET
D-2	ROAD MAINTENANCE SPECIFICATIONS
D-3	ROAD MAINTENANCE MAPS
D-4	ROAD DECOMMISSIONING WORKLIST
D-5	ROAD DECOMMISSIONING MAPS
D-6	ESTIMATE OF QUANTITIES
D-7	BARRICADE AND WATER BAR DETAILS
D-8	DECOMPACTION & CULVERT REMOVAL DETAILS
D-9	TYPICAL ROAD CAMOUFLAGE DETAIL

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE TITLE SHEET

DRAFTED BY: BLM	SCALE: 1" = 12 MI
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-D1	

This page intentionally left blank

ROAD MAINTENANCE SPECIFICATIONS

TABLE OF CONTENTS

GENERAL - 3000

3001 - The Purchaser shall be required to maintain all roads as shown on Exhibit D-3 and Exhibit D-5 maps and Exhibit D-6 of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 of this exhibit.

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

3002 - The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.

3003 - The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.

3004 - The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time.

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

OPERATIONAL MAINTENANCE - 3100

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

3102 - The Purchaser shall furnish (from a commercial source) and place **250 cu. yds**. of aggregate conforming to the requirements in Section 1200 of Exhibit C of this contract on the roadway and landings at locations and in the amounts designated by the Authorized Officer.

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

3103 - The purchaser shall maintain established berms and place additional berms using

adjacent material where needed to protect fills as directed by the Authorized Officer.

3104 - The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.

3104a - Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.

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

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

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

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

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

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work based upon current BLM Road Cost

Guide. Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.

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

The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be in accordance with Section 2100 of Exhibit C-15.

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

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

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

SEASONAL MAINTENANCE - 3200

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

3202 - The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 15 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.

3203 - The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.

3204 - The Purchaser shall be responsible for performing post storm inspections and

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

FINAL MAINTENANCE - 3300

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

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

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

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

OTHER MAINTENANCE - 3400

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

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

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

3403 - The Purchaser shall be required to furnish and apply non-saline water during dry hauling periods, when directed by the Authorized Officer, for the purpose of laying dust and to prevent loss of surface material. The first application of water shall be made at the rate of one- half gallon per yd^2 of road surface traveled. Subsequent applications shall be made for each 40 MBF of timber or 120 yds^3 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.
39-5-05.00 A-B	0.00	0.47

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

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

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

Road Number	From M.P.	to M.P.
39-5-05.00 A-B	0.00	0.47

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

3404 - The Purchaser may at his option and expense substitute lignin sulfonate for water on any or all road segments listed in Subsection 3403 or 3403a provided that written approval is received from the Authorized Officer. Such authorization shall include the approval of product specifications for the application of the product to be used. Multiple applications may be required to maintain the conditions specified in Subsection 3403.

3405b - The Purchaser shall notify affected residents along the roads to be treated of the planned application of lignin sulfonate dust palliatives at least 7 days prior to the work. Warning signs shall be posted at key intersections to alert users that the road is being treated. All signs shall be removed by the Purchaser within 30 days of treatment.

3406 - Prior to the application of lignin sulfonate dust palliatives, the roadbed shall be bladed and shaped to remove surface irregularities and excess loose material. The prepared surface must have 1/2 to 1 inch of relatively loose material and be visibly moist and drying.

3406b - A light application of water to promote penetration shall be made in advance of the application of the specified dust palliative to allow the drying process to begin and to eliminate any saturated surface conditions.

3406c - The prepared roadbed shall be approved by the Authorized Officer prior to application of the specified dust palliative.

3407 - The Purchaser shall furnish in duplicate, commercial certification signed by vendor of compliance with the lignin sulfonate dust palliatives material requirements specified under Subsection 3412b. Commercial certification includes the date, identification number of truck or trailer, net mass, and brand name with each shipment. Also provide the net volume and specific gravity at 60 degrees F, percent solids by mass, and PH.

3408 - Dust palliatives shall be applied with standard commercial distribution equipment operated in a manner that the material is uniformly applied on variable widths of surface at controlled rates.

3409 - The Purchaser shall notify the Authorized Officer a minimum of 7 days in advance of application of required dust palliative.

3410 - The Purchaser shall submit an application schedule for all dust palliative work to the Authorized Officer for approval. All work shall be in accordance with the approved plan.

3411 - Required lignin sulfonate dust palliatives shall only be applied when the atmospheric temperature is 45° F and steady or rising and when the weather is not

foggy or rainy. Do not apply dust palliative if rain is anticipated within 24 hours of application or when the ground is frozen.

3412 - The Purchaser shall apply to the prepared roadbed specified under Subsection 3405, a lignin sulfonate dust palliative conforming to the material requirements of Subsection 3412b. The rate of application shall be 0.5 gallons per yd^2 surface.

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

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

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

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

3412b - Specifications for Lignin Sulfonate:

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

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

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

phosphorous	25.00 ppm
cyanide	0.20 ppm
arsenic	5.00 ppm
copper	0.20 ppm
lead	1.00 ppm
mercury	0.05 ppm
chromium	0.50 ppm
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.

DECOMMISSIONING – 3500

3501 - Decommissioning work may include removing culverts, installing water bars, placement of slash and/or placement of soil stabilization material, and blocking road from access by vehicles as listed in the Road Decommissioning Worklist Exhibit D-4. This work is required for road acceptance under Section 18 of this contract.

3503 - Decommissioning shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	From Sta/MP	To Sta/MP	Decommission or Obliterate
38-5-17.00 C	2.68	3.60	Re-decommission
38-5-18.02	0.00	0.51	Re-decommission
38-6-26.00	0.00	0.24	Re-decommission
OS 18-1E	0+00	1+00	Decommission
OS 26-1D	0+00	1+00	Decommission
TR 18-01F	0+00	11+62	Decommission
TR 25-1D	0+00	5+28	Decommission
TR 26-1A	0+00	8+24	Decommission
TR 30-2	0+00	6+33	Decommission

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

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

3505 - Where draw crossing fill material is to be excavated and removed, the finished

bottom of draw profile shall be re-established to its original channel grade and resulting adjacent banks shall be constructed to a 2:1 backslope ratio.

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

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

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

3509 - Access shall be blocked with barricades as shown on the Barricade and Water Bar Detail Exhibit C-7, Decompaction and Culvert Removal Detail Sheet Exhibit D-8, Typical Road Camouflage Sheet Exhibit D-9, and at locations as shown on Exhibits D-4 and D-5.

3510 - Sections of roadway where ripping and/or is required shall be cleared of all vegetation and slash. The resultant slash shall be stockpiled in a manner that will allow retrieval and uniform spreading in accordance with Subsection 3506. No vegetation or slash shall be mixed with excavated material to be placed.

3511 - Ripping and/or subsoiling and water barring shall be done on designated roadways. Ripping shall be performed with wing-toothed rippers or excavators modified for tillage.

3512 - Draw crossing fill material shall be excavated and placed in designated locations for use in accomplishing partial recontouring. Placement of materials shall produce well-drained, uniform recontoured terrain as shown on the plans. The finished draw excavation shall meet requirements of Subsection 3505.

3513 - Water bars shall be installed across full width of roadway at spacing shown in the specifications. Water bars shall be constructed conforming to the lines, grades, dimensions and typical details as shown on Exhibit D-7. No water bar will be installed closer than 50 feet to a draw crossing.

3514 - Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800 and placement of slash described in Subsection 3506 on designated roadways, disturbed areas, landings,

and other areas disturbed by the purchaser's operations in accordance with these specifications and as shown in the plans.

This page intentionally left blank

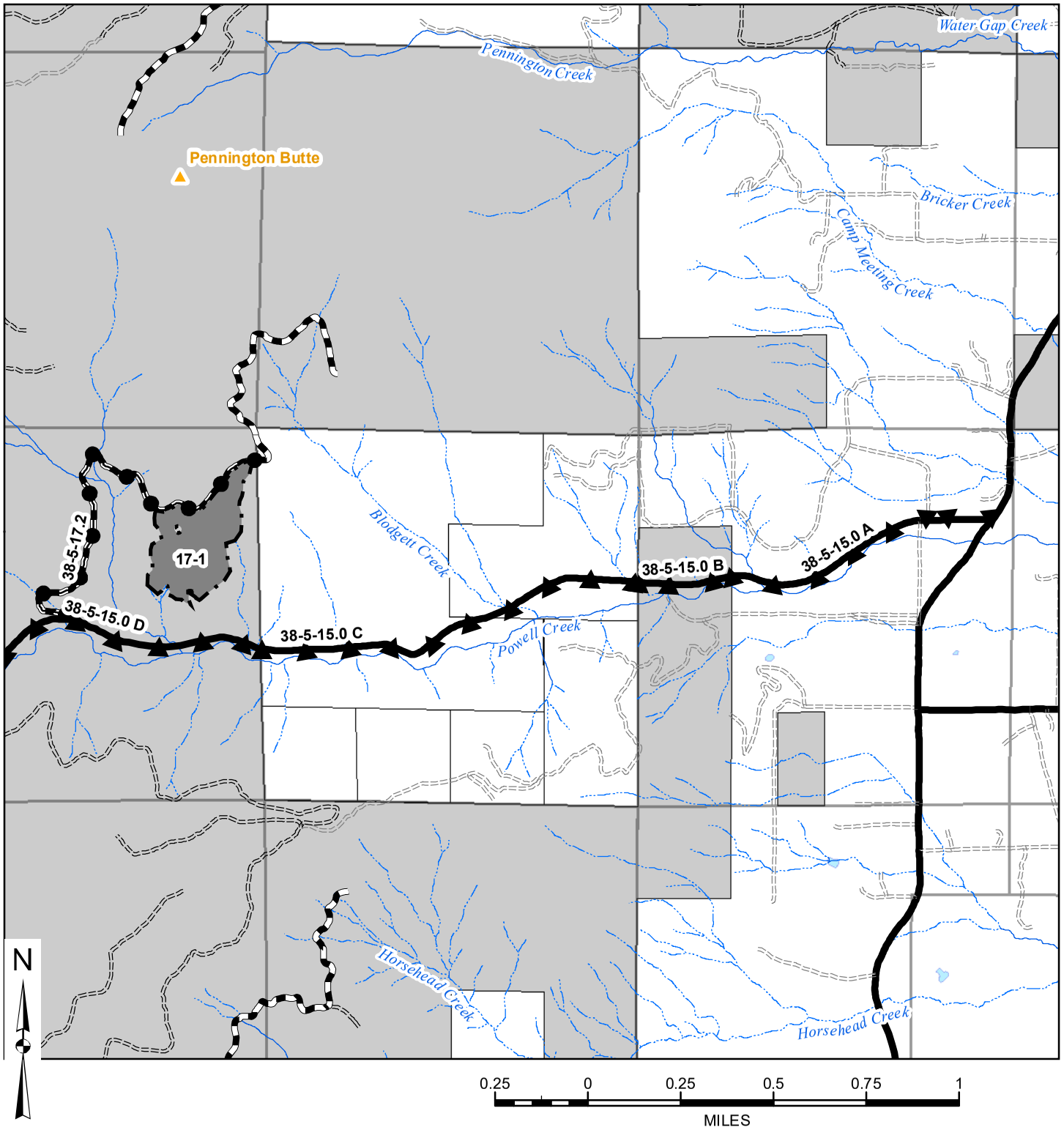


EXHIBIT D3-1

LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Maintenance Responsibility

Maintenance Responsibility

- Purchaser
- Bureau of Land Management
- Barricade
- Gate

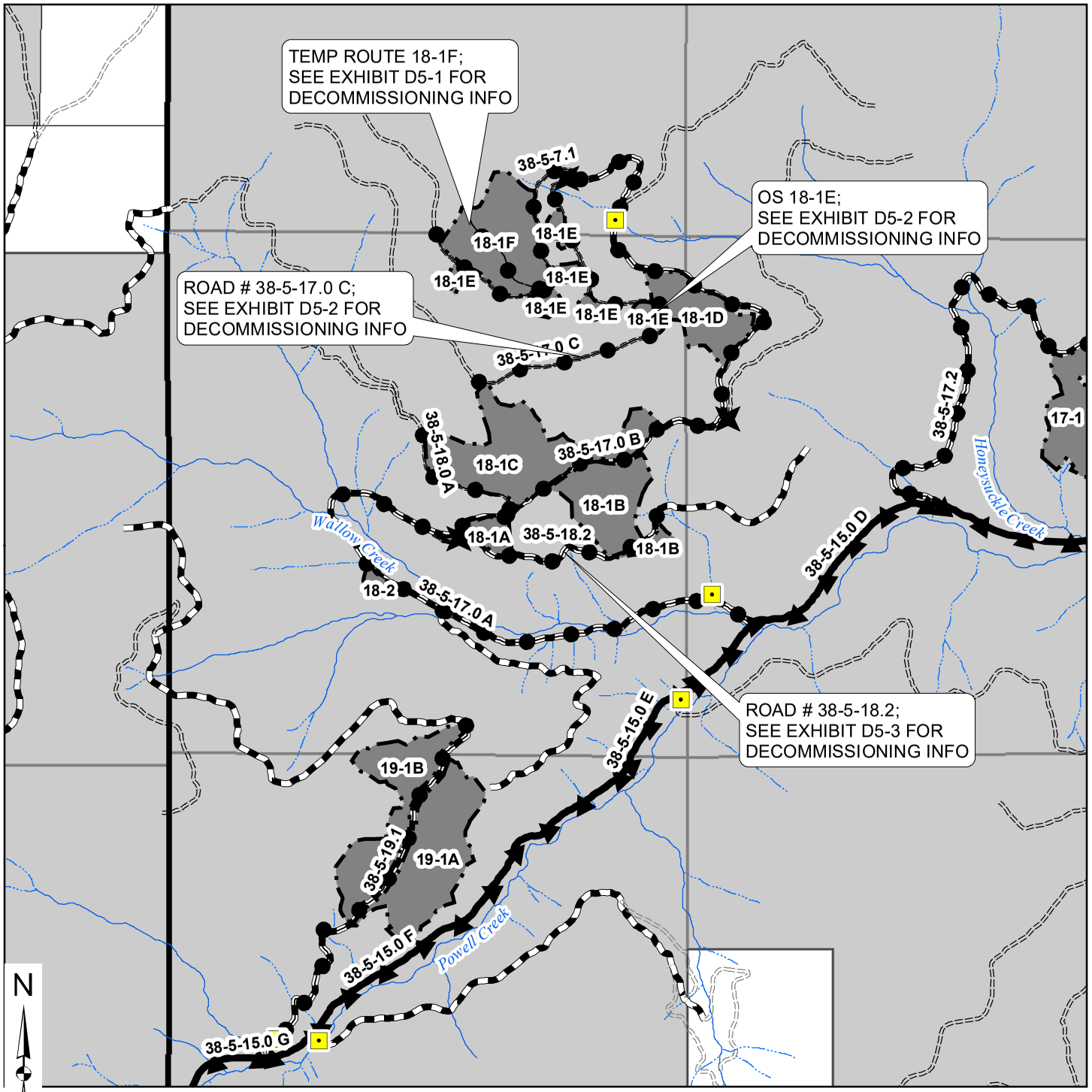
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD MAINTENANCE MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 1 OF 5
DRAWING NO.: ORM07-TS-2024.0003-D3-1	

EXHIBIT D3-2



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Maintenance Responsibility

Maintenance Responsibility

- Purchaser
- Bureau of Land Management
- Barricade
- Gate

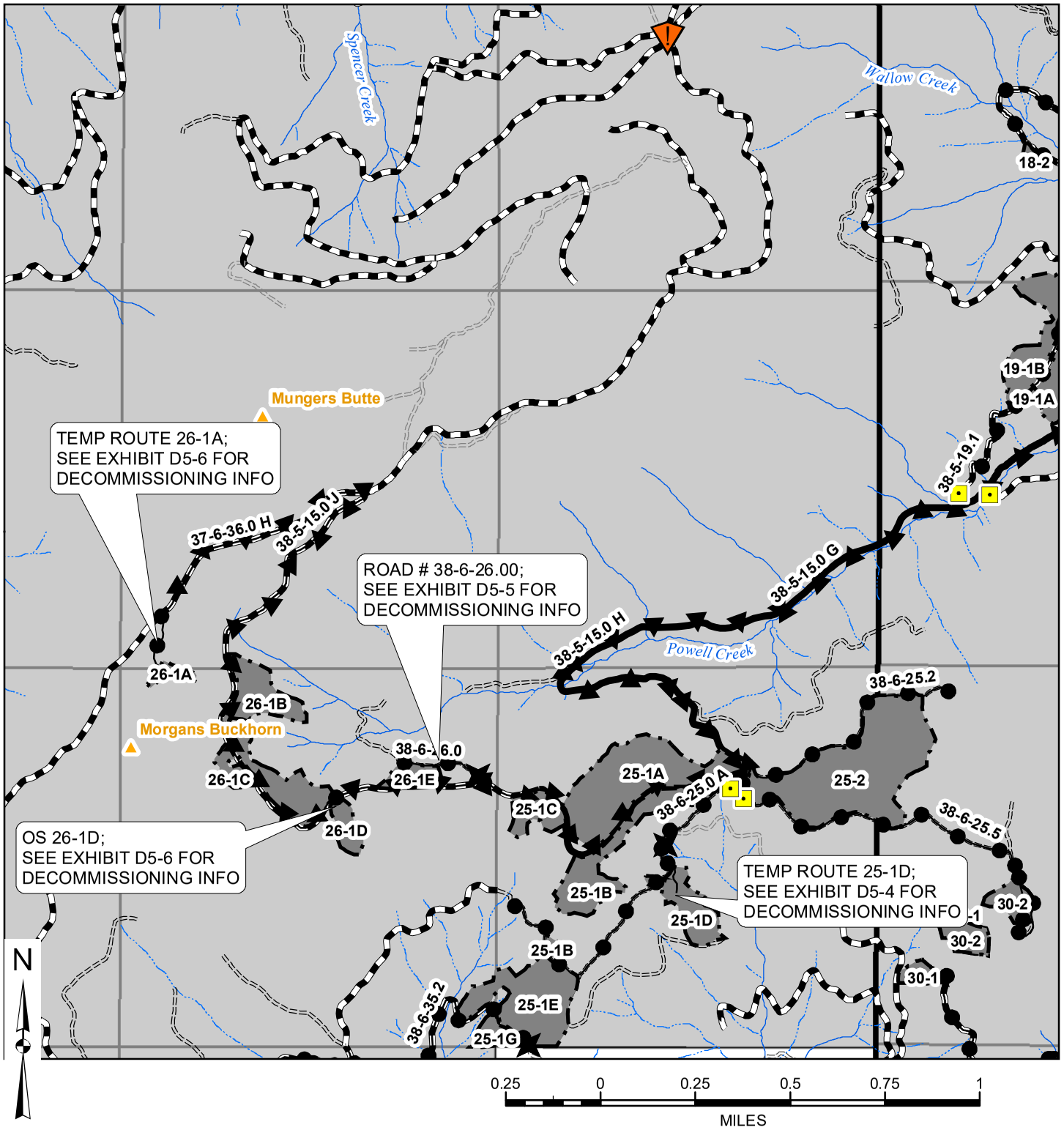
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD MAINTENANCE MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 2 OF 5
DRAWING NO.: ORM07-TS-2024.0003-D3-2	

EXHIBIT D3-3



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Maintenance Responsibility

Maintenance Responsibility

- Purchaser
- Bureau of Land Management
- Barricade
- Gate
- BLM Stockpiles

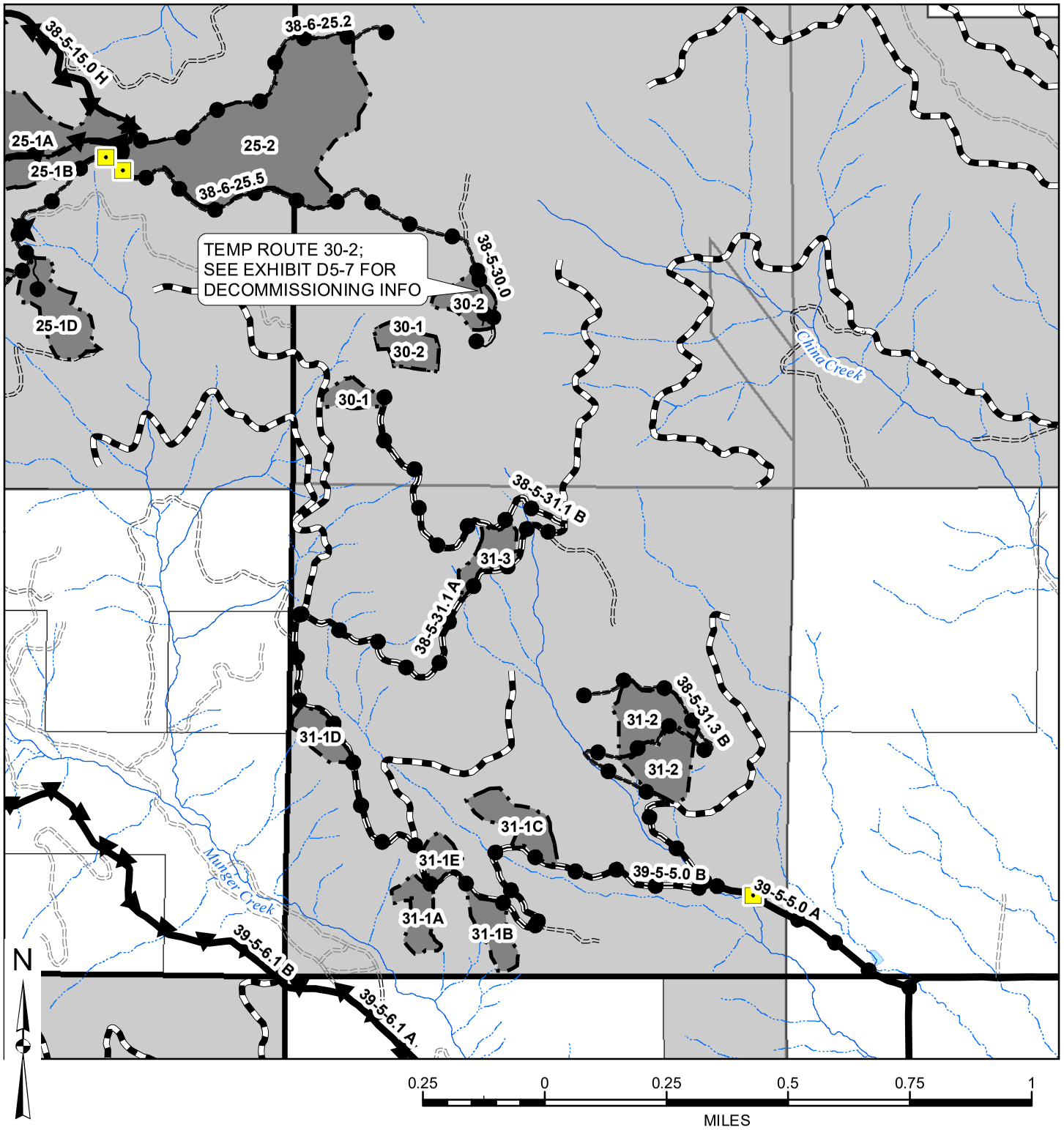
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD MAINTENANCE MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 3 OF 5
DRAWING NO.: ORM07-TS-2024.0003-D3-3	

EXHIBIT D3-4



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Maintenance Responsibility

Maintenance Responsibility

- Purchaser
- Bureau of Land Management
- Barricade
- Gate

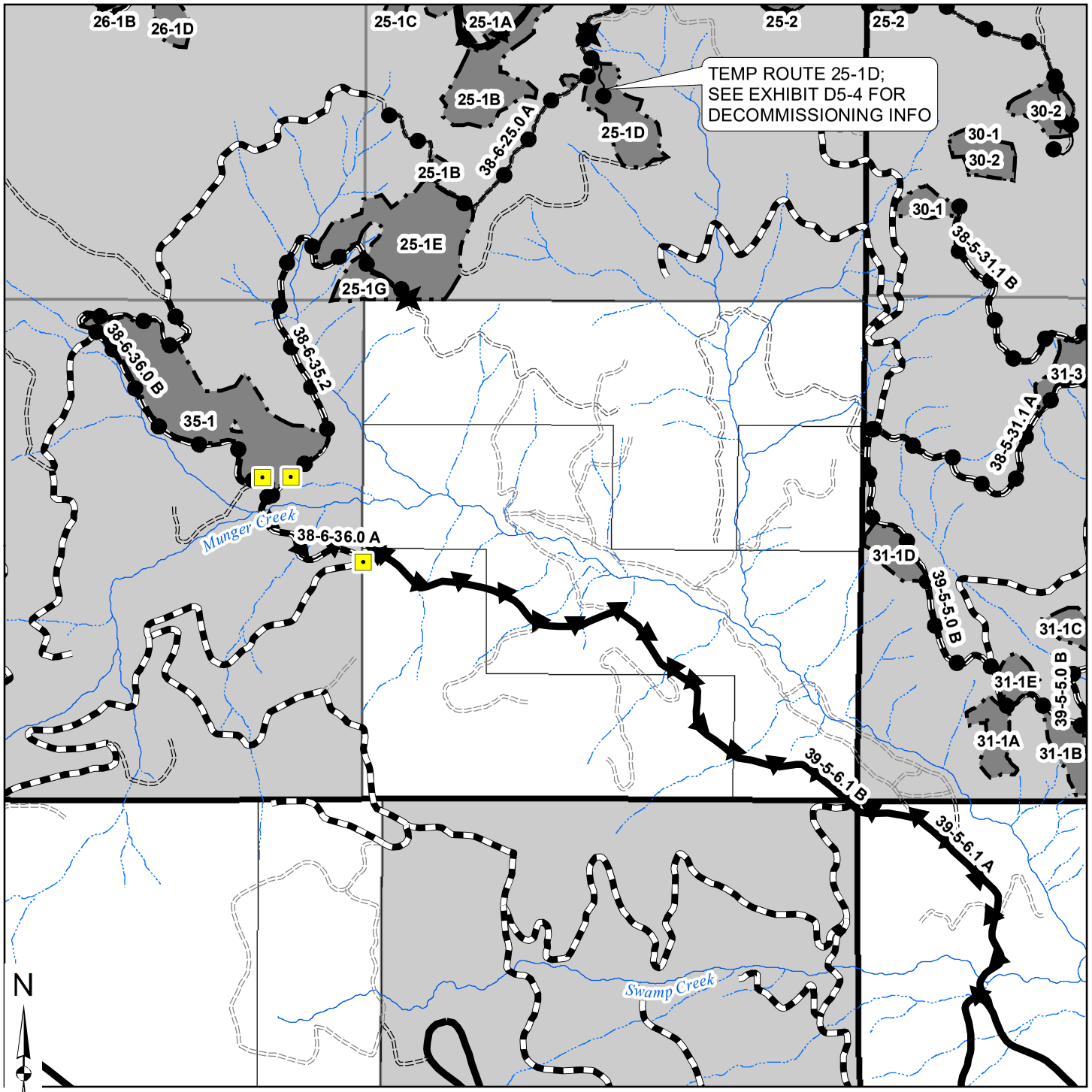
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD MAINTENANCE MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 4 OF 5
DRAWING NO.: ORM07-TS-2024.0003-D3-4	

EXHIBIT D3-5



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Maintenance Responsibility

Maintenance Responsibility

- Purchaser
- Bureau of Land Management
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE ROAD MAINTENANCE MAP

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 5 OF 5
DRAWING NO.: ORM07-TS-2024.0003-D3-5	

This page intentionally left blank

Roads Decommissioning Work List

Definitions:

AGG = Aggregate	CY = Cubic Yard
NAT = Natural/Native Surface	BST = Bituminous
Jct = Junction/Intersection	Pvt = Private (Industry, Citizen)
CMP = Corrugated Metal Pipe	MP = Mile Post
Seg = Segment	STA = Station

Full Decommission = Full Decommissioning shall include removing temporary culverts, installing water bars per the Water Bar Spacing by Erosion Class Table shown in Exhibit D7, and unless otherwise noted in the work list, and camouflaging and barricading road entrances. All disturbed soils shall be covered with slash. If enough slash is not available, then remaining disturbed areas shall be mulched with weed-free straw. Camouflaged entrances shall consist of logs, slash, boulders and other debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use per Exhibit D9.

Long Term Closure = Long Term Closure shall include installing water bars per the Water Bar Spacing by Erosion Class Table shown in Exhibit D7, stabilizing or removing fills on unstable areas, barricading the road entrance, camouflaging the road entrance, and removing culverts (armor if needed). All disturbed soils shall be covered with slash. If enough slash is not available, then remaining disturbed areas shall be mulched with weed-free straw. Camouflaged entrances shall consist of logs, slash, boulders and other debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use per Exhibit D9.

Camouflaging = Camouflaged entrances shall consist of logs, slash, boulders and other debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use. Detail in Exhibit D9.

Culvert Removal = When removing culverts unless constructing armored water dips, pull slopes back to the natural slope, or at least 2:1, to minimize sloughing, erosion, and the potential for the stream to undercut stream banks during periods of high stream flows. Remove excess sediment from stream channels during culvert removal, replacement, and installation activities.

Barricade = Barricade only.

38-5-17.00 C Wallow Creek ML – NAT – Sub: 14ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
2.68	Jct. w/ 38-5-07.01 road. Begin long term closure work after completion of haul. See Exhibit D5-2 for map, Exhibit D7 for water bar construction specifications, Exhibit D8 for culvert removal specifications, and Exhibit D9 for road camouflaging.
2.70	Re-construct earthen barricade.
2.74	Remove temporary culvert.
2.77	Remove temporary culvert.
2.79	Timber unit 18-1E boundary right.
2.85	Remove temporary culvert.

2.88 Timber unit 18-1E boundary right.
2.94 Clean water dip.
2.98 Re-construct water bar.
3.00 Timber unit 18-1E boundary right.
3.03 Clean water dip.
3.07 Re-construct water bar.
3.10 Re-construct water bar.
3.13 Clean water dip.
3.16 Re-construct water bar.
3.18 Timber unit 18-1D boundary left.
3.21 Timber unit 18-1E boundary right.
3.23 Clean water dip.
3.27 Re-construct water bar.
3.31 Clean water dip.
3.34 Clean water dip.
3.38 Clean water dip.
3.42 Re-construct water bar.
3.46 Re-construct water bar.
3.49 Re-construct water bar.
3.51 Clean water dip.
3.55 Re-construct water bar.
3.57 Timber unit 18-1C boundary left.
3.58 Re-construct water bar.
3.59 Timber unit 18-1C boundary left.
3.60 End long term closure work.

38-5-18.02 Road – Wallow Creek Spur B – NAT – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-17.00 road. Begin long term closure work after completion of haul. See Exhibit D5-3 for map, Exhibit D7 for water bar construction specifications, Exhibit D8 for culvert removal specifications, and Exhibit D9 for road camouflaging. Timber unit 18-1A boundary left.
0.02	Re-construct earthen barricade.
0.07	Re-construct water bar.
0.10	Remove temporary culvert.
0.16	Re-construct water bar.
0.18	Re-construct water bar. Timber unit 18-1A boundary left.
0.21	Remove temporary culvert.
0.23	Remove temporary culvert.
0.26	Re-construct water bar.
0.27	Re-construct water bar.
0.29	Remove temporary culvert.
0.30	Re-construct water bar.
0.33	Re-construct water bar.
0.37	Re-construct water bar.
0.38	Timber unit 18-1B boundary left.

0.39 Timber unit 18-1B boundary right.
0.43 Re-construct water bar.
0.46 Timber unit 18-1B boundary left.
0.47 Re-construct water bar.
0.50 Timber unit 18-1B boundary right.
0.51 End long term closure work.

38-6-26.00 Road – Powell Creek D Spur – NAT – Sub: 15Ft – Ditch: 3Ft – X-Sect: Crowned

MP	Description
0.00	Jct. w/ 38-5-15.00 road. Begin long term closure work after completion of haul. See Exhibit D5-5 for map, Exhibit D7 for water bar construction specifications, Exhibit D8 for culvert removal specifications, and Exhibit D9 for road camouflaging.
0.02	Re-construct earthen barricade.
0.24	End long term closure work.

OS 18-1E Operator Spur – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-17.00. Upon completion of log haul, begin full decommissioning and entrance camouflage. See Exhibit D5-1 for map, Exhibit D7 for barricade and water bar construction specifications, and Exhibit D9 for road camouflaging.
0+20	Construct earthen barricade.
1+00	End full decommissioning.

TR 18-1F Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-07.01. Upon completion of log haul, begin full decommissioning and entrance camouflage. See Exhibit D5-1 for map, Exhibit D7 for barricade and water bar construction specifications, and Exhibit D9 for road camouflaging.
0+50	Construct earthen barricade.
11+62	End full decommissioning.

TR 25-1D Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-6-25.00. Upon completion of log haul, begin full decommissioning. See Exhibit D5-4 for map, Exhibit D7 for barricade and water bar construction specifications, and Exhibit D9 for road camouflaging.
0+50	Construct earthen barricade.
5+28	End full decommissioning.

TR 26-1A Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 37-6-36.00 road. Upon completion of log haul, begin full decommissioning and entrance camouflage. See Exhibit D5-6 for map, Exhibit D7 for barricade and water bar construction specifications, and Exhibit D9 for road camouflaging.
1+50	Construct earthen barricade.
8+24	End full decommissioning.

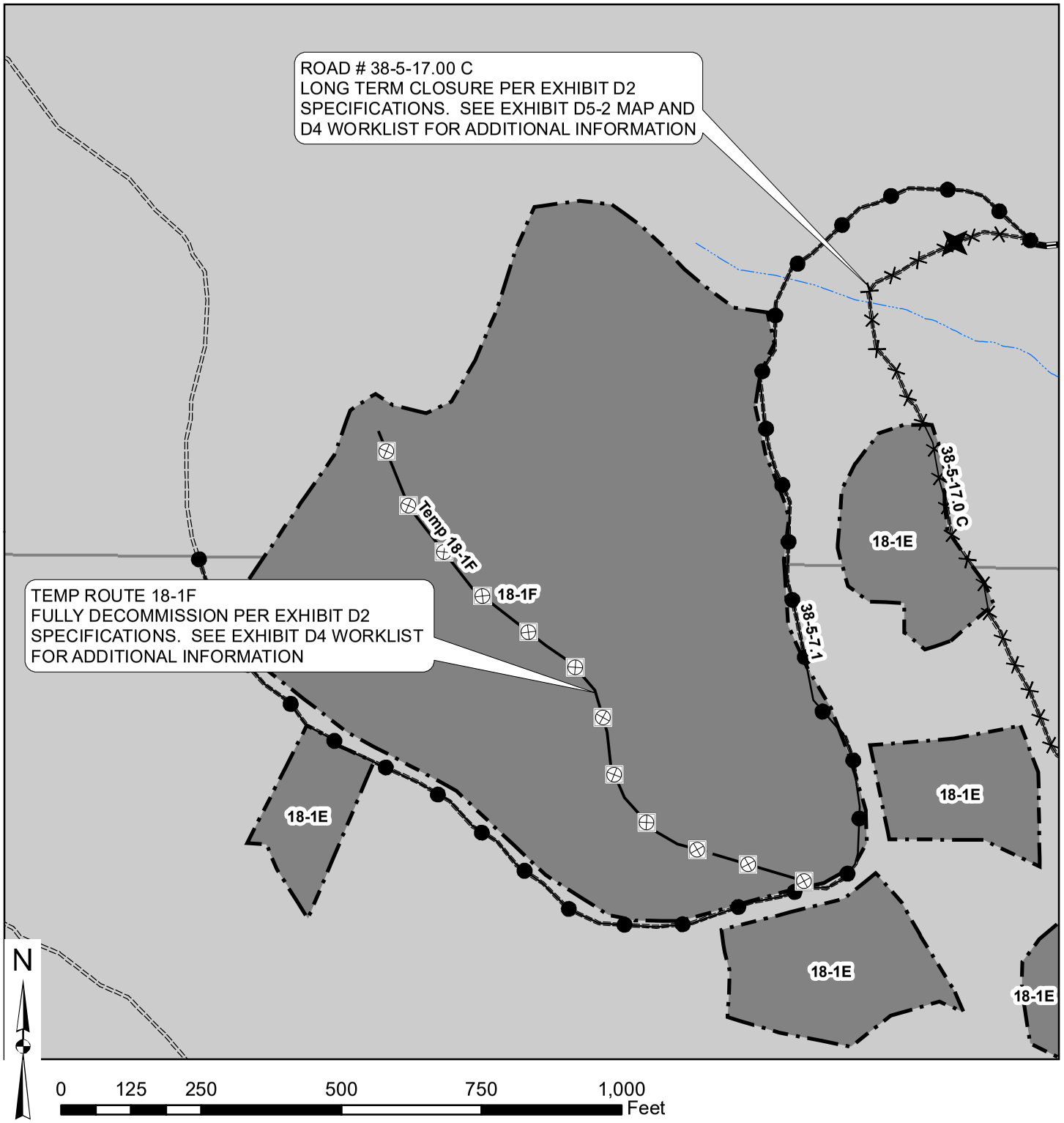
OS 26-1D Operator Spur – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-15.00. Upon completion of log haul, begin full decommissioning and entrance camouflage. See Exhibit D5-1 for map, Exhibit D7 for barricade and water bar construction specifications, and Exhibit D9 for road camouflaging.
0+20	Construct earthen barricade.
1+00	End full decommissioning.

TR 30-2 Temporary Route – NAT – Sub: 14Ft – Ditch: 0Ft – X-Sect: Outsloped

STA	Description
0+00	Jct. w/ 38-5-30.00 road. Upon completion of log haul, begin full decommissioning and entrance camouflage. See Exhibit D5-7 for map, Exhibit D7 for barricade and water bar construction specifications, and Exhibit D9 for road camouflaging.
0+50	Construct earthen barricade.
6+33	End full decommissioning.

EXHIBIT D5-1



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Decommissioning

Decommissioning

- Remaining Haul Route
- Full Decommission
- Long Term Closure
- Barricade
- Gate

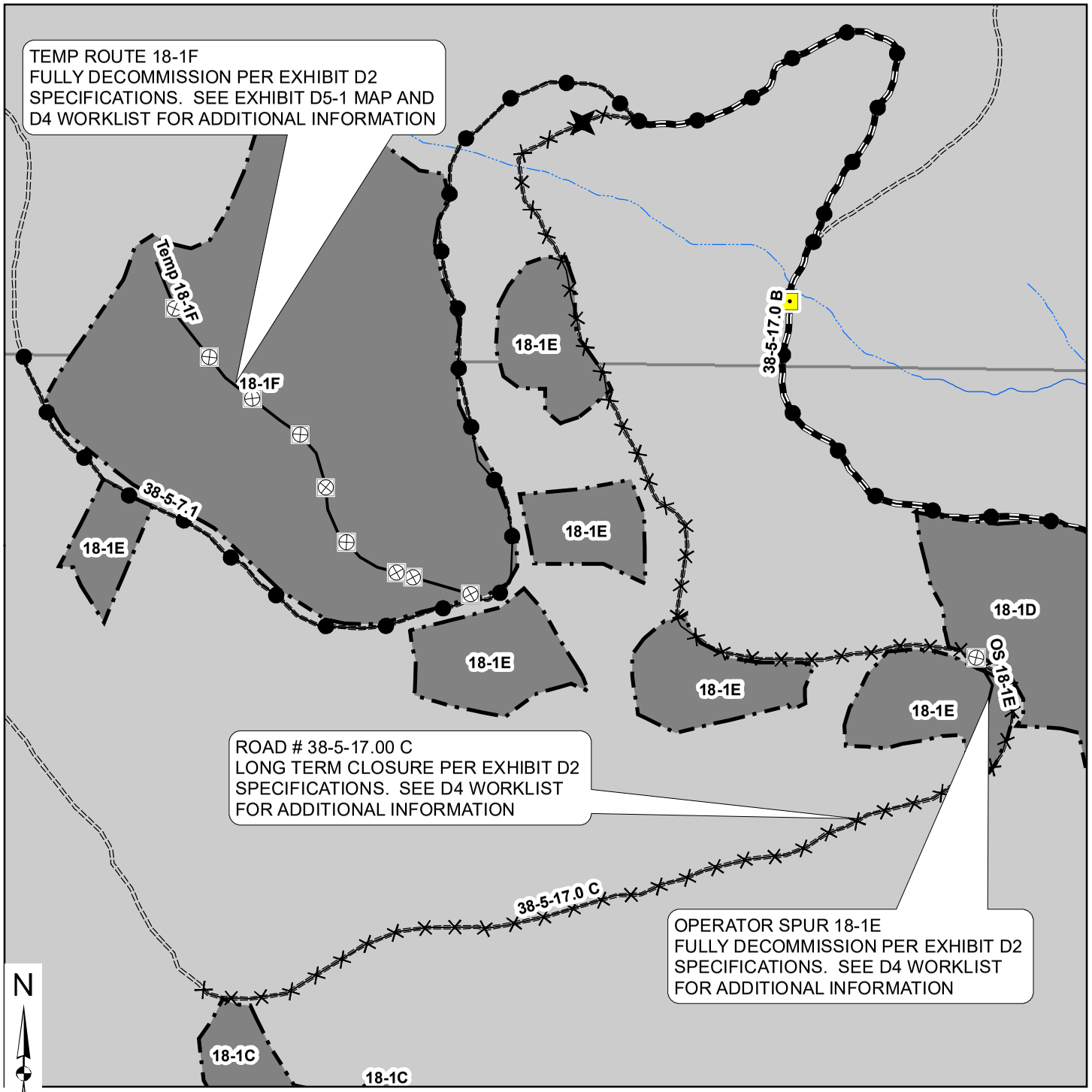
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE DECOMMISSIONING MAP TEMP ROUTE 18-1F

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 1 OF 7
DRAWING NO.: ORM07-TS-202 4.0003-D5-1	

EXHIBIT D5-2



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Decommissioning

Decommissioning

- Remaining Haul Route
- Full Decommission
- Long Term Closure
- Barricade
- Gate

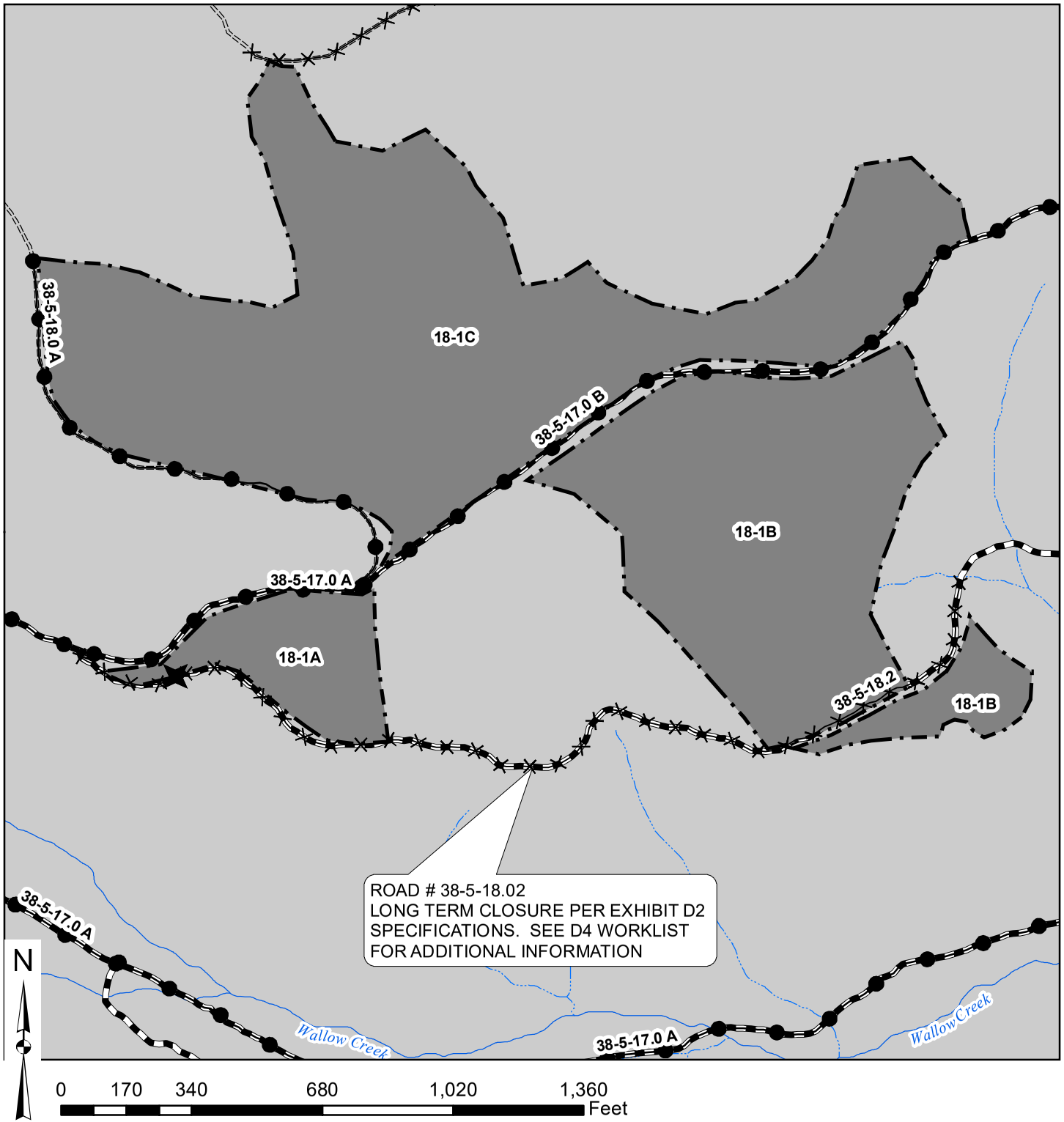
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE
DECOMMISSIONING MAP
ROAD # 38-5-17.00 C &
OPERATOR SPUR 18-1E

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 2 OF 7
DRAWING NO.: ORM07-TS- 2024.0003-D5-2	

EXHIBIT D5-3



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Decommissioning

Decommissioning

- Remaining Haul Route
- Full Decommission
- Long Term Closure
- Barricade
- Gate

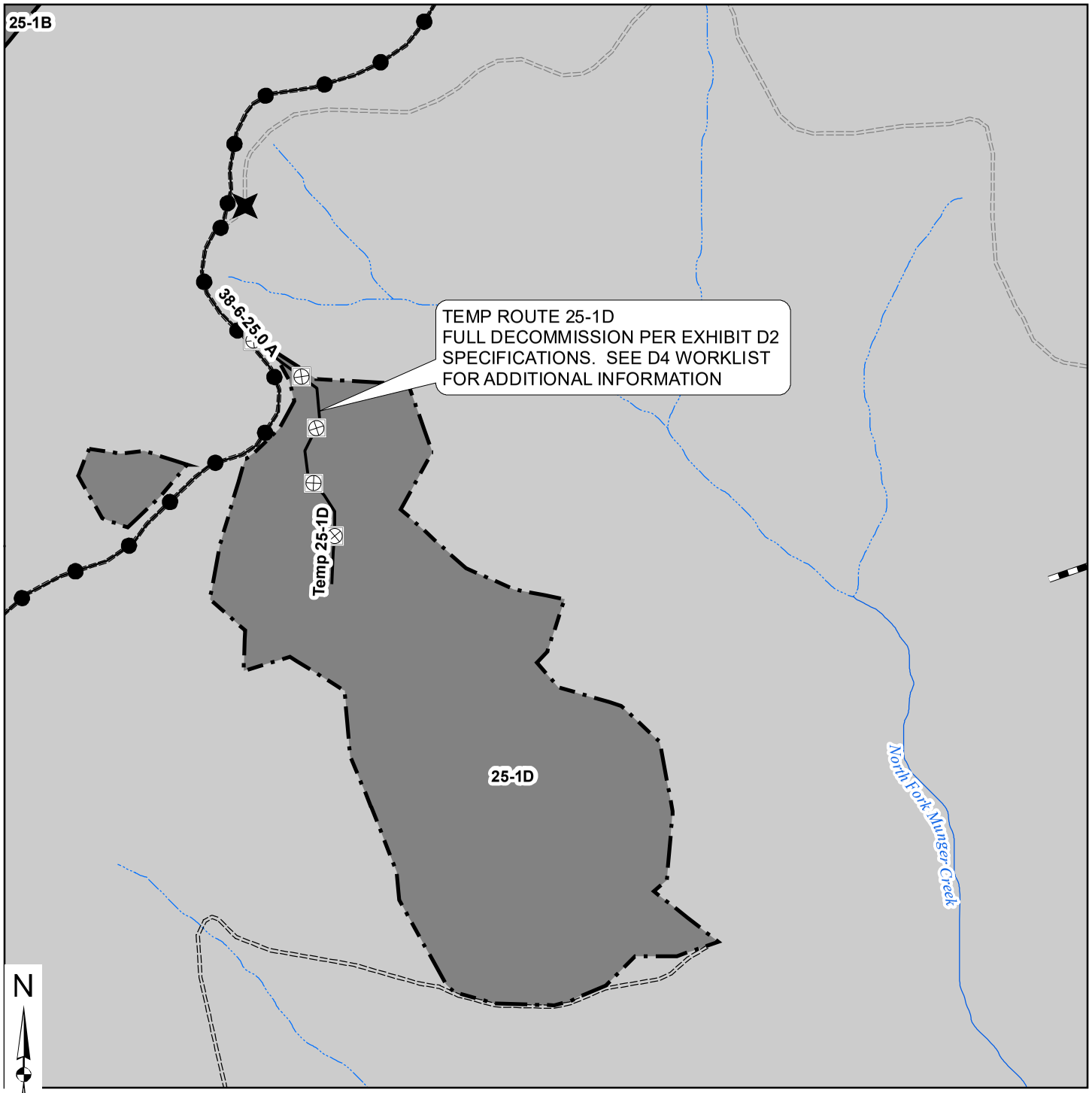
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE DECOMMISSIONING MAP ROAD # 38-5-18.02

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 3 OF 7
DRAWING NO.: ORM07-TS-2024.0003-D5-3	

EXHIBIT D5-4



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Decommissioning

Decommissioning

- Remaining Haul Route
- Full Decommission
- Long Term Closure
- Barricade
- Gate

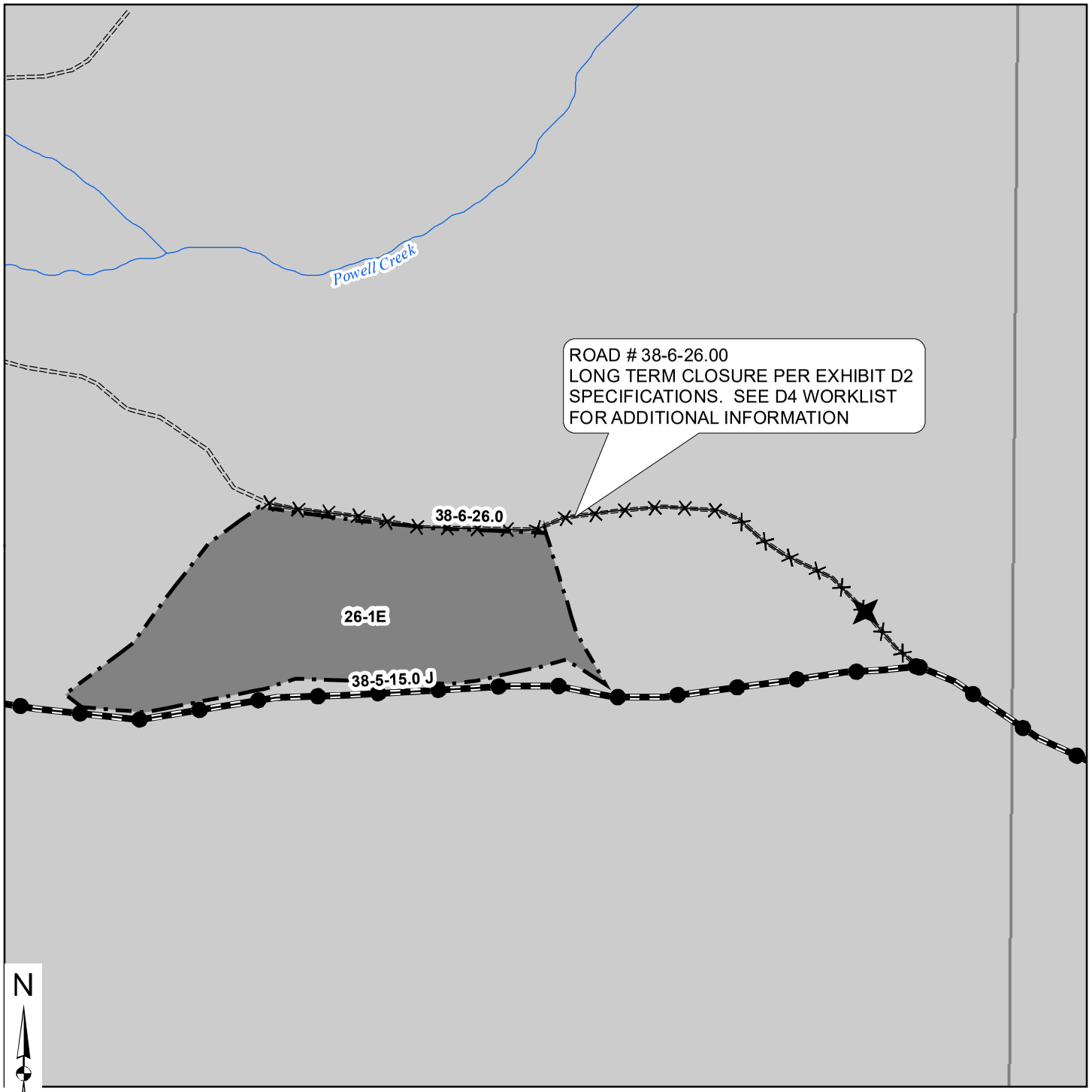
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE DECOMMISSIONING MAP TEMP ROUTE 25-1D

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 4 OF 7
DRAWING NO.: ORM07-TS-202 4.0003-D5-4	

EXHIBIT D5-5



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Decommissioning

Decommissioning

- Remaining Haul Route
- Full Decommission
- Long Term Closure
- Barricade
- Gate

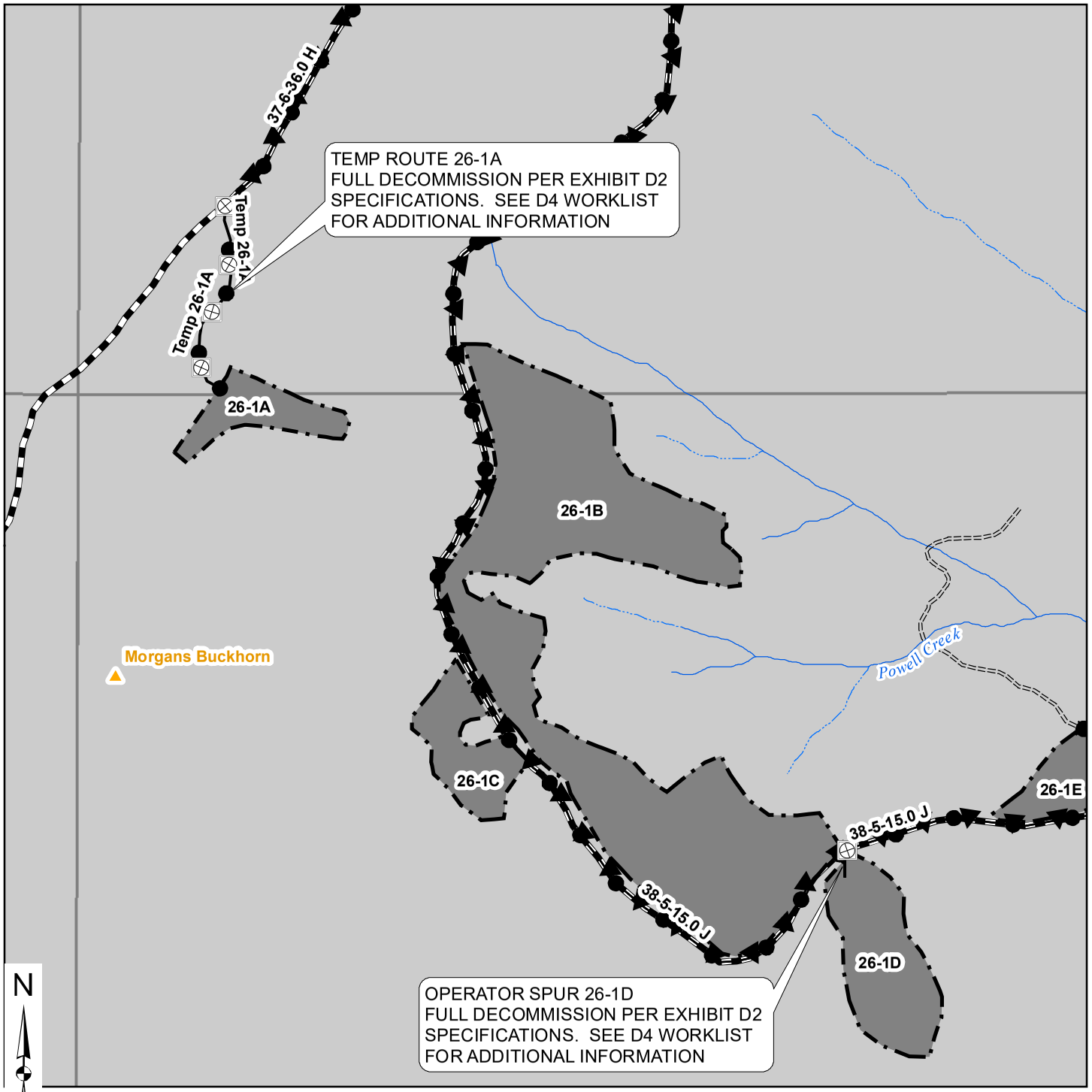
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE DECOMMISSIONING MAP ROAD # 38-6-26.00

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 5 OF 7
DRAWING NO.: ORM07-TS-2024.0003-D5-5	

EXHIBIT D5-6



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Decommissioning

Decommissioning

- Remaining Haul Route
- Full Decommission
- Long Term Closure
- Barricade
- Gate

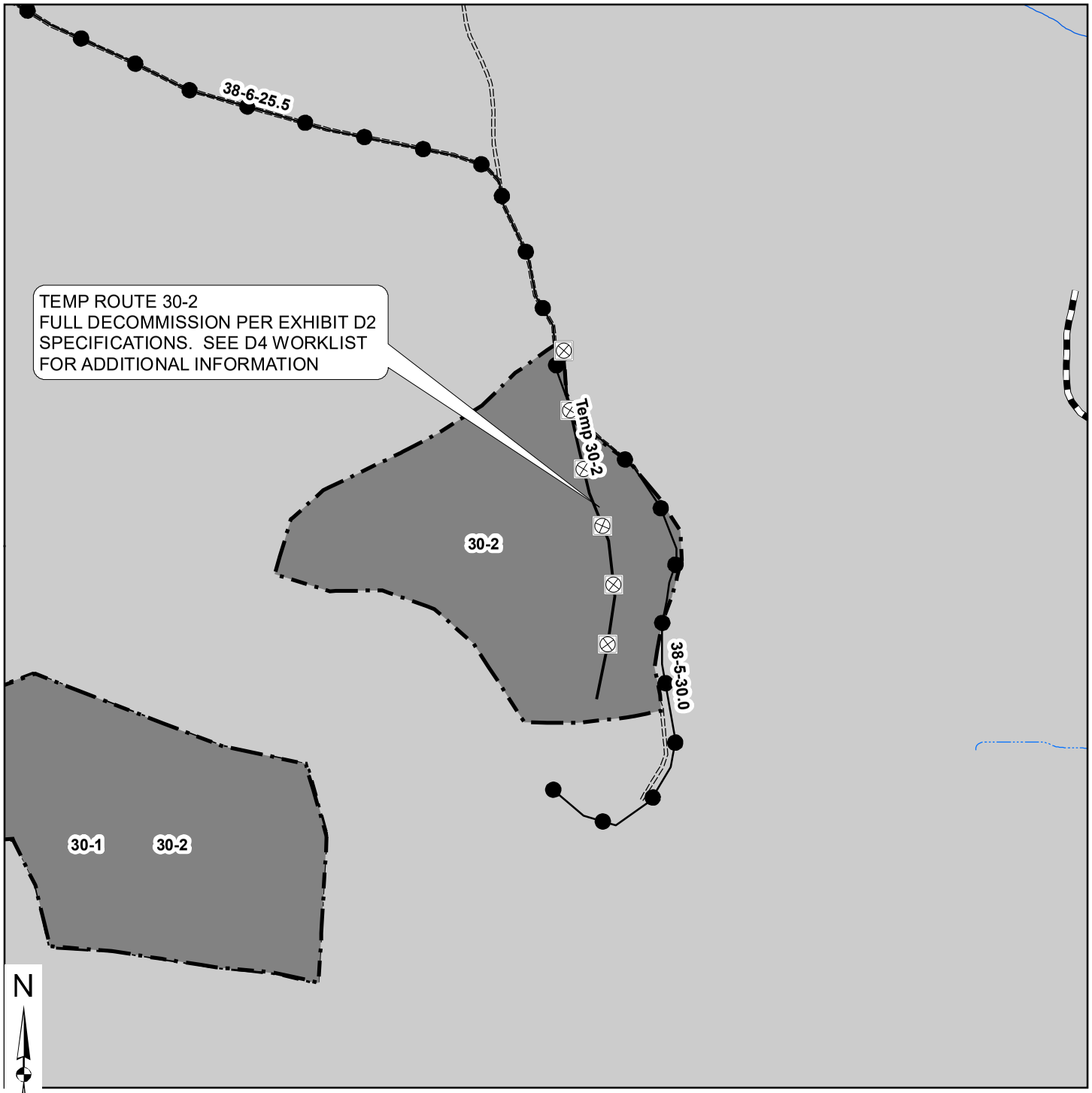
REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE
DECOMMISSIONING MAP
TEMP ROUTE 26-1A
OPERATOR SPUR 26-1D

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 6 OF 7
DRAWING NO.: ORM07-TS- 2024.0003-D5-1	

EXHIBIT D5-7



LEGEND

Land Ownership

- BLM
- Non-BLM
- Penn Butte TS Units

Roads by Surface

- Bituminous
- Aggregate
- Natural
- Unknown

Penn Butte TS Decommissioning

Decommissioning

- Remaining Haul Route
- Full Decommission
- Long Term Closure
- Barricade
- Gate

REV. NO.	DESCRIPTION	DATE	APPROV.

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

PENN BUTTE DECOMMISSIONING MAP TEMP ROUTE 30-2

DRAFTED BY: BLM	
DATE: DECEMBER 2023	SHEET: 7 OF 7
DRAWING NO.: ORM07-TS-2024.0003-D5-2	

EXHIBIT D6-1

ROAD NUMBER	FROM	TO	LENGTH	MAINTENANCE RESPONSIBILITY			DUST ABATEMENT/ WATERING	SPOT ROCKING **	ROAD CLOSURE AND DECOMMISSIONING					
				BLM MAINTENANCE	PURCHASER MAINTENANCE	THIRD PARTY MAINTENANCE			INSTALL EARTH/LOG BARRICADE	REMOVE CULVERTS	INSTALL WATER BARS	CAMOUFLAGE ROAD ENTRANCE (100 FT)	SUB-SOIL/ RIPPING/ DECOMPACT SUBGRADE	SOIL STABILIZATION (SLASH OR MULCH)
	MILE/STA	MILE/STA	MILE/STA	MILE	MILE	MILE	MILE	MILE	EA	EA	EA	EA	MILE/STA	ACRE
37-6-36.00 H	0.00	0.66	0.66	0.66										
38-5-07.01	0.00	0.60	0.60		0.60									
38-5-15.00 A-I	0.00	7.50	7.50	7.50										
38-5-15.00 J	7.50	8.85	1.35	1.35										
38-5-17.00 A-B	0.00	2.68	2.68		2.68									
38-5-17.00 C	2.68	3.60	0.92		0.92				1	3	10	1		
38-5-17.02	0.00	1.26	1.26		1.26									
38-5-18.00 A	0.00	0.29	0.29		0.29									
38-5-18.02	0.00	0.51	0.51		0.51				1	4	10	1		
38-5-19.01	0.00	0.84	0.84		0.84									
38-5-30.00	0.00	0.27	0.27		0.27									
38-5-31.01 A-B	0.00	1.53	1.53		1.53									
38-5-31.03 A-B	0.00	1.11	1.11		1.11									
38-6-25.00 A	0.00	0.76	0.76		0.76									
38-6-25.02	0.00	0.67	0.67		0.67									
38-6-25.04	0.00	0.17	0.17		0.17									
38-6-25.05	0.00	0.87	0.87		0.87									
PAGE 1 TOTALS			21.99	9.51	12.48				2	7	20	2		

DECOMMISSIONING NOTES

1. ALL TEMP ROUTE ARE TO BE DECOMMISSIONED PER EXHIBIT D SPECIFICATIONS AND DETAILS.

2. DECOMMISSIONING SHALL INCLUDE WATER BARRING, SLASHING OR MULCHING, AND BARRICADING..

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

**250CY OF SPOT ROCK SHALL BE FURNISHED AND PLACED ON AGGREGATE ROADS AFTER USE. ROCK SHALL BE OBTAINED FROM A COMMERCIAL SOURCE AND SHALL MEET EXHIBIT C-21 SECTION 1200 SPECIFICATIONS.

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROVAL

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

PENN BUTTE TIMBER SALE ESTIMATE OF QUANTITIES*

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 2
DRAWING NO.: ORM07-TS-2024.0003-D6-1	

EXHIBIT D6-2

ROAD NUMBER	FROM	TO	LENGTH	MAINTENANCE RESPONSIBILITY			DUST ABATEMENT/ WATERING	SPOT ROCKING	ROAD CLOSURE AND DECOMMISSIONING					
				BLM MAINTENANCE	PURCHASER MAINTENANCE	THIRD PARTY MAINTENANCE			INSTALL EARTH/LOG BARRICADE	REMOVE CULVERTS	INSTALL WATER BARS	CAMOUFLAGE ROAD ENTRANCE (100 FT)	SUB-SOIL/ RIPPING/ DECOMPACT SUBGRADE	SOIL STABILIZATION (SLASH OR MULCH)
	MILE/STA	MILE/STA	MILE/STA	MILE	MILE	MILE	MILE	MILE	EA	EA	EA	EA	STA	ACRE
38-6-26.00	0.00	0.24	0.24		0.24				1		12	1		
38-6-35.02	0.00	0.95	0.95		0.95									
38-6-36.00 A	0.00	0.33	0.33	0.33										
38-6-36.00 B	0.33	1.30	0.97		0.97									
39-5-05.00 A-B	0.00	2.13	2.13		2.13		0.47							
39-5-06.01 A-B	0.00	1.80	1.80	1.80										
TR 18-1 F	0+00	11+62	0.22		0.22				1		11	1		0.50
TR 25-1 D	0+00	5+28	0.10		0.10				1		1			0.25
TR 26-1 A	0+00	8+24	0.16		0.16				1		7	1		0.15
TR 30-2	0+00	6+33	0.12		0.12				1		2	1		0.30
OS 18-1E	0+00	1+00	0.02		0.02				1		1	1		0.05
OS 26-1D	0+00	1+00	0.02		0.02				1		1	1		0.05
PAGE 1 TOTALS			21.99	9.51	12.48			250	2	7	20	2		
PAGE 2 TOTALS			7.06	2.13	4.93		0.47		7		35	6		1.30
PROJECT TOTALS			29.05	11.64	17.41		0.47	250	9	7	55	8		1.30

DECOMMISSIONING NOTES

1. ALL TEMP ROUTE ARE TO BE DECOMMISSIONED PER EXHIBIT D SPECIFICATIONS AND DETAILS.

2. DECOMMISSIONING SHALL INCLUDE WATER BARRING, SEEDING & MULCHING, AND BARRICADING.

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

**250CY OF SPOT ROCK SHALL BE FURNISHED AND PLACED ON AGGREGATE ROADS AFTER USE. ROCK SHALL BE OBTAINED FROM A COMMERCIAL SOURCE AND SHALL MEET EXHIBIT C-21 SECTION 1200 SPECIFICATIONS.

ALWAYS
THINK
SAFETY

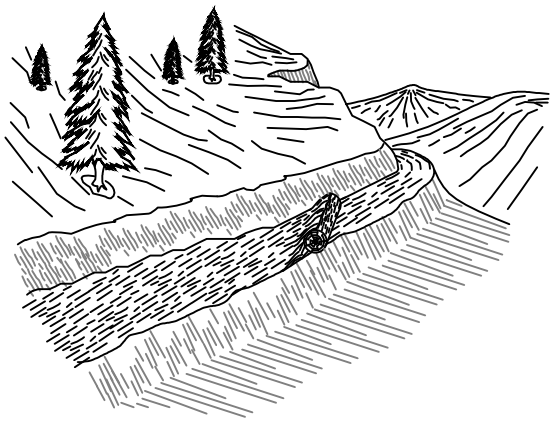
REV. NO.	DESCRIPTION	DATE	APPROVAL

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

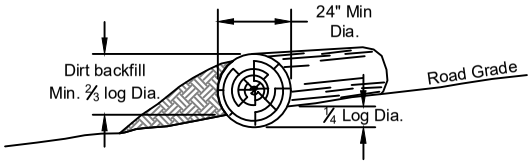
PENN BUTTE TIMBER SALE ESTIMATE OF QUANTITIES*

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 2 OF 2
DRAWING NO.: ORM07-TS-2024.0003-D6-2	

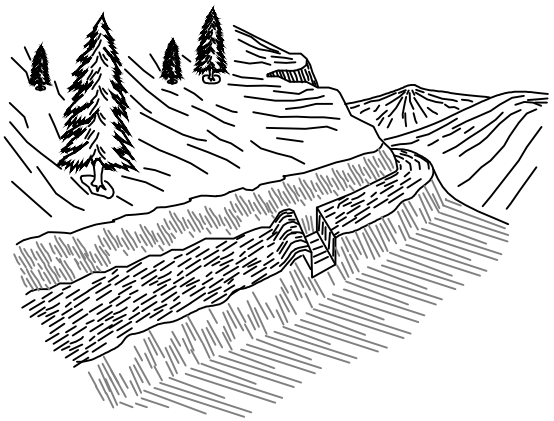
EXHIBIT D7



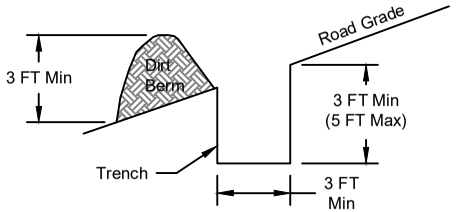
LOG BARRICADE



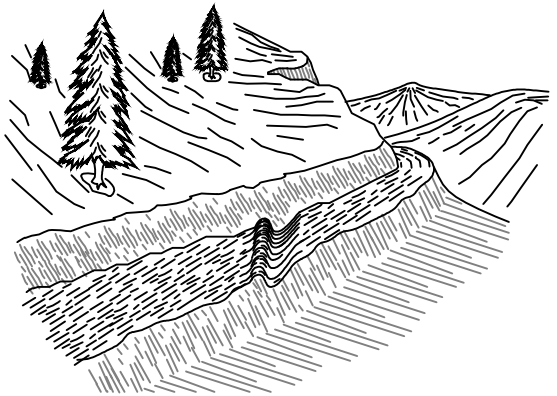
1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Decommissioning Work List.
3. All barricades shall be skewed 30 degrees.
4. The log length shall extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".



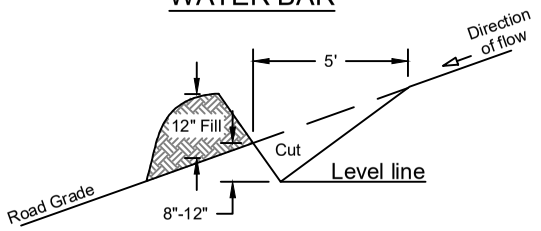
TRENCH BARRICADE



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

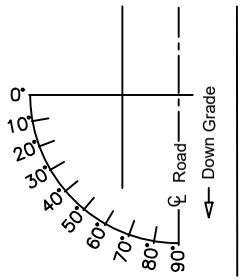


WATER BAR



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

SKEW DIAGRAM



WATER BAR SPACING* BY EROSION CLASS^

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

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

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

ALWAYS
THINK
SAFETY

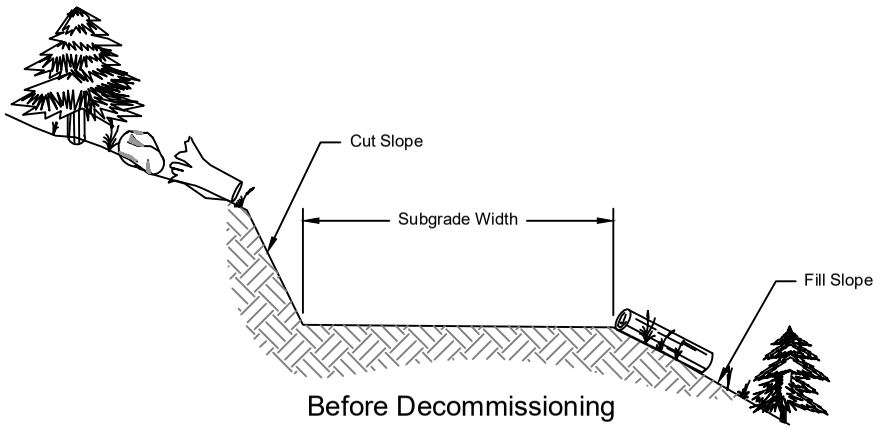
REV. NO.	DESCRIPTION	DATE	APPROV.

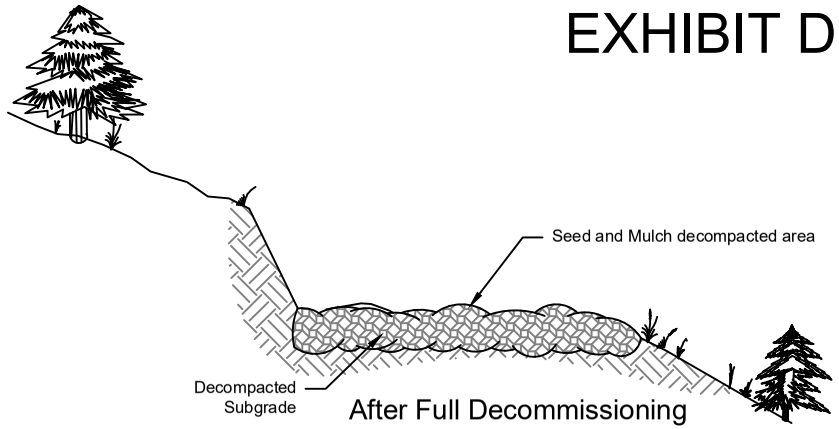
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

PENN BUTTE TIMBER SALE BARRICADE AND WATER BAR DETAILS

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003 - D7	

EXHIBIT D8

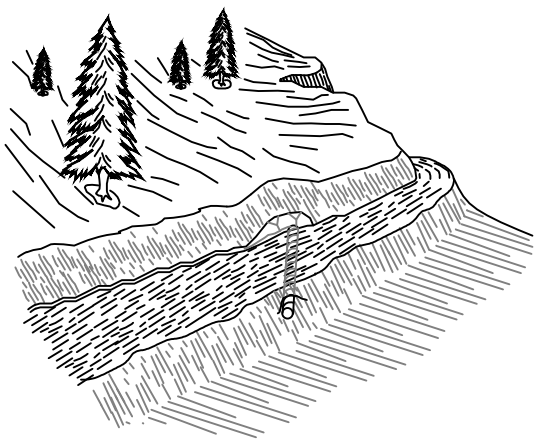




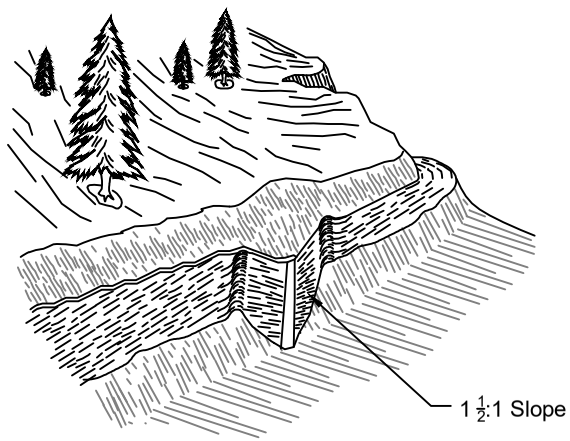
Typical Full Decommission

Notes:

1. The Purchaser shall barricade and decompact the temp route subgrade. Barricades shall be constructed as shown in Exhibit D Barricade and Water Bar Details.
2. Ditch lines at intersecting existing roads will be restored to their original shape.
3. Road surface shall be covered with slash. If enough slash is not available to cover entire road, then remaining disturbed areas shall be mulched with weed-free straw.
4. All temporary culverts (if any) shall be removed from temp routes entirely. Excavated culvert trenches shall be left open to drain and have side slopes laid back to 1½:1. Where draw culverts are removed, the grade of the channel shall be restored to match existing stream grade. Culverts not designated as salvage for the Government shall become the property of the Contractor. The Contractor shall be responsible for legally disposing of material.
5. See Section 1800 for Mulching Specifications.



Typical Culvert Removal - Before



Typical Culvert Removal - After

ALWAYS
THINK
SAFETY

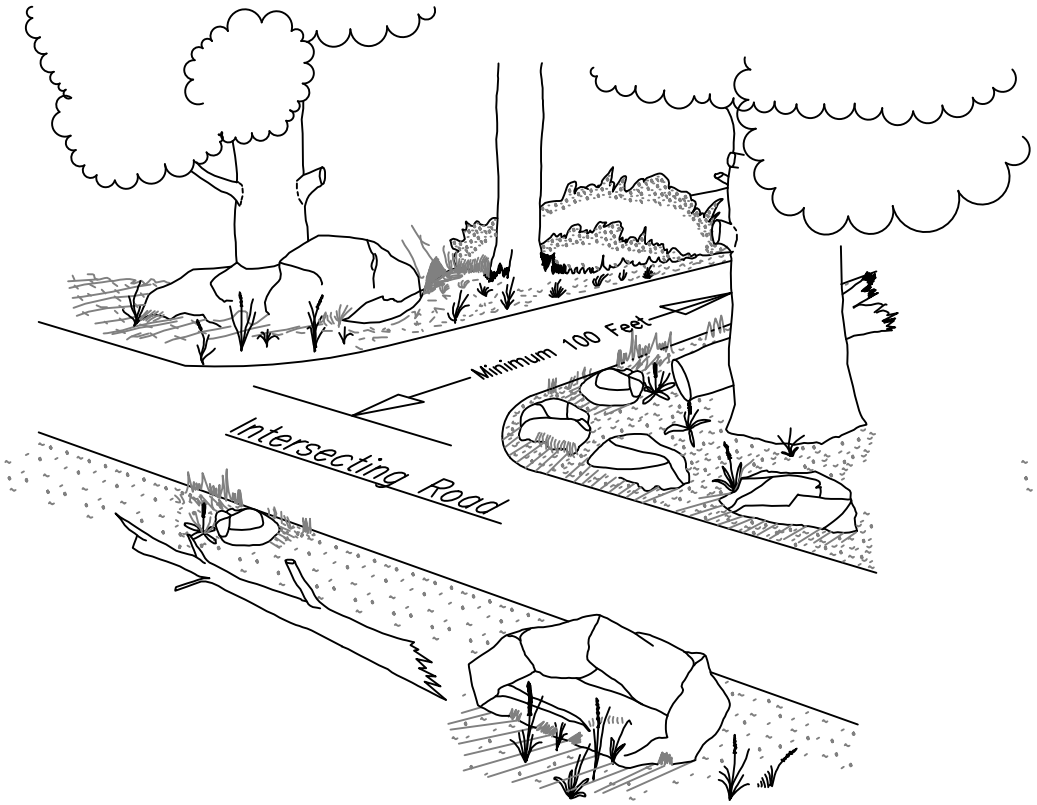
REV. NO.	DESCRIPTION	DATE	APPROV.

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

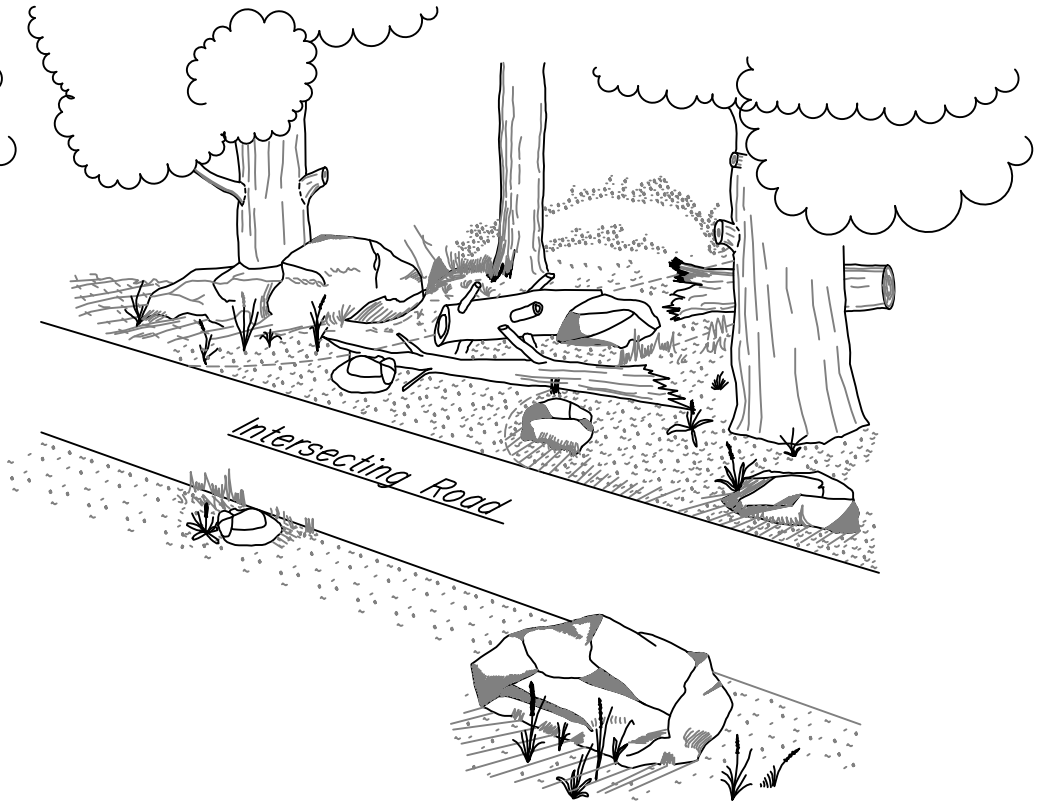
PENN BUTTE TIMBER SALE DECOMPACTION AND CULVERT REMOVAL DETAILS

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-D8	

EXHIBIT D9



Typical Entrance - Before



Typical Entrance - After

NOTES:

1. The Purchaser shall barricade and Camouflage the road prism and disguise the roadbed so that the road entrance and roadway are indiscernible from the intersecting road. Camouflaged entrances shall consist of logs, slash, boulders and others debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use. An Earth Berm or equivalent barricade shall be constructed at road entrance as approved by the Authorized Officer..

2. Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads will be restored as indicated on plan view. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible. No live trees should be used without approval of the Authorized Officer.

REV. NO. DESCRIPTION	DATE	APPROV.

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

PENN BUTTE TIMBER SALE TYPICAL ROAD CAMOUFLAGE DETAIL

DRAFTED BY: BLM	SCALE: NONE
DATE: DECEMBER 2023	SHEET: 1 OF 1
DRAWING NO.: ORM07-TS-2024.0003-D9	

Sale: Penn Butte
Sale Date: 3/2023
Prep. By : Brown
Tract No ORM07-TS-24-03

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: $0.00/6597 MBF = $0/MBF

Road Maintenance Obligation:

(2.1) BLM Maintenance		$22,457.26
(2.2) BLM Rockwear	$341.36	
(5.1) Purchaser Maintenance Rockwear	$5,217.83	
Total Rockwear Payable to BLM		$5,559.19
(3.1) 3rd Party Maintenance		$0.00
(3.2) 3rd Party Rockwear		$0.00
(4.1) Other Maintenance Payments		$0.00
Total Maintenance Fee Obligation (2.1-5.1)		$28,016.45

Purchaser Maintenance Allowances:

(5.2A) Move In	$11,100.00
(5.2B) Culverts, Catch Basins, Downspouts	$7,002.75
(5.2C) Grading, Ditching	$14,801.29
(5.2D) Slide Removal and Slump Repair	$0.00
(5.2E) Dust Palliative (Water)	$20,995.20
(5.2F) Surface Repair (Aggregate)	$14,395.00
(5.2G) Other	$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	$68,294.24

(2.1-5.2G) Cost ($28,016.45 + $68,294.24) = $96,310.69
Cost/MBF 96310.69 / 6597 MBF = $14.60/MBF

(5.2H) Decommissioning $13,730.65

(5.2H) Cost/MBF $13,730.65/6597 MBF = $2.08/MBF

(2.1-5.2H) Cost ($28,016.45 + $68,294.24 + $13,730.65) = $110,041.34

Total Cost/MBF (Excluding Road Use) $110,041.34/6597 MBF = $16.68/MBF

1) Road Use Fees - Amortization

Details

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

Subtotal by agreement number

(1.1) Subtotal $0.00

2) BLM Maintenance - Timber Haul

			MAINTENANCE (2.1)				ROCKWEAR (2.2)			
Road Number and Segment	A N	Surf Type	Mi	Maint x Fee x	Vol MBF	= Maint	Fee x	MBF =	Rkwear
37-6-36.00 H	A	AGG	0.66	0.77	40	$20.33	0.85	40	$22.44
38-5-15.00 J	A	AGG	0.62	0.77	40	$19.10	0.85	40	$21.08
38-5-15.00 J	A	AGG	0.73	0.77	480	$269.81	0.85	480	$297.84
38-5-15.00 I	A	BST	0.34	0.82	555	$154.73	0.00	555	$0.00
38-5-15.00 H-IA		BST	0.88	0.82	1409	$1,016.73	0.00	1409	$0.00
38-5-15.00 F-HA		BST	1.90	0.82	2461	$3,834.24	0.00	2461	$0.00
38-5-15.00 E-FA		BST	1.31	0.82	3100	$3,330.02	0.00	3100	$0.00
38-5-15.00 D	A	BST	0.46	0.82	4480	$1,689.86	0.00	4480	$0.00
38-5-15.00 A-DA		BST	2.61	0.82	5017	$10,737.38	0.00	5017	$0.00
38-6-36.00 A	A	BST	0.33	0.82	793	$214.59	0.00	793	$0.00
39-5-06.01 A-BA		BST	1.80	0.82	793	$1,170.47	0.00	793	$0.00

(2.1) Subtotal $22,457.26 (2.2) Subtotal $341.36

3) Third Party Maintenance and Rockwear

			MAINTENANCE (3.1)					ROCKWEAR (3.2)				
Agrmnt Number	Surface Type	Road Number	Mi	x	Fee	x MBF =	Maint	Fee x	MBF =	Rkwear
Subtotal of maintenance fees by agreement number:												
Subtotal of rockwear fees by agreement number:												

(3.1) Subtotal $0.00

(3.2) Subtotal $0.00

4) Other Maintenance Payments - USFS or Others Perform Maintenance

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

(4.1) Subtotal $0.00

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)

Road No and Segment	A N	Mi	RkWear x Fee x	Vol MBF =	Total RkWear
38-5-07.01	A	0.60	x $0.85 x	351 =	$179.01
38-5-17.00 C	A	0.92	x $0.00 x	340 =	$0.00
38-5-17.00 B	A	1.03	x $0.85 x	721 =	$631.24
38-5-17.00 B	A	0.36	x $0.85 x	1057 =	$323.44
38-5-17.00 A	A	0.15	x $0.85 x	1270 =	$161.93
38-5-17.00 A	A	0.38	x $0.85 x	1350 =	$436.05
38-5-17.00 A	A	0.76	x $0.85 x	1380 =	$891.48
38-5-17.02	A	1.26	x $0.85 x	537 =	$575.13

38-5-18.00 A	A 0.29 x $0.85 x 163 =	$40.18
38-5-18.02	A 0.51 x $0.00 x 80 =	$0.00
38-5-19.01	A 0.84 x $0.85 x 639 =	$456.25
38-5-30.00	A 0.21 x $0.00 x 30 =	$0.00
38-5-30.00	A 0.06 x $0.00 x 208 =	$0.00
38-5-31.01 B	A 0.50 x $0.85 x 29 =	$12.33
38-5-31.01 A-B	A 1.03 x $0.85 x 103 =	$90.18
38-5-31.03 B	A 0.87 x $0.85 x 137 =	$101.31
38-5-31.03 A	A 0.24 x $0.85 x 267 =	$54.47
38-6-25.00 A	A 0.41 x $0.00 x 157 =	$0.00
38-6-25.00 A	A 0.35 x $0.00 x 416 =	$0.00
38-6-25.02	A 0.67 x $0.00 x 214 =	$0.00
38-6-25.04	A 0.17 x $0.00 x 150 =	$0.00
38-6-25.05	A 0.33 x $0.00 x 208 =	$0.00
38-6-25.05	A 0.54 x $0.00 x 422 =	$0.00
38-6-26.00	A 0.24 x $0.00 x 82 =	$0.00
38-6-35.02	A 0.95 x $0.85 x 260 =	$209.95
38-6-36.00 B	A 0.97 x $0.85 x 533 =	$439.46
39-5-05.00 A	A 0.30 x $0.00 x 785 =	$0.00
39-5-05.00 B	A 0.17 x $0.85 x 785 =	$113.43
39-5-05.00 B	A 0.30 x $0.85 x 518 =	$132.09
39-5-05.00 B	A 0.74 x $0.85 x 418 =	$262.92
39-5-05.00 B	A 0.62 x $0.85 x 203 =	$106.98

(5.1) Subtotal $5,217.83

Purchaser Operational Maintenance

Move In

Equipment	No Units	Move x	Cost/ in x	Dist 50 Mi x	Sub-Factor =	total
Motor Grader:	1	6		536	1.00	$3,216.00
Back Hoe:	1	6		399	1.00	$2,394.00
Loader:				536	0.63	$0.00
Water Truck:	1	6		131	1.00	$786.00
Dump Truck:	2	6		124	1.00	$1,488.00
Excavator:				536	0.63	$0.00
Roller:	1	6		536	1.00	$3,216.00

(5.2A) Total $11,100.00

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x Cost/Mi	= Subtotal
13.96	$501.63	$7,002.75

(5.2B) Total $7,002.75

Grading (Includes Ditches and Shoulders)

Miles	x Cost/Mi	x Freq =	Subtotal
Blade w/ Ditch:	13.96	923.61	1 $12,893.60
Blade w/o Ditch:	3.41	559.44	1 $1,907.69

(5.2C) Total $14,801.29

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

Type Equipment	No Slides /Slumps	x Hours Each	x Equip Cost	= Subtotal

Grader:	0	0	$184.36	$0.00
Loader:	0	0	$114.30	$0.00
Backhoe:	0	0	$108.79	$0.00

(5.2D) Total $0.00

Dust Palliative (Water)

Spreading Hours

	No Miles	/	Freq MPH	=	Truck Hours	x	Days	x	/Day	=	Hours
	0.47		3		0.2		30		2		12
Load & Haul =					2.0		30		2		120
Return trip =					1.0		30		2		60
Total Hours =					192						

Truck Cost: $109.35/Hr. x 192.0 Hours = $20,995.20

(5.2E) Total $20,995.20

Surface Repair (Aggregate)

Quarry / Source Name: Robco 1.5"

Production Cost:	250.0 CY x $19.00/CY	= $4,750.00
Haul to Stockpile:		
Grades > 15%	250.0 CY x (($2.43/CY x 5.00 Mi) + $1.62)	= $3,442.50
Grades <= 15%	250.0 CY x (($1.21/CY x 9.00 Mi) + $1.62)	= $3,127.50
State / Co Roads	250.0 CY x (($0.54/CY x 15.00 Mi) + $1.62)	= $2,430.00
Process with Grader:	250.0 CY x $1.20/CY	= $300.00
Compaction:	250.0 CY x $1.38/CY	= $345.00
	SubTotal	$14,395.00

(5.2F) Total $14,395.00

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

Pipe Removal

Road Number	Qty Ditch Pipes	Cyd < 15' Fill	Cyd > 15' Fill	Qty Hauling	= Total
38-5-17.00 C	(3x134.14)	+ (300x3.73)	+ (0x5.92)	+ (3x92.17)	= $1,797.93
38-5-18.02	(4x134.14)	+ (400x3.73)	+ (0x5.92)	+ (4x92.17)	= $2,397.24

(Pipe Removal) Total $4,195.17

Other Costs

Road Number	Cubic Yds Pullback Material		Qty Waterbars		Qty Earthen Barriers	= Total
38-5-17.00 C	(300x2.19)	+	(0x86.27)	+	(1x258.81)	= $915.81
38-5-18.02	(400x2.19)	+	(10x86.27)	+	(1x258.81)	= $1,997.51
38-6-26.00	(0x2.19)	+	(12x86.27)	+	(1x258.81)	= $1,294.05
TR 18-1F	(0x2.19)	+	(11x86.27)	+	(1x258.81)	= $1,207.78
TR 25-1D	(0x2.19)	+	(1x86.27)	+	(1x258.81)	= $345.08
TR 26-1A	(0x2.19)	+	(7x86.27)	+	(1x258.81)	= $862.70
TR 30-2	(0x2.19)	+	(2x86.27)	+	(1x258.81)	= $431.35
OS 18-1E	(0x2.19)	+	(1x86.27)	+	(1x258.81)	= $345.08
OS 26-1D	(0x2.19)	+	(1x86.27)	+	(1x258.81)	= $345.08

(Other Cost) Total $7,744.44

Time & Equipment

38-5-17.00 C Excavator -Small (1.5 CY) - Camouflaging: 2 hr @ $111.94/hr =$223.88
38-5-18.02 Excavator -Small (1.5 CY) - Camouflaging: 2 hr @ $111.94/hr =$223.88
38-6-26.00 Excavator -Small (1.5 CY) - Camouflaging: 2 hr @ $111.94/hr =$223.88
TR 18-1F Excavator -Small (1.5 CY): 2 hr @ $111.94/hr =$223.88
TR 26-1A Excavator -Small (1.5 CY): 2 hr @ $111.94/hr =$223.88
TR 30-2 Excavator -Small (1.5 CY): 2 hr @ $111.94/hr =$223.88
OS 18-1E Excavator -Small (1.5 CY): 2 hr @ $111.94/hr =$223.88
OS 26-1D Excavator -Small (1.5 CY): 2 hr @ $111.94/hr =$223.88
(5.2H) Decommissioning Total $13,730.65

This page intentionally left blank

SPECIAL PROVISIONS TO CONTROL THE SPREAD OF PORT-ORFORD CEDAR ROOT DISEASE

A. VEHICLE AND EQUIPMENT CLEANING:

1. Cleaning shall consist of the removal of soil by washing with a high pressure hose or steam cleaning. Vehicles and equipment shall be cleaned and inspected at washing stations designated by the Authorized Officer. Washing at project site will require that water is treated with Clorox® bleach at a ratio of 1 gallon bleach to 1,000 gallons water. Water source for site washing will be designated by the Authorized Officer.

2. All equipment parts shall be cleaned as designated by the Authorized Officer. For equipment cleaning checklist see page 2 of this exhibit.

B. OPERATIONS:

1. Seasonal Restriction. All road construction and log hauling operations and the transportation of personnel and equipment shall be limited to dry periods during the dry season, as designated by the Authorized Officer, unless prior to entering uninfested areas (units 19-1, 25-1, 25-2, 25-3, 35-1, 19-1 RS, 25-1 RS, 35-1 RS and roads Op. Spur 26-1D, TR 25-1D, TR 26-1A, TR 30-2, 38-5-15.0, 38-5-19.1, 38-5-30.0, 38-6-25.0, 38-6-25.2, 38-6-25.4, 38-6-25.5, 38-6-35.2, 38-6-26.0, and 38-6-36.0) or prior to leaving infested areas, all vehicles and equipment are cleaned in accordance with Sections A.1. and A.2. above. An exception will be made for the transportation of personnel if all vehicles are confined to operating on bituminous or gravel-surfaced roads and stay on the designated surfacing at all times. The Authorized Officer will designate access routes and areas for parking vehicles.

2. Cleaning of Project Equipment. All project equipment that comes into contact with soils, as designated by the Authorized Officer, shall be cleaned prior to entering uninfested areas (units 19-1, 25-1, 25-2, 25-3, 35-1, 19-1 RS, 25-1 RS, 35-1 RS and roads Op. Spur 26-1D, TR 25-1D, TR 26-1A, TR 30-2, 38-5-15.0, 38-5-19.1, 38-5-30.0, 38-6-25.0, 38-6-25.2, 38-6-25.4, 38-6-25.5, 38-6-35.2, 38-6-26.0, and 38-6-36.0) or prior to leaving infested areas in accordance with Sections A.1. and A.2. above.

3. Water for Non-Washing Use. Water for roadwork, dust abatement, or fire prevention will be approved by the Authorized Officer and shall be from uninfested water sources or shall be treated with Clorox®.

Equipment Cleaning Checklist

This checklist (for optional use) is referenced in the Washing Project Equipment management practice.

The purpose of this checklist is to provide guidance in the cleaning of equipment, as stipulated in contracts, to control or prevent the spread of noxious weeds and PL. The checklist directs attention to specific areas on equipment that are likely to accumulate soil and organic material.

Questions to ask about overall equipment cleanliness are:

1) Does the equipment appear to have been cleaned?
2) Is the equipment clean of clumps of soil and organic matter?

Rubber-Tired Vehicles

- Tires
- Wheel rims (underside and outside)
- Axles
- Fenders/wheel wells/trim
- Bumpers

Track-Laying Vehicles

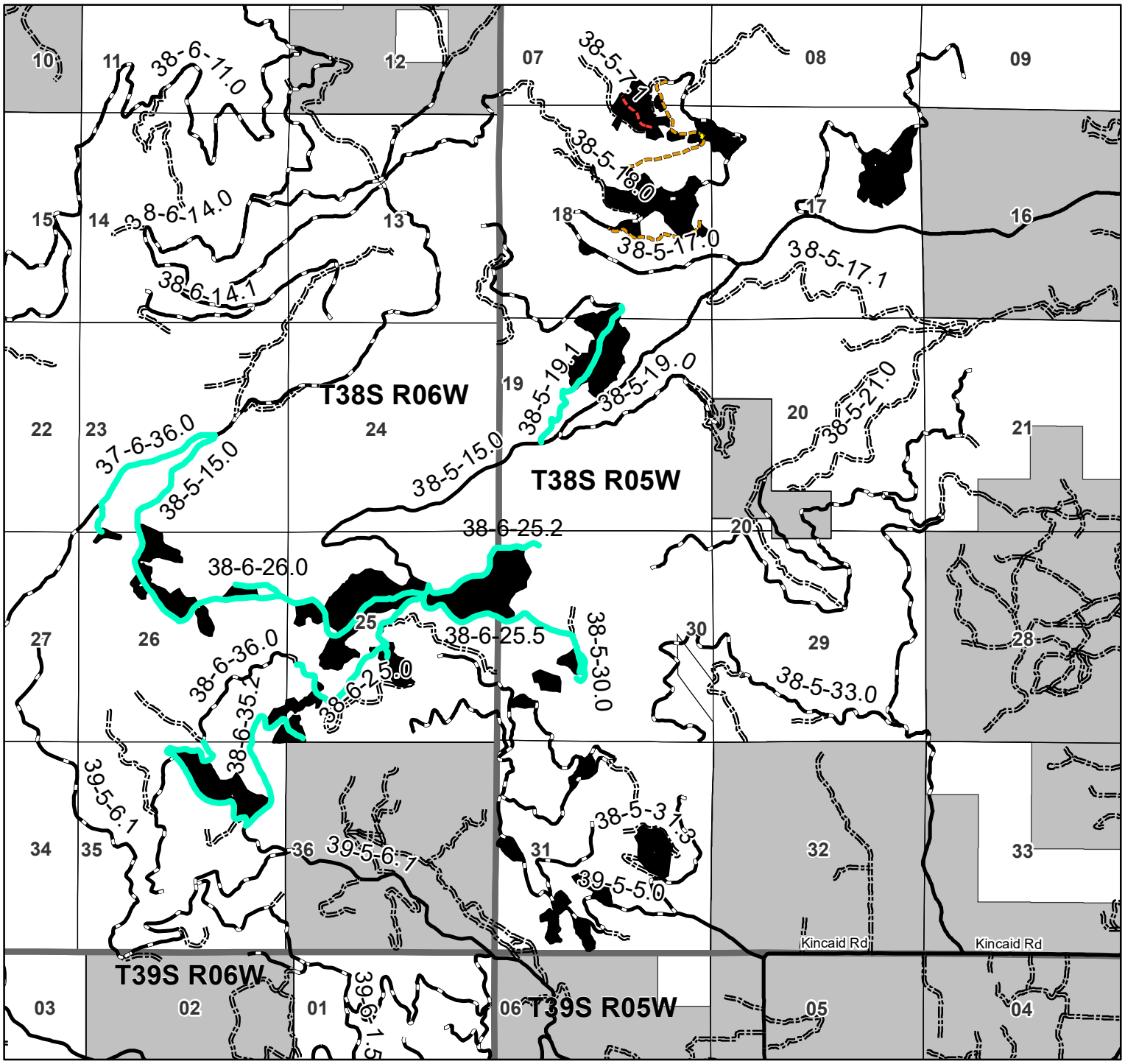
- Tracks
- Road wheels
- Drive gears
- Sprockets
- Roller frame
- Track rollers/idlers

All Vehicles

- Frame
- Belly pan (inside)
- Stabilizers (jack pads)
- Grapple and arms
- Dozer blade or bucket and arms
- Ripper
- Brush rake
- Winch
- Shear head
- Log loader
- Water tenders (empty or with treated water)
- Trailers (low-boys)
- Radiator/grill
- Air filter/pre-cleaner
- Struts/springs/shocks
- Body seams

U.S.D.I. BLM MEDFORD DISTRICT
JOSEPHINE COUNTY
T. 38 S., R. 5 W., SECTION 7, 17, 18, 19, 30, 31
T. 38 S., R. 6 W., SECTION 23, 25, 26, 35

EXHIBIT P POC MAP
PENN BUTTE TIMBER SALE
SALE NO. ORM07-TS-2024.0003



Legend

- Penn Butte TS Units
- Penn Butte Roads w/ POC Seasonal Restrictions

Penn Butte Road Construction Roads

- Operator Spur
- Reconstruction
- New Construction
- <all other values>

SurfaceType

- Rocked Road
- Paved Road
- Natural Surface Road

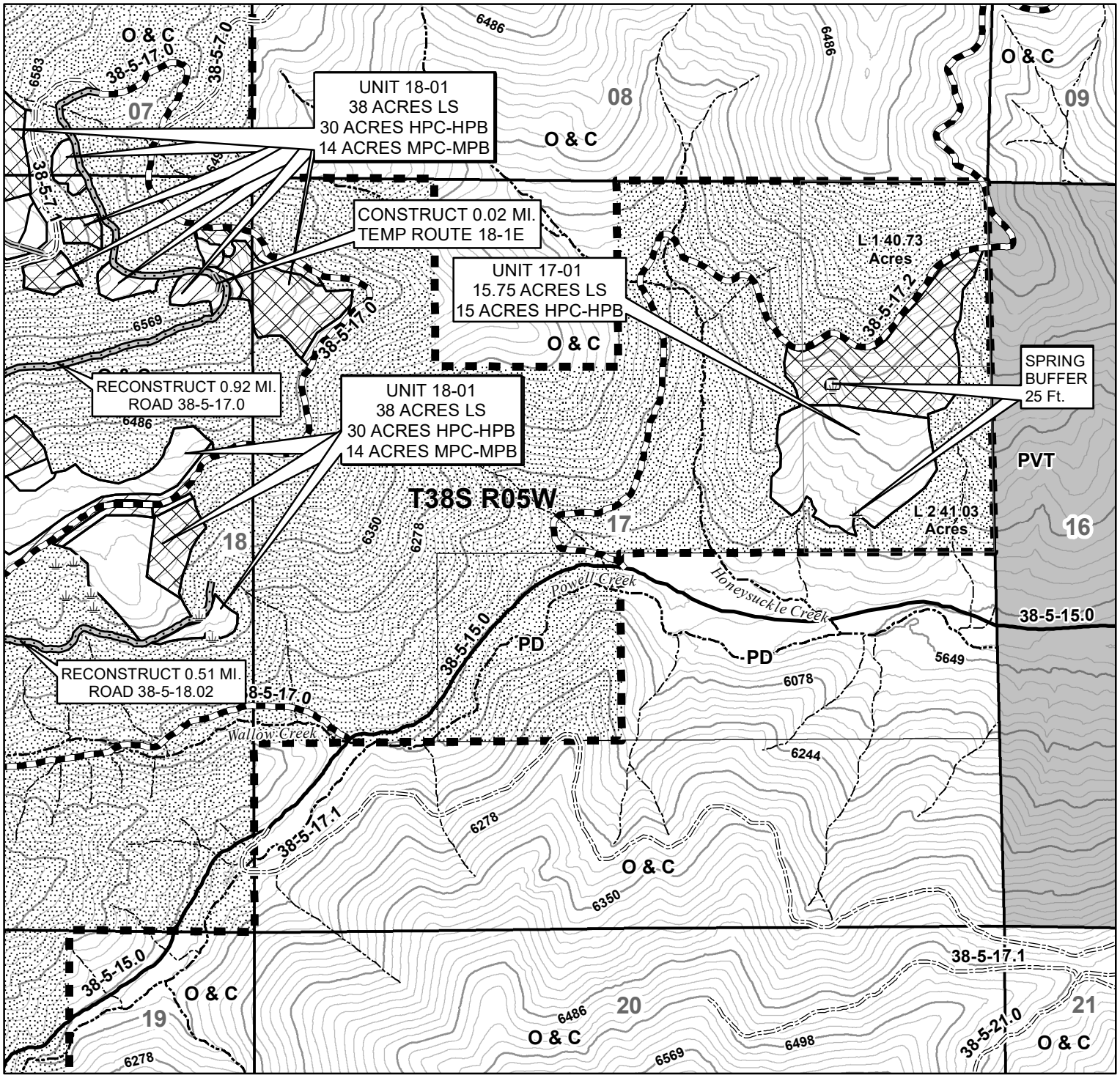
0 0.5 1 2 Miles

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

This page intentionally left blank

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 17 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

40 FOOT CONTOUR INTERVAL

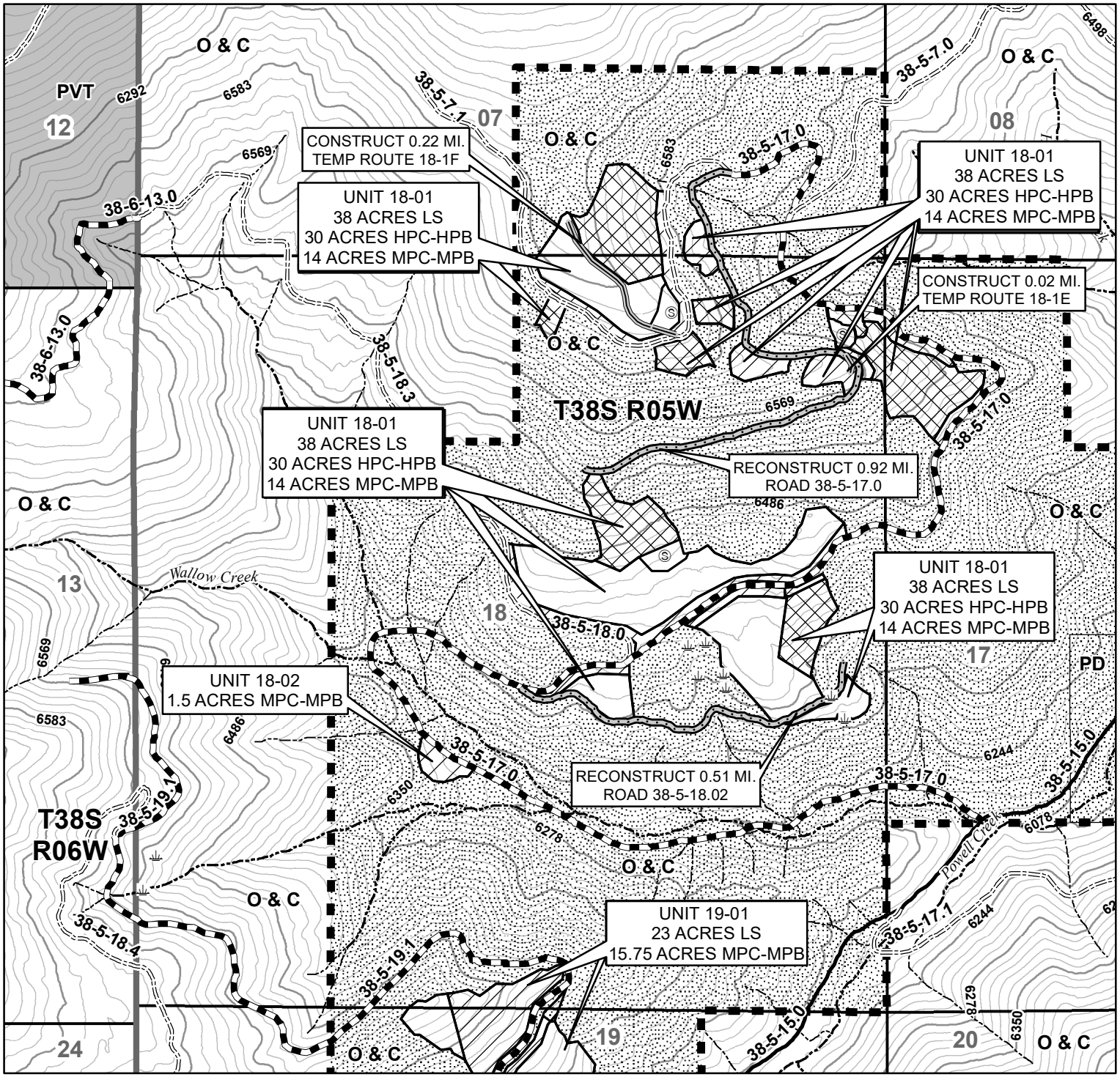
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification.

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

Map created by SDT
2/21/2023

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 18 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

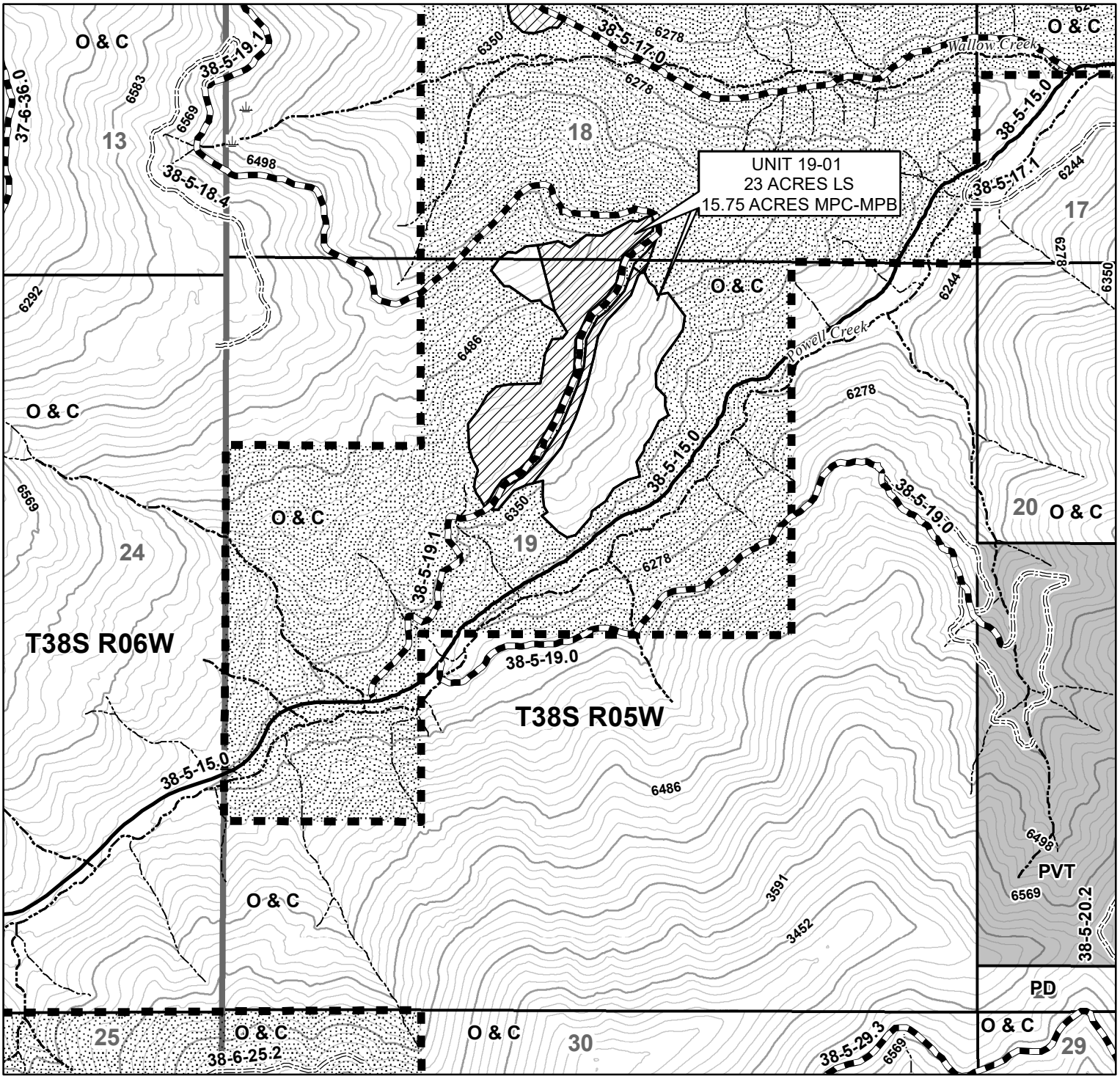
40 FOOT CONTOUR INTERVAL

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

Map created by SDT
2/21/2023

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 19 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

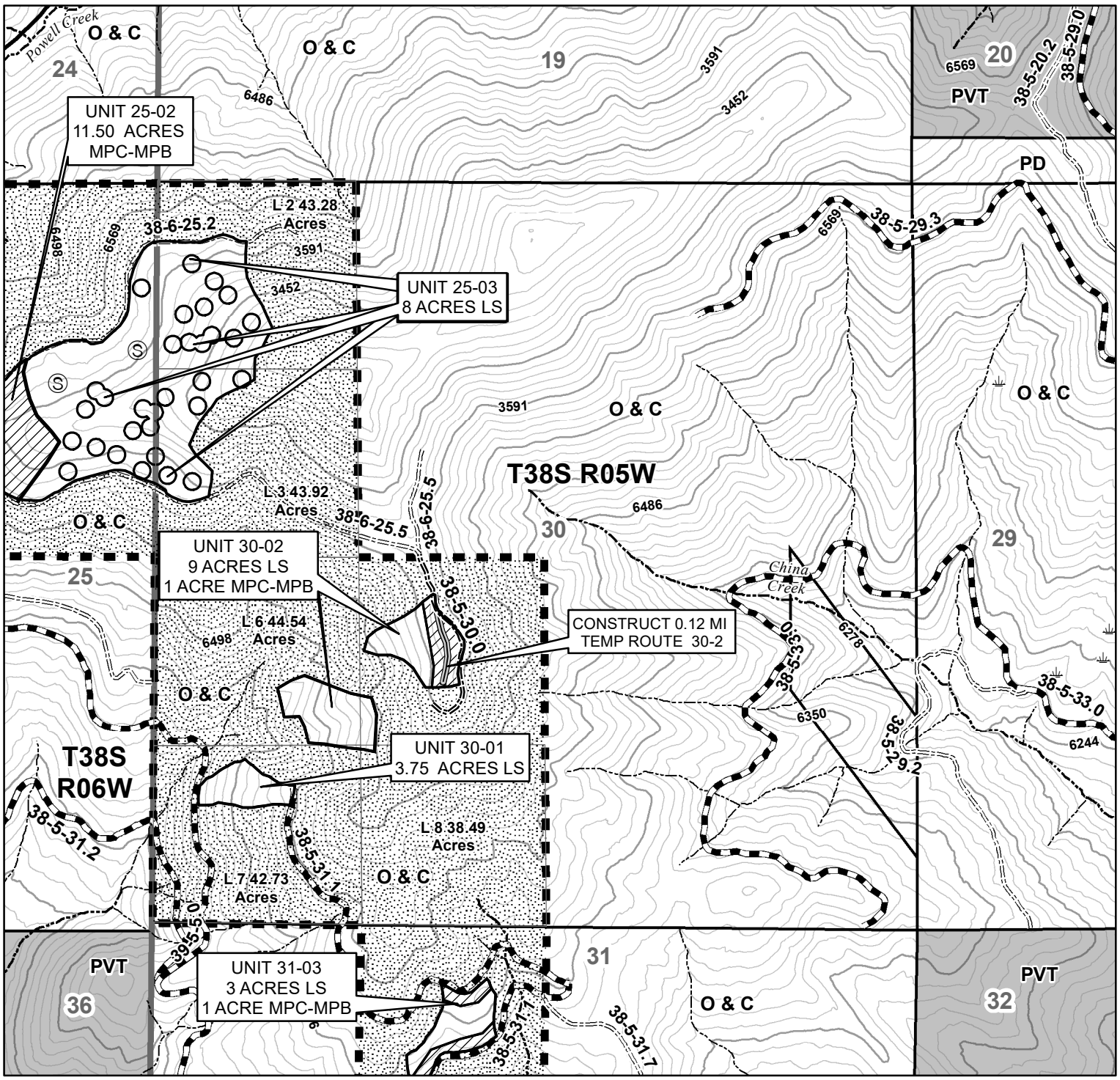
40 FOOT CONTOUR INTERVAL

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

Map created by SDT
2/21/2023

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 30 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

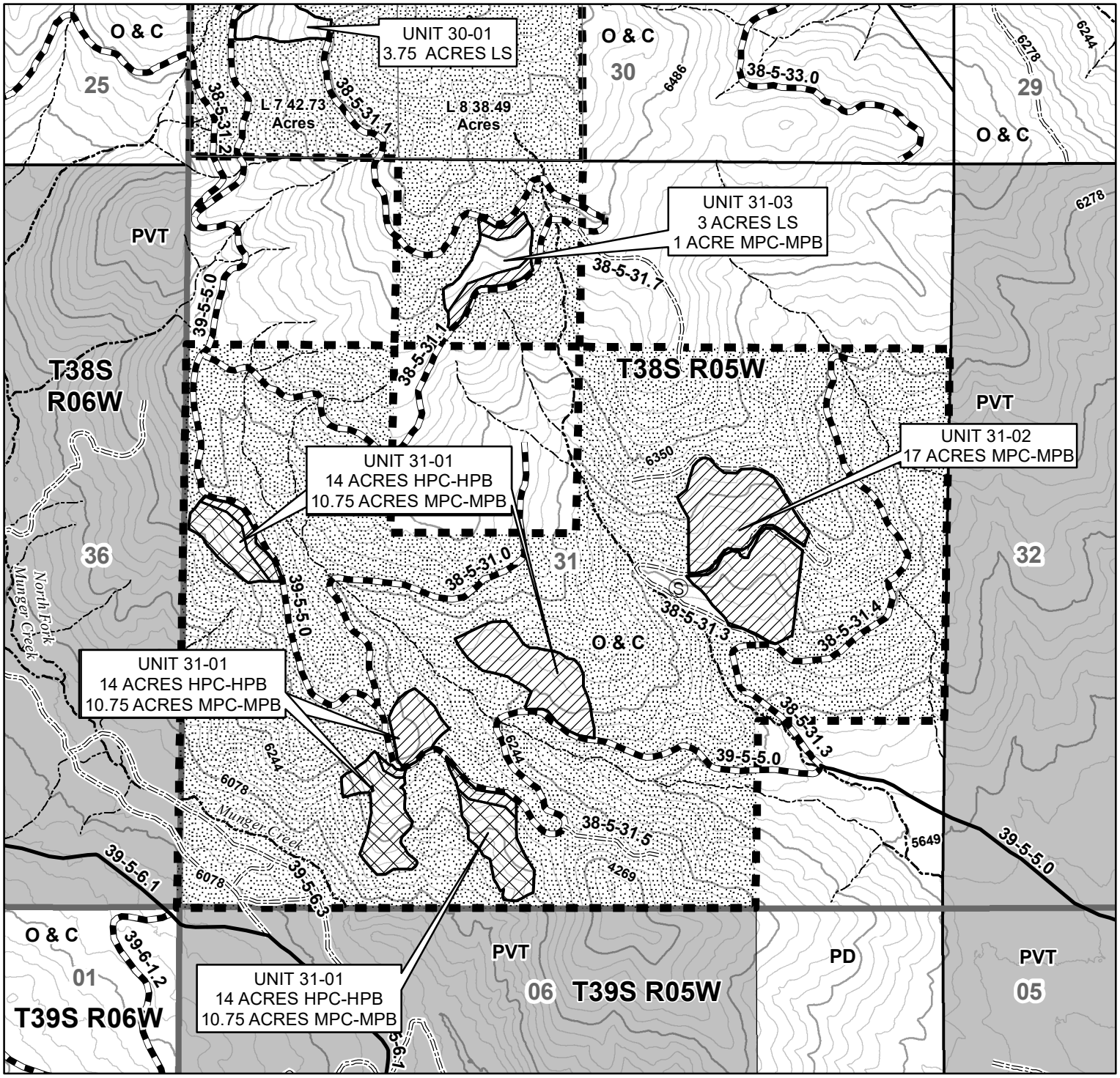
40 FOOT CONTOUR INTERVAL

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

Map created by SDT
2/21/2023

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 5 W., SEC. 31 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

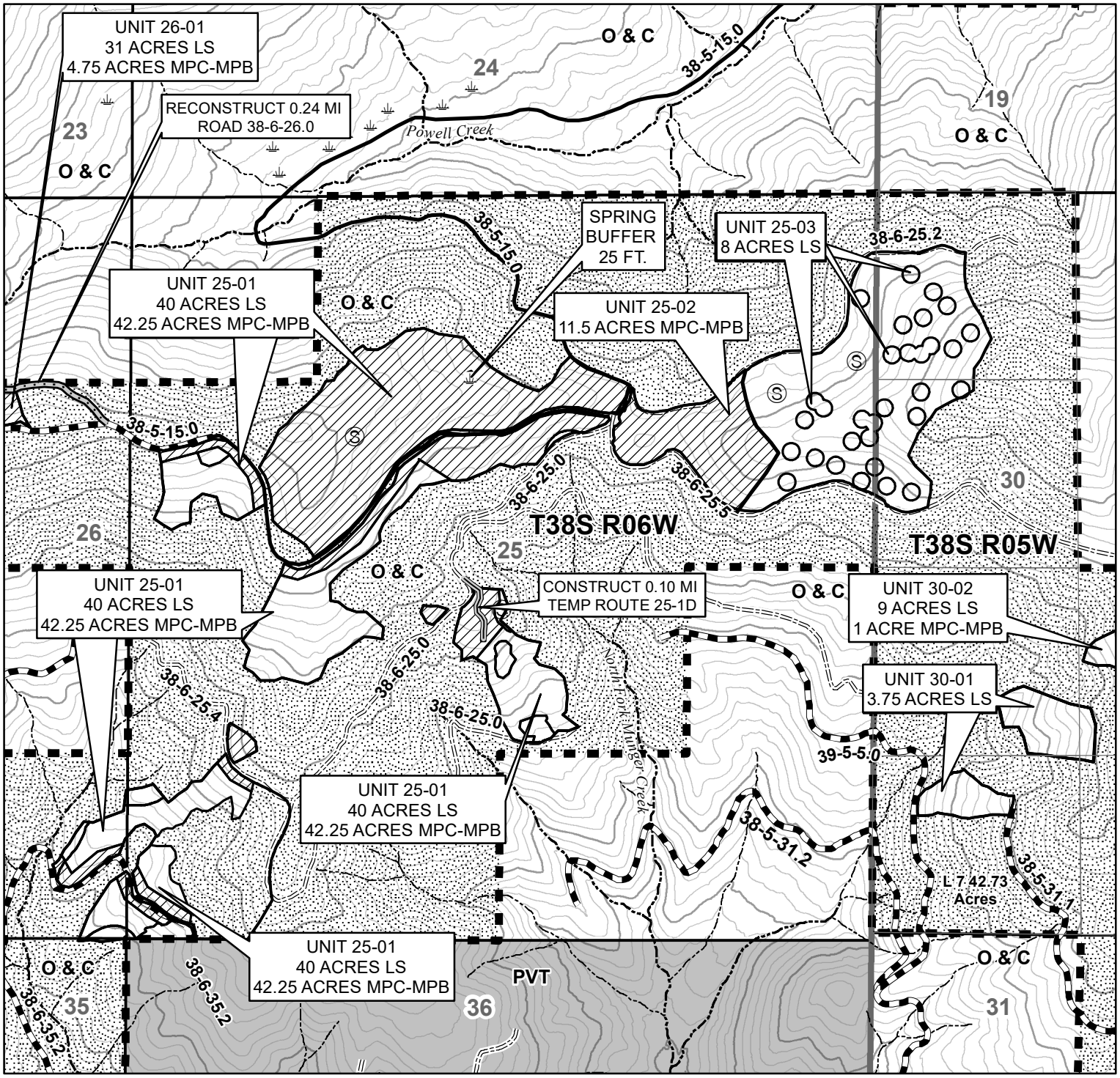
40 FOOT CONTOUR INTERVAL

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

Map created by SDT
2/21/2023

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 6 W., SEC. 25 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

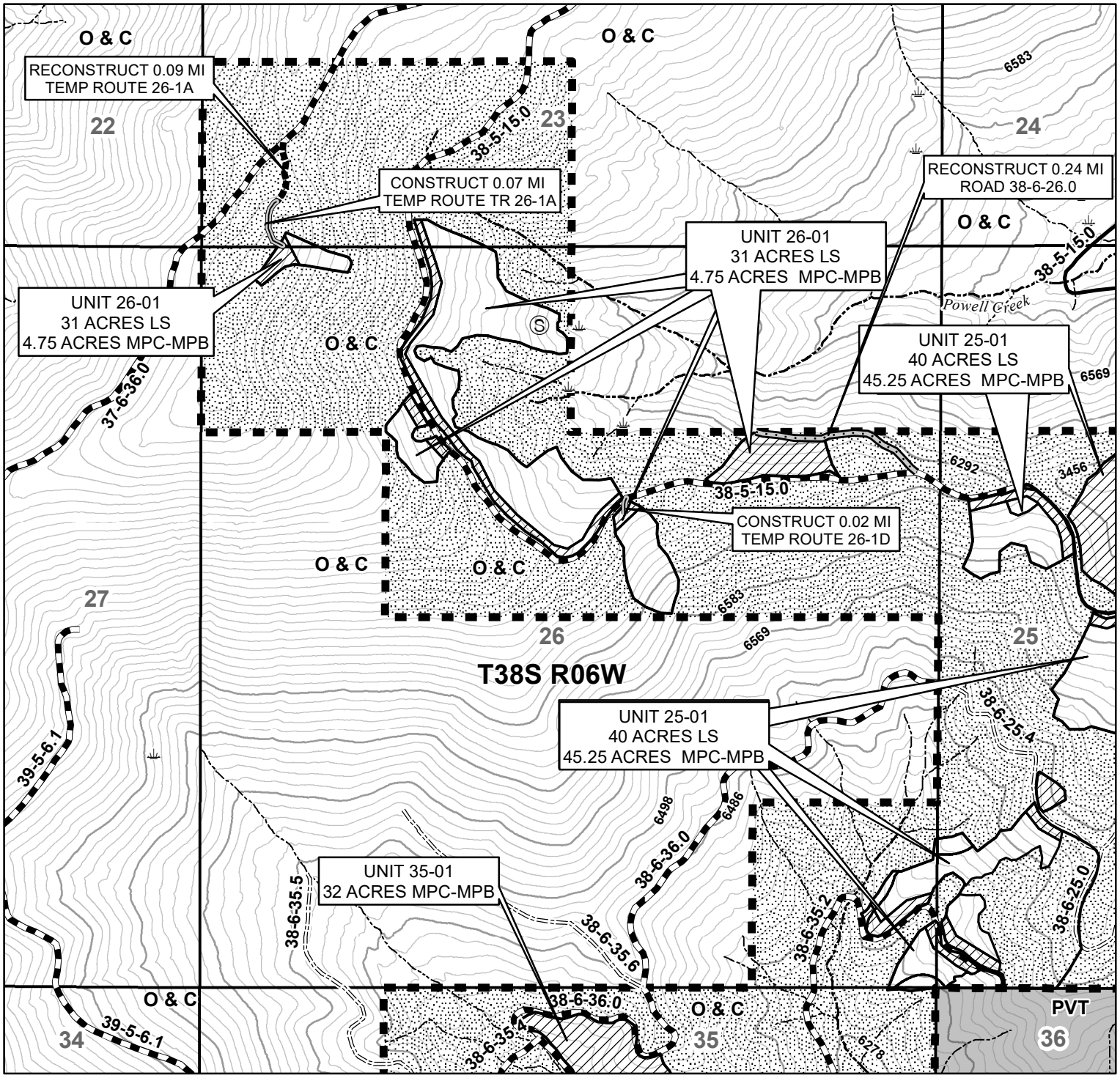
40 FOOT CONTOUR INTERVAL

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

Map created by SDT
2/21/2023

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 6 W., SEC. 26 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



0 750 1,500 3,000 Feet

1 inch = 1,000 feet

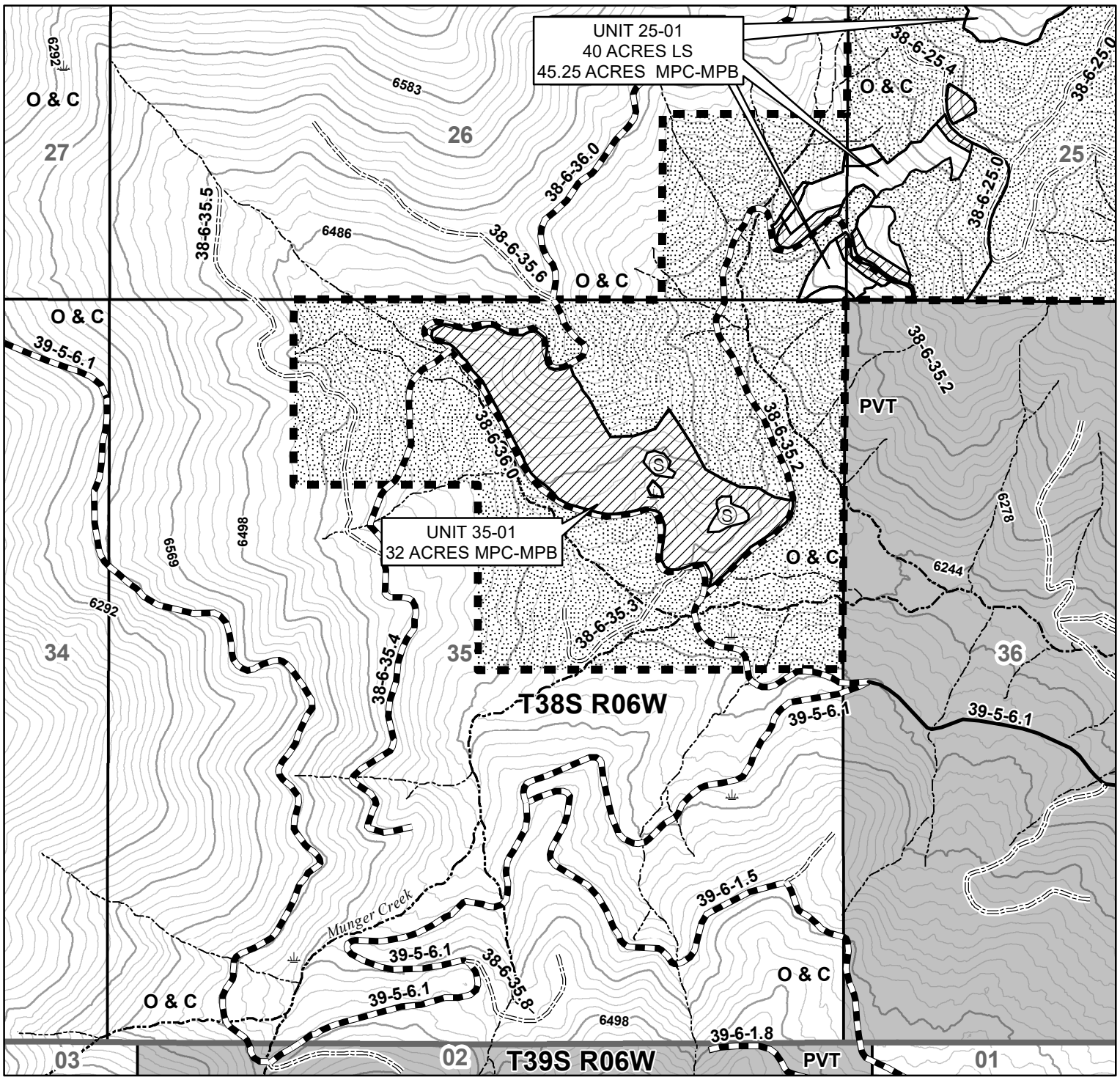
40 FOOT CONTOUR INTERVAL

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

Map created by SDT
2/21/2023

U.S.D.I BLM MEDFORD DISTRICT SALE NO. ORM07-TS-2024.0003
T. 38 S., R. 6 W., SEC. 35 WILL. MER.
PENN BUTTE TIMBER SALE
JOSEPHINE COUNTY

TIMBER SALE CONTRACT MAP
EXHIBIT S



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

Map created by SDT
2/21/2023

Springs

Skips

Slash Disposal

Hand Pile Cover - Hand Pile Burn

Lop & Scatter

Machine Pile Cover - Machine Pile Burn

Road Surface Type

Natural

Paved Road

Rocked Road

Road Work Type

Road Reconstruction

Temp Route Construction

Temp Route Reconstruction

Streams

Perennial

Intermittant

Contract Area Boundary

Reserve Area Boundary

Township and Range

Sections

Ownership

O & C — Bureau of Land Management O & C Lands

PD — Bureau of Land Management Public Domain Lands

ODF — Oregon Department of Forestry

PVT — Private

Government Lots

Contour

Intermediate 40-ft contour

Index 200-ft contour

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

Map created by SDT
2/21/2023

LEGEND

UNIT	UNIT ACRES	SLASH DISPOSAL TREAMENT PRESCRIPTION
17-01	36.0	LS/HPC-HPB/LPC-LPB/NT
18-01	88.0	LS/HPC-HPB/MPC-MPB/LPC-LPB/NT
18-02	2.0	MPC-MPB/LPC-LPB
19-01	43.0	LS/MPC-MPB/LPC-LPB/NT
25-01	96.0	LS/MPC-MPB/LPC-LPB/NT
25-02	13.0	MPC-MPB/LPC-LPB
25-03	46.0	LS/LPC-LPB/NT
26-01	43.0	LS/MPC-MPB/LPC-LPB/NT
30-01	4.0	LS/LPC-LPB
30-02	11.0	LS/MPC-MPB/LPC-LPB
31-01	28.0	HPC-HPB/MPC-MPB/LPC-LPB
31-02	18.0	MPC-MPB/LPC-LPB
31-03	5.0	LS/MPC-MPB/LPC-LPB
35-01	36.0	MPC-MPB/LPC-LPB/NT
18-1 ROW	1.0	LPC-LPB
25-1 ROW	1.0	LPC-LPB
26-1 ROW	0.0	NT
30-2 ROW	1.0	LPC-LPB
17-1 RS	2.0	LPC-LPB/NT
18-1 RS	9.0	LPC-LPB/NT
19-1 RS	3.0	LPC-LPB/NT
25-1 RS	2.0	LPC-LPB/NT
35-1 RS	2.0	LPC-LPB/NT
TOTAL	**490**	

* BOUNDARIES OF HARVEST UNITS ARE POSTED AND PAINTED IN ORANGE

NT = NO TREATMENT
LS = LOP & SCATTER
HPC-HPB = HAND PILE & COVER, HAND PILE BURN
MPC-MPB = MACHINE PILE & COVER, MACHINE PILE BURN
LPC-LPB = LANDINGS PILE & COVER, LANDINGS PILE BURN

SLASH DISPOSAL SUMMARY BY UNIT AND PRESCRIPTION

UNIT	UNIT ACRES	NO TREATMENT ACRES	LOP & SCATTER ACRES	HAND PILE, COVER & BURN ACRES	MACHINE PILE, COVER & BURN ACRES	LANDINGS: COVER AND BURN ACRES
17-01	36.0	3.00	15.75	15.00	0.00	2.25
18-01	88.0	3.00	38.00	30.00	14.00	3.00
18-02	2.0	0.00	0.00	0.00	1.50	0.50
19-01	43.0	1.00	23.00	0.00	15.75	3.25
25-01	96.0	1.00	40.00	0.00	45.25	9.75
25-02	13.0	0.00	0.00	0.00	11.50	1.50
25-03	46.0	37.00	8.00	0.00	0.00	1.00
26-01	43.0	2.00	31.00	0.00	4.75	5.25
30-01	4.0	0.00	3.75	0.00	0.00	0.25
30-02	11.0	0.00	9.00	0.00	1.00	1.25
31-01	28.0	0.00	0.00	14.00	10.75	3.25
31-02	18.0	0.00	0.00	0.00	17.00	1.00
31-03	5.0	0.00	3.00	0.00	1.00	1.00
35-01	36.0	1.00	0.00	0.00	32.00	3.00
18-1 ROW	1.0	0.00	0.00	0.00	0.00	1.00
25-1 ROW	1.0	0.00	0.00	0.00	0.00	1.00
26-1 ROW	0.0	0.00	0.00	0.00	0.00	0.00
30-2 ROW	1.0	0.00	0.00	0.00	0.00	1.00
17-1 RS	2.0	1.50	0.00	0.00	0.00	0.50
18-1 RS	9.0	8.50	0.00	0.00	0.00	0.50
19-1 RS	3.0	2.50	0.00	0.00	0.00	0.50
25-1 RS	2.0	1.50	0.00	0.00	0.00	0.50
35-1 RS	2.0	1.50	0.00	0.00	0.00	0.50
TOTAL	**490**	**63.50**	**171.50**	**59.00**	**154.50**	**41.75**

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

Map created by SDT
2/21/2023