

PROSPECTUS

LUMP SUM SALE

BUTTE FALLS FIELD OFFICE
JACKSON MASTER UNIT

Medford Sale # ORM05-TS-2026.0003
August 20, 2026 (KD)

Pine Shepherd (6300) Jackson County, O&C

BID DEPOSIT REQUIRED: \$3,000.00

All timber designated for cutting in;

NW1/4NE1/4, E1/2NW1/4, SW1/4, Sec. 9; E1/2NE1/4, SW1/4NE1/4, NE1/4NW1/4, SW1/4NW1/4, W1/2SW1/4, Sec. 17; E1/2NW1/4NW1/4, E1/2SW1/4NW1/4, Sec. 29; SE1/4NE1/4, SE1/4NW1/4, SW1/4SE1/4, NE1/4SW1/4, N1/2SE1/4, Sec. 31; NW1/4SW1/4, S1/2SW1/4, Sec. 32; T.34S., R.04W.; SW1/4NW1/4, Sec. 17; SW1/4NE1/4, NW1/4, SW1/4, Sec. 19; T.35S., R.04W.; NE1/4SW1/4, SW1/4SW1/4, Sec. 13; N1/2NE1/4, SW1/4NE1/4, SE1/4NW1/4, NE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4, Sec. 23; NE1/4, NW1/4SW1/4, S1/2SW1/4, SE1/4, Sec. 25; NE1/4NE1/4, E1/2SE1/4 (Mineral Survey 951), Sec.26; N1/2NE1/4, NE1/4NW1/4, Sec. 35; T.35S., R.05W.; SE1/4SE1/4, Sec. 1; Lot 3, Lot 4, W1/2NE1/4, E1/2NW1/4, E1/2SW1/4, SW1/4SE1/4, Sec. 7; N1/2SE1/4, SE1/4SE1/4, Sec. 12; T. 36S., R04W., 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
13,034	2,994	Douglas-fir	3,699	\$7.33	\$27,113.67
1,240	258	White Fir	327	\$4.63	\$1,514.01
765	180	Ponderosa Pine	226	\$3.78	\$854.28
734	60	Incense-Cedar	76	\$4.36	\$331.36
139	38	Sugar Pine	46	\$3.74	\$172.04
15,912	3,530		4,374		\$29,985.36

*Stumpage values have been determined by market value estimates and analytical appraisal methods were used to compute the appraised price. Additional information concerning the appraised price is available at the Medford District Office.

CRUISE INFORMATION – The 3P cruise method was utilized in cruising of Pine Shepherd TS. Douglas-fir, White fir, Ponderosa Pine, Sugar Pine and Incense-cedar have been cruised using the 3-P sampling methods to select sample trees. Maps showing the location and description of these sample trees are available at the Medford District Office. The sample trees have been measured using the volt system of measurement, and the volume expanded to a total sale volume. With respect to merchantable trees of all conifer species: the average tree is 16.9 inches DBHOB; the average gross merchantable log contains 77 bd. ft.; the total gross volume is approximately 4,967 MBF; and 88% recovery is expected (Average DF is 17.4 inches DBHOB; average gross merchantable log DF contains 82 bd. ft.). Bidders will be restricted to bidding on a unit (MBF) rate of the Douglas-fir volume. All other species will be sold at appraised price per unit (MBF). The minimum bid increment will be \$0.10 per MBF.

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

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

CUTTING AREA - Eighteen (18) units containing approximately two hundred fifty one (251) acres must be logged. Approximately thirteen miles (13) of roadside vegetation management units must be logged.

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

ACCESS – Access to the sale area is available via public roads and through the contract area using BLM Roads and, via Right-of-Way and Road Use Agreements M-2000 with Silver Butte Timber Co. Among other conditions, agreement M-2000 with Silver Butte Timber Co. requires completion of a license agreement between the Purchaser and Silver Butte Timber Co., road maintenance to be performed by the Purchaser and an estimated payment of a road surface replacement fee of \$00.00 and the road use obligation fee to be swapped out between Silver Butte Timber Co. and BLM.

ROAD MAINTENANCE – The Purchaser will be required to maintain approximately 29.30 miles of existing BLM and private roads. The BLM will maintain approximately 5.03 miles of existing BLM roads.

HELICOPTER LANDINGS - The contract will require the Purchaser to improve approximately three (3) acres of permanent helicopter/service landings.

SOIL DAMAGE PREVENTION: Pursuant to Section 26 of Form 5450-3, Timber Sale Contract, the Purchaser shall not operate or cause to have operated on the contract area any tractor-type logging equipment when soil moisture content at six (6) inch depth exceeds twenty-five (25) percent by weight as determined by the oven dry method.

EQUIPMENT REQUIREMENTS

1. A yarding tractor not greater than 9 feet in track width equipped with a integral arch and winch system capable of lining logs at least 75 feet.
2. A subsoiler, wing-toothed subsoiler, excavator with ripping attachment, or equivalent is required.
3. A helicopter with a minimum dropline length of 200 feet.
4. A yarder capable of logging with lead end suspension.

SLASH DISPOSAL - Perform logging residue reduction and site preparation work on approximately nineteen (19) acres of harvest area as directed by the Authorized Officer.

CONTRACT TERMINATION - Section 42 of the contraction enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and /or to modify or terminate the contract when necessary to:

1. Comply with the Endangered Species Act, or;
2. Comply with a court order, or;
3. Protect species which were identified for protection in accordance with management direction established in the ROD and RMP. This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

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

OTHER

1. Unit 1-3, 7-5, 7-5sya, 7-6, -13-1, 13-2, 17-2, 17-3, 17-4, 19-2, 19-3, 25-4, 25-5b, and 32-1 as shown on exhibit A are selection harvest prescriptions.
2. Unit 31-1 and 25-6, as shown on exhibit A are selection harvest prescriptions with group selection harvest prescriptions.
3. Unit 12-1 as shown on exhibit A are group selection harvest prescriptions.
4. Unit 1-3, 7-5, 12-1, 17-3 and 19-2 have limited or insufficient guyline anchors. Refer to division 7 OR OSHA regulations for suitable anchors or utilize a yarder that does not require guyline anchors.

5. There are roadside vegetation maintenance units
6. No extension of time beyond the normal 30 days will be granted for completing bonding and contract signing requirements.
7. This contract includes an additional special provision to ensure the Purchaser understands he/she is required to conduct all operations in compliance with Contract Section 12 (Purchaser's Contractual Responsibilities for Liability) and Contract Section 29 (Safety and Health) and the Special Provisions included in Section 44 of this Contract.
8. Purchaser shall be responsible for complying with all county, state, and federal laws and regulations that relate to the execution of this contract (See Sec. 29 of contract).
9. Directional felling is required
10. Warning signs and a flagger(s) must be placed in advance of active operations or other equivalent protection must be used on roads to control traffic where hazardous conditions are created from forest activities as per OR-OSHA division 7 rules.
11. There are daily and seasonal restrictions in place on this sale.
12. Cleaning of equipment to eliminate noxious weed seeds is required prior to move-in of equipment onto federal lands.
13. There are lockable gates within the contract area.
14. Dust abatement may be required.
15. There are slash treatment and pile placement requirements in place for this sale (see SD-1 in the contract)
16. Purchaser should be aware there are logging residue reduction costs assessed under SD-5. Refer to the appraisal for total assessed costs of logging residue reduction.
17. The Purchaser may wet season haul, with the Authorized Officer's approval on the following roads: 34-4-10.00 A-E3, 34-4-15.00 A, 34-4-17.06, 34-4-28.00 A-H, 34-4-31.00, 34-4-32.00 A, 35-4-05.00 A-C1, 35-4-08.00 A, 35-4-19.00, 35-5-21.00 A-B, 35-5-25.03 A-B, 35-5-25.06, 35-5-26.00 A, 35-5-26.04 A-B, 35-5-35.00 A-B, 36-4-05.00 A1-B, 36-4-07.00 A1, and 36-4-07.01 A1-B1. If the use of these roads during the wet season causes or begins to cause road damage or the transport of sediment into streams, the Authorized Officer may suspend wet season haul or require additional erosion control devices to prevent damage or off-site transportation of sediment. Additional rock may be required at the Purchaser's expense to repair any damage that occurs to the road during wet season haul.

- The Purchaser shall have the option to rock road numbers 34-4-17.00 A-B, 34-4-17.05 A-A1, 35-4-08.01 A-C, 35-5-17.00, 35-4-18.02 A-D, and 36-4-07.01 B2 for wet weather haul. Purchaser option rocking depths will be determined and approved by the Authorized Officer. Any costs for rocking and installation of additional drainage structures will be at the Purchaser's expense and shall be completed in accordance with the plans and specifications show in Exhibit C of this contract.
18. Purchaser should be aware that additional wildlife restrictions could be applied if the species of concern is found within the distances listed to the contract area
 - No confirmed den sites are located within 50 feet of proposed treatment areas, however, if a confirmed fisher den site is found: Maintain $\geq$ 80 percent canopy cover within at least 50 feet of documented fisher natal and maternal dens. No activities may occur within stands. Maintain sufficient (at least 60%) canopy cover on a within-stand average basis. containing known fisher den sites from March 1 to July 30. Protect fisher denning structures by retaining $\geq$ 24" diameter snags, down woody material, and live trees with cavities in the stand and if, for safety concerns, it is necessary to fall such snags or live trees with cavities, retain those cut trees or snags in the stand as additional down woody material. Do not apply vegetation treatments to all portions of the stand.
 - Seasonally restrict timber harvest activities from March 1 to July 15 but may be extended up to September 30 if late nesting or nesting re-attempts are confirmed, within 0.25-mile of known active NSO sites or within 0.5-mile for helicopter operations and blasting. The seasonal restriction could be waived if non-nesting status is determined. If any new owls are discovered in harvest units following the sale date, activities would be halted until mitigation options are determined. Follow USFWS recommended noise disturbance distances for activities other than timber harvest to avoid disturbance to NSOs.
 - Seasonally restrict prescribed burning and site preparation with chainsaws from March 1 to July 15 within 0.25-mile of known active NSO nests. The seasonal restriction could be waived if non-nesting status is determined.
 - If a gray wolf den or rendezvous site is identified prior to or during project activities, implement a seasonal restriction from April 1 to July 15 and suspend project activities located within one mile of a known den or rendezvous site. Because these sites are difficult to locate and can change from year to year, this would be assessed on an ongoing basis throughout the life of this project through

annual updates and communication with the USFWS and Oregon Department of Fish and Wildlife.

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

From the city of Medford take Bullock Road for 0.6 mi, turn right onto OR-62W for 0.3 mi, Take I-5 N Towards Grants Pass for 18.3 miles, take exit 48, Turn right onto Depot St for 151 ft, Turn left onto Pine St for 495 ft, Turn Left onto W Main st for 0.2 miles, continue onto Foothill Blvd for 0.1 mi, Turn right onto West Evans Creek Rd for 2.9 mi, turn left onto Fielder Creek Road for 1.2 miles, Stay left to stay on Fielder Creek Road for 1 mile, Turn right onto the 36-4-7 road for 256 ft and arrive.

ENVIRONMENTAL ASSESSMENT - Environmental assessment (DOI-BLM-ORWA-M050-2026-0001-EA) were prepared for this sale, and a Finding of No Significant Impact has been documented for each environmental assessment. These documents are available for inspection as background for this sale at the Medford District Office.

Pine Shepherd
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 Area(s) as shown on Exhibit A and all orange painted and posted trees which are on or mark the boundaries of the Reserve Area(s).
- (B) IR-1 Approximately five thousand and sixty-one (5,061) trees marked with orange paint above and below stump height in units 1-3, 7-5, 7-5a, 7-5sya, 7-6, 13-1, 13-2, 13-3, 17-2, 17-3, 17-4, 19-2, 19-3, 25-4, 25-5b, 25-6, 31-1 and 32-1 as shown on exhibit A.
- (C) IR-1 Approximately eleven (11) trees marked with white paint above and below stump height in unit 12-1 as shown on exhibit A.
- (D) IR-2 All timber except approximately one thousand nine hundred and fifty-three (1,953) trees marked for cutting heretofore by the Government with blue paint above and below stump height in all RVM units (outside of harvest units) as shown on Exhibit A.
- (E) IR-5 All young growth conifers less than eight (8) inches in diameter D.B.H.O.B. not damaged in the normal course of logging in all units as shown on Exhibit A.
- (F) IR-13 All dominant madrone, bigleaf maple and oak trees > 24 inches DBH in all units as shown on Exhibit A (which do not present a safety hazard as determined by the authorized officer). Trees felled for safety reasons shall be retained on site.
- (G) IR-13 All snags in all units as shown on Exhibit A (which do not present a safety hazard as determined by the authorized officer). Snags felled for safety reasons shall be retained on site.
- (H) IR-14 Within all commercial harvest units as shown on Exhibit A retain existing large down woody material >20 inches in diameter at the large end and >20 feet in length; and down woody material 6-20 inches in diameter at the large end and >20 feet in length in decay classes III, IV, and V (USDI 2016c, pp. 62-63).

Pine Shepherd
SPECIAL PROVISIONS

Section 44

(A) Log Exports

- (1) LE-1 Unless otherwise authorized in writing by the Contracting Officer, the Purchaser shall brand clearly and legibly one end of all logs with a scaling diameter (small end inside bark) of over ten (10) inches, prior to the removal of timber from the contract area. All loads of eleven (11) logs or more will have a minimum of ten (10) logs clearly and legibly branded on one end regardless of the diameter of the logs. All logs will be branded on loads of ten (10) logs or less. One end of all branded logs to be processed domestically will be marked with a three (3) square inch spot of highway yellow paint. The purchaser will stop trucks for accountability monitoring at mutually agreed upon locations when notified by the Authorized Officer.

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

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

(B) Logging

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) days or more, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of seven (7) or more days.
- (2) L-2 Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. (A pre-work conference between the Purchaser's authorized representative and the Authorized Officer's representative must be held at a location designated by the Authorized Officer before the logging plan will be approved.) All logging shall be done in accordance with the plan.
- (3) L-4 All trees designated for cutting shall be cut so that the resulting stumps shall not be lower than six (6) inches nor higher than twelve (12) inches measured from the

Pine Shepherd
SPECIAL PROVISIONS

ground on the uphill side of the tree. This height requirement may be reduced if approved by the Authorized Officer.

- (4) L-7 In all ground-based units shown on Exhibit A, all trees over twenty-one (21) inches DBH designated for cutting shall be felled and cut into log lengths not to exceed forty-four (44) feet. before being yarded.
- (5) L-7 In all cable units shown on Exhibit A, all trees designated for cutting shall be felled and cut into log lengths not to exceed forty-four (44) feet before being yarded.
- (6) L-8 In all ground-based units, as shown on Exhibit A, all trees twenty-one (21) inches D.B.H.O.B. and smaller designated for cutting shall be felled and 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 logs shall be completely limbed and bucked into a max log length of forty-four (44) feet prior to being yarded.
- (7) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-nine (179) feet of the unit boundary shall be felled way from the unit boundary. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (8) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-nine (179) feet of a private property line shall be felled away from the private property line. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (9) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-nine (179) feet of the corner monument shall be felled away from the corner monument. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (10) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-nine (179) feet of any plant site, or reserve area boundary as shown on Exhibit A shall be felled away from the painted and posted boundary. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).
- (11) L-10 In the contract area shown on Exhibit A, all trees designated for cutting which are within one hundred seventy-nine (179) feet of any utility box on road 36-4-7.1 and 36-4-5.0 road (Unit 7-5, 7-6e, 7-5a and RVM Units) as shown on Exhibit A shall be felled away from utility boxes on roads 36-4-7.1 and 36-4-5.0 road. The Purchaser shall notify the Authorized Officer three (3) days before beginning felling operations in the above area(s).

Pine Shepherd
SPECIAL PROVISIONS

- (12) L-12 Yarding on the areas designated herein and shown on Exhibit A shall be done in accordance with the yarding requirements or limitations for the designated area.

Designated Area	Yarding Requirements or Limitations
All Units	Purchasers shall provide a logging plan prior to logging and construction of pre-designated roads, landings, and skid trails. In this logging plan, the purchaser shall identify whether they will utilize the pre-designated roads, landings, or skid trails specified in the contract and will include any proposed alternatives to the use of pre-designated roads, landings, and skid trails. Any proposed alternate road, landing, or skid trail location will require analysis by the Interdisciplinary Team prior to approval. If an alternate location is approved and used in lieu of a pre-designated location: 1) the pre-designated road, landing, or skid trail shall not be built, 2) the timber in the pre-designated ROW shall not be harvested, 3) the associated ROW timber volume will be modified out of the contract, and 4) any difference between proposed and pre-designated construction costs exceeding \$2,500 will be modified in the contract. If no reasonable alternative is proposed and approved, the purchaser shall utilize pre-designated roads, landings, and skid trails as shown on Exhibit A and C. Mechanized equipment is prohibited from entering the timber reserve or internal skips as painted/posted/flagged and or as shown on Exhibit A unless approved by the authorized officer. During logging or forest management operations, use techniques, such as directional falling, to prevent damage to fences, cattle guards, livestock watering troughs and other improvements. If damage to range improvements does occur, the BLM shall be notified immediately, and proper repair or replacement will occur within two weeks. Proper repair of fences and gates includes keeping wire properly attached to posts, splicing or replacing broken wire in kind, repairing structures such as corners, stress panels or gates, and any other work necessary to keep improvements functional. Repair of structures such as stress or corner panels and gates requires pre-approval by BLM staff. Repair or cleaning of cattle guards damaged or filled with sediment by logging activities would

Pine Shepherd
SPECIAL PROVISIONS

	require approval of BLM road engineering staff for structural integrity and public safety compliance. During logging and forest management activities, operators shall keep all gates closed and all livestock containment systems functional to keep livestock in authorized areas. Do not machine pile slash within Riparian Reserves (RRs) unless in established landing in RRs and approved by the authorizing officer after consulting with Soils and/or Hydrologist to make sure that it is located in a stable location with no hydrologic connectivity. Locate temporary routes, permanent roads, and landings on stable locations, such as ridge tops, stable benches, or flats where feasible. Use existing jeep roads, skid trails, and landings where possible. Locate newly constructed routes and landings away from slide areas, headwalls, seeps, springs, high landslide hazard locations, and RRs, unless there is no practicable alternative. Locate new routes in locations to minimize stream crossings. Locations would be approved by the Authorized Officer before construction. Logging system breaks are flagged in orange/white. Silviculture breaks are flagged in yellow. Where trees are cut for yarding corridors, skid trails, landings, road construction, maintenance, and improvement in the Inner Zone or Middle Zone, retain cut trees in adjacent stands as down woody material or move cut trees for placement in streams for fish habitat restoration, at the discretion of the BLM. In the Outer Zone, retain cut trees in adjacent stands as down woody material, move cut trees for placement in streams for fish habitat restoration, or sell trees, at the discretion of the BLM. Yarding or equipment use through plant site buffers shown on Exhibit A will not be allowed. When working in weed infested project areas (landings, haul routes, RVMs, harvest units, road construction): • Require all vehicles and equipment traveling off designated roads, trails, or temporary routes to be thoroughly cleaned before entering BLM-administered lands, including when transitioning from private lands.
--	--

Pine Shepherd
SPECIAL PROVISIONS

	• Remove all plant material, soil, and debris, particularly from undercarriages, using effective methods such as pressure washing, compressed air, or brushing to ensure decontamination • Clean all equipment off site or at authorized locations within the Planning Area before leaving the site
Oversized Tree Restrictions (All units and landings as shown in Exhibit A maps)	All Douglas-fir and ponderosa pine over 36 inches DBH with a birthdate prior to 1850 felled for skid trails, yarding corridors, landings or safety reasons must be left in the stand or felled, bucked, and removed to an area adjacent to and outside of the ROW. Where trees are bucked at the large ends, the purchaser shall put a "X" of paint with a color approved by the authorized officer. These trees/logs shall not be yarded to the landing.
Ground Based Units (7-5a, 7-6, 13-3, 17-2, 17-4, 25-4, 32-1)	Mechanized felling equipment must have an arm capable of reaching at least twenty (20) feet. No front-end loaders are permitted. Yarding tractor width will not be greater than twelve (12) feet as measured from the outer edges of the standard width dozer blade in the straight position, or nine (9) feet as measured from the outer edges of standard width track shoes. Yarding tractors will be equipped with integral arches capable of suspending one end of the log clear of the ground and winch systems capable of lining logs at least seventy-five (75) feet. One end suspension is required in all ground-based units. No mechanized equipment shall travel up or down draw bottoms. Crossing the draw shall be permitted where approved by the authorized officer. Mechanized equipment shall not travel through plant site buffers shown on exhibit A. Do not operate machinery for timber harvest within 50 feet of streams (slope distance), except where machinery is on improved roads, designated stream crossings, or where equipment entry into the 50-foot zone would not increase the potential for sediment delivery into the stream. Incorporate existing skid trails and landings as a priority over creating new trails and landings where feasible, into a designated trail network for ground-based harvesting equipment.

Pine Shepherd
SPECIAL PROVISIONS

	Limit designated skid trails to <15 percent of the harvest unit area to reduce displacement or compaction to acceptable limits. Consider proper spacing (on average 100 feet), skid trail direction and location relative to terrain and stream channel features. Locate skid trails to minimize disturbance to down woody material. Where skid trails encounter large down woody material, a section would be bucked out for equipment access. The remainder would be left in place and would not be disturbed unless they pose a safety hazard. Limit width of skid trails to single-width or what is operationally necessary for the approved equipment. Where multiple machines are used, provide a minimum sized pullout for passing. Limit non-specialized skidders or tracked equipment to slopes generally less than 35 percent except when using previously constructed trails or accessing isolated ground-based harvest areas requiring short trails over steeper pitches. End-line yarding may occur on slopes over 35 percent for short distances where needed. Ground-based equipment would be stationed outside of the area greater than 35 percent unless the conditions above are met. Also, limit the use of this equipment when surface displacement creates trenches, depressions, excessive removal of organic horizons, or when disturbance would channel water and sediment as overland flow. Create skips, defer portions of units or change logging systems to helicopter where the soils show indicators of mass movement. Limit the use of specialized ground-based mechanized equipment (those machines specifically designed to operate on slopes greater than 35 percent which includes tethered ground-based equipment) to slopes less than 50 percent, except when using previously constructed skid trails, adequate slash mat (to minimize erosion and displacement) or accessing isolated short skid trails over steeper pitches. Stop the use of this equipment if surface displacement creates trenches, depressions, excessive removal of organic horizons, or if disturbance would channel water and sediment as overland flow. Unit design would be determined based on specific equipment and operator capabilities and would be monitored during implementation by the Authorized Officer with input from BLM soils and/or aquatics staff.
--	--

Pine Shepherd
SPECIAL PROVISIONS

	Block skid trails to prevent public motorized vehicle use and other unauthorized use by October 15 of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season. Place woody debris or other appropriate barriers (e.g., rocks, logs, and slash) on the first 100 feet of skid trails leading off system roads or landing areas in all ground-based yarding units upon completion of yarding to block and discourage unauthorized vehicle use. If there is not enough available slash to cover the first 100 feet of skid trails, apply seed and mulch to the area. If operators are using feller-bunchers or cut-to-length harvesters off designated skid trails: Allow mechanized equipment capable of creating and walking on slash (such as a cut-to-length system) to work off designated skid trails for one or two passes on at least eight inches of slash and under dry soil conditions (less than 25% soil moisture content. The Authorized Officer, with input from the soil scientist, can provide waiver for soil moisture if minimal soil disturbance is expected to occur due to site conditions. Allow mechanized equipment (feller-buncher systems) to work off designated skid trails during the dry season (soil moisture content less than 20%) for one or two passes only (one round-trip). The BLM may issue a waiver of the soil moisture if minimal soil disturbance would occur based on site conditions. Use low, ground-pressure equipment off designated skid trails. Restrict all other use of ground-based equipment to designated skid trails. Stop equipment use off designated skid trails if logging equipment is causing soil disturbance above a Class 1 (Page-Dumroese, Abbott, Rice 2009, p. 6, 14, 15, and 27-33), or as determined by the Authorized Officer. Landing location must be approved by the authorized officer. Ground-based landings shall be no larger than 0.5 acres In upland units, allow harvesting operations (cutting and transporting logs) when ground is frozen or adequate snow cover exists to prevent soil compaction and displacement. The Authorized Officer would consult with a watershed specialist (hydrologist, soils scientist, or fisheries biologist) to determine appropriate conditions. If conditions change during operations where detrimental soil compaction and displacement is occurring, operations would be stopped immediately.
--	---

Pine Shepherd
SPECIAL PROVISIONS

	Minimize the area where more than half of the depth of the organically enriched upper horizon (topsoil) is removed when conducting forest management operations. For all units with predesignated skid trails as shown on Exhibit A and flagged in the field with yellow/white candy stripe tied with red, the purchaser shall use those skid trails unless a new location is approved by the authorized officer. Predesignated landings and skids may require excavation.
Cable Units (1-3, 7-5, 13-2, 12-1, 17-3, 19-2 (cable/helicopter) and 31-1)	No yarding up or down draw bottoms is permitted. 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. For all skyline/cable units, all trees shall be bucked into logs not to exceed 44 feet and will be completely delimbed prior to being yarded. Limit the width of skyline corridors to be as narrow as operationally feasible; do not exceed a 15-foot width. As practicable, set corridor spacing where they cross the streams to no less than 100 feet apart when physical, topography, or operational constraints demand, with an overall desire to keep an average spacing of 200 feet apart. If possible, use natural openings or areas with non-commercial sized trees when selecting corridor locations that cross a riparian area. Where operationally feasible cable corridor spacing shall average a minimum of 150 ft. Use full or partial suspension when skyline-cable yarding. Require full suspension over flowing streams, non-flowing streams with highly erodible beds and banks, and jurisdictional wetlands. Seed and mulch the top 20 feet of skyline-cable yarding corridors where yarding logs to the road results in extended soil exposure. Cable landings shall be no larger than 0.5 acres.

Pine Shepherd
SPECIAL PROVISIONS

Helicopter Units (13-1, 19-2 (cable/helicopter), 19-3, 25-5b, and 25-6)	Limit service pad and helispot construction to be no larger than necessary and obtain approval from the Contract Administrator before construction. Lift logs vertically (without horizontal movement) to a height above the adjacent leave trees. Vertically lift multiple log turns from a small enough radius to result in minimal damage to the residual forest stand as determined by the Authorized Officer. Restrict aerial operations within 0.5 miles of any residence to an operating time of 6:00am to 6:00pm, Monday through Friday. A dropline with a minimum length of two hundred (200) feet is required. For Helicopter units whole tree yarding will be allowed as long as residual stand damage is minimized. Yarding of unmerchantable material is not required. If excessive stand damage occurs as determined by the authorized officer, trees will be required to be bucked into lengths no longer than forty-four (44) feet and will be completely limbed prior to being yarded. Helicopter landings shall be no larger than one acre and service landing shall be no larger than three acres.
Units that can be Tether Logged (12-1, 17-3, 25-5b and portions of 25- 6)	If the purchaser chooses to tether log units instead of using the assigned logging system in the contract the following provisions will apply. Specialized ground-based equipment using a tether assist may be allowed on slopes between 35-60% only in units identified on Map 4. Potential Tether-assisted Timber Harvest Units (Treatment Areas) (Soils NAID #1) under the following conditions: • Specialized equipment must be designed for steep slopes. • No tethered skidding. • Limit detrimental soils disturbance to less than 20% of the unit after completion. Purchaser shall present a logging plan of the unit to the BLM Sale Administrator and Soil Scientist for approval before project activities begin.

Pine Shepherd
SPECIAL PROVISIONS

Unit 19-2 (cable./heli)	No logging system break is flagged. The entire unit is available to cable log or helicopter at the purchaser's discretion if the L-12 stips are met for the chosen logging system.
Units 1-3, 7-5, 12-1, 17-3 and 19-2	Suitable guyline anchors are limited or insufficient, refer to division 7 OR OSHA regulations for suitable anchors or utilize a yarder that does not require guyline anchors.
Directional Fell only units (7-5sya)	Directional fell trees that are not reserved to the existing road below. No mechanized equipment shall be allowed within or adjacent to the unit off of the existing road.
Roadside Vegetation Maintenance Units (RVM Units)	Mechanized logging equipment shall be restricted to the existing roads where clearing is to occur. Directionally fell away from all plant sites, flagged weed infestations (where operationally feasible), streams, springs, wetlands, ponds and pump chances as shown on exhibit A maps. Where operationally feasible directionally fell away from all conifers greater than 36 inches and madrone/ bigleaf maple/ oak trees > 24 inches DBH. If during the felling of an RVM tree, a conifer 36 inches DBH or greater or madrone/ bigleaf map/ oak tree greater than 24 inches DBH in the adjacent stand needs to be severed from the stump obtain permission from the authorized officer prior to felling unless the tree needs to be felled for immediate safety reasons. Unless otherwise directed by the BLM all conifer 36 inches DBH or greater or madrone/bigleaf maple/oak tree > 24 inches DBH felled for safety and operations shall be left in nearby stands. If the tree needs to be bucked to facilitate operations. the purchaser shall put a "X" of paint with a color approved by the authorized officer on the large ends to ensure that the logs are not yarded and shipped.
Weed Infestation Areas Shown on Exhibit A	In addition to the E-7 stip, after entering weed infested sites shown on exhibit A, wash equipment on site at an area approved by the authorized officer prior to entering uninfected areas. In the RVM in Section 9 of T34S., R04W., there will be no need to wash in between interrupted infestation sites due to close proximity.
Units 1-3, 7-5, 7-5a, 7-6, 13-1, 13-2, 19-2, 19-3, 25-4 and 32-1	When additional trees need to be cut for cable corridors, skid trails or felling operations trees shall be tallied by species and diameter. The BLM will utilize these tallies to reserve trees of

Pine Shepherd
SPECIAL PROVISIONS

	similar size and species within the same harvest unit in accordance with L-24.
--	--

- (13) L-14 No falling, yarding, loading or mechanized equipment is permitted in or through the timber reserve area as shown in Exhibit A and as posted (unless otherwise approved by the Authorized officer).
- (14) L-17 Landings shown on exhibit A shall be placed at the approximate location(s) as shown on Exhibit A. Any alternative landing sites must be approved by the Contracting Officer in the written operations and logging plan.
- (15) L-19 No road construction, landing construction, skid trail construction, skid trail blocking, road renovation, road reconstruction, road decommissioning, road blocking/barricade construction, rocking, water bar construction, soil ripping, shall be conducted within contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or when soil moisture exceeds 25% as directed by the contracting officer.
- (16) L-19 No ground-based yarding and soil decompaction operations shall be conducted within contract area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive, or when soil moisture exceeds 25% as directed by the contracting officer.
- (17) L-19 No landing operations, rock haul and log haul between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. The Purchaser may wet season haul, with the Authorized Officer's approval on the following roads: 34-4-10.00 A-E3, 34-4-15.00 A, 34-4-17.06, 34-4-28.00 A-H, 34-4-31.00, 34-4-32.00 A, 35-4-05.00 A-C1, 35-4-08.00 A, 35-4-19.00, 35-5-21.00 A-B, 35-25.03 A-B, 35-5-25.06, 35-5-26.00 A, 35-5-26.04 A-B, 35-5-35.00 A-B, 36-4-05.00 A1-B, 36-4-07.00 A1, and 36-4-07.01 A1-B1. If the use of these roads during the wet season causes or begins to cause road damage or the transport of sediment into streams, the Authorized Officer may suspend wet season haul or require additional erosion control devices to prevent damage or off-site transportation of sediment. Additional rock may be required at the Purchaser's expense to repair any damage that occurs to the road during wet season haul.
- (18) The Purchaser shall have the option to rock road numbers 34-4-17.00 A-B, 34-4-17.05 A-A1, 35-4-08.01 A-C, 35-5-17.00, 35-4-18.02 A-D, and 36-4-07.01 B2 for wet weather haul. Purchaser option rocking depths will be determined and approved by the Authorized Officer. Any costs for rocking and installation of additional drainage structures will be at the Purchaser's expense and shall be completed in accordance with the plans and specifications show in Exhibit C of this contract.

Pine Shepherd
SPECIAL PROVISIONS

- (18) L-24 Before cutting and removing any trees necessary to facilitate logging in all units as shown on Exhibit A, the Purchaser shall identify the location of skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees on the ground in a manner approved by the Authorized Officer at the pre-work conference and documented in the Logging Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding the following conditions must be met:
- (a) All skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees; however, unless otherwise approved in writing by the Authorized Officer, the width of each skid road shall be limited to fourteen (14) feet, and cable yarding roads shall be limited to fifteen (15) feet.
 - (b) The Purchaser may immediately cut and remove additional timber to clear skid roads, cable yarding roads, and tailhold, tieback, guyline, lift, intermediate support, and danger trees when the trees have been marked with green paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Sec. 3.(b) of the contract or sufficient bonding has been provided in accordance with Sec. 3.(e) of the contract.
 - (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Sec. 9 of the contract; or, 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

Pine Shepherd
SPECIAL PROVISIONS

Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.

- (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Sec. 8 or Sec. 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.
- (f) The Government may reserve trees previously designated for cutting and removal by applying orange paint or blacking out blue paint as replacements for additional trees cut and removed for skid roads and/or cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescription(s). The volume of this timber to be reserved will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures and the value shall be based on the unit prices shown in Exhibit B of the contract. The Purchaser agrees that the Total Purchase Price shall be reduced accordingly through a unilateral modification to the contract executed by the Contracting Officer.

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

- (1) R-1 The Purchaser shall construct, improve, renovate, and/or decommission all roads and structures in strict accordance with the plans and specifications shown on Exhibit C and Exhibit D, which is attached hereto and made a part hereof.
- (2) R-1a Any required construction, improvement, or renovation of structures and roads shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.
- (3) R-1b The Purchaser shall construct, use, and decommission temporary routes by October 15th of the same respective operating season.

Pine Shepherd
SPECIAL PROVISIONS

(4) R-1c The Purchaser shall renovate, use, and place into long term storage 34-4-17.00 B, 34-4-17.05 A-A1, 35-4-08.01 A-C, 35-4-17.00, 35-4-18.02 A-B, and 36-4-07.01 B2 roads by October 15th of the same respective operating season.

(5) R-2 The Purchaser is authorized to use the roads listed and shown on Exhibit D Section 3000 for the removal of Government timber sold under the terms of this contract, provided that the Purchaser pay the required maintenance and rockwear obligations described in Provision R-2b. The Purchaser shall pay current Bureau of Land Management maintenance fees and rockwear for the sale of additional timber under modification to the contract.

(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 Provision R-2f of this contract; provided, that such cooperative arrangement shall not relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.

(7) R-2b The Purchaser shall pay the Government a road maintenance and rockwear fee of *twenty three thousand four hundred eighteen and 9/100 dollars (\$23,418.09)* for the transportation of timber included in this contract price over said roads. The above maintenance amount is for the use of 29.30 miles of road or less. If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligations.

(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 Exhibit D Section 3000. If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligations.

Pine Shepherd
SPECIAL PROVISIONS

- (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. The Purchaser shall perform any required road repair and maintenance work on roads used by them, under the terms of Exhibit D, Road Maintenance Specifications, of this contract, which is attached hereto and made a part hereof.
- (10) R-3a In the use of Road Nos 34-1-17.05A, 35-4-08.01 A-C, and 35-4-18.02 A-B the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement M-2000 between the United States and Silver Butte Timber Co. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Payment of a road maintenance and road rockwear obligation of zero and 00/100 dollars (\$00.00) to Silver Butte Timber Co. payable at the time indicated in the License Agreement. The above maintenance amount is for the use of 1.21 miles of road or less.
- (b) Road use obligation fee to be swapped out between Silver Butte Timber Co. and BLM.
- (c) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (d) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.

- (11) R-3b In the use of the existing helicopter landing in T35S R05W Sec 24 the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement M-1882 between the United States and Josephine County. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Prior to the use of said landing, the Purchaser shall furnish the Authorized Officer a properly signed copy of

Pine Shepherd
SPECIAL PROVISIONS

the executed License Agreement.

- (b) Default by the Purchaser of said Right-of-Way and Road Use Agreement, or any License Agreement executed pursuant thereto, for failure to pay appropriate road use fees shall be considered a violation of this contract. The amount of unpaid fees shall be considered as the amount of damage suffered by the Government as a result of the violation of this provision.
 - (c) Prior to cutting or removing any timber from the helicopter landing being constructed the Purchaser shall pay to Josephine County, the owner of the right-of-way timber, the total value of that timber.
- (12) R-3c: The Purchaser agrees that if they elect to use any other private road, which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.
- (13) 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.

Pine Shepherd
SPECIAL PROVISIONS

- 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.

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

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

(D) Environmental Protection

- (1) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan for all hazardous substances to be used in the contract area. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. In addition, such plan shall follow all applicable State of Oregon Department of Environmental Quality guidelines for spill prevention and containment of petroleum products (Oregon Administrative Rules, Chapter 340, Department of Environmental Quality, Division 142, Oil and Hazardous Materials Emergency Response Requirements).

Pine Shepherd
SPECIAL PROVISIONS

During operations the operator would be required to have a BLM-approved spill plan or other applicable contingency plan. In the event of any release of oil or hazardous substance, as defined in Oregon Administrative Rules (OAR) 340-142-0005 (9)(d) and (15), into the soil, water, or air, the operator would immediately implement the site's plan. As part of the plan, the operator would be required to have spill containment kits present on the site during operations. The operator would be required to be in compliance with OAR 629-605-0130 of the Forest Practices Act, Compliance with the Rules and Regulations of the Department of Environmental Quality. Notification, removal, transport, and disposal of oil, hazardous substances, and hazardous wastes would be accomplished in accordance with OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements, contained in Oregon Department of Environmental Quality regulations (SP-05, SP-06, and SP-07).

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

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

- (3) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall where service landings overlap with Riparian Reserves: Where practicable, maintain or refuel equipment and helicopters as far as possible from streams or other waterbodies. Prior to use, the fueling site will be approved by the authorized officer or BLM aquatics staff. If refueling and maintenance activities need to occur within 150 feet of streams and other waterbodies, require activities to occur within a pre-constructed spill containment system (i.e. booms or berms arranged to contain all materials on site). Prior to use, the spill containment system must be approved by the authorized officer and BLM aquatics staff. Store all fuel and equipment containing toxic fluids outside of the Riparian Reserve or inside an approved spill containment system.

- (4) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall utilize the following definition for Mulch. Mulch refers to organic or plant-based material applied to the soil surface to conserve moisture, reduce erosion, suppress weeds, and improve soil health. Mulch includes:
- Straw obtained from the Bureau of Land Management (BLM) or growers certified by the Oregon Department of Agriculture's Weed Free Forage and Mulch Program.
 - On-site plant material such as slash, branches, tops, bark, and small logs, provided:
 - o The material is sourced from areas free of invasive plants.
 - o It does not contain noxious vegetative parts or seeds (per 75 FR 159:51101-02).
 - o It is approved by BLM botany staff

Pine Shepherd
SPECIAL PROVISIONS

- (5) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall utilize the following definition for seeding. Seeding refers to the process of planting native seeds to restore vegetation and stabilize soils on disturbed sites. Seeding must meet the following criteria:
- All native seed mixes must be approved by the Bureau of Land Management (BLM) or obtained from a BLM-authorized grower.
 - Seed must be site-specific and adapted to the local ecoregion to maintain genetic integrity and ecosystem resilience.
 - Planting and seeding activities occur between September 1 and March 31, aligning with seasonal conditions for optimal germination.
 - Seed must be free of invasive species and sourced from suppliers that meet BLM standards for purity and certification.
- (6) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall restrict ground-based yarding and soil decompaction operations from October 15 to May 15 generally, or when soil moisture exceeds 25%. The Authorized Officer may issue a waiver, with support from the BLM soil scientist and based on site conditions.
- (7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall comply with the following. Road renovation and improvement would occur during the dry season (May 15 to October 15). Variations in these dates would be permitted dependent upon weather and soil moisture conditions and with a specific erosion control plan (e.g., rocking, waterbarring, seeding, mulching, barricading) as determined by the Authorized Officer in consultation with aquatic and/or soils scientists. All road and landing construction activities would be stopped when a storm event resulted in degrading conditions as evidenced by turbid runoff, turbid ditch flow, ponding, or rutting or other displacement in excess of two inches. Watershed specialists would closely monitor storms that result in precipitation and would convey pertinent information to the Authorized Officer. Similarly, the Authorized Officer would convey road, landing, and ditch conditions to the aquatic and/or soil specialists.
- (8) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall construct road barricades as specified on Exhibit C, at locations where an existing barricade has been removed to provide for harvest access. Barricades shall be in place by October 15 of each calendar year.
- (9) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall block skid trails to prevent public motorized vehicle use and other unauthorized use by October 15 of the year of harvest unless a waiver is in place for ground-based yarding to extend the dry season. Place woody debris or other appropriate barriers (e.g., rocks, logs, and slash) on the first 100 feet of skid trails leading off system

Pine Shepherd
SPECIAL PROVISIONS

- roads or landing areas in all ground-based yarding units upon completion of yarding to block and discourage unauthorized vehicle use. If there is not enough available slash to cover the first 100 feet of skid trails, apply seed and mulch to the area.
- (10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall revegetate disturbed soils with seed/ plant materials and mulch as prescribed by the field office botany staff. Need would be determined by the field office botanist, based on the level of disturbance and the presence of priority non-native invasive plants. Apply native seed and mulch to areas, such as cut and fill slopes and waste disposal sites, that have the potential for sediment delivery to wetlands, riparian reserves, floodplains and waters of the state. Apply seed upon completion of construction and as early as practical to increase germination and growth. BLM botany staff conducts a site visit prior to application to confirm treatment requirements. Apply native seed and mulch to areas with potential for sediment delivery to wetlands, riparian reserves, floodplains, and waters of the state, including cut and fill slopes and waste disposal sites. Apply seed upon completion of construction as early as practical to increase germination and growth. Planting and/or seeding would occur between September 1 to March 31, ground shall be snow free or as otherwise approved by the field office botanist.

The Purchaser shall furnish the specific seed mixture prescribed by the Authorized Officer, which will include up to 3 grasses and 2 forbs from the following list, but may include substitutions approved by the Authorized Officer:
Grasses: *Achnatherum lemmonii*, *Bromus carinatus*, *Brumus vulgaris*, *Elymus glaucus*, *Festuca californica*, *Festuca roemerii*, *Koeleria macrantha*, *Poa secunda*, *Vulpia microstachys*
Forbs: *Achillea millefolium*, *Clarkia purpurea*, *Clarkia rhomboidea*, *Collinsia grandiflora*, *Eriophyllum lanatum*, *Lupinus bicolor*, *Madia elegans*, *Madia gracilis*

The proportion of each species in the mixture shall be prescribed by the Authorized Officer.

The Purchaser shall apply prescribed seed and straw mulch to acres designated for treatment, as directed by the Authorized Officer, at the following rates of application:

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

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

Pine Shepherd
SPECIAL PROVISIONS

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

<u>Test</u>	<u>Grasses (%)</u>	<u>Forbs (%)</u>
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.

- (11) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall Apply erosion-control techniques (e.g., water bar, native seed, weed-free mulch, scatter chipped material, or scatter limbs and other fine material) on skid trails, forwarder trails, yarding corridors, landings, and other disturbed areas where potential for soil erosion or delivery to waterbodies, floodplains, and wetlands exist, or as identified by the Authorized Officer or BLM aquatics and soils staff.
- (12) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall Restrict the use of motorized equipment and vehicles to existing roads within the following naturally occurring special habitats to maintain their ecological function: seeps, springs, wetlands, natural ponds, and natural meadows.
- (13) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall when installing temporary culverts, use washed rock as backfill material. Use geotextile fabric as necessary where washed rock will spread with traffic and cannot be practicably retrieved.
- (14) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall remove temporary crossing structures promptly after use. Follow practices under the closure/decommissioning section for removing stream crossing drainage structures and reestablishing the natural drainage.

Pine Shepherd
SPECIAL PROVISIONS

- (15) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not cut vegetation within the extent of the unstable areas that are above or adjacent to stream channels and are likely to deliver material such as sediment and logs to the stream if the unstable area fails. Extend the Riparian Reserves to include stable areas between such an unstable area where there is potential for the failure to reach the stream.
- (16) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not cut vegetation within 25 feet of natural ponds < 1 acre or wetlands <1 acre (including seeps and springs), and constructed water impoundments (e.g., canal ditches and pump channels) of any size.
- (17) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not operate machinery for timber harvest within 50 feet of streams (slope distance), except where machinery is on improved roads, designated stream crossings, or where equipment entry into the 50-foot zone would not increase the potential for sediment delivery into the stream.
- (18) E-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the specifications shown on Exhibit C Package (special provisions), which is attached hereto and made a part hereof.
- (a) Water-bar all pre-designated skid trails, designated skid trails, and forwarder trails used for logging activities in all ground based units shown on Exhibit A., at locations approved by the authorized officer, by October 15 of the year of harvest.
 - (b) Install water-bars at the same time as subsoiling (if both are required) unless skid trails are needed to complete harvest the following season. In that case, water bars would be constructed and straw would be applied to exposed soil prior to fall rains to reduce sedimentation during winter months. Water-bar spacing on tractor skid trails would be based on the RMP erosion-control measures for timber harvest, which considers slope and soil series.
- (19) E-5 The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area between March 1 and September 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting owls may not be allowed during this time period.
- (20) E-7 In order to prevent the spread of noxious weeds (and *Phytophthora lateralis*), the Purchaser shall (steam clean or pressure wash) all equipment traveling off system roads or temporary routes prior to entry onto BLM lands (and between sale locations if operating in areas infested with weeds.) as directed by the Authorized Officer.

Pine Shepherd
SPECIAL PROVISIONS

Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.

(E) Miscellaneous

M-2 The Government, at its option, may administratively check scale any portion of the timber removed from the contract area, and if necessary, conduct check scaling of independent scalers contracted to BLM for administrative check scaling purposes. The Purchaser hereby agrees to place Government supplied load tickets on each load of logs as directed by the Authorized Officer, and make such contract timber available for such scaling at a location or locations to be designated or approved in writing by the Authorized Officer. At the approved location or locations and as directed by the Authorized Officer, the Purchaser shall either make loaded logs available for ramp scaling, or provide an area for logs to be safely rolled out for scaling, to unload logs from trucks, and to place logs in a manner so that both ends and three faces of each log are visible for scaling, and to reload or remove logs after scaling has been completed. In the event that BLM elects to administratively check scale and if such scaling causes a delay in log transportation or yard operations, a reduction will be made to the total purchase price by applying a value of \$1.00 to \$5.00 per thousand board feet times the volume actually administratively check scaled as determined by the Authorized Officer. Any reduction in total purchase price under the terms of this provision shall be full compensation to the Purchaser for any expense or loss incurred as a result of any delay in log transportation and/or yarding operations. Such adjustment to the total purchase price shall be made by unilateral modification of the contract executed by the Contracting Officer. Scaling will be conducted by BLM scalers, and/or independent scalers contracted to BLM. A copy of the scale report will be made available to the Purchaser upon request.

Pine Shepherd
SPECIAL PROVISIONS

(F) Fire Prevention and Control

1. F-1a Fire Prevention and Control. For the purpose of fire prevention and control, the Purchaser is required to adhere to the following:

Prior to operating power-driven equipment for construction or logging during the closed fire season or periods of fire danger, the Purchaser must ensure that all planned operations are in full compliance with the current Fire Season Requirements issued by the State of Oregon, Department of Forestry, and the Medford District Bureau of Land Management.

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

(G) Slash Disposal and Site Preparation

1. SD-4 Logging Residue Reduction. In addition to Section 15 requirements, and regardless of Purchaser's compliance with State laws and regulations or State's release from liability, Purchaser remains responsible to the Government for the following residue reduction and site preparation measures:

Prior to any operation, a pre-work conference between Purchaser's representative and Authorized Officer must be held at a location designated by the Authorized Officer. All slash disposal and site preparation shall follow plans developed at this conference.

Definition of Slash: All material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over due to Purchaser's operations, including material cut during slashing activities for fuel reduction.

Refueling of chainsaws and other equipment is prohibited within 150 feet of any stream or wet area. Cleanup and disposal of spilled fuel and oil must occur at an approved site.

2. Site Preparation Treatments.

- (a) SD-1a Lop and Scatter: Lop and scatter all slash as directed by the Authorized Officer during normal felling operations. All tops and side branches must be separated from the central stem so slash is reduced to within 18 inches of the ground at all points.

Pine Shepherd
SPECIAL PROVISIONS

(b) SD-1b Excavator Pile and Burn: Pile all slash in designated units per specifications:

1. Piling must use a track-mounted excavator with track shoes producing less than 10 pounds per square inch ground pressure, equipped with a hydraulic thumb or rotating grapple head, minimum 25-foot reach. Finished piles must be tight and free of earth. No pile within 30 feet of any living conifer tree dripline. No machine piling in riparian areas.
2. Pile slash, brush, and downed hardwoods greater than 2 inches and less than 12 inches in diameter, exceeding 2 feet in length. Avoid piles over 16 feet in height/diameter. Protect existing reproduction of commercial coniferous species where feasible.
3. Unmerchantable logs greater than 12 inches on the small end must be left in place or positioned so they will not be burned.
4. Equipment approval by Authorized Officer required before piling work begins.
5. Excavators restricted to designated skid roads; additional trails must be approved, limited to one pass.
6. Each pile must be capped with a 10x10 foot cover of 4 mil black plastic or equivalent material at time of piling, firmly fixed to maintain a dry ignition point.
7. Operations must be current with yarding and conducted as directed by Authorized Officer. Units must be piled and covered in same season as logging; completion within eight weeks after BLM site treatment notification.

(c) SD-1c Landing Piles:

1. Within 30 feet of each landing, pile all tops, broken pieces, limbs, and debris between 2 and 8 inches in diameter and longer than 3 feet. Piles must be free of dirt, located adjacent to roads at least 30 feet from any Reserve Tree or as directed. Upon completion, and no later than September 30 of the same year, securely cover each pile with a minimum 10x10 foot cover of 4 MIL polyethylene or alternate material per OAR 629-048-0210. Covers must shed water and resist wind damage. Pile height/diameter not to exceed 16 feet. Purchaser must provide covering materials and follow Authorized Officer's timing instructions. If piles do not burn adequately, Purchaser must re-pile as directed.
2. Deck or windrow logs more than 8 inches in diameter and longer than 8 feet at locations designated by Authorized Officer for a 30-foot perimeter along rocky roads. These residues must not be piled for burning and must be segregated at least 20 feet from burnable residue piles.

Pine Shepherd
SPECIAL PROVISIONS

(d) SD-5 Logging Residue Reduction and Site Preparation:

1. Perform logging residue reduction and site preparation on approximately 19 acres as directed by the Authorized Officer.
2. Required work consists of treatments (or combinations thereof) listed below, as determined and specified in writing by the Contracting Officer. The Authorized Officer will determine the number of acres for each treatment.

Treatment/Level	Cost Per Acre	Number of Acres	Total Cost Per Treatment Type
Excavator Pile/Cover	\$550.00	19	\$10,450
Total Appraised Cost	\$10,450		

Price Adjustment:

The total Purchase Price in Section 2 will be adjusted by the difference between the site preparation treatment costs designated by Section 44(G)(2)(a) and \$10,450, calculated using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 44(G)(2)(a).

Liability and Timeliness:

The Purchaser is liable for injuries to personnel or damage to equipment furnished under this section, except when caused by Government negligence. Time is of the essence for compliance. If the Purchaser fails to provide required personnel and equipment, they are responsible for all additional costs incurred by the Government for slash disposal, including wages and costs for substitute labor and equipment, plus overhead. If failure results in deferred burning and new conditions require additional site preparation or personnel/equipment, the Purchaser is also responsible for these additional costs.

This page intentionally left blank

Seasonal Restriction Matrix

1 of 1

Pine Shepherd Timber Sale

ORM05-TS-2026.0003

 Restricted Times are Shaded

 Possible Waived Times are Hatched

Sale Area	Activity	Restriction for	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		Oct		Nov		Dec	
			1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
All Units	Ground Based yarding and all landing operations*	Wet Season ¹																								
	Rock/Log Hauling*	Wet Season ^{1,2}																								
	Road and/or landing construction, Road Reconstruction, Road Renovation, Road/skid trail barricading, waterbar construction and soil ripping*	Wet Season ¹																								
	Seeding, mulching	Seeding Season																								

Sale Area	Activity	Restriction for	Jan		Feb		Mar		Apr		May		June		July		Aug		Sept		Oct		Nov		Dec	
			1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Haul Routes	Road Rocking*	Wet Season ^{1,2}																								
	Road Grading*	Wet Season ^{1,2}																								
	Timber Haul*	Wet Season ^{1,2}																								
	Rock Haul*	Wet Season ^{1,2}																								
	Instream work	Instream Work Window																								

¹ Wet season restrictions may be shortened or extended depending on weather conditions (see L-19 in special provisions)

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

*Additional restrictions will apply if a spotted owl nest site is found within 0.25 miles for most harvest related activities or 0.5 miles for blasting, a gray wolf den is found within one mile of a treatment area, if a fisher den site is found within 50 feet of proposed treatment area, or if a bald/golden eagle is found within 660 feet of a treatment area (see section 42). State fire restrictions may apply.

This page intentionally left blank

Pine Shepherd Timber Sale
 Contract Number: ORM05-TS-2026.0003
 August 20, 2026
 U.S.D.I. BLM Medford District

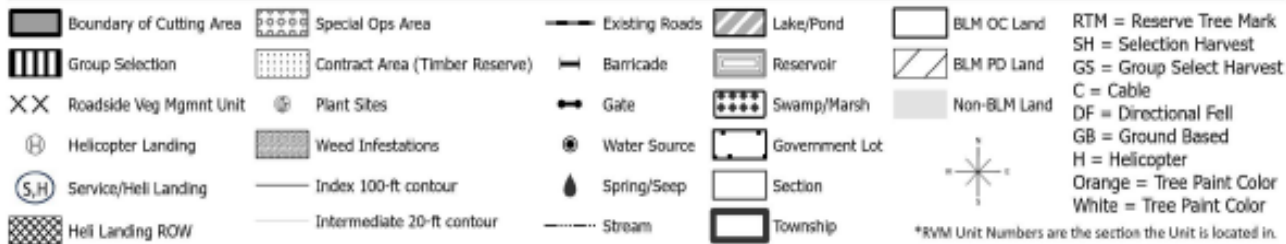
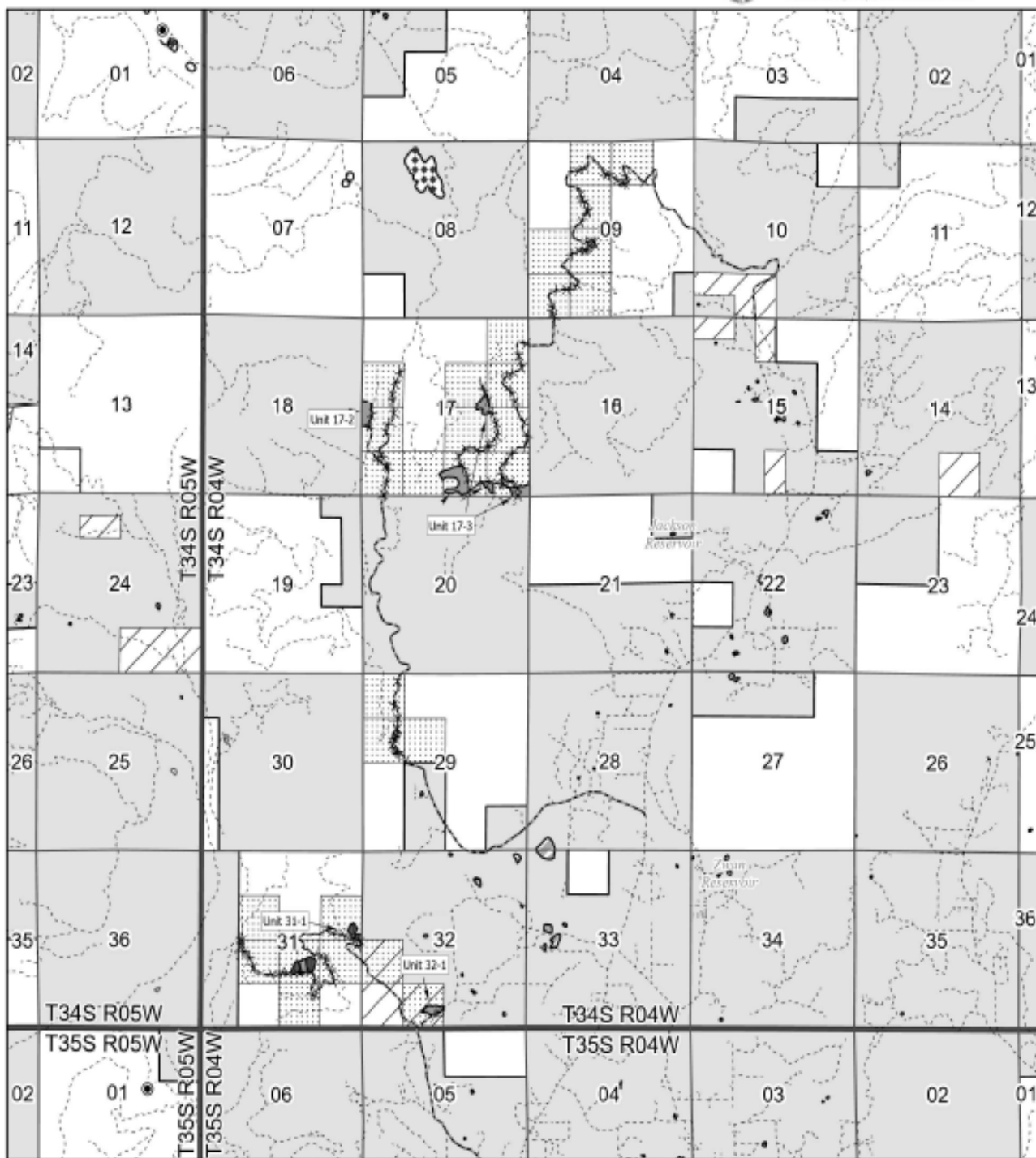
Page 1 of 13 Overview North

Scale: 1:50,000



Exhibit A Timber Sale Contract Maps

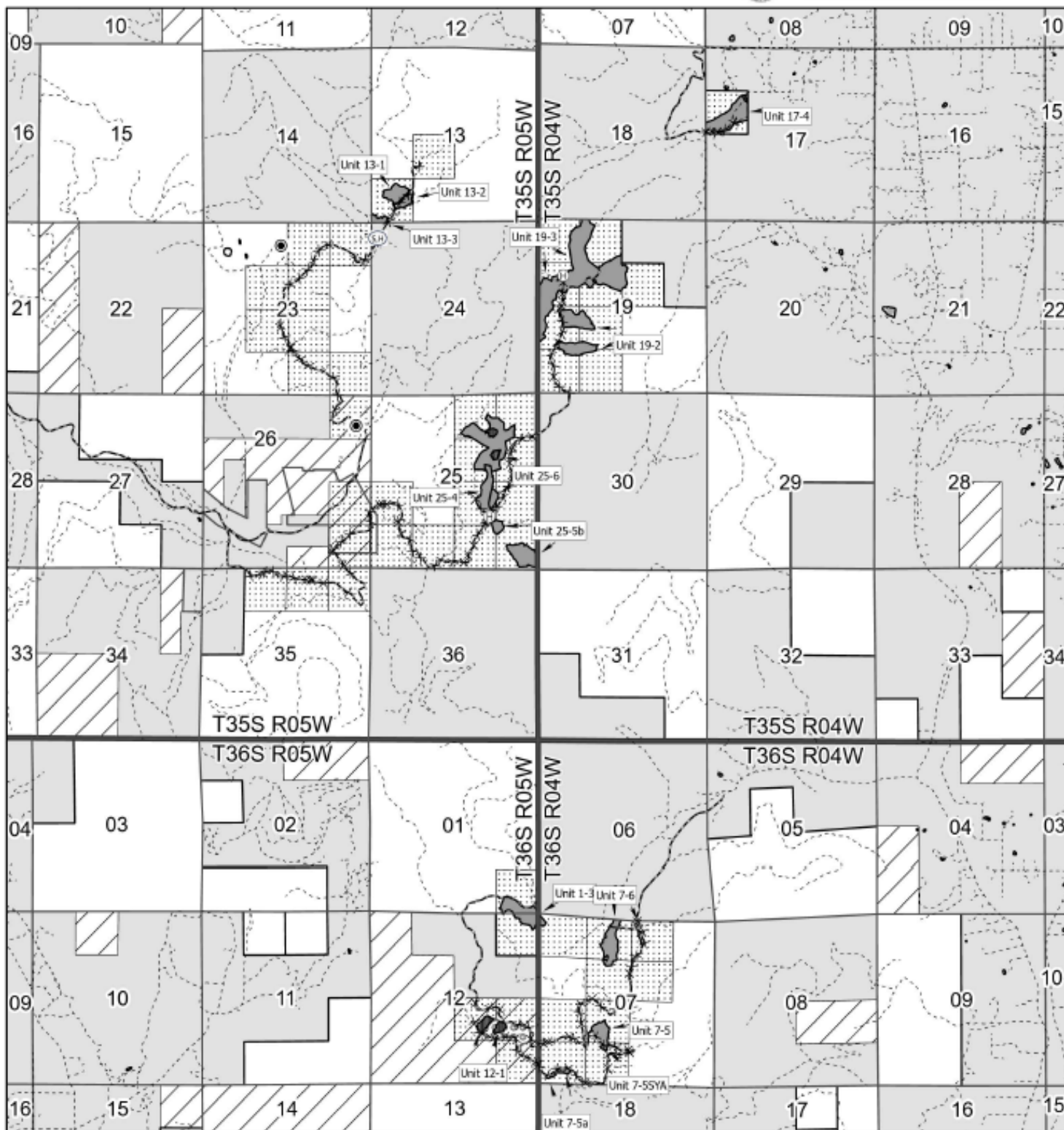
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed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



This page intentionally left blank



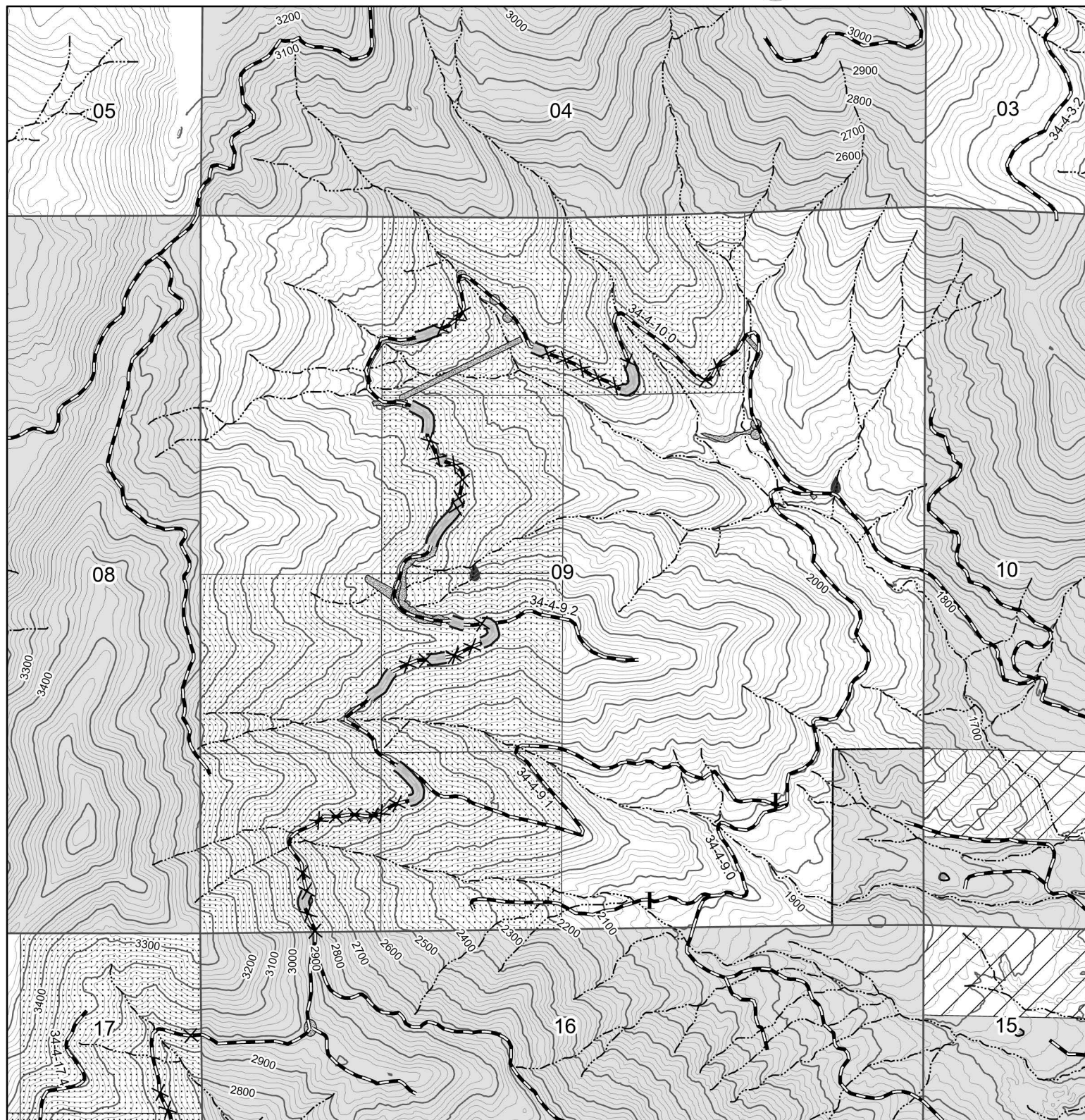
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed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



This page intentionally left blank



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



RTM = Reserve Tree Mark
 SH = Selection Harvest
 GS = Group Select Harvest
 C = Cable
 DF = Directional Fell
 GB = Ground Based
 H = Helicopter
 Orange = Tree Paint Color
 White = Tree Paint Color

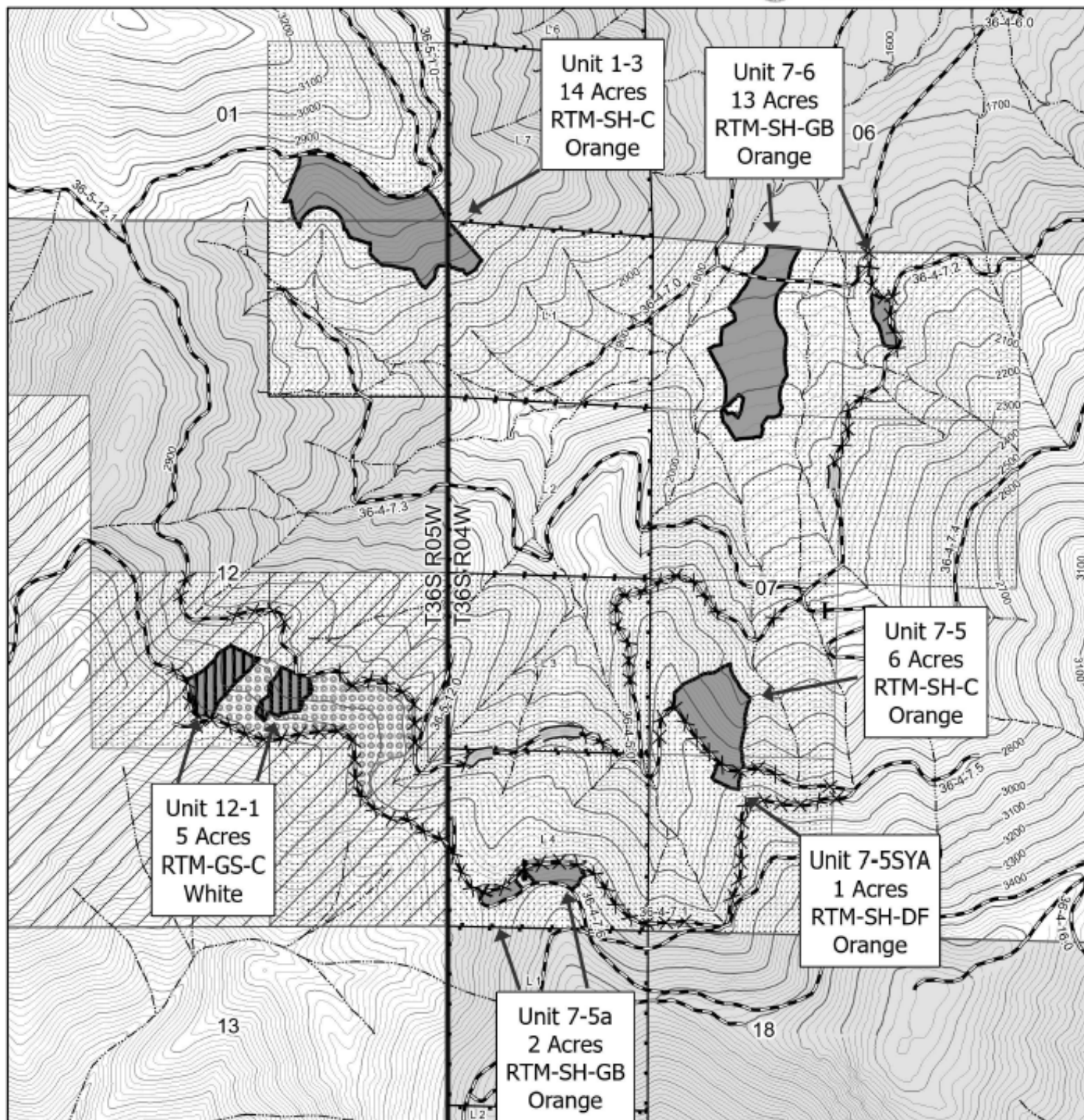
*RVM Unit Numbers are the section the Unit is located in.

D. Roelofs 6/29/2026

This page intentionally left blank



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



RTM = Reserve Tree Mark
 SH = Selection Harvest
 GS = Group Select Harvest
 C = Cable
 DF = Directional Fell
 GB = Ground Based
 H = Helicopter
 Orange = Tree Paint Color
 White = Tree Paint Color

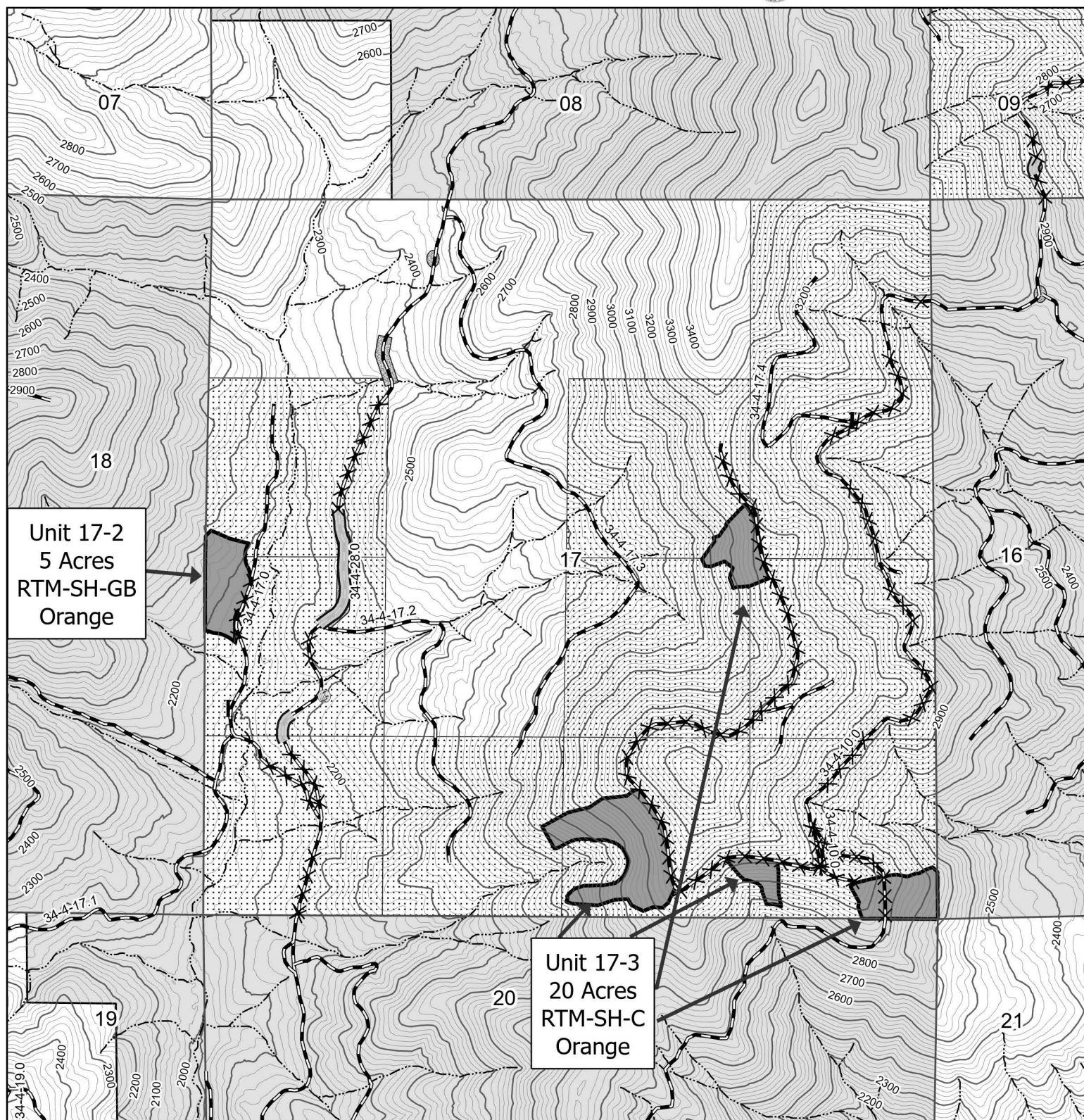
*RVM Unit Numbers are the section the Unit is located in.

D. Roelofs 6/29/2026

This page intentionally left blank



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



RTM = Reserve Tree Mark
 SH = Selection Harvest
 GS = Group Select Harvest
 C = Cable
 DF = Directional Fell
 GB = Ground Based
 H = Helicopter
 Orange = Tree Paint Color
 White = Tree Paint Color

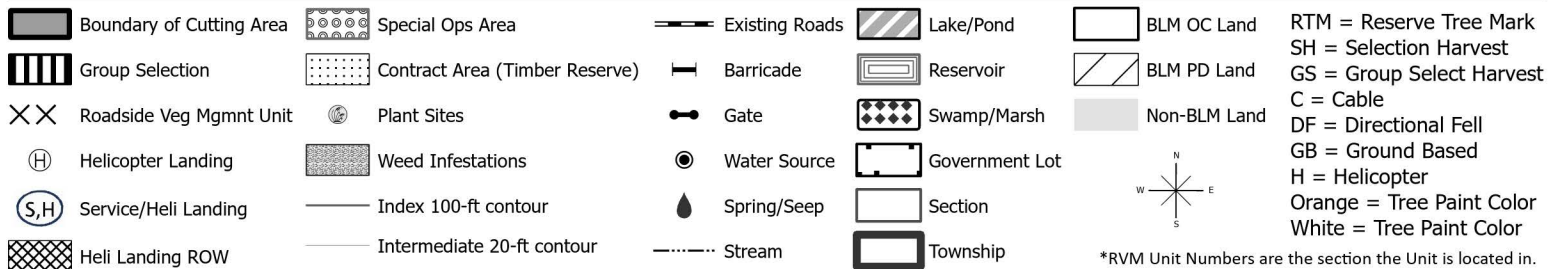
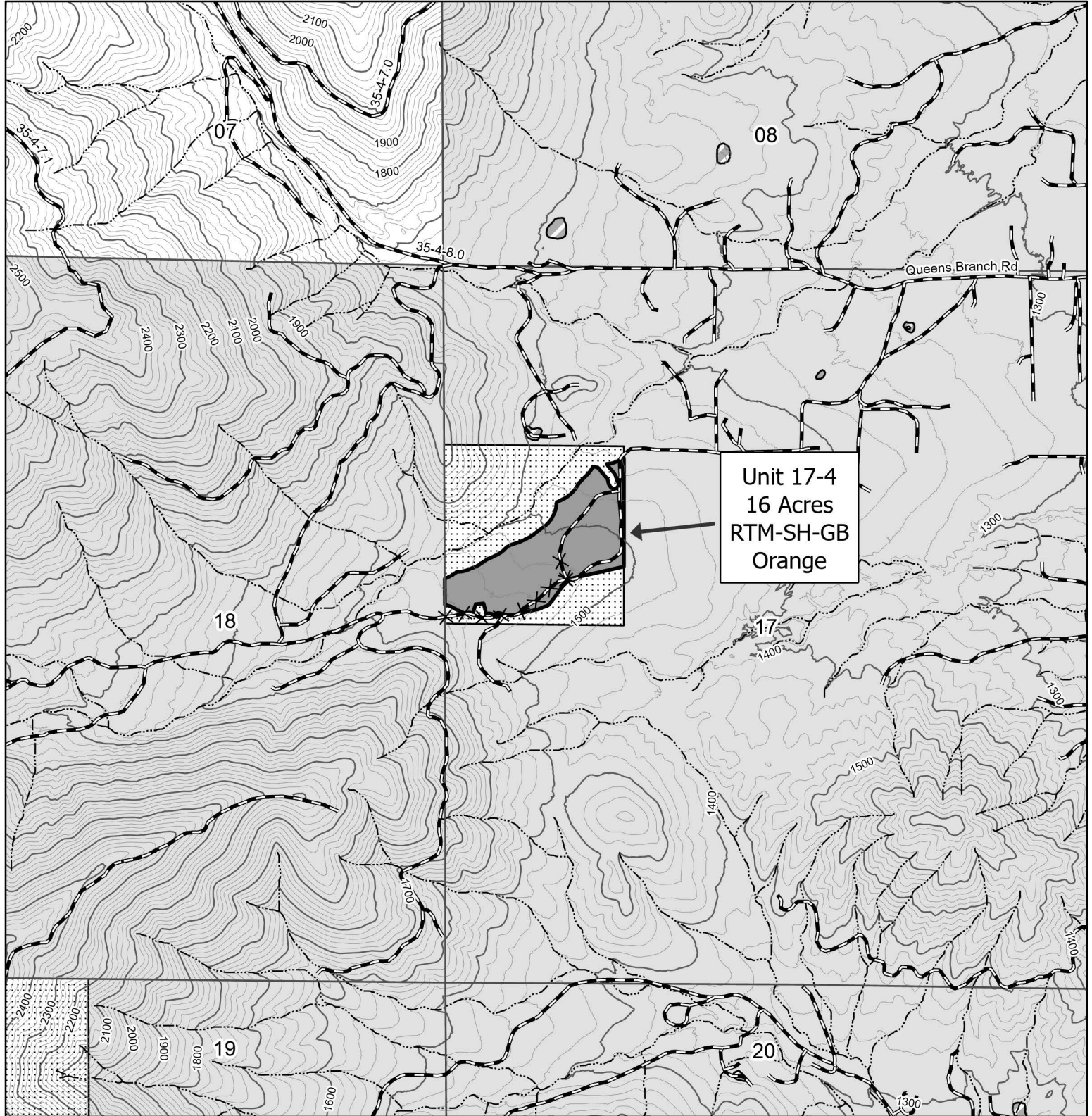
*RVM Unit Numbers are the section the Unit is located in.

D. Roelofs 6/29/2026

This page intentionally left blank



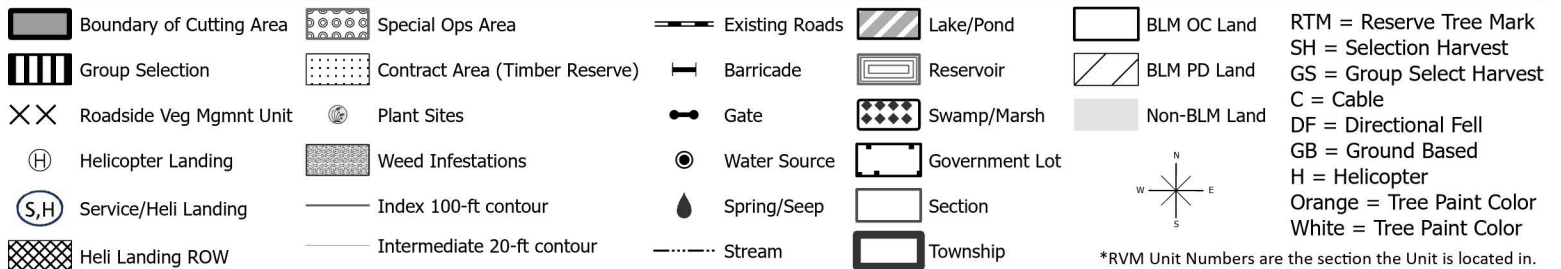
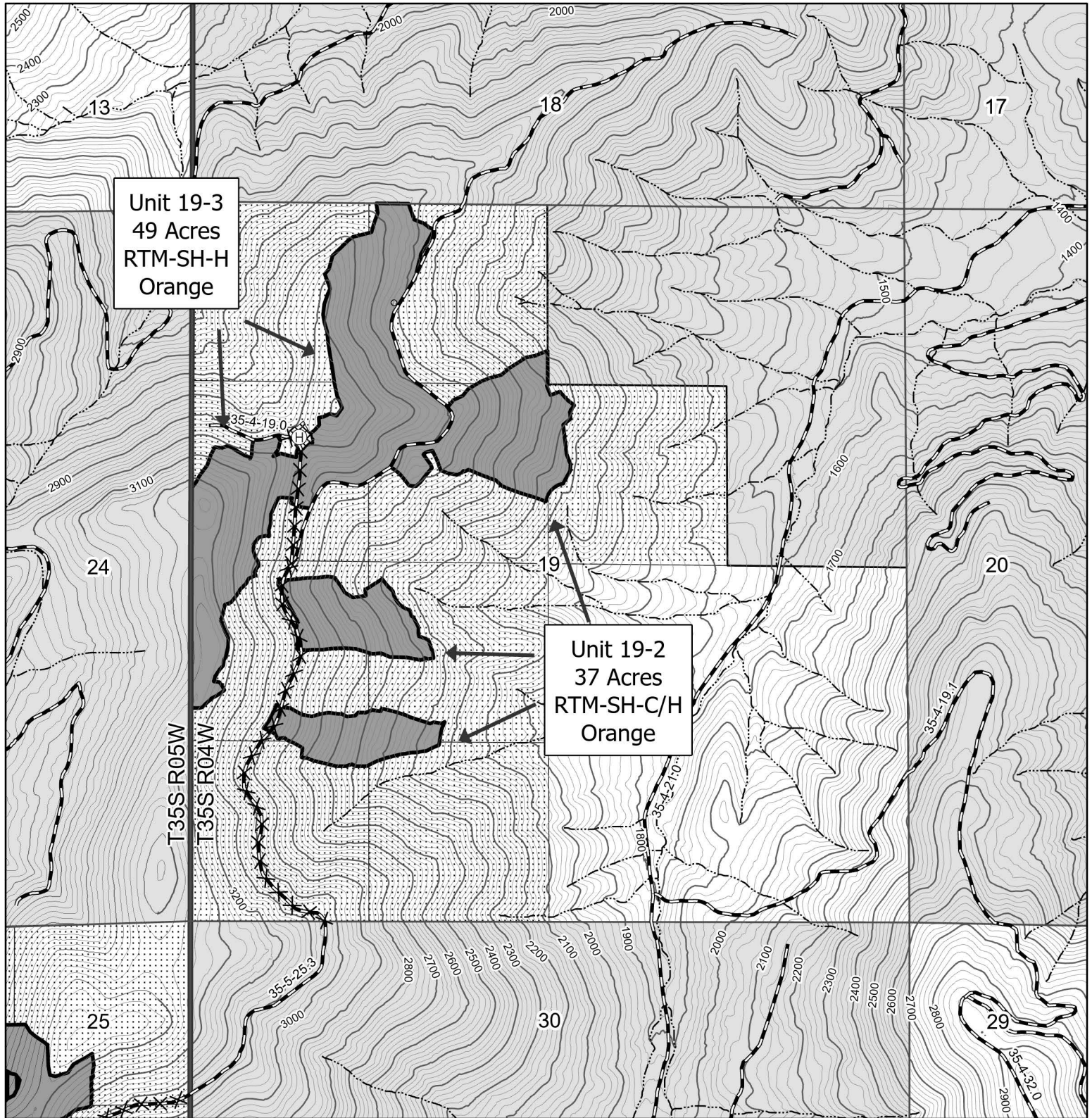
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed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



This page intentionally left blank



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

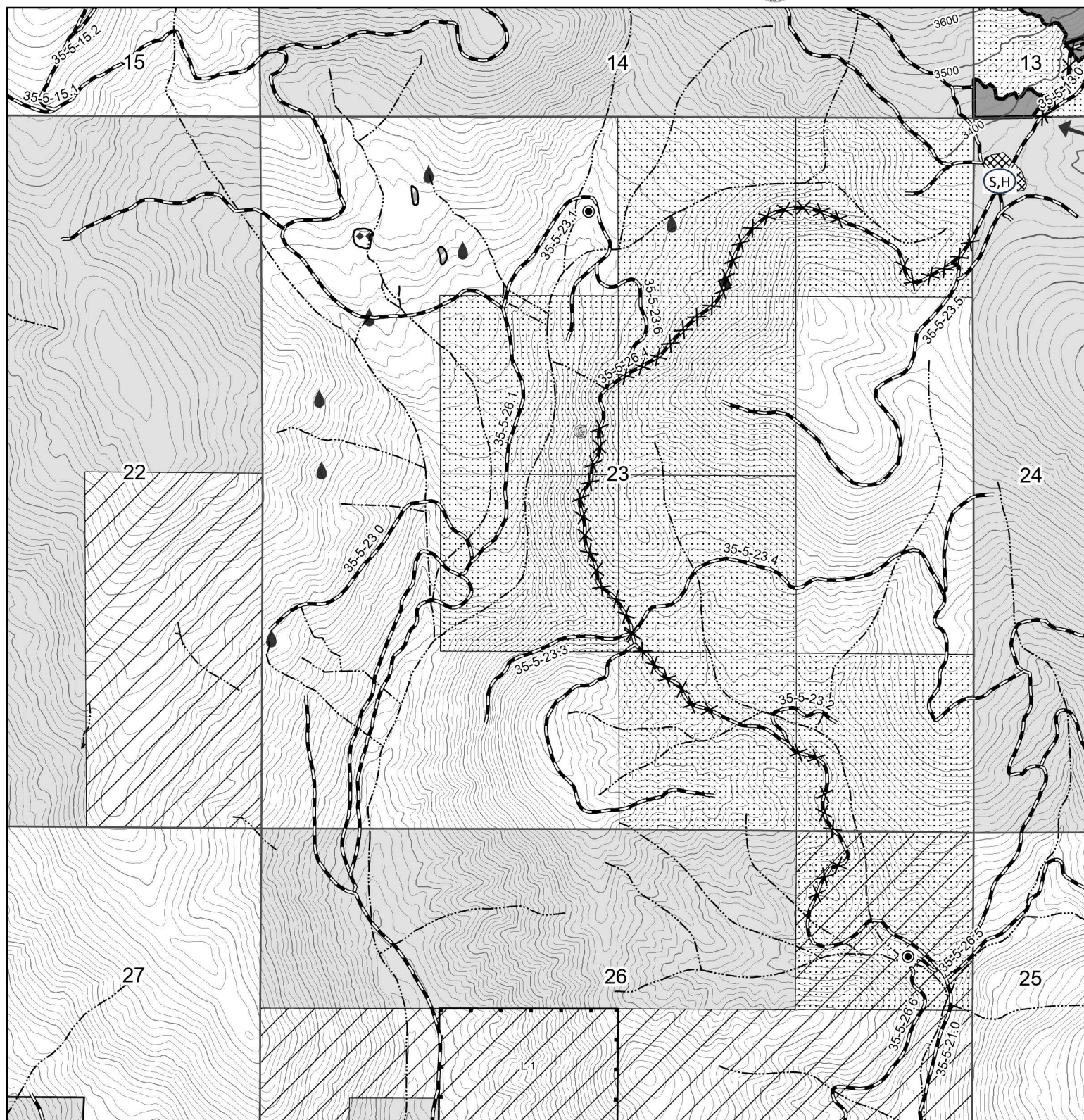


This page intentionally left blank



Exhibit A Timber Sale Contract Maps

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



- | | | | | | | | | | | |
|--|--------------------------|---|--------------------------------|---|----------------|---|----------------|---|--------------|--|
|  | Boundary of Cutting Area |  | Special Ops Area |  | Existing Roads |  | Lake/Pond |  | BLM OC Land | RTM = Reserve Tree Mark
SH = Selection Harvest
GS = Group Select Harvest
C = Cable
DF = Directional Fell
GB = Ground Based
H = Helicopter
Orange = Tree Paint Color
White = Tree Paint Color |
|  | Group Selection |  | Contract Area (Timber Reserve) |  | Barricade |  | Reservoir |  | BLM PD Land | |
|  | Roadside Veg Mgmt Unit |  | Plant Sites |  | Gate |  | Swamp/Marsh |  | Non-BLM Land | |
|  | Helicopter Landing |  | Weed Infestations |  | Water Source |  | Government Lot |  | | |
|  | Service/Heli Landing |  | Index 100-ft contour |  | Spring/Seep |  | Section | | | |
|  | Heli Landing ROW |  | Intermediate 20-ft contour |  | Stream |  | Township | | | *RVM Unit Numbers are the section the Unit is located in. |

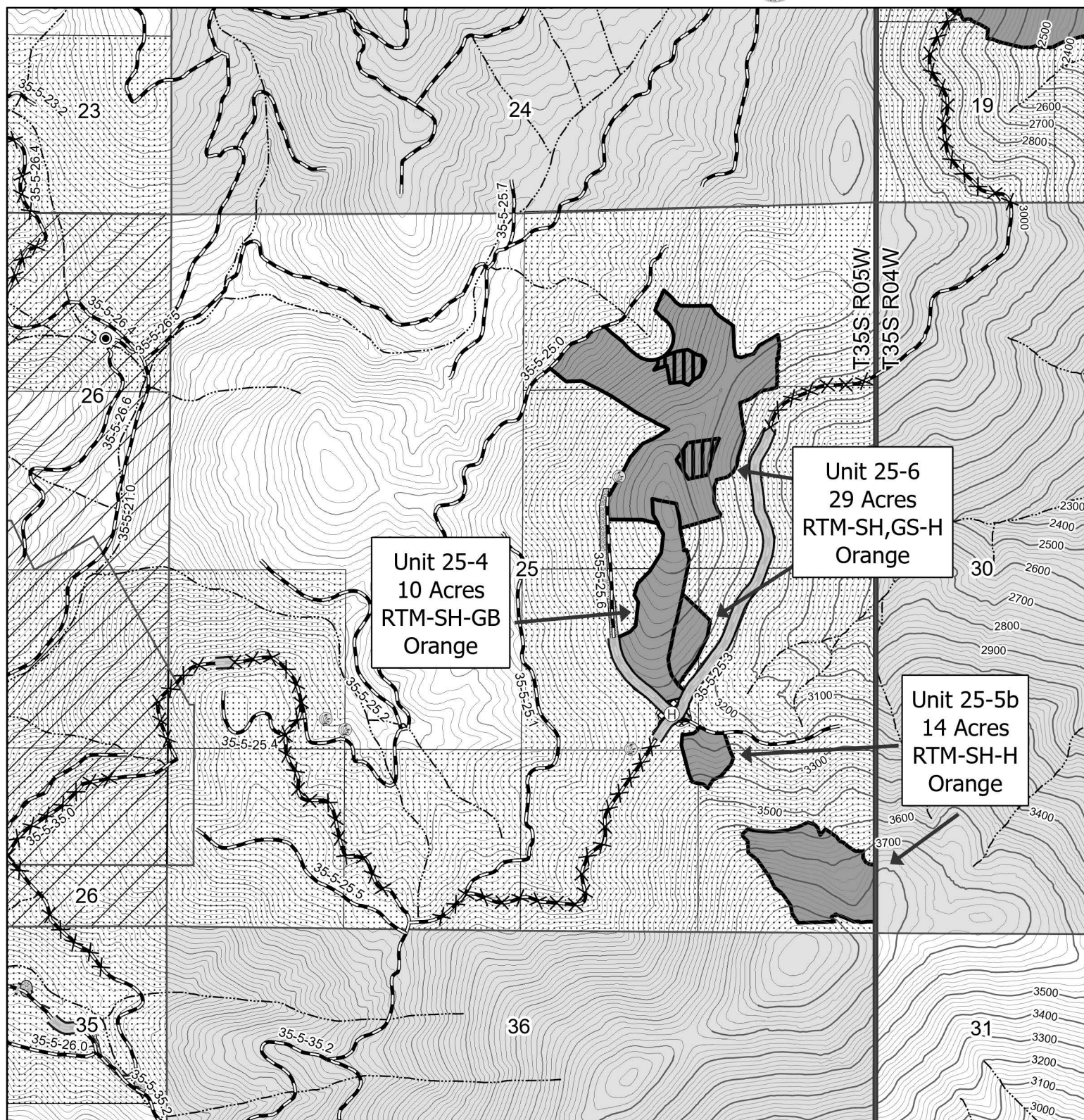
*RVM Unit Numbers are the section the Unit is located in.

D. Roelofs 6/29/2026

This page intentionally left blank



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



RTM = Reserve Tree Mark
 SH = Selection Harvest
 GS = Group Select Harvest
 C = Cable
 DF = Directional Fell
 GB = Ground Based
 H = Helicopter
 Orange = Tree Paint Color
 White = Tree Paint Color

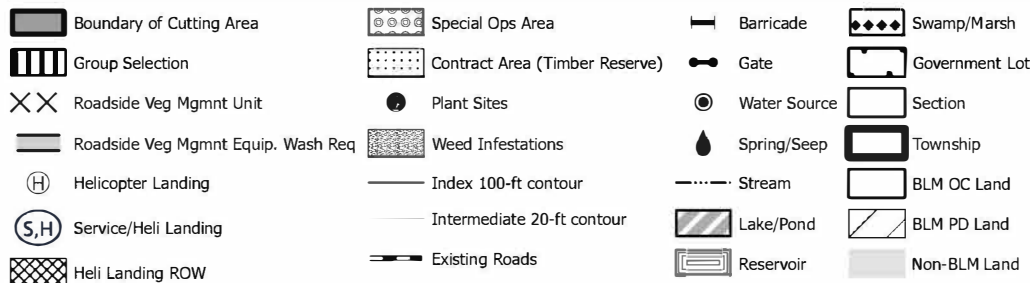
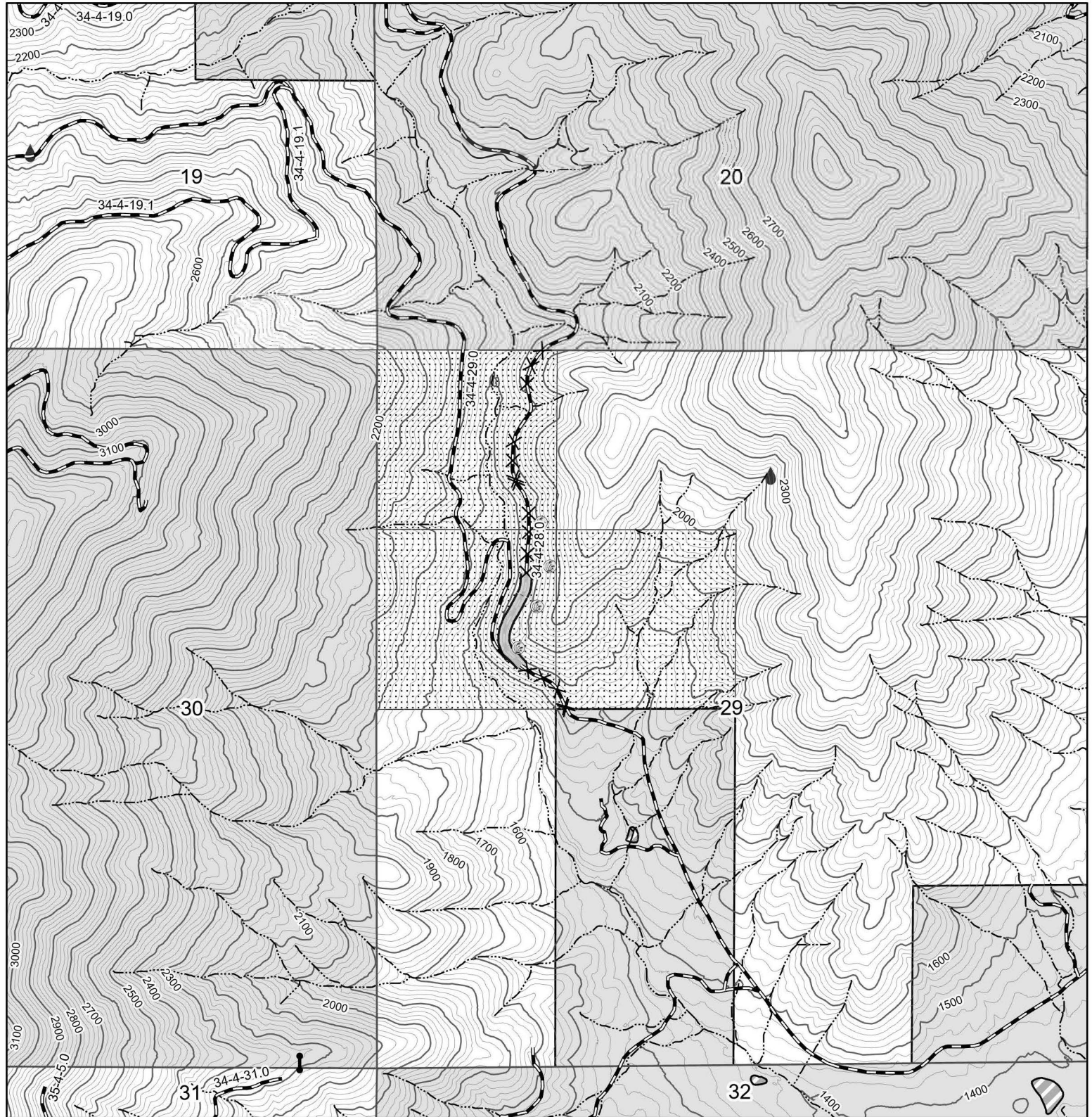
*RVM Unit Numbers are the section the Unit is located in.

D. Roelofs 6/29/2026

This page intentionally left blank



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



RTM = Reserve Tree Mark
 SH = Selection Harvest
 GS = Group Select Harvest
 C = Cable
 DF = Directional Fell
 GB = Ground Based
 H = Helicopter
 Orange = Tree Paint Color
 White = Tree Paint Color

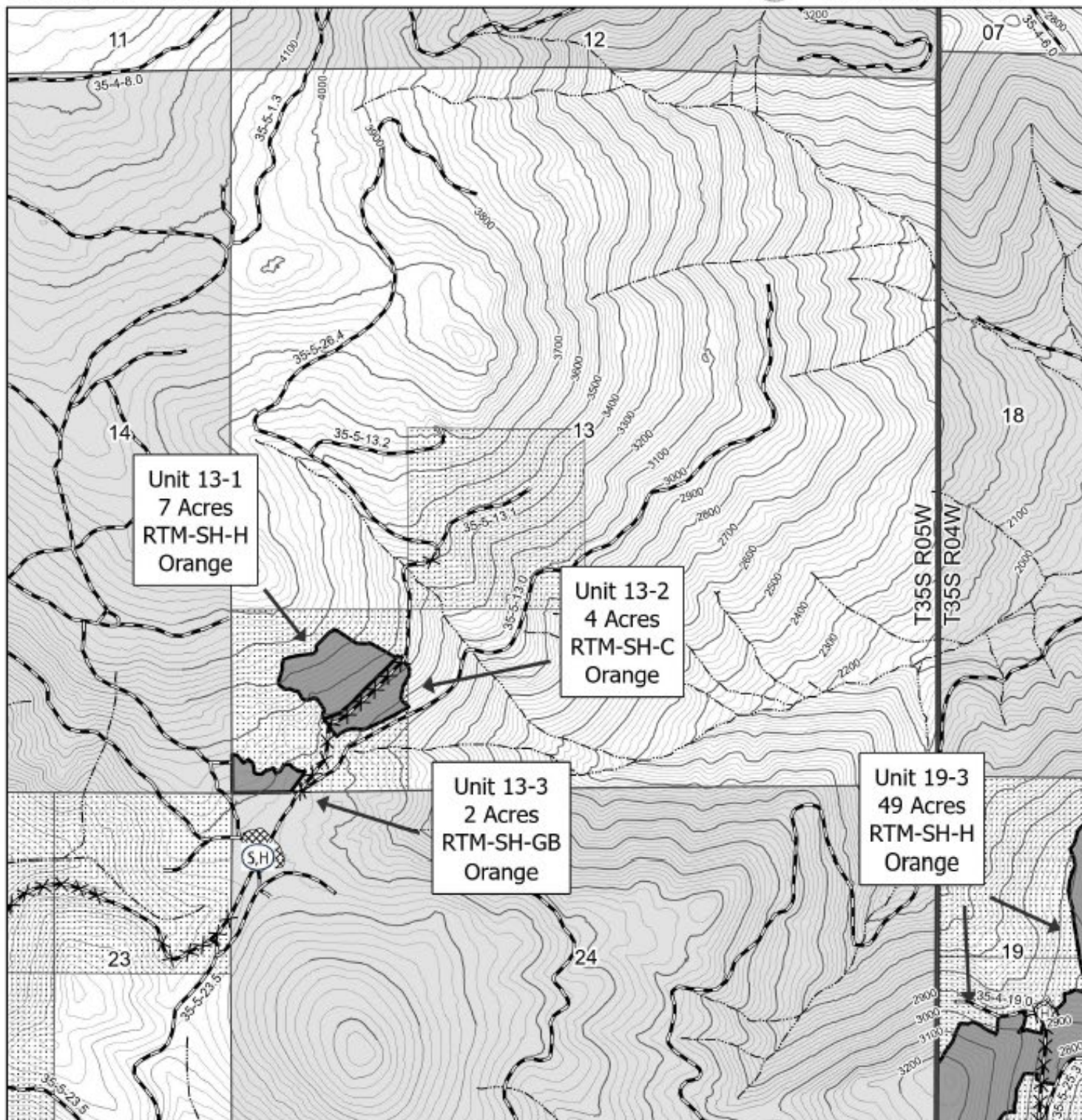
*RVM Unit Numbers are the section the Unit is located in.

D. Roelofs 6/29/2026

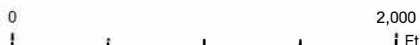
This page intentionally left blank



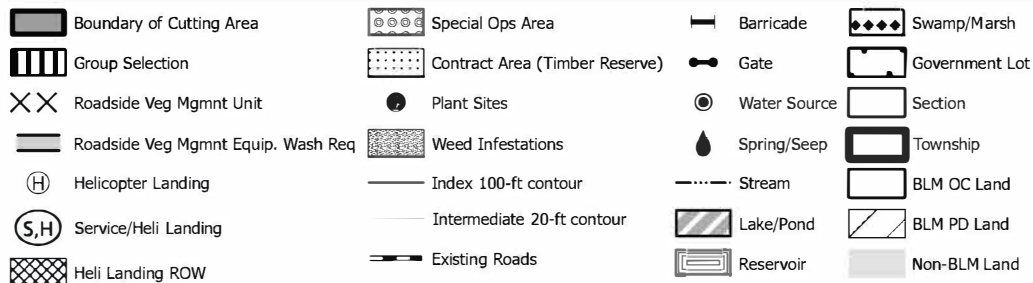
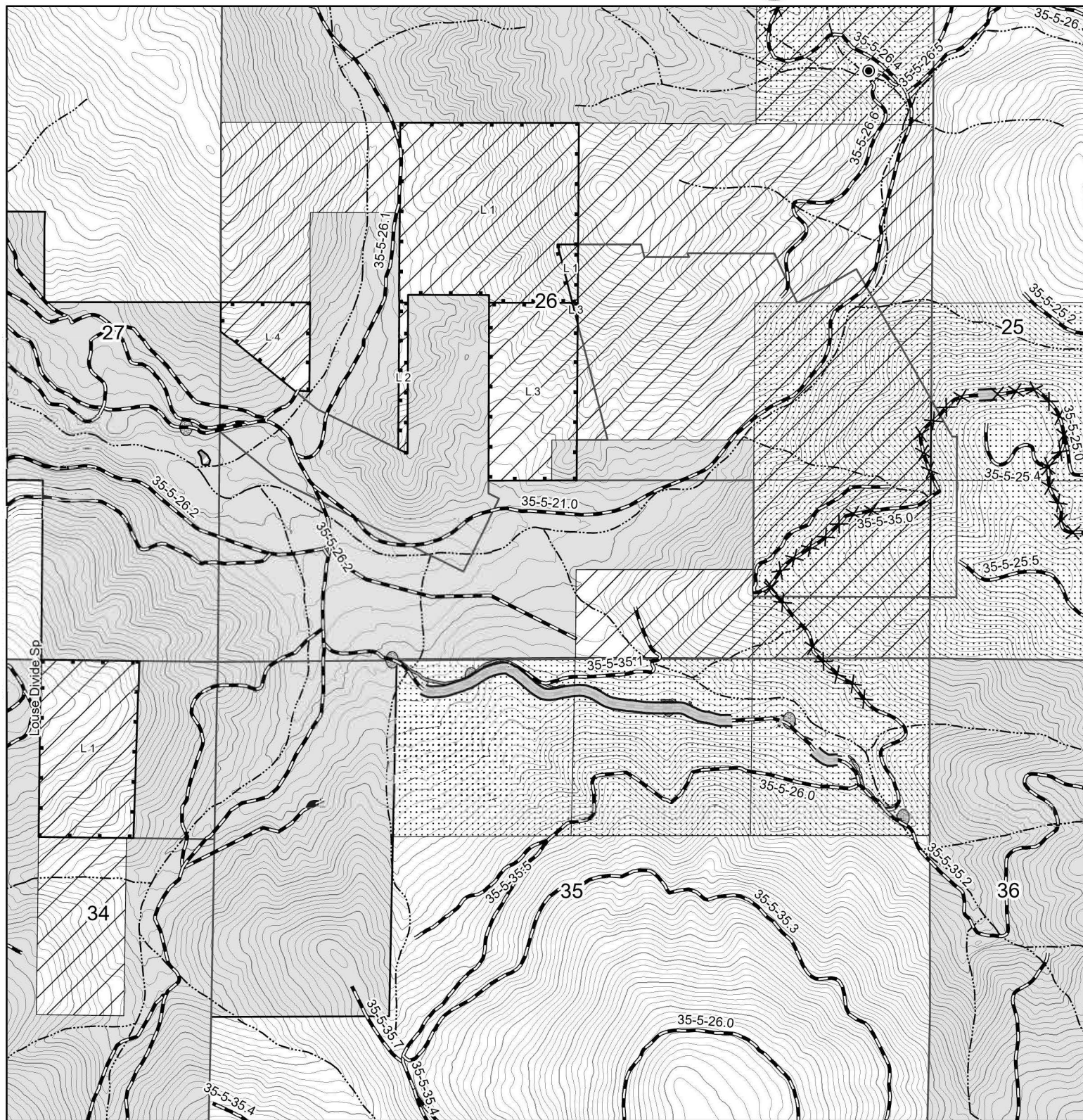
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed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



This page intentionally left blank



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



RTM = Reserve Tree Mark
SH = Selection Harvest
GS = Group Select Harvest
C = Cable
DF = Directional Fell
GB = Ground Based
H = Helicopter
Orange = Tree Paint Color
White = Tree Paint Color

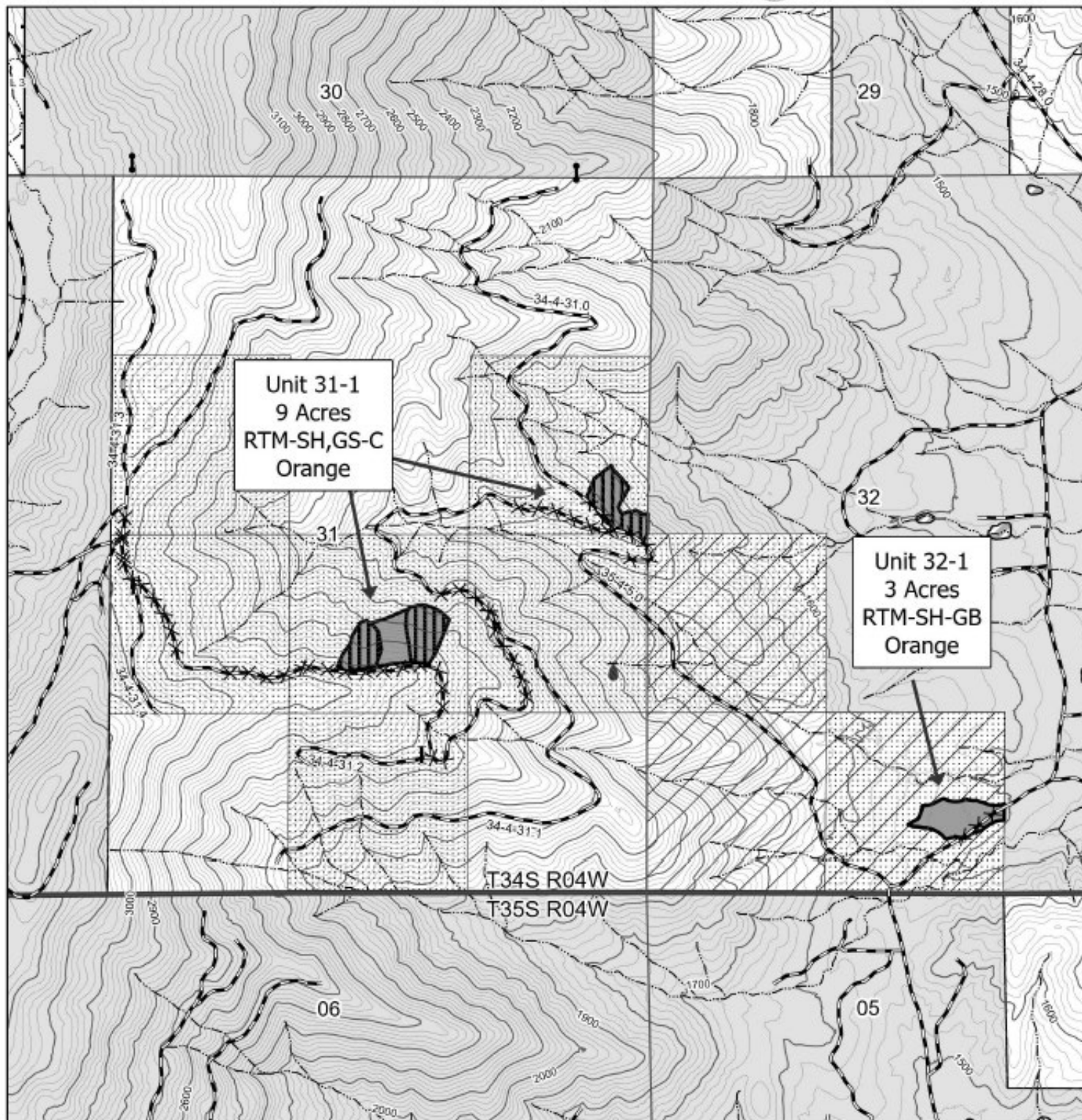
*RVM Unit Numbers are the section the Unit is located in.

D. Roelofs 6/29/2026

This page intentionally left blank



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



This page intentionally left blank

Information for Timber Sale Notice, Prospectus, Sec. 43 & 44
Pine Shepherd TS Timber Sale
ORM05-TS-2026.0003

Approx # of trees	Est Volume MBF 32'	Species	Est Volume MBF 16'	Appraised \$/MBF	Appraised Value (\$)
13,034	3,030.0	Douglas Fir	3,699.0	\$65.50 *	\$242,284.50
1,240	258.0	White Fir	327.0	\$41.40 *	\$13,537.80
764	184.0	Ponderosa Pine	226.0	\$33.80 *	\$7,638.80
734	61.0	Incense-cedar	76.0	\$39.00 *	\$2,964.00
139	38.0	Sugar Pine	46.0	\$33.40 *	\$1,536.40
15,911	3,571.0		4,374.0		\$267,961.50

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

CRUISED BY:	Miller, Parks, Casillas, Worman, Knighton, Siemer
CRUISE COMPLETED:	May 2026
COMBINED SAMPLING ERROR:	8.68%

CRUISE DESIGN/METHOD Description:
3P cruise of all species. <u>Form</u> class: DF=77, WF=78, PP & SP=78, IC =66. Avg Vol (bd ft)/kpi by species: DF=43.2, WF=43.1, PP=44, SP=37.3, IC=19.8.

TRACT FEATURES

ALL SPECIES

QM DBH	16.9	INCHES
GM LOG	77	BD FT
Total Gross Volume	4,967	MBF
Recovery	88	%
Salvage	0	MBF
Export	0	MBF

Dominant Species: Douglas Fir

QM DBH	17.4	INCHES
GM Log	82	BD FT

Recovery	87	%
Salvage	0	MBF

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

Reserve Tree Paint Color	Reserve Tree Count
	0

Harvest Tree Paint Color	Harvest Tree Count
	0



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

Timber Appraisal

Sale Name: Pine Shepherd TS	Sale Date: Thursday, August 20, 2026
BLM District: Medford DO	Unit of Measure: 16' MBF
Contract #: ORM05-TS-2026.0003	Contract Term: 36 months
Sale Type: Advertised	Contract Mechanism: 5450-003

Lump Sum Sale of Timber and other Wood Products

Content

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

Prepared By: Parks, Corey J - 7/7/2026

Approved By: -

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Jackson	34S	4W	9	SW1/4, E1/2NW1/4, NW1/4NE1/4.	Willamette
O&C	Jackson	34S	4W	17	E1/2NE1/4, SW1/4NE1/4, NE1/4NW1/4, SW1/4NW1/4, W1/2SW1/4.	Willamette
O&C	Jackson	34S	4W	31	SE1/4NE1/4, SE1/4NW1/4, SW1/4SE1/4, NE1/4SW1/4, N1/2SE1/4.	Willamette
O&C	Jackson	34S	4W	32	S1/2SW1/4, NW1/4SW1/4.	Willamette
O&C	Jackson	35S	4W	17	SW1/4NW1/4.	Willamette
O&C	Jackson	35S	4W	19	SW1/4, NW1/4, SW1/4NE1/4.	Willamette
O&C	Jackson	35S	5W	13	SW1/4SW1/4, NE1/4SW1/4.	Willamette
O&C	Jackson	35S	5W	23	N1/2NE1/4, SW1/4NE1/4, SE1/4NW1/4, NE1/4SW1/4, W1/2SE1/4, SE1/4SE1/4.	Willamette
O&C	Jackson	35S	5W	25	NW1/4SW1/4, S1/2SW1/4, SE1/4, NE1/4.	Willamette
O&C	Jackson	35S	5W	26	NE1/4NE1/4, E1/2SE1/4, Mineral Survey 951.	Willamette
O&C	Jackson	35S	5W	35	NE1/4NW1/4, N1/2NE1/4.	Willamette
O&C	Jackson	36S	4W	7	Lot 3, Lot 4, W1/2NE1/4, E1/2NW1/4, E1/2SW1/4, SW1/4SE1/4.	Willamette
O&C	Jackson	36S	5W	1	SE1/4SE1/4.	Willamette
O&C	Jackson	36S	4W	12	N1/2SE1/4, SE1/4SE1/4.	Willamette
O&C	Jackson	34S	4W	29	E1/2NW1/4NW1/4, E1/2SW1/4NW1/4.	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	3,699.0	4,064.0	4,246.0	4,923	2,541	13,034
White Fir	327.0	347.0	348.0	4,900	22	1,240
Ponderosa Pine	226.0	237.0	237.0	4,544	0	764
Incense-cedar	76.0	85.0	86.0	2,193	69	734
Sugar Pine	46.0	49.0	50.0	681	52	139
Totals	4,374.0	4,782.0	4,967.0	17,241	2,684	15,911

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
0.0	243.0	17.0	260.0	16.8

Comments:

Do not use stumpage values from TAS. Refer to sale prospectus for advertised stumpage [rates](#).

Logging Costs	
Stump to Truck	\$2,016,021.61
Transportation	\$313,557.89
Road Construction	\$52,407.68
Maintenance/ <u>Rockwear</u>	\$62,449.55
Road Use	\$0.00
Other Allowances	\$50,055.00
Total:	\$2,494,491.73
Total Logging Cost per MBF:	\$570.30

Utilization Centers		
<u>Location</u>	<u>Distance</u>	<u>% of Net Volume</u>
White City	36.0 miles	60%
Glendale	28.0 miles	40%

Profit & Risk	
Profit	11%
<u>Risk</u>	<u>1%</u>
Total Profit & Risk	12%

Tract Features	
Quadratic Mean DBH	16.9 in
Average GM Log	77 bf
Average Volume per Acre	16.8 <u>mbf</u>
Recovery	88%
<u>Net MBF volume:</u>	
Green	4,374.0 <u>mbf</u>
Salvage	0 <u>mbf</u>
Export	0 <u>mbf</u>
<u>Ground Base Logging:</u>	
Percent of Sale Volume	22%
Average Yarding Slope	7%
Average Yarding Distance	445 ft
<u>Cable Logging:</u>	
Percent of Sale Volume	38%
Average Yarding Slope	58%
Average Yarding Distance	322 ft
<u>Aerial Logging:</u>	
Percent of Sale Volume	40%
Average Yarding Slope	60%
Average Yarding Distance	1440 ft

Cruise	
Cruise Completed	May 2026
Cruised By	Miller, Parks, Casillas, Worman, Knighton, Siemer
Cruise Method	
3P cruise of all species. <u>Form</u> class: DF=77, WF=78, PP & SP=78, IC=66. Avg Vol (bd ft)/ <u>kpi</u> by species: DF=43.2, WF=43.1, PP=44, SP=37.3, IC=19.8.	

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF	Appraised Value (\$)
Douglas Fir	13,034	3,699.0	\$654.44	\$78.53	\$570.30	\$1.72	\$65.50 *	\$242,284.50
White Fir	1,240	327.0	\$413.58	\$49.63	\$570.30	\$0.00	\$41.40 *	\$13,537.80
Ponderosa Pine	764	226.0	\$337.08	\$40.45	\$570.30	\$0.00	\$33.80 *	\$7,638.80
Incense-cedar	734	76.0	\$389.26	\$46.71	\$570.30	\$0.00	\$39.00 *	\$2,964.00
Sugar Pine	139	46.0	\$333.74	\$40.05	\$570.30	\$0.00	\$33.40 *	\$1,536.40
Totals	15,911	4,374.0						\$267,961.50

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

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir			5.0%	63.0%	29.0%	3.0%	

Comments: Refer to Prospectus for advertised prices. Advertised prices are @ 1.1% PV as follows:

DF=\$7.33 /mbf, WF=\$4.63/mbf, PP=\$3.78/mbf, IC=\$4.36/mbf, SP=\$3.74/mbf

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir				61.0%	36.0%	3.0%	

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

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

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

Marginal Log Volume By Grade

Species	Utility Cull	Peeler Cull
Douglas Fir	12	57

Pine Shepherd TS**Unit Summary****ORM05-TS-2026.0003****Unit: 1-3**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	217.0	238.0	249.0	683
Ponderosa Pine	23.0	24.0	24.0	58
Sugar Pine	8.0	8.0	8.0	26
Incense-cedar	1.0	1.0	1.0	12
Totals:	249.0	271.0	282.0	779

Net Volume/Acre: 17.8 MBF

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

Unit: 7-5

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	39.0	43.0	45.0	135
Ponderosa Pine	0.5	0.5	0.5	3
Totals:	39.5	43.5	45.5	138

Net Volume/Acre: 6.6 MBF

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

Unit: 7-5A

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	28.0	30.0	32.0	119
Ponderosa Pine	1.0	1.0	1.0	3
Totals:	29.0	31.0	33.0	122

Net Volume/Acre: 29.0 MBF

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

Unit: 7-6

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	122.0	134.0	139.0	453
Sugar Pine	1.0	1.0	1.0	2
Ponderosa Pine	1.0	1.0	1.0	5
Incense-cedar	0.5	0.5	0.5	5
Totals:	124.5	136.5	141.5	465

Net Volume/Acre: 9.6 MBF

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

Unit: 8-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	114.0	126.0	131.0	172
Ponderosa Pine	3.0	4.0	4.0	5
Incense-cedar	0.1	0.1	0.1	1
Totals:	117.1	130.1	135.1	178

Net Volume/Acre: 8.4 MBF

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

Unit: 13-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	101.0	111.0	115.0	315
White Fir	54.0	58.0	58.0	220
Incense-cedar	4.0	5.0	5.0	22
Ponderosa Pine	2.0	2.0	2.0	5
Sugar Pine	1.0	1.0	1.0	2
Totals:	162.0	177.0	181.0	564

Net Volume/Acre: 23.1 MBF

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

Unit: 13-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	49.0	53.0	56.0	168
White Fir	24.0	26.0	26.0	105
Sugar Pine	2.0	2.0	2.0	1
Incense-cedar	1.0	1.0	1.0	5
Ponderosa Pine	0.5	0.5	0.5	2
Totals:	76.5	82.5	85.5	281

Net Volume/Acre: 19.1 MBF

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

Unit: 9-9

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	16.0	18.0	19.0	44
White Fir	11.0	11.0	11.0	61
Incense-cedar	1.0	1.0	1.0	8
Totals:	28.0	30.0	31.0	113

Net Volume/Acre: 14.0 MBF

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

Unit: 17-2

Species	Net	Gross Merch	Gross	# of Trees
White Fir	46.0	49.0	49.0	195
Douglas Fir	31.0	34.0	36.0	163
Incense-cedar	0.5	0.5	0.5	7
Totals:	77.5	83.5	85.5	365

Net Volume/Acre: 15.5 MBF

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

Unit: 17-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	474.0	521.0	544.0	1,998
Ponderosa Pine	18.0	19.0	19.0	45
Incense-cedar	4.0	5.0	5.0	41
Sugar Pine	4.0	4.0	4.0	10
Totals:	500.0	549.0	572.0	2,094

Net Volume/Acre: 25.0 MBF

Regeneration Harvest	0.0
Partial Cut	20.0
Right of Way	0.0
Total Acres:	20.0

Unit: 17-4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	89.0	98.0	103.0	440
Incense-cedar	11.0	12.0	12.0	121
Ponderosa Pine	11.0	11.0	11.0	52
Sugar Pine	5.9	5.9	5.9	24
Totals:	116.9	126.9	131.9	637

Net Volume/Acre: 7.3 MBF

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

Unit: 19-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	482.0	530.0	553.0	1,776
Ponderosa Pine	19.0	19.0	19.0	65
Sugar Pine	13.0	14.0	14.0	39
Incense-cedar	1.0	1.0	1.0	14
White Fir	1.0	1.0	1.0	7
Totals:	516.0	565.0	588.0	1,901

Net Volume/Acre: 13.9 MBF

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

Unit: 19-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	604.0	664.0	694.0	2,179
White Fir	131.0	139.0	139.0	431
Ponderosa Pine	37.4	38.4	38.4	64
Incense-cedar	17.6	21.6	22.6	135
Sugar Pine	2.0	2.0	3.0	14
Totals:	792.0	865.0	897.0	2,823

Net Volume/Acre: 16.2 MBF

Regeneration Harvest	0.0
Partial Cut	49.0
Right of Way	0.0
Total Acres:	49.0

Unit: 25-4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	146.0	161.0	168.0	426
Incense-cedar	7.0	8.0	8.0	45
Ponderosa Pine	7.0	8.0	8.0	18
White Fir	2.0	2.0	2.0	8
Sugar Pine	0.1	0.1	0.1	1
Totals:	162.1	179.1	186.1	498

Net Volume/Acre: 16.2 MBF

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

Unit: 25-5b

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	141.0	155.0	162.0	404
White Fir	42.0	44.0	44.0	157
Incense-cedar	1.0	1.0	1.0	3
Ponderosa Pine	0.5	0.5	0.5	2
Totals:	184.5	200.5	207.5	566

Net Volume/Acre: 13.2 MBF

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

Unit: 25-6

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	598.9	656.9	686.9	1,662
White Fir	13.9	14.9	15.9	46
Sugar Pine	4.0	5.0	5.0	12
Ponderosa Pine	3.0	4.0	4.0	11
Incense-cedar	1.0	1.0	1.0	11
Totals:	620.8	681.8	712.8	1,742

Net Volume/Acre: 21.4 MBF

Regeneration Harvest	0.0
Partial Cut	29.0
Right of Way	0.0
Total Acres:	29.0

Unit: 31-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	146.0	160.0	167.0	244
Ponderosa Pine	20.0	21.0	21.0	82
Sugar Pine	5.0	6.0	6.0	8
Incense-cedar	1.0	1.0	1.0	18
Totals:	172.0	188.0	195.0	352

Net Volume/Acre: 19.1 MBF

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

Unit: 32-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	59.0	64.0	67.0	222
Ponderosa Pine	7.0	8.0	8.0	21
Incense-cedar	3.0	3.0	3.0	25
White Fir	0.1	0.1	0.1	1
Totals:	69.1	75.1	78.1	269

Net Volume/Acre: 23.0 MBF

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

Unit: ROW-19

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1.0	1.0	1.0	1
White Fir	0.5	0.5	0.5	2
Totals:	1.5	1.5	1.5	3

Net Volume/Acre: 1.5 MBF

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

Unit: ROW-25

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	10.0	11.0	11.0	48
Ponderosa Pine	2.0	2.0	2.0	10
Incense-cedar	1.0	1.0	1.0	12
Totals:	13.0	14.0	14.0	70

Net Volume/Acre: 13.0 MBF

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

Unit: RV10NW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1.0	2.0	2.0	5
Ponderosa Pine	0.5	0.5	0.5	1
Totals:	1.5	2.5	2.5	6

Net Volume/Acre: 1.5 MBF

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

Unit: RV12SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	12.0	13.0	14.0	62
Ponderosa Pine	2.0	2.0	2.0	4
Totals:	14.0	15.0	16.0	66

Net Volume/Acre: 14.0 MBF

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

Unit: RV13SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1.0	2.0	2.0	9
Incense-cedar	0.1	0.1	0.1	2
Ponderosa Pine	0.1	0.1	0.1	1
Totals:	1.2	2.2	2.2	12

Net Volume/Acre: 1.2 MBF

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

Unit: RV17NW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	49.0	54.0	56.0	270
Ponderosa Pine	20.0	21.0	21.0	97
Incense-cedar	9.0	10.0	10.0	106
White Fir	1.0	1.0	1.0	6
Totals:	79.0	86.0	88.0	479

Net Volume/Acre: 79.0 MBF

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

Unit: RV19SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	8.0	9.0	10.0	59
Incense-cedar	0.1	0.1	0.1	1
Totals:	8.1	9.1	10.1	60

Net Volume/Acre: 8.1 MBF

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

Unit: RV23SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	24.0	26.0	27.0	141
Ponderosa Pine	9.0	10.0	10.0	50
Incense-cedar	1.0	1.0	1.0	12
Totals:	34.0	37.0	38.0	203

Net Volume/Acre: 34.0 MBF

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

Unit: RV25SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	56.0	62.0	64.0	353
Ponderosa Pine	6.0	6.0	6.0	29
Incense-cedar	2.0	2.0	2.0	29
White Fir	0.5	0.5	0.5	1
Totals:	64.5	70.5	72.5	412

Net Volume/Acre: 64.5 MBF

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

Unit: RV26SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	5.0	6.0	6.0	29
Ponderosa Pine	3.0	3.0	3.0	14
Incense-cedar	1.0	1.0	1.0	12
Totals:	9.0	10.0	10.0	55

Net Volume/Acre: 9.0 MBF

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

Unit: RV29NW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1.0	1.0	1.0	7
Incense-cedar	0.5	0.5	0.5	4
Ponderosa Pine	0.5	0.5	0.5	3
Totals:	2.0	2.0	2.0	14

Net Volume/Acre: 2.0 MBF

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

Unit: RV31NW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	18.0	20.0	21.0	122
Ponderosa Pine	11.0	12.0	12.0	49
Incense-cedar	2.0	2.0	2.0	31
Totals:	31.0	34.0	35.0	202

Net Volume/Acre: 31.0 MBF

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

Unit: RV32NW

Species	Net	Gross Merch	Gross	# of Trees
Ponderosa Pine	1.0	1.0	1.0	3
Incense-cedar	0.1	0.1	0.1	1
Douglas Fir	0.1	0.1	0.1	1
Totals:	1.2	1.2	1.2	5

Net Volume/Acre: 1.2 MBF

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

Unit: RV35SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	8.0	9.0	9.0	51
Ponderosa Pine	2.0	2.0	2.0	7
Incense-cedar	0.5	0.5	0.5	8
Totals:	10.5	11.5	11.5	66

Net Volume/Acre: 10.5 MBF

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

Unit: RVM7SW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	24.0	27.0	28.0	159
Ponderosa Pine	7.0	7.0	7.0	27
Incense-cedar	1.0	1.0	1.0	12
Totals:	32.0	35.0	36.0	198

Net Volume/Acre: 32.0 MBF

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

Unit: RVM9NW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	24.0	26.0	27.0	114
Ponderosa Pine	8.0	8.0	8.0	28
Incense-cedar	3.0	3.0	3.0	31
Totals:	35.0	37.0	38.0	173

Net Volume/Acre: 35.0 MBF

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

Total Stump <u>To</u> Truck	Net Volume	\$/MBF
\$2,016,021.61	4,374.0	\$460.91

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

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Helicopter	GM MBF	1,926.0	\$767.88	\$1,478,936.88	Medium Ship
Yoder	GM MBF	1,826.0	\$206.17	\$376,466.42	
Feller Buncher	GM MBF	633.0	\$186.74	\$118,206.42	
Shovel	GM MBF	397.0	\$55.37	\$21,981.89	ROW/RVM
Subtotal				\$1,995,591.61	

Additional Costs

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

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Yoder	Hour	18.0	\$245.00	\$4,410.00	6 GB <u>Moves @ 3 hr / move</u>
Loader	Hour	18.0	\$245.00	\$4,410.00	6 GB <u>Moves @ 3 hr / move</u>
Stroke <u>Delimber</u>	Hour	18.0	\$245.00	\$4,410.00	6 GB <u>Moves @ 3 hr / move</u>
Feller Buncher	Hour	18.0	\$200.00	\$3,600.00	6 GB <u>Moves @ 3 hr / move</u>
Wheel Skidder	Hour	18.0	\$200.00	\$3,600.00	6 GB <u>Moves @ 3 hr / move</u>
Subtotal				\$20,430.00	

Total	Net Volume	\$/MBF
\$313,557.89	4,374.0	\$71.69

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
White City	36.0	Transportation	GM MBF	1,651.0	\$73.01	\$120,539.51	60%
Glendale	28.0	Transportation	GM MBF	3,138.0	\$61.51	\$193,018.38	40%

Comments:

Granite Hill units appraised to haul to Glendale. Remaining units appraised to haul to White City.

Engineering Allowances

Total	Net Volume	\$/MBF
\$114,857.23	4,374.0	\$26.26

Cost Item	Total Cost
Road Construction:	\$52,407.68
Road Maintenance/ <u>Rockwear</u> :	\$62,449.55
Road Use Fees:	\$0.00

Total	Net Volume	\$/MBF
\$50,055.00	4,374.0	\$11.44

Environmental Protection

Cost item	Total Cost
Barricades	\$2,700.00
<u>Waterbar Skids</u>	\$5,800.00
Woody Debris 100'	\$4,500.00
Landing Clean-up	\$4,290.00
Equipment Washing #4	\$550.00
Equipment Washing #3	\$900.00
Equipment Washing #1	\$900.00
Equipment Washing #2	\$900.00
Seed & Mulch	\$3,375.00
Subtotal	\$23,915.00

Logging

Cost item	Total Cost
Directional Falling	\$1,500.00
Skid Location	\$1,200.00
Skid Construction	\$3,300.00
Landing Construction	\$4,290.00
Botany Equipment Washing #2	\$2,700.00
Botany Equipment Washing #1	\$2,700.00
Subtotal	\$15,690.00

Slash Disposal & Site Prep

Cost item	Total Cost
Excavator Pile/ Cover	\$10,450.00
Subtotal	\$10,450.00

Comments:

Equipment Washing #1 = Loader for 3 seasons, Equipment washing #2 = Processor for 3 seasons, Equipment washing #3 = Feller Buncher for 3 seasons, Equipment washing #4 = Skidder for 3 seasons. Directional Felling = L10 ~~stip~~ fall away from P/L, Boundary, skips, etc.

Excavator pile/ burn= unit 17-4 and 32-1. Botany Equipment Washing #1 loader. Botany Equipment Washing #2 Feller Buncher.

This page intentionally left blank

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Version: 8.0.0.34
Updated: 11/4/2022
Sale Date: 08/20/2026

Summary of All Roads and Projects

T.S. Contract Name: Pine Shepherd Tract No: ORM05-TS-2026.0003
Prepared by: Pardini Ph: 2471 Print Date: 7/1/2026 4:34:40 PM
Construction: 0.00 sta
Improve: 0.00 sta Renov: 1812.64 sta Decom: 0.00 sta Temp: 0.00 sta

200 Clearing and Grubbing: 3 acres	\$31,699.49
300 Excavation:	\$1,013.36
Haul < 500 ft: 0 sta-yds	
Haul > 500 ft: 0 yd-mi	
400 Drainage:	\$2,544.74
Culvert: 0.00 lf	DownSpout: 0.00 lf
PolyPipe: 0.00 lf	
500 Renovation:	\$3,731.41
Blading 2.94 mi	
700-1200 Surfacing:	\$474.60
Commercial Quarry Name: Robco 4" - Del MG 20.00 LCY	
Grid Rolled / Pitrun Quarry Name: Fielder Quarry 20.00 LCY	
1300 Geotextiles:	\$141.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing:	\$8,024.32
Mechanical Brushing: 23.31 acres	
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$4,778.76 Surf. \$0.00.....	\$4,778.76
Quarry Development:	\$0.00

Total: 4,374 mbf @ \$11.982/mbf = \$52,407.68

Notes:

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

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-10.00 Road Name: Jamison Gulch

Road Renovation: 5.95 mi 17 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$5,787.78
300 Excavation:	\$0.00
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: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):5.77 acres	\$2,211.20
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$802.56 Surf. \$0.00.....	\$802.56
Quarry Development:	\$0.00
Total:	\$8,801.55

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-10.00 Road Name: Jamison Gulch

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 3.83 Acre x \$1,511.17/Acre = \$5,787.78

Subtotal: \$5,787.78

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 2.89 acres = \$830.99

RoadSide Brushing Medium: \$479.24/acre x 2.88 acres = \$1,380.21

Subtotal: \$2,211.20

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 16.79% of total Costs = \$802.56

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$802.56

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$8,801.55

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-15.00 Road Name: Pleasant Creek Rd

Road Renovation: 0.32 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:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.31 acres	\$89.14
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$8.94 Surf. \$0.00.....	\$8.94
Quarry Development:	\$0.00

Total: \$98.08

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-15.00 Road Name: Pleasant Creek Rd

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:
Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:
Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.31 acres = \$89.14

Subtotal: \$89.14

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.19% of total Costs = \$8.94

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$8.94

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$98.08

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-17.00 Road Name: Overditch

Road Renovation: 0.41 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$272.01
300 Excavation:	\$0.00
400 Drainage:	\$1,722.97
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$858.37
Blading 0.41 mi	
700-1200 Surfacing:	\$400.00
Quarry Name: Robco 4" - Del MG 20.00 LCY	
1300 Geotextiles:	\$47.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.40 acres	\$168.69
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$348.06 Surf. \$0.00.....	\$348.06
Quarry Development:	\$0.00

Total: \$3,817.10

Notes:

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

Road Construction Worksheet

Road Number: 34-4-17.00 Road Name: Overditch

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 0.18 Acre x \$1,511.17/Acre = \$272.01

Subtotal: \$272.01

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

AWD MP 0.25

Construct Armored Water Dip 1 EA x \$1,722.97/EA = \$1,722.97

Subtotal: \$1,722.97

Section 500 Renovation:

Blading: \$939.38/mi x 0.41 mi = \$385.15

Barricade

Remove Earth Berm 1 EA x \$473.22/EA = \$473.22

Subtotal: \$858.37

Section 700-1200 Surfacing:

Commercial Quarry Name: Robco 4" - Del MG

Comment: rock for AWD

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

Rock Volume = 20.00 LCY

Purchase Price / Royalty: \$20.00/LCY x 20.00 LCY = \$400.00

Subtotal: \$400.00

Section 1300 Geotextiles:

Stream Xing

Low strength, woven 20 sy x \$2.35/sy = \$47.00

Subtotal: \$47.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.24 acres = \$69.01

RoadSide Brushing Medium: \$479.24/acre x 0.08 acres = \$38.34

RoadSide Brushing Heavy: \$766.78/acre x 0.08 acres = \$61.34

Subtotal: \$168.69

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Road Number: 34-4-17.00 Overditch Continued

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 7.28% of total Costs = \$348.06

Surfacing - 50.00% by rock volume = \$0.00

Subtotal: \$348.06

Quarry Development:

Based on 50.00% of total rock volume

Subtotal: \$0.00

Total: \$3,817.10

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-17.05 Road Name:

Road Renovation: 0.19 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$287.12
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$108.05
Blading 0.19 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.18 acres	\$51.76
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$44.84 Surf. \$0.00.....	\$44.84
Quarry Development:	\$0.00
Total:	\$491.78

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-17.05 Road Name:

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 0.19 Acre x \$1,511.17/Acre = \$287.12

Subtotal: \$287.12

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: \$568.71/mi x 0.19 mi = \$108.05

Subtotal: \$108.05

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.18 acres = \$51.76

Subtotal: \$51.76

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.94% of total Costs = \$44.84

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$44.84

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$491.78

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-17.06 Road Name:

Road Renovation: 0.06 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$105.78
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$34.12
Blading 0.06 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.06 acres	\$17.25
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$15.77 Surf. \$0.00.....	\$15.77
Quarry Development:	\$0.00
Total:	\$172.92

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-17.06 Road Name:

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 0.07 Acre x \$1,511.17/Acre = \$105.78

Subtotal: \$105.78

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: \$568.71/mi x 0.06 mi = \$34.12

Subtotal: \$34.12

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.06 acres = \$17.25

Subtotal: \$17.25

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.33% of total Costs = \$15.77

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$15.77

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$172.92

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-28.00 Road Name: Ditch Creek Rd

Road Renovation: 4.59 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$2,553.88
300 Excavation:	\$0.00
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: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):4.45 acres	\$1,492.34
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$405.97 Surf. \$0.00.....	\$405.97
Quarry Development:	\$0.00
Total:	\$4,452.19

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-28.00 Road Name: Ditch Creek Rd

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 1.69 Acre x \$1,511.17/Acre = \$2,553.88

Subtotal: \$2,553.88

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Comment: 1.44 mi BST

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 3.34 acres = \$960.38

RoadSide Brushing Medium: \$479.24/acre x 1.11 acres = \$531.96

Subtotal: \$1,492.34

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 8.50% of total Costs = \$405.97

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$405.97

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$4,452.19

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-31.00 Road Name: Dixie Gulch E

Road Renovation: 0.06 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$75.56
300 Excavation:	\$0.00
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: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.06 acres	\$17.25
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$9.31 Surf. \$0.00.....	\$9.31
Quarry Development:	\$0.00

Total: \$102.12

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-31.00 Road Name: Dixie Gulch E

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 0.05 Acre x \$1,511.17/Acre = \$75.56

Subtotal: \$75.56

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.06 acres = \$17.25

Subtotal: \$17.25

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.19% of total Costs = \$9.31

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$9.31

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$102.12

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 34-4-32.00 Road Name:

Road Renovation: 0.2 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.19 acres	\$54.63
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$5.48 Surf. \$0.00.....	\$5.48
Quarry Development:	\$0.00
Total:	\$60.11

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 34-4-32.00 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:
Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:
Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.19 acres = \$54.63

Subtotal: \$54.63

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.11% of total Costs = \$5.48

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$5.48

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$60.11

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-4-05.00 Road Name: Dixie Gulch

Road Renovation: 3.71 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$1,949.41
300 Excavation:	\$0.00
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: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):3.60 acres	\$1,035.14
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$299.45 Surf. \$0.00.....	\$299.45
Quarry Development:	\$0.00
Total:	\$3,284.00

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-4-05.00 Road Name: Dixie Gulch

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 1.29 Acre x \$1,511.17/Acre = \$1,949.41

Subtotal: \$1,949.41

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Comment: 0.86 mi BST

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 3.60 acres = \$1,035.14

Subtotal: \$1,035.14

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 6.27% of total Costs = \$299.45

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$299.45

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$3,284.00

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-4-08.00 Road Name: Queens Creek Rd

Road Renovation: 0.55 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:	\$0.00
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.53 acres	\$152.40
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$15.29 Surf. \$0.00.....	\$15.29
Quarry Development:	\$0.00

Total: \$167.69

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-4-08.00 Road Name: Queens Creek Rd

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:
Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:
Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.53 acres = \$152.40

Subtotal: \$152.40

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.32% of total Costs = \$15.29

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$15.29

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$167.69

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-4-08.01 Road Name:

Road Renovation: 0.76 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$432.22
Blading 0.76 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.74 acres	\$212.78
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$64.71 Surf. \$0.00.....	\$64.71
Quarry Development:	\$0.00
Total:	\$709.71

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-4-08.01 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: \$568.71/mi x 0.76 mi = \$432.22

Subtotal: \$432.22

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.74 acres = \$212.78

Subtotal: \$212.78

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 1.35% of total Costs = \$64.71

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$64.71

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$709.71

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-4-17.00 Road Name:

Road Renovation: 0.04 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$0.00
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$22.75
Blading 0.04 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.04 acres	\$11.50
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$3.44 Surf. \$0.00.....	\$3.44
Quarry Development:	\$0.00
Total:	\$37.69

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-4-17.00 Road Name:

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: $\$568.71/\text{mi} \times 0.04 \text{ mi} = \22.75

Subtotal: \$22.75

Section 700-1200 Surfacing:
Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: $\$287.54/\text{acre} \times 0.04 \text{ acres} = \11.50

Subtotal: \$11.50

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.07% of total Costs = \$3.44

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$3.44

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$37.69

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-4-18.02 Road Name:

Road Renovation: 0.44 mi 15 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$196.45
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$1,096.31
Blading 0.44 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.43 acres	\$156.23
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$145.38 Surf. \$0.00.....	\$145.38
Quarry Development:	\$0.00
Total:	\$1,594.38

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-4-18.02 Road Name:

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 0.13 Acre x \$1,511.17/Acre = \$196.45

Subtotal: \$196.45

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: \$568.71/mi x 0.44 mi = \$250.23

Low water xing/barricade

Tractor: D7 with rippers 2 hr x \$253.34/hr = \$506.68

Excavator - Large (3 CY) 2 hr x \$169.70/hr = \$339.40

Subtotal: \$1,096.31

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.26 acres = \$74.76

RoadSide Brushing Medium: \$479.24/acre x 0.17 acres = \$81.47

Subtotal: \$156.23

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 3.04% of total Costs = \$145.38

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$145.38

Road Number: 35-4-18.02 Continued

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$1,594.38

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-4-19.00 Road Name: Bear Head Spur

Road Renovation: 0.19 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.50 acres	\$1,026.79
300 Excavation:	\$1,013.36
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$108.05
Blading 0.19 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.18 acres	\$51.76
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$220.73 Surf. \$0.00.....	\$220.73
Quarry Development:	\$0.00
Total:	\$2,420.69

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-4-19.00 Road Name: Bear Head Spur

Section 200 Clearing and Grubbing:

Clearing - Brush (Clearing): Adjustment Factor (0)

Pile and Burn (Slash): Adjustment Factor (1.28)

Total Adjustment Factor: $0 + 0 + 1.28 + 0 = 1.28$

Base Cost/Acre: \$1,226.56 x Adjustment Factor: 1.28 x Total Acres: 0.5 = \$785.00

RVM

RVM Clearing 0.16 Acre x \$1,511.17/Acre = \$241.79

Subtotal: \$1,026.79

Section 300 Excavation:

Helicopter Landing

Tractor: D7 with rippers 4 hr x \$253.34/hr = \$1,013.36

Subtotal: \$1,013.36

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: \$568.71/mi x 0.19 mi = \$108.05

Subtotal: \$108.05

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.18 acres = \$51.76

Subtotal: \$51.76

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 4.62% of total Costs = \$220.73

Road Number: 35-4-19.00 Bear Head Spur Continued

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$220.73

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$2,420.69

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-5-21.00 Road Name: Granite Hill

Road Renovation: 3.04 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:	\$0.00
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. \$0.00 Surf. \$0.00.....	\$0.00
Quarry Development:	\$0.00
Total:	\$0.00

Notes:

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

Road Construction Worksheet

Road Number: 35-5-21.00 Road Name: Granite Hill

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Comment: 2.64 mi BST

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.00% of total Costs = \$0.00

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$0.00

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$0.00

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-5-25.03 Road Name: Bear Head Rd

Road Renovation: 1.9 mi 14 ft Subgrade 0 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$2,463.21
300 Excavation:	\$0.00
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: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.35 acres	\$268.37
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$274.07 Surf. \$0.00.....	\$274.07
Quarry Development:	\$0.00
Total:	\$3,005.65

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-5-25.03 Road Name: Bear Head Rd

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 1.63 Acre x \$1,511.17/Acre = \$2,463.21

Subtotal: \$2,463.21

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

RoadSide Brushing Heavy: \$766.78/acre x 0.35 acres = \$268.37

Subtotal: \$268.37

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 5.74% of total Costs = \$274.07

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$274.07

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$3,005.65

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-5-25.06 Road Name: Old Baldy Rd Spur

Road Renovation: 0.14 mi 17 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$151.12
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$131.51
Blading 0.14 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.14 acres	\$40.26
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$32.40 Surf. \$0.00.....	\$32.40
Quarry Development:	\$0.00
Total:	\$355.28

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-5-25.06 Road Name: Old Baldy Rd Spur

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 0.10 Acre x \$1,511.17/Acre = \$151.12

Subtotal: \$151.12

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading: \$939.38/mi x 0.14 mi = \$131.51

Subtotal: \$131.51

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 0.14 acres = \$40.26

Subtotal: \$40.26

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 0.68% of total Costs = \$32.40

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$32.40

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$355.28

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-5-26.00 Road Name: Louse Mtn

Road Renovation: 1.07 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres \$1,088.04

300 Excavation: \$0.00

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: 0.00 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. \$109.17 Surf. \$0.00..... \$109.17

Quarry Development: \$0.00

Total: \$1,197.21

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-5-26.00 Road Name: Louse Mtn

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 0.72 Acre x \$1,511.17/Acre = \$1,088.04

Subtotal: \$1,088.04

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 2.28% of total Costs = \$109.17

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$109.17

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$1,197.21

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-5-26.04 Road Name: Granite Hill ML

Road Renovation: 2.56 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 1.50 acres	\$5,483.12
300 Excavation:	\$0.00
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: 0.00 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. \$550.14 Surf. \$0.00.....	\$550.14
Quarry Development:	\$0.00
Total:	\$6,033.26

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 35-5-26.04 Road Name: Granite Hill ML

Section 200 Clearing and Grubbing:

Clearing - Brush (Clearing): Adjustment Factor (0)

Pile and Burn (Slash): Adjustment Factor (1.28)

Total Adjustment Factor: $0 + 0 + 1.28 + 0 = 1.28$

Base Cost/Acre: \$1,226.56 x Adjustment Factor: 1.28 x Total Acres: 1.5 = \$2,355.00

RVM

RVM Clearing 2.07 Acre x \$1,511.17/Acre = \$3,128.12

Subtotal: \$5,483.12

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 11.51% of total Costs = \$550.14

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$550.14

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$6,033.26

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 35-5-35.00 Road Name: Old Baldy

Road Renovation: 2.09 mi 16 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 1.00 acres	\$5,045.69
300 Excavation:	\$0.00
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: 0.00 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. \$506.25 Surf. \$0.00.....	\$506.25
Quarry Development:	\$0.00
Total:	\$5,551.94

Notes:

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

Road Construction Worksheet

Road Number: 35-5-35.00 Road Name: Old Baldy

Section 200 Clearing and Grubbing:

Clearing - Brush (Clearing): Adjustment Factor (0)

Pile and Burn (Slash): Adjustment Factor (1.28)

Total Adjustment Factor: $0 + 0 + 1.28 + 0 = 1.28$

Base Cost/Acre: \$1,226.56 x Adjustment Factor: 1.28 x Total Acres: 1 = \$1,570.00

RVM

RVM Clearing 2.30 Acre x \$1,511.17/Acre = \$3,475.69

Subtotal: \$5,045.69

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Subtotal: \$0.00

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 10.59% of total Costs = \$506.25

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$506.25

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$5,551.94

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 36-4-05.00 Road Name: Left Frk Fielder Crk

Road Renovation: 4.12 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$2,327.20
300 Excavation:	\$0.00
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: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):4.00 acres	\$1,232.59
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$357.17 Surf. \$0.00.....	\$357.17
Quarry Development:	\$0.00
Total:	\$3,916.96

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-4-05.00 Road Name: Left Frk Fielder Crk

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 1.54 Acre x \$1,511.17/Acre = \$2,327.20

Subtotal: \$2,327.20

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Subtotal: \$0.00

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 3.75 acres = \$1,078.28

RoadSide Brushing Medium: \$479.24/acre x 0.13 acres = \$62.30

RoadSide Brushing Heavy: \$766.78/acre x 0.12 acres = \$92.01

Subtotal: \$1,232.59

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 7.47% of total Costs = \$357.17

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$357.17

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$3,916.96

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 36-4-07.00 Road Name: Fielder Creek Spur

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:	\$821.77
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$632.91
Blading 0.17 mi	
700-1200 Surfacing:	\$74.60
Quarry Name: Fielder Quarry 20.00 LCY	
1300 Geotextiles:	\$94.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):0.16 acres	\$122.68
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$175.18 Surf. \$0.00.....	\$175.18
Quarry Development:	\$0.00

Total: \$1,921.15

Notes:

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

Road Construction Worksheet

Road Number: 36-4-07.00 Road Name: Fielder Creek Spur

Section 200 Clearing and Grubbing:

Subtotal: \$0.00

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

AWD MP 0.04 - rock on fielder

Construct Water Dip 1 EA x \$821.77/EA = \$821.77

Subtotal: \$821.77

Section 500 Renovation:

Blading: \$939.38/mi x 0.17 mi = \$159.69

Barricade

Remove Earth Berm 1 EA x \$473.22/EA = \$473.22

Subtotal: \$632.91

Section 700-1200 Surfacing:

Grid Rolled / Pitrun Quarry Name: Fielder Quarry

Comment: for AWD rd 07.00 MP 0.04

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

Rock Volume = 20.00 LCY

Production: \$1.60/LCY x 20.00 LCY = \$32.00

Basic Rock Haul cost: \$0.85/LCY x 20.00 LCY = \$17.00

Rock Haul -15% grades: \$1.28/LCY-mi x 20.00 LCY x 1.00 mi = \$25.60

Subtotal: \$74.60

Section 1300 Geotextiles:

Stream Xing - 2

Low strength, woven 40 sy x \$2.35/sy = \$94.00

Subtotal: \$94.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

RoadSide Brushing Heavy: \$766.78/acre x 0.16 acres = \$122.68

Subtotal: \$122.68

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Road Number: 36-4-07.00 Fielder Creek Spur Continued

Subtotal: \$0.00

Mobilization:

Construction - 3.67% of total Costs = \$175.18

Surfacing - 50.00% by rock volume = \$0.00

Subtotal: \$175.18

Quarry Development:

Based on 50.00% of total rock volume

Subtotal: \$0.00

Total: \$1,921.15

ROAD CONSTRUCTION SUMMARY

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number: 36-4-07.01 Road Name: Upper Left Fk

Road Renovation: 1.77 mi 14 ft Subgrade 3 ft ditch

200 Clearing and Grubbing: 0.00 acres	\$2,886.33
300 Excavation:	\$0.00
400 Drainage:	\$0.00
Culvert: 0.00 lf	
DownSpout: 0.00 lf	
PolyPipe: 0.00 lf	
500 Renovation:	\$307.10
Blading 0.54 mi	
700-1200 Surfacing:	\$0.00
1300 Geotextiles:	\$0.00
1400 Slope Protection:	\$0.00
1800 Soil Stabilization: 0.00 acres	\$0.00
1900 Cattleguards:	\$0.00
2100 RoadSide Brushing (Mechanical):1.72 acres	\$638.34
2300 Engineering: 0.00 sta.	\$0.00
2400 Minor Concrete:	\$0.00
2500 Gabions:	\$0.00
8000 Miscellaneous:	\$0.00
Mobilization: Const. \$384.45 Surf. \$0.00.....	\$384.45
Quarry Development:	\$0.00
Total:	\$4,216.23

Notes:

Quantities shown are estimates only and not pay items.

Surfacing Quantities shown are loose cubic yards.

Road Construction Worksheet

Road Number: 36-4-07.01 Road Name: Upper Left Fk

Section 200 Clearing and Grubbing:

RVM

RVM Clearing 1.91 Acre x \$1,511.17/Acre = \$2,886.33

Subtotal: \$2,886.33

Section 300 Excavation:

Subtotal: \$0.00

Section 400 Drainage:

Subtotal: \$0.00

Section 500 Renovation:

Blading w/o Ditches: \$568.71/mi x 0.54 mi = \$307.10

Subtotal: \$307.10

Section 700-1200 Surfacing:

Surfacing:

Subtotal: \$0.00

Section 1300 Geotextiles:

Subtotal: \$0.00

Section 1400 Slope Protection:

Subtotal: \$0.00

Section 1800 Soil Stabilization:

Subtotal: \$0.00

Section 1900 Cattleguards:

Subtotal: \$0.00

Section 2100 Roadside Brushing:

Mechanical Brushing

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

RoadSide Brushing Light: \$287.54/acre x 1.42 acres = \$408.31

RoadSide Brushing Heavy: \$766.78/acre x 0.30 acres = \$230.03

Subtotal: \$638.34

Section 2300 Engineering:

Subtotal: \$0.00

Section 2400 Minor Concrete:

Subtotal: \$0.00

Section 2500 Gabions:

Subtotal: \$0.00

Section 8000 Miscellaneous:

Subtotal: \$0.00

Mobilization:

Construction - 8.05% of total Costs = \$384.45

Surfacing - 0.00% by rock volume = \$0.00

Subtotal: \$384.45

Quarry Development:

Based on 0.00% of total rock volume

Subtotal: \$0.00

Total: \$4,216.23

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mobilization Costs - Construction and Surfacing

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Average Mobilization distance = 25 miles Factor = 0.63

Mobilization: Construction

Fire Equipment: 1 ea x (0.63 x \$98.00/ea + 10 mi x \$5.43/mi)= \$116.04
Graders-all: 1 ea x (0.63 x \$558.00/ea + 10 mi x \$18.75/mi)= \$539.04
Excavators (Lg): 1 ea x (0.63 x \$1208.00/ea + 10 mi x \$33.94/mi)= \$1,100.44
RTBackhoes 24/30: 1 ea x (0.63 x \$415.00/ea + 10 mi x \$7.36/mi)= \$335.05
Tractors <= D7: 1 ea x (0.63 x \$883.00/ea + 10 mi x \$49.56/mi)= \$1,051.89
Dump Truck<=15cy: 1 ea x (0.63 x \$130.00/ea + 10 mi x \$5.44/mi)= \$136.30
Equipment Washing: 6 ea x (\$250.00) /ea = \$1,500.00

Subtotal: \$4,778.76

Mobilization: Surfacing

Subtotal: \$0.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Summary of Construction Quantities

T.S. Contract Name: Pine Shepherd Sale Date: 08/20/2026

Road Number	Const	Improv	Renov	Decomm	Temp
34-4-10.00			314.16		
34-4-15.00			16.9		
34-4-17.00			21.65		
34-4-17.05			10.03		
34-4-17.06			3.17		
34-4-28.00			242.35		
34-4-31.00			3.17		
34-4-32.00			10.56		
35-4-05.00			195.89		
35-4-08.00			29.04		
35-4-08.01			40.13		
35-4-17.00			2.11		
35-4-18.02			23.23		
35-4-19.00			10.03		
35-5-21.00			160.51		
35-5-25.03			100.32		
35-5-25.06			7.39		
35-5-26.00			56.5		
35-5-26.04			135.17		
35-5-35.00			110.35		
36-4-05.00			217.54		
36-4-07.00			8.98		
36-4-07.01			93.46		

Total Sta:	_____	_____	1,812.64	_____	_____
------------	-------	-------	----------	-------	-------

200 Clearing and Grubbing	Clearing acres
---------------------------	-------------------

34-4-10.00	0.0
34-4-15.00	0.0
34-4-17.00	0.0
34-4-17.05	0.0
34-4-17.06	0.0
34-4-28.00	0.0
34-4-31.00	0.0
34-4-32.00	0.0
35-4-05.00	0.0
35-4-08.00	0.0
35-4-08.01	0.0
35-4-17.00	0.0
35-4-18.02	0.0
35-4-19.00	0.5
35-5-21.00	0.0
35-5-25.03	0.0
35-5-25.06	0.0
35-5-26.00	0.0
35-5-26.04	1.5
35-5-35.00	1.0
36-4-05.00	0.0
36-4-07.00	0.0
36-4-07.01	0.0

Totals:	_____	3.00
---------	-------	------

RVM 35-4-19.00

Continuation of Construction Quantities

RVM Clearing	0.16 Acre
RVM 34-4-17.00	
RVM Clearing	0.18 Acre
RVM 34-4-17.05	
RVM Clearing	0.19 Acre
RVM 34-4-17.06	
RVM Clearing	0.07 Acre
RVM 34-4-28.00	
RVM Clearing	1.69 Acre
RVM 34-4-31.00	
RVM Clearing	0.05 Acre
RVM 34-4-10.00	
RVM Clearing	3.83 Acre
RVM 35-4-18.02	
RVM Clearing	0.13 Acre
RVM 36-4-07.01	
RVM Clearing	1.91 Acre
RVM 35-5-25.03	
RVM Clearing	1.63 Acre
RVM 35-5-25.06	
RVM Clearing	0.10 Acre
RVM 35-5-26.00	
RVM Clearing	0.72 Acre
RVM 35-5-26.04	
RVM Clearing	2.07 Acre
RVM 35-5-35.00	
RVM Clearing	2.30 Acre
RVM 36-4-05.00	
RVM Clearing	1.54 Acre
RVM 35-4-05.00	
RVM Clearing	1.29 Acre

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

Helicopter Landing 35-4-19.00
Tractor: D7 with rippers 4 hr

400 Drainage

Road Number	CMP Culvert	Polypipes	Downspouts
Total Drainage:			

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

Downspout Qty	Half Round	Full (poly)	Full (galv)
18 inch	0 lf	0 lf	0 lf
21 inch	0 lf		
24 inch	0 lf	0 lf	0 lf

Continuation of Construction Quantities

30 inch

0 lf

AWD MP 0.04 - rock on fielder 36-4-07.00
 Construct Water Dip 1 EA
 AWD MP 0.25 34-4-17.00
 Construct Armored Water Dip 1 EA

500 Renovation	Blade Miles	Slide cy
34-4-17.00	0.41	0
34-4-17.05	0.19	0
34-4-17.06	0.06	0
35-4-08.01	0.76	0
35-4-17.00	0.04	0
35-4-18.02	0.44	0
35-4-19.00	0.19	0
35-5-25.06	0.14	0
36-4-07.00	0.17	0
36-4-07.01	0.54	0

Totals:	<u>2.94</u>	<u>0</u>
---------	-------------	----------

Barricade 36-4-07.00
 Remove Earth Berm 1 EA
 Barricade 34-4-17.00
 Remove Earth Berm 1 EA
 Low water xing/barricade 35-4-18.02
 Tractor: D7 with rippers 2 hr
 Excavator - Large (3 CY) 2 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: Robco 4" - Del MG

Commercial	Roadway	Turnouts	Other	
34-4-17.00	0	0	20	20
Totals:	<u>0</u>	<u>0</u>	<u>20</u>	<u>20</u>

Quarry Name: Robco 1.5"

Commercial	Roadway	Turnouts	Other	
Totals:	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Quarry Name: Fielder Quarry

Grid Rolled / Pitrun	Roadway	Turnouts	Other	
36-4-07.00	0	0	20	20
Totals:	<u>0</u>	<u>0</u>	<u>20</u>	<u>20</u>

1300 Geotextiles

Stream Xing 34-4-17.00
 Low strength, woven 20 sy
 Stream Xing - 2 36-4-07.00
 Low strength, woven 40 sy

1400 Slope Protection

Totals:	<u>0 cy</u>
---------	-------------

Continuation of Construction Quantities

Totals: 0

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

Totals:	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
---------	-------------	-------------	-------------

1900 Cattleguards

Totals: No Quantities

2100 RoadSide Brushing acres

34-4-10.00 - Mechanical Brushing	5.8
34-4-15.00 - Mechanical Brushing	0.3
34-4-17.00 - Mechanical Brushing	0.4
34-4-17.05 - Mechanical Brushing	0.2
34-4-17.06 - Mechanical Brushing	0.1
34-4-28.00 - Mechanical Brushing	4.5
34-4-31.00 - Mechanical Brushing	0.1
34-4-32.00 - Mechanical Brushing	0.2
35-4-05.00 - Mechanical Brushing	3.6
35-4-08.00 - Mechanical Brushing	0.5
35-4-08.01 - Mechanical Brushing	0.7
35-4-17.00 - Mechanical Brushing	0.0
35-4-18.02 - Mechanical Brushing	0.4
35-4-19.00 - Mechanical Brushing	0.2
35-5-25.03 - Mechanical Brushing	0.4
35-5-25.06 - Mechanical Brushing	0.1
36-4-05.00 - Mechanical Brushing	4.0
36-4-07.00 - Mechanical Brushing	0.2
36-4-07.01 - Mechanical Brushing	1.7

Totals: 23.31

2300 Engineering stations

Totals: 0.00

2400 Minor Concrete

Totals: No Quantities

2500 Gabions

Totals: No Quantities

8000 Miscellaneous

Totals: No Quantities

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

EXHIBIT C-1
SHEET 1 OF 1

PINE SHEPHERD TIMBER SALE
TRACT NO. ORM05-TS-2026.0003

PROJECT LOCATION

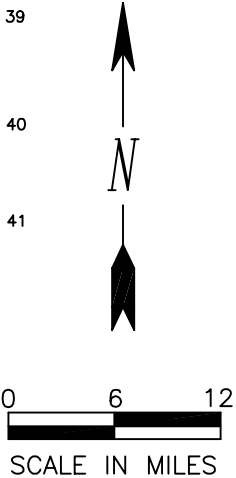
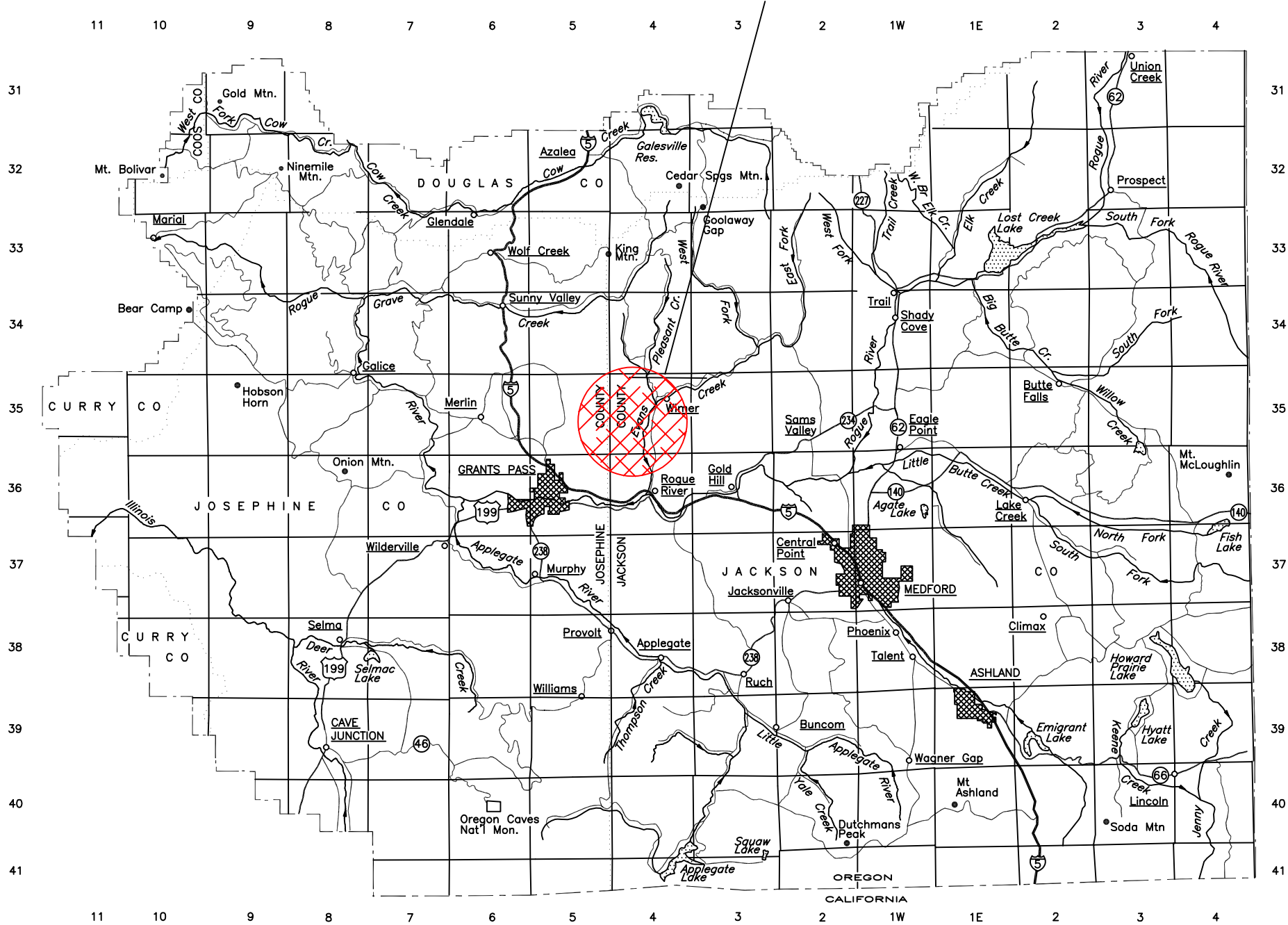


Exhibit No.	Description
C-1	TITLE SHEET
C-2	MAPS
C-3	ESTIMATE OF QUANTITIES
C-4	SPECIFICATION SHEET
C-5	ROAD SPECIFICATIONS
C-6	ROAD RENOVATION AND IMPROVEMENT WORK LIST
C-7	SPECIAL PROVISIONS
C-8	ROADSIDE BRUSHING & RVM DETAILS
C-9.1	DRAINAGE AND EROSION CONTROL DETAILS
C-9.2	TYPICAL ARMORED WATER DIP DETAILS
C-10	TYPICAL ROAD DATA
C-11	RD. SURFACING & CURVE WIDENING

ALWAYS
THINK
SAFETY

REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
PINE SHEPHERD TITLE SHEET			
DESIGNED			
REVIEWED			
APPROVED			
DRAWN FEP	SCALE AS SHOWN		
JUNE 2026	SHEET 1 OF 1		
DRAWING NO.	ORM05-TS-2026.0003-C1		

T.34.S., R.04.W., WILL MER.

)() Roadside Vegetation Management



 Rocked Road

— Paved Road

—— Natural Surface

Null or Not Known

Bureau of Land Mgmt.

☐ Private or Undetermined
$$0 \qquad \qquad \qquad \frac{1}{2}$$

Scale in Miles

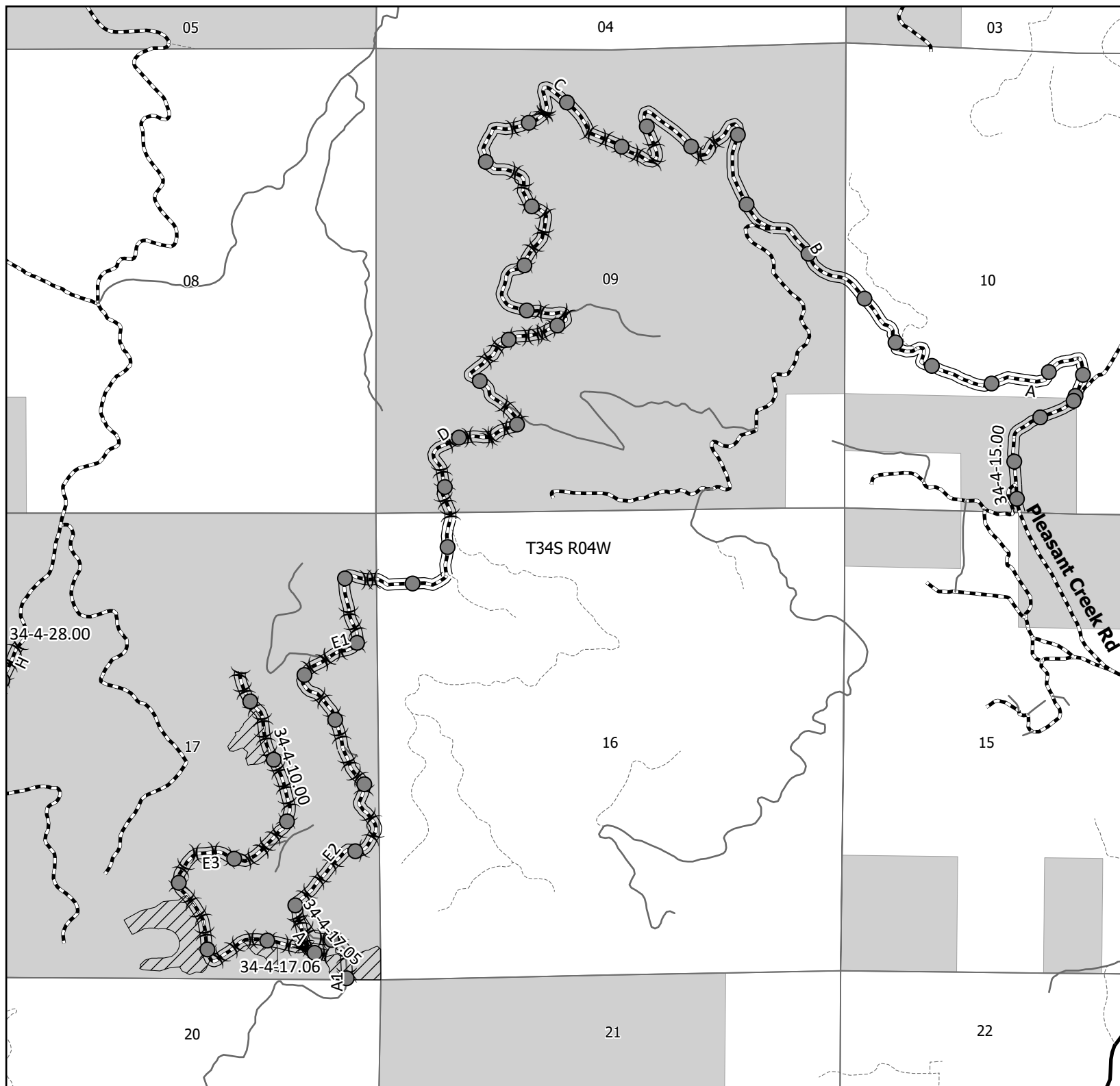


EXHIBIT C-2

Page 2 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD WORK MAP

U.S.D.I BLM MEDFORD DISTRICT

T.34.S., R.04.W., WILL MER.

Legend

Road Work

● RENO

⌵ ⌵ Roadside Vegetation Management

Landing Right-of-Way



Harvest Unit



Road by Surface Type

--- Rocked Road

— Paved Road

— Natural Surface

--- Null or Not Known

Land Ownership

■ Bureau of Land Mgmt.

□ Private or Undetermined

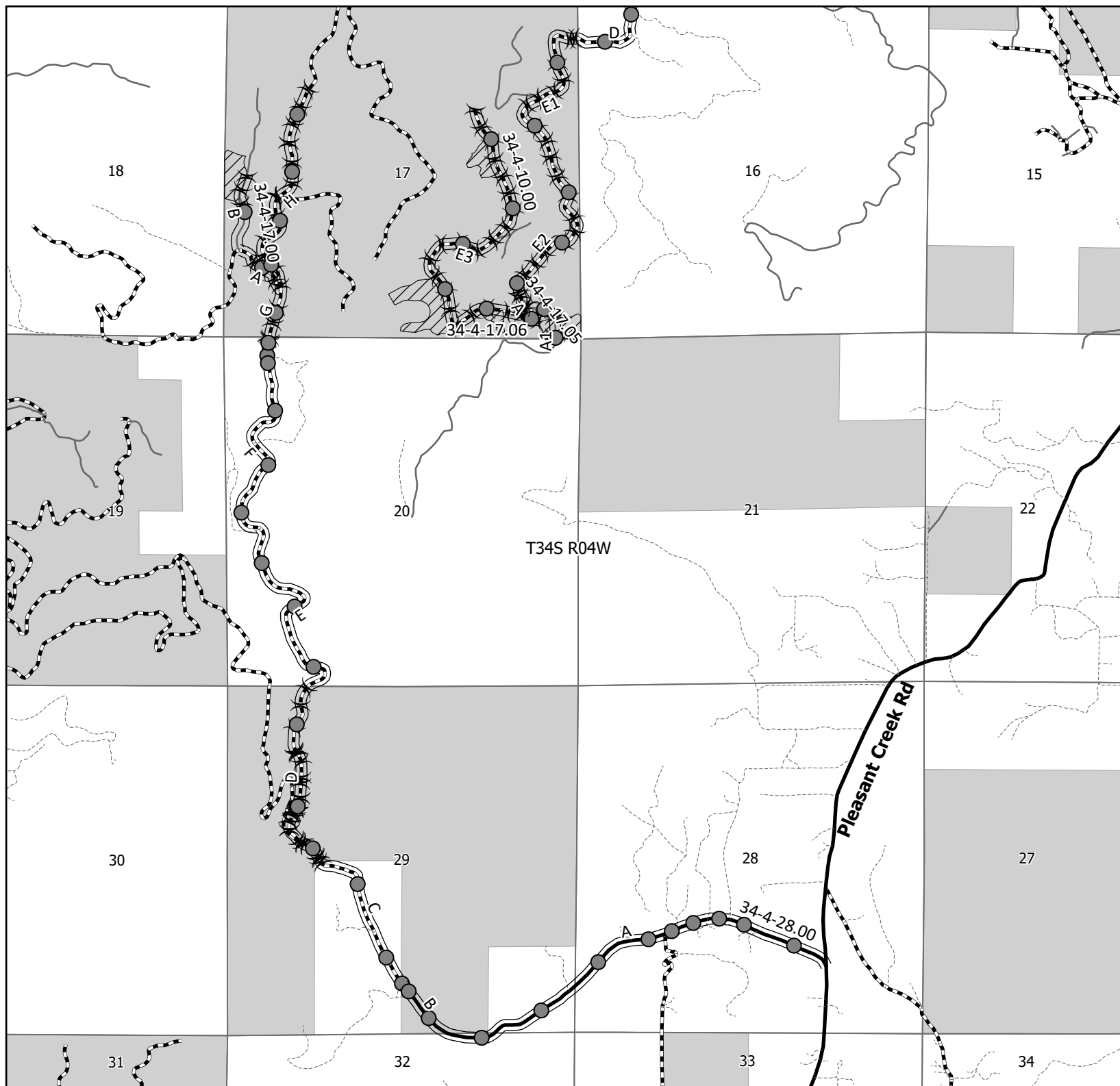


EXHIBIT C-2

Page 3 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD WORK MAP

U.S.D.I BLM MEDFORD DISTRICT

T.34.S., R.04.W., WILL MER.
T.35.S., R.04.W., WILL MER.

Legend

Road Work

● Road to be Renovated

⌵ ⌵ Roadside Vegetation
Management

Landing Right-of-Way



Harvest Unit



Road by Surface Type

--- Rocked Road

— Paved Road

— Natural Surface

--- Null or Not Known

Land Ownership

■ Bureau of Land Mgmt.

□ Private or Undetermined

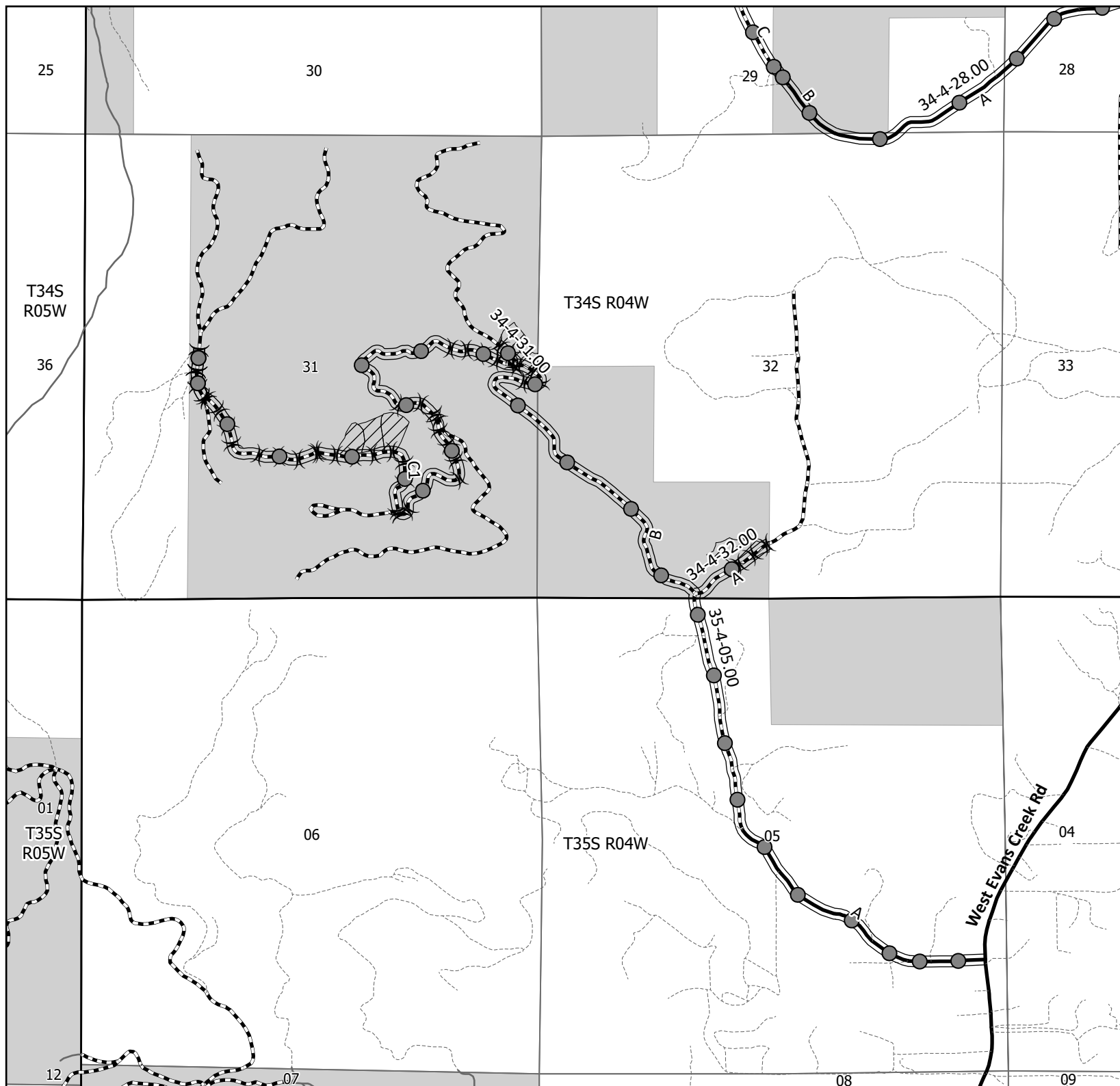


EXHIBIT C-2

Page 4 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD WORK MAP

U.S.D.I BLM MEDFORD DISTRICT

T.35.S., R.04.W., WILL MER.
T.35.S., R.05.W., WILL MER.

Legend

Landing

(H) Helicopter

(S,H) Service/Heli

Road Work

● Road to be Renovated

(X) Roadside Vegetation Management

Landing Right-of-Way

XXXX

Harvest Unit

////

Road by Surface Type

--- Rocked Road

— Paved Road

— Natural Surface

--- Null or Not Known

Land Ownership

■ Bureau of Land Mgmt.

□ Private or Undetermined

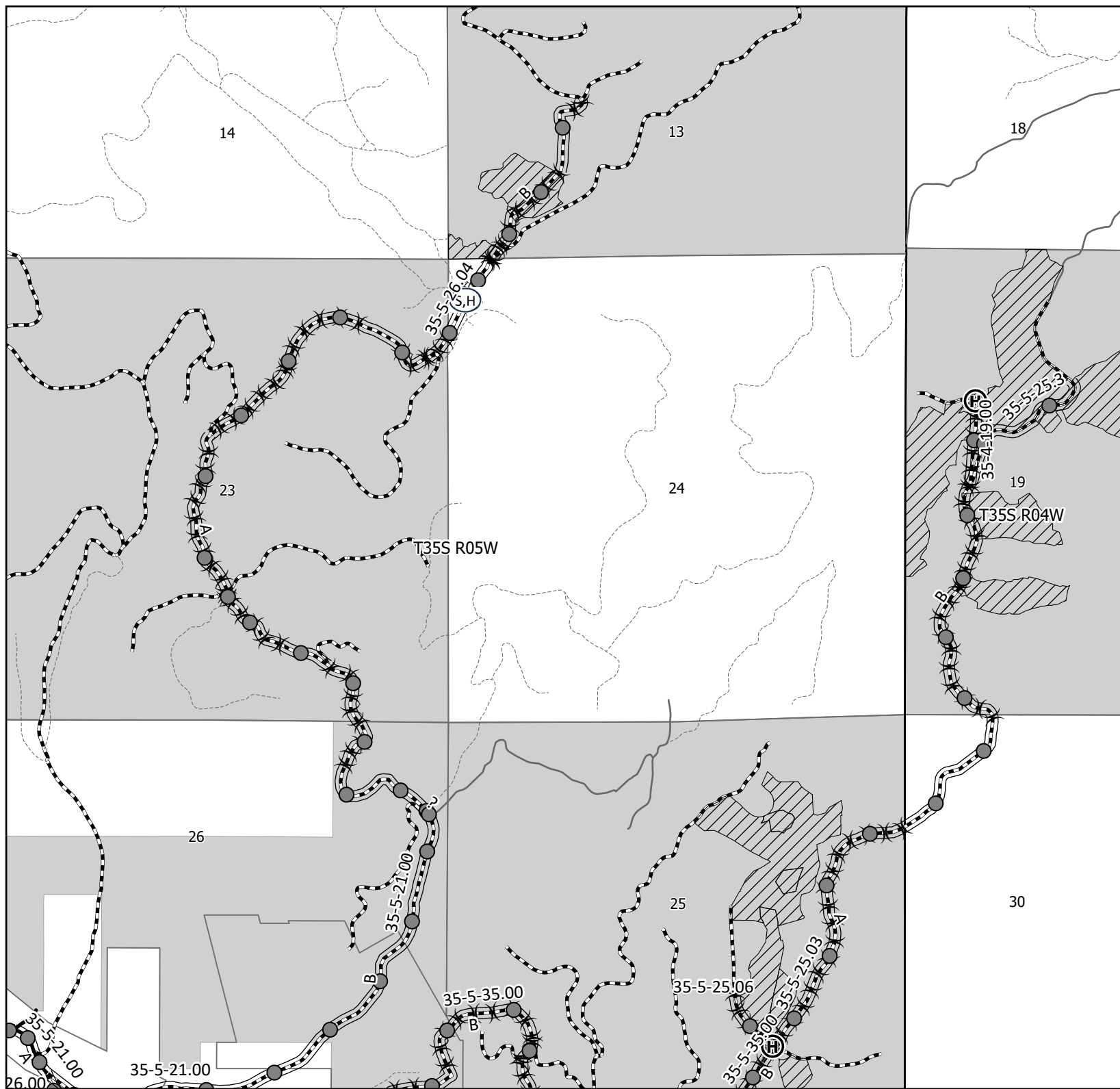


EXHIBIT C-2

Page 5 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD WORK MAP

U.S.D.I BLM MEDFORD DISTRICT

T.35.S., R.05.W., WILL MER.

Legend

Road Work

 Road to be Renovated

 Roadside Vegetation Management

Landing Right-of-Way



Harvest Unit



Road by Surface Type

 Rocked Road

 Paved Road

 Natural Surface

 Null or Not Known

Land Ownership

 Bureau of Land Mgmt.

 Private or Undetermined

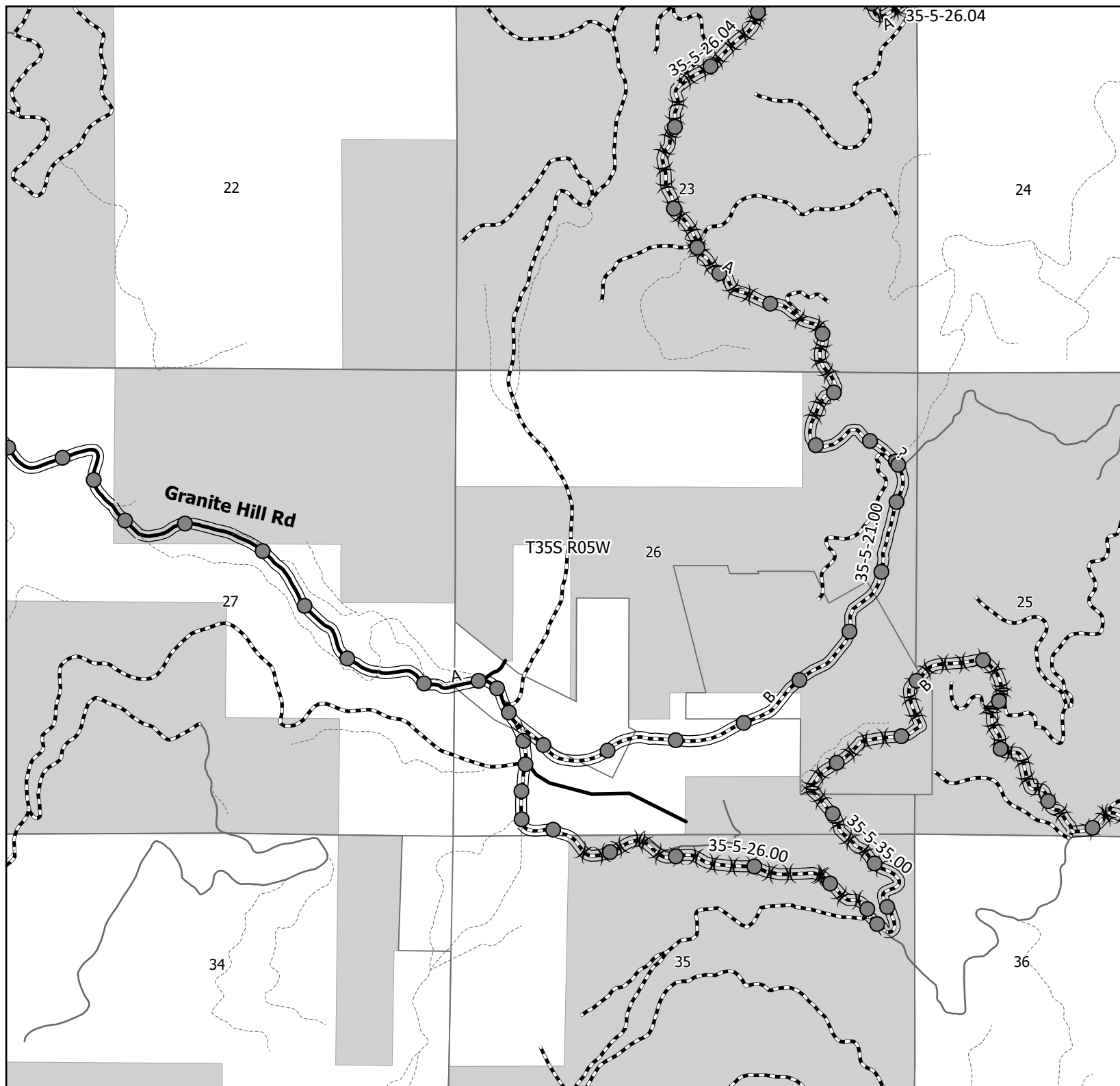


EXHIBIT C-2

Page 6 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD WORK MAP

U.S.D.I BLM MEDFORD DISTRICT

T.35.S., R.04.W., WILL MER.

Legend

Road Work

● Road to be Renovated

⌵ ⌶ Roadside Vegetation Management

Landing Right-of-Way



Harvest Unit



Road by Surface Type

⋯ Rocked Road

— Paved Road

— Natural Surface

⋯ Null or Not Known

Land Ownership

■ Bureau of Land Mgmt.

□ Private or Undetermined

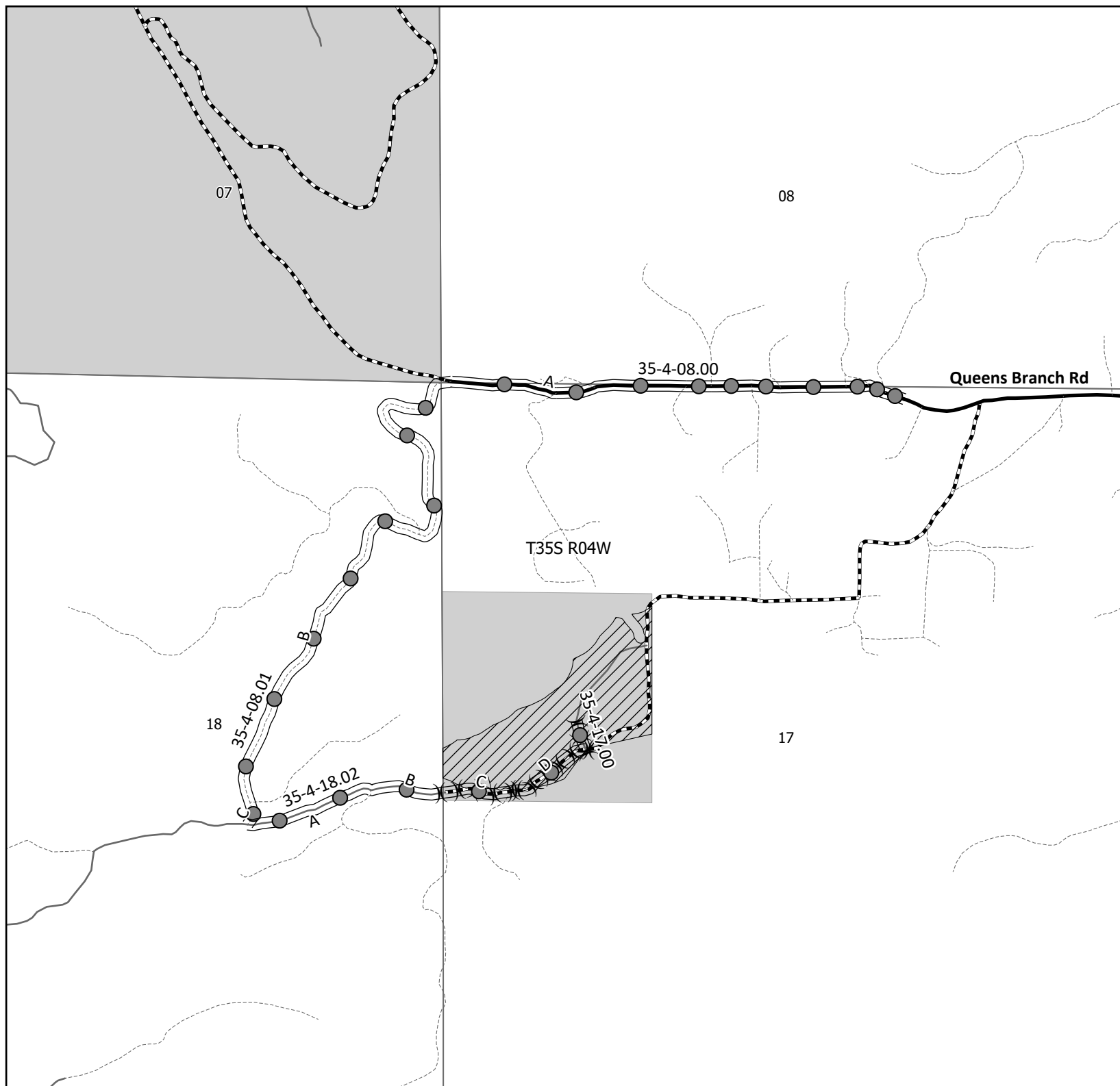


EXHIBIT C-2

Page 7 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD WORK MAP

U.S.D.I BLM MEDFORD DISTRICT

T.36.S., R.04.W., WILL MER.

T.36.S., R.05.W., WILL MER.

Legend

Road Work

 Road to be Renovated

 Roadside Vegetation Management

Landing Right-of-Way



Harvest Unit



Road by Surface Type

 Rocked Road

 Paved Road

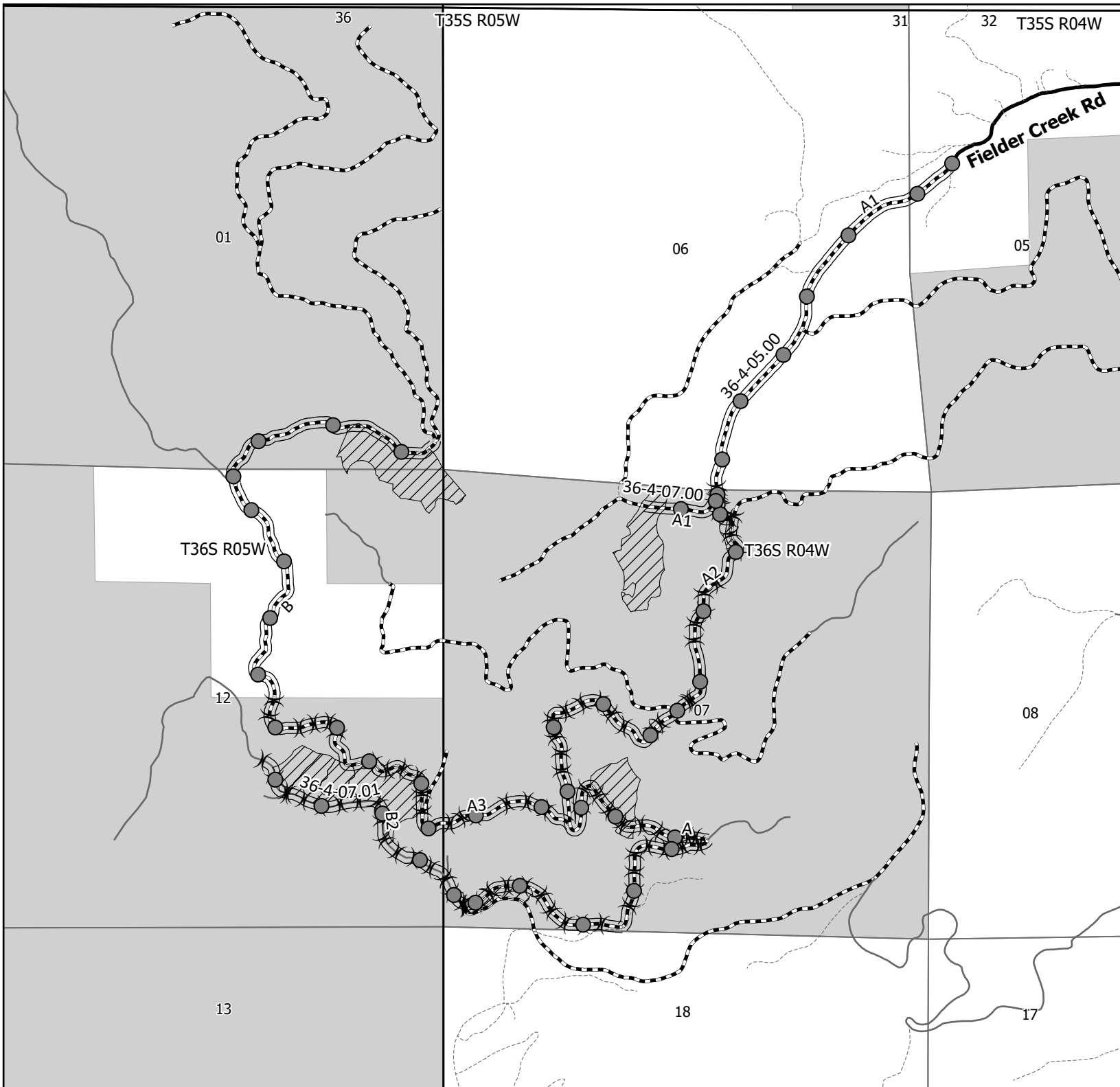
 Natural Surface

 Null or Not Known

Land Ownership

 Bureau of Land Mgmt.

 Private or Undetermined



ROAD NUMBER	FROM	TO	LENGTH **	CLEARING	GRUBBING	ROADSIDE VEGETATION MANAGEMENT	EXCAVATION (includes slides)	SEE CULVERT PIPE WORK LIST FOR TYPE										ROAD RENOVATION	ROAD BLADING	NEW CONSTRUCTION - PERMANENT	NEW CONSTRUCTION - TEMPORARY	CONSTRUCT ARMORED WATER DIPS ****	AGGREGATE****			GEOTEXTILE	ROADSIDE BRUSHING MECHANICAL	ROADSIDE BRUSHING - CHIP	REMOVE BARRICADE	CONSTRUCT BARRICADE	CONSTRUCT WATER BARS	SOIL STABILIZATION																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
								SIZE						18" FULL ROUND DOWNSPOUT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
								ROCK COMMON	18"	24"	30"	36"	42"		48"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
SPECIFICATION NO.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

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

ALWAYS
THINK
SAFETY

***Indicates gradation

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

***Armored water dip aggregate quantities are calculated at 40 CY per AWD

and are listed in aggregate column "4" minus grade A".

If road is surfaced with fine crushed rock, 20 CY of 1 1/2" minus crushed rock shall be placed on top of the 4" rock. Crushed Rock quantities are listed under aggregate column "1 1/2 minus crushed rock Grade C, C1". An AWD constructed on a natural surface road will not be surfaced with 20 CY of crushed rock surfacing.

Rock costs for splash pads are calculated under drainage.

ESTIMATE OF QUANTITIES*

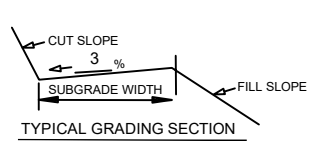
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT MEDFORD
DISTRICT MEDFORD, OREGON

DATE: APPROV:

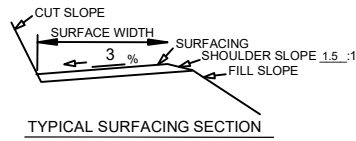
DRAWN:	FEF	SCALE: NONE
DATE:	JUNE 2026	SHEET: 1 OF 2
DRAWING NO.		ORM05-TS-2026 0003-C3

ROAD NUMBER	STATION OR MILE POST	TO STATION OR MILE POST	LENGTH MILE OR STATION	TYPICAL SECTION TYPE	ALIGNMENT	ROAD WIDTH (1, 3)		GRADIENT		CLEARING WIDTH				SURFACING (4)								REMARKS
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	From C/L		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE				
										L	R	L	R	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	MINIMUM WIDTH	COMP. DEPTH	TYPE (2)	GRADING	
34-4-10.00	0.00	4.82	4.82	5		17	3															
34-4-10.00	4.82	5.95	1.13	3		17	0															
34-4-15.00	0.00	0.32	0.32	5		16	3															
34-4-17.00	0.00	0.17	0.41	5		14	3															
34-4-17.00	0.17	0.41	0.24	3		14	0															
34-4-17.05	0.00	0.19	0.19	3		15	0															
34-4-17.06	0.00	0.06	0.06	5		15	0															
34-4-28.00	0.00	4.59	4.59	5		16	3															
34-4-31.00	0.00	0.06	0.06	5		14	3															
34-4-32.00	0.00	0.20	0.20	3		15	0															
35-4-05.00	0.00	3.71	3.71	5		16	3															
35-4-08.00	0.00	0.55	0.55	5		16	3															
35-4-08.01	0.00	0.77	0.77	3		15	0															
35-4-17.00	0.00	0.04	0.04	3		15	0															
35-4-18.02	0.00	0.44	0.44	3		15	0															
35-4-19.00	0.00	0.19	0.19	3		14	0															
35-5-21.00	0.00	3.04	3.04	5		16	3															
35-5-25.03	0.00	1.90	1.90	3		14	0															
35-5-25.06	0.00	0.14	0.14	5		17	3															

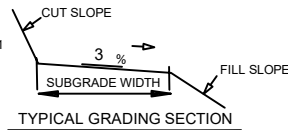
NOTES



TYPE 1



TYPE 2



TYPE 3

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

MATERIALS	CUT SLOPES	FILL SLOPES
COMMON	1:1	1 1/2:1
SOFT ROCK & SHALE	1/2:1	1 1/2:1
SOLID ROCK	1/2:1	ANGLE OF REPOSE
FULL BENCH CONSTRUCTION IS REQUIRED ON SIDE SLOPES		

2. **SURFACING TYPE**
A. PIT RUN ROCK MATERIAL
B. GRID ROLLED ROCK MATERIAL
C. SCREENED ROCK MATERIAL
D. CRUSHED ROCK MATERIAL
E. BITUMINOUS SURFACE TREATMENT (BST).
F. NATURAL.

3. **TURNOUTS**
A. WIDTH 10 FT. IN ADDITION TO SUBGRADE WIDTH, OR AS
SHOWN ON THE PLANS.
B. LOCATED APPROXIMATELY AS SHOWN ON THE ROAD PLANS.

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

5. **CLEARING WIDTH**
SEE SUBSECTION 200

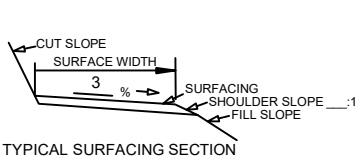
**ALWAYS
THINK
SAFETY**

REV. NO.	DESCRIPTION	DATE	APPROV.
----------	-------------	------	---------

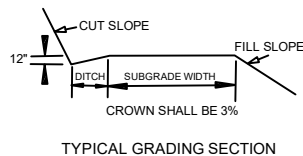
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU
OF LAND MANAGEMENT MEDFORD DISTRICT MEDFORD,
OREGON

SPECIFICATION SHEET

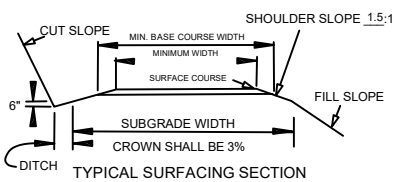
DRAWN: FEP	SCALE NONE
DATE: JUNE 2026	SHEET 1 OF 2
DRAWING NO.	ORM05-TS-2026.0003 C4



TYPE 4



TYPE 5



TYPE 6

TIMBER SALE ROAD SPECIFICATIONS

TABLE OF CONTENTS

SECTION	DESCRIPTION
100	General
200	Clearing and Grubbing
300	Excavation and Embankment
400	Pipe Culverts
500	Renovation and Improvement of Existing Roads
600	Watering
900	Aggregate Base Course - Screened Rock
1200	Aggregate Surface Course - Crushed Rock
1300	Geotextiles
1400	Slope Protection
1600	Quarry and Borrow Pit Development
1700	Erosion Control
1800	Soil Stabilization
2100	Roadside Brushing
2600	Hot Mix Asphalt Concrete Paving

GENERAL – 100

101 - Prework Conference(s):

A prework conference will be held prior to the start of new construction, improvement, renovation, quarry development, surfacing, or mulching operations. The Purchaser shall request the conference at least 48 hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or his representatives, subcontractors and/or his representatives and the Authorized Officer and/or his representatives.

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

102 - Definitions:

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

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

ACI - American Concrete Institute

TIMBER SALE ROAD SPECIFICATIONS

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.

TIMBER SALE ROAD SPECIFICATIONS

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.

TIMBER SALE ROAD SPECIFICATIONS

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

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

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

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

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

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

Spalls - Flakes or chips of stone.

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

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

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

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

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

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

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

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

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

TIMBER SALE ROAD SPECIFICATIONS

and strains.

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

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

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

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

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

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

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

102a - Tests Used in These Specifications:

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

TIMBER SALE ROAD SPECIFICATIONS

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

<u>AASHTO T 119</u>	Slump of hydraulic cement concrete.
<u>AASHTO T 152</u>	Air content of freshly mixed concrete.
<u>AASHTO T 166</u>	Specific Gravity of compacted Bituminous Mixtures.
<u>AASHTO T 176</u>	Shows relative portions of fine dust or claylike materials in soil or graded aggregate.
<u>AASHTO T 180</u>	(OSHD 106-71) moisture density relationship of soil same as AASHTO T 99 proctor but uses a 10-lb rammer & 18-in drop height.
<u>AASHTO T 191</u>	<u>Sand Cone</u> . Density of soil in place: For subgrade use 6-inch or 12-inch cone. For rock surfacing for 1-1/2-inch minus to 3-inch minus use 12-inch cone.
<u>AASHTO T 205</u>	<u>Rubber balloon</u> . Density of soil in place. Use for compacted or firmly bonded soil.
<u>AASHTO T 209</u>	Maximum Specific Gravity of Bituminous Paving Mixtures.
<u>AASHTO T 210</u>	Durability of aggregates based on resistance to produce fines.
<u>AASHTO T 224</u>	Correction for coarse particles in the soil.
<u>AASHTO T 238</u>	Density of Soil and Soil-Aggregate in place by nuclear methods.
<u>AASHTO T 248</u>	Reducing field samples of aggregate to testing size by mechanical splitter, quartering, or miniature stockpile sampling.
<u>ASTM D 4564</u>	Determination of relative density of cohesionless soils.
<u>DMSO (dimethyl sulfide)</u>	Determines volume of expanding clays in aggregates. Usually associated with marine basalts.

- 103 Compaction equipment shall meet the following requirements:
- 103a Padded Drum Tamping Rollers. The unit shall consist of a drum with pads, be either self propelled or towed by a tractor, and capable of operating at a speed of 6 mph. The drum shall be no less than 48 inches in diameter over the pads and not less than 60 inches in width. The pads shall have a minimum height of 3 inches, and a face area of not less than 14 square inches. The weight at drum shall be no less than 8000 lb.
- 103b Sheepfoot 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

TIMBER SALE ROAD SPECIFICATIONS

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 tamping 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 tamping 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.

103c Smooth-wheel power rollers. Smooth-wheel power rollers shall either be of the 3-wheel type, weighing not less than 10 tons, or of the tandem type, 2-wheel or 3-wheel, weighing not less than 8 tons. Smooth-wheel roller shall provide compression of 325 pounds per linear inch of width of rear wheels or drum.

103d Pneumatic-tired rollers. Pneumatic-tired rollers shall be of the double-axle type equipped with pneumatic tires each of equal size and type. The spacing between the sidewalls of adjacent tires shall not exceed 5 inches and the rear tires shall be staggered in relation to the front tires. The rolling width of the unit shall be not less than 60 inches, exclusive of the power unit. The roller shall be so constructed that the contact pressure is uniformly distributed on all of the tires, and the tires shall be inflated to maintain the air pressure in the several tires within a total tolerance of 5 pounds per square inch. The roller shall be so constructed that the total weight shall be between 1,000 and 2,000 pounds per tire. The actual operating weight of the rollers shall be as ordered by the Authorized Officer.

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

103e Grid roller. A grid roller shall consist of two or more cylindrical drums independently mounted on a common shaft in a rigid frame. Each drum shall have a minimum outside diameter of 5 feet and a minimum width of 2 feet 6 inches. The overall width of the roller exclusive of frame shall be not less than 5 feet 6 inches of which no more than 6 inches shall be used for center spacing between two roller drums. The face of the drums shall have the appearance of woven open-mesh made by interlacing bars of no less than 1-1/4 inches nor more than 1-3/4 inches diameter space spaced on 4-1/2 inches to 5-1/2 inches center. Net opening between the bars shall be no less than 3 inches nor more than 4 inches. The roller shall be so constructed that counterweights can be

TIMBER SALE ROAD SPECIFICATIONS

used to adjust the gross weight of the roller to no less than 27,000 pounds. The grid roller shall be drawn by a power unit capable of propelling the fully loaded roller through 6 inches of loose embankment material at a speed of at least 4 miles per hour.

103f Vibratory roller. The drum diameter shall be 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 no less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibration frequency shall be regulated in steps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of no less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced no more than 8-1/2 inches apart.

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

TIMBER SALE ROAD SPECIFICATIONS

CLEARING AND GRUBBING - 200

- 201 This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans and as staked on the ground.
- 201a This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions from borrow pits, quarries, channel changes, stockpile sites, etc., in accordance with these specifications and as staked on the ground.
- 202 Where clearing limits have not been staked, established by these specifications, or shown on the plans, the limits shall extend 6 feet back from the top of the fill slope and 6 feet out from the toe of the fill slope.
- 202a Where clearing limits for structures have not been staked or shown on the plans, the limits shall extend 6 feet out from the outside edge of the structure.
- 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 202a or as shown on the plans or as staked on the ground.
- 203a Brush under 1 foot in height need not be cut within the limits established for clearing.
- 203b Standing trees and snags to be cleared shall be felled within the limits established for clearing unless otherwise authorized.
- 203c Disposal of logs from private timber cleared within the limits established as shown on the plans or as staked on the ground shall consist of decking at a location designated by the Authorized Officer.
- 204 Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a, 204b, 204c, 204d and 204e between the top of the cut slope and the toe of the fill slope. Undisturbed stumps, roots and other solid objects which will be a minimum of 3 feet below subgrades or slope surfaces or embankments are excluded.
- 204a Stumps including those overhanging cut banks, shall be removed within the required excavation limits.

TIMBER SALE ROAD SPECIFICATIONS

- 204b Stumps and other protruding objects shall be completely removed within the limits of required embankments having heights of less than 4 feet. When authorized, stumps and other nonperishable objects may be left provided they do not extend more than 6 inches above the existing ground line. Stumps on the fill slope that would interfere with future grading and snow plowing operations shall be removed. Any holes left in the fill slope shall be filled with approved material.
- 204c On excavated areas, roots and embedded wood shall be removed to a depth not less than 6 inches below the subgrade.
- 204d On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.
- 204e Roots and embedded wood material shall be removed to a depth not less than 1 foot below embankment subgrades or slope surfaces.
- 205 Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections. Such debris will, however, be permitted to remain under waste material from full-bench construction on steep side slopes.
- 206 Clearing and grubbing debris shall be disposed of by burning in accordance with Subsection 207, and/or piling in accordance with Subsection 211 and at the following road locations:

Road No.	Total Miles	Activity Type	Disposal Method
34-4-10.00	2.81	Rdside Veg. Mgmt	Pile and Burn
34-4-17.00	0.17	Rdside Veg. Mgmt	Pile and Burn
34-4-17.05	0.19	Rdside Veg. Mgmt	Pile and Burn
34-4-17.06	0.05	Rdside Veg. Mgmt	Pile and Burn
34-4-28.00	1.09	Rdside Veg. Mgmt	Pile and Burn
34-4-31.00	0.06	Rdside Veg. Mgmt	Pile and Burn
34-4-32.00	0.07	Rdside Veg. Mgmt	Pile and Burn
35-4-05.00	1.23	Rdside Veg. Mgmt	Pile and Burn
35-4-17.00	0.04	Rdside Veg. Mgmt	Pile and Burn
35-4-18.02	0.19	Rdside Veg. Mgmt	Pile and Burn
35-4-19.00	0.19	Rdside Veg. Mgmt	Pile and Burn
35-5-25.03	1.21	Rdside Veg. Mgmt	Pile and Burn
35-5-25.06	0.14	Rdside Veg. Mgmt	Pile and Burn
35-5-26.00	0.37	Rdside Veg. Mgmt	Pile and Burn
35-5-26.04	1.51	Rdside Veg. Mgmt	Pile and Burn
35-5-35.00	1.58	Rdside Veg. Mgmt	Pile and Burn
36-4-05.00	1.23	Rdside Veg. Mgmt	Pile and Burn
36-4-07.01	1.42	Rdside Veg. Mgmt	Pile and Burn

TIMBER SALE ROAD SPECIFICATIONS

- 206a Notwithstanding Subsections 204, 204a, and 204d clearing and grubbing debris resulting from landing construction as shown on Exhibit A, shall be placed at disposal sites and shall not be covered with excavated material. Location of disposal sites will be determined by the Authorized Officer.
- 207 The Purchaser shall prepare a burning plan for the disposal of clearing and grubbing debris 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.
- 209a Clearing and grubbing debris shall be reduced to chips having a maximum thickness of 2 inches and faces not exceeding 6 square inches on an individual surface. Chips will be used as a mulch and be produced and stockpiled at locations that will not interfere with construction, and ultimately spread over designated portions of embankments and cut slopes in layers not to exceed 3 inches in loose thickness.
- A chip blower approved by the Authorized Officer shall be used to apply the chips, and after placement of the chips, 50 pounds of available nitrogen per ton of chips shall be applied to the chipped areas.

TIMBER SALE ROAD SPECIFICATIONS

- 210 Disposal of clearing and grubbing debris, stumps, and cull logs shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.
- 210a Disposal of clearing and grubbing debris, stumps, and cull logs on non-government property by scattering, burning, chipping, and piling this material outside of clearing limits will be permitted provided the Purchaser obtains a written permit from the property owner on whose property the disposal is to be made. The Purchaser shall furnish the Authorized Officer a certified copy of the permit and a written release from the property owner absolving the Government from responsibilities in connection with the disposal of debris on said property.
- 210b Clearing and grubbing debris, stumps, and cull logs resulting from road construction on non-Government property shall be loaded and hauled to designated areas, as shown on the plan. Disposal shall be by burning in accordance with Subsection 207, and/or burying in accordance with Subsection 208, and/or chipping in accordance with Subsection 209, and/or scattering in accordance with Subsection 210, and/or piling in accordance with Subsection 211.
- 211 Disposal of clearing and grubbing debris stumps and cull logs shall be by piling on government lands outside of established clearing limits in an area and in a manner acceptable to the Authorized Officer.
- 212 No grading will be permitted prior to completion and approval by the Authorized Officer of the required clearing and grubbing work, except that stump grubbing may proceed with the excavation of the road prism.
- 213 No clearing or grubbing debris shall be left lodged against standing trees.

TIMBER SALE ROAD SPECIFICATIONS

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. 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

TIMBER SALE ROAD SPECIFICATIONS

dimension shall be placed in successive layers not exceeding 2 feet in thickness. Individual rocks and boulders greater than 12 inches in diameter may be used to construct 12-foot embankment layers, provided they are carefully distributed, with interstices filled with fine material to form a dense and compact mass.

305d Where embankments are constructed predominantly of blasted rock material, depth of layers shall not exceed 4 feet. Rock fragments having dimensions greater than 4 feet will be permitted provided that they have no dimensions greater than 6 feet and that clearance between adjacent fragments is adequate for the placing and compacting of material in horizontal layers as specified, and that no part of the larger fragments comes within 4 feet of subgrade.

306 Layers of embankment, selected borrow, final subgrade and selected roadway excavation material as specified under Subsections 305a, 305b, 317 and 317a shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103a, 103b, 103c, 103d, 103f, 103g and 103i and in accordance with the following table:

Landing No.	Road No.	Subsection 306	Landing Type
H-1	35-5-26.04	306f	Log/Service
H-2	35-4-19.00	306f	Log
H-3	35-5-35.00	306f	Log

306a Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be 1 hour of continuous compacting for each 150 cubic yards in place or fraction thereof.

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

Landings and Temporary Roads shall be compacted by routing construction equipment over full width.

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

306g All fill slopes shall be compacted to 75 percent of maximum density, either by

TIMBER SALE ROAD SPECIFICATIONS

walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.

- 307 The Purchaser shall establish control sections as shown on the plans and/or determined by the Authorized Office on which the incremental measurements of compaction by a nuclear densometer, penetrometer or Clegg hammer can be made. No more than 3 sections will be required for the designated road and each section will not exceed 500 feet in length. Construction conditions under which the tests are conducted shall approximate normal construction conditions for the type of compaction work required in Subsection 306b. Compaction achieved on these control sections shall be used to establish calibration standards for the nuclear densometer, penetrometer, or Clegg hammer for the rest of the project.
- 308 In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.
- 309 The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance 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.
- 310 Serrated cut slopes shall be constructed so that the final slope line shall consist of a series of steps. The step rise and tread dimensions shall be as shown on the plans.
- 310a Steps are to be constructed on an approximately horizontal grade as determined by visual inspection. Construction on the first step shall begin immediately below the top of the cut. Each successive step shall be constructed in the opposite direction from the construction of the preceding one to minimize build up of loose excavated material at the ends of the cuts. Loose material at the end of the cuts shall be removed and the steps blended into the natural groundline. Where rock too hard to rip is encountered within a cut, steps shall be blended into the rock.
- 310b Each step shall be completed before beginning the following one, except when permitted by the Authorized Officer; portions of steps may be constructed at the ends of cuts to accommodate general construction practices.
- 311 In solid rock cuts where pockets that will not drain are formed by blasting below the subgrade elevation, drainage shall be provided by ditching to the edge of the subgrade 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

TIMBER SALE ROAD SPECIFICATIONS

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 Subsection 306.

- 313 In cut areas where solid rock is encountered at, or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.
- 314 When heavy clays, muck, clay shale, or other deleterious material for forming the roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected borrow material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306. Unsuitable material shall be disposed of as directed by the Authorized Officer.
- 315 Borrow material required for the construction of embankment or for other portions of the work shall be obtained from sources as shown on the plans.
- 316 Borrow material from sources selected at the Purchaser's option shall be inspected and approved in writing by the Authorized Officer prior to placement.
- 317 Selected borrow shall consist of talus material, finely broken rock, gravel, or other material of granular or favorable characteristics from sources shown on the plans.
- 317a Where indicated on the plans, the Purchaser shall conserve excavation material consisting of talus material, gravel, finely broken rock, or other material of granular or favorable characteristics for placement on the top portions of the roadbed as shown on the plans and as directed by the Authorized Officer.
- 318 Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed in lifts not to exceed 6 inches in depth until the required thickness shown on the plans is attained.

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

TIMBER SALE ROAD SPECIFICATIONS

- 318a Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed to a depth which, after compaction, will provide the depth shown on the plans. Compaction for temporary roads and landings shall be accomplished by routing construction and hauling equipment over the full width of the roadbed. Compaction for permanent roads shall be as described in Subsection 306
- 319 Borrow pits shall be subject to the development, operation, and reclamation requirements set forth under Section 1600 of these specifications.
- 320 Ditches shall conform to the slope, grade, dimensions, and shape of the required cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.
- 321 Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water.
- 322 When so indicated on the plans, selected coarse rock encountered in the excavation shall be conserved for slope protection or special rock embankment purposes and placed in accordance with the requirements and details of section 1400 of these specifications and as shown on the plans.
- 323 In the construction of channel changes and stream-crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.
- 324 Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.
- 325 Where shown on the plans, topsoil shall be conserved from areas of excavation or embankment. Topsoil shall consist of friable earth material which may include the natural or native sod and be reasonably free of undesirable subsoil, large roots, wood refuse, and coarse gravel or stones which might interfere with the sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. The removed topsoil shall be transported and deposited in stockpiles at locations shown on the plans.
- 326 Conserved topsoil shall be uniformly spread and compacted over areas shown on the plans, and as staked on the ground, and as directed by the Authorized Officer.
- 327 The finished grading shall be approved in writing by the Authorized Officer in segments. The Purchaser shall give the Authorized Officer 3 days notice prior to final inspection of the grading operations and start of surfacing operations.
- 328 The Purchaser shall adopt methods and procedures in using explosives, which will prevent damage to adjacent landscape features, and which will minimize scattering

TIMBER SALE ROAD SPECIFICATIONS

rocks and other debris outside the road prism.

- 328a The Purchaser shall establish and be responsible for blasting techniques and shall furnish the Authorized Officer, prior to starting drilling operations, a blasting plan specifying drill-hole diameter, drill-hole spacing, depth of drilling, type of explosive to be used, loading pattern, sequence of firing, the location where the plan is to be used, and other relevant data. Acceptance of the drilling and blasting plan does not relieve the Purchaser of responsibility or liability for the results of the blasting.

TIMBER SALE ROAD SPECIFICATIONS

PIPE CULVERTS - 400

- 401 This work shall consist of furnishing and installing pipe culverts, downspouts, elbows and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer. 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.
- 402a Where a fence needs to be opened to replace the culvert provisions shall be made to prevent cattle from passing through the opening.
- 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.
- 405 Corrugated steel riveted and helical pipe culverts, pipe-arch culverts, and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274 as specified on the plans.
- 405a Corrugated-aluminized steel-welded pipe culverts and pipe-arch culverts and special sections shall conform to the requirements of AASHTO M 36 and AASHTO M 218, AASHTO M 274, or AASHTO M 289 as specified on the plans.
- 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.
- 406b Coupling bands produced from flat galvanized steel sheets with impressed dimples will

TIMBER SALE ROAD SPECIFICATIONS

be permitted only for connecting annular corrugated steel pipe to helically corrugated steel pipe. Such coupling bands shall conform to the width requirements shown on the plans.

- 406c Elbow sections used in conjunction with full-round pipe culvert downspouts shall be connected at both ends by "Hugger"-type bands, and "O"-ring neoprene gaskets shall be inserted between the band and pipe as shown on the plans to insure a water-tight joint.
- 406d Pipe sections shall be connected with "Hugger"-type, flange-end, or annular coupling bands using sleeve gaskets, "O"-ring neoprene gaskets, or 1-inch neoprene flat gaskets as shown on the plans and/or as directed by the Authorized Officer. "Hugger"-type bands shown on the Culvert Band Detail drawings.
Dimple bands shall not be accepted.
- 406e Bituminous coated bands or a full-size gasket shall be used to join aluminum pipe culvert to galvanized steel pipe culvert.
- 406f Channel-type or flanged-end coupling bands may be used on helical pipe with reformed rolled ends and flanged specifically to receive these bands. Such coupling bands shall conform to the requirements shown on the plans.
- 407 Special sections, such as elbows, branch connections, and flared-end sections, shall be of the same gauge as the pipe to which they are joined, and shall conform to the requirements of AASHTO M 36 and AASHTO M 218 or AASHTO M 274.
- 407a Flumes and half rounds conforming to the material and construction requirements shall be constructed for culverts as shown on the plans and at the specified locations.
- 407c Flexible butyl-rubber, plastomate, nylon-vinyl fabric, and neoprene fabric sleeves conforming to the material and construction requirements shall be constructed for culverts as shown on the plans and at the specified locations.
- 408 Pipe culverts 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.
- 409 Structural-plate pipe culverts and pipe-arch culverts shall be installed in accordance with the plans and detailed erection instructions furnished by the manufacturer. One copy of the erection instructions shall be submitted to the Authorized Officer 3 days prior to erection.

TIMBER SALE ROAD SPECIFICATIONS

- 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 referred to as 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 crushed rock material in accordance with Section 1200 gradation E-1.
- 413 Pipe culverts shall be bedded on a selected granular or crushed rock material in accordance with Section 1200 gradation E-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.
- 414 The invert grade of the bedding shall be cambered in accordance with the requirements and details shown on the plans and as directed by the Authorized Officer.
- 414a The invert grade of the bedding shall be cambered at the middle ordinate a minimum of 1 percent of the total length of the drainage structure. Camber shall be developed on a parabolic curve.
- 415 Inspection of pipe culverts having a diameter of 48 inches and pipe-arch culverts having a height of 40 inches or a cross-sectional area greater than or equal to 13 square feet shall be made before backfill is placed. Culverts found to be out of alignment or damaged shall be replaced, reinstalled, or repaired as directed by the Authorized Officer at the Purchaser's expense.
- 416 Side fill material 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 in accordance with Section 1200 gradation E-1, or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.
- 417 Side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in

TIMBER SALE ROAD SPECIFICATIONS

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.

- 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.
- 420 Perforated pipe for underdrains shall be placed in accordance with plans and specifications. Pipe sections shall be securely joined together with perforations down. Inlets of underdrains shall be plugged, and outlets shall be covered with securely fastened fiberglass insect screens. Underdrain locations shall be identified with Culvert Markers.
- 421 Trenches and bedding rock necessary for the installation of perforated pipe shall conform to the lines, grades, dimensions, and typical diagram as shown on the plans.
- 422 Drain rock shall be carefully placed on geotextile material required in section 1300, to prevent damage or displacement. A minimum 4-inch bedding of drain rock shall be placed and compacted in the bottom of the trench before installing the underdrain pipe. Underdrain pipe shall be firmly embedded in this layer and drain rock placed to the height shown on the plans, or as directed by the Authorized Officer, and then compacted. Care shall be taken not to displace the underdrain pipe or the covering at open joints. Geotextile material shall be overlapped on top of the drain rock a minimum of 1 foot, as shown on the plans. Backfill shall then be placed and compacted in 1 foot lifts to the required grades.
- 423 Construction of catch basins and ditch dams conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for grade culverts at the following locations:

TIMBER SALE ROAD SPECIFICATIONS

- 424 Construction of splash pads conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for culverts at the following locations:
- 425 Where pervious materials are used for backfill and bedding, collars consisting of selected impervious material shall be placed at the inlet and at various intervals along the pipe barrel as shown on the plans and as directed by the Authorized Officer.
- 426 Culvert markers consisting of 2-inch by 1-inch by 2-foot treated wood posts shall be installed by the Purchaser at grade culverts as shown on the plans and as directed by the Authorized Officer.
- 427 Record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.
- 428 Remove and dispose of old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the work site within three 3 working days of completion of the culvert replacement work for each road prior to road acceptance.
- 429 Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site in a manner that will avoid damage to adjacent property. Provide for downstream waterflow with no more 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.

TIMBER SALE ROAD SPECIFICATIONS

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 and as shown on the plans.
- 501a This work shall include the removal and disposal of slides in accordance with these specifications
- 502 The existing road surface shall be scarified to a depth of 6 inches where needed to eliminate potholes and surface irregularities then bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans:
- 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.
- 503 Debris from slides shall be disposed of as directed by the Authorized Officer.
- 503a Debris from the slides shall be hauled to designated disposal sites or shall be used as embankment as shown on the plans and marked on the ground.
- 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 or 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 103a, 103b, 103c, 103d, 103f, 103g and 103i and in accordance with the following table:
- 504a Minimum compaction required shall be 1 hour of continuous rolling for each 3 stations of road 6 passes over each full-width layer, or fraction thereof, as measured along the centerline per layer of material.
- 505 The Purchaser shall establish control sections of road as shown on the plans and as determined by the Authorized Officer on which the incremental measurements of compaction by a nuclear densometer or penetrometer can be made No more than 3 sections will be required for the designated road. Sections will not exceed 500 feet in length. Construction conditions under which the tests are made shall approximate normal construction conditions for the type of compaction work required in Subsection 306 and 306a. Calibration of the nuclear densometer or

TIMBER SALE ROAD SPECIFICATIONS

penetrometer by this procedure shall constitute the basis for determining compliance with the density specified under Subsection 504b.

506 The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

507 Existing and new drainage structures at the locations in the table below shall be replaced with structures of the type, gauge, diameter, and length shown on the plans and in accordance with the placement requirements set forth under section 400 of these specifications:

Road No.	Sta./M.P.
34-4-17.00	AWD 0.25
36-4-07.00	AWD 0.04

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 1 day prior to surfacing operations. The Purchaser shall give the Authorized Officer 3 days' notice prior to final inspection of the grading operations.

TIMBER SALE ROAD SPECIFICATIONS
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.
- 604 Water required under these specifications shall be obtained at the time(s) and at the location(s) indicated below:

Common Name	Willamette Meridian			Road No.	M.P.
	Section	T	R		
John F. Fleming Veteran's Memorial Park Boat Launch	21	36S	04W	Hwy 99	0.10

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

- 605 The Purchaser shall secure the necessary water permits and pay all required water fees for use of the water sources specified under Subsection 604 for use of water sources selected by the Purchaser and approved by the Authorized Officer.
- 606 The Purchaser shall construct pump chances and heliponds as shown in the plans and as directed by the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS
AGGREGATE BASE COURSE – 900
SCREENED ROCK MATERIAL

- 901 This work shall consist of furnishing, hauling, and placing one or more lifts of screened rock material on roadbeds and landings approved for placing screened rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.
- 902 Screened rock materials used in this work shall be obtained from the sources shown on the plans. Development and mining of such sources shall be in accordance with Subsection 1601 and Subsection 1602.
- 902a Screened rock materials to be used in this work may be obtained from the sources selected by the Purchaser, at his option, providing the rock materials furnished comply with these specifications and the sources are approved in writing by the Authorized Officer prior to use.
- 903 Screened rock material shall conform to the following gradation requirements:

Table 903
SCREENED ROCK MATERIAL GRADATION REQUIREMENTS
Percentage by Weight Passing Square Mesh Sieves
(AASHTOT 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.

TIMBER SALE ROAD SPECIFICATIONS

- 904a Screened rock material shall show a durability value of not less than 35 as determined by AASHTO T 210.
- 905 The roadbed as shaped and compacted under sections 300 and 500 of these specifications, shall be approved in writing by the Authorized Officer prior to placement of screened rock materials. Notification for final inspection, prior to rocking, shall be 72 hours prior to that inspection and shall be 10 days prior to start of rock operations.
- 906 Screened rock material shall be placed in layers not to exceed 6 inches in thickness. Where the required total thickness is more than 6 inches, the rock material shall be shaped and compacted in two or more layers of approximately equal thickness.
- 906a Screened rock materials used to repair or reinforce a soft, muddy, frozen, yielding, or rutted subgrades shall not be construed as surfacing under this specification.
- 907 Filler or binder material obtained from sources shown on the plans and approved by the Authorized Officer shall be uniformly blended with the screened rock material on the road. Filler or binder materials shall be free from stones, vegetative matter, and other deleterious materials.
- 908 Screened rock material shall be blade-processed and spread to required dimensions. Processing shall be performed in such a manner as to minimize aggregate segregation.
- 909 Screened rock material shall be compacted by routing construction and hauling equipment over the full width of each layer placed.
- 910 Screened rock material, bladed and shaped as specified, shall be moistened or dried to optimum moisture content for maximum compaction and compacted to full width by compaction equipment conforming to the requirements of Subsections 103f, 103g and 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.
- 911 The Purchaser shall place in stockpile screened rock material sites as shown on the plans. Such material shall be used as shown on the plans and as directed by the Authorized Officer. Crushed sandstone material stockpiled shall be placed on the designates roads prior to termination of the timber sale contract.

TIMBER SALE ROAD SPECIFICATIONS

- 912 Acceptance tests will be made at the source from samples taken of screened rock materials being produced. Test data obtained by BLM from testing screened rock materials shall be made to the Purchaser.

TIMBER SALE ROAD SPECIFICATIONS
AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

- 1201 This work shall consist of furnishing, hauling, and placing one or more layers of crushed rock material on roadbeds approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected, and shall be removed from the road at the purchaser's expense.
- 1202 Crushed rock materials used in this work shall consist of quarry rock, stone, gravel, or other approved materials obtained from sources shown on the plans. Development and mining of such sources shall be in accordance with Subsection 1601 Subsection 1602 of these specifications.
- 1202a Crushed rock materials used in this work may be obtained from commercial sources selected by the Purchaser at his option and expense, providing the rock materials furnished comply with the specifications providing laboratory tests performed by BLM of furnished rock samples in accordance with Subsection 1220 indicate compliance with the specifications in this section.
- 1203 When crushed rock material is produced from gravel, 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:

TIMBER SALE ROAD SPECIFICATIONS

TABLE 1204

AGGREGATE SURFACE COURSE

CRUSHED ROCK MATERIAL

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

GRADATION

	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 and also perform testing for sand equivalency requirements using AASHTO T 176 testing procedures. Prior to testing, each sample shall be split, making one half of the sample, with proper identification, available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within 24 hours of sampling. The Purchaser shall provide test results for the first 500 cubic yards produced prior to commencing production crushing and hauling.
- 1205 Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of 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.
- 1206a The crushed rock material shall show a loss of not more than 20 percent by

TIMBER SALE ROAD SPECIFICATIONS

weight, when submerged in DMSO, dimethyl sulfoxide, for five days, according to Federal Highway Administration Region 10 Accelerated Weathering Test Procedure.

1207 That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of 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.

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

TABLE 1207a

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

1208 If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources shown on the plan 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 base course shall be completed and approved in writing, prior to placing crushed rock material, in accordance to the

TIMBER SALE ROAD SPECIFICATIONS

requirements of Subsections 300 and 500 for placing on the roadbed or landings and Subsection 900 for placing the screened rock on the roadbed or landing. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 10 days prior to start of surfacing operations.

- 1210 Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed, and landings, and base course in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Compacted layers shall not exceed 4 inches in depth. When more than one layer is required, each shall be shaped, processed, compacted, and approved in writing by the Authorized Officer before the succeeding layer is placed. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.
- 1210a Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification unless approved by the Authorized Officer.
- 1211 Crushed rock material shall be compacted by routing construction and hauling equipment over the full width of each layer placed.
- 1212 Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to the requirements of Subsections 103c, 103d, 103f. Minimum compaction shall be 1 hour of continuous compacting for each 6 stations full-width layer, or fraction thereof.
- 1213 Each layer of crushed rock material placed, uniformly processed, and shaped as specified shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width until a uniform density of no less than 5 percent of the maximum density is attained as determined by a nuclear testing device calibrated by the incremental test method specified under Subsection 1214 95 percent of maximum density is attained as determined by AASHTO T 99, Method C or D.
- 1214 The Purchaser shall establish control sections as shown on the plans and as directed by the Authorized Officer on which incremental measurements of compaction by a nuclear testing device can be made. Construction conditions under which the tests are conducted shall approximate normal construction conditions for the type of compaction work required. Calibration of the nuclear

TIMBER SALE ROAD SPECIFICATIONS

testing device by this procedure shall constitute the basis for determining compliance with the required density.

- 1215 The Purchaser is authorized to remove crushed rock material from the BLM stockpile listed below for placement on the roads in accordance with the requirements and details shown on the plans and Exhibit C-3. The Purchaser shall maintain records of material removed from each of the stockpile sites designated above. These records shall be submitted to the Authorized Officer upon completion of the surfacing operation.

Stockpile No.				Approx. Cu. Yds.	Grad.	Road No.
	Sec.	T.	R.			
Fielder Mtn	07	36S.	04W	40	Pit-run	36-4W-07.03

- 1216 The Purchaser shall place 500 cubic yards of Gradation C-1 on table in Subsection 1204 crushed rock material on haul roads or at a quarry site designated by the Authorized Officer or his representative. This work is not required for road acceptance under Section 18 of this contract.

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

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

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

- 1219 Upon completion of the work, stockpile sites designated on the plans as temporary shall be scarified as directed by the Authorized Officer, and mulched

TIMBER SALE ROAD SPECIFICATIONS

and seeded in accordance with Section 1800, and planted as directed by the Authorized Officer.

- 1219a When shown on the plans, the access roads to the temporary stockpile sites shall be blocked, water-barred, scarified, mulched, seeded, and planted in accordance with Section 1800 and as directed by the Authorized Officer.
- 1220 Crushed rock material required under Section 1200 of these specifications shall first be placed in stockpile after crushing. The Purchaser shall notify the Authorized Officer a minimum of 3 days in advance of the date he intends to commence the crushing and stockpiling operations so that progressive test samples can be taken as the crushed rock material is produced. Sampled materials shall remain in stockpile until such time the Authorized Officer receives test results which indicate compliance with Subsections 1203, 1204, 1205, 1206, 1207, 1207a, 1208. Crushed rock material so tested shall be approved in writing by the Authorized Officer within 6 days from sampling date. Approved material may then be removed from stockpile for placement on the designated road. In no event shall the Purchaser place crushed rock materials on the road from sources other than the tested and approved stockpiles. Noncompliance with the requirements of this subsection shall constitute grounds for the rejection of all crushed rock materials furnished under this contract.

TIMBER SALE ROAD SPECIFICATIONS

GEOTEXTILES – 1300

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

TIMBER SALE ROAD SPECIFICATIONS

1306 The geotextile material used to construct silt fences shall meet the following requirements:

TABLE 1306
Physical Requirements for Silt Fence

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

(1) Maximum average roll value.

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

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

1307 Where subgrade reinforcement or material separation is required, clearing, grubbing, and excavation of the subgrade shall be completed prior to the placement of geotextile material. The subgrade shall be leveled and smoothed to remove lumps and depressions which exceed 6 inches in height and depth. Small pieces of woody debris shall be removed. Light vegetation, i.e., grasses, weeds, leaves, and other small woody debris, may be left in place.

1308 The geotextile material shall be installed directly on the prepared surface. Place the geotextile smooth and free of tension, stress, or wrinkles. Fold or cut the geotextile to conform to curves. Overlap in the direction of construction. Overlap the geotextile a minimum of 2 feet at the ends and sides of adjoining sheets or sew the geotextile joints according to manufacturer's recommendations. Do not place longitudinal overlaps below anticipated wheel loads. Hold the geotextile in place with pins, staples, or piles of cover material.

1309 End-dump the cover material onto the geotextile from the edge of the geotextile or from previously placed cover material. Do not operate equipment directly on the geotextile. Spread the end-dumped pile of cover material maintaining a minimum lift thickness of 4 inches. Compact the cover material with rubber-tired or non-vibratory smooth drum rollers. Avoid sudden stops, starts, or turns of the construction equipment. Fill all ruts from construction equipment with additional cover material. Do not re-grade ruts with placement equipment.

TIMBER SALE ROAD SPECIFICATIONS

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

TABLE 1311a
Physical Requirements for Separation Geotextile

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

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

(2) Maximum average roll value.

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

TABLE 1311b
Physical Requirements for Stabilization Geotextile

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

TIMBER SALE ROAD SPECIFICATIONS

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

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

TIMBER SALE ROAD SPECIFICATIONS

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

TABLE 1315
Physical Requirements for Subsurface Drainage Geotextile

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

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

(2) Maximum average roll value.

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

TIMBER SALE ROAD SPECIFICATIONS

SLOPE PROTECTION - 1400

1401 This work shall consist of furnishing, hauling and placing stone materials for slope protection structures and rock blankets in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross-sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the slope protection structure at the purchaser's expense as directed by the Authorized Officer.

1402 Stone material shall consist of hard angular quarry rock, blasted rock and coarse stone from roadway excavation of such quality that it will not disintegrate on exposure to water or weathering, and shall be graded in accordance with these specifications.

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

1404 The material shall be well graded from the smallest to the maximum size specified. Stones smaller than the specified 10 percent size shall consist of spalls and fine rock fragments so distributed as to provide a stable compact mass.

1405 Rip rap shall conform to the following gradations:

TIMBER SALE ROAD SPECIFICATIONS

TABLE 1405

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

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

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

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

1405a Stone materials shall show a durability value of not less than 50 as determined by AASHTO T 210.

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

TIMBER SALE ROAD SPECIFICATIONS

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

TIMBER SALE ROAD SPECIFICATIONS

QUARRY AND BORROW PIT DEVELOPMENT - 1600

1601 This work shall consist of quarry development in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans.

1602 The designated rock quarry site located at:

	Sec.	T.	
NO QUARRY DESIGNATED			

shall be developed and mined in strict accordance with these specifications and the mining and reclamation plan shown on the plans.

1602a Use of sites on non-BLM ownership are subject to the terms and conditions of Rock Permits, and regulations as administered by the State of Oregon Department of Geology and Mineral Industries (DOGAMI) which may include, but are not limited to, the following requirements: payment of a royalty fee, obtaining liability insurance and performance bond, and compliance with rock quarry or borrow pit site development and reclamation plans.

1603 If the Purchaser elects to use a rock source other than the designated source, the rock material produced shall comply with applicable sections of these specifications. If the alternate source is located on BLM ownership and a current BLM plan is not available, a development, mining, and reclamation plan shall be prepared by the Purchaser, and submitted for approval by the Authorized Officer. Development, mining and reclamation work shall be in accordance with the approved plan and 1600 specifications.

1604 If the designated source proves insufficient as to quantity and quality of the required rock material, the Purchaser shall, when ordered in writing by the Authorized Officer, move his operation to an alternate materials source as selected by the Authorized Officer. Development, extraction, and reclamation work on the alternate source shall be in accordance with the mining and reclamation plans prepared by the BLM. An equitable adjustment will be made in the contract price.

1605 Quarry access roads to designated or approved rock sources located on public lands and private lands under permit shall be constructed in accordance with the typical cross section and at the locations shown on the development, mining, and reclamation plans. Required road construction work, except surfacing, shall be

TIMBER SALE ROAD SPECIFICATIONS

approved by the Authorized Officer prior to the removal of road-embankment and/or surfacing materials.

- 1605a Quarry access roads to the designated or approved rock sources located on public land and private lands under permit shall be constructed to the minimum necessary for rock hauling operations, with adequate drainage facilities to minimize channeling and soil erosion. Required road construction, except surfacing, shall be completed prior to the removal of road embankment or surfacing materials.
- 1605b Quarry access roads to the designated or approved rock sources located on public land shall be surfaced with 8 inches, compacted depth, of screened-rock material conforming to requirements of Section 900, or crushed rock material conforming to requirements of Section 1200, Gradation D.
- 1605c The operation of equipment related to the production of rock aggregate and quarry operations shall be confined to the quarry operations area and to the designated tractor trails as shown on the plans.
- 1606 Prior to removal of overburden from the quarry site, topsoil shall be removed and stockpiled. Stockpiles shall not be covered by overburden or waste materials and will be readily accessible for final backfilling and grading. The location of stockpile sites shall be shown on the mining plan. Topsoil stockpiles shall be seeded and mulched to minimize erosion.
- 1607 Slash, stumps, logs, and other organic debris from quarry operations shall be piled and burned in accordance with the requirements of Subsection 207, 207a and 207b.
- 1608 Overburden or reject material which does not conform to the requirements of Subsections 900 and 1200 shall be stockpiled and used for reclamation backfill.
- 1609 Overburden, trees, stumps, logs, and loose rock shall be removed back from the edge of working quarry faces for a minimum distance of 20 feet.
- 1609a Overburden and/or reject material shall be removed back from the upper edge of the quarry for a distance equal to one-half of the working face or a minimum of 20 feet, whichever is greater. Overburden shall be sloped no steeper than 1 to 1.
- 1610 Waste disposal sites shall be selected and prepared to minimize erosion and establish conditions conducive to vegetative growth. Disposal areas shall be seeded and mulched in accordance with the requirements set forth in Section 1800 of these specifications.

TIMBER SALE ROAD SPECIFICATIONS

- 1611 The Purchaser shall notify the Authorized Officer in writing at least 7 days prior to commencing quarry operations.
- 1611a The Purchaser shall not commence production drilling or crushing until the Authorized Officer has inspected and approved the site development in writing.
- 1612 The Purchaser shall notify Mining Safety and Health Administration (MSHA) by standard form or telephone, and in accordance with part 56, Chapter 1 of Title 30 Code of Federal Regulations (CFR), of what date he intends to commence, terminate, and/or temporarily close down operations of the Floras Quarry ID No. 295. Notice shall be submitted a minimum of 10 days prior to the proposed date of the action to be taken. Notification shall be submitted to:
- Mining Safety and Health Administration
Albany, OR 97321
or
Mining Safety and Health Administration
Bellevue, WA 98004
- The Purchaser shall also prepare and submit to MSHA the quarterly Employment Report and Injury and Illness Report for the mining operation.
- 1613 The Purchaser shall comply with local and State Safety Codes covering quarrying operations, warning signs, seismic monitoring, and traffic control. All quarrying operations will be conducted by appropriately licensed personnel, i.e. blasting and powder handler's license, etc.
- 1613a The Purchaser shall submit a written blasting plan or modification of the plan to the Authorized Officer for the Floras Quarry, 7 working days prior to the start of drilling. **The plan shall include: a) cross section of the quarry removal area; b) plan view of delay pattern; c) cross section of a typical loaded hole; d) types of explosives; e) powder factor; f) burden spacing, hole diameter, depth of holes, and depth of subdrill; and g) number of lifts.** Acceptance of the blasting plan does not relieve the Purchaser of the liability or responsibility for the results of the blasting.
- 1613b Controlled blasting techniques shall be employed during production blasting to contain blasted rock. The quarry shall be shot in multiple lifts with no more than one-half of the total volume shot per lift.
- 1613c The Purchaser shall submit to the Authorized Officer a blasting log showing "as built" data and a brief summary of the blasting results, within 10 days after blasting.

TIMBER SALE ROAD SPECIFICATIONS

- 1614 Rock materials extracted from the quarry walls shall be utilized or disposed of as shown on the plans. Secondary blasting or other methods shall be employed to reduce 75 percent of the quarried rock to a maximum 24 inches in any dimension.
- 1615 Operations on the quarry site shall be so conducted that, both during and after completion of work, erosion will be minimized and sediment will not enter streams or other bodies of water. Waste or disposal areas and quarry access roads shall be located, constructed, and maintained in a manner that will prevent sediment from entering live streams or other bodies of water. Noncombustible debris and silt-laden water material resulting from the quarry operations shall be placed in such waste or disposal areas as shown on the plans or directed by the Authorized Officer.
- 1616 Upon completion of quarrying operations, overburden and waste materials shall be disposed of in accordance with requirements of the approved reclamation plan or in a manner approved in writing by the Authorized Officer.
- 1617 Upon completion of quarrying operations, required site reclamation measures shall be performed to the satisfaction of the Authorized Officer, including but not limited to the following:
- (a) Permanently seal or fill unused drill holes as directed by the Authorized Officer. Follow State of Oregon Department of Water Resources guidelines and requirements.
 - (b) Construct waterbars and take other erosion control measures as directed by the Authorized Officer.
 - (c) Remove blockages from drainage systems, streams, and waterways, and restore streams and waterways to their original courses. Follow State of Oregon guidelines and requirements.
 - (d) Erect barricades on quarry access roads as directed by the Authorized Officer.
 - (e) Complete required site-reclamation measures within 14 days after final cessation of quarrying operations.
 - (f) Clear quarry benches and scale wall of loose or dislodged shot material and move to a designated location within the quarry.

TIMBER SALE ROAD SPECIFICATIONS

EROSION CONTROL - 1700

- 1701 This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.
- 1702 The Purchaser shall construct the dikes, dams, diversion channels, settling basins and other erosion control structures in accordance with the requirements and details shown on the plans or as directed by the Authorized Officer.
- 1703 This work shall consist of furnishing and installing sediment fences in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans or as directed by the Authorized Officer.
- 1704 The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800 and the Geotextile requirement of Section 1300.
- 1705 The surface area of erodible earth material exposed at any one time by clearing and grubbing shall not exceed 21,780 square feet (0.50 acres) after October 15 without prior approval by the Authorized Officer.
- 1706 The surface area of erodible earth material exposed at one time by excavation, borrow, or fill within the right-of-way shall not exceed 21,780 square feet (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.
- 1708 Newly constructed or graded native surface roads to be carried over the winter period, shall be blocked to vehicular traffic. They shall be winterized by installing water bars, seed and mulched and installing other drainage structures as needed and directed by the Authorized Officer.
- 1708a Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.

TIMBER SALE ROAD SPECIFICATIONS

- 1709 The ditch on roads shown below and/or listed in the plans shall be shaped and lined with aggregate furnished under Sections 900 and 1200 in accordance with the cross section and details shown on the plans and as directed by the Authorized Officer.
- 1711 The Purchaser shall construct sediment and check dams, catch basins and splash pad energy dissipators for pipe culverts conforming to the requirements and details shown on the respective exhibits.
- 1712 Where shown on the plans, the Purchaser shall provide erosion control measures for newly constructed ditches on steep grades which include but is not limited to, dumped stone, jute mesh, sod, check dams consisting of hay bales, and earth or stone. Width of protective lining or dam should extend far enough up the ditch slopes to effectively contain the runoff and prevent erosion and washout at the edges and prevent sediment from reaching live water.
- 1713 Where newly constructed logging spur roads join with existing surfaced roads, the Purchaser shall construct a sag in the spur road profile and install culverts and settling basins in accordance with the requirements and details as shown on the plans and directed by the Authorized Office.

TIMBER SALE ROAD SPECIFICATIONS
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 and as shown on the plans. 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 native surface roads and designated locations where soil disturbance has occurred, such as culvert installations, in accordance with these specifications and as shown on the plans at the following locations:

Road No.	From Sta./M.P.	To Sta./M.P.	Total Acres
34-4-17.00	0.20	0.41	0.40
36-4-07.00	0.00	0.17	0.30

1802a Soil stabilization work consisting of seeding and mulching shall be performed on new road construction that is not rocked, landings, culvert installations, RVM stump removal, disturbed areas, waste disposal sites and specials areas in accordance with these specifications and as shown on the plans.

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

From September 1	To October 15 of the same year
------------------	--------------------------------

If soil stabilization of disturbed areas is not completed by the specified fall date, the Purchaser shall treat disturbed areas in accordance with Subsection 1708 and then complete the requirements of Section 1800 the next construction season. The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

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

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

1805b Seed shall be sacked in quantities proportional to the capacity of the Purchaser's

TIMBER SALE ROAD SPECIFICATIONS

slurry tank and the required rate of application as specified under Subsection 1811.

- 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 18.
- 1808a Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.
- 1808b Wood cellulose fiber shall have the property of dispersing readily in water and shall have no toxic effect when combined with seed or other materials. The homogeneous slurry or mixture shall be capable of application with power spray equipment. A green-colored dye which is non-injurious to plant growth shall be used. Processed wood cellulose fiber shall be packaged in new, labeled containers in an air dry condition.
- The Purchaser shall furnish a sample and descriptive literature to the Authorized Officer for approval prior to application. Processed wood cellulose fiber furnished by the Purchaser which has become wet or otherwise damaged in transit or storage will not be accepted.
- 1808c Wood chips shall be 1/8-inch nominal thickness, with 50 percent having an area of no less than 1 square inch, nor more than 6 square inches. Wood chip mulch material shall be free from leaves, twigs, shavings, bark, or materials injurious to plant growth.
- 1808d On-site plant material such as slash, branches, tops, bark, and small logs, provided the material is sourced from areas free of invasive plants, it does not contain noxious vegetative parts or seeds (per 75 FR 159:51101-02), and it is approved by BLM botany staff.
- 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

TIMBER SALE ROAD SPECIFICATIONS

be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.

1810 Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.

1811 The Purchaser shall furnish and apply to approximately 0.7 acres designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806, 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.

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

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

1814 The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.

1815 The seed and mulch materials shall be placed by the hydraulic method in accordance with the requirements set forth in Subsection 1815a or the dry method in accordance with the requirements set forth in Subsection 1815b.

1815a Hydraulic method – The seed, fertilizer, and mulch materials shall be mixed with water to form a slurry and then applied under pressure by hydroseeder. Where only seed and fertilizer are to be applied hydraulically, the mulch material and tackifier, if specified, may be applied after the seeding operation.

TIMBER SALE ROAD SPECIFICATIONS

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

- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipacker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.
- 1816 Hydraulic equipment used for the application of slurry shall meet the following requirements:
- The equipment shall have a built-in agitation system. The slurry distribution lines shall be large enough to prevent stoppage. Discharge line shall be equipped with a set of hydraulic spray nozzles which will provide even distribution of the slurry on the various slopes to be treated. The slurry tank shall have a minimum operation capacity of 1300 gallons and shall be mounted on a traveling unit which will place the slurry tank and spray nozzles within sufficient proximity to the areas to be treated so as to provide uniform distribution without waste. Lug- or track-type units are not authorized. The hydroseeder must be capable of spraying the slurry a minimum distance of 100 feet. The nozzle, mounted on a stand, must be capable of traversing 360 degrees on a horizontal plane and a minimum of 70 degrees on a vertical plane.
- All equipment and tanks (internally and externally) shall be cleaned before entering BLM lands. Tanks shall be cleaned prior to mixing BLM seed mixes to avoid application of unwanted plant species.
- 1816a Hydromulch slurry mixing shall be with water and seed first, followed by fertilizer, and finally fiber. The time between mixing and application shall not exceed 1 hour.
- 1816b Hydroseeding shall be performed in two steps. Water, seed, and fertilizer as specified in Subsection 1811, shall be mixed with a wood fiber tracer and applied to the area specified. The second step shall include the application of water and processed wood fiber, also specified in Subsection 1811, to be applied on the same area within an hour.
- 1817 At the beginning of each day's operation, a measured area will be seeded, fertilized, and mulched to assure uniform application.
- 1818 The maximum distance to be seeded, fertilized, and mulched from the road centerline shall be 100 feet for the cut slopes and 150 feet for the fill slopes.
- 1819 The Purchaser shall notify the Authorized Officer at least 3 days in advance of

TIMBER SALE ROAD SPECIFICATIONS

date he intends to commence the specified soil stabilization work.

- 1820 When sprayed, the mix or slurry must overlap on the ground uniformly so that there will be no voids in the treated areas.
- 1821 Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.
- 1822 No materials shall be applied when wind velocities would prevent a uniform application of the seed and mulch when winds would drift the seed and mulch outside of the designated treatment area.
- 1823 Seed and mulch will not be applied above the upper edge of cut banks unless otherwise specified.
- 1824 Twine, rope, sacks, and other debris resulting from the soil-stabilization operation shall be picked up and disposed of to the satisfaction of the Authorized Officer.

TIMBER SALE ROAD SPECIFICATIONS

CATTLE GUARDS AND BYPASS GATES - 1900

- 1901 This work shall consist of furnishing, hauling, installing, and construction of cattleguards, complete with foundations and bypass gates in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown in the plans and as staked on the ground.
- 1902 The Purchaser shall furnish and install steel cattleguard superstructures in accordance with Subsections 1902a, 1902b, and 1902c and as shown on the plans.
- 1902a Cattleguard superstructures shall be constructed of structural steel conforming to ASTM A 36 specifications. Welds shall be secure and complete along both edges of cross pieces, at frame joints, and shall conform to current specifications of the American Welding Society for Welded Highway and Railroad Bridges.

TIMBER SALE ROAD SPECIFICATIONS

ROADSIDE BRUSHING - 2100

- 2101 This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of exhibit C 8.
- 2102 Roadside brushing may be performed mechanically with self powered, self-propelled equipment or manually with hand tools, including chain saws.
- 2103 Vegetation cut manually or mechanically less than 8 inches in diameter when measured Diameter at Breast Height (DBH) shall be cut to a maximum height of 6 inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below 2 inches will be severed from the trunk.
- 2103a Vegetation shall be cut and removed from 4 horizontal feet beyond the outside shoulder break and 4 horizontal feet from the ditch centerline. The 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 greater than 8 inches (DBH) not removed by RVM activities shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway, on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inches of the trunk to produce a smooth vertical face. Removal of trees larger than 8 inches DBH for sight distance or safety may be directed by the Authorized Officer. Measurements are shown on the Roadside Brushing and Roadside Vegetation Management Details sheet, exhibit C 8
- 2105 Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inch to produce a smooth vertical face.
- 2106 Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2107 Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.
- 2108 Self propelled equipment shall not be permitted on cut and fill slopes or in ditches.

TIMBER SALE ROAD SPECIFICATIONS

2109 Debris resulting from this operation shall be scattered downslope from the roadway or piled to burn. Debris shall not be allowed to accumulate in concentrations. Debris in excess of 1 foot in length and 2 inches in diameter shall not be allowed to remain on cut slopes, ditches, roadways or water courses, or as directed by the Authorized Officer.

2111 Vegetation cut in the following locations shall be loaded and hauled to the designated disposal site indicated on the plans.

Road Number	From Sta./M.P.	To Sta./M.P.
N/A	N/A	N/A

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.

TIMBER SALE ROAD SPECIFICATIONS
HOT MIX ASPHALT CONCRETE PAVING – 2600

- 2601 This work shall consist of furnishing, applying and compacting Hot Mix Asphalt Concrete on prepared surfaces, in the depths, amounts and locations as shown on the plans.
- 2602 Submit 2 copies of the bituminous job mix formula to be used on this project 3 weeks prior to placement of paving. The Purchaser shall have written approval of the formula by the Authorized Officer prior to placement of pavement.
- 2603 Vehicular traffic, including heavy equipment, will not be permitted on the pavement until all rolling and compacting operations have been completed.
- 2604 Place bituminous mixture only when air temperature is above 45°F, on surfaces that do not have standing water, and when it is not raining.
- 2605 Asphalt paving shall conform to the Oregon Department of Transportation, Level III, ½” dense, PG 64-22 Asphalt Binder mix for use on roadways. Furnish aggregate that conform to the aggregate requirements for hot mix asphalt concrete by the Oregon Department of Transportation.
- 2606 Aggregate shall be tested by AASHTO T 11 and T 27. The aggregate selected for use in the work shall have a gradation within the limits designated in Table 2606.TABLE 2606

TOLERANCE GRADATION OF AGGREGATES
Total Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 11 and AASHTO T 27)

Sieve Size	Percent
¾ inch	100
½ inch	90-100
No. 4	JMF +/- 5
No. 8	JMF +/- 4
No. 30	JMF +/- 4
No. 200	JMF +/- 2

JMF = Job Mix Formula

- 2607 Bituminous material shall meet the requirements of AASHTO M 320.
- 2608 Water shall be clean and free from deleterious materials.
- 2609 The asphalt spreader shall be capable of spreading hot bituminous mixtures without tearing, shoving, or gouging and produce a finished surface of the

TIMBER SALE ROAD SPECIFICATIONS

specified grade and smoothness.

- 2610 The number, type and weight of rollers shall be sufficient to compact the mixture to the required density without detrimentally affecting the compacted material. All rollers shall be suitable for rolling hot-mix bituminous pavements and capable of being operated without turning on the mat and without loosening the surface being rolled. Rollers shall have suitable devices and apparatus to keep the rolling surfaces wet and prevent adherence of bituminous mixture.
- 2610a Vibratory rollers shall be especially designed for bituminous concrete compacting and may be used provided the rollers do not impair stability of the pavement structure and any underlying layers. Depressions in pavement surfaces resulting from the use of vibratory rollers are not acceptable. Rollers shall be self-propelled, single or dual vibrating drums, and steel drive wheels, as applicable; equipped with variable amplitude and separate controls for energy and propulsion.
- 2611 Make pavement cuts with parallel, straight lines, 1 foot wider than trench width on each side of trenches.
- 2612 Prior to laying the asphalt concrete pavement the Purchaser shall obtain written approval from the Authorized Officer by showing satisfactory test results of the crushed aggregate base course that has been tested and meets the requirements of the specifications.
- 2613 Prior to laying the asphalt concrete, remove unsuitable material from the underlying course.
- 2614 Place string lines to identify the edge of pavement. Establish lines parallel to the centerline of the area to be paved, and place string lines coinciding with the established lines for the spreading machine to follow. The number and location of the lines will be as approved by the Authorized Officer.
- 2615 Restore disturbed edges of existing bituminous pavements, matching existing edges.
- 2616 The thickness of the asphalt concrete pavement shall be as shown on the plans.
- 2617 Plants used for the preparation of bituminous mixtures shall conform to AASHTO M 156 and to Oregon Department of Transportation requirements.
- 2618 Transport bituminous material from the mixing plant to the paving site in trucks having tight, clean, smooth beds that have been coated with a minimum amount of concentrated solution of hydrated lime and water or other approved coating to prevent adhesion of the mixture to the truck bodies. Petroleum products will not be permitted for coating truck bodies. When the air temperature is less than 60°F

TIMBER SALE ROAD SPECIFICATIONS

or if haul time is greater than 30 minutes, cover each load with canvas or other approved material of ample size to protect the mixture from the loss of heat.

2619

Compact each layer of Hot Mix Asphalt Concrete to a minimum density of 91 percent of the maximum specific gravity determined by AASHTO T 166 and T 209. Percent compaction will be determined from at least one production sample per day.

PINE SHEPHERD TIMBER SALE
Road Renovation Work List

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

All culvert replacements shall be capped with 20 cubic yards (unless otherwise noted in the worklist) from Exhibit C-5, Section 1215 (Gradation D-1). All aggregate conforming to Exhibit C-5, Section 900 (Gradation A) and 1200 (Gradation C-1) shall be from the designated rock quarry, Exhibit C-5, Section 1602. All turnout and truck turnaround widths are in addition to subgrade widths listed in Exhibit C-4.

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

Removal of brush, and non-merchantable trees (conifers less than 8" DBH and all hardwoods), will be completed along all haul routes.

Removal of merchantable trees (conifers 8" DBH and larger) will be completed as designated in the work list and shown on Exhibit C-2, and be limited to those trees marked with blue paint outside of sale units and un- marked trees inside of sale units.

Debris resulting from these activities shall be disposed of by lop and scatter, pile and burn, or chipping in accordance with Exhibit C-5 Section 2109 and 206. Debris disposed of by lop and scatter shall not exceed 8 feet in length or be allowed to accumulate in concentrations but shall be further reduced or removed.

Concentrations will be defined as any debris, limbs or branches touching each other or piled on top of each other or any material sticking up over 2 feet in elevation above the ground. Cut trees or debris shall not be allowed to stand or lean against other standing uncut trees or brush.

All stumps that are within the road surface that may hinder blading operations shall be removed, ground, cut to 6" below subgrade. Any damage to the road/shoulder/ditch resulting from these activities shall be repaired. Disturbed soil from these activities will be treated in accordance with Exhibit C-5 Section 1802a.

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

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

<u>Road 34-4W-10.00 Jamison Gulch ASC</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Final Maint	
Mileposts	Remarks
0.00	Jct. 34-4W-15.00. Begin RENO and BRSH.
0.01	Property line. Enter Private.
0.70	Jct. non-system road (right).
0.76	Property line. Enter BLM.
0.96	Jct. 34-4W-09.00 (left).
1.26	Begin RVM.
1.31	End RVM.
1.53	Begin RVM.
1.72	End RVM.
1.90	Begin RVM.
1.98	End RVM.
2.17	Begin RVM.
2.42	End RVM.
2.63	Begin RVM.
2.68	Jct. 34-4W-09.02 (left).
2.86	End RVM.
3.04	Jct. 34-4W-09.01 (left). Begin RVM.
3.24	End RVM.
3.32	Begin RVM.
3.44	Property line. Enter Private. End RVM.
3.72	Property line. Enter BLM. Begin RVM.
3.74	End RVM.
3.87	Begin RVM.
4.01	Jct. 34W-4W-17.04 (right).
4.05	End RVM.
4.14	Begin RVM.
4.23	End RVM.
4.29	Begin RVM.
4.36	End RVM.
4.43	Begin RVM.
4.51	End RVM.
4.58	Begin RVM.
4.69	End RVM.
4.76	Jct. 34-4W-17.05 (left). Begin RVM.

4.82	Jct. 34-4W-17.06 (left). End ditch, begin outsloped road.
5.50	Jct. 34-4-17.08 (right).
5.95	End RENO, BRSH, and RVM.

<u>Road 34-4W-15.00 Pleasant Creek ASC</u>	
<u>Summary of work to be completed</u>	
Brushing Final Maint	
Mileposts	Remarks
0.00	Jct. County Pleasant Creek Rd. BLM ownership and control begins at the Section line of 10/15 in T34S R04W. Begin RENO and BRSH. Underground Utilities. Locate required before ground disturbing activities begin.
0.06	Jct. un-numbered road (left).
0.32	Jct. 34-4W-10.00 (left). End RENO and BRSH.

<u>Road 34-4W-17.00 Overditch ASC/NAT</u>	
<u>Summary of work to be completed</u>	
Barricade removal RVM/ROW Cutting Brushing CMP/WD install Shaping Seed/Mulch Barricade Inst Winterization Final Maint	
Mileposts	Remarks
0.00	Jct. 34-4W-28.00. Begin RENO and BRSH.
0.02	Begin RVM.
0.10	End RVM.
0.17	Jct. 34-4W-17.01 (left).
0.21	Remove trench barricade. Surface change from ASC to NAT.
0.25	Install AWD. Place 20 CY 4" minus and geotextile.
0.33	Begin RVM.
0.41	End RVM, RENO and BRSH.

<u>Road 34-4W-17.05 NAT</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Shaping	
Seed/Mulch	
Winterization	
Final Maint	
Mileposts	Remarks
0.00	Jct. 34-3W-10.00. Begin BRSH, RENO, and RVM.
0.15	Private gate. BLM Lock #N1081.
0.19	End BRSH, RENO, and RVM.

<u>Road 34-4W-17.06 ASC</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Shaping	
Final Maint	
Mileposts	Remarks
0.00	Jct. 34-4W-10.00. Begin RENO, BRSH, and RVM.
0.06	End RENO, BRSH, and RVM.

<u>Road 34-4W-28.00 Ditch Creek BST/ASC</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Final Maint	
Mileposts	Remarks
0.00	Begin 34-4W-28.00, Ditch Creek Road, at jct. with Pleasant Creek Rd. Begin RENO and BRSH. Underground Utilities. Locate required before ground disturbing activities begin.
1.23	Property line. Enter BLM.
1.43	Property line. Enter Private.
1.88	Property line. Enter BLM. Begin RVM.
1.97	Jct. 34-4W-29.00 (left).
2.46	Property line. Enter Private. End RVM.
3.77	Property line. Enter BLM. Begin RVM.
3.86	End RVM.
3.92	Jct. 34-4W-17.00 (left)
3.93	Begin RVM.
4.08	End RVM.
4.18	Begin RVM.
4.23	Jct. 34-4W-17.02 (right).
4.59	End RENO, BRSH, and RVM.

<u>Road 34-4W-31.00 Dixie Gulch East ASC</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Final Maint	
Mileposts	Remarks
0.00	Jct. 35-4W-05.00. Begin RENO, BRSH, and RVM.
0.06	End RENO, BRSH, and RVM.

<u>Road 34-4W-32.00 ASC</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Final Maint	
Mileposts	Remarks
0.00	Jct. 35-4W-05.00. Begin RENO and BRSH.
0.13	Begin RVM.
0.20	End RENO, BRSH, and RVM.

<u>Road 35-4W-05.00 Dixie Gulch BST/ASC</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Final Maint	
Mileposts	Remarks
0.00	Jct. Pleasant Creek Rd. Begin RENO and BRSH. Underground Utilities. Locate required before ground disturbing activities begin.
0.86	End BST. Begin ASC.
1.15	Property line. Enter BLM.
1.16	Jct. 34-4W-32.00 (right).
1.91	Begin RVM.
2.02	Jct. 34-4W-31.00 (right).
2.16	End RVM.
2.53	Begin RVM.
2.62	Jct. 34-4W-31.01 (left).
2.79	End RVM.
2.93	Begin RVM.
2.95	Jct. 34-4W-31.02 (left).
2.96	End RVM.
3.03	Begin RVM.
3.34	End RVM.
3.41	Begin RVM.
3.71	Truck turnaround. End RENO, BRSH, and RVM.

<u>Road 35-4W-08.00 Queen's Creek BST</u>	
<u>Summary of work to be completed</u> Brushing Final Maint	
Mileposts	Remarks
0.00	Jct. County Queen's Branch Rd. Begin RENO and BRSH. Underground Utilities. Locate required before ground disturbing activities begin.
0.55	Jct. 35-4W-08.01 (left). End RENO and BRSH.

<u>Road 35-4W-08.01 NAT</u>	
<u>Summary of work to be completed</u> Brushing Shaping Winterization Final Maint	
Mileposts	Remarks
0.00	Jct. 35-4W-08.00. Begin RENO and BRSH.
0.02	Private Gate. BLM lock N74.
0.22	Jct. Non-system spur (right).
0.72	Jct. Non-system spur (left).
0.76	Jct. 35-4W-18.02 (left). End RENO and BRSH.

<u>Road 35-4W-17.00 NAT</u>	
<u>Summary of work to be completed</u> RVM/ROW Cutting Brushing Shaping Seed/Mulch Winterization Final Maint	
Mileposts	Remarks
0.00	Jct. 35-4W-18.02. Begin RENO, BRSH and RVM.
0.04	End RENO, BRSH, and RVM.

Road 35-4W-18.02 NAT**Summary of work to be completed**

Barricade removal
 RVM/ROW Cutting
 Brushing
 Shaping
 Seed/Mulch
 Barricade Inst
 Winterization
 Final Maint

Mileposts	Remarks
0.00	Jct. 35-4W-08.01. Begin RENO and BRSH.
0.11	Low water crossing. <u>To be used and improved in the in-stream work window (June 15-September 15) only.</u> Improve approach to a grade passable by trucks. Stream bed material may be placed and moved within bank-full width to make passable by trucks so long as it is not a barrier to fish. Washed rock may be placed outside of bankfull width to facilitate truck crossing if necessary. Pull back and stockpile washed rock outside of the bankfull width after use.
0.15	Jct. Non-system spur (right).
0.20	Property line. Enter BLM. Begin RVM.
0.22	Remove trench barricade.
0.28	Jct. Non-system spur (right).
0.44	Jct. 35-4W-17.00 (left). End BRSH, RENO, and RVM.

Road 35-4W-19.00 Bear Head Spur PRR**Summary of work to be completed**

RVM/ROW Cutting
 Stump Removal
 Brushing
 Shaping
 Final Maint

Mileposts	Remarks
0.00	Jct. 35-5W-25.03. Begin RENO, BRSH, and RVM.
0.19	Improve Helicopter Landing, Clear and Grub. End RENO, BRSH, and RVM.

Road 35-5W-21.00 Granite Hill BST/ASC	
<u>Summary of work to be completed</u>	
Final Maint	
Mileposts	Remarks
0.00	Jct. Granite Hill Rd. Begin RENO.
0.66	Property line. Enter BLM.
1.02	Property line. Enter private.
1.72	Jct. 35-5W-26.01 (left).
1.75	Jct. 35-5W-26.00 (right).
2.37	Surface change from BST to ASC.
2.41	Property line. Enter BLM.
3.04	Jct. 35-5W-26.05 (right). End RENO.

Road 35-5W-25.03 Bear Head ASC	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Final Maint	
Mileposts	Remarks
0.00	Jct.35-5W-25.06 and 35-5W-35.00. Begin RENO and RVM.
0.62	Property line. Enter Private. End RVM.
0.95	Property line. Enter BLM. Begin RVM.
1.54	Jct. 35-4W-19.00 (left). End RVM. Begin BRSH.
1.90	End RENO and BRSH.

Road 35-5W-25.06 Old Baldy Spur ASC	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Stump Removal	
Brushing	
Shaping	
Final Maint	
Mileposts	Remarks
0.00	Jct. 35-5W-25.03 and 35-5W-35.00. Begin RENO, BRSH, and RVM.
0.01	At 4 way Jct., Helicopter Landing, Clear and Grub.
0.14	End RENO, BRSH, and RVM.

Road 35-5W-26.00 Louse Mountain ASC	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Final Maint	
Mileposts	Remarks
0.00	Jct. 35-5W-21.00. Begin RENO.
0.33	Property line. Enter BLM.
0.38	Begin RVM.
0.84	End RVM.
0.90	Begin RVM.
0.92	End RVM.
0.98	Begin RVM.
1.02	End RVM.
1.07	Jct. 35-5W-35.00 (straight) and 35-5-35.05 (right). End RENO.

Road 35-5W-26.04 Granite Hill Mainline ASC	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Final Maint	
Mileposts	Remarks
0.00	Jct. 35-5W-21.00 and 35-5W-26.05. Begin RENO.
0.30	Begin RVM.
0.36	End RVM.
0.41	Begin RVM.
0.48	End RVM.
0.52	Begin RVM.
0.56	Jct. 35-5W-23.02 (right). End RVM.
0.70	Begin RVM.
0.83	Jct. non-system spur (left).
0.84	Jct. 35-5W-23.04 (right).
1.19	End RVM.
1.22	Jct. 35-5W-23.06 (left).
1.24	Begin RVM.
1.69	End RVM.
1.79	Begin RVM.
1.86	Jct. 35-5W-23.05 (right).
1.92	Property line. Enter Private. End RVM.
2.01	Helicopter/Service Landing, Clear and Grub.
2.02	Jct. 35-5W-13.00 (right). Property line. Enter BLM. Begin RVM.
2.45	End RVM.
2.54	Begin RVM.
2.56	Jct. 35-5W-13.01 (right). Truck turnaround. End RENO and RVM.

Road 35-5W-35.00 Old Baldy ASC	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Final Maint	
Mileposts	Remarks
0.00	Jct. 35-5W-26.00. Begin RENO.
0.05	Jct. 35-5W-35.02 (right).
0.21	Begin RVM.
0.34	End RVM.
0.39	Begin RVM.
0.63	End RVM.
0.74	Begin RVM.
1.06	Jct. 35-5W-25.00 (left).
1.11	Jct. 35-5W-25.04 (right).
1.42	End RVM.
1.46	Jct. 35-5W-25.05 (right).
1.49	Begin RVM.
1.54	Jct. 35-5W-25.01 (left).
2.02	Jct. 35-5W-25.06 (left) and 35-5W-25.03 (straight).
2.09	Helicopter Landing, Clear & Grub. End RENO and RVM.

<u>Road 36-4W-05.00 Left Fork Fielder Creek ASC</u>	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Final Maint	
Mileposts	Remarks
0.00	Jct. Fielder Creek Road. Begin RENO and BRSH. Underground Utilities. Locate required before ground disturbing activities begin.
0.52	Jct. 36-4W-06.00 (left).
0.93	Property line. Enter BLM. Begin RVM.
0.95	Jct. 36-4W-07.00 (right).
1.01	Jct. 36-4W-07.02 (left).
1.09	End RVM.
1.17	Begin RVM.
1.32	End RVM.
1.45	Begin RVM.
1.47	End RVM.
1.49	Jct. 36-4W-07.03 (right).
1.50	Jct. 36-5W-07.04 (left).
1.52	Begin RVM.
1.54	End RVM.
1.62	Begin RVM.
1.96	End RVM.
2.07	Jct. 36-4W-07.01 (left).
2.16	Begin RVM.
2.23	End RVM.
2.30	Begin RVM.
2.37	End RVM.
2.44	Jct. 36-5W-12.00 (right).
2.46	Begin RVM.
2.61	End RVM.
2.76	Begin RVM.
2.87	End RVM.
2.96	Begin RVM.
3.00	Property line. Enter Private. End RVM.
3.57	Jct. 36-5W-12.01 (left).
4.12	Jct. 36-5W-01.00 (right). End RENO and BRSH.

Road 36-4W-07.00 Fielder Creek Spur ASC	
<u>Summary of work to be completed</u>	
Barricade removal	
Brushing	
CMP/WD install	
Shaping	
Seed/Mulch	
Barricade Inst	
Winterization	
Final Maint	
Mileposts	Remarks
0.00	Begin RENO and BRSH.
0.02	Remove trench barricade.
0.04	Install AWD. Place 20 CY pit-run, from Fielder Quarry 36-4-07.02, and geotextile.
0.17	End RENO, and BRSH.

Road 36-4W-07.01 Upper Left Fork PRR/NAT	
<u>Summary of work to be completed</u>	
RVM/ROW Cutting	
Brushing	
Shaping	
Winterization	
Final Maint	
Mileposts	Remarks
0.00	Jct. 36-4W-05.00. Begin RENO and BRSH.
0.06	Begin RVM.
0.32	End RVM.
0.38	Begin RVM.
0.40	End RVM.
0.43	Jct. 36-4W-07.05 (left).
0.46	Begin RVM.
0.72	End RVM.
0.76	Jct. non-system spur (left).
0.80	Begin RVM.
1.06	Gate. Lock number N 493.
1.14	Jct. 36-4W-07.06 (left). Road surface change from PRR to NAT.
1.21	Jct. non-system road (right).
1.77	End BRSH, RENO, and RVM.

SPECIAL PROVISIONS

1. EQUIPMENT:

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

2. SOIL STABILIZATION:

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

3. DAMAGE:

- The Purchaser shall protect and is responsible for any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements. Damage to utilities and existing improvements shall be promptly paid for or repaired to a condition which is, in the opinion of the Authorized Officer and the governing utility company, at least as good as the condition just prior to such damage.

4. DUST ABATEMENT:

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

5. WATER SOURCES:

- The Purchaser is responsible for obtaining water and associated rights and permits.
- Water required under these specifications shall be obtained at the location(s) indicated below:

Common Name	Willamette Meridian			Road No.	M.P.
	Section	T	R		
John F. Fleming Veteran's Memorial Park Boat Launch	21	36S	04W	Hwy 99	0.10

- Use of this water source must be reported to and coordinated with the City of Rogue River.

6. PERMITS:

- All permits required are the responsibility of the Purchaser.

7. CULVERT REMOVAL:

- When removing culverts unless constructing armored water dips, pull slopes back to the natural slope, or at least 2:1, to minimize sloughing, erosion, and the potential for the stream to undercut stream banks during periods of high stream flows. Remove excess sediment from stream channels during culvert

removal, replacement, and installation activities. Apply seed and mulch to all disturbed or exposed soils at each stream culvert removal site

8. COMMERCIAL AGGREGATE

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

9. ROAD RENOVATION:

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

10. STREAMS:

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

11. TEMPORARY ROUTES

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

12. PERMANENT ROADS

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

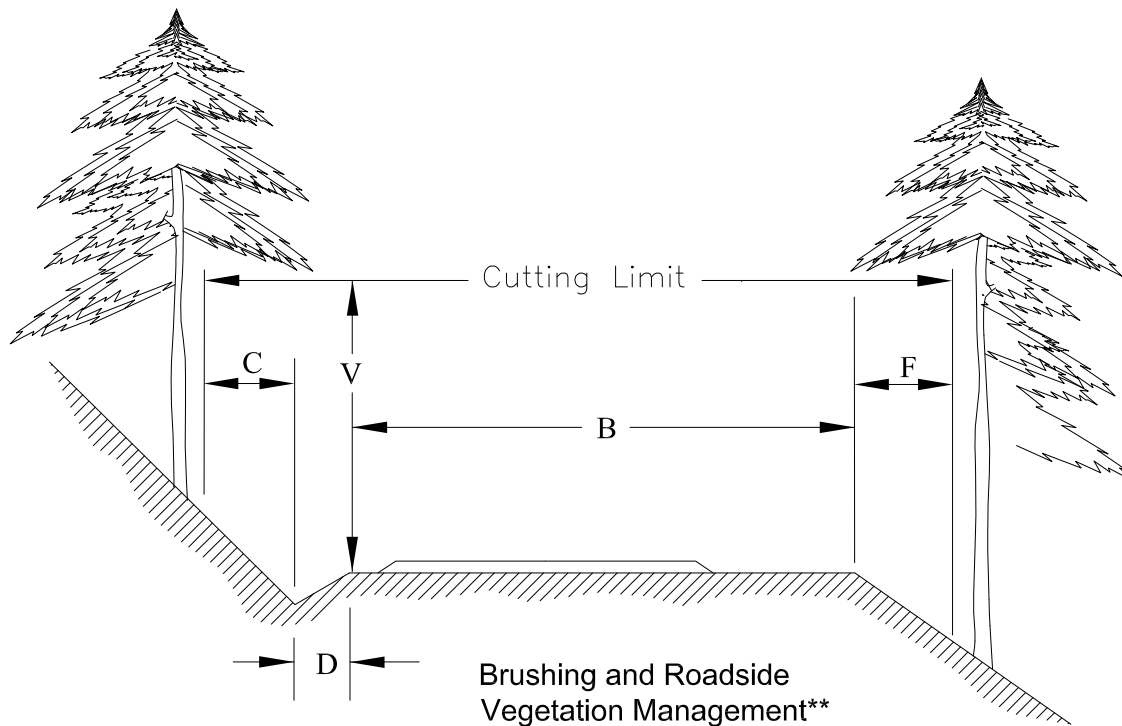
13. ROADSIDE BRUSHING

- While roadside brushing, there shall be no scarring or any other damage of the tree trunk or bole allowed.
- Use of Excavators and/or flailers for brush removal will be at the discretion of the Authorized Officer.
- All culvert inlets and outlets shall be brushed for a radius of 4'.
- All bridges shall be brushed 8 horizontal feet from the outer most portion of the structure.

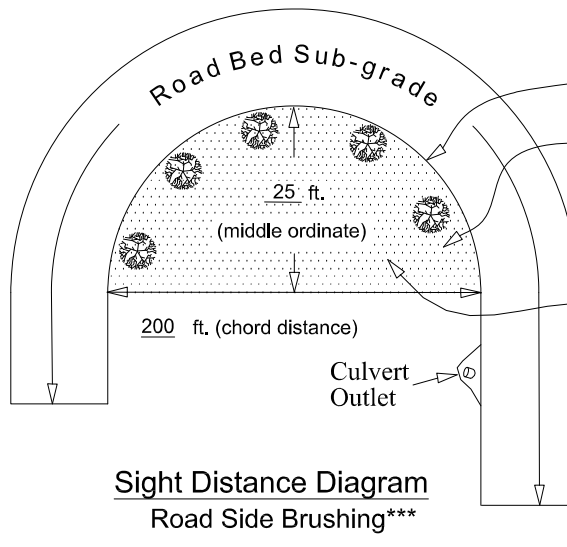
14. WET SEASON HAUL

- The Purchaser may wet season haul, with the Authorized Officer's approval on the following roads: 34-4-10.00 A-E3, 34-4-15.00 A, 34-4-17.06, 34-4-28.00 A-H, 34-4-31.00, 34-4-32.00 A, 35-4-05.00 A-C1, 35-4-08.00 A, 35-4-19.00, 35-5-21.00 A-B, 35-5-25.03 A-B, 35-5-25.06, 35-5-26.00 A, 35-5-26.04 A-B, 35-5-35.00 A-B, 36-4-05.00 A1-B, 36-4-07.00 A1, and 36-4-07.01 A1-B1. If the use of these roads during the wet season causes or begins to cause road damage or the transport of sediment into streams, the Authorized Officer may suspend wet season haul or require additional erosion control devices to prevent damage or off-site transportation of sediment. Additional rock may be required at the Purchaser's expense to repair any damage that occurs to the road during wet season haul.
- The Purchaser shall have the option to rock road numbers 34-4-17.00 A-B, 34-4-17.05 A-A1, 35-4-08.01 A-C, 35-5-17.00, 35-4-18.02 A-D, and 36-4-07.01 B2 for wet weather haul. Purchaser option rocking depths will be determined and approved by the Authorized Officer. Any costs for rocking and installation of additional drainage structures will be at the Purchaser's expense and shall be completed in accordance with the plans and specifications show in Exhibit C of this contract.

EXHIBIT C8 SHEET 1 OF 1



Inside Corner



Sight Distance Diagram
Road Side Brushing***

$$\text{Cutting Limit} = C + D + B + F$$

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

*C = $\frac{4}{1}$ ft - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to max height of 6".

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

*F = $\frac{4}{1}$ ft - Distance to be brushed on fill slope beyond outside shoulder. Cut all vegetation to max height of 6".

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

All distances shown are horizontal except for V.

NOTES:

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

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

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

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

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

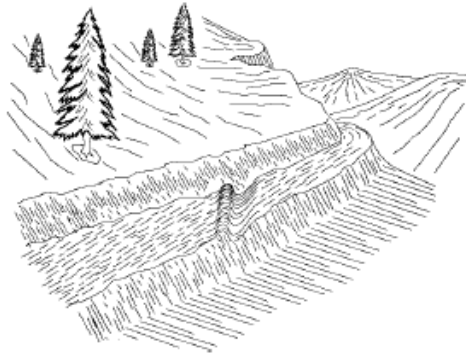
*** = Excludes work for roadside vegetation management.

Typical Road Bed Subgrade widths

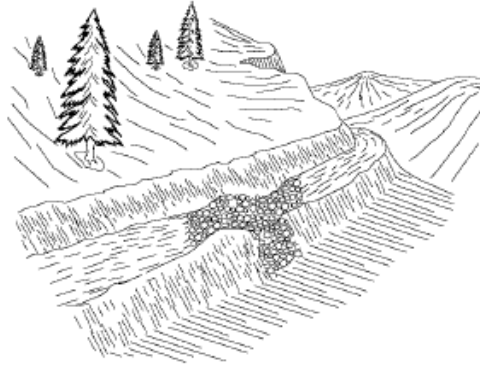
One lane low traffic volume 12 to 16 ft
One lane medium traffic volume . . 16 to 20 ft
Two lane high volume traffic 20 to 40 ft
Turnouts 10 ft

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
<i>ROADSIDE BRUSHING AND ROADSIDE VEGETATION MANAGEMENT DETAILS</i>			
DRAWN	JWR	SCALE	NONE
DATE	April 2022	SHEET	1 OF 1
DRAWING NO. ORM05-TS-2026.0003-C8			

EXHIBIT C-9.1
SHEET 1 OF 1
PINE SHEPHERD T.S.



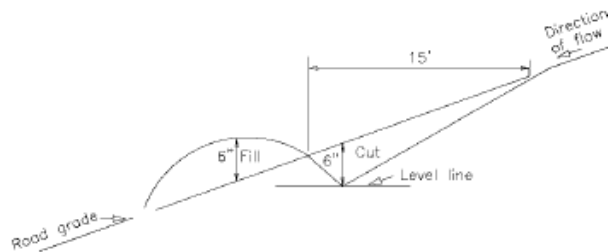
WATER BAR



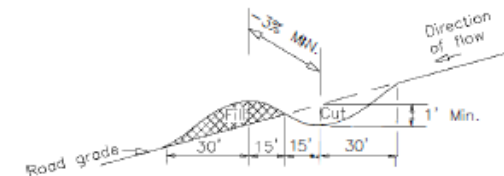
ARMORED WATER DIP



WATER DIP

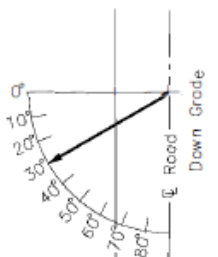


1. CROSS-DRAINS SHALL BE CONSTRUCTED AS SHOWN ABOVE.
2. EXACT LOCATION WILL BE FLAGGED BY THE AUTHORIZED OFFICER PRIOR TO CONSTRUCTION.
3. ALL CROSS DRAINS SHALL BE SKEWED 30 DEGREES.
4. THE CROSS-DRAINS INVERT SHALL BE SMOOTH AND FREE DRAINING.



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

SKEW DIAGRAM

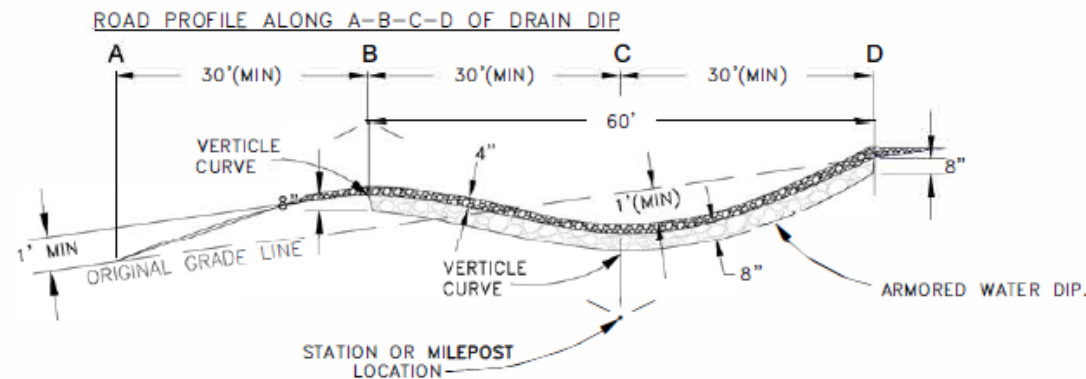
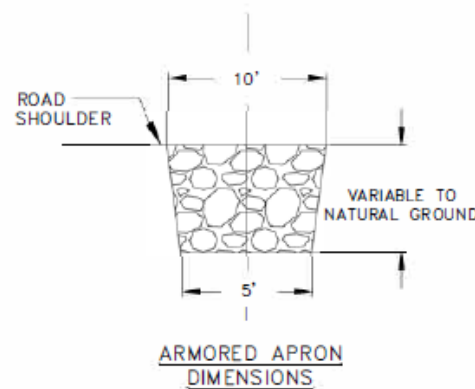
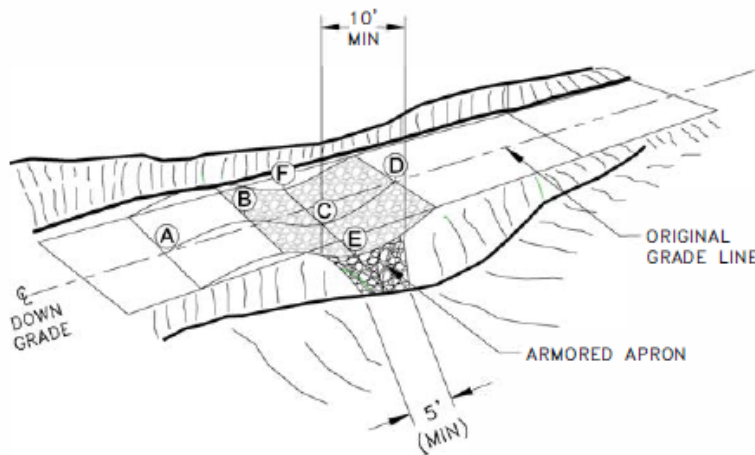


REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
DRAINAGE & EROSION CONTROL DETAILS			
DRAWN	JAB	SCALE	NONE
DATE	FEBRUARY 2023	SHEET	1 OF 1
DRAWING NO. ORM05-TS-2026.0003 C9.1			

EXHIBIT C-9.2

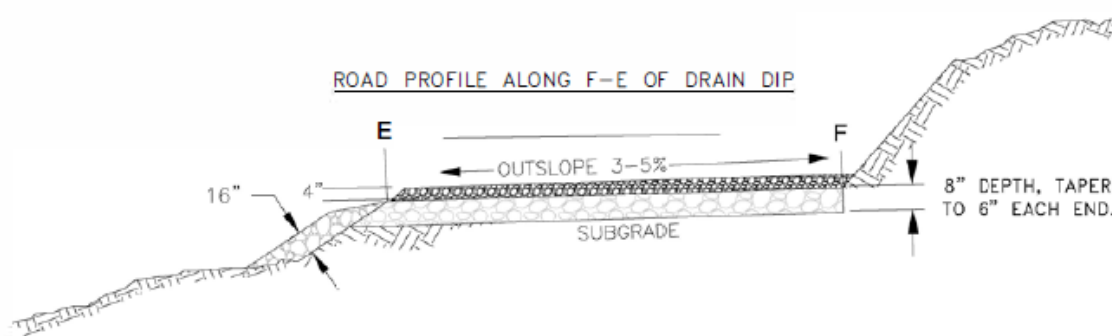
SHEET 1 OF 1 PINE SHEPHERD T.S. NOTES

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

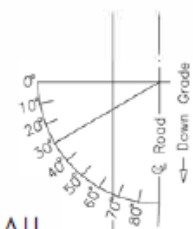


LEGEND

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



SKEW DIAGRAM



DRAWINGS NOT TO SCALE

TYPICAL ARMORED WATER DIP CONSTRUCTION DETAIL

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

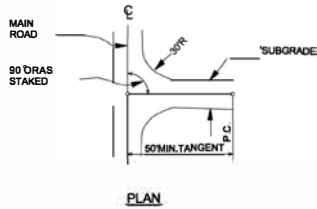
TYPICAL ARMORED WATER DIP CONSTRUCTION

DRAWN BY JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO.	ORM05-TS-2026.0003-C9.2

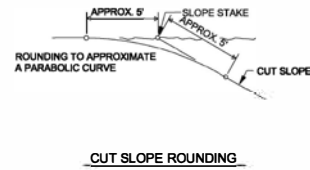
EXHIBIT C-10 SHEET 1 OF 1

PINE SHEPHERD T.S.

TYPICAL ROAD APPROACHES

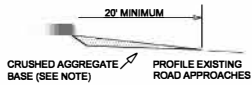
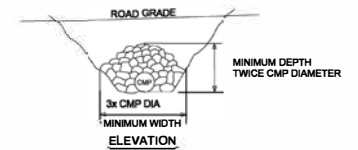
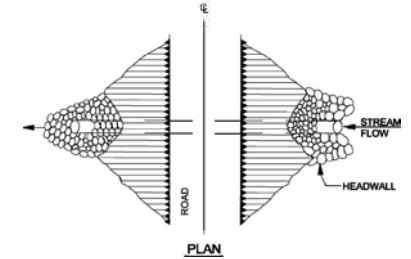
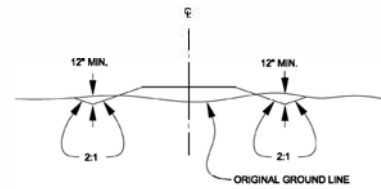
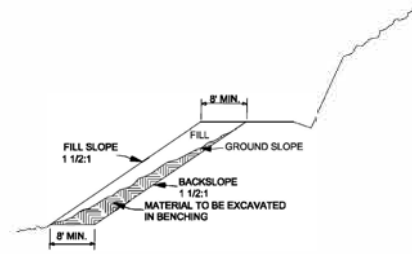
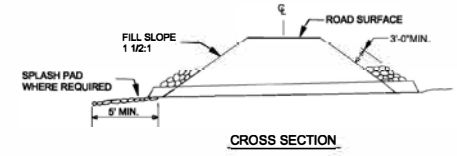


PROFILE



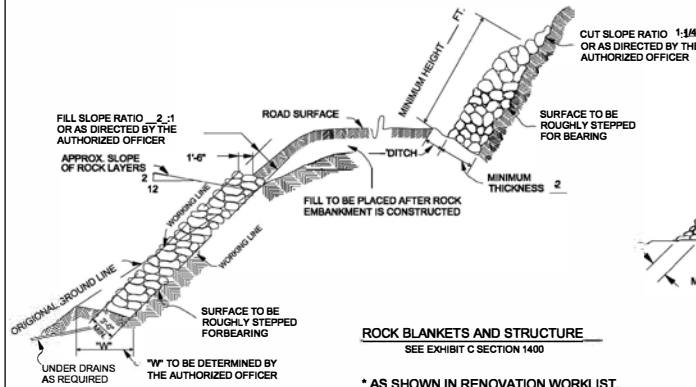
TYPICAL RANDOM FILL

ROAD FILL AND RANDOM FILL TO BE COMPACTED AS INDICATED IN EXHIBIT C SECTION 300



TYPICAL SURFACING SECTION

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



SLOPE PROTECTION ROCK

SEE EXHIBIT C SECTION 1400

NOTES: RIPRAP AT CULVERTS

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

ALWAYS
THINK
SAFETY

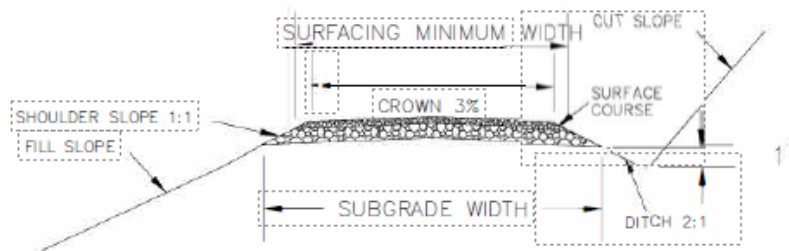
REV. NO.	DESCRIPTION	DATE	APPROVED
	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT MEDFORD, OREGON		

TYPICAL ROAD DATA

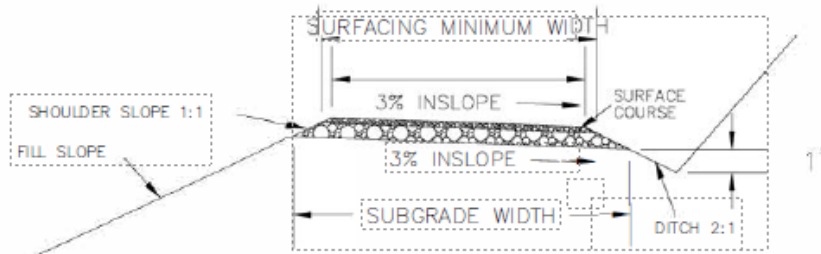
DRAWN JAB	SCALE NONE
DATE FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO ORM05-TS-2026.0003 C10	

EXHIBIT C-11
SHEET 1 OF 1
PINE SHEPHERD T.S.

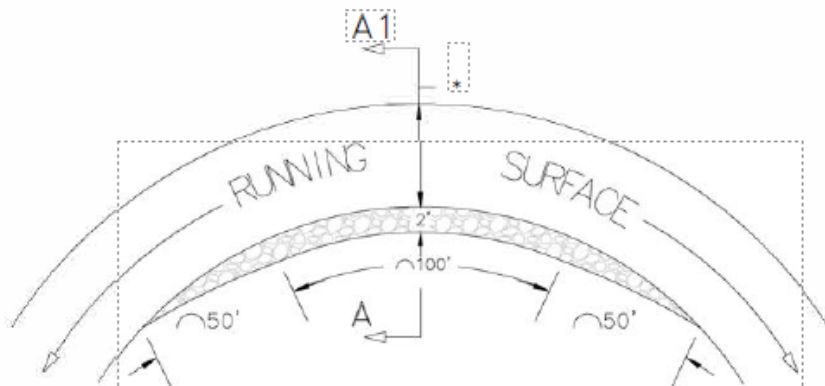
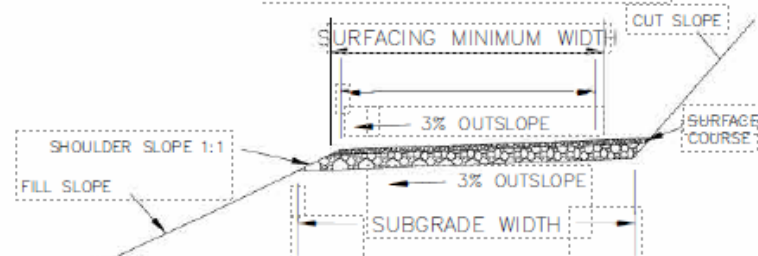
TYPICAL CROWNED SURFACE
EXISTING MIN. BASE COURSE WIDTH



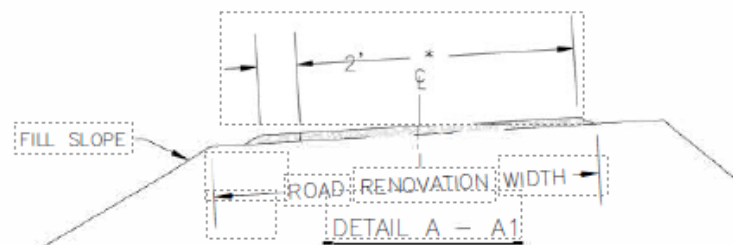
TYPICAL INSLOPED SURFACE
EXISTING MIN. BASE COURSE WIDTH



TYPICAL OUTSLOPED SURFACE
EXISTING MIN. BASE COURSE WIDTH



TYPICAL CURVE WIDENING DETAIL



NOTES:

SURFACING SHALL BE THE COMPACTED DEPTH AS SPECIFIED IN THE WORKLIST.

CURVE WIDENING SHALL BE SURFACED TO A LENGTH OF 100' WITH 50' TAPERS.

APPLY THE WIDENING ON THE INSIDE OF THE CURVES THROUGHOUT THE RADIUS OF THE CORNER TO MATCH THE EXISTING ROAD TEMPLATE.

MAINTAIN EXISTING CROSS SLOPE AT CURVES

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

ROAD SURFACING and
CURVE WIDENING SECTIONS

DRAWN: JCM	SCALE: AS SHOWN
DATE: FEBRUARY 2023	SHEET 1 OF 1
DRAWING NO.	ORM05-TS-2026.0003-C11

This page intentionally left blank

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sale: Pine Shepherd
Sale Date: 08/20/2026
Prep. By : Pardini
Tract No: ORM05-TS-2026.0003

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: \$0.00/4374 MBF = \$0/MBF

Road Maintenance Obligation:

(2.1) BLM Maintenance	\$5,594.93
(2.2) BLM Rockwear	\$0.00
(5.1) Purchaser Maintenance Rockwear	\$17,823.16
Total Rockwear Payable to BLM	\$17,823.16
(3.1) 3rd Party Maintenance	\$136.21
(3.2) 3rd Party Rockwear	\$0.00
(4.1) Other Maintenance Payments	\$0.00
Total Maintenance Fee Obligation (2.1-5.1)	\$23,554.30

Purchaser Maintenance Allowances:

(5.2A) Move In	\$1,836.45
(5.2B) Culverts, Catch Basins, Downspouts	\$0.00
(5.2C) Grading, Ditching	\$23,410.63
(5.2D) Slide Removal and Slump Repair	\$0.00
(5.2E) Dust Palliative (Water)	\$0.00
(5.2F) Surface Repair (Aggregate)	\$11,315.00
(5.2G) Other	\$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	\$36,562.08

(2.1-5.2G) Cost (\$23,554.30 + \$36,562.08) = \$60,116.38
Cost/MBF 60116.38 / 4374 MBF = \$13.74/MBF

(5.2H) Decommissioning \$2,333.17

(5.2H) Cost/MBF \$2,333.17/4374 MBF = \$0.53/MBF

(2.1-5.2H) Cost (\$23,554.30 + \$36,562.08 + \$2,333.17) = \$62,449.55

Total Cost/MBF (Excluding Road Use) \$62,449.55/4374 MBF = \$14.28/MBF

1) Road Use Fees - Amortization

Details

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

Subtotal by agreement number

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

MAINTENANCE (2.1)						ROCKWEAR (2.2)			
Road Number	A	Surf	Maint	Vol					
and Segment	N	Type	Mi	x Fee x	MBF	=	Maint Fee x	MBF	= Rkwear
35-5-21.00 A	A	BST	1.78	0.82	2684	\$3,917.13	0.00	2684	\$0.00
35-5-21.00 B1	A	BST	0.62	0.82	2684	\$1,364.39	0.00	2684	\$0.00
35-4-08.00 A	A	BST	0.55	0.82	117	\$52.72	0.00	117	\$0.00
35-4-05.00 A	A	BST	0.64	0.82	273	\$143.43	0.00	273	\$0.00
34-4-28.00 A	A	BST	1.24	0.82	99	\$100.97	0.00	99	\$0.00
34-4-28.00 B	A	BST	0.20	0.82	99	\$16.29	0.00	99	\$0.00

(2.1) Subtotal \$5,594.93(2.2) Subtotal \$0.00**3) Third Party Maintenance and Rockwear**

MAINTENANCE (3.1)						ROCKWEAR (3.2)			
Agrmnt	Surface	Road							
Number	Type	Number	Mi	x	Fee x	MBF	=	Maint Fee x	MBF = Rkwear
Maint CredNAT		35-4-18.02 B	0.09	x	\$0.96 x	116.9=	\$10.10	\$0.00 x	116.9 = \$0.00
Maint CredNAT		35-4-18.02 A	0.16	x	\$0.96 x	116.9=	\$17.96	\$0.00 x	116.9 = \$0.00
Maint CredNAT		35-4-08.01 C	0.03	x	\$0.96 x	116.9=	\$3.37	\$0.00 x	116.9 = \$0.00
Maint CredNAT		35-4-08.01 B	0.44	x	\$0.96 x	116.9=	\$49.38	\$0.00 x	116.9 = \$0.00
Maint CredNAT		35-4-08.01 A	0.30	x	\$0.96 x	116.9=	\$33.67	\$0.00 x	116.9 = \$0.00
Maint CredNAT		34-4-17.05 A	0.19	x	\$0.96 x	119.15=	\$21.73	\$0.00 x	119.15 = \$0.00

Subtotal of maintenance fees by agreement number:

Maint Cred \$136.21

Subtotal of rockwear fees by agreement number:

Maint Cred \$0.00

(3.1) Subtotal

\$136.21

(3.2) Subtotal

\$0.00**4) Other Maintenance Payments - USFS or Others Perform Maintenance**

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

(4.1) Subtotal \$0.00**5) Purchaser Maintenance - Rock Wear**

TIMBER HAUL (5.1)

Road No	A	RkWear	Vol	Total
---------	---	--------	-----	-------

and Segment	N	Mi	x	Fee	x	MBF = RkWear	
35-5-26.04 A	A	1.99	x	\$0.95	x	301.7	= \$570.36
35-5-26.04 B	A	0.99	x	\$0.95	x	301.7	= \$283.75
35-5-26.00 A	A	1.07	x	\$0.95	x	2382	= \$2,421.30
35-5-35.00 B	A	2.09	x	\$0.95	x	2382	= \$4,729.46
35-5-25.06	A	0.14	x	\$0.95	x	162.1	= \$21.56
35-5-25.03 A	A	0.62	x	\$0.95	x	1317.6	= \$776.07
35-5-25.03 B	N	0.91	x	\$0.95	x	1317.6	= \$1,139.07
35-5-21.00 B2	A	0.64	x	\$0.95	x	2683.7	= \$1,631.69
35-4-19.00	N	0.18	x	\$0.95	x	1317.6	= \$225.31
36-4-05.00 A1	A	0.37	x	\$0.95	x	605.1	= \$212.69
36-4-05.00 A2.1	N	0.57	x	\$0.95	x	605.1	= \$327.66
36-4-05.00 A2.2	N	1.13	x	\$0.95	x	480.6	= \$515.92
36-4-05.00 A3	N	0.30	x	\$0.95	x	249	= \$70.97
36-4-05.00 B	N	1.11	x	\$0.95	x	249	= \$262.57
36-4-07.00 A1	N	0.16	x	\$0.95	x	124.5	= \$18.92
36-4-07.01 A1	N	0.43	x	\$0.95	x	160.1	= \$65.40
36-4-07.01 A2	N	0.31	x	\$0.95	x	160.1	= \$47.15
36-4-07.01 A3	N	0.38	x	\$0.95	x	160.1	= \$57.80
35-4-05.00 B1	A	0.52	x	\$0.95	x	273.3	= \$135.01
35-4-05.00 B2	A	0.86	x	\$0.95	x	203	= \$165.85
35-4-05.00 C1	A	1.69	x	\$0.95	x	152.25	= \$244.44
34-4-31.00	A	0.06	x	\$0.95	x	50.75	= \$2.89
34-4-32.00 A	A	0.20	x	\$0.95	x	70.3	= \$13.36
34-4-28.00 C	A	0.46	x	\$0.95	x	99.3	= \$43.39
34-4-28.00 D	A	0.57	x	\$0.95	x	99.3	= \$53.77
34-4-28.00 E	A	0.64	x	\$0.95	x	99.3	= \$60.37
34-4-28.00 F	A	0.67	x	\$0.95	x	99.3	= \$63.20
34-4-28.00 G	A	0.14	x	\$0.95	x	99.3	= \$13.21
34-4-17.00 A	A	0.18	x	\$0.95	x	79.5	= \$13.59
34-4-15.00 A	A	0.32	x	\$0.95	x	595.75	= \$181.11
34-4-10.00 A	N	0.77	x	\$0.95	x	595.75	= \$435.79
34-4-10.00 B	N	0.20	x	\$0.95	x	595.75	= \$113.19
34-4-10.00 C	N	1.83	x	\$0.95	x	595.75	= \$1,035.71
34-4-10.00 D	N	0.98	x	\$0.95	x	595.75	= \$554.64
34-4-10.00 E1	N	0.54	x	\$0.95	x	595.75	= \$305.62
34-4-10.00 E2	N	0.55	x	\$0.95	x	595.75	= \$311.28
34-4-10.00 E3	N	1.07	x	\$0.95	x	476.6	= \$484.46
34-4-17.06	N	0.06	x	\$0.95	x	476.6	= \$27.17
36-4-05.00 B	N	0.70	x	\$0.95	x	249	= \$165.59
36-4-05.00 B	N	0.04	x	\$0.95	x	249	= \$9.46
34-4-28.00 H	A	0.66	x	\$0.95	x	19.8	= \$12.41

(5.1) Subtotal \$17,823.16

Purchaser Operational Maintenance

Move In

Equipment	No	Move	Cost/	Dist	Sub-	
		Units	x in x	50 Mi	x Factor	= total
Motor Grader:	1	1		558	0.63	\$351.54
Back Hoe:	1	1		415	0.63	\$261.45
Loader:	1	1		558	0.63	\$351.54
Water Truck:	1	1		138	0.63	\$86.94
Dump Truck:	1	1		130	0.63	\$81.90
Excavator:	1	1		558	0.63	\$351.54
Roller:	1	1		558	0.63	\$351.54

(5.2A) Total \$1,836.45

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x	Cost/Mi	=	Subtotal
		\$514.62		\$0.00

(5.2B) Total \$0.00**Grading (Includes Ditches and Shoulders)**

Miles	x	Cost/Mi	x	Freq	=	Subtotal
Blade w/ Ditch:	23.65		939.38	1		\$22,216.34
Blade w/o Ditch:	2.10		568.71	1		\$1,194.29

(5.2C) Total \$23,410.63**Slide and Slough removal, Slump Repair (15 sta-yds. ea.)**

Type	No Slides	Hours	Equip		
Equipment	/Slumps	x Each	x Cost	=	Subtotal
Grader:	0	0	\$187.45		\$0.00
Loader:	0	0	\$117.39		\$0.00
Backhoe:	0	0	\$111.88		\$0.00

(5.2D) Total \$0.00**Dust Palliative (Water)**

Spreading Hours

No	Freq	Truck						
Miles	/	MPH	=	Hours	x	Days	x	/Day = Hours
0.00		0				0		0
Load & Haul =				0.0		0		0
Total Hours =				0				

Truck Cost: \$114.98/Hr. x 0.0 Hours = \$0.00

(5.2E) Total \$0.00**Surface Repair (Aggregate)**

Quarry / Source Name: Robco 1.5"

Production Cost: 500.0 CY x \$20.00/CY = 10,000.00

Haul to Stockpile:

Grades > 15% 500.0 CY x ((\$2.56/CY x 0.00 Mi) + \$0.85) = \$0.00

Grades <= 15% 500.0 CY x ((\$1.28/CY x 0.00 Mi) + \$0.85) = \$0.00

State / Co Roads 500.0 CY x ((\$0.57/CY x 0.00 Mi) + \$0.85) = \$0.00

Process with Grader: 500.0 CY x \$1.22/CY = \$610.00

Compaction: 500.0 CY x \$1.41/CY = \$705.00

SubTotal \$11,315.00(5.2F) Total \$11,315.00**Other**

Fallen Timber Cutting: 0.0 Hours x \$0.00/Hour = \$0.00

Brush Cutting/Tree Trimming: 0.0 Hours x \$0.00/Hour = \$0.00

Oil/Asphalt Materials: Lump Sum = \$0.00

Signing for Dust Palliatives: Lump Sum = \$0.00

Lump Sum = \$0.00

Lump Sum = \$0.00

Lump Sum = \$0.00

Lump Sum = \$0.00

Lump Sum = \$0.00

(5.2G) Total \$0.00

Decommissioning

Other Costs

Road Number	Cubic Yds Pullback Material		Qty Waterbars		Qty Earthen Barriers	= Total
34-4-17.00	(0x2.23)	+	(6x87.3)	+	(1x261.9)	= \$785.70
36-4-07.00	(0x2.23)	+	(4x87.3)	+	(1x261.9)	= \$611.10
(Other Cost) Total						<u>\$1,396.80</u>

Time & Equipment

34-4-17.00	Camouflage Entrance: 1 EA @ \$142.79/EA	= \$142.79
36-4-07.00	Camouflage Entrance: 1 EA @ \$142.79/EA	= \$142.79
36-4-07.00	Seed and Mulch: 0.3 Acre @ \$929.70/Acre	= \$278.91
34-4-17.00	Seed and Mulch: 0.4 Acre @ \$929.70/Acre	= \$371.88
(5.2H)	Decommissioning Total <u>\$2,333.17</u>	

This page intentionally left blank

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

PINE SHEPHERD TIMBER SALE
TRACT NO. ORM05-TS-2026.0003

PROJECT LOCATION

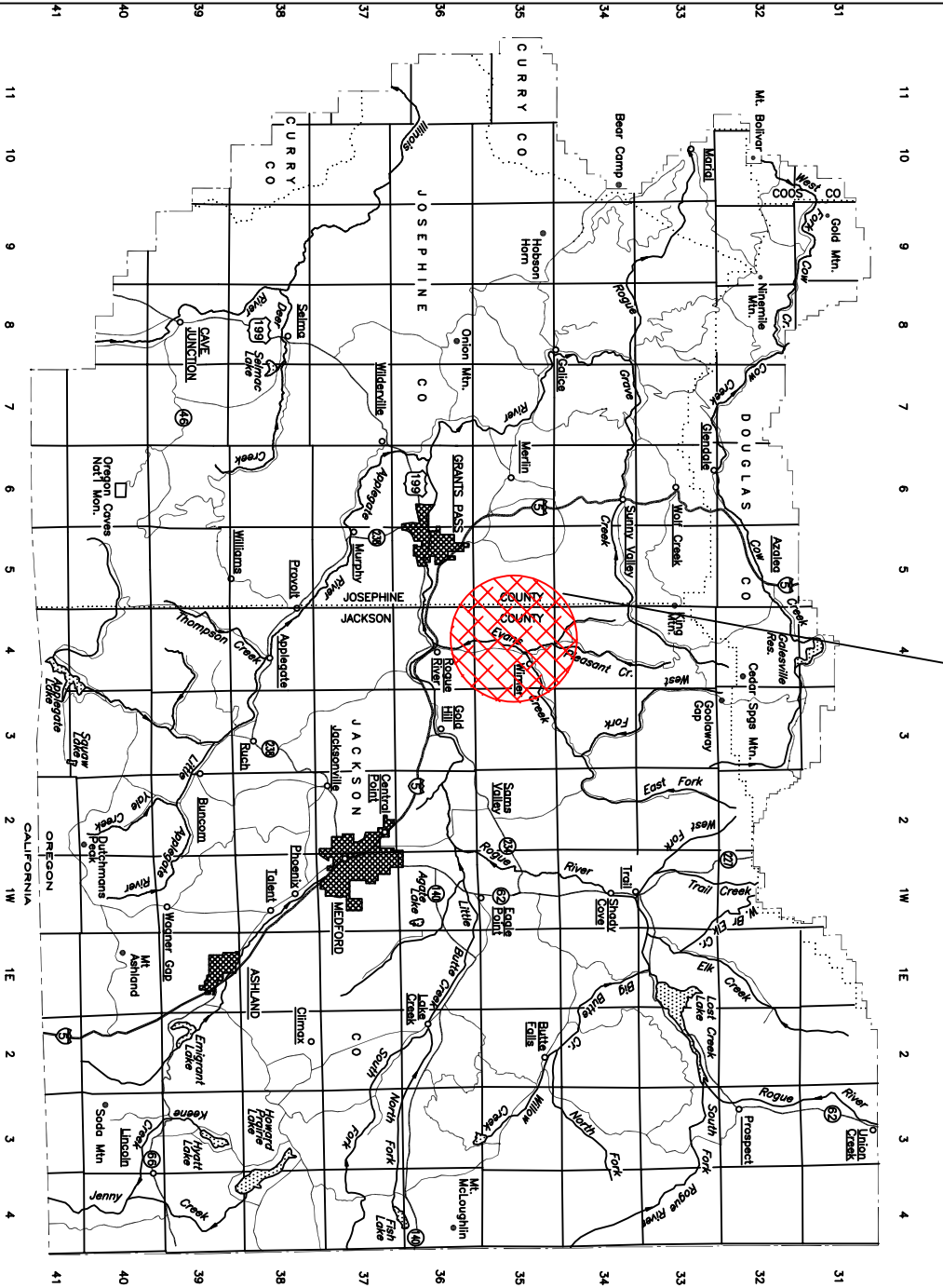


Exhibit No.	Description
D-1	TITLE SHEET
D-2	ROAD MAINTENANCE MAP
D-3	ROAD MAINTENANCE SPECIFICATIONS
D-4	ESTIMATE OF QUANTITIES
D-5	DRAINAGE & EROSION CONTROL DETAILS
D-6	ROAD DECOMMISSIONING MAP
D-7	ROAD DECOMMISSIONING WORKLIST
D-8	TYPICAL FULL DECOMMISSION
D-9	TYPICAL ROAD CAMOUFLAGE
D-10	TYPICAL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

EXHIBIT D-1
SHEET 1 OF 1

REV. NO.		DESCRIPTION		DATE APPROV.	
PINE SHEPHERD		TITLE SHEET			
DRAWN FEP		SCALE AS SHOWN			
DATE JUNE 2026		SHEET 1 OF 1			
DRAWING NO. ORM05-TS-2026.0003-D1					

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

EXHIBIT D-2

Page 1 of 7

PINE SHEPHERD T.S.

ORM05-TS-2026.0003

ROAD MAINTENANCE

MAP

U.S.D.I BLM MEDFORD DISTRICT

T.34.S., R.04.W., WILL MER.

Legend

Road Maintenance

■ Purchaser Maintenance

Harvest Unit



Road by Surface Type

--- Rocked Road

— Paved Road

— Natural Surface

..... Null or Not Known

Land Ownership

■ Bureau of Land Mgmt.

□ Private or Undetermined

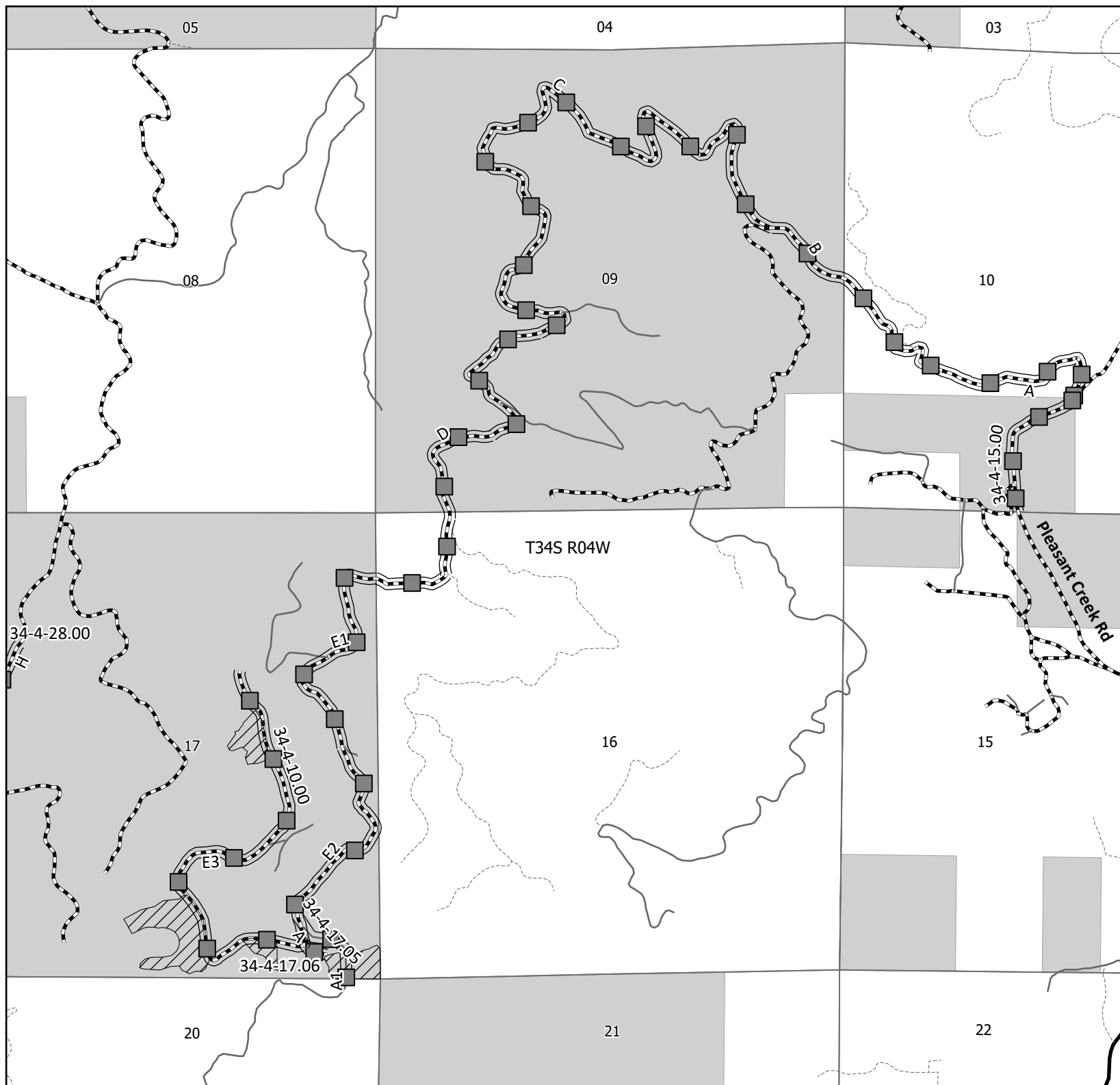


EXHIBIT D-2

Page 2 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD MAINTENANCE

MAP

U.S.D.I BLM MEDFORD DISTRICT

T.34.S., R.04.W., WILL MER.

Legend

Road Maintenance

- ★ BLM Maintenance
- ⌵ Purchaser Maintenance to be put in Long Term Storage
- Purchaser Maintenance

Harvest Unit



Road by Surface Type

- ⋯ Rocked Road
- Paved Road
- Natural Surface
- ⋯ Null or Not Known

Land Ownership

- Bureau of Land Mgmt.
- Private or Undetermined

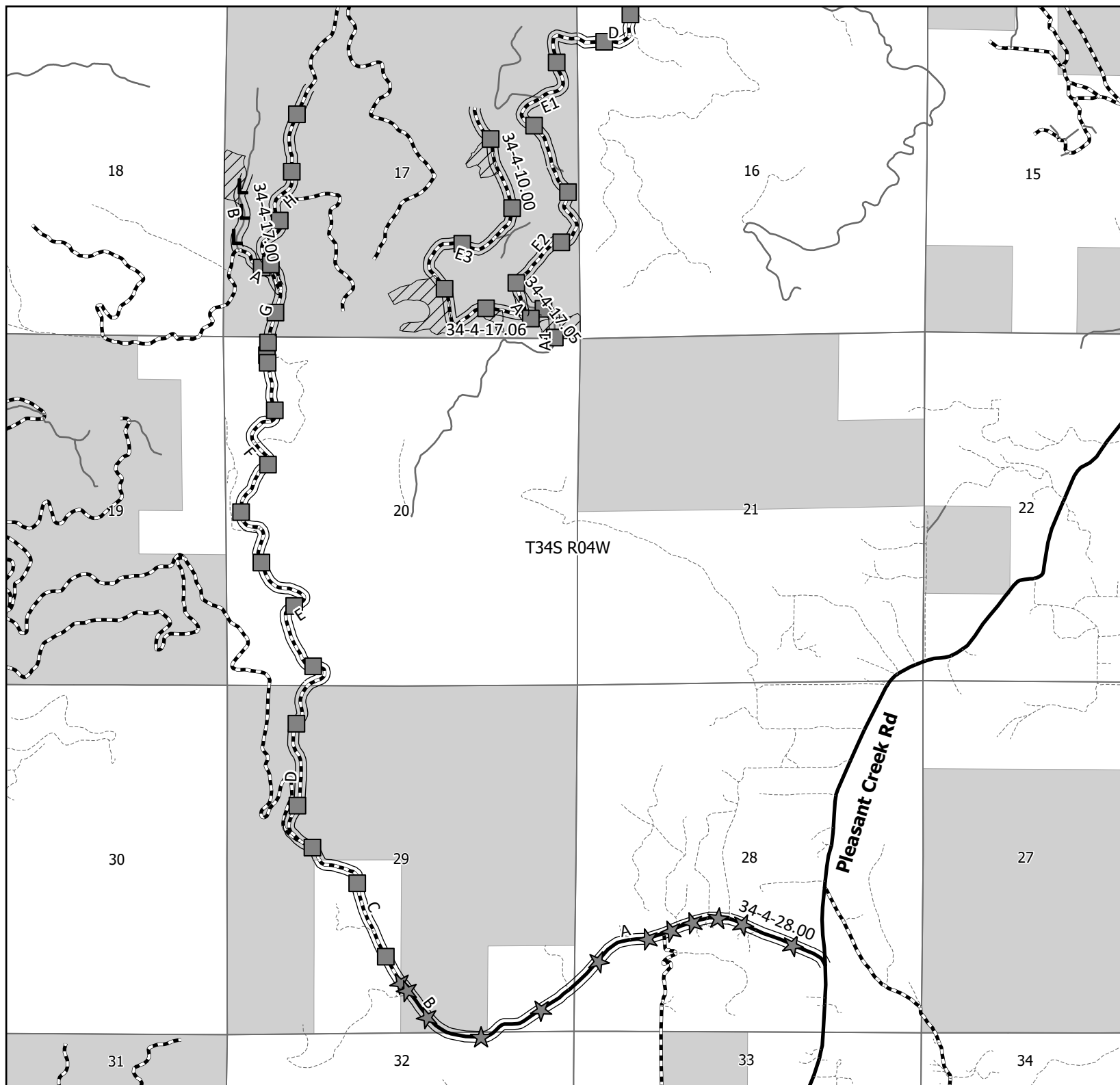


EXHIBIT D-2

Page 3 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD MAINTENANCE

MAP

U.S.D.I BLM MEDFORD DISTRICT

T.34.S., R.04.W., WILL MER.

T.35.S., R.04.W., WILL MER.

Legend

Road Maintenance

- ★ BLM Maintenance
- Purchaser Maintenance

Harvest Unit

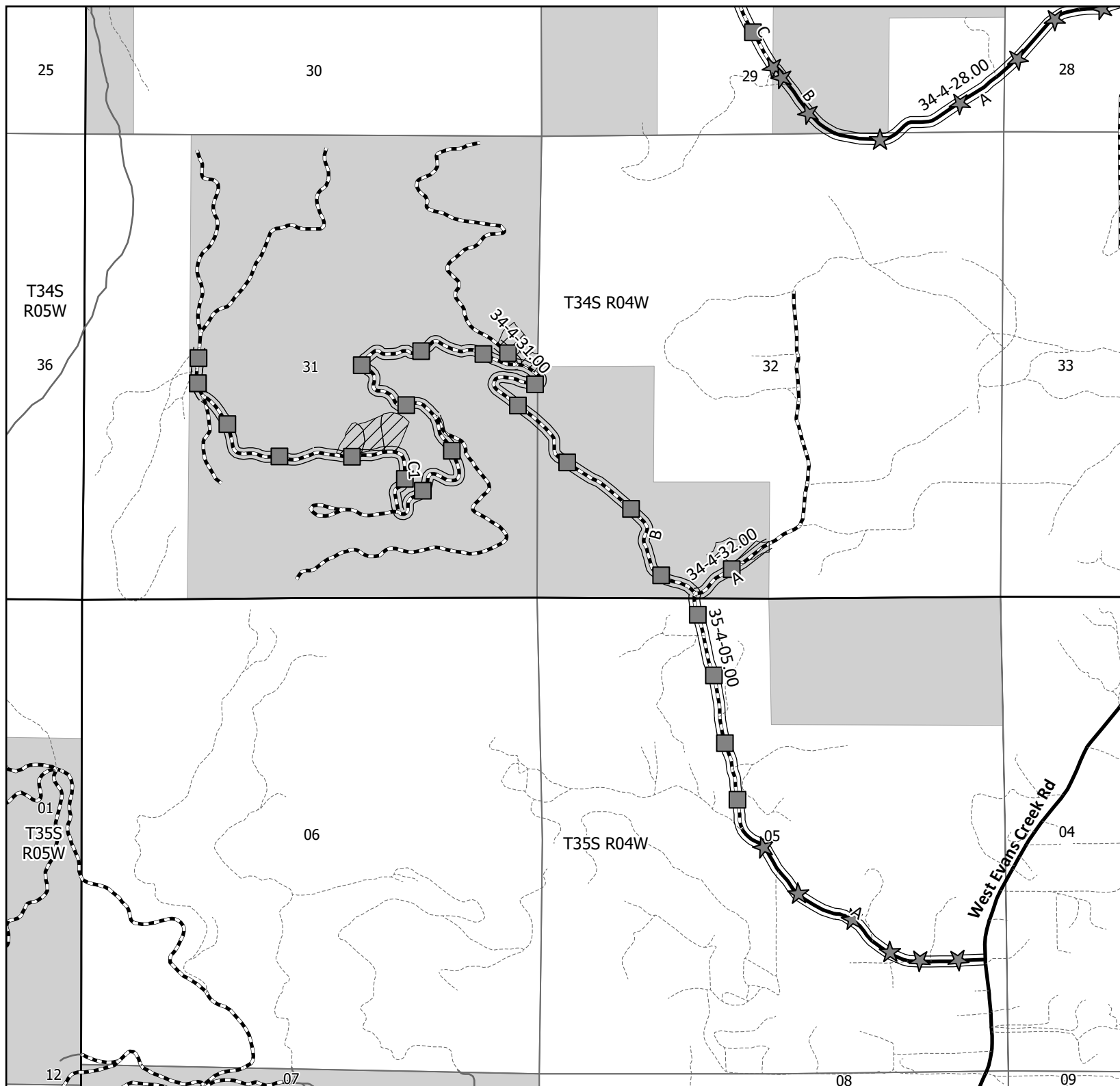


Road by Surface Type

- Rocked Road
- Paved Road
- Natural Surface
- ... Null or Not Known

Land Ownership

- Bureau of Land Mgmt.
- Private or Undetermined



T.35.S., R.05.W., WILL MER.

Legend

Road Maintenance



BLM Maintenance



Purchaser Maintenance

Harvest Unit



Road by Surface Type



- Rocked Road



- Paved Road



- Natural Surface



Null or Not Known

Land Ownership



Bureau of Land Mgmt.



Private or Undetermined



EXHIBIT D-2

Page 5 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD MAINTENANCE

MAP

U.S.D.I BLM MEDFORD DISTRICT

T.35.S., R.05.W., WILL MER.

Legend

Road Maintenance

- ★ BLM Maintenance
- Purchaser Maintenance

Harvest Unit



Road by Surface Type

- Rocked Road
- Paved Road
- Natural Surface
- Null or Not Known

Land Ownership

- Bureau of Land Mgmt.
- Private or Undetermined

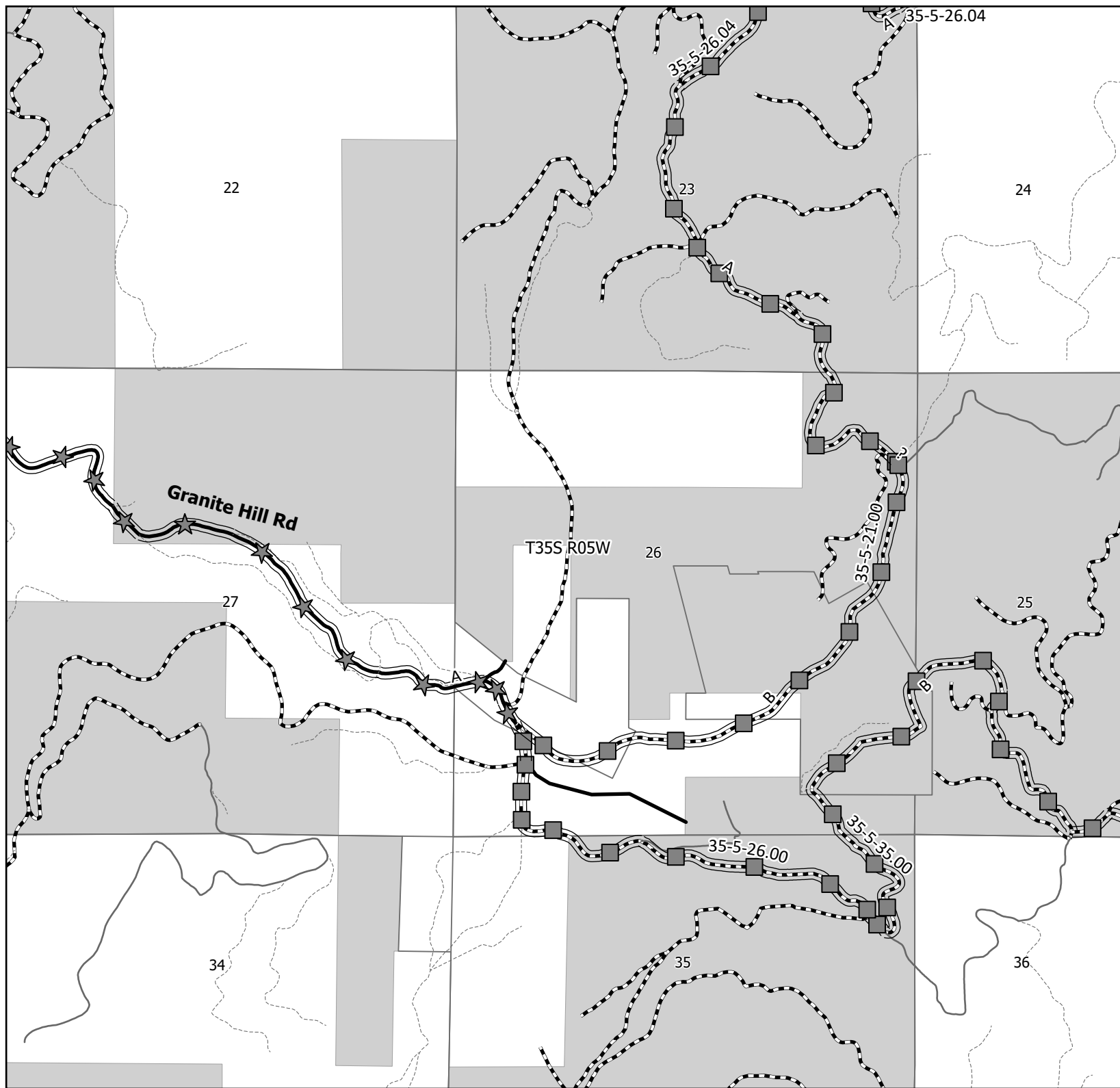


EXHIBIT D-2

Page 7 of 7

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD MAINTENANCE

MAP

U.S.D.I BLM MEDFORD DISTRICT

T.36.S., R.04.W., WILL MER.

T.36.S., R.05.W., WILL MER.

Legend

Road Maintenance

-  Purchaser Maintenance to be put in Long Term Storage
-  Purchaser Maintenance

Harvest Unit

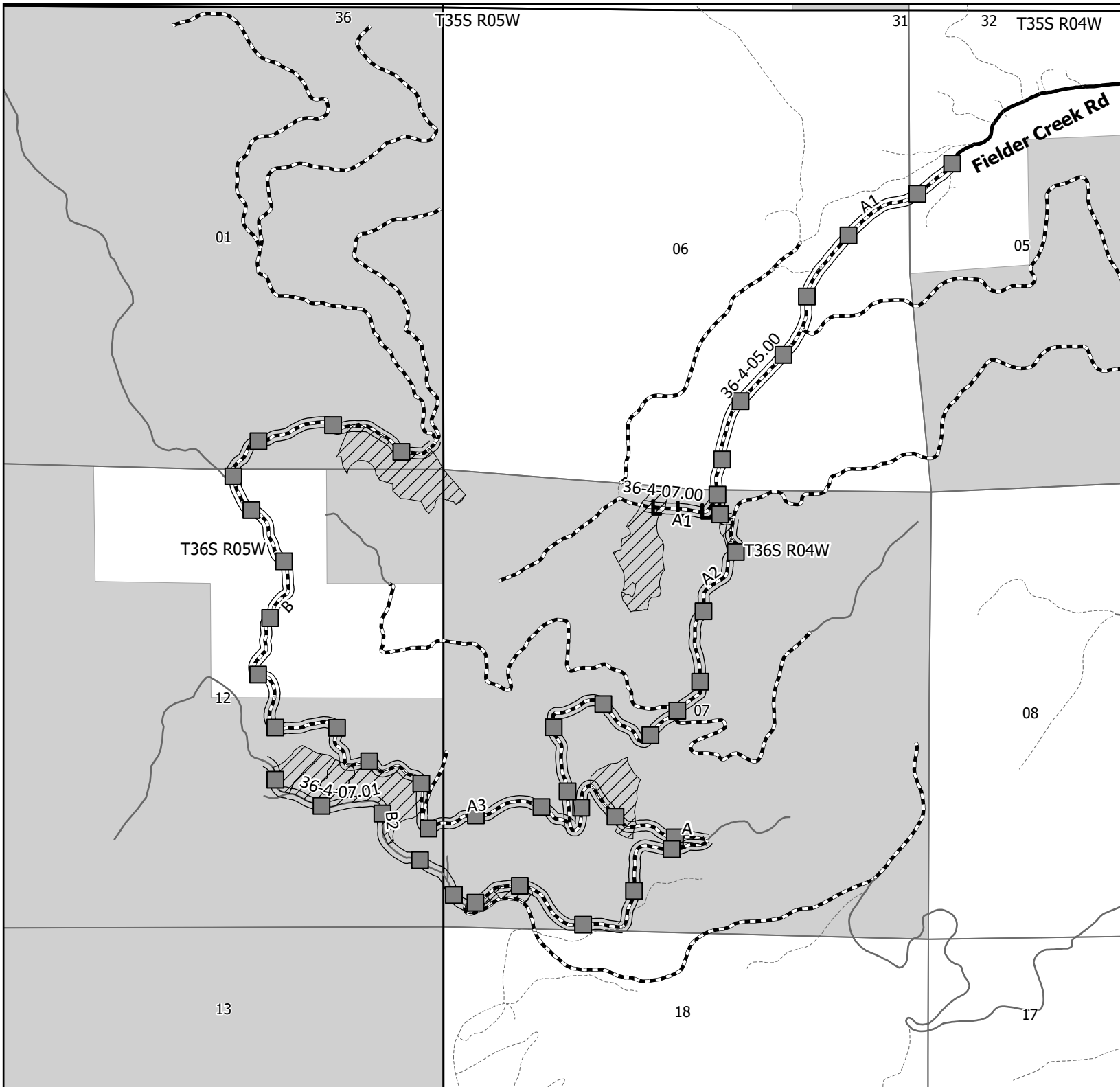


Road by Surface Type

-  Rocked Road
-  Paved Road
-  Natural Surface
-  Null or Not Known

Land Ownership

-  Bureau of Land Mgmt.
-  Private or Undetermined



ROAD MAINTENANCE SPECIFICATIONS

TABLE OF CONTENTS

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

GENERAL - 3000

- 3001 The Purchaser shall be required to maintain all roads listed in Exhibit D-4 and as shown on the Exhibit D-2 maps of this contract in accordance with Sections 3000, 3100, 3200, 3300, and 3400 of this exhibit.
- 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 road 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 and place 500 cu. yds. of stockpiled aggregate from a commercial source conforming to the requirements in Section (1000) (1200) of Exhibit C of this contract on the roadway at locations and in the amounts designated by the Authorized Officer.

ROAD MAINTENANCE SPECIFICATIONS

This aggregate shall be used to repair surface failures and areas of depleted surface depth excluding damages covered by Section 12 of this contract. The aggregate shall be hauled, placed, spread, and compacted by use of dump trucks, water trucks, and motor grader or similar equipment.

- 3103 The purchaser shall maintain established berms and place additional berms using adjacent material where needed to protect fills as directed by the Authorized Officer.
- 3104 The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.
- 3104a Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.
- 3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.
- Prior to removal of any slough or slide material exceeding fifteen station yards at any one site, the Purchaser and the Authorized Officer or their Authorized Representatives shall agree in writing, in the field, to the quantity of material, method of disposal, and the disposal site. Work may commence immediately after agreement.
- Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work, based on current BLM Road Cost Guide. Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.
- 3105 The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water-bars using 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.

ROAD MAINTENANCE SPECIFICATIONS

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

- 3107 The Purchaser shall cut or trim trees and brush which obstructs vision or prevents the safe passage of traffic along the traveled way when directed by the Authorized Officer.
- The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be by scattering below the road in accordance with Section 2100 of Exhibit C.
- 3108 The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.
- 3108a The Purchaser shall perform logging operations on gravel and/or bituminous roadways only where the locations have been marked on the ground and/or approved by the Authorized Officer. The Purchaser shall furnish asphalt and/or gravel for necessary repairs at designated locations. Repair of the roads is not considered maintenance and shall be repaired at the Purchaser's expense.

SEASONAL MAINTENANCE - 3200

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

ROAD MAINTENANCE SPECIFICATIONS

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.

ROAD MAINTENANCE SPECIFICATIONS

DECOMMISSIONING – 3500

3501 Decommissioning work includes ripping and installing water bars, seeding, placement of slash or soil stabilization material, and blocking or camouflaging road to prevent access by vehicles. This work is not required for road acceptance under Section 18 of this contract.

3503 Decommissioning and long term closure shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	From Sta/MP	To Sta/MP	(D)ecommission or (L)ong Term Closure
34-4W-17.00	0.20	0.42	L
36-4W-07.00	0.00	0.17	L

3504 Decommissioning work shall be completed after road use. All decommissioning work shall be performed during the following seasonal periods.:

From: May 15	To: Oct 15
--------------	------------

3505 Where draw crossing fill material is to be excavated and removed, the finished bottom of draw profile shall be re-established to its original channel grade and resulting adjacent banks shall be re-established to their original backslope ratios.

3506 Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. Where slash is no longer available, remaining exposed soil areas shall be stabilized in accordance with Section 1800.

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

3508 Protect areas mulched or treated with slash placement from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.

3509 Access shall be blocked with barricades as shown on the typical detail sheet Exhibit D-10 and at locations as described in Exhibit D-7.

ROAD MAINTENANCE SPECIFICATIONS

- 3510 All vegetation and slash shall be removed from the immediate area designated for excavation and partial contouring including draw fill slopes, waste areas, and other special areas. Sections of roadway where ripping is required shall be cleared of all vegetation and slash. The resultant slash shall be scattered along the roadway or stockpiled in a manner that will allow retrieval and uniform spreading in accordance with Subsection 3506. No vegetation or slash shall be mixed with excavated material to be placed.
- 3511 Ripping and water barring shall be done on designated roadways, turnouts, landings. Ripping shall be done in accordance with Exhibit D-7.
- 3512 Draw crossing fill material shall be excavated and placed in designated locations for use in accomplishing partial recontouring. Placement of materials shall produce well-drained, uniform recontoured terrain as shown on the plans. The finished draw excavation shall meet requirements of Subsection 3505.
- 3513 Water bars and drain dips shall be installed across full width of roadway at spacing shown in Exhibit D-7. Water bars and drain dips shall be constructed as shown on Exhibit D-5.
- 3514 Protection of exposed surfaces shall be accomplished by placement of soil stabilization material or slash in accordance with Section 1800 and Subsection 3506 on designated roadways, turnouts, disturbed areas, landings, cut banks, fill slopes and other areas disturbed by the purchaser's decommissioning operations in accordance with these specifications and as shown in the plans.

**EXHIBIT D-4
SHEET 1 OF 2
PINE SHEPHERD T.S.**

ROAD NUMBER	FROM	TO	LENGTH	MAINTENANCE RESPONSIBILITY			WATERING (PURCHASER)	SPOT ROCKING**	ROAD CLOSURE AND DECOMMISSIONING							
				BLM MAINTENANCE	PURCHASER MAINTENANCE	THIRD PARTY MAINTENANCE			INSTALL		CAMOU- FLAGE ROAD	INSTALL WATER BARS	REMOVE CULVERTS	RIPPING	SOIL STABILIZATION (SEED & MULCH)	
									EARTH, BOULDER OR STUMP BARRICADE	MEGA GATE						
																MILE
ROAD NUMBER	MP/STA	MP/STA	MILE/STA	MILE	MILE	MILE	MILE									
34-4-10.00	0.00	5.95	5.95		5.95											
34-4-15.00	0.00	0.32	0.32		0.32											
34-4-17.00	0.00	0.41	0.41		0.41				1		1	6				0.40
34-4-17.05	0.00	0.19	0.19		0.19											
34-4-17.06	0.00	0.06	0.06		0.06											
34-4-28.00 A-B	0.00	1.44	1.44	1.44												
34-4-28.00 C-H	1.44	4.58	3.14		3.14											
34-4-31.00	0.00	0.06	0.06		0.06											
34-4-32.00	0.00	0.20	0.20		0.20											
35-4-05.00 A	0.00	0.64	0.64	0.64												
35-4-05.00 B-C1	0.64	3.71	3.07		3.07											
35-4-08.00	0.00	0.55	0.55	0.55												
35-4-08.01	0.00	0.76	0.76		0.76											
35-4-17.00	0.00	0.04	0.04		0.04											
35-4-18.02	0.00	0.44	0.44		0.44											
35-4-19.00	0.00	0.19	0.19		0.19											
35-5-21.00 A-B1	0.00	2.40	2.40	2.40												
35-5-21.00 B2	2.40	3.04	0.64		0.64											
35-5-25.03	0.00	1.90	1.90		1.90											
TOTALS	##	###	22.40	5.03	17.37	####	####	####	1.00	####	1.00	6.00	####	####		0.40

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

**** 500 CY of spot rock shall be placed on roads after use. Rock shall
be obtained from a commercial source as described
in Exhibit D-3, Section 3102.**

**ALWAYS
THINK
SAFETY**

ESTIMATE OF QUANTITIES*

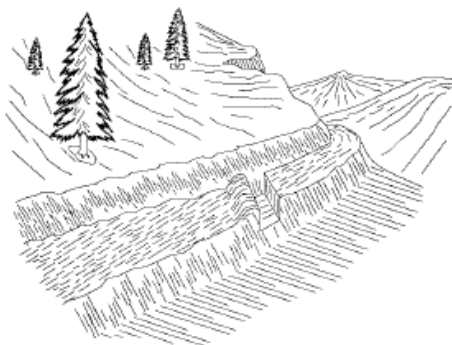
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF
LAND MANAGEMENT MEDFORD DISTRICT MEDFORD,
OREGON

DRAWN: FEP	SCALE: NONE
DATE: JUNE 2026	SHEET: 1 OF 2
DRAWING NO. ORM05-TS-2026.0003-D4	

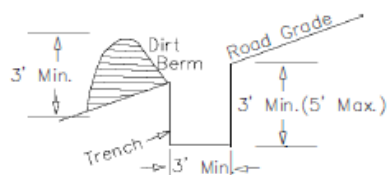
REV. NO.	DESCRIPTION	DATE	APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT MEDFORD, OREGON			

DRAWN: FEP	SCALE: NONE
DATE: JUNE 2026	SHEET: 2 OF 3
DRAWING NO.	ORM05-TS-2026 0003-D

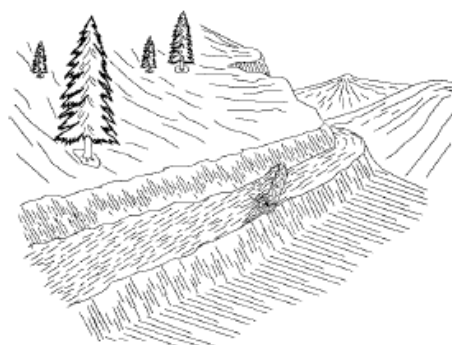
EXHIBIT D5
SHEET 1 OF 1
PINE SHEPHERD T.S.



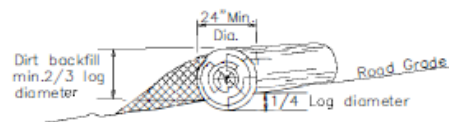
TRENCH BARRICADE



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



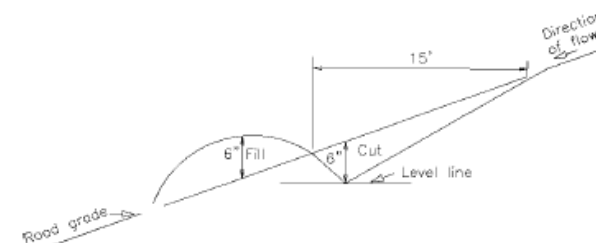
LOG BARRICADE



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

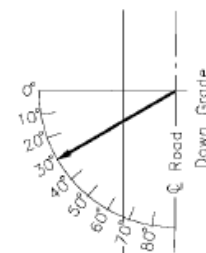


WATER BAR



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

SKEW DIAGRAM



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

**DRAINAGE & EROSION
CONTROL INSTALLATION**

DRAWN JWR	SCALE NONE
DATE April 2022	SHEET 1 OF 1
DRAWING NO. ORM05-TS-2026.0003-D5	

EXHIBIT D-6

Page 1 of 2

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD MAINTENANCE

MAP

U.S.D.I BLM MEDFORD DISTRICT

T.36.S., R.04.W., WILL MER.

Legend

Road Maintenance

-  Purchaser Maintenance to be put in Long Term Storage
-  Purchaser Maintenance

Harvest Unit



Road by Surface Type

-  Rocked Road
-  Natural Surface
-  Null or Not Known

Land Ownership

-  Bureau of Land Mgmt.
-  Private or Undetermined

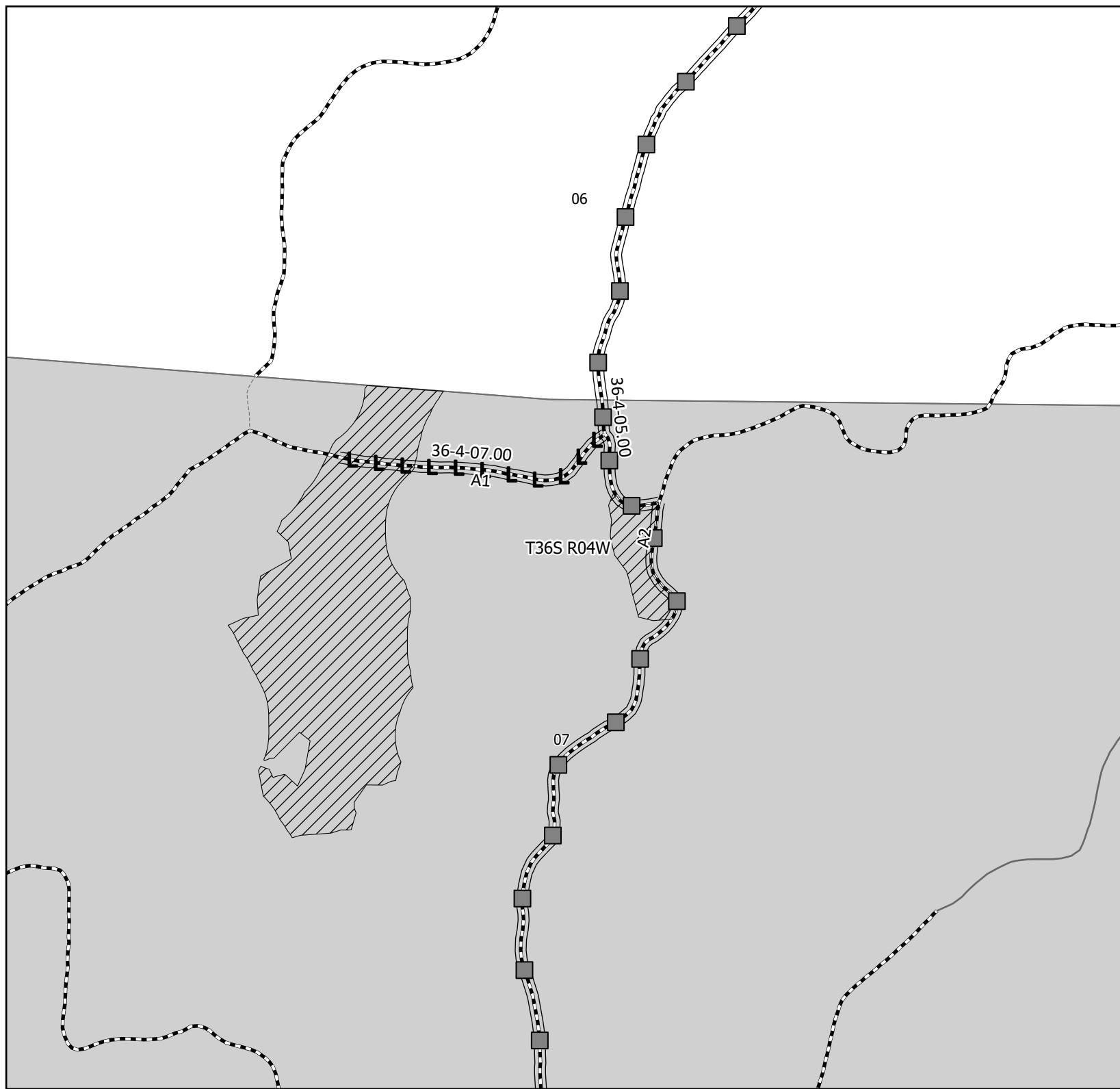


EXHIBIT D-6

Page 2 of 2

PINE SHEPHERD T.S

ORM05-TS-2026.0003

ROAD MAINTENANCE

MAP

U.S.D.I BLM MEDFORD DISTRICT

T.34.S., R.04.W., WILL MER.

Legend

Road Maintenance

 Purchaser Maintenance to be put in Long Term Storage

 Purchaser Maintenance

Harvest Unit



Road by Surface Type

 Rocked Road

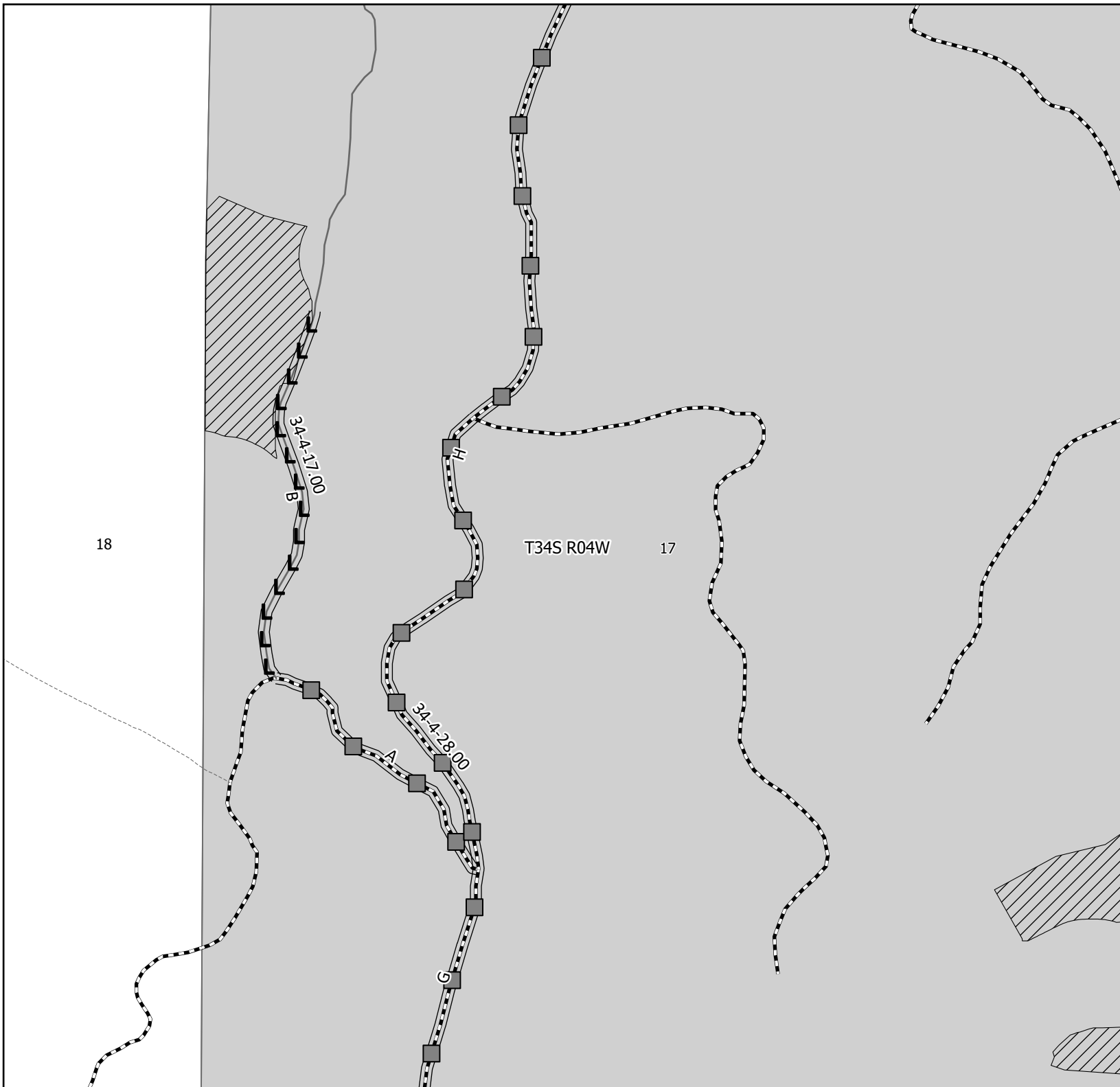
 Natural Surface

 Null or Not Known

Land Ownership

 Bureau of Land Mgmt.

 Private or Undetermined



ROAD DECOMMISSIONING WORKLIST

GENERAL DEFINITIONS:

Long Term Closure = Work shall include installing waterbars every 200', and camouflaging and/or barricading the road entrance as per Exhibit D-9 or D-10, unless directed otherwise. Seeding with approved native seed species and mulching with weed-free straw or approved native materials on all disturbed areas.

LONG TERM CLOSURE:

Road 34-4W-17.00 B (BLM) NAT

<u>M.P.</u>	<u>Remarks</u>
0.00	Jct. 34-4W-28.00.
0.20	Jct. 34-4W-17.01 (left). Begin long term closure. Camouflage, barricade, install waterbars every 200 feet, and seed and mulch.
0.41	End long term closure.

Road 36-4W-07.00 (BLM) NAT

<u>M.P.</u>	<u>Remarks</u>
0.00	Jct. 36-4W-05.00. Begin long term closure. Begin long term closure. Camouflage, barricade, install waterbars every 200 feet, and seed and mulch.
0.17	End long term closure.

EXHIBIT D8

SHEET 1 OF 1

PINE SHEPHERD T.S.



Typical Entrance – Before



Typical Entrance – After

Typical Road Camouflaged Entrance
(See Exhibit D-9)

Notes:

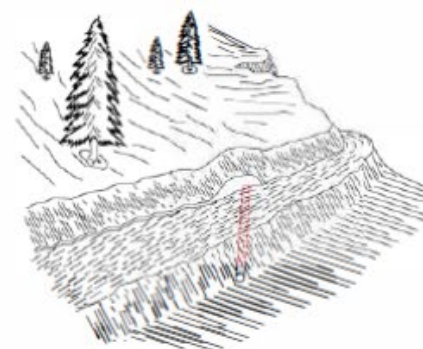
1. The Purchaser shall barricade, decompact the road prism and camouflage the roadbed so that the road entrance and roadway are indiscernible from the intersecting road. Camouflaged entrances shall consist of logs, slash, boulders and other debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use. Barriades shall be constructed as shown for each road.

Where multiple entrances exist, the work shall include obscuring all road entrances. Ditchlines at intersecting roads will be restored as indicated on plan view. The Purchaser shall use soil, boulders, brush, dead material, stumps, and other debris to disguise the road prism to the extent possible. No live trees shall be used without approval of the Authorized Officer.

3. Road surface shall be decompact for its entire length using mechanical equipment. Decompact road surface to a depth of 12 to 18 inches or to a point where 10 inch diameter stones are the dominant substrate (whichever is shallower). Where it is determined by the Authorized Officer that decompaction may cause unacceptable damage to the root systems of residual trees along a majority of the road, decompaction may be intermittent, or scarification may be used instead. Woody debris, brush, stumps, boulders, and other debris shall be placed along the roads entire length as determined by availability of materials to provide ground cover and discourage use. No live trees shall be cut or used without approval of the Authorized Officer.

4. All culverts shall be removed from road for its entire length. Excavated culverts shall be left open to drain and have slopes of $1\frac{1}{2}$:1. Where draw culverts are removed the grade of the channel shall be restored to match existing stream. Culverts not designated as salvage for the Government shall become the property of the Contractor. The Contractor shall be responsible for legally disposing of material.

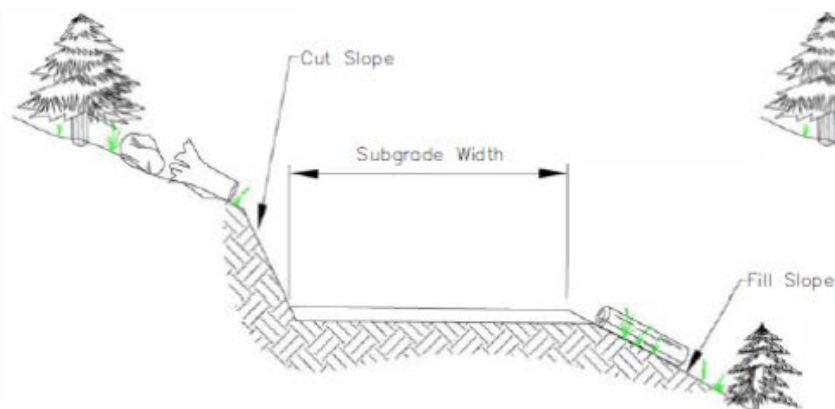
5. See Section 1800 for Seeding Specifications.



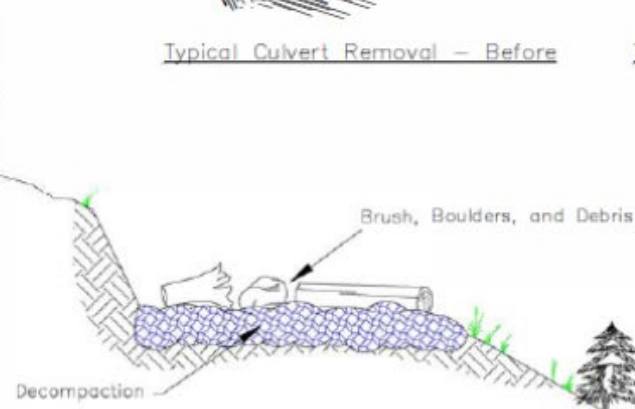
Typical Culvert Removal – Before



Typical Culvert Removal – After



Before Decommissioning



After Decommissioning

Typical Full Decommission

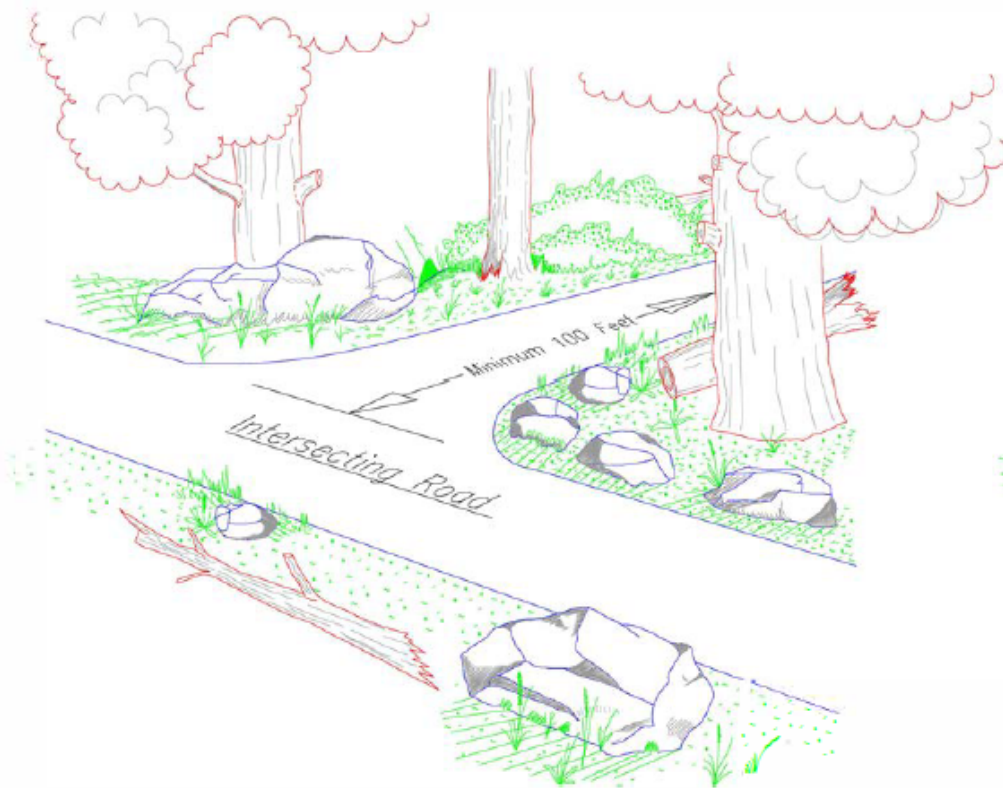
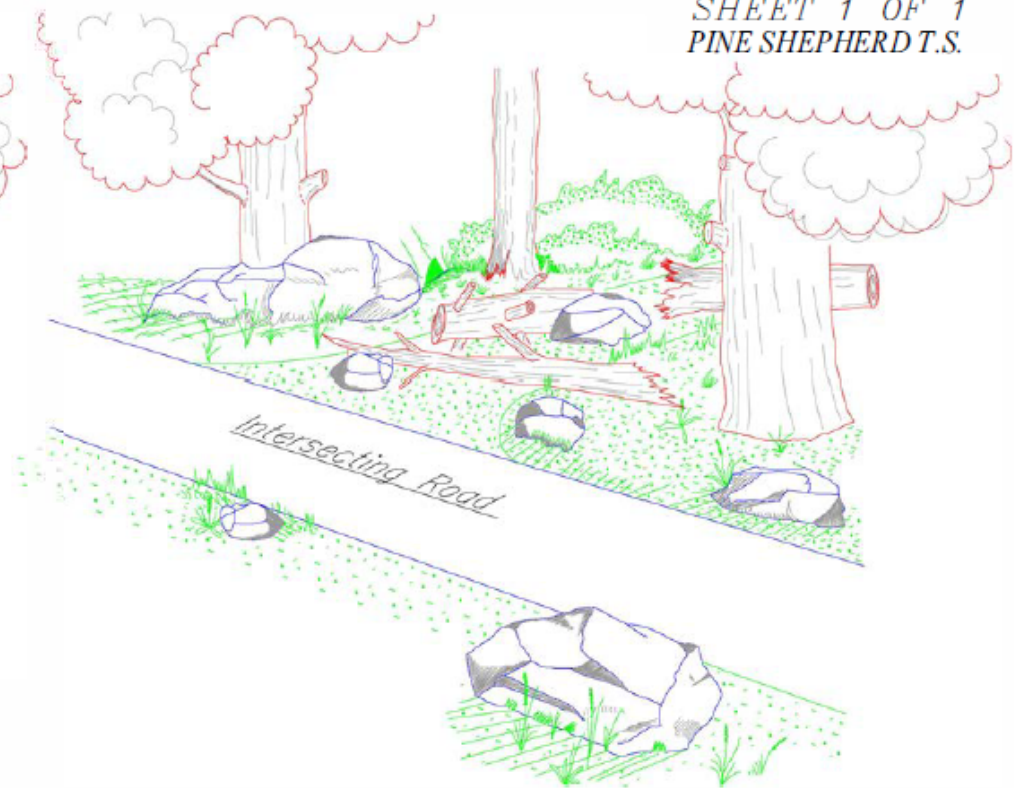
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT – MEDFORD, OREGON

Typical Full Decommission

DRAWN: JWR SCALE: NONE

DATE: April 2022 SHEET 1 OF 1

DRAWING NO. ORM05-TS-20260003-D8

Typical Entrance – BeforeTypical Entrance – After

Notes:

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

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

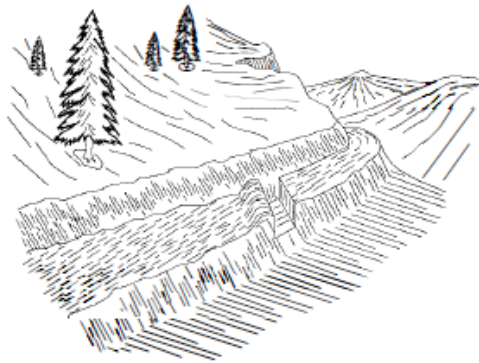
Typical Road Camouflage

DRAWN JWR SCALE NONE

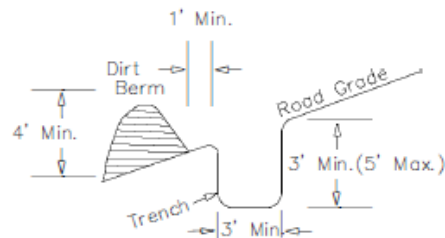
DATE April 2022 SHEET 1 OF 1

DRAWING NO. ORM05-TS- 2026.0003 -D9

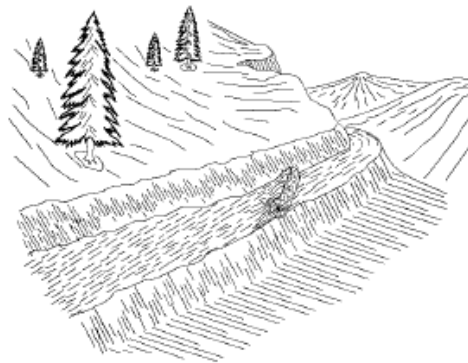
EXHIBIT D-10
SHEET 1 OF 1
PINE SHEPHERD T.S.



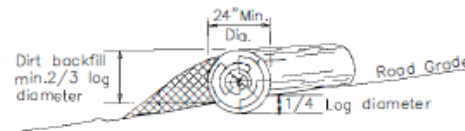
TRENCH BARRICADE



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



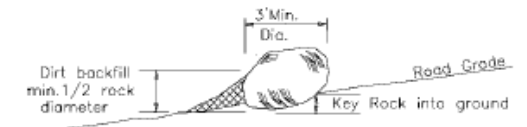
LOG BARRICADE



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

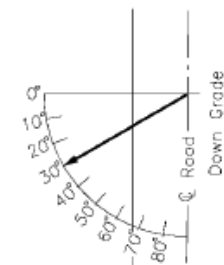


ROCK BARRICADE



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

SKEW DIAGRAM



REV.	NO.	DESCRIPTION	DATE APPROV.
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
<i>BARRICADE DETAILS</i>			
DRAWN	JAB	SCALE	NONE
DATE	FEBRUARY 2023	SHEET	1 OF 1
DRAWING NO. ORMO5-TS-2026.0003-D10			