

P R O S P E C T U S

Scale Sale

GRANTS PASS FIELD OFFICE
JOSEPHINE MASTER UNIT

Medford Sale # ORM07-TS-2026.0002
March 26, 2026 (SQ)

King Graves Timber Sale
Jackson & Josephine Counties, O&C

BID DEPOSIT REQUIRED: \$59,800.00

All timber designated for cutting in SE $\frac{1}{4}$ SE $\frac{1}{4}$ Section 17, S $\frac{1}{2}$ SE $\frac{1}{4}$ Section 19, N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$ Section 21, NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 29, Lot 1, Lot 2, NE $\frac{1}{4}$, SE $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ Section 31, T. 33 S., R. 4 W.; SW $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ Section 25, T.33 S., R. 5 W.; Willamette Meridian.

Approx. Number Merch. Trees	Est. Volume MBF 32' Log	Species	Est. Volume MBF 16' Log	Appr. Price Per MBF*	Est. Volume Times Appraised Price
38,562	5,856	Douglas-fir	7,084	\$75.00	\$531,300.00
5,129	784	white fir	968	\$47.10+	\$45,592.80
3,846	163	Incense-cedar	214	\$38.50+	\$8,239.00
947	103	ponderosa pine	125	\$33.40+	\$4,175.00
177	8	western hemlock	10	\$45.30+	\$453.00
8	5	sugar pine	6	\$33.80+	\$202.80
48,669	6,919	Totals	8,407		\$589,962.60
Other Wood Products		Species	Est. Green Tons	Appr. Price Per Green Ton	Est. Tons Times Appraised Price
Biomass		All Species	2,500	\$3.00	\$7,500.00
Total Appraised Purchase Price					\$597,462.60

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

*Minimum Stumpage values were used to compute the Appraised Price/MBF (10% of Pond Value) Reduced Douglas-fir stumpage by \$21.92/mbf or \$155,274.32 to pay for deficit species white-fir, Incense-cedar, ponderosa pine, western hemlock and sugar pine.

TIMBER AUCTION LOCATION – The timber auction will be held at the Medford Inter-agency Office, located at 3040 Biddle Road, Medford, Oregon, at 9 a.m. on Thursday, March 26, 2026.

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

CRUISE INFORMATION - The King Graves timber sale was cruised using the PCMTRE, 3P, and

BLM 100 cruise methods. Strata 1 was 200 acres dominant of Variable Retention Harvest and gaps which was cruised using PCMTRE, a 40 BAF, 1 in 10 sampling frequency, on 131 plots installed on a grid pattern. Strata 2 was 210 acres dominant of Commercial Thinning and Selection Harvest which was cruised using PCMTRE, a 40 BAF, 1 in 9 sampling frequency, on 140 plots installed on a grid pattern. The 11 acres of ROW's and roadside clearing were cruised using the 3P cruise method for DF, IC, PP and BLM 100 for other minor species

Approximately 0% of the 8,407 mbf sale volume is salvage material. With respect to merchantable trees of all conifer species: the average tree is 14.6 inches DBHOB; the average gross merchantable log contains 51bd. ft.; the total gross volume is approximately 9,283 M bd. ft; and 91% recovery is expected. (Average DF is 14.9 inches DBHOB; average gross merchantable log DF contains 51 bd. ft.)

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

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

CUTTING AREA – The sale contains twenty-one (21) units totaling four hundred twenty-one (421) acres. Fifty-six (56) acres must be commercially thinned, one hundred fifty-nine (159) acres must be selection harvested, one hundred fifty-one (151) acres must be variable retention harvested, thirty-seven (37) acres must be group selection harvested, seven (7) acres must be skipped, five (5) acres must be treated for roadside vegetation management, and six (6) acres must be clear cut for permanent road construction rights-of way.

CUTTING TIME - Contract duration will be forty-eight (48) months for cutting and removal of timber.

ACCESS - Access to sale area is available via: a public, state, and county road system to the contract area; existing BLM roads; existing private roads under Right-of-Way and Road Use Agreement M-660/M-660I with Hancock Timberland X, Inc.; existing private roads under Right-of-Way and Road Use Agreement M-660/M-660J with Siskiyou Timberlands, LLC; existing private roads under Right-of-Way and Road Use Agreement M-660 with Murphy Timber Investments; and skid roads under Right-of-Way and Road Use Agreement M-660/M-660K with System Global Timberlands, LLC.

Among other conditions, Right-of-Way and Road Use Agreement M-660/M-660I with Hancock Timberland X, Inc. requires, but is not limited to:

1. Execution and compliance with the terms and conditions identified in the license agreement between the Purchaser and Hancock X, Inc.
2. Payment from the Purchaser for a road use obligation of \$20,771.90 based on the cruised volume to be hauled across the roads listed in the license agreement.
3. Road renovation and final road maintenance to be completed by the Purchaser.
4. Payment from the Purchaser for a rockwear fee of \$87.36, based on the estimated cruised volume to be hauled across the aggregate roads listed in the license agreement. Final rockwear fees will be calculated at \$0.95 per actual thousand board feet log scale

per mile for the use of aggregate surfaced roads maintained by the Purchaser identified in the license agreement between the Purchaser and Hancock Timberland X, Inc.

5. Payment from the Purchaser for road right-of-way volume on roads 33-4-30.04, 33-4-30.05, and the skid roads used to access Unit 19-07. The Purchaser shall pay Hancock Timberlands X, Inc, the owner of the right-of-way timber, the total value of that timber based on an agreed upon fair market value price for the timber.

Among other conditions, Right-of-Way and Road Use Agreement M-660/M-660J with Siskiyou Timberlands, LLC requires, but is not limited to:

1. Execution and compliance with the terms and conditions identified in the license agreement between the Purchaser and Siskiyou Timberlands, LLC.
2. Payment from the Purchaser for a road use obligation of \$632.00 based on the cruised volume to be hauled across the roads listed in the license agreement.
3. Road renovation and final road maintenance to be completed by the Purchaser.
4. Payment from the Purchaser for a rockwear fee of \$66.04, based on the estimated cruised volume to be hauled across the aggregate roads listed in the license agreement. Final rockwear fees will be calculated at \$0.95 per actual thousand board feet log scale per mile for the use of aggregate surfaced roads maintained by the Purchaser identified in the license agreement between the Purchaser and Siskiyou Timberlands, LLC.
5. Payment from the Purchaser for road right-of-way volume on roads 33-4-31.04. The Purchaser shall pay Siskiyou Timberlands, LLC, the owner of the right-of-way timber, the total value of that timber based on an agreed upon fair market value price for the timber.

Among other conditions, Right-of-Way and Road Use Agreement M-660 with Murphy Timber Investments requires, but is not limited to:

1. Execution and compliance with the terms and conditions identified in the license agreement between the Purchaser and Murphy Timber Investments.
2. Payment from the Purchaser for a road use obligation of \$3,068.00 based on the cruised volume to be hauled across the roads listed in the license agreement.
3. Road renovation and final road maintenance to be completed by the Purchaser.
4. Payment from the Purchaser for a rockwear fee of \$844.30 based on the estimated cruised volume to be hauled across the aggregate roads listed in the license agreement. Final rockwear fees will be calculated at \$0.95 per actual thousand board feet log scale per mile for the use of aggregate surfaced roads maintained by the Purchaser identified in the license agreement between the Purchaser and Murphy Timber Investments.
5. Payment from the Purchaser for road right-of-way volume on roads 33-4-20.00B and the skid roads used to access Unit 17-01. The Purchaser shall pay Murphy Timber Investments, the owner of the right-of-way timber, the total value of that timber based on an agreed upon fair market value price for the timber.

Among other conditions, Right-of-Way and Road Use Agreement M-660/M-660K with System Global Timberlands, LLC requires, but is not limited to:

1. Payment from the Purchaser for road right-of-way volume on skid roads used to access Unit 31-02. The Purchaser shall pay System Global Timberlands, LLC, the owner of the

right-of-way timber, the total value of that timber based on an agreed upon fair market value price for the timber.

ROAD MAINTENANCE - The Purchaser will be required to maintain all roads which he constructs plus 15.95 miles of existing BLM and private roads, as listed in Sec. 44(B)(6)(R-2) and Exhibit D6. BLM will maintain 17.84 miles of the 34-4-28.00 A-B, 34-4-28.00 C-K, and 34-5-10.00 A1-B3 roads. The Purchaser will be required to pay an estimated BLM maintenance fee of \$55,202.43 and an estimated BLM rockwear fee of \$23,477.96 for the use of these roads. The Purchaser will also be required to pay an estimated rockwear fee of \$9,346.98 for the use of the Purchaser maintained BLM rocked roads.

ROAD CONSTRUCTION - The contract will require the Purchaser to construct 90.91 stations (1.72 miles) of permanent road, construct 49.58 stations (0.94) miles of temporary road, renovate 1.58 stations (0.03 miles) of permanent road, and renovate 22.75 stations (0.43 miles) of temporary road. Additional information is available in the timber sale prospectus.

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

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

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, log haul shall not be conducted on hydrologically connected rocked and/or natural surface roads TR 25-12A, TR 25-12B, TR 29-07, TR 29-08A, TR 29-08B, TR 29-08C, TR 31-02, TR 31-04A, 33-4-20.0B, 33-4-20.00, 33-4-21.01, 33-4-21.02, 33-4-21.05, 33-4-21.06, 33-4-21.07, 33-4-29.03, 33-4-30.00, 33-4-30.01, 33-4-30.02, 33-4-30.04, 33-4-30.05, 33-4-31.03, 33-4-31.04 and 34-4-5.03; and the portion of the 34-4-5.00 road that lies northwest of the boundary of unit 31-3 (and unnumbered road), during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud splash or tire slides, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer. The Purchaser may elect, at their own expense, to apply rock surfacing to these roads to bring them up to wet weather haul standards, as approved by the Authorized Officer.

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

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, no work in the stream channel shall be conducted between September 15 of one calendar year and June 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.

Pursuant to Section 26 of Form 5450-004, Timber Sale Contract, no non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.

EQUIPMENT REQUIREMENTS - A yarding tractor equipped with an integral arch capable of one-end log suspension and a winch for lining logs seventy-five (75) feet. A skyline yarder with a medium (34-44 foot) tower; capable of one-end log suspension with a minimum lateral yarding capability of seventy-five (75) feet while maintaining a fixed position during inhaul; capable of multi-span; and capable of an external yarding distance of one thousand four hundred (1,400) feet slope distance. A piece of equipment capable of sub-soiling to a depth of twelve (12) inches will be required for fully decommissioning any landings or skid trails within ground-based units as necessary to achieve no more than twenty (20) percent detrimental soil compaction within the unit. A piece of equipment with a self-leveling cab capable of lifting and moving cut logs or trees to roads or landings. A fire engine of three hundred (300) gallons or more capacity with five hundred (500) feet of 1½ inch hose (must be adequate length to reach two hundred (200) feet beyond active work sites), six (6) 1½ inch wyes, six (6) 1½ inch to 1 inch reducers, three (3) 1½ inch nozzles and three (3) 1 inch nozzles will be required for fire prevention and control. Each fire engine shall be equipped with a pump capable of delivering a minimum of forty (40) gallons per minute (gpm) water flow at one hundred fifty (150) pounds per square inch (psi) engine pressure through fifty (50) feet of 1½ inch fire hose. The pump may be either power take off driven or truck-mounted auxiliary engine driven, or portable.

SLASH DISPOSAL - Slash disposal will consist of a combination of lop and scatter; hand felling/selective slashing and yum yarding hardwoods less than or equal to twenty (20) inches DBH; mechanical felling/selective slashing hardwoods less than or equal to twenty (20) inches DBH; machine pile, cover, burn, and mop-up machine piles; hand pile, cover, burn, and mop-up hand piles; pile, cover, burn, and mop-up landing decks; and cover, burn, and mop-up roadside piles as described in SD-1, SD-2, and SD-4 of the Special Provisions. A post logging assessment shall be conducted to determine treatment needs in all units. The initial slash disposal appraisal described in SD-5 prescribed one hundred thirty-five (135) acres of lop and scatter, seventy-nine and one half (79.50) acres of hand felling/selective slashing and yum yarding hardwoods less than or equal to twenty (20) inches DBH, one hundred five and one half (105.5) acres of hand pile, cover, burn, and mop-up hand piles, thirty-six and one half (36.50) acres of mechanical felling/selective slashing hardwoods less than or equal to twenty (20) inches DBH, one hundred thirty-two and one half (132.50) acres of machine pile, cover, burn, and mop-up machine piles, eleven (11) acres of cover and burn roadside piles, and forty-seven and one half (47.50) acres of cover and burn landing decks.

CONTRACT TERMINATION - A Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to comply with the Endangered Species Act, or comply with a court order, or protect occupied marbled murrelet sites in accordance with the Standards and Guidelines of the Medford District Record of Decision (ROD) and Resource Management Plan (RMP). This contract provision limits the liability of the Government to the actual costs incurred by the Purchaser which have not been amortized by timber removed from the contract area.

BUYOUT SECURITIES - The purchaser will have the option of performing one hundred thirty-two and one half (132.50) acres of machine pile burn and mop up slash disposal requirements or contributing eleven thousand two hundred three and 39/100 dollars (\$11,203.39) in lieu thereof. The option must be declared upon execution of the contract. The purchaser will have the option of performing one hundred five and one half (105.5) acres of hand pile burn and mop up slash disposal requirements or contributing ten thousand three hundred two and 48/100 dollars (\$10,302.48) in lieu thereof. The option must be declared upon execution of the contract. The purchaser will have the option of performing fifty-eight and one half (58.50) acres of burn and

mop up landing decks and roadside piles slash disposal requirements or contributing four thousand three hundred nineteen and 39/100 dollars (\$4,319.39) in lieu thereof. The option must be declared upon execution of the contract. The optional contribution must be paid in installments payable in the same manner as and together with payments required in Section 3 of the contract.

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

OTHER -

1. No extension of time beyond the normal 30 days will be granted for completing bonding and contract signing requirements.
2. A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), or; (2) Comply with a stay or remedy issued by the Interior Board of Land Appeals or a court order, or; (3) Protect species which were identified for protection in accordance with management direction established in the ROD and RMP.
3. No harvest, yarding, or road construction operations within: units 17-1, 19-7, 20.0 RW, 21-1, 21-2, 29-7, 29-8, 29-9, 29.4 RW, 30.4 RW, 30.5 RW, 31-2; the northern-most polygon portion of unit 25-12 (including construction of temp. roads TR 25-12A and TR 25-12B), the eastern one-third of unit 31-3, and the northeastern portion of unit 31-5, as shown on Exhibit A shall be conducted between March 1 and July 15 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest. This restriction may be extended if it can be shown from northern spotted owl protocol surveys that owls are nesting.
4. The Purchaser shall notify the Authorized Officer in writing by February 1 of each calendar year in which operations are expected to take place on the contract area between March 1 and September 30, both days inclusive. If notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting northern spotted owls may not be allowed between March 1 and September 30, both days inclusive. Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls have moved into harvest units. If northern spotted owls are detected in or adjacent to the units, operations would be restricted until northern spotted owl occupancy and nesting status has been determined. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations in writing. Without this approval, such operations are prohibited from March 1 through July 15 of each year.
5. Equipment guyline anchors and/or a yoder may be needed to yard units 29-7, 29-8, 31-2, 31-3, 31-4.
6. Corridors and landings may be needed outside of unit boundaries in units 21-1 and 31-4. These cable corridors and landings shall try to avoid the stream buffers and crossing over streams shown on Exhibit A and shall be approved by the Authorized Officer prior to use. If cable corridors cannot avoid the stream buffers or cannot avoid crossing over a stream, then they shall adhere to the requirements listed in Section 44 (A)(10)(L-12).

7. In unit 21-2, designated existing skid trails and landings may be utilized outside of unit boundaries but within stream buffers shown on Exhibit A, as approved by the Authorized Officer prior to use. See Section 44(A)(9)(L-12) and Section 44(A)(18)(L-19) for utilization and seasonal requirements.
8. In units 17-1, 19-7, and 31-2, designated skid trails and landings may be located outside of unit boundaries on private land. These skid trails and landings shall avoid stream and resource buffers shown on Exhibit A; shall be approved by the Authorized Officer prior to use; and shall adhere to the terms and conditions of the executed License Agreement with the private land owner. See Section 44(A)(10)(L-12) and Section 44(A)(15)(L-17) for utilization requirements.
9. In the ground-based portions of units 19-7 and 31-2 as shown on Exhibit A, remove limbs and tops from logs within the unit on BLM as required in Section 44(A)(7)(L-8) and as directed by the Authorized Officer to minimize the amount of slash that would be piled at the landings on private land.
10. In the eastern portion of unit 29-7 that is marked as a skip, no skid trails, cable corridors, or falling trees shall enter the skip. The skip represents a 100-foot buffer for a plant site that lies outside of the unit boundaries, as shown on Exhibit A. See Section 44(A)(10)(L-12) for more details.
11. In the selective slash and yum yard hardwoods area of 19-7, 21-1, 29-7, 29-8, 29-9, 31-3, and 31-5 shown on Exhibit A and Exhibit S, all hardwoods between eight (8) inches in diameter and twenty (20) inches diameter at the small end shall be cut, yarded, and decked at roadside landings as required in Section 44(E)(3)(SD-4)(a)(L-5) and Section 44(E)(3)(SD-4)(b)(L-13). The purchaser may elect to remove yum yarded hardwoods as firewood or biomass, however, any yum yarded material not hauled away and left on-site shall be piled.
12. In the selective slash and machine pile and burn hardwood areas of units 19-7, 21-1, 21-2, 29-7, 29-8, 29-9, 31-2, and 31-5 shown on Exhibit A and Exhibit S, all slash, including hardwoods between eight (8) inches diameter and twenty (20) inches diameter at the small end, shall be bucked to less than ten (10) feet in length and machine piled and burned within the unit boundaries concurrently with machine pile and burn slash disposal operations, as required in Section 44(E)(3)(SD-4)(a)(L-5), Section 44(E)(3)(SD-4)(c)(L-13), Section 44(E)(1)(SD-1)(b)(SD-1b), and Section 44(E)(2)(SD-2)(a&b).
13. No mechanical ground-based harvesting, ground-based yarding, skid trail and/or landing rehabilitation, machine piling, road construction, reconstruction, and/or decommissioning, or non-emergency road maintenance shall be conducted in units 17-1, 19-7, 21-1, 20.0 RW, 21-2, 25-12, 29-7, 30.4 RW, 30.5 RW, 29-8, 29-9, 29.4 RW, 31-2, 31-4, 31-5, 31.4 RW, 21.1 RS, and 29.0 RS between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
14. A harvester, feller-processor, or feller-buncher with purpose-built carriers with boom-mounted felling heads and a boom with a minimum lateral reach of twenty (20) feet may be used in the ground-based portion of harvest units. Mechanized equipment as stated above with self-leveling cabs may be used on slopes up to fifty (50) percent un-tethered,

and on slopes up to seventy (70) percent if it is attached to a tether-assist winch mechanism, as approved by the Authorized Officer.

15. In the Riparian Reserve portion of units 21-1, 29-7, 29-8, 29-9, 31-3, 31-4, and 31-5, as shown on Exhibit E, the Purchaser shall create a total of eighty-two (82) snags via girdling. See Section 44(A)(24)(L-32) and Exhibit E for more details.

NARRATIVE DESCRIPTION OF HOW TO GET TO THE TIMBER SALE AREA - Take I-5 to Exit 71 for Sunny Valley. Turn left onto Sunny Valley Loop. Turn right onto Placer Rd., which turns into Grave Creek Rd and then turns into the 34-5-10 Rd.

From the 34-5-10 Rd, turn left onto the 34-4-5.0 Rd and navigate to units 25-12, 31-2, 31-3, 31-4, 31-5, 31.4 RW, and 30.5 RW along that road system.

From the 34-5-10 Rd, turn left onto the 33-4-29.0 Rd and navigate to units 19-7, 29-7, 29-8, 29-9, 29.0 RS, 29.4 RW, and 30.4 RW along that road system.

From the 34-5-10 Rd, turn left onto the 33-4-21.2 Rd and navigate to unit 21-2 along that road system.

From the 34-5-10 Rd, turn left onto the 33-4-21.05 Rd and navigate to units 17-1, 21-1, and 20.0 RW along that road system.

From the 34-5-10 Rd, turn left onto the 33-4-21.0 Rd and navigate to units 21-1, and 21.1 RS along that road system.

ENVIRONMENTAL ASSESSMENT - An environmental assessment (DOI-BLM-ORWA-M070-2022-0007-EA) was prepared for this sale, and a Finding of No Significant Impact has been documented. This document is available for inspection as background for this sale at the Medford District Office and on the ePlanning website: <https://eplanning.blm.gov/>.

KING GRAVES TIMBER SALE
SPECIAL PROVISIONS

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

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

- (A) AR-1 All timber on the Reserve Areas as shown on Exhibit A and all trees marked with a combination of orange paint, orange flagging, and/or posters which are on or mark the boundaries of the Reserve Areas.
- (B) AR-2 All timber on the Reserve Areas shown on Exhibit A and all blazed, painted, or posted trees which are on or mark the boundaries of the Reserve Areas, except approximately three hundred twenty-nine (329) Douglas-fir, fourteen (14) ponderosa pine, eighty-nine (89) incense-cedar, and two (2) white fir trees marked for cutting heretofore by the Government with blue paint above and below stump height in units 5.0 RS, 21.1 RS, 29.0 RS, and 31.0 RS as shown on Exhibit A.
- (C) AR-2 All timber on the Reserve Areas shown on Exhibit A and all blazed, painted, or posted trees which are on or mark the boundaries of the Reserve Areas, except approximately eight hundred eight (808) Douglas-fir, thirty-seven (37) ponderosa pine, eight (8) sugar pine, sixty-three (63) incense-cedar, and fifty (50) white fir trees designated for cutting heretofore by the Government with the absence of orange paint above and below stump height in road construction clearing limit units 20.0 RW, 29.4 RW, 30.4 RW, 30.5 RW, and 31.4 RW as shown on Exhibit A.
- (D) IR-1 Approximately eleven thousand one hundred thirty (11,130) Douglas-fir, five hundred-seven (507) ponderosa pine, five hundred eighty-two (582) sugar pine, eight hundred forty-nine (849) Incense-cedar, twenty-one (21) western redcedar, six (6) western hemlock, one hundred eighty-eight (188) white fir, three hundred eighty-one (381) grand fir, one hundred (100) pacific yew, and one hundred fifty-three (153) hardwood trees marked with yellow paint above and below stump height in units 17-1, 19-7, 21-1, 21-2, 25-12, 29-7, 29-8, 29-9, 31-2, 31-3, 31-4, and 31-5, as shown on Exhibit A.
- (E) IR-6 All Pacific yew trees in the Contract Area shown on Exhibit A.

KING GRAVES TIMBER SALE
SPECIAL PROVISIONS

- (F) IR-13 All trees greater than thirty-six (36) inches D.B.H.O.B that were established prior to 1850 in whole units 17-1, 21-2, 25-12, and 31-2 as shown on Exhibit A that are cut for safety or operational purposes shall be retained on site as directed by the Authorized Officer.
- (G) IR-13 All trees greater than thirty-six (36) inches D.B.H.O.B that were established prior to 1850 in the portions of units 19-7, 29-7, 29-8, 29-9, 31-4, and 31-5 that are marked to Selection Harvest and/or Group Selection (gaps) prescriptions as shown on Exhibit A, that are cut for safety or operational purposes shall be retained on site as directed by the Authorized Officer.
- (H) IR-13 All trees greater than forty (40) inches D.B.H.O.B that were established prior to 1850 in whole units 21-1, 31-3 as shown on Exhibit A that are cut for safety or operational purposes shall be retained on site as directed by the Authorized Officer.
- (I) IR-13 All trees greater than forty (40) inches D.B.H.O.B that were established prior to 1850 in portions of units 19-7, 29-7, 29-8, 29-9, 31-4, and 31-5 that are marked to Commercial Thin and/or Variable Retention Harvest prescriptions as shown on Exhibit A, that are cut for safety or operational purposes shall be retained on site as directed by the Authorized Officer.
- (J) IR-13 All existing snags and coarse woody debris in all units shown on Exhibit A which do not present a safety hazard as determined by the Authorized Officer. All snags that are felled for safety reasons, and do not present a safety hazard on the ground, shall be retained on site.

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Section 44

(A) LOGGING

- (1) L-1 Before beginning operations on the contract area for the first time or after a shutdown of seven (7) or more days, the Purchaser shall notify the Authorized Officer in writing of the date they plan to begin operations. The Purchaser shall also notify the Authorized Officer in writing if he intends to cease operations for any period of seven (7) or more days.
- (2) L-2 Prior to the commencement of operations the Purchaser shall obtain from the Authorized Officer written approval of a written operations and logging plan commensurate with the terms and conditions of the contract, which shall include measures needed to ensure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held at a location designated by the Authorized Officer before the logging plan will be approved. All logging shall be done in accordance with the plan.
- (3) L-4 All trees designated for cutting in all units shall be cut so that the resulting stumps shall not be higher than twelve (12) inches measured from the ground on the uphill side of the trees unless otherwise approved by the Authorized Officer.
- (4) L-5 All conifer trees eight (8) inches or larger D.B.H.O.B., which are not reserved, shall be felled in all units shown on Exhibit A.
- (5) L-5 All hardwood trees less than or equal to twenty (20) inches D.B.H.O.B., which are not reserved, shall be felled concurrently with conifers designated for cutting in the selective slash portions of units 19-7, 21-1, 21-2, 29-7, 29-8, 29-9, 31-2, 31-3, and 31-5 (in areas with a high concentration of overstory hardwood trees) as shown on Exhibit A and Exhibit S.
- (6) L-5 All trees and vegetation greater than twelve (12) inches in height that are within fifteen (15) of the edge of the road, which are not reserved, shall be felled in all roadside vegetation management units 5.0 RS, 21.1 RS, 29.0 RS, and 31.0 RS, as shown on Exhibit A and as described in Exhibit C.
- (7) L-8 In all units, except the ground-based portions of units 19-7 and 31-2 as shown on Exhibit A, all trees designated for cutting shall be felled and whole tree yarded or yarded with tops attached except when excessive stand damage occurs as determined by the Authorized Officer. If excessive stand damage occurs, all trees

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shall be bucked into log lengths not to exceed forty-one (41) feet prior to being yarded. In the ground-based portions of units 19-7 and 31-2, all logs shall be completely limbed and topped prior to yarding to reduce the amount of slash yarded to the designated landings located on private land.

- (8) L-11 No trees may be felled into the stream, seep, plant, or other resource buffers designated on Exhibit A.
- (9) L-12 In unit 21-2 as shown on Exhibit A, utilization of existing skid trails and roadside landings may be necessary outside of unit boundaries and within two hundred (200) feet of streams (in the Riparian Reserve) to log the unit. These designated skid trails and designated landings may be used during the dry season, as described in Sec. 44(A)(18)(L-19) and as approved by the Authorized Officer. Prior to use, design the landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads. Any trees outside of unit that need to be felled to utilize these skid trails and landings shall be retained on site as coarse woody debris. Following use, waterbar, seed & mulch the utilized skid trail and landings (outside of the road prism) within two hundred (200) feet of the streams.
- (10) L-12 In the units shown on Exhibit A, felling and yarding shall be done in accordance with the requirements for the designated area listed below.

Designated Area	Yarding Requirements or Limitations
<u>Roadside Vegetation Management Units (RMUs)</u> 5.0 RS, 21.1 RS, 29.0 RS, 31.0 RS	No tracked equipment shall operate on paved roads. Mechanical felling required with a single-grip felling head (a head that can hold and fully suspend the tree after it is cut). Only purpose-built carriers with boom-mounted felling heads may be approved. The boom must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible. The purpose-built carrier may be of the articulated, rubber-tired design, or the zero-clearance tail swing leveling track-mounted design. Yarding shall be done with a system which will fully suspend both ends of the log clear of the ground during inhaul.

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<u>Roadside Vegetation Management Units (RMUs) Continued</u> 5.0 RS, 21.1 RS, 29.0 RS, 31.0 RS	Landing size shall not exceed one-quarter ($\frac{1}{4}$) acre, shall be located along existing roads, and shall be approved by the Authorized Officer. No landing creation or expansion shall occur without prior approval from the Authorized Officer. Design landings with adequate drainage. Conifer tops and limbs, hardwoods, brush, and other cut vegetation created from the roadside vegetation management treatment shall be machine piled concurrently with felling operations and shall be treated according to the roadside vegetation management prescription found in Exhibits C7 and C20 and according to the roadside machine pile cover, burn and mop up slash disposal stipulations found in Sec. 44(E)(1)(SD-1)(e)(SD-1f) and Sec. 44(E)(2)(SD-2)(e & f). All mechanized equipment shall only operate on existing road surfaces. Mechanized felling operations for roadside units are subject to seasonal operating restrictions as described in Sec. 44(A)(18)(L-19) and Sec. 44(A)(21)(L-20) of this contract. See Exhibits C3, C7, and C20 in the Engineering package for more details on the roadside vegetation management requirements.
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Designated Area	Yarding Requirements or Limitations
<u>Ground Based Harvest & Ground Based Yard Units</u> 17-1, 19-7, 21-1, 20.0 RW, 21-2, 25- 12, 29-7, 30.4 RW, 30.5 RW, 29-8, 29- 9, 29.4 RW, 31-2, 31-4, 31-5, 31.4 RW	No tracked equipment shall operate on paved roads. Mechanized harvesting operations are optional. All ground-based harvest units may be manually felled. The harvester, feller-processor, or feller-buncher shall be approved by the Authorized Officer prior to the start of mechanized felling operations. Only purpose-built carriers with boom-mounted felling heads may be approved. The boom must have a lateral reach of twenty (20) feet or more, and the machine's lateral reach must be utilized as much as possible. The purpose-built carrier

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<u>Ground Based</u> <u>Harvest &</u> <u>Ground Based Yard</u> <u>Units Continued</u> 17-1, 19-7, 21-1, 20.0 RW, 21-2, 25- 12, 29-7, 30.4 RW, 30.5 RW, 29-8, 29- 9, 29.4 RW, 31-2, 31-4, 31-5, 31.4 RW	may be of the articulated, rubber-tired design, or the zero-clearance tail swing leveling track-mounted design. Directional falling to lead and away from streams, seeps, wetlands, plant sites & buffers, and unit boundaries shown on Exhibit A will be required. The harvest equipment shall walk on existing or created slash as directed by the Authorized Officer. If Purchaser is required to create slash to walk on, then Purchaser shall not be required to whole-tree-yard. Non-specialized ground-based equipment (without a self-leveling cab) shall be limited to slopes of thirty-five (35) percent or less. Specialized ground-based equipment (with a self-leveling cab) shall be limited to slopes fifty (50) percent or less, unless it can operate safely and it is attached to tether-assist winch mechanism. This equipment can operate on steeper ground without tether-assist if it is operating on previously constructed skid trails or accessing isolated ground-based harvest areas requiring short distances over steeper pitches. Mechanized ground-based felling and yarding operations are subject to dry condition operating restrictions as described in Sec. 44(A)(18)(L-19), Sec. 44(A)(19)(L-19), and Sec. 44(C)(1)(E-1) and northern spotted owl seasonal restrictions described in Sec. 44(A)(21)(L-20) of this contract. Yarding tractor shall be equipped with an integral arch and yard with minimum one-end log suspension. Existing skid roads shall be used when possible. Skid roads shall not exceed a width of twelve (12) feet on average per unit and new skid roads shall be placed at least one hundred fifty (150) feet apart where topography will allow, unless the Purchaser proposes an alternate logging plan that limits soil compaction from skids trails to less than fifteen (15) percent over the harvest unit and is approved by the Authorized Officer.
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<u>Ground Based</u> <u>Harvest &</u> <u>Ground Based Yard</u> <u>Units Continued</u> 17-1, 19-7, 21-1, 20.0 RW, 21-2, 25- 12, 29-7, 30.4 RW, 30.5 RW, 29-8, 29- 9, 29.4 RW, 31-2, 31-4, 31-5, 31.4 RW	Designate skid trails in locations that do not channel water into waterbodies, floodplains, and wetlands, or unstable areas. Rehabilitate utilized skid trails within 50 feet of streams. Rehabilitate utilized skid trails, landings, and/or temporary roads as necessary to achieve no more than twenty (20) percent detrimental soil conditions in the ground-based harvest unit, as specified in Sec. 44(C)(13)(E-1). Block skid trails following use. Landing size shall not exceed one-half (½) acre, shall be located along existing and constructed roads, and shall be approved by the Authorized Officer. Design landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads. Minimize disturbance to existing coarse woody debris. Where skid trails encounter large coarse woody debris, the Purchaser shall buck out a portion for equipment access. The use of blades while tractor yarding will be limited, equipment shall walk over as much ground litter as possible. In unit 21-2, designated existing skid trails and landings outside of unit boundaries but within stream buffers may be used as shown on Exhibit A, and as approved by the Authorized Officer. See Sec. 44(A)(9)(L-12) and Sec. 44(A)(18)(L-19) for a complete description of the requirements for the use of these existing designated skid trails and landings. In unit 29-7, skid trails may not be located within one hundred (100) feet of the plant site that lies outside of the eastern unit boundary as shown on Exhibit A. The plant site is delineated with yellow and black striped flagging
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<u>Ground Based Harvest & Ground Based Yard Units Continued</u> 17-1, 19-7, 21-1, 20.0 RW, 21-2, 25-12, 29-7, 30.4 RW, 30.5 RW, 29-8, 29-9, 29.4 RW, 31-2, 31-4, 31-5, 31.4 RW	and all trees in the one hundred (100) buffer around the plant site that are within unit boundaries have been marked to reserve with yellow paint as part of the skip. Trees designated for cutting outside of the skip shall be felled away from the plant site, buffer, and skip. Designated skid trails and landings may be located outside of unit boundaries in units 17-1, 19-7, and 31-2, but shall not enter plant, stream, seep, wetland or other resource buffers shown on Exhibit A and shall be approved by the Authorized Officer prior to use. See Sec. 44(A)(15)(L-17) for designated skid trail and landing location requirements in units 17-1, 19-7, and 31-2. Additionally, see Sec. 44(A)(7)(L-8) for a complete description of the requirements for limbing and topping logs prior to yarding them to the designated landings in the ground-based portions of units 19-7 and 31-2. In the northeastern-most portion of 31-5 unit, logs are appraised to yard up to road 33-4-31.00. If the Purchaser elects to skid logs downhill to the un-numbered spur road, then they must: obtain a License Agreement from both Siskiyou Timberlands LLC and Lone Rock Timberland for use of the road in T.33S-R.4W-Sec. 32; and avoid the infrastructure tied to the existing water right near the unit and the road.
Designated Area	Yarding Requirements or Limitations
<u>Cable Yard Units</u> 19-7, 21-1, 25-12, 29-7, 29-8, 29-9, 31-2, 31-3, 31-4, 31-5	Directional falling to the lead and away from streams, seeps, wetlands, plant sites & buffers, and unit boundaries shown on Exhibit A will be required. Yarding will be done with a cable yarding system which will suspend one end of the log clear of the ground during inhaul on the yarding corridor. The cable yarding system shall be capable of yarding one thousand four hundred (1,400) feet slope distance. Skyline equipment shall be capable of yarding in a multispan configuration.

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<u>Cable Yard Units</u> <u>Continued</u> 19-7, 21-1, 25-12, 29-7, 29-8, 29-9, 31- 2, 31-3, 31-4, 31-5	A carriage is required which will maintain a fixed position on the skyline during lateral yarding and has a minimum lateral yarding capability of seventy-five (75) feet. Yarding corridors will be perpendicular to the contours. Prior to falling any timber in the unit, all tail/lift trees and/or intermediate support trees shall be pre-designated by the Purchaser and approved by the Authorized Officer. Existing cable corridors shall be used whenever possible. Yarding corridors shall be approximately one hundred fifty (150) feet apart, measured at the tailholds. Yarding corridor widths shall not exceed six (6) feet either side of the skyline centerline. Cable corridors that are hydrologically connected to streams or wetlands shown on Exhibit A shall be water-barred and shall have slash placed over them prior to winter rain events to protect water quality. Landing size shall not exceed one-quarter ($\frac{1}{4}$) acre, shall be located along existing and constructed roads within unit boundaries where possible, and shall be approved by the Authorized Officer. Design landings with adequate drainage so that they are not hydrologically connected to draws or the ditchline of roads. In unit 29-7, cable corridors may not be located within one hundred (100) feet of the plant site that lies outside of the eastern unit boundary as shown on Exhibit A. The plant site is delineated with yellow and black striped flagging and all trees in the one hundred (100) buffer around the plant site that are within unit boundaries have been marked to reserve with yellow paint as part of the skip. Trees designated for cutting outside of the skip shall be felled away from the plant site, buffer, and skip.
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<u>Cable Yard Units</u> <u>Continued</u> 19-7, 21-1, 25-12, 29-7, 29-8, 29-9, 31- 2, 31-3, 31-4, 31-5	Equipment guyline anchors and/or a yoder may be needed to yard units 29-7, 29-8, 31-2, 31-3, and 31-4, as shown on Exhibit A. Corridors and landings may be needed outside of unit boundaries in units 21-1 and 31-4. These cable corridors and landings shall not be located in any of the stream, seep, wetland, plant, or other resource buffers shown on Exhibit A and shall be approved by the Authorized Officer prior to use. If cable corridors cannot be avoided over streams and wetlands, then they shall adhere to the requirements below. Yarding over streams and wetlands shall be avoided unless it is the only viable option. If yarding is needed outside of unit boundaries, over streams or wetlands shown on Exhibit A, it shall be done with full suspension within fifty (50) feet of and over stream/wetland and shall be approved by the Authorized Officer. Any trees cut for the yarding corridor outside of unit boundaries within one hundred twenty (120) feet of streams shown on Exhibit A shall be retained on site as coarse woody debris.
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- (11) L-13 In the selective slash and yum yard hardwoods area of units 19-7, 21-1, 29-7, 29-8, 29-9, 31-3, and 31-5 shown on Exhibit A and Exhibit S, all hardwoods between eight (8) inches in diameter and twenty (20) inches in diameter, shall be cut, yarded, and decked at roadside landings. The purchaser may elect to remove yum yarded hardwoods as firewood or biomass, however, any yum yarded material not hauled away and left on-site shall be piled as described in Section 44(E)(1)(SD-1)(d)(SD-1f) and burned as described in Section 44(E)(2)(SD-2)(e&f).
- (12) L-13 In the selective slash and machine pile and burn hardwood areas of units 19-7, 21-1, 21-2, 29-7, 29-8, 29-9, 31-2, and 31-5 shown on Exhibit A and Exhibit S, all slash, including hardwoods between eight (8) inches diameter and twenty (20) inches diameter, shall be bucked to less than ten (10) feet in length and machine piled and burned within the unit boundaries concurrently with machine pile and burn slash disposal operations as described in Section 44(E)(1)(SD-1)(b)(SD-1b) and Section 44(E)(2)(SD-2)(a&b).

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- (13) L-14 No falling, yarding or loading is permitted in or through the streams, seeps, or wetlands as shown on Exhibit A, except for cable corridors crossing over streams or wetlands if necessary as permitted in Sec. 44(A)(12)(L-10)(cable yarding).
- (14) L-14 No falling, yarding, or loading is permitted in plant sites delineated with yellow and black striped flagging or within one hundred (100) feet of the plant sites as shown on Exhibit A.
- (15) L-17 Designated landings and skid trails outside of unit boundaries, which are located on private land, to facilitate logging in units 17-1, 19-7, 29-8, and 31-2 shall be placed at the approximate locations as shown on Exhibit A. Use of such landings and skid trails or any alternative locations must be approved by the Authorized Officer and shall adhere to the terms and conditions of executed the License Agreement with the private land owner.
- (16) L-19 No work in the stream channel shall be conducted between September 15 of one calendar year and June 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
- (17) L-19 No non-emergency road maintenance shall be conducted from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. Purchaser may request in writing, a waiver of this restriction.
- (18) L-19 No ground-based yarding shall be conducted on the designated existing skid trails and roadside landings outside of unit 21-2 boundaries and within two hundred (200) feet of streams from October 15 of one calendar year and May 15 of the following calendar year, both days inclusive.
- (19) L-19 No mechanical ground-based harvesting, ground-based yarding, skid trail and/or landing rehabilitation, machine piling, road construction, reconstruction, and/or decommissioning, or non-emergency road maintenance shall be conducted in units 17-1, 19-7, 21-1, 20.0 RW, 21-2, 25-12, 29-7, 30.4 RW, 30.5 RW, 29-8, 29-9, 29.4 RW, 31-2, 31-4, 31-5, 31.4 RW, 21.1 RS, and 29.0 RS, between October 15 of one calendar year and May 15 of the following calendar year both days inclusive. Purchaser may request in writing, a conditional waiver of this restriction. If soil moisture conditions are dry, as determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and by the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks, the Contracting Officer may approve a conditional waiver. If impacts to soil resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.

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- (20) L-19 No haul on natural surface and rocked roads: TR 25-12A, TR 25-12B, TR 29-07, TR 29-08A, TR 29-08B, TR 29-08C, TR 31-02, TR 31-04A, 33-4-20.0B, 33-4-20.00, 33-4-21.01, 33-4-21.02, 33-4-21.05, 33-4-21.06, 33-4-21.07, 33-4-29.03, 33-4-30.00, 33-4-30.01, 33-4-30.02, 33-4-30.04, 33-4-30.05, 33-4-31.03, 33-4-31.04 and 34-4-5.03; and the portion of the 34-4-5.00 road that lies northwest of the boundary of unit 31-3 (and unnumbered road), shall be conducted on the Contract Area between October 15 of one calendar year and May 15 of the following calendar year, both days inclusive. The Purchaser may request in writing, a conditional waiver of this seasonal restriction and/or The Purchaser may elect to rock these roads at their own expense, as approved by the Authorized Officer, to bring them up to all season haul standards. If the Authorized Officer determines that hauling would not result in road damage or the transport of sediment to nearby stream channels based on soil moisture conditions or rain events, Contracting Officer may approve a conditional waiver for hauling. If soil moisture conditions or rain events are anticipated to cause impacts to roads or stream water quality resulting from said conditional waiver are not acceptable as determined by the Authorized Officer, the waiver will be revoked.
- (21) L-20 No harvest, yarding, or road construction operations within: units 17-1, 19-7, 20.0 RW, 21-1, 21-2, 29-7, 29-8, 29-9, 29.4 RW, 30.4 RW, 30.5 RW, and 31-2; the northern-most polygon portion of unit 25-12 (including construction of temp. roads TR 25-12A and TR 25-12B); the eastern one-third of unit 31-3; and the northeastern portion of unit 31-5 as shown on Exhibit A shall be conducted between March 1 and July 15 of the same calendar year, both days inclusive. This restriction will not apply if it can be shown from northern spotted owl protocol surveys conducted in accordance with accepted standards, as approved by the Contracting Officer, that northern spotted owl nesting and/or fledging activities are not occurring during the year and/or time of harvest. This restriction may be extended if it can be shown from northern spotted owl protocol surveys that owls are nesting.
- (22) L-22 During logging operations, the Purchaser shall keep the 33-4-21.6 and 34-4-5.0 roads, where the road passes through the contract area, clear of trees, rock, dirt, and other debris so far as is practicable. The road shall not be blocked by such operations for more than fifteen (15) minutes.
- (23) L-24 Before cutting and removing any trees necessary to facilitate logging in the harvest units shown on Exhibit A, the Purchaser shall identify the location of the temporary roads, 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

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Plan. Said Purchaser identification of trees to be cut and removed does not constitute authority to proceed with cutting and removal. In addition, before proceeding with cutting the following conditions must be met:

- (a) All temporary roads, skid roads and/or cable yarding roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contract and shall be limited to the minimum width necessary for hauling and yarding of logs with a minimum of damage to reserve trees, however, unless otherwise approved in writing by the Contracting Officer, the width of each temporary road running surface shall be limited to sixteen (16) feet, the clearing limit width of each temporary road shall be limited to fifty (50) feet, and the width of each skid road, and/or cable yarding road shall be limited to twelve (12) feet.
- (b) The Purchaser may immediately cut and remove additional timber to clear temporary roads, skid roads and cable yarding roads; and provide tailhold, tieback, guyline, lift and intermediate support trees; and clear danger trees when the trees have been marked with pink paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Section 3.b. of the contract or sufficient bonding has been provided in accordance with Section 3.d. of the contract.
- (c) The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Section 9 of the contract; or, the Authorized Officer determines that the species of trees are not listed in Exhibit B of this contract shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Section 8 of the contract.
- (d) This authorization for the Purchaser to cut and remove additional timber prior to the execution of a modification may be withdrawn by the Contracting Officer if the Authorized Officer determines that the Purchaser has cut and removed any tree not previously marked and approved for

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cutting by the Authorized Officer, which under Section 10 of the contract constitutes a violation of the contract and under Section 13 of the contract may constitute a trespass rendering the Purchaser liable for damages under applicable law.

- (e) If authorization is withdrawn, the Contracting Officer shall issue a written notice to the Purchaser that the sale of additional timber under this special provision is no longer approved. In this case, the Purchaser shall inform the Authorized Officer at least one (1) working day prior to the need for cutting and removing any additional timber, and execute a bilateral modification prior to cutting for such additional approved timber at the unit prices shown in Exhibit B of the contract or in accordance with Section 8 or Section 9 of the contract as determined by the Authorized Officer in accordance with this provision. The Contracting Officer may issue a written order to the Purchaser to suspend, delay, or interrupt any or all contract work for the period of time deemed necessary and appropriate for the Government to safely measure and mark additional timber.
 - (f) The Government may reserve trees previously designated for cutting and removal **in all units as shown on Exhibit A** by applying orange or yellow paint as replacements for additional trees cut and removed for temporary roads, skid roads and/or cable yarding roads when the Authorized Officer determines such reservation is necessary to maintain stand densities consistent with objectives set forth in the management prescriptions. 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.
- (24) L-32 In harvest units 21-1, 29-7, 29-8, 29-9, 31-3, 31-4, and 31-5, the Purchaser shall create snags via girdling, or other method as approved by the Authorized Officer, within two hundred (200) feet of streams (the Riparian Reserve land use allocation) as shown on Exhibit E. The total number of snags to create in the Riparian Reserve (RR) per unit is as follows: 21-1 (2 snags), 29-7 (18 snags), 29-8 (16 snags), 29-9 (12 snags), 31-3 (12 snags), 31-4 (12 snags), and 31-5 (10 snags). A total of eighty-two (82) snags shall be created in the RR land use allocation portion of units. Of this total, one-half (½) of the snags required in each unit shall be greater than ten (10) inches diameter at breast height outside bark and one-half (½) of the snags required in each unit shall be greater than twenty (20) inches

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diameter at breast height outside bark. All snags created shall come from reserve marked trees as described in Section 43(D)(IR-1), Section 43(F)(IR-13), Section 43(G)(IR-13), Section 43(H)(IR-13), or Section 43(I)(IR-13) and shall be distributed in a variety of spatial patterns including aggregated groups and individual trees. No adjustments of volume or value shall be made to meet these requirements. The Purchaser shall tally all girdled trees by diameter class and species per unit. At the end of girdling operations, a completed tree tally shall be submitted to the Authorized Officer. Any species of tree available could be used to meet this requirement. The Purchaser shall not create snags in locations that may be hazardous to roads or powerlines.

(B) ROAD CONSTRUCTION, MAINTENANCE, AND USE

- (1) R-1 The Purchaser shall construct, improve, renovate, and/or decommission all roads and structures in strict accordance with the plans and specifications shown on Exhibit C and Exhibit D, which is attached hereto and made a part hereof.
- (2) R-1a Any required construction, improvement, or renovation of structures and roads shall be completed and accepted, in accordance with Section 18, prior to the removal of any timber, except right-of-way timber, over that road.
- (3) R-1b The Purchaser shall construct, use, and decommission temporary roads by October 15th of the same respective operating season. If temporary roads are used over two dry seasons, temporary roads must be winterized by October 15th.
- (4) R-1c The Purchaser shall construct and/or reconstruct Road No.'s 33-4-30.05, 33-4-30.04, 33-4-29.04, 33-4-21.07, 33-4-20.00B, 33-4-31.04, 33-4-30.03 and construct and/or reconstruct all temporary roads in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof. The Purchaser shall not commence any road construction work until receipt of written notice to do so from the Authorized Officer.
- (5) R-1d Prior to completion and approval of sub-grade construction from all proposed road construction, temporary road construction, and temporary road reconstruction, as shown on Exhibit C, all logs shall be removed from the designated right-of-way.
- (6) R-2 The Purchaser is authorized to use the roads listed and shown on Exhibits C & D for the removal of Government timber sold under the terms of this contract and/or the hauling of rock as required in Exhibits C, provided that the Purchaser pay the required maintenance and rockwear obligations described in Section 44(B)(8)(R2-d). Any road listed on Exhibits C & D and requiring construction, improvement,

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or renovation in Exhibit C of this contract, shall be maintained by the Purchaser until receiving written acceptance of the construction, improvement, or renovation from the Contracting Officer. The Purchaser shall pay current Bureau of Land Management (BLM) maintenance and rockwear fees for the sale of additional timber hauled over BLM maintained roads, as well as pay current rockwear fees for the sale of additional timber hauled over Purchaser maintained rocked roads under a modification to the contract.

Road No. and Segment	Length Miles Used	Road Ownership	Road Surface Type	Maintenance Responsibility
33-4-20.00A	0.89	Murphy Timber Investments	NAT	Purchaser
33-4-20.00B (new)	0.30	BLM	NAT	Purchaser
33-4-21.01	1.19	BLM	NAT	Purchaser
33-4-21.02A	0.21	Murphy Timber Investments	AGG	Purchaser
33-4-21.02B	0.18	BLM	NAT	Purchaser
33-4-21.05A	1.09	Murphy Timber Investments	AGG	Purchaser
33-4-21.06	0.09	BLM	AGG	Purchaser
33-4-21.07 (new)	0.11	BLM	NAT	Purchaser
33-4-29.00A-D1	2.33	BLM	AGG	Purchaser
33-4-29.01	0.16	BLM	AGG	Purchaser
33-4-29.03	0.03	BLM	AGG	Purchaser
33-4-29.04 (new)	0.24	BLM	AGG	Purchaser
33-4-30.00	0.09	BLM	AGG	Purchaser
33-4-30.01	0.77	BLM	AGG	Purchaser
33-4-30.02A	0.44	Hancock Timberlands X, INC	AGG	Purchaser
33-4-30.02B	0.41	Hancock Timberlands X, INC	NAT	Purchaser
33-4-30.03	0.18	Hancock Timberlands X, INC	AGG	Purchaser

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Road No. and Segment	Length Miles Used	Road Ownership	Road Surface Type	Maintenance Responsibility
33-4-30.04 (new)	0.17	BLM	NAT	Purchaser
33-4-30.05 (new)	0.32	BLM	NAT	Purchaser
33-4-31.0A-C	1.07	BLM	AGG	Purchaser
33-4-31.03A	0.76	Hancock Timberlands X, INC	NAT	Purchaser
33-4-31.04	0.01	BLM	NAT	Purchaser
33-4-31.04 (new)	0.57	BLM	NAT	Purchaser
34-4-5.0A-B	2.56	BLM	AGG	Purchaser
34-4-5.03A	0.22	Siskiyou Timberlands, LLC	AGG	Purchaser
34-4-28.00 A-B	1.39	BLM	BST	BLM
34-4-28.00 C-K	5.88	BLM	AGG	BLM
34-5-10.00 A1-B3	10.57	BLM	BST	BLM
TR 25-12A	0.26	BLM	NAT	Purchaser
TR 25-12B	0.11	BLM	NAT	Purchaser
TR 29-07	0.07	BLM	NAT	Purchaser
TR 29-08A	0.28	BLM	NAT	Purchaser
TR 29-08B	0.09	BLM	NAT	Purchaser
TR 29-08C	0.20	BLM	NAT	Purchaser
TR 31-02	0.04	BLM	NAT	Purchaser
TR 31-04A	0.25	BLM	NAT	Purchaser
TR 31-04B	0.08	BLM	AGG	Purchaser
Total	33.61			

- (7) R-2a With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of roads included in Section 44(B)(6)(R-2) 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

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shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users on these roads.

- (8) R-2d The Purchaser shall pay a road maintenance fee of \$0.82 per thousand board feet log scale per mile for the use of roads 34-5-10.00 A1-B3 and 34-4-28.00 A-B, the Purchaser shall pay a road maintenance fee of \$0.74 per thousand board feet log scale per mile for the use of road 34-4-28.00 C-K, and the Purchaser shall pay a road rockwear fee of \$0.95 per thousand board feet log scale per mile for the use of all rocked roads maintained by the Bureau of Land Management or the Purchaser within the sale area. **The Purchaser will be required to label, with a permanent marker, each load ticket with the corresponding unit number as directed by the Authorized Officer.** The total maintenance fee due shall be based upon volumes determined pursuant to Exhibit B of this contract and mileage of roads used as determined by the Authorized Officer. Prior to the use of such roads, the Purchaser shall give written notice to the Authorized Officer of the roads intended for use in the removal of timber purchased under this contract, together with an estimate of the volume to be hauled over such roads. The Authorized Officer shall establish an installment schedule of payment of the maintenance obligation. If it is determined by the Authorized Officer, after all merchantable timber has been cut and scaled, that the total maintenance payments made under this contract exceed the total maintenance and rockwear payment due, such excess shall be returned to the Purchaser after such determination is made.
- (9) R-2e The Contracting Officer may at any time, by written notice, terminate the Purchaser's operator road maintenance obligations and require instead payment of current Bureau of Land Management road maintenance and rockwear fees for the particular surface type of the roads involved. These fees will be applied to the remaining contract volume on the sale area, as determined by the Authorized Officer, to be transported over the roads listed in Section 44(B)(6)(R-2). If the total road maintenance and rockwear fee does not exceed five hundred and no/100 dollars (\$500.00), the Purchaser shall pay such amount in full prior to use of such roads. If the total road maintenance and rockwear fee exceeds five hundred and no/100 dollars (\$500.00), the Authorized Officer shall establish an installment schedule of payments of the maintenance and rockwear obligation(s).
- (10) 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.

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- (11) R-3 In the use of Road No. 34-4-5.03A, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660/M-660J, between the United States of America and Siskiyou Timberlands, LLC. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Execution and compliance with the terms and conditions identified in the License Agreement between the Purchaser and Siskiyou Timberlands, LLC.
- (b) Payment of a road use obligation of six hundred thirty two and 00/100 dollars (\$632.00) to Siskiyou Timberlands, LLC, payable at the time indicated in the License Agreement.
- (c) Payment of a rockwear fee obligation of sixty six and 04/100 dollars (\$66.04) to Siskiyou Timberlands, LLC, for the estimated volume to be hauled, payable at the time indicated in the License Agreement. For any additional timber, the Purchaser shall also pay a rockwear fee of \$0.95 per thousand board feet log scale per mile for the use of all aggregate surfaced roads indicated in the License Agreement.
- (d) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (e) Prior to cutting or removing any timber from the road right-of-way on road 33-4-31.04, the Purchaser shall pay to Siskiyou Timberlands, LLC, the owner of the right-of-way timber, the total value of that timber based on an agreed upon fair market value price for the timber.

Species	Estimated Volume	Price per Unit	Estimated Volume x Unit Price
Douglas-fir	0.1 MBF	TBD	TBD

- (f) 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.

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- (12) R-3 In the use of Road No. 33-4-20.00A, 33-4-21.02A, and 33-4-21.05A, and a skid road in the NENE of T33S R04W Section 20, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660, between the United States of America and Murphy Timber Investments. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Execution and compliance with the terms and conditions identified in the License Agreement between the Purchaser and Murphy Timber Investments.
- (b) Payment of a road use obligation of three thousand sixty-eight and 00/100 dollars (\$3,068.00) to Murphy Timber Investments, payable at the time indicated in the License Agreement.
- (c) Payment of a rockwear fee obligation of eight hundred forty-four and 30/100 dollars (\$844.30) to Murphy Timber Investments, for the estimated volume to be hauled, payable at the time indicated in the License Agreement. For any additional timber, the Purchaser shall also pay a rockwear fee of \$0.95 per thousand board feet log scale per mile for the use of all aggregate surfaced roads indicated in the License Agreement.
- (d) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (e) Prior to cutting or removing any timber from the road right-of-way on road 33-4-20.00B and the skid road in the NENE of T33S R04W Section 20 (Unit 17-01 access), the Purchaser shall pay to Murphy Timber Investments, the owner of the right-of-way timber, the total value of that timber based on an agreed upon fair market value price for the timber.

Species	Estimated Volume	Price per Unit	Estimated Volume x Unit Price
Douglas-fir	3.0 MBF	TBD	TBD
ponderosa pine	1.0 MBF	TBD	TBD
Incense-cedar	0.1 MBF	TBD	TBD

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- (f) 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.
- (13) R-3 In the use of Road No's. 33-4-30.02A, 33-4-30.02B, 33-4-30.03, 33-4-31.03, and skid roads in the NENE of T33S R04W Section 30, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660/M-660I, between the United States of America and Hancock Timberlands X, Inc. This document is available for inspection at the Medford District Office.

These conditions include:

- (a) Execution and compliance with the terms and conditions identified in the License Agreement between the Purchaser and Hancock Timberlands X, Inc.
- (b) Payment of a road use obligation of twenty thousand seven hundred seventy-one and 90/100 dollars (\$20,771.90) to Hancock Timberlands X, payable at the time indicated in the License Agreement.
- (c) Payment of a rockwear fee obligation of eighty-seven and 36/100 dollars (\$87.36) to Hancock Timberlands X, Inc, for the estimated volume to be hauled, payable at the time indicated in the License Agreement. For any additional timber, the Purchaser shall also pay a rockwear fee of \$0.95 per thousand board feet log scale per mile for the use of all aggregate surfaced roads indicated in the License Agreement.
- (d) Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a properly signed copy of the executed License Agreement.
- (e) Prior to cutting or removing any timber from the road right-of-way on roads 33-4-30.04, 33-4-30.05, and skid roads in the NENE of T33S R04W Section 30 (Unit 19-07 access), the Purchaser shall pay to Hancock Timberlands X, Inc, the owner of the right-of-way timber, the total value of that timber based on an agreed upon fair market value price for the timber.

Species	Estimated Volume	Price per Unit	Estimated Volume x Unit Price
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Douglas-fir	1.2 MBF	TBD	TBD
white fir	0.1 MBF	TBD	TBD
Incense-cedar	0.2 MBF	TBD	TBD

- (f) 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.
- (14) R-3 In the use of a tramway wedge for skid road in the NENE of T33S R05W Section 36 (Unit 31-02 access), the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement No. M-660/M-660K, between the United States of America and System Global Timberlands, LLC. This document is available for inspection at the Medford District Office.
- These conditions include:
- (a) Prior to cutting or removing any timber from the right-of- way yarding wedge area accessing Unit 31-2, the Purchaser shall pay to System Global Timberlands, LLC, the owner of the right-of- way timber, the total value of that timber based on an agreed upon fair market value price for that timber.
- (b) Default by the Purchaser of said Right-of-Way and Road Use Agreement, for failure to pay appropriate timber 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.
- (15) R-3c The Purchaser agrees that if they elect to use any other private road, which is the subject of a right-of-way agreement with the Government for the removal of Government timber sold under the terms of this contract, the Purchaser shall request and agree to the modification of this contract to provide for such use and for allowances for amortization of the Government's share of the capital investment of any such road.
- (16) 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

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vehicles meet allowable non-permitted State vehicle weights, but the haul route crosses a structure or segment of road that is posted for reduced weights. The Purchaser agrees to abide by any special requirements included in said written approval.

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

Details shall include:

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

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

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

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

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

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

(C) ENVIRONMENTAL PROTECTION

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- (1) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall restrict non-road, in unit, ground-based equipment used for harvesting, yarding, machine piling, and rehabilitation operations (including temporary roads and landings) to periods of low soil moisture (dry conditions). Low soil moisture varies by texture and is based on site-specific considerations. Generally, low soil moisture is determined by the inability of a soil sample taken at four (4) to six (6) inches to maintain form when compressed and the inability of soil moisture at the surface to be readily displaced, causing ribbons and ruts along equipment tracks. Low soil moisture limits will be determined by the Authorized Officer. Ground-based equipment shall be allowed to operate when the ground is frozen or adequate snow exists to prevent soil compaction and displacement, as determined by the Authorized Officer.
- (2) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on hydrologically connected natural surface or rock roads: TR 25-12A, TR 25-12B, TR 29-07, TR 29-08A, TR 29-08B, TR 29-08C, TR 31-02, TR 31-04A, 33-4-20.0B, 33-4-20.00, 33-4-21.01, 33-4-21.02, 33-4-21.05, 33-4-21.06, 33-4-21.07, 33-4-29.03, 33-4-30.00, 33-4-30.01, 33-4-30.02, 33-4-30.04, 33-4-30.05, 33-4-31.03, 33-4-31.04 and 34-4-5.03; and the portion of the 34-4-5.00 road that lies northwest of the boundary of unit 31-3 (and unnumbered road), during conditions that would result in any of the following: surface displacement such as rutting or ribbons, continuous mud splash or tire slide, fines being pumped through road surfacing from the subgrade resulting in a layer of surface sludge, as directed by the Authorized Officer.
- (3) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall not haul on all natural surface roads that receive one-half ($\frac{1}{2}$) inch or more precipitation within a twenty-four (24) hour period. Haul shall not resume for a minimum of forty-eight (48) hours following any storm event, or until road surface is sufficiently dry, as approved by the Authorized Officer. The Purchaser may elect, at their own expense, to apply rock surfacing to these roads to bring them up to wet weather haul standards, as approved by the Authorized Officer.
- (4) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:
 - (a) In order to prevent the potential spread of noxious weeds into the Medford District BLM, the operator would be required to clean all logging, construction, chipping, grinding, shredding, rock crushing, and transportation equipment prior to entry on BLM lands.

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- (b) Cleaning shall be defined as removal of dirt, grease, plant parts, and material that may carry noxious weed seeds into BLM lands. Cleaning prior to entry onto BLM lands may be accomplished by using a pressure hose.
 - (c) Only equipment inspected by the BLM would be allowed to operate within the Analysis Area. All subsequent move-ins of equipment as described above shall be treated the same as the initial move-in.
 - (d) Prior to initial move-in of any equipment, and all subsequent move-ins, the operator shall make the equipment available for BLM inspection at an agreed upon location off Federal lands.
 - (e) Equipment would be visually inspected by the Authorized Officer to verify that the equipment has been reasonably cleaned.
 - (f) If work occurs in an area known to contain priority non-native invasive plants, equipment shall be cleaned before moving to another project area at a site designated by the Authorized Officer.
 - (g) Equipment and vehicles will avoid working within flagged non-native invasive plant sites, flagged with orange flagging labeled in black letters “NOXIOUS WEEDS”, as directed by the Authorized Officer.
- (5) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall only use certified weed-free straw and native seed species approved by the Authorized Officer for rehabilitation activities. Straw must be obtained from the BLM or purchased from growers certified by the Oregon Department of Agriculture’s Weed Free Forage and Mulch Program. Seeding shall occur from September 1 to March 31 of the following year. All seeding shall be contingent upon seed availability.
- (6) E-1 In addition to the requirements set forth in Section 26 of this contract, the Purchaser shall implement the following noxious weed control measures:

Upon decommissioning and prior to fall rains, the Purchaser shall scarify landings (outside of the driving surface), temporary roads provide for adequate drainage, and utilized skid trails within two hundred (200) feet of streams and waterbodies as shown on Exhibit A, then stabilize and revegetate all bare soil with certified weed free straw mulch and a native seed mixture approved by the Authorized Officer. Landings on roads and rocky areas that lack soil for seed germination need not be

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scarified, seeded or mulched, as determined by the Authorized Officer. The BLM may provide the seed mixture and straw mulch if the purchaser is unable to locate and buy the approved materials from a commercial source. The Purchaser shall reimburse the government for the cost of seed and straw, if provided by the government. The Purchaser shall furnish the specific seed mixture prescribed by the Authorized Officer, which will include up to 3 grasses and 2 forbs from the following list, but may include substitutions approved by the Authorized Officer:

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

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

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

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

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

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

<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

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

- (7) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall prepare a Spill Prevention, Control, and Countermeasure Plan (SPCC) for all hazardous substances to be used in the contract area, as directed by the Authorized Officer. Such plan shall include identification of Purchaser's representatives responsible for supervising initial containment action for releases and subsequent cleanup. Such plans must comply with the State of Oregon DEQ OAR 340-142, Oil and Hazardous Materials Emergency Response Requirements. All operators shall have a Spill Containment Kit (SCK) as described in the SPCC plan on-site during any operation with potential for run-off to adjacent waterbodies. The SCK shall be appropriate in size and type for the oil or hazardous material carried by the Purchaser.
- (8) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not refuel equipment, store, or cause to have stored, any fuel or other petroleum products within one hundred fifty (150) feet of all riparian management or wet areas. All Petroleum products shall be stored in durable containers and located so that any accidental releases will be contained and not drain into any stream system. Hydraulic fluid and fuel lines on heavy mechanized equipment would be in proper working condition in order to minimize potential for leakage into streams. Absorbent materials shall be onsite to allow for immediate containment of any accidental spills. Spilled fuel and oil shall be cleaned up and disposed of at an approved disposal site.
- (9) E-1 In addition to the requirements set forth in Sec. 26 of this contract, the Purchaser shall prevent the delivery of chemical retardant foam or additives to

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waterbodies, and wetlands. Ignition devices/materials shall be stored and disposed of at least one hundred fifty (150) feet away from streams and wetlands.

- (10) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall not locate new landings in areas that contribute eroded fines to streams, wet areas, dry draws and swales. If these landing locations cannot be avoided, ensure that properly installed sediment control measures are placed and maintained, as needed, to keep eroded material onsite.
- (11) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall ensure that silt fencing or other sediment control measures are properly placed and maintained during use and periods of non-use when utilizing landings or temp roads that have the potential to release eroded fines into a stream or wet area, directly or via draws or ditchlines. Any project-related activity would be suspended if conditions develop that cause a potential for sediment laden runoff to enter a wetland, floodplain or waters of the state. Operations can resume when sediment control devices are in place and conditions allow turbidity standards to be met.
- (12) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall, prior to October 15 of the same operating season, winterize and rehabilitate temporary roads, landings, hydrologically connected corridors and skid trails and other areas of exposed soils by properly installing and/or using water bars, berms, sediment basins, gravel pads, hay bales, small dense woody debris, seeding and/or mulching, to reduce sediment runoff and divert runoff water away from stream channels, headwalls, slide areas, high landslide hazard locations or steep erodible fill slopes as directed by the Authorized Officer. Block temporary roads and skid trails.
- (13) E-1 In addition to the requirement set forth in Section 26 of this contract, the Purchaser shall decommission: all temporary roads and ground based skid trails utilized within two hundred (200) feet of streams and waterbodies as shown on Exhibit A; and temporary roads, ground based skid trails, and landings outside of the permanent road prism, within ground-based yarding areas **as needed to achieve no more than twenty (20) percent detrimental soil compaction within the unit**, as directed by the Authorized Officer, by one of the following methods:
 - (a) If the Authorized Officer deems subsoiling will not cause unacceptable damage to the root systems of residual trees the Purchaser shall discontinuously subsoil, simultaneously water bar, seed, mulch, and barricade. Subsoil to a depth of twelve (12) inches, and no further than

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thirty-six (36) inches apart. If the Authorized Officer deems subsoiling to this depth will cause an unacceptable amount of damage to the root system of residual trees, the Purchaser shall scarify to a depth of up to six (6) inches and simultaneously water bar, seed, mulch, and barricade.

- (b) All rehabilitation shall occur within eighteen (18) months of harvest, during dry conditions, and after pile burning is complete.
 - (c) The Purchaser shall simultaneously water bar, seed, mulch, and barricade all temporary roads.
- (14) E-1 In addition to the requirement set forth in Sec. 26 of this contract, the Purchaser shall place material removed during excavation in locations where it cannot enter streams or other water bodies.
- (15) E-2 The water bars to be constructed as required by Sec. 26(c) shall be constructed in accordance with the spacing described in the table below and to the specifications shown on Exhibit D-7 which is attached hereto and made a part hereof.

Gradient (Percent)	Water bar Spacing
2-5%	200 feet
6-10%	150 feet
11-15%	100 feet
16-20%	75 feet
21-35%	50 feet
36+%	50 feet

- (16) E-3 The Purchaser shall immediately discontinue specified construction or timber harvesting operations upon written notice from the Contracting Officer that:
- (a) threatened or endangered plants or animals protected under the Endangered Species Act of 1973, as amended, may be affected by the operation, and a determination is made that consultation or reinitiation of consultation is required concerning the species prior to continuing operation, or;
 - (b) when, in order to comply with the Endangered Species Act, or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan

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(RMP), the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

- (c) Federal proposed, Federal candidate, Bureau sensitive or State listed species protected under BLM Manual 6840 - Special Status Species Management - have been identified, and a determination is made that continued operations would affect the species or its habitat, or;
- (d) when, in order to comply with a court order, which enjoins operations on the sale or otherwise requires the Bureau of Land Management to suspend operations, or;
- (e) when, in order to comply with a court order, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
- (f) when, in order to comply with a stay or other remedy issued by the Interior Board of Land Appeals (IBLA) the Contracting Officer determines it may be necessary to modify or terminate the contract, or;
- (g) species have been discovered which were identified for protection in accordance with management direction established in the ROD and RMP, and the Contracting Officer determines that continued operations would affect the species or its habitat, or;
- (h) when, in order to protect species which were identified for protection in accordance with management direction established in the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract.

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

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

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In the event of a suspension period or a combination of suspension periods that exceed a total of 30 days, the First Installment held on deposit may be temporarily reduced upon the written request of the Purchaser. For the period of suspension extending beyond 30 days, the First Installment on deposit may be reduced to five (5) percent of the First Installment amount listed in Section 3.a. of the contract. Any First Installment amount temporarily reduced may be refunded or transferred to another BLM contract at the request of the Purchaser. However, if the Purchaser has outstanding debt owing the United States, the Contracting Officer must first apply the amount of First Installment that could be refunded to the debt owed in accordance with the Debt Collection Improvement Act, as amended (31 USC 3710, et seq.). Upon Purchaser's receipt of a bill for collection and written notice from the Contracting Officer lifting the suspension, the Purchaser shall restore the First Installment to the full amount shown in Section 3.a. of the contract within 15 days after the bill for collection is issued, subject to Section 3.i. of the contract. The Purchaser shall not resume contract operations until the First Installment amount is fully restored.

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

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

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

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

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

- (17) 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

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notification is not received by the Authorized Officer by February 1, felling, bucking, yarding, road construction, or any other activity with the potential to disturb nesting northern spotted owls may not be allowed during this time period.

Upon receipt of a notice that the Purchaser expects to perform such operations during this time period, the Government will conduct surveys to determine whether owls are nesting within 0.25 miles of the harvest units. If it is determined owls are not nesting or that no young have been produced, the Authorized Officer may lift the seasonal restriction on such operations in writing. Without this approval, such operations are prohibited from March 1 through July 15 of each year.

(D) FIRE PREVENTION

- (1) F-1 Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall, prior to the operation of power-driven equipment in construction or logging operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the of the Authorized Officer.
- (2) F-1a Fire Prevention and Control. Primarily for purposes of fire prevention and control, the Purchaser shall comply with the following provisions:
 - (a) At least three (3) days prior to the operation of power-driven equipment during any operations under this contract during the closed fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer and the State of Oregon Department of Forestry.
 - (b) Provide and maintain on the contract area in good working order, and immediately available, the following equipment for use during closed fire season or periods of fire danger:
 1. F-2a Firefighting tools shall be kept at each landing or at such other place as the Authorized Officer shall designate whenever employees are working on the contract area. All firefighting tools shall be kept in a sturdily constructed box which shall be painted red and lettered on the front or top in large letters, "For Fire Only." The box shall have a hinged lid and a hasp by which the lid can be sealed. One box may serve two landings not over six hundred (600) feet apart. When filled, the box shall not weigh over two hundred (200) pounds. The fire tools shall be in good condition, be tight on strong handles, and

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have sharp cutting edges. There shall be not less than four (4) tools in each box nor less than one (1) tool for each employee working on the contract area. Three-fourths (3/4) of all fire tools shall be shovels, hazel hoes, or other scraping tools. The fire tools shall be used only for fighting fire.

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

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

(E) SLASH DISPOSAL

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

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

- (a) SD-1a Lop and scatter all slash in units 17-1 and 31-4; lop and scatter all slash in the DDR-TPCC portion of unit 21-1 (the DDR-TPCC area is marked to Selection Harvest prescription); lop and scatter all slash in units 25-12, 29-7, 29-9, 31-2, and 31-5 that is outside of the pile and burn areas as shown on Exhibit S. All top and side branches must be free of the central stem so that such stem is reduced to the extent that it is within eighteen (18) inches of the ground at all points. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract. Lop and scatter shall be completed in accordance with Exhibit S as directed by the Authorized Officer.
1. All slash shall be arranged in a discontinuous pattern across the forest floor.
 2. All slash shall be loped to no more than eight (8) feet in length.
- (b) SD-1b Machine pile, cover, and burn all slash in units 21-2, 21.1 RS, 29.0 RS, 31.0 RS, 5.0 RS; machine pile, cover, and burn all slash the ground-based portions of units 19-7, 29-7, and 29-8; machine pile, cover, and burn all slash in the ground-based portion of unit 21-1 that is outside of the DDR-TPCC lop & scatter area; machine pile, cover, and burn all slash in the ground-based portion of unit 25-12 that lies above road 34-4-5.0 and lies two hundred (200) feet below road 34-4-5.0; machine pile, cover, and burn all slash in the ground-based portion of unit 29-9 that that is marked to a group selection (gap) silvicultural prescription as shown on Exhibit A (lies on both side of road 33-4-29.03); machine pile, cover, and burn all slash in the east half of unit 31-2 that is marked to a group selection (gap) silvicultural prescription as shown on Exhibit A; and machine pile, cover, and burn all slash in the ground-based portion of unit 31-5 that lies below road 33-4-31.0 and the ground-based portion of the unit that lies between unit 31.4 RW and road 34-4-5 as shown on Exhibit S. Slash shall be piled by machine. Piling shall be completed in accordance with Exhibit S as directed by the Authorized Officer. Finished piles shall be tight and free of earth.
1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.

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2. Slash includes all woody material (brush, limbs, tops, unmerchantable stems, or chunks) severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract. In the selective slash-machine pile & burn areas as shown on Exhibit S, hardwoods less than or equal to twenty (20) inches diameter shall be felled, cut into lengths less than ten (10) feet, and shall be machine piled. In the areas that do not call for selective slashing, do not pile pieces of slash with a diameter greater than twelve (12) inches.
3. All equipment shall be approved by the Authorized Officer. Piling shall be accomplished using a track mounted hydraulic excavator or equivalent with at least a five (5) tooth brush rake. The excavator shall have a minimum reach of twenty (20) feet. The excavator shall be equipped with a hydraulic thumb or rotating controllable grapple head. Finished piles shall be tight and free of dirt and other non-woody debris.
4. Piles shall be less than sixteen (16) feet in height and width.
5. Machine piling operations are limited to slopes less than thirty five (35) percent slope and to seasonal restrictions as described in Sec. 44(A)(19)(L-19), Sec. 44(A)(21)(L-20), and dry conditions as described in Sec. 44(C)(1)(E-1). All areas that are identified in Exhibit A as ground-based yarding that cannot be machine piled shall be hand piled.
6. Machine piles shall be constructed as compactly as possible. There should be an adequate supply of fine fuels located within and under the covered area of the pile to ensure ignition of the larger fuels. Completed piles shall be free of projecting limbs or slash which would interfere with adequate covering of the piles.
7. Machine piles shall be adequately covered with a cap of **at least ten (10) feet by ten (10) feet** of four (4) mil polyethylene sheeting. The polyethylene sheeting shall be held in place with woody debris or tied with rope or twine to ensure coverage. Coverage shall be completed when piles are constructed, or as directed by the Authorized Officer.
8. Machine piles shall not be placed within fifteen (15) feet of snags, stumps, reserve trees or large woody debris.

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9. Machine piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 10. The Purchaser is required to furnish the fuel and equipment for machine pile burning.
- (c) SD-1c Hand pile, cover, and burn all slash in unit 31-3; hand pile, cover, and burn all slash situated in the cable portion of units 19-7, 29-8, and 31-5; hand pile, cover, and burn all slash in the cable portion of unit 21-1 that is outside of the DDR-TPCC lop & scatter area; and hand pile, cover, and burn all slash situated in the cable portion of unit 25-12 that lies two hundred (200) feet below road 34-4-5 as shown on Exhibit S. Slash shall be piled by hand. Finished piles shall be tight and free of earth.
1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.
 2. Slash includes woody material (brush, limbs, tops, unmerchantable stems, or chunks severed, uprooted, or broken from live plants as a result of Purchaser's operations under the terms of this contract.
 3. Hand pile all slash which is between one (1) and six (6) inches in diameter on the large end and exceeds two (2) feet in length, or as directed by the Authorized Officer.
 4. Hand piles shall be covered with a large enough piece of four (4) mil polyethylene sheeting to ensure a dry ignition spot, generally five (5) feet by five (5) feet or large enough to cover eighty (80) percent of the pile.
 5. Hand piles shall not be placed adjacent to or within ten (10) feet of leave trees or large woody debris.
 6. Hand piles shall not be located on roadways, turnouts, shoulders, or cut banks, unless authorized by the Authorized Officer.
- (d) SD-1f Within twenty (20) feet of the edge of each landing pile, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than two (2) feet in length shall be piled within fourteen (14) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located off of the driving surface of roads and

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at least fifteen feet (15) from any Reserve Tree and/or as directed by the Authorized Officer.

Upon completion of landing piling, the Purchaser shall remove flammable material around each landing pile down to bare mineral soil to prevent escaped fire. Landing piles shall be less than sixteen (16) feet in height and width. Cover piles with large enough piece of four (4) mil polyethylene sheeting to ensure a dry ignition spot, **at least ten (10) foot by ten (10) foot**. The Purchaser is required to furnish the covering materials. The timing of this covering work shall be in accordance with instructions from the Authorized Officer. If the structure of the landing piles will not permit adequate consumption of piled debris by burning, the Purchaser shall re-pile them at the direction of the Authorized Officer.

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

2. Landing piles on private land shall not be burned by the Purchaser.

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

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

5. If purchaser elects to set aside pole/firewood decks and not pile the material in landing piles, the purchaser will be required to remove decks before the expiration of cutting rights. Material will be hauled off site for processing. The Authorized Officer will determine location of pole/hardwood decks.

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

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Upon completion of piling, the Purchaser shall remove flammable material around each roadside and/or landing pile down to bare mineral soil to prevent escaped fire. Roadside and Landing piles shall be less than sixteen (16) feet in height and width. Cover piles with large enough piece of four (4) mil polyethylene sheeting to ensure a dry ignition spot, **at least ten (10) foot by ten (10) foot**. The Purchaser is required to furnish the covering materials. The timing of this covering work shall be in accordance with instructions from the Authorized Officer. If the structure of the landing piles will not permit adequate consumption of piled debris by burning, the Purchaser shall re-pile them at the direction of the Authorized Officer.

1. The BLM will prepare a fire burn plan. Smoke clearance shall be obtained by the BLM the day prior to planned ignition for all burn units.
 2. Roadside piles will be burned in the fall to spring season after one (1) or more inches of precipitation have occurred.
 3. Roadside piles will be burned within twenty-four (24) months of harvest completion.
- (2) SD-2 Notwithstanding the provisions of Sec. 15 of this contract, the Government shall assume all obligations for disposal or reduction of fire hazards created by Purchaser's operations on Government lands, except for burning and mop up assistance as required herein, and measures required in Sections 44(E)(1)(SD-1) and 44(E)(2)(SD-2). In accordance with written instruction to be issued by the Authorized Officer at least ten (10) days in advance of earliest date of required performance, the Purchaser shall, under supervision of the Authorized Officer or his designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at his own expense, the services of personnel and equipment on each unit as shown below.

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

- (a) For igniting and burning machine piles in units 19-7, 21-1, 21-2, 25-12, 29-7, 29-8, 29-9, 31-2, and 31-5 as shown on Exhibit S:
1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.

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2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
 3. One (1) Wildland Fire Engine Boss.
 4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.
 5. Six (6) drip torches.
 6. Hand ignition with drip torches is required in machine pile units.
 7. All ignition personnel will be directly supervised by a BLM representative.
- (b) For mop-up of machine piles in units 19-7, 21-1, 21-2, 25-12, 29-7, 29-8, 29-9, 31-2, and 31-5 as shown on Exhibit S:
1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
 2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
 3. One (1) Wildland Fire Engine Boss.
 4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one

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

(c) For igniting and burning hand piles in units 19-7, 21-1, 25-12, 29-8, 31-3, and 31-5 as shown on Exhibit S:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with ten (10) members per crew, including a designated crew foreman. Each crew shall be equipped with fuel, drip torches, shovels, pulaskis, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.
5. Ten (10) drip torches.
6. Hand ignition with drip torches is required in pile burn units.
7. All ignition personnel will be directly supervised by a BLM representative.

(d) For mop-up of hand piles in units 19-7, 21-1, 25-12, 29-8, 31-3, and 31-5 as shown on Exhibit S:

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1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

(e) For igniting and burning landing and roadside piles:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzles acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the

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standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

(f) For mop-up of landing and roadside piles:

1. One (1) person to supervise crew and equipment operators who is Burn Boss Qualified at the complexity level of the burn, and to serve as Purchaser's representative.
2. One (1) crew with six (6) members per crew, including a designated crew foreman. Each crew shall be equipped with shovels, pulaskis, or scraping tool, one (1) power saw and one (1) backpack pump; one (1) tool for each crew member.
3. One (1) Wildland Fire Engine Boss.
4. One (1) Wildland Fire Engine. Each engine shall have three hundred (300) gallons or more capacity with one thousand (1,000) feet of one and one half (1½) inch hose and nozzle(s) acceptable to the Authorized Officer. All hose couplings shall have the standard thread adopted by the State Fire Marshall pursuant to ORS 476.610 as amended. Each engine shall be equipped with a mounted pump conforming to the standards set forth in the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System requirements. Engine and tank shall be in good working order and shall be filled with water.

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

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

KING GRAVES TIMBER SALE
SPECIAL PROVISIONS

approved aramid fabric, Nomex™ or equivalent, and all personnel shall carry an approved fire shelter. Clothing shall be free of diesel fuel oil.

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

Except as provided hereafter for fire escapement, the Purchaser shall continue the required assistance in mop up on each hand/machine piled unit and landing decks, as directed by the Authorized Officer within 10 days beginning 8:00 a.m. the day following completion of ignition in that unit or until released from such services by the Authorized Officer, whichever occurs first.

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

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

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

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

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

- (3) SD-4 Logging Residue Reduction. In addition to the requirements of Secs. 15 and 25 of this contract, and notwithstanding the Purchaser's satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the State's willingness to release Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following logging residue reduction and site preparation measures required by this contract:
- (a) L-5 All hardwood trees less than or equal to twenty (20) inches D.B.H.O.B., which are not reserved, shall be felled concurrently with conifers designated for cutting in the selective slash portions of units 19-7, 21-1, 21-2, 29-7, 29-8, 29-9, 31-2, 31-3, and 31-5 (in areas with a high concentration of overstory hardwood trees in order to prepare the site for re-planting) as shown on Exhibit A and Exhibit S.
 - (b) L-13 In the selective slash and yum yard hardwoods area of units 19-7, 21-1, 29-7, 29-8, 29-9, 31-3, and 31-5 shown on Exhibit A and Exhibit S, all hardwoods between eight (8) inches diameter and twenty (20) inches diameter, shall be cut, yarded, and decked at roadside landings. The purchaser may elect to remove yum yarded hardwoods as firewood or biomass, however, any yum yarded material not hauled away and left on-site shall be piled as described in Section 44(E)(1)(SD-1)(d&e) (SD-1f) and burned as described in Section 44(E)(2)(SD-2)(e&f).
 - (c) L-13 In the selective slash and machine pile and burn hardwood areas of units 19-7, 21-1, 21-2, 29-7, 29-8, 29-9, 31-2, and 31-5 shown on Exhibit A and Exhibit S, all slash, including hardwoods between eight (8) inches diameter and twenty (20) inches diameter, shall be bucked to less than ten (10) feet in length and machine piled and burned within the unit boundaries concurrently with machine pile and burn slash disposal

KING GRAVES TIMBER SALE
SPECIAL PROVISIONS

operations as described in Section 44(E)(1)(SD-1)(b)(SD-1b) and Section 44(E)(2)(SD-2)(a&b).

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

- (4) SD-5 The Purchaser shall perform logging residue reduction and site preparation work on approximately four hundred thirty-one and one half (431.5) acres of harvest area located in all units as shown on Exhibit S. (The total slash treatment acres are greater than timber sale treatment acres due to the large number of landings outside of unit boundaries/within road prisms.)
- (a) The required work shall consist of any treatment or combination of treatments listed in the table below, as determined by the Authorized Officer and specified in writing by the Contracting Officer. The number of acres of each treatment shall be determined by the Authorized Officer.

Treatment	Treatment Description	Cost/Acre
Lop and Scatter	0-12 tons/acre	\$52.00
Selective Slashing (Hand Felling) Hardwoods $\leq$ 20" DBH	Cost per acre	\$300.00
Hand Pile and Cover	0-25 piles/acre	\$599.00
Hand Pile Burn and Mop-up	0-25 piles/acre	\$82.00
Mechanical Felling / Selective Slashing Hardwoods $\leq$ 20" DBH	Cost per acre	\$147.99
Machine Pile and Cover	Cost per acre	\$605.00
Machine Pile Burn and Mop-up	0-20 piles/acre	\$71.00
Cover and Burn Landing Decks	Cost per acre	\$62.00

KING GRAVES TIMBER SALE
SPECIAL PROVISIONS

Cover and Burn Roadside Piles	Cost per acre	\$62.00
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****Seventy-nine and one half (79.5) acres of Yum Yarding of Hardwoods in Cable Yard Areas as shown on Exhibit A and Exhibit S are required as described in Sec. 44(E)(3)(SD-4)(b). The cost of this work was included in the timber appraisal****

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

Appraised Treatment	Acres	Cost/Acre	Total Cost Per Treatment
Lop and Scatter	135.00	\$52.00	\$7,020.00
Hand Felling / Selective Slashing Hardwoods $\leq$ 20" DBH	79.50	\$300.00	\$23,850.00
Hand Pile and Cover	105.50	\$599.00	\$63,194.50
Hand Pile Burn and Mop-up	105.50	\$82.00	\$8,651.00
Mechanical Felling / Selective Slashing Hardwoods $\leq$ 20" DBH	36.50	\$147.99	\$5,401.64
Machine Pile and Cover	132.50	\$605.00	\$80,162.50
Machine Pile Burn and Mop-up	132.50	\$71.00	\$9,407.50
Cover and Burn Landing Decks	47.50	\$62.00	\$2,945.00
Cover and Burn Roadside Piles	11.00	\$62.00	\$682.00
Total Appraised Cost	431.50		\$201,314.14

- (c) The Total Purchase Price set forth in Section 2 shall be adjusted in a unilateral modification executed by the Contracting Officer by the amount that the total cost of the site preparation treatments designated pursuant to Section 44(E)(4)(SD-5)(a) differs from two hundred one thousand three hundred fourteen and 14/100 dollars (\$201,314.14), as calculated by using the estimated acres determined by the Authorized Officer and the per acre costs listed in Section 44(E)(4)(SD-5)(a).
- (d) Selective slashing and yum yarding of hardwoods shall be done in accordance with Section 44(3)(SD-4)(a&b); Selective slashing and machine

KING GRAVES TIMBER SALE
SPECIAL PROVISIONS

piling of hardwoods shall be done in accordance with Section 44(3)(SD-4(a&c); Lop and scatter shall be done in accordance with Section 44(E)(1)(SD-1)(a)(SD-1a); Machine piling shall be done in accordance with Section 44(E)(1)(SD-1)(b)(SD-1b); Hand piling shall be done in accordance with Section 44(E)(1)(SD-1)(c)(SD-1c).

(F) BUYOUT SECURITIES

- (1) B-1 The Purchaser shall perform machine pile burning and mop up in accordance with Section 44(E)(2)(SD-2)(a&b). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of eleven thousand two hundred three and 39/100 dollars (\$11,203.39), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in these subsections. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Authorized Officer shall establish a required schedule of payments.
- (2) B-1 The Purchaser shall perform hand pile burning and mop up in accordance with Section 44(E)(2)(SD-2)(c&d). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of ten thousand three hundred two and 48/100 dollars (\$10,302.48), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in these subsections. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Authorized Officer shall establish a required schedule of payments.
- (3) B-1 The Purchaser shall perform landing and roadside pile burning and mop up in accordance with Section 44(E)(2)(SD-2)(e&f). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of four thousand three hundred nineteen and 39/100 dollars (\$4,319.39), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in these subsections. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract, and the Authorized Officer shall establish a required schedule of payments.

(G) LOG EXPORTS

KING GRAVES TIMBER SALE
SPECIAL PROVISIONS

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

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

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

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

	Unrestricted Period
	Operations Restricted To Dry Condition, Waiver Required
	Operations Restricted While NSO Spot Check Surveys Occur, Restriction May Be Extended IF Owls Are Nesting
	Operations Restricted

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

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

*** **All road maintenance and improvements must be completed before wet season haul can occur on the roads. The Purchaser may elect to make improvements to Dry Condition Haul Roads listed to allow for All Season Haul, at their own expense, as approved by the Authorized Officer. Haul will be suspended if the roads begin to show damage or conditions develop that could cause damage to the road as described in Sec. 44(C)(2&3)(E-1).**

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

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Units 5.0 RS, 31.0 RS (Ground Based Yard Units with All Season Haul)	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads 33-4-31.00, 34-4-5.00, and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Unit 21.1 RS (Ground Based Yard Unit with Dry Condition Haul & All Season Haul)	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Road 33-4-21.01.***																								
	Loading and Hauling on all Paved Rds***																								
Units 29.0 RS (Ground Based Yard Unit with Northern Spotted Owl Seasonal Restrictions, and Dry Condition Haul & All Season Haul)	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on the portion of Road 33-4-29.01 west of the junction with the 33-4-29.04 rd.***																								
	Loading and Hauling on the rest of Road 33-4-29.00, and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Units 20.0 RW, 30.4 RW, 30.5 RW (Ground Based Yard Unit with Road Construction, Northern Spotted Owl Seasonal Restrictions, and Dry Condition & All Season Haul)	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads 33-4-20.0B, 33-4-20.00, 33-4-21.05, 33-4-30.02, 33-4-31.03, 33-4-30.04, and 33-4-30.05.***																								
	Loading and Hauling on Roads 33-4-29.00, 33-4-31.00, 34-4-5.00, and all Paved Rds***																								
Unit 29.4 RW (Ground Based Yard Unit with Road Construction, Northern Spotted Owl Seasonal Restrictions, and All Season Haul)	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads 33-4-29.00, 33-4-29.04 and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Unit 31.4 RW (Ground Based Yard Unit with Road Construction, Dry Condition & All Season Haul)	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads 33-4-31.04 and 34-4-5.03.***																								
	Loading and Hauling on Road 34-4-5.00 and all Paved Rds***																								
Units 17-1, 21-2 (Ground Based Yard Units with Northern Spotted Owl Seasonal Restrictions, and Dry Condition Haul & All Season Haul)	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads 33-4-20.00, 33-4-21.02, 33-4-21.05, and 33-4-21.06.***																								
	Loading and Hauling on all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Unit 19-7 (Ground Based & Cable Yard Unit with Northern Spotted Owl Seasonal Restrictions, and Dry Condition Haul & All Season Haul)	Manual Falling and Bucking*																								
	Cable Yarding																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Road 33-4-30.00.***																								
	Loading and Hauling on Road 33-4-29.00 and all Paved Rds***																								
Unit 31-4 (Ground Based & Cable Yard Unit with Road Construction, and Dry Condition Haul & All Season Haul)	Manual Falling and Bucking*																								
	Cable Yarding																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Road TR 31-04A.***																								
	Loading and Hauling on Roads TR 31-04B, 33-4-31.00, and 34-4-5.00 and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Units 21-1, 29-7, 29-8, 29-9, and 31-2 (Ground Based & Cable Yard Units with Road Construction, Northern Spotted Owl Seasonal Restrictions, and Dry Condition Haul & All Season Haul)	Manual Falling and Bucking*																								
	Cable Yarding																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads TR 29-07, TR 29-08A, TR 29-08B, TR 29-08C, TR 31-02, 33-4-20.0B, 33-4-20.00, 33-4-21.01, 33-4-21.05, 33-4-21.07, 33-4-29.03, 33-4-30.01, 33-4-30.02, 33-4-30.04, 33-4-30.05, 33-4-31.03, and the portion of the 34-4-5.00 road that lies northwest of the junction with the un-numbered road across from the unit 31-3 boundary.***																								
	Loading and Hauling on Roads 33-4-29.00, 33-4-29.04, 33-4-30.03, 33-4-31.00, and the portion of the 34-4-5.00 road that lies southeast of the junction with the un-numbered road across from the unit 31-3 boundary, and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
North Unit 25-12 polygon (Ground Based & Cable Yard Unit with Road Construction, Northern Spotted Owl Seasonal Restrictions, and Dry Condition Haul & All Season Haul)	Manual Falling and Bucking*																								
	Cable Yarding																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads TR 25-12A & TR 25-12B, and the portion of the 34-4-5.00 road that lies northwest of the boundary of unit 31-3.***																								
	Loading and Hauling on the portion of the 34-4-5.00 road that lies southeast of the junction with the un-numbered road across from the unit 31-3 boundary, and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

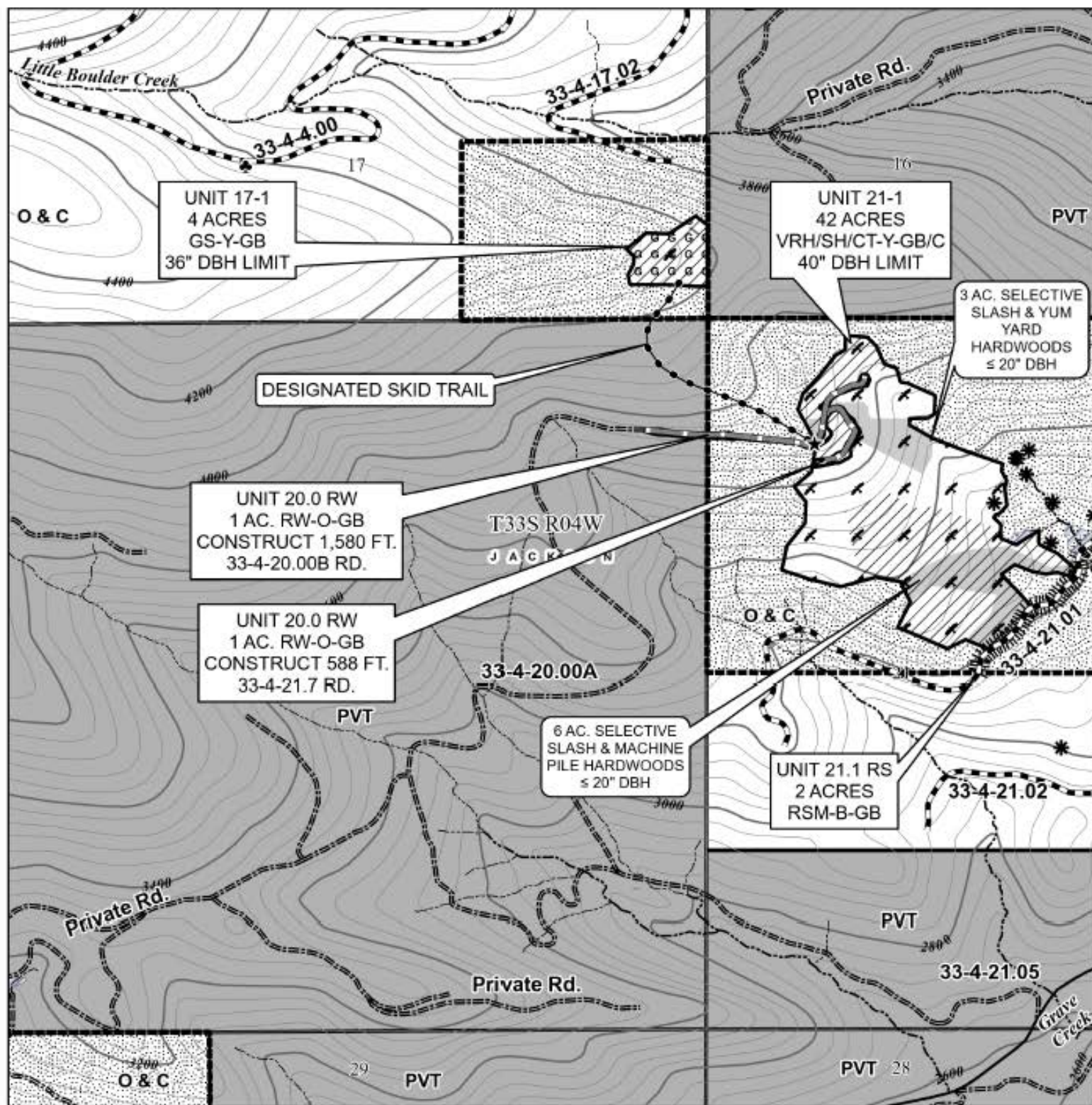
Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
South Unit 25-12 polygon (Ground Based Yard Unit with Dry Condition Haul & All Season Haul)	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads TR 25-12A & TR 25-12B, and the portion of the 34-4-5.00 road that lies northwest of the boundary of unit 31-3.***																								
	Loading and Hauling on the portion of the 34-4-5.00 road that lies southeast of the junction with the un-numbered road across from the unit 31-3 boundary, and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Portion of Unit 31-5 w/ VRH Rx (Ground Based Yard Unit with Northern Spotted Owl Seasonal Restrictions, and All Season Haul)	Manual Falling and Bucking*																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Road 33-4-31.00 and 34-4-5.00, and all Paved Rds***																								
Rest of Unit 31-5 (Ground Based & Cable Yard Unit with Road Construction, and Dry Condition Haul & All Season Haul)	Manual Falling and Bucking*																								
	Cable Yarding																								
	Mechanical Ground Based Harvesting, Yarding & Piling, Road & Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Roads 33-4-31.04 and 34-4-5.03.***																								
	Loading and Hauling on Road 33-4-31.00 and 34-4-5.00 and all Paved Rds***																								

King Graves Timber Sale Seasonal Restriction Matrix, Contract # ORM07-TS-2026.0002

Sale Area	Activity	Jan		Feb		Mar		Apr		May		Jun		Jul		Aug		Sep		Oct		Nov		Dec	
		1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15	1	15
Portion of Unit 31-3 that lies east of seasonal restriction line shown on Exhibit A (Cable Yard Unit with All Season Haul)	Manual Falling and Bucking*																								
	Cable Yarding																								
	Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Road 34- 4-5.00 and all Paved Rds***																								
Portion of Unit 31-3 that lies west of seasonal restriction line shown on Exhibit A (Cable Yard Unit with Northern Spotted Owl Seasonal Restrictions and All Season Haul)	Manual Falling and Bucking*																								
	Cable Yarding																								
	Landing Construction, and Rehabilitation Activities Involving Heavy Equipment																								
	Pile Burning																								
	Road Maintenance**																								
	Loading and Hauling on Road 34- 4-5.00 and all Paved Rds***																								



0 750 1,500 3,000 Feet

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

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

40 FOOT CONTOUR INTERVAL



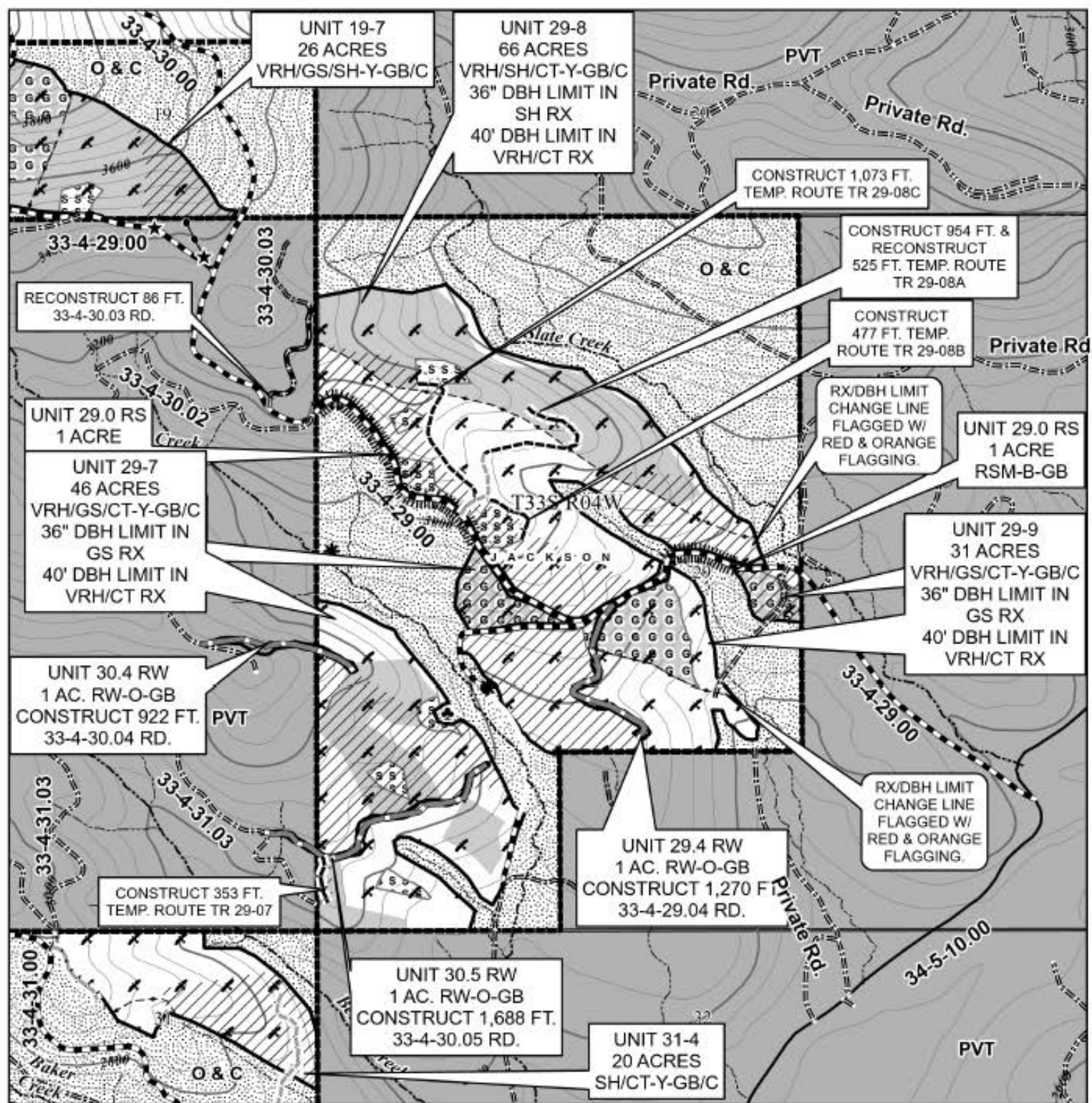
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0 750 1,500 3,000 Feet

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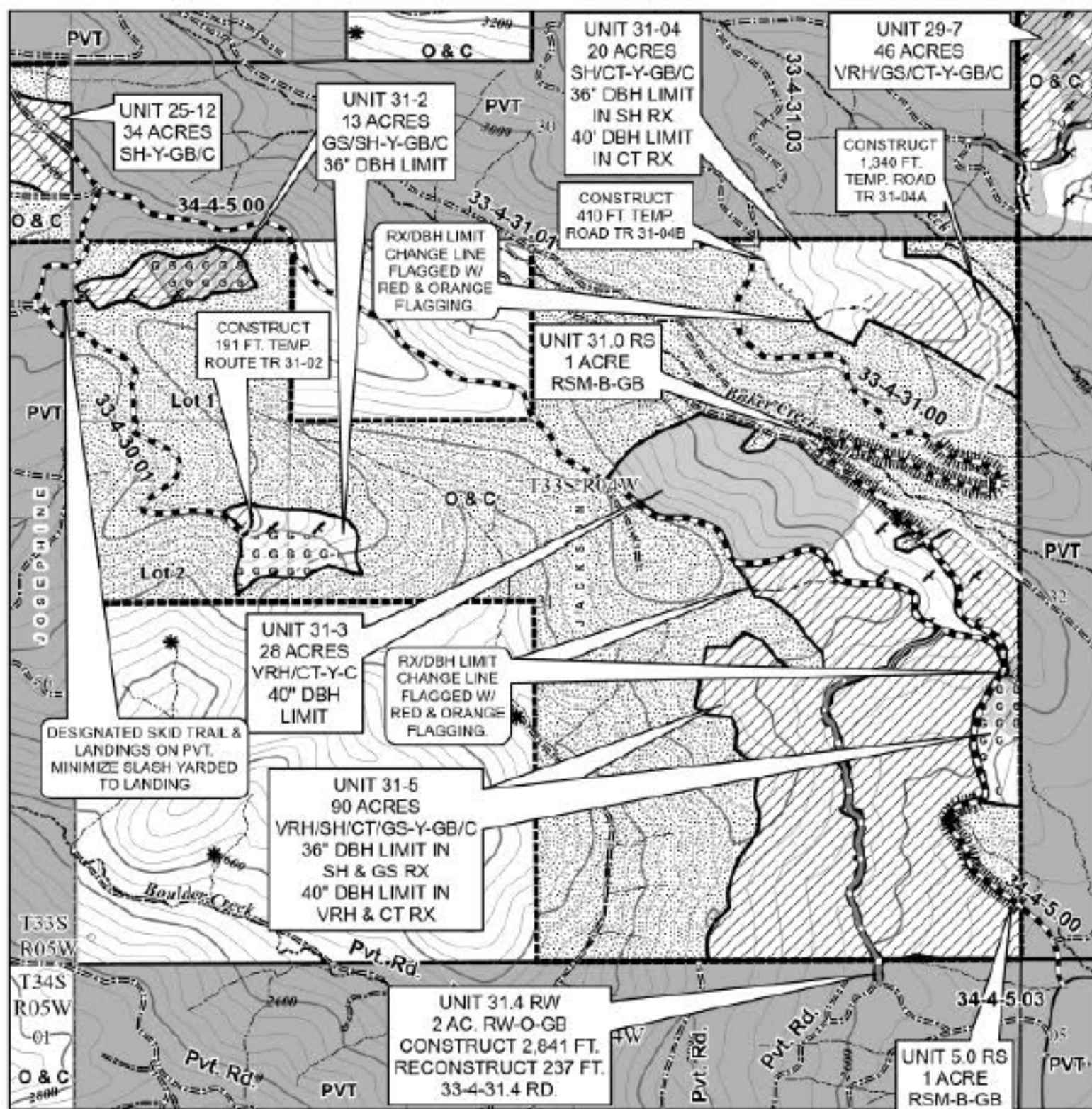
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Medford, OR 97504
(541) 618-2200

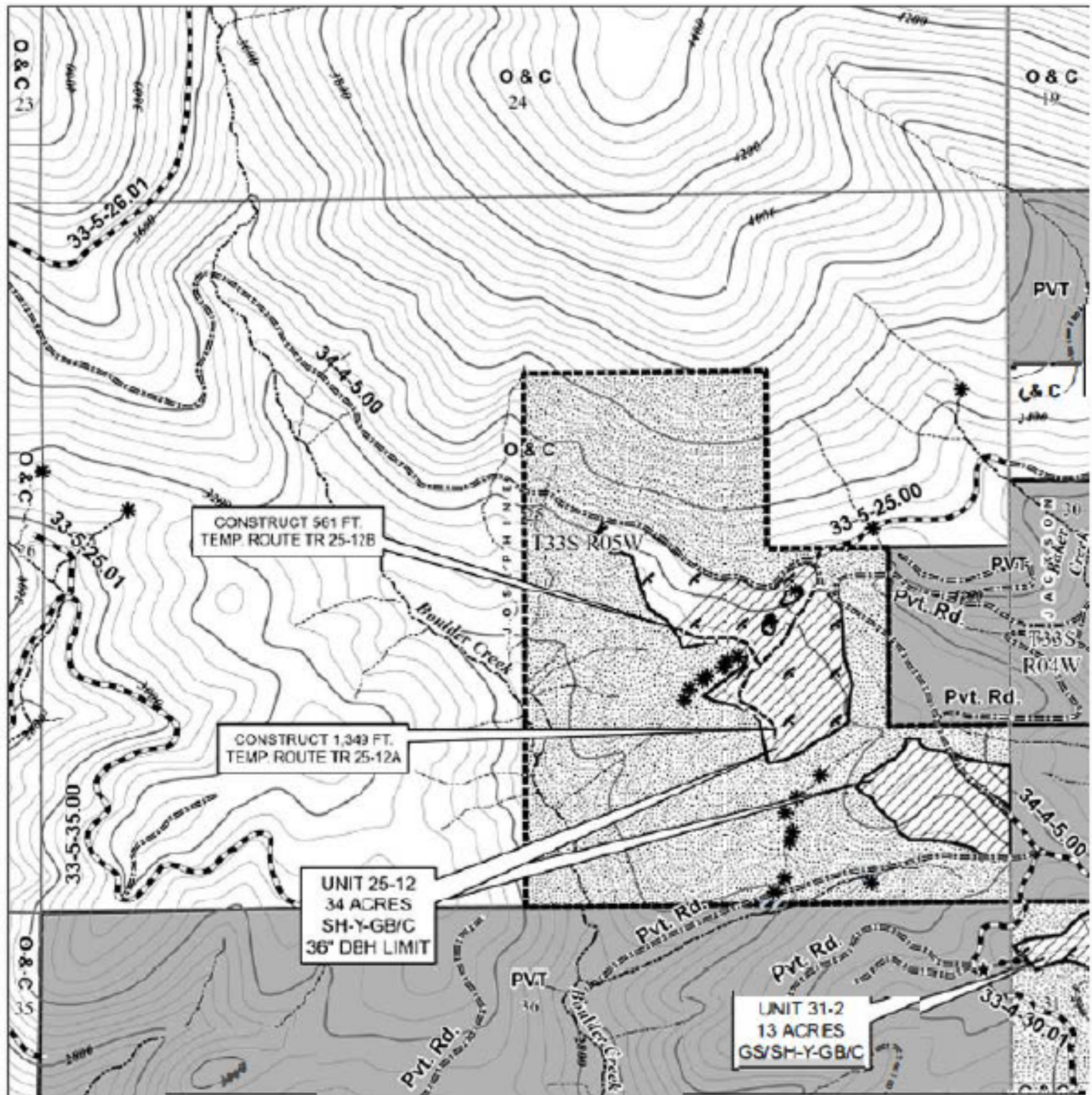
40 FOOT CONTOUR INTERVAL



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0 750 1,500 3,000 Feet

1:12,000

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LEGEND

King Graves Timber Sale Units

-  Cable
-  Ground-Based
-  Gap
-  Skip
-  Rx/DBH Limit Breaks
-  Selective Slash & Yum Yard Hardwoods ≤ 20" DBH
-  Selective Slash & Machine Pile Hardwoods ≤ 20" DBH
-  Northern Spotted Owl Seasonal Restrictions
-  Roadside Clearing Units
-  Designated Landings
-  Designated Skid Trails

King Graves Road Work

-  Perm Construction
-  Perm Reconstruction
-  Temp Construction
-  Temp Reconstruction

Road Surface Type

-  Paved
-  Rocked
-  Natural Surface

-  Contract Area Boundary
-  Reserve Area
-  Intermittent Stream
-  Perennial Stream
-  Springs
-  Waterbodies
-  Plant Site - No Yarding w/in 100 ft.

Contours

-  Index - 200 ft.
-  Intermediate - 40 ft.
-  County
-  Township & Range
-  Section
-  Lots

Ownership

-  O&C Bureau of Land Management
-  PVT Private Individual or Company

0 750 1,500 3,000 Feet

1:12,000

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LEGEND

UNIT	UNIT ACRES	PRESCRIPTION-PAINT COLOR-LOGGING SYSTEM
17-1	4	GS-Y-GB
19-7	26	VRH/GS/SH-Y-GB/C
21-1	42	VRH/SH/CT-Y-GB/C
20.0 RW	1	RW-O-GB
21-2	10	GS/SH-Y-GB
25-12	34	SH-Y-GB/C
29-7	46	VRH/GS/CT-Y-GB/C
30.4 RW	1	RW-O-GB
30.5 RW	1	RW-O-GB
29-8	66	VRH/SH/CT-Y-GB/C
29-9	31	VRH/GS/CT-Y-GB/C
29.4 RW	1	RW-O-GB
31-2	13	GS/SH-Y-GB/C
31-3	28	VRH/CT-Y-C
31-4	20	SH/CT-Y-GB/C
31-5	90	VRH/GS/SH/CT-Y-GB/C
31.4 RW	2	RW-O-GB
21.1 RS	2	RSM-B-GB
29.0 RS	1	RSM-B-GB
31.0 RS	1	RSM-B-GB
5.0 RS	1	RSM-B-GB
TOTAL	421	

* BOUNDARIES OF HARVEST UNITS ARE POSTED AND PAINTED IN ORANGE

CT = COMMERCIAL THIN

SH = SELECTION HARVEST

VRH = VARIABLE RETENTION HARVEST

GS = GROUP SELECT

RW = RIGHT OF WAY CLEARING

RSM = ROADSIDE MANAGEMENT

GB = GROUND BASE YARD

C = CABLE YARD

Y = YELLOW MARK LEAVE TREE

O = ORANGE MARK LEAVE TREE

B = BLUE MARK CUT TREE

0 750 1,500 3,000 Feet

1:12,000

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40 FOOT CONTOUR INTERVAL



SUMMARY

VRH/GS/SH/CT-Y-GB/C	VARIABLE RETENTION HARVEST, GROUP SELECTION, SELECTION HARVEST COMMERCIAL THIN - YELLOW MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNIT 31-5)	90 ACRES
VRH/SH/CT-Y-GB/C	VARIABLE RETENTION HARVEST, SELECTION HARVEST & COMMERCIAL THIN - YELLOW MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNITS 21-1 & 29-8)	108 ACRES
SH/CT-Y-GB/C	SELECTION HARVEST & COMMERCIAL THIN - YELLOW MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNIT 31-4)	20 ACRES
VRH/GS/CT-Y-GB/C	VARIABLE RETENTION HARVEST, GROUP SELECTION & COMMERCIAL THIN - YELLOW MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNITS 29-7 & 29-9)	77 ACRES
VRH/CT-Y-C	VARIABLE RETENTION HARVEST & COMMERCIAL THIN - YELLOW MARK LEAVE TREE - CABLE YARD (UNITS 31-3)	28 ACRES
VRH/GS/SH-Y-GB/C	VARIABLE RETENTION HARVEST, GROUP SELECTION & SELECTION HARVEST YELLOW MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNIT 19-7)	26 ACRES
GS/SH-Y-GB/C	GROUP SELECTION & SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNIT 31-2)	13 ACRES
GS/SH-Y-GB	GROUP SELECTION & SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE YARD (UNIT 21-2)	10 ACRES
SH-Y-GB/C	SELECTION HARVEST - YELLOW MARK LEAVE TREE - GROUND BASE & CABLE YARD (UNIT 25-12)	34 ACRES
GS-Y-GB	GROUP SELECTION - YELLOW MARK LEAVE TREE - GROUND BASE YARD (UNIT 17-1)	4 ACRES
RW-O-GB	RIGHT OF WAY CLEARING - ORANGE MARK LEAVE TREE - GROUND BASE YARD (UNITS 20.0 RW, 30.4 RW, 30.5 RW, 29.4 RW, & 31.4 RW)	6 ACRES
RSM-B-GB	ROADSIDE MANAGEMENT - BLUE MARK CUT TREE - GROUND BASE YARD (UNITS 21.1 RS, 29.0 RS, 31.0 RS, & 5.0 RS)	5 ACRES
	TOTAL TIMBER SALE UNIT AREA	421 ACRES
	RESERVE AREA	912.71 ACRES
	TOTAL CONTRACT AREA	1,333.71 ACRES

0 750 1,500 3,000
Feet

1:12,000

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Information for Timber Sale Notice, Prospectus, Sec. 43 & 44

King Graves Timber Sale

ORM07-TS-2026.0002

Approx # of trees	Est Volume MBF 32'	Species	Est Volume MBF 16'	Stumpage Adjustment	Appraised \$/MBF	Appraised Value (\$)
38,562	5,856.0	Douglas Fir	7,084.0	(\$21.92)	\$75.00	\$531,300.00
5,129	784.0	White Fir	968.0	\$0.00	\$47.10	* \$45,592.80
3,846	163.0	Incense-cedar	214.0	\$0.00	\$38.50	* \$8,239.00
947	103.0	Ponderosa Pine	125.0	\$0.00	\$33.40	* \$4,175.00
177	8.0	Western Hemlock	10.0	\$0.00	\$45.30	* \$453.00
8	5.0	Sugar Pine	6.0	\$0.00	\$33.80	* \$202.80
48,669	6,919.0		8,407.0			\$589,962.60

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

CRUISED BY:	Cannon/Darner
CRUISE COMPLETED:	December 2025
COMBINED SAMPLING ERROR:	11.88%

CRUISE DESIGN/METHOD Description:
The King Graves timber sale was cruised using the PCMTRE, 3P, and BLM 100 cruise methods. Strata 1 was 200 acres dominant of Variable Retention Harvest and gaps which was cruised using PCMTRE, a 40 BAF, 1 in 10 sampling frequency, on 131 plots installed on a grid pattern. Strata 2 was 210 acres dominant of Commercial Thinning and Selection Harvest which was cruised using PCMTRE, a 40 BAF, 1 in 9 sampling frequency, on 140 plots installed on a grid pattern. Strata 3 was 11 acres of ROW's and roadside clearing and was cruised using the 3P cruise method for DF, IC and PP. The BLM 100 cruise method was used for strata 4 for other minor species in ROW's, roadside clearing and private timber.

TRACT FEATURES

ALL SPECIES

QM DBH	14.6	INCHES
GM LOG	51	BD FT
Total Gross Volume	9,283	MBF
Recovery	91	%
Salvage	0	MBF

	Export	0	MBF
--	---------------	---	-----

Dominant Species: **Douglas Fir**

	QM DBH	14.9	INCHES
	GM Log	51	BD FT
	Recovery	91	%
	Salvage	0	MBF

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

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

Reserve Tree Paint Color	Reserve Tree Count
	0

Harvest Tree Paint Color	Harvest Tree Count
	48,669

PRIVATE TIMBER:	Cut and Deck Only		
COMPANY NAME:	Hancock Timberland X Inc.		
LOCATION/ROAD #:	SE 1/4 of T33S R4W S30. Un-numbered road but BLM called 30.4H RW		
SPECIES	MBF VOLUME		
Douglas Fir	1.2		
White Fir	0.1		
Incense-cedar	0.1		
Total:	1.4		

PRIVATE TIMBER:	Cut and Deck Only		
COMPANY NAME:	Siskiyou Timberlands LLC		
LOCATION/ROAD #:	NE1/4 of T34S R4W S6. Un-numbered road but BLM called it 31.4S RW		
SPECIES	MBF VOLUME		
Douglas Fir	0.1		
Total:	0.1		

PRIVATE TIMBER:	Cut and Deck Only		
COMPANY NAME:	Hancock Timberland X Inc.		
LOCATION/ROAD #:	SE 1/4 of T33S R4W S30. Un-numbered road but BLM called 30.5H RW		

SPECIES	MBF VOLUME		
Incense-cedar	0.1		
Total:	0.1		

PRIVATE TIMBER:	Cut and Deck Only		
COMPANY NAME:	Murphy Timber Investments		
LOCATION/ROAD #:	NE 1/4 of T33S R4W S20. Un-numbered road but BLM called 20.0M RW		
SPECIES	MBF VOLUME		
Douglas Fir	3		
Ponderosa Pine	1		
Incense-cedar	0.1		
Total:	4.1		



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

Timber Appraisal

Sale Name: King Graves	Sale Date: Thursday, March 26, 2026
BLM District: Medford DO	Unit of Measure: 16' MBF
Contract #: ORM07-TS-2026.0002	Contract Term: 48 months
Sale Type: Advertised	Contract Mechanism: 5450-004

Scale 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: Cannon, Grant P - 2/9/2026
Approved By: Caulfield, David J - 2/10/2026

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Jackson	33S	4W	17	SE1/4SE1/4	Willamette
O&C	Jackson	33S	4W	19	S1/2SE1/4	Willamette
O&C	Jackson	33S	4W	21	N1/2NE1/4, SW1/4NE1/4, NW1/4, NE1/4SW1/4	Willamette
O&C	Jackson	33S	4W	29	NW1/4, N1/2SW1/4, SW1/4SW1/4	Willamette
O&C	Jackson	33S	4W	31	Lot 1, Lot 2, NE1/4, SE1/4NW1/4, SE1/4	Willamette
O&C	Josephine	33S	5W	25	SW1/4NE1/4, SE 1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	7,084.0	7,758.0	7,816.0	152,420	2,015	38,562
White Fir	968.0	1,048.0	1,049.0	16,772	9	5,129
Incense-cedar	214.0	235.0	262.0	6,754	449	3,846
Ponderosa Pine	125.0	138.0	138.0	3,338	0	947
Western Hemlock	10.0	11.0	11.0	415	0	177
Sugar Pine	6.0	7.0	7.0	33	2	8
Totals	8,407.0	9,197.0	9,283.0	179,732	2,475	48,669

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
188.0	222.0	11.0	421.0	20.0

Comments:

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

Logging Costs

Stump to Truck	\$2,160,806.31
Transportation	\$505,191.21
Road Construction	\$826,410.30
Maintenance/Rockwear	\$166,329.21
Road Use	\$24,471.90
Other Allowances	\$243,897.14
Total:	\$3,927,106.06

Total Logging Cost per MBF: \$467.12

Utilization Centers

<u>Location</u>	<u>Distance</u>	<u>% of Net Volume</u>
Glendale/White City	35.0 miles	100%

Profit & Risk

Profit	11%
Risk	0%
Total Profit & Risk	11%

Tract Features

Quadratic Mean DBH	14.6 in
Average GM Log	51 bf
Average Volume per Acre	20.0 mbf
Recovery	91%
<u>Net MBF volume:</u>	
Green	8,407.0 mbf
Salvage	0 mbf
Export	0 mbf
<u>Ground Base Logging:</u>	
Percent of Sale Volume	55%
Average Yarding Slope	0%
Average Yarding Distance	270 ft
<u>Cable Logging:</u>	
Percent of Sale Volume	45%
Average Yarding Slope	0%
Average Yarding Distance	315 ft
<u>Aerial Logging:</u>	
Percent of Sale Volume	0%
Average Yarding Slope	0%
Average Yarding Distance	0 ft

Cruise

Cruise Completed	December 2025
Cruised By	Cannon/Darner
Cruise Method	

The King Graves timber sale was cruised using the PCMTRE, 3P, and BLM 100 cruise methods. Strata 1 was 200 acres dominant of Variable Retention Harvest and gaps which was cruised using PCMTRE, a 40 BAF, 1 in 10 sampling frequency, on 131 plots installed on a grid pattern. Strata 2 was 210 acres dominant of Commercial Thinning and Selection Harvest which was cruised using PCMTRE, a 40 BAF, 1 in 9 sampling frequency, on 140 plots installed on a grid pattern. Strata 3 was 11 acres of ROW's and roadside clearing and was cruised using the 3P cruise method for DF, IC and PP. The BLM 100 cruise method was used for strata 4 for other minor species in ROW's, roadside clearing and private timber.

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Stumpage Adjustment	Appraised Price/MBF	Appraised Value (\$)
Douglas Fir	38,562	7,084.0	\$633.76	\$69.71	\$467.12	\$0.00	(\$21.92)	\$75.00	\$531,300.00
White Fir	5,129	968.0	\$470.19	\$51.72	\$467.12	\$0.00	\$0.00	\$47.10 *	\$45,592.80
Incense-cedar	3,846	214.0	\$384.66	\$42.31	\$467.12	\$0.00	\$0.00	\$38.50 *	\$8,239.00
Ponderosa Pine	947	125.0	\$333.72	\$36.71	\$467.12	\$0.00	\$0.00	\$33.40 *	\$4,175.00
Western Hemlock	177	10.0	\$452.76	\$49.80	\$467.12	\$0.00	\$0.00	\$45.30 *	\$453.00
Sugar Pine	8	6.0	\$337.49	\$37.12	\$467.12	\$0.00	\$0.00	\$33.80 *	\$202.80
Totals	48,669	8,407.0							\$589,962.60

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

Other Wood Products

Product	Unit of Measure	# of Units	\$/Unit	Appraised Value
Biomass	Green Tons	2500	\$3.00	\$7,500.00
Totals				\$7,500.00

Total Appraised Value: \$597,462.60

Percent of Volume By Log Grade

Species	No. 1 & 2 Peeler	No. 3 Peeler	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Douglas Fir			1.0%	44.0%	49.0%	6.0%	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
White Fir				60.0%	33.0%	7.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Incense-cedar				20.0%	62.0%	18.0%	

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

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Western Hemlock					77.0%	23.0%	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	No. 6 Sawmill	Camp Run
Sugar Pine				87.0%	12.0%	1.0%	

King Graves**Unit Summary****ORM07-TS-2026.0002****Unit: 5.0RS**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	10.0	10.0	11.0	52
White Fir	1.0	1.0	1.0	2
Totals:	11.0	11.0	12.0	54

Net Volume/Acre: 11.0 MBF

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

Unit: 17-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	83.0	92.0	93.0	450
White Fir	14.0	15.0	15.0	53
Ponderosa Pine	2.0	2.0	2.0	18
Incense-cedar	2.0	2.0	2.0	28
Totals:	101.0	111.0	112.0	549

Net Volume/Acre: 25.3 MBF

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

Unit: 19-7

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	541.0	598.0	603.0	2,923
White Fir	88.0	96.0	96.0	341
Ponderosa Pine	14.0	15.0	15.0	116
Incense-cedar	11.0	12.0	16.0	180
Western Hemlock	1.0	1.0	1.0	23
Totals:	655.0	722.0	731.0	3,583

Net Volume/Acre: 25.2 MBF

Regeneration Harvest	19.0
Partial Cut	7.0
Right of Way	0.0
Total Acres:	26.0

Unit: 20.0RW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	38.0	41.0	42.0	357
Ponderosa Pine	3.0	4.0	4.0	14
Incense-cedar	1.0	1.0	1.0	4
Totals:	42.0	46.0	47.0	375

Net Volume/Acre: 42.0 MBF

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

Unit: 21-1

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	874.0	966.0	973.0	4,722
White Fir	143.0	155.0	155.0	551
Ponderosa Pine	22.0	25.0	25.0	188
Incense-cedar	18.0	20.0	25.0	290
Western Hemlock	2.0	2.0	2.0	37
Totals:	1,059.0	1,168.0	1,180.0	5,788

Net Volume/Acre: 25.2 MBF

Regeneration Harvest	39.0
Partial Cut	3.0
Right of Way	0.0
Total Acres:	42.0

Unit: 21-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	208.0	230.0	232.0	1,124
White Fir	34.0	37.0	37.0	131
Ponderosa Pine	5.0	6.0	6.0	45
Incense-cedar	4.0	5.0	6.0	69
Western Hemlock	1.0	1.0	1.0	9
Totals:	252.0	279.0	282.0	1,378

Net Volume/Acre: 25.2 MBF

Regeneration Harvest	5.0
Partial Cut	5.0
Right of Way	0.0
Total Acres:	10.0

Unit: 21.1RS

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	14.0	15.0	16.0	115
Incense-cedar	5.0	5.0	5.0	58
Ponderosa Pine	1.0	1.0	1.0	2
Totals:	20.0	21.0	22.0	175

Net Volume/Acre: 10.0 MBF

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

Unit: 25-12

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	448.0	485.0	488.0	2,419
White Fir	44.0	48.0	48.0	397
Incense-cedar	18.0	20.0	20.0	374
Totals:	510.0	553.0	556.0	3,190

Net Volume/Acre: 15.0 MBF

Regeneration Harvest	0.0
Partial Cut	34.0
Right of Way	0.0
Total Acres:	34.0

Unit: 29-7

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	958.0	1,058.0	1,066.0	5,172
White Fir	157.0	170.0	171.0	606
Ponderosa Pine	24.0	27.0	27.0	207
Incense-cedar	20.0	22.0	28.0	318
Western Hemlock	2.0	2.0	2.0	44
Totals:	1,161.0	1,279.0	1,294.0	6,347

Net Volume/Acre: 25.2 MBF

Regeneration Harvest	35.0
Partial Cut	11.0
Right of Way	0.0
Total Acres:	46.0

Unit: 29-8

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	869.0	941.0	947.0	4,695
White Fir	86.0	93.0	93.0	770
Incense-cedar	35.0	40.0	40.0	726
Totals:	990.0	1,074.0	1,080.0	6,191

Net Volume/Acre: 15.0 MBF

Regeneration Harvest	25.0
Partial Cut	41.0
Right of Way	0.0
Total Acres:	66.0

Unit: 29-9

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	645.0	713.0	718.0	3,485
White Fir	105.0	114.0	114.0	407
Ponderosa Pine	16.0	18.0	18.0	139
Incense-cedar	13.0	15.0	19.0	214
Western Hemlock	2.0	2.0	2.0	27
Totals:	781.0	862.0	871.0	4,272

Net Volume/Acre: 25.2 MBF

Regeneration Harvest	25.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	31.0

Unit: 29.0RS

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	15.0	16.0	16.0	93
Ponderosa Pine	4.0	4.0	4.0	7
Incense-cedar	2.0	2.0	2.0	23
Totals:	21.0	22.0	22.0	123

Net Volume/Acre: 21.0 MBF

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

Unit: 29.4RW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	16.0	17.0	17.0	123
Sugar Pine	6.0	7.0	7.0	8
Ponderosa Pine	6.0	6.0	6.0	15
White Fir	1.0	1.0	1.0	4
Totals:	29.0	31.0	31.0	150

Net Volume/Acre: 29.0 MBF

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

Unit: 30.4RW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	4.0	5.0	5.0	24
White Fir	3.0	3.0	3.0	15
Incense-cedar	1.0	1.0	1.0	4
Totals:	8.0	9.0	9.0	43

Net Volume/Acre: 8.0 MBF

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

Unit: 30.5RW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	16.0	17.0	18.0	114
White Fir	9.0	9.0	9.0	29
Ponderosa Pine	2.0	2.0	2.0	3
Incense-cedar	2.0	2.0	2.0	25
Totals:	29.0	30.0	31.0	171

Net Volume/Acre: 29.0 MBF

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

Unit: 31-2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	271.0	299.0	301.0	1,462
White Fir	44.0	48.0	48.0	171
Ponderosa Pine	7.0	8.0	8.0	58
Incense-cedar	6.0	6.0	8.0	90
Western Hemlock	1.0	1.0	1.0	12
Totals:	329.0	362.0	366.0	1,793

Net Volume/Acre: 25.3 MBF

Regeneration Harvest	7.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	13.0

Unit: 31-3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	583.0	644.0	649.0	3,148
White Fir	95.0	103.0	103.0	368
Ponderosa Pine	15.0	16.0	16.0	125
Incense-cedar	12.0	13.0	17.0	194
Western Hemlock	1.0	2.0	2.0	25
Totals:	706.0	778.0	787.0	3,860

Net Volume/Acre: 25.2 MBF

Regeneration Harvest	22.0
Partial Cut	6.0
Right of Way	0.0
Total Acres:	28.0

Unit: 31-4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	263.0	285.0	287.0	1,423
White Fir	26.0	28.0	28.0	233
Incense-cedar	11.0	12.0	12.0	220
Totals:	300.0	325.0	327.0	1,876

Net Volume/Acre: 15.0 MBF

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

Unit: 31-5

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	1,187.0	1,282.0	1,289.0	6,402
White Fir	118.0	127.0	127.0	1,051
Incense-cedar	49.0	53.0	54.0	996
Totals:	1,354.0	1,462.0	1,470.0	8,449

Net Volume/Acre: 15.0 MBF

Regeneration Harvest	7.0
Partial Cut	83.0
Right of Way	0.0
Total Acres:	90.0

Unit: 31.0RS

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	11.0	12.0	12.0	69
Incense-cedar	1.0	1.0	1.0	7
Ponderosa Pine	1.0	1.0	1.0	5
Totals:	13.0	14.0	14.0	81

Net Volume/Acre: 13.0 MBF

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

Unit: 31.4RW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	30.0	32.0	33.0	190
Ponderosa Pine	3.0	3.0	3.0	5
Incense-cedar	3.0	3.0	3.0	26
Totals:	36.0	38.0	39.0	221

Net Volume/Acre: 18.0 MBF

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

Total Stump To Truck	Net Volume	\$/MBF
\$2,160,806.31	8,407.0	\$257.02

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

Yarding System	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Cable: Medium Yarder	GM MBF	960.0	\$294.22	\$282,451.20	Thinning Units
Cable: Medium Yarder	GM MBF	3,196.0	\$234.95	\$750,900.20	Regen. & Gap Units
Wheel Skidder/Feller Buncher	GM MBF	2,454.0	\$224.86	\$551,806.44	Thinning Units
Wheel Skidder/Feller Buncher	GM MBF	2,587.0	\$180.81	\$467,755.47	Regen. & Gap Units
Subtotal				\$2,052,913.31	

Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Deadman Anchor	Each	4.0	\$450.00	\$1,800.00	
Intermediate Support	Each	28.0	\$250.00	\$7,000.00	
YUM Yarding	MBF	400.0	\$191.21	\$76,484.00	Cable yarding of Hardwoods 8" and above. See maps for YUM areas
Lift Tree	Each	43.0	\$150.00	\$6,450.00	
Subtotal				\$91,734.00	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Harvester/Forwarder	Hour	22.0	\$169.00	\$3,718.00	
Cable: Large Yarder	Hour	11.0	\$169.00	\$1,859.00	
Loader	Hour	22.0	\$169.00	\$3,718.00	
Shovel	Hour	11.0	\$169.00	\$1,859.00	
Feller Buncher	Hour	11.0	\$138.00	\$1,518.00	
Wheel Skidder	Hour	22.0	\$111.00	\$2,442.00	
Track Skidder	Hour	11.0	\$95.00	\$1,045.00	
Subtotal				\$16,159.00	

Total	Net Volume	\$/MBF
\$505,191.21	8,407.0	\$60.09

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
Glendale/White City	35.0	All Species	GM MBF	9,197.0	\$54.93	\$505,191.21	100%

Comments:

Haul mileage was averaged between White City and Glendale.

Engineering Allowances

Total	Net Volume	\$/MBF
\$1,017,211.41	8,407.0	\$121.00

Cost Item	Total Cost
Road Construction:	\$826,410.30
Road Maintenance/Rockwear:	\$166,329.21
Road Use Fees:	\$24,471.90

Total	Net Volume	\$/MBF
\$243,897.14	8,407.0	\$29.01

Environmental Protection

Cost item	Total Cost
Snag Creation	\$2,296.00
Waterbar Corridors	\$870.00
Waterbar Skids & Temp Routes	\$3,225.00
Barricade Skids & Temp Routes	\$2,040.00
Equipment Washing (Small)	\$1,000.00
Equipment Washing (Large)	\$1,500.00
Ripping Skids	\$842.00
Seed & Mulch	\$20,000.00
Subtotal	\$31,773.00

Logging

Cost item	Total Cost
Skid Location	\$1,200.00
Corridor Location	\$1,200.00
Landing Construction	\$3,630.00
Subtotal	\$6,030.00

Road Construction, Maintenance, Use, & Decommissioning

Cost item	Total Cost
Culvert Cleaning	\$600.00
Subtotal	\$600.00

Slash Disposal & Site Prep

Cost item	Total Cost
Lop & Scatter	\$7,020.00
Cover & Burn Landing Decks	\$2,945.00

Cover & Burn Roadside Piles	\$682.00
Machine Pile Burn & Mop-up	\$9,407.50
Handpile Burn & Mop-up	\$8,651.00
Landing Clean-up	\$4,180.00
Mechanical Felling/Selective Slashing Hardwoods	\$5,401.64
Handfelling/Selective Slashing Hardwoods	\$23,850.00
Handpile & Cover	\$63,194.50
Machine Pile & Cover	\$80,162.50
Subtotal	\$205,494.14

Comments:

Fuels Adjustment for acreage rounding.

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**

**Contract No.: ORM07-TS-
2026.0002**

Sale Name: King Graves TS

Issuing Office: Medford

**EXHIBIT B
SCALE SALE**

PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS

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

Timber Schedule

Species	Unit of Measure	Price Per Measurement Unit
Douglas-fir	MBF	\$75.00
White Fir	MBF	\$47.10
Incense-Cedar	MBF	\$38.50
Ponderosa Pine	MBF	\$33.40
Western Hemlock	MBF	\$45.30
Sugar Pine	MBF	\$33.80

Other Wood Products Schedule

Product/Species	Unit of Measure	Price Per Measurement Unit
Biomass	Green Tons	\$3.00

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

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

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

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

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

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

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

Left Standing Timber	Felled Timber Not Removed
Diameter at Breast Height (DBH): 8"	Small End DIB: 6"
Log Height: 24'	Log Length: 8'
% Sound: 33.3	% Sound: 33.3
Net Tree Volume: 10 bd.ft.	Net Log Volume: 10 bd.ft.

V. Measurement Standards

1. **Log Scaling Loads:** All species or products in Section I, with MBF as the Unit of Measure shall be designated as log scaling loads.
 - a. Log scaling services shall be provided and performed by BLM Certified Scalers or BLM-authorized Third-Party Scaling Organizations (TPSO), as determined by the Authorized Officer. The Purchaser's employees or contractors may not perform log scaling.

- b. All logs shall be scaled in Eastside Scribner Log Rules according to the Official Log Scaling and Grading Bureaus, Northwest Log Rules Eastside and Westside Log Scaling Handbook, as amended or supplemented, at the time the logs are scaled.
- c. All logs shall be scaled using an authorized BLM log scaling method approved by the Authorized Officer in accordance with BLM prescribed procedures. A list of authorized BLM log scaling methods is available upon request.
- d. Purchaser shall ensure all logs are presented so that they may be scaled in an economical and safe manner.
- e. Scaling deductions made for rot, check or other defect resulting from abnormal delay in scaling caused by Purchaser shall be recorded separately and charged to the Purchaser in accordance with Section 3(g) of the contract when applicable. Avoidable delay in log scaling caused by the Purchaser that results in a measurable reduction in timber volume or quality would generally be considered abnormal delay, as determined by the Authorized Officer.
- f. Mechanical damage to logs that occurs during unloading identified by the TPSO will not be considered a deductible defect.
- g. The BLM will conduct check scaling using the following standards:
 Gross Scale - A variance of one and ½ percent (1.5%) in gross scale is the standard unless otherwise justified.
 Net scale - The allowable variance is as follows:

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

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

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

- a. All weight loads shall be weighed on State certified scales.
- b. Scales must have a current inspection tag or seal posted which shows the date of the most recent test by the State weights and measures agency.
- c. No load shall be presented for weighing that exceeds the certified capacity of the scales in use.
- d. Each load shall be weighed as a single unit. Gross and tare weight must be machine printed on a weight receipt. Average tare weights shall not be used, unless approved by the Authorized Officer. In addition to the gross and tare weight, the following shall be recorded with each weight receipt:
 - Contract name and number
 - Load Ticket number
 - Date, time, and location the load was weighed

VI. Accountability

1. Purchaser shall notify the Authorized Officer seven (7) business days prior to starting or stopping of hauling operations performed under the contract.
2. The Purchaser must provide the following information to the Authorized Officer seven (7) business days prior to the commencement of haul: log scaling and weighing location(s), planned beginning haul dates, anticipated number of loads per day to each scaling or weighing location, logger name and contact information, and log brands to be used, and the log brand registration number(s).
3. A Scaling Authorization Form(s) must be completed and approved by the Contracting Officer prior to beginning of hauling operations. The Scaling Authorization(s) will include approved measurement methods, merchantability standards, sort descriptions, and authorized delivery locations for all loads hauled from the contract area. For log scale loads, all log scaling locations on the Scaling Authorization(s) are required to have a Log Yard Authorization with the BLM. Approved Scaling Authorizations will be provided to the Purchaser upon request.
4. All loads will be scaled and/or weighed at locations listed on the Scaling Authorization as approved by the Authorized Officer.
5. Purchaser shall notify the Authorized Officer seven (7) business days in advance to request additional log scaling and/or weighing locations for approval on the Scaling Authorization(s).
6. Purchaser shall not intermingle BLM timber and other wood products with any other timber or wood products before log scaling and/or weighing occurs.
7. All logs on timber loads will be painted and branded at the landing and accounted for accordance with Section 44 of the contract. If contract area is within a State that maintains a log brand register, brands shall be registered with the State and Purchaser

shall use assigned brand(s) exclusively on logs from this contract until the Authorized Officer releases the brand(s).

8. The Authorized Officer shall issue the Purchaser serially numbered load ticket books prior to any haul operations. The Purchaser shall sign a receipt for all ticket books received. The Purchaser shall accurately complete all load receipts in accordance with the instructions on the front of the ticket books, or as directed by the Authorized Officer. Separate load ticket books will be used for timber and other wood products. Mule train timber loads will be treated as two separate loads with a ticket for each load. All load tickets will be marked with the cutting area number using a permanent marker or as directed by the Authorized Officer. The Purchaser shall deliver all loads to the log scaling or weighing location on the Scaling Authorization and listed on the BLM receipt. The load receipt and BLM receipt shall remain attached to the log load until it is scaled and/or weighed. For log scale loads, attach on the bunk or wing log at the front of the load on the driver's side, and surrender the load receipt and BLM receipt to the TPSO or Authorized Officer at the scaling location. For weight loads, either attach at the front of the load on the driver's side or place on the driver's side dashboard, attach the load receipt and BLM receipt to the weight receipt and deliver to the BLM weekly, unless otherwise directed by the Authorized Officer. The Purchaser will return all used load ticket books with woods receipts still attached to the BLM at the time new books are being issued. All unused and partial load ticket books, with receipts still attached, must be returned to the BLM upon completion of the contract and prior to final payment, or at the request of the Authorized Officer.
9. The Purchaser must account for all load receipts from each load ticket book. For all load receipts not accounted for, the Contracting Officer, at their sole discretion, will determine if the receipts are void or if the Purchaser shall pay damages for lost products. The value of lost products shall be equal to the highest value load for the month in which the receipt is lost. If no loads have been hauled in that month, value will be determined from the closest month in which loads were hauled. In the event a load receipt or load ticket book is lost or stolen, the Purchaser must immediately notify the Authorized Officer, and provide a complete explanation.
10. The Purchaser shall furnish BLM a map showing the route which shall be used to haul loads from the timber sale area to the log scaling/weighing location. Upon loading timber or other wood products in the contract area, all loads shall be hauled directly to the authorized scaling or weighing location as stated on the load receipt. The route of haul may be changed only with advance notice to and approval by BLM.
11. The Purchaser shall notify the Authorized Officer and receive advance authorization if any loads will arrive at an authorized scaling or weighing locations outside of their normal operating hours. No loads will be left on the truck for overnight storage without advance permission from the Authorized Officer.
12. If scaling or weighing services are unavailable, delayed or interrupted for any reason, hauling operations will cease immediately until services resume or an alternate scaling or weighing location is approved by the Authorized Officer.

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

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

1. When payments are made under Section 3 of the contract, the Authorized Officer shall determine the value of removed timber and other wood products using the Government's records of log scale and/or weight volumes removed from the contract area.
2. The estimated value of timber and other wood products not yet removed from the contract area will be determined by subtracting the Government's records for value of removed timber and other wood products from the estimated total purchase price as shown in the table below. The estimated Total Purchase price is calculated by multiplying the estimated volume or weight for all species/products, listed below, by the bid prices in Section 1.

Total Estimated Purchase Price for Timber and Other Wood Products

Species/Product	Estimated Volume (MBF or Tons)	Bid Price (\$/MBF or \$/Ton)	Estimated Value
Douglas-fir	7,084 MBF	\$	\$
White Fir	968 MBF	\$47.10	\$45,592.80
Incense-Cedar	214 MBF	\$38.50	\$8,239.00
Ponderosa Pine	125 MBF	\$33.40	\$4,175.00
Western Hemlock	10 MBF	\$45.30	\$453.00
Sugar Pine	6 MBF	\$33.80	\$202.80
Biomass	2,500 Green Tons	\$3	\$7,500

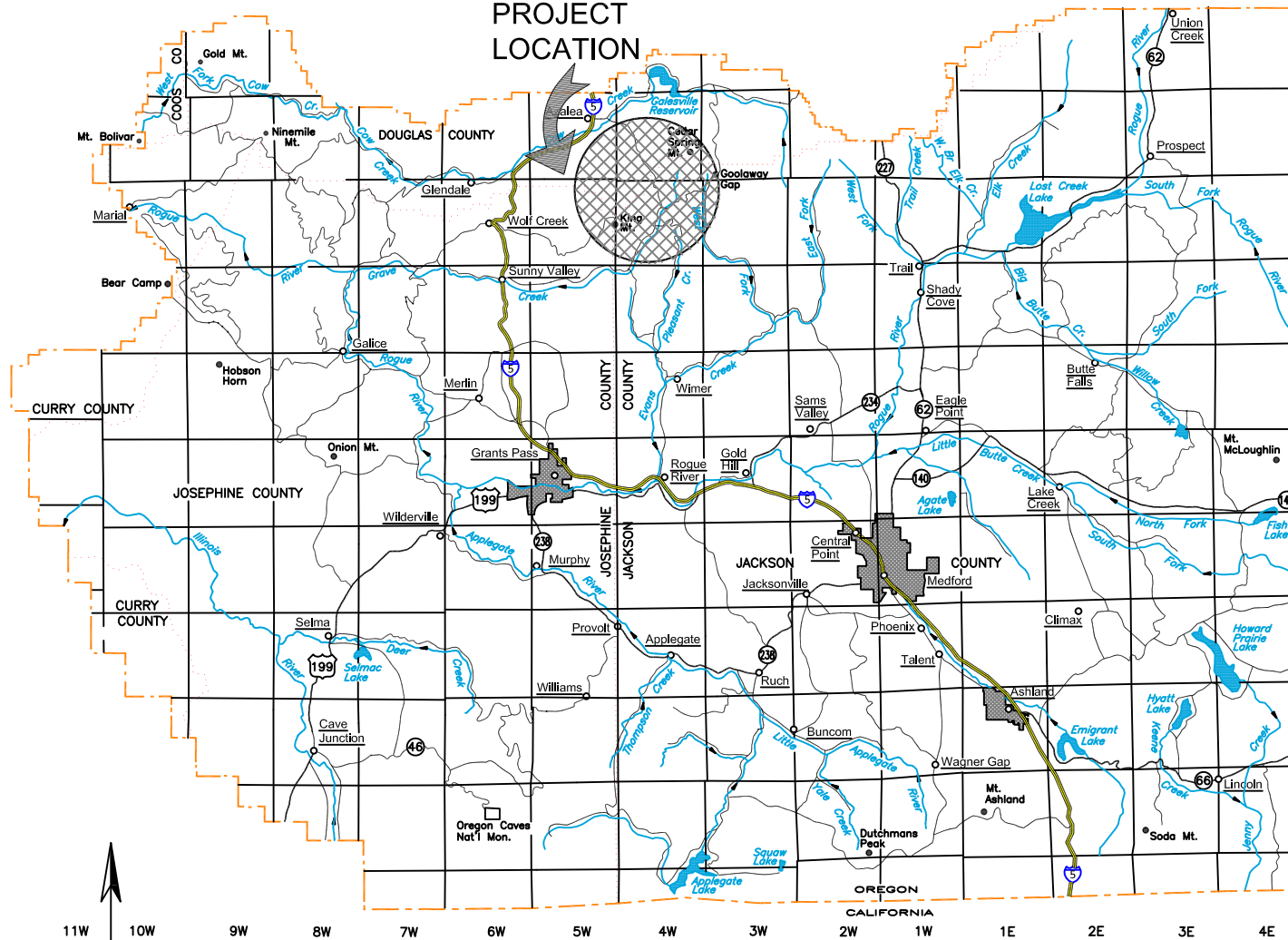
Total Estimated Purchase Price: \$

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

EXHIBIT C1

KING GRAVES TIMBER SALE
TRACT NO. ORM07-TS-2026.0002

PROJECT LOCATION



31S

32S

33S

34S

35S

36S

37S

38S

39S

40S

41S

EXHIBIT NO.	DESCRIPTION
C1	RENOVATION TITLE SHEET
C2	TIMBER SALE ROAD RENOVATION MAPS
C3	ESTIMATE OF QUANTITIES - CONSTRUCTION
C4	SPECIFICATION SHEET
C5	TYPICAL ROAD RENOVATION DETAILS
C6	ROADSIDE BRUSHING DETAIL
C7	ROADSIDE MANAGEMENT UNIT DETAIL
C8	CULVERT REPLACEMENT LIST
C9	CULVERT INSTALLATION DETAILS
C10	CULVERT BAND DETAIL
C11	DRAINAGE & EROSION CONTROL DETAILS
C12	ROAD SURFACING & CURVE WIDENING SECTIONS
C13	TYPICAL TURNOUT SURFACING
C14	NEW 33-4-20.00B ROAD PLAN & PROFILE SHEET
C15	NEW 33-4-21.07 ROAD PLAN & PROFILE SHEET
C16	NEW 33-4-29.04 ROAD PLAN & PROFILE SHEET
C17	NEW 33-4-30.04 ROAD PLAN & PROFILE SHEET
C18	NEW 33-4-30.05 ROAD PLAN & PROFILE SHEET
C19	NEW 33-4-31.04 ROAD PLAN & PROFILE SHEET
C20	ROAD RENOVATION WORKLIST
C21	SPECIAL PROVISIONS
C22	ROAD SPECIFICATIONS

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

KING GRAVES TIMBER SALE ROAD RENOVATION COVER SHEET

DRAFTED BY: BLM	SCALE: 1" = 12 MI
DATE: March 2026	SHEET: 1 OF 1

ALWAYS
THINK
SAFETY

Exhibit C2-1

Legend

 King Graves TS Units

Land Ownership

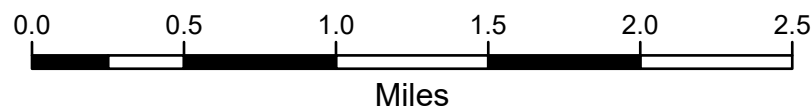
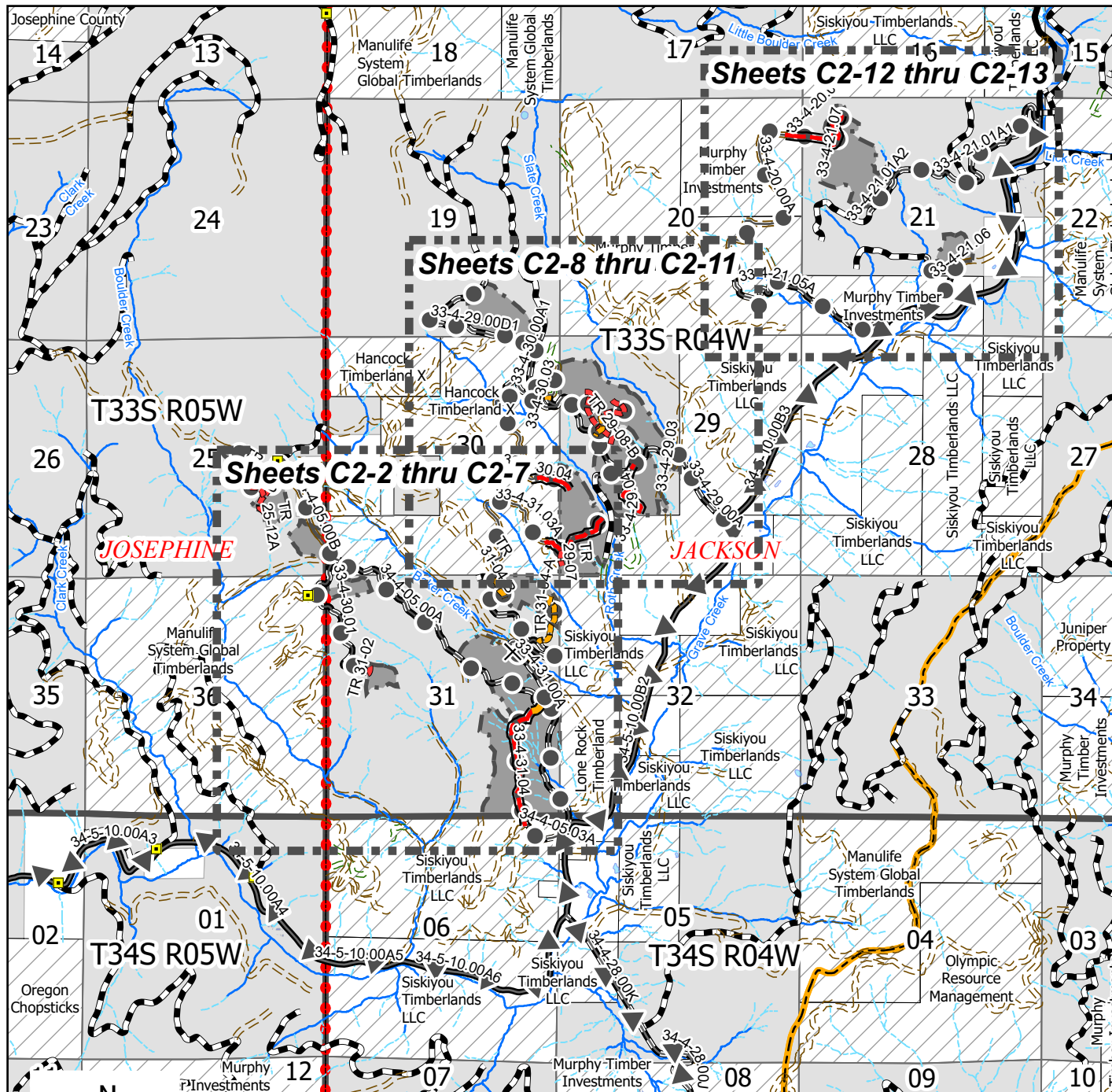
-  Bureau of Land Management
-  Private Individual
-  Industrial Lands

Road Renovation Responsibility

-  Bureau of Land Management
-  Purchaser

Road Construction/Reconstruction

-  Perm Construction
-  Perm Reconstruction
-  Temp Route Construction
-  Temp Route Reconstruction
-  Field Office Boundary
-  Counties
-  GP Gates



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD RENOVATION MAP OVERALL SALE AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 1 OF 13	

Exhibit C2-2

Legend

- King Graves TS Units
- King Graves Roadside Units

Land Ownership

- Bureau of Land Management
- Private Individual
- Industrial Lands

Roads by Surface Type

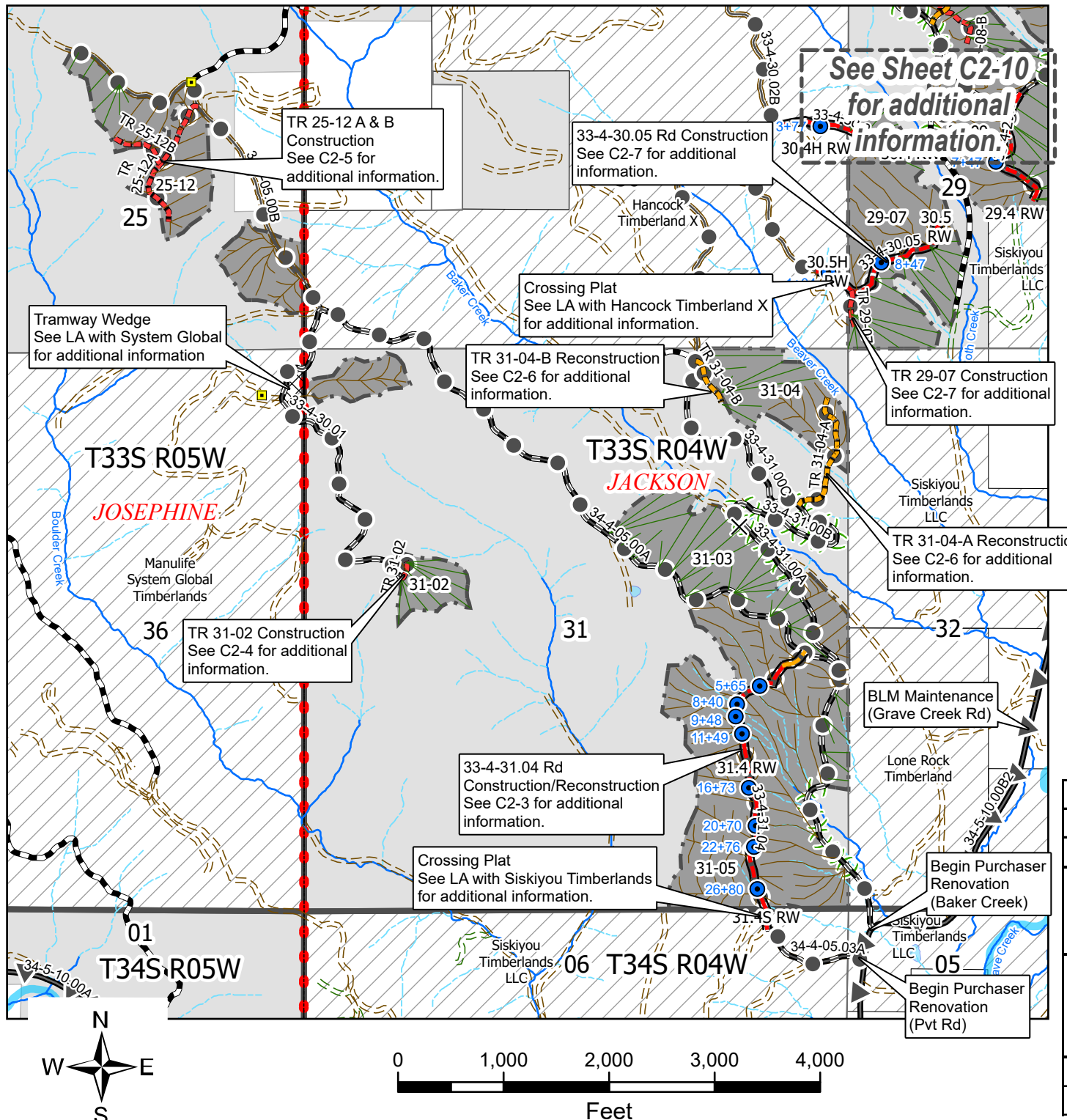
- Paved Road
- Rocked Road
- Natural Surface
- Null or Not Known

Road Construction/Reconstruction

- Perm Construction
- Perm Reconstruction
- Temp Route Construction
- Temp Route Reconstruction

Road Renovation Responsibility

- Bureau of Land Management
- Purchaser
- New Culverts
- Tramways
- Gate

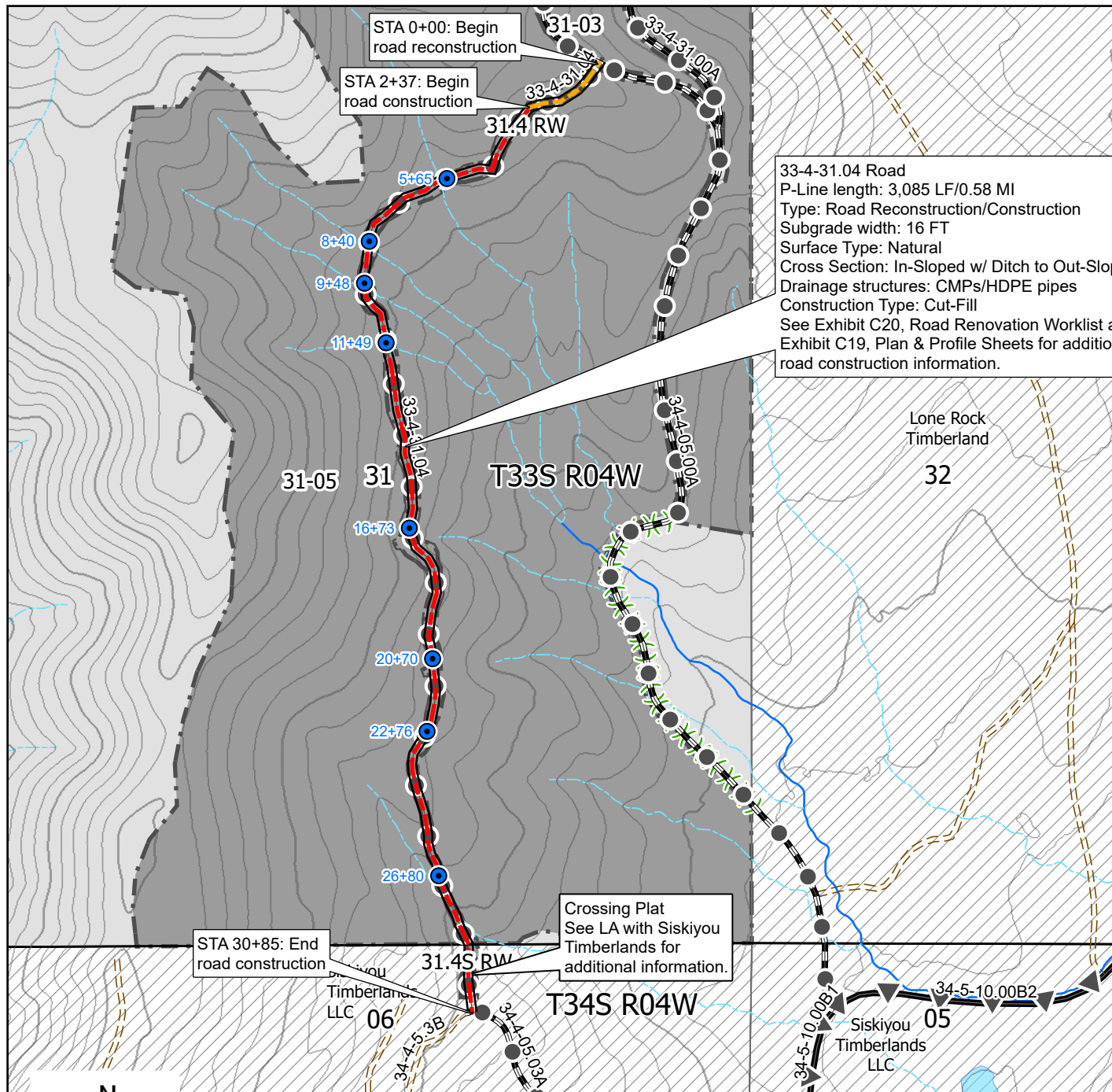


Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD RENOVATION MAP			
BAKER CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 2 OF 13	

Exhibit C2-3

Legend

-  King Graves TS Units
-  King Graves Roadside Units
- Land Ownership**
 -  Bureau of Land Management
 -  Private Individual
 -  Industrial Lands
- Roads by Surface Type**
 -  Paved Road
 -  Rocked Road
 -  Natural Surface
 -  Null or Not Known
- Road Construction/Reconstruction**
 -  Perm Construction
 -  Perm Reconstruction
 -  Temp Route Construction
 -  Temp Route Reconstruction
- Road Renovation Responsibility**
 -  Bureau of Land Management
 -  Purchaser
 -  New Culverts

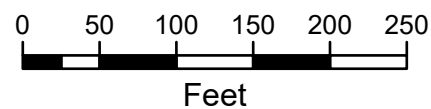
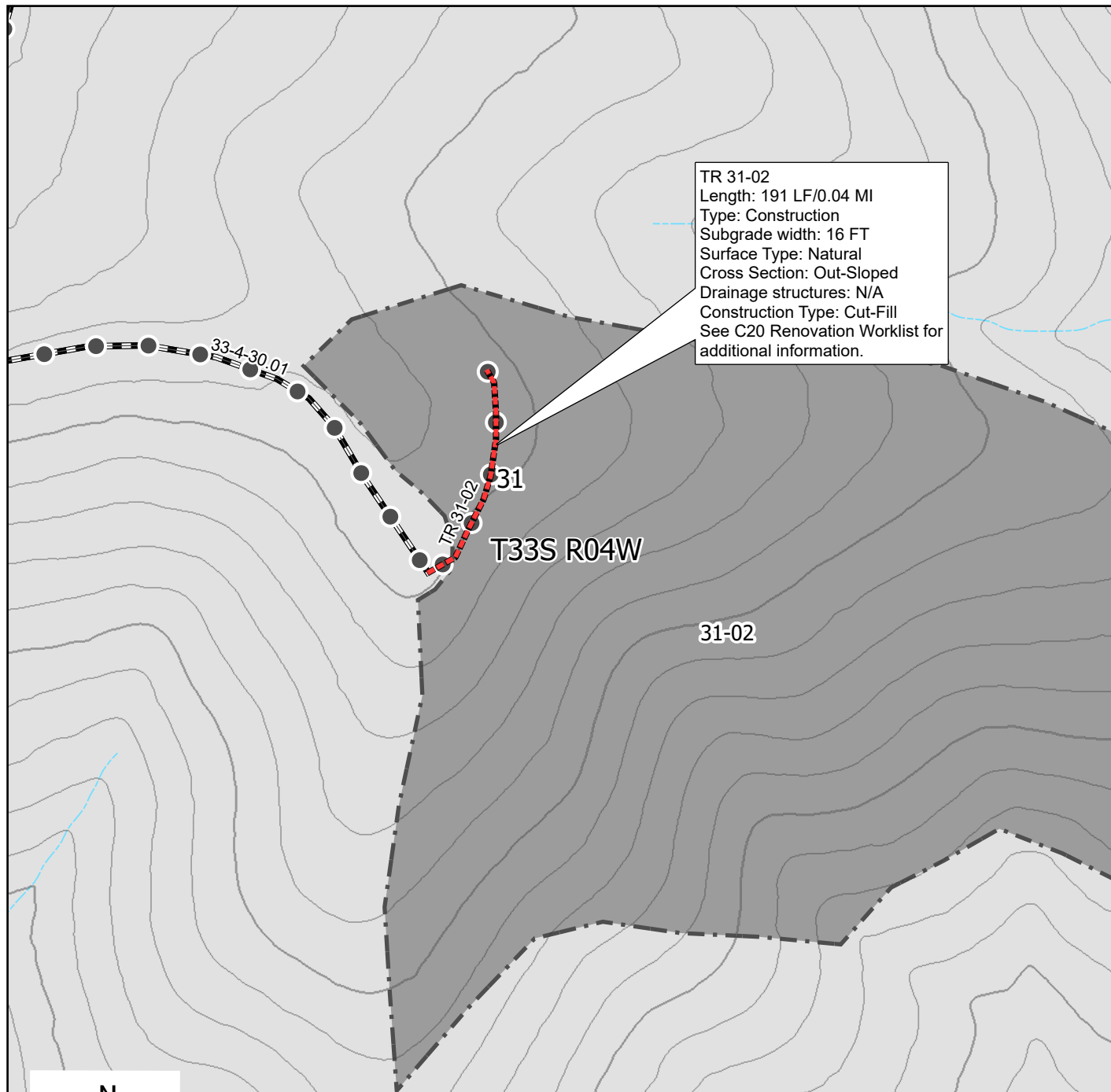


Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD RENOVATION MAP			
BAKER CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 3 OF 13	

Exhibit C2-4

Legend

-  King Graves TS Units
-  King Graves Roadside Units
- Land Ownership**
 -  Bureau of Land Management
 -  Private Individual
 -  Industrial Lands
- Roads by Surface Type**
 -  Paved Road
 -  Rocked Road
 -  Natural Surface
 -  Null or Not Known
- Road Construction/Reconstruction**
 -  Perm Construction
 -  Perm Reconstruction
 -  Temp Route Construction
 -  Temp Route Reconstruction
- Road Renovation Responsibility**
 -  Bureau of Land Management
 -  Purchaser



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD RENOVATION MAP BAKER CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 4 OF 13	

Exhibit C2-5

Legend

- King Graves TS Units
- King Graves Roadside Units

Land Ownership

- Bureau of Land Management
- Private Individual
- Industrial Lands

Roads by Surface Type

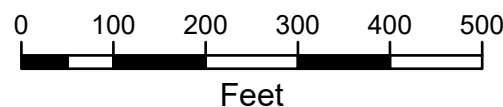
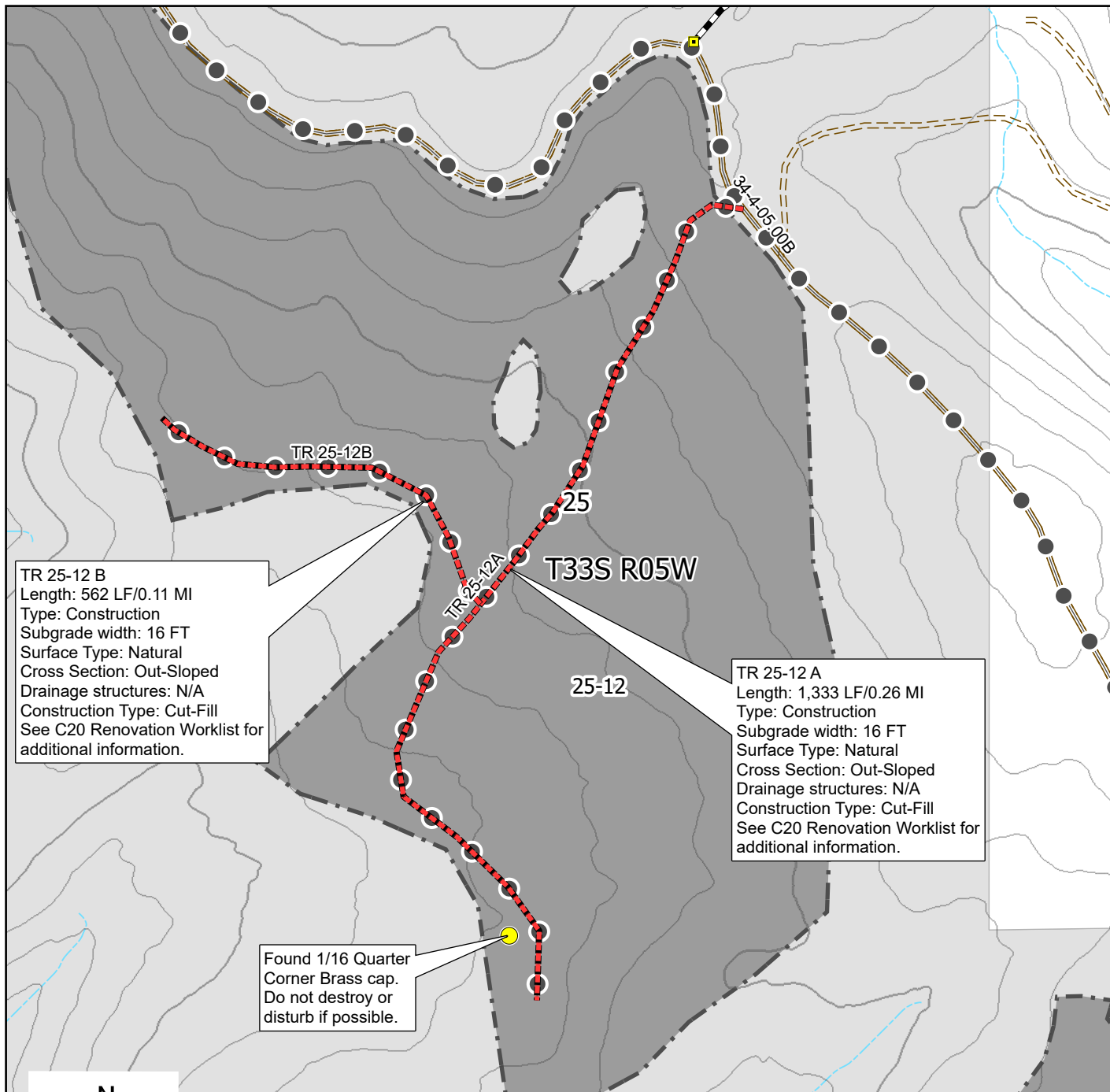
- Paved Road
- Rocked Road
- Natural Surface
- Null or Not Known

Road Construction/Reconstruction

- Perm Construction
- Perm Reconstruction
- Temp Route Construction
- Temp Route Reconstruction

Road Renovation Responsibility

- Bureau of Land Management
- Purchaser
- GP Gates



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD RENOVATION MAP BAKER CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: March 2026		SHEET: 5 OF 13	

Exhibit C2-6

Legend

- King Graves TS Units
- King Graves Roadside Units
- Land Ownership

Bureau of Land Management

Private Individual

Industrial Lands
- Roads by Surface Type

Paved Road

Rocked Road

Natural Surface

Null or Not Known
- Road Construction/Reconstruction

Perm Construction

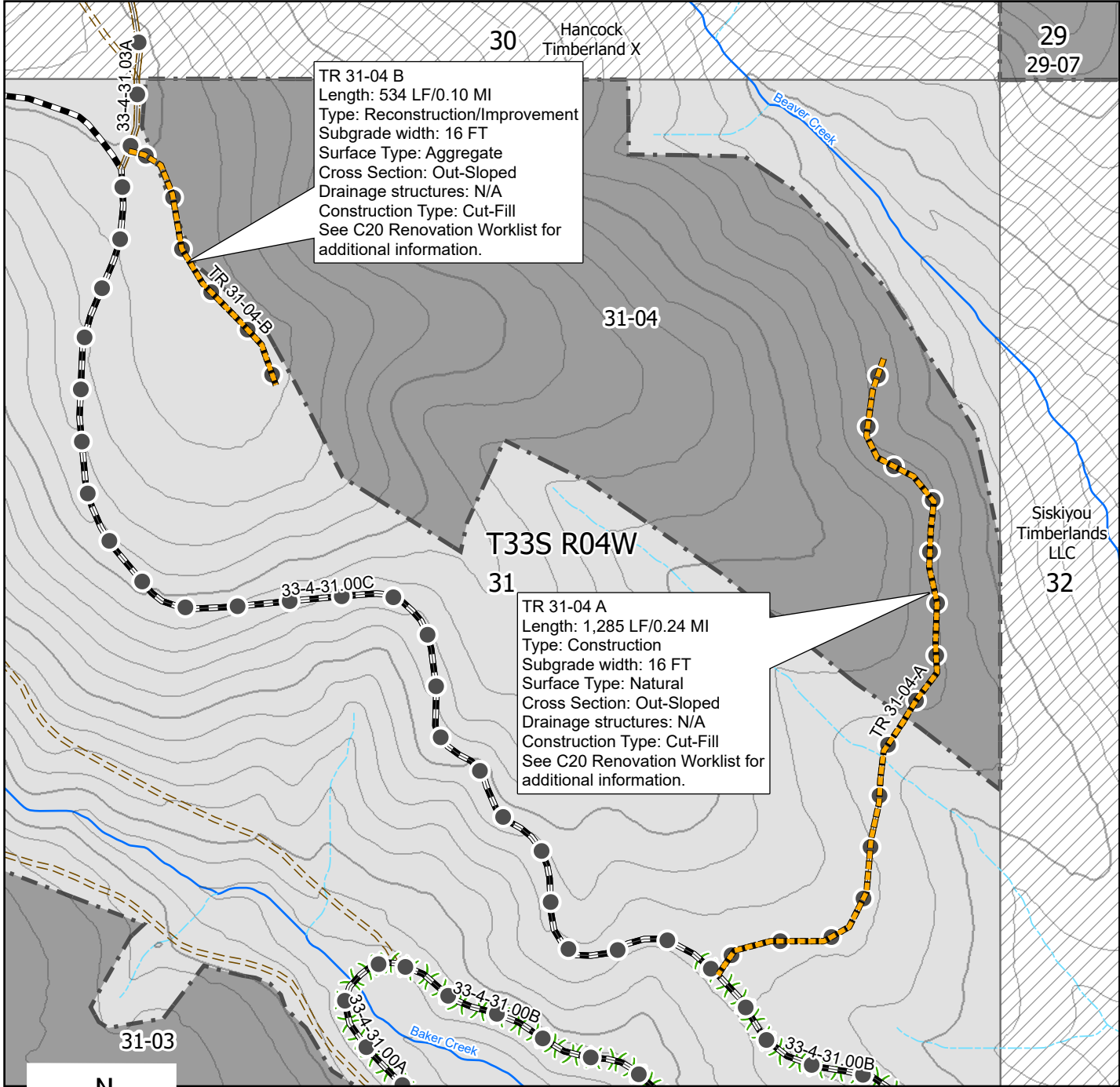
Perm Reconstruction

Temp Route Construction

Temp Route Reconstruction
- Road Renovation Responsibility

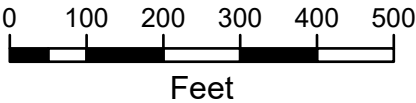
Bureau of Land Management

Purchaser



TR 31-04 B
Length: 534 LF/0.10 MI
Type: Reconstruction/Improvement
Subgrade width: 16 FT
Surface Type: Aggregate
Cross Section: Out-Sloped
Drainage structures: N/A
Construction Type: Cut-Fill
See C20 Renovation Worklist for additional information.

TR 31-04 A
Length: 1,285 LF/0.24 MI
Type: Construction
Subgrade width: 16 FT
Surface Type: Natural
Cross Section: Out-Sloped
Drainage structures: N/A
Construction Type: Cut-Fill
See C20 Renovation Worklist for additional information.



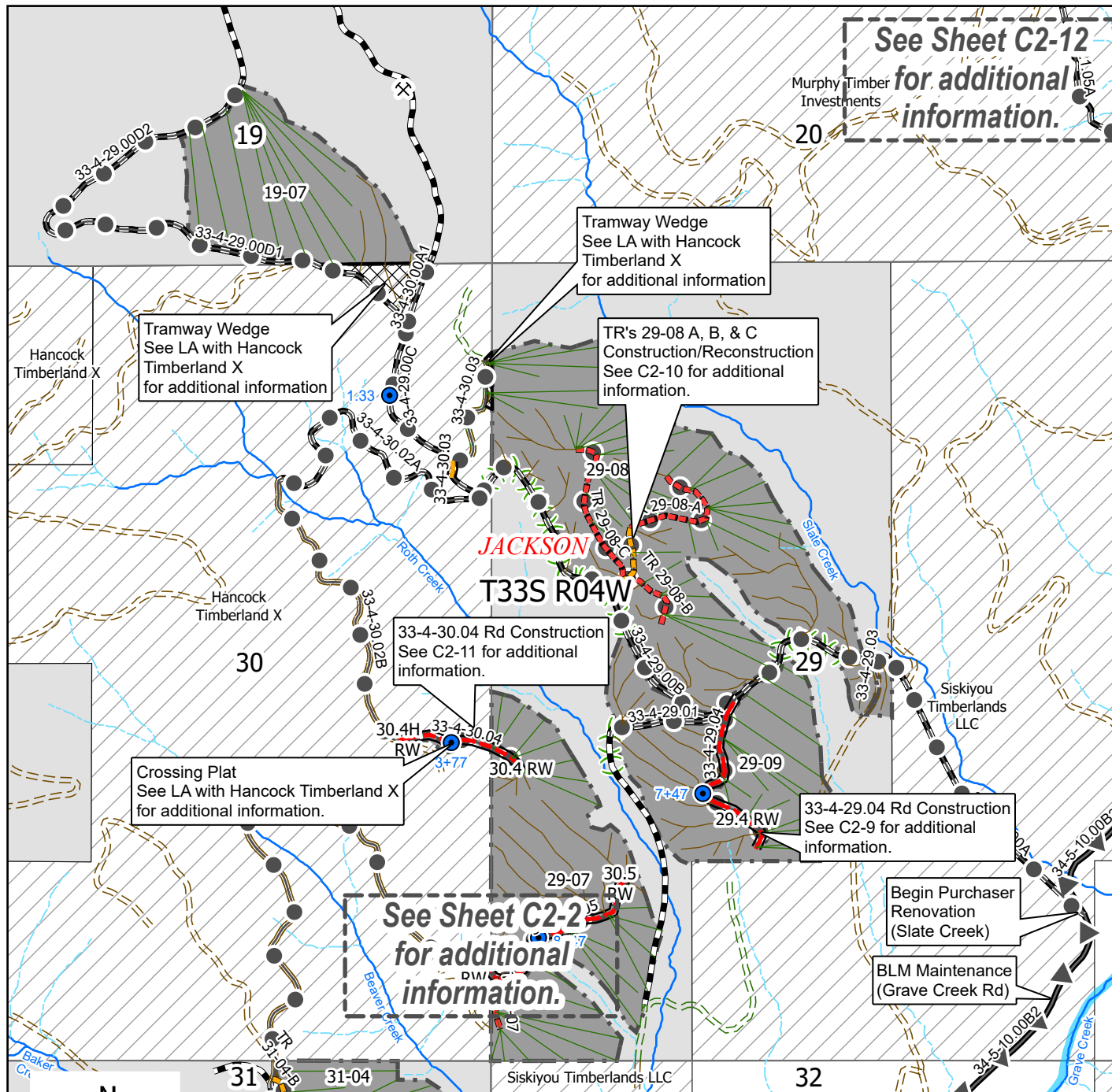
Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD RENOVATION MAP BAKER CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 6 OF 13	

Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD RENOVATION MAP BAKER CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 7 OF 13	

Exhibit C2-8

Legend

- King Graves TS Units
- King Graves Roadside Units
- Land Ownership
 - Bureau of Land Management
 - Private Individual
 - Industrial Lands
- Roads by Surface Type
 - Paved Road
 - Rocked Road
 - Natural Surface
 - Null or Not Known
- Road Construction/Reconstruction
 - Perm Construction
 - Perm Reconstruction
 - Temp Route Construction
 - Temp Route Reconstruction
- Road Renovation Responsibility
 - Bureau of Land Management
 - Purchaser
 - New Culverts
 - Tramways



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD RENOVATION MAP			
SLATE CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 8 OF 13	

Exhibit C2-9

Legend

- King Graves TS Units
- King Graves Roadside Units
- ### Land Ownership

Bureau of Land Management

Private Individual

Industrial Lands
- ### Roads by Surface Type

Paved Road

Rocked Road

Natural Surface

Null or Not Known
- ### Road Construction/Reconstruction

Perm Construction

Perm Reconstruction

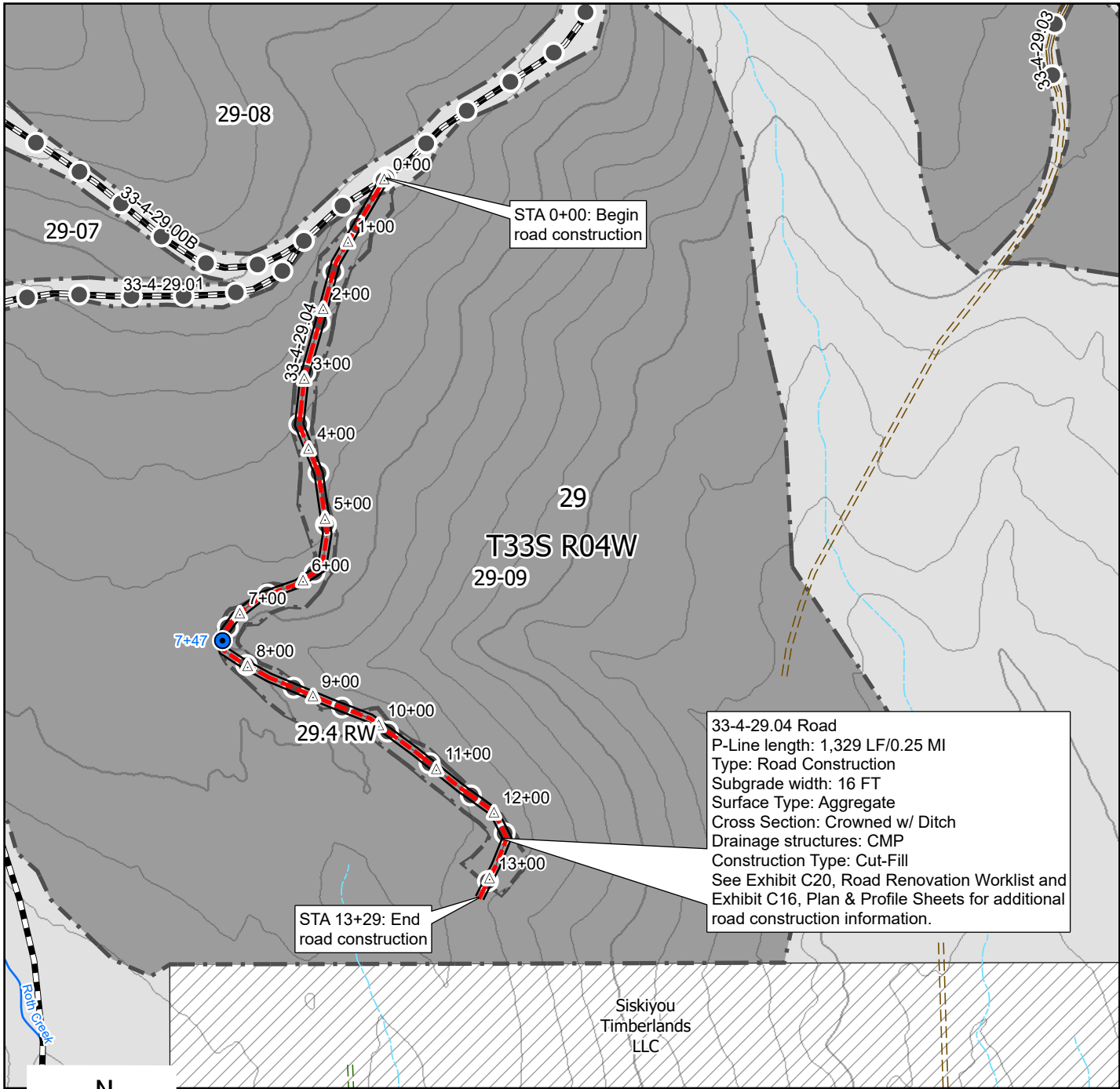
Temp Route Construction

Temp Route Reconstruction
- ### Road Renovation Responsibility

Bureau of Land Management

Purchaser

New Culverts



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD RENOVATION MAP			
SLATE CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 9 OF 13	

Exhibit C2-10

Legend

-  King Graves TS Units
-  King Graves Roadside Units

Land Ownership

-  Bureau of Land Management
-  Private Individual
-  Industrial Lands

Roads by Surface Type

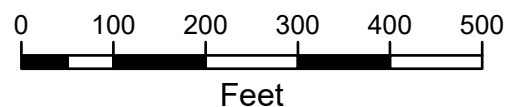
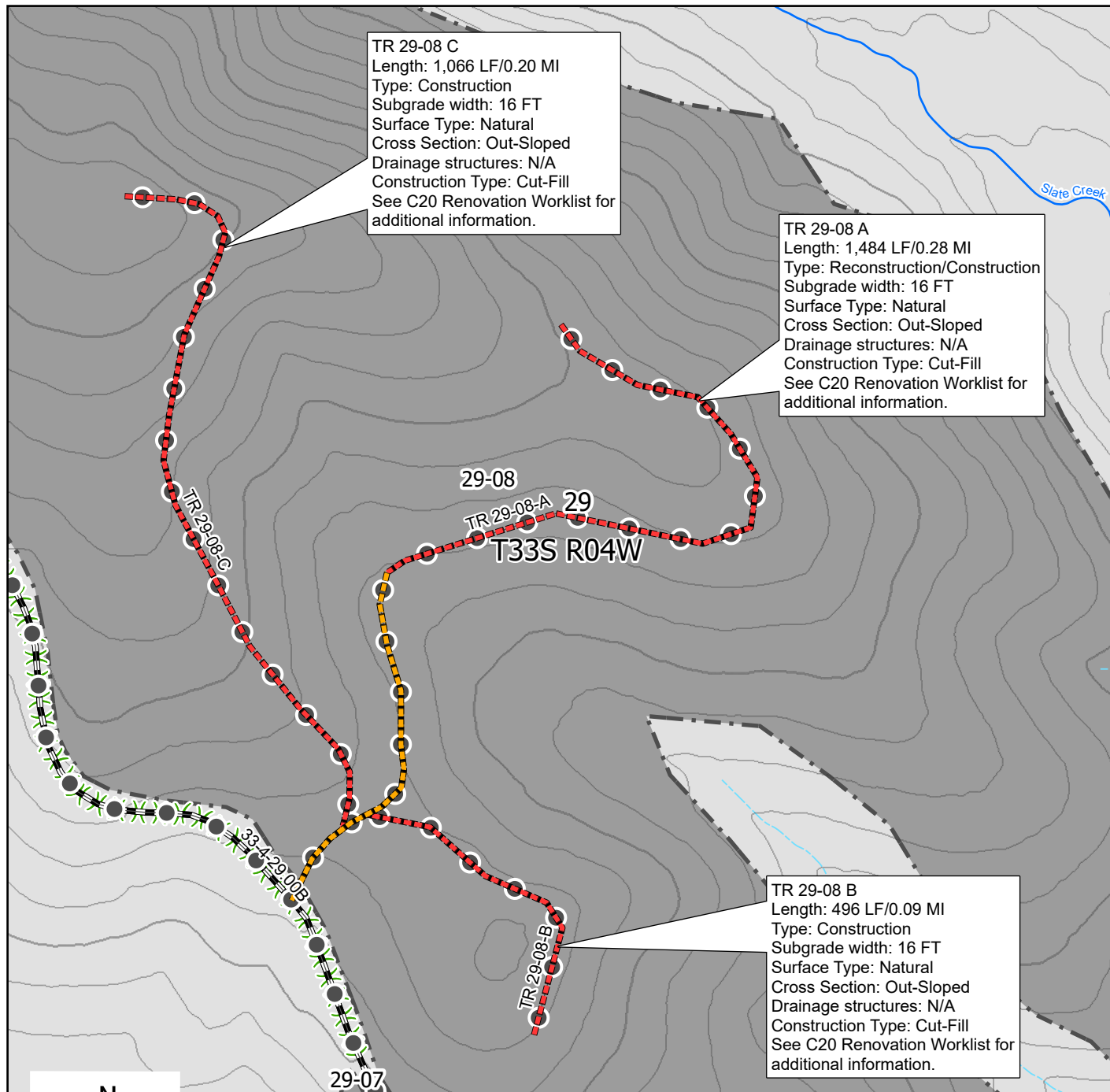
-  Paved Road
-  Rocked Road
-  Natural Surface
-  Null or Not Known

Road Construction/Reconstruction

-  Perm Construction
-  Perm Reconstruction
-  Temp Route Construction
-  Temp Route Reconstruction

Road Renovation Responsibility

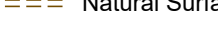
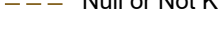
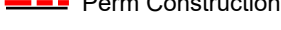
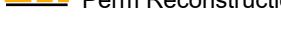
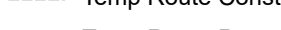
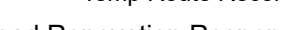
-  Bureau of Land Management
-  Purchaser

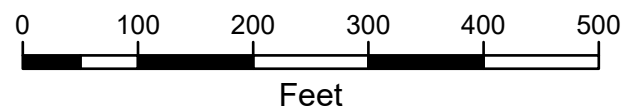
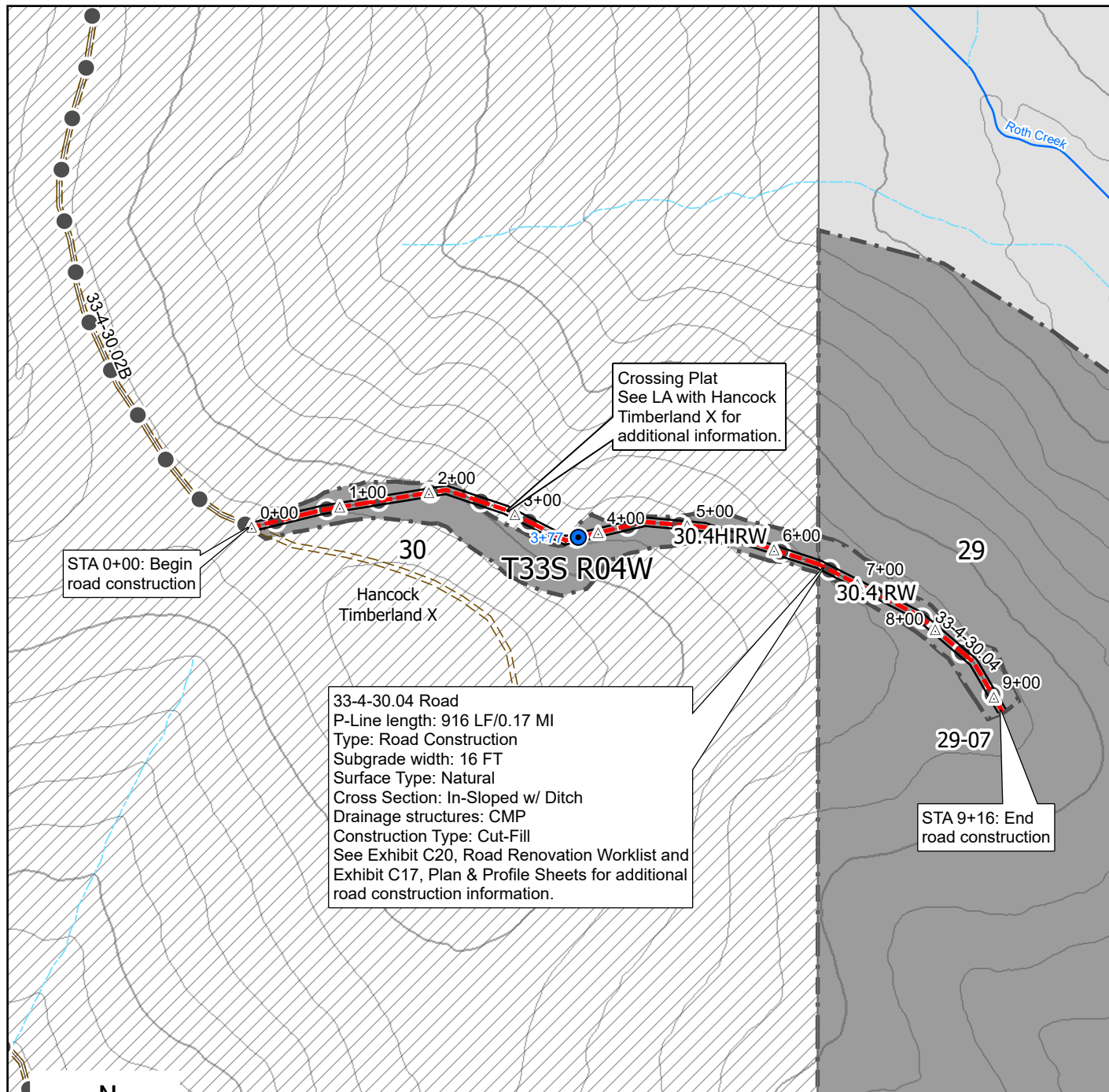


Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD RENOVATION MAP			
SLATE CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 10 OF 13	

Exhibit C2-11

Legend

-  King Graves TS Units
-  King Graves Roadside Units
- Land Ownership**
 -  Bureau of Land Management
 -  Private Individual
 -  Industrial Lands
- Roads by Surface Type**
 -  Paved Road
 -  Rocked Road
 -  Natural Surface
 -  Null or Not Known
- Road Construction/Reconstruction**
 -  Perm Construction
 -  Perm Reconstruction
 -  Temp Route Construction
 -  Temp Route Reconstruction
- Road Renovation Responsibility**
 -  Bureau of Land Management
 -  Purchaser
 -  New Culverts



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD RENOVATION MAP SLATE CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 11 OF 13	

Exhibit C2-12

Legend

- King Graves TS Units
- King Graves Roadside Units
- Land Ownership

Bureau of Land Management

Private Individual

Industrial Lands
- Roads by Surface Type

Paved Road

Rocked Road

Natural Surface

Null or Not Known
- Road Construction/Reconstruction

Perm Construction

Perm Reconstruction

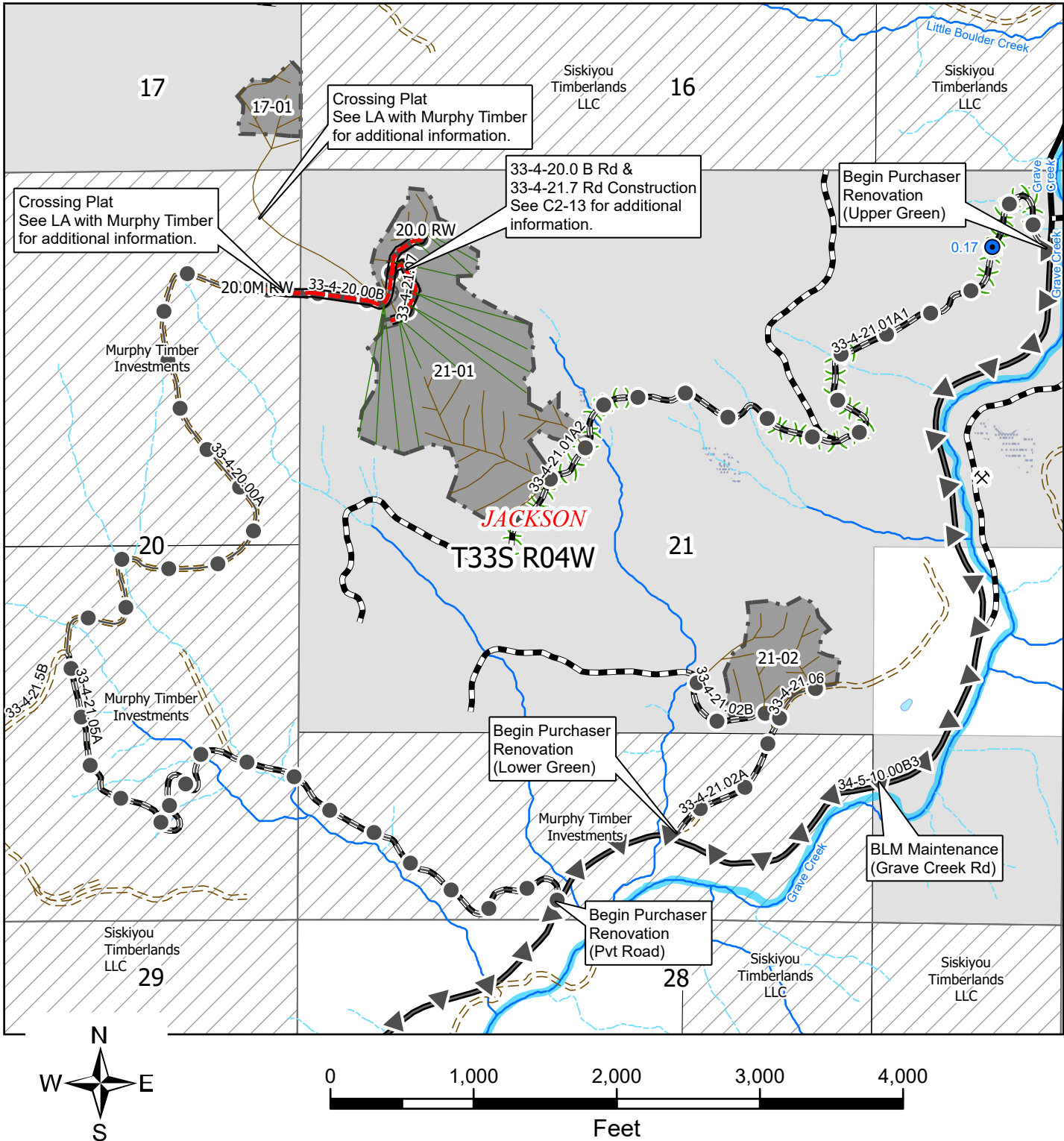
Temp Route Construction

Temp Route Reconstruction
- Road Renovation Responsibility

Bureau of Land Management

Purchaser

New Culverts

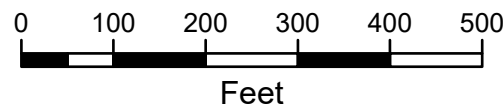
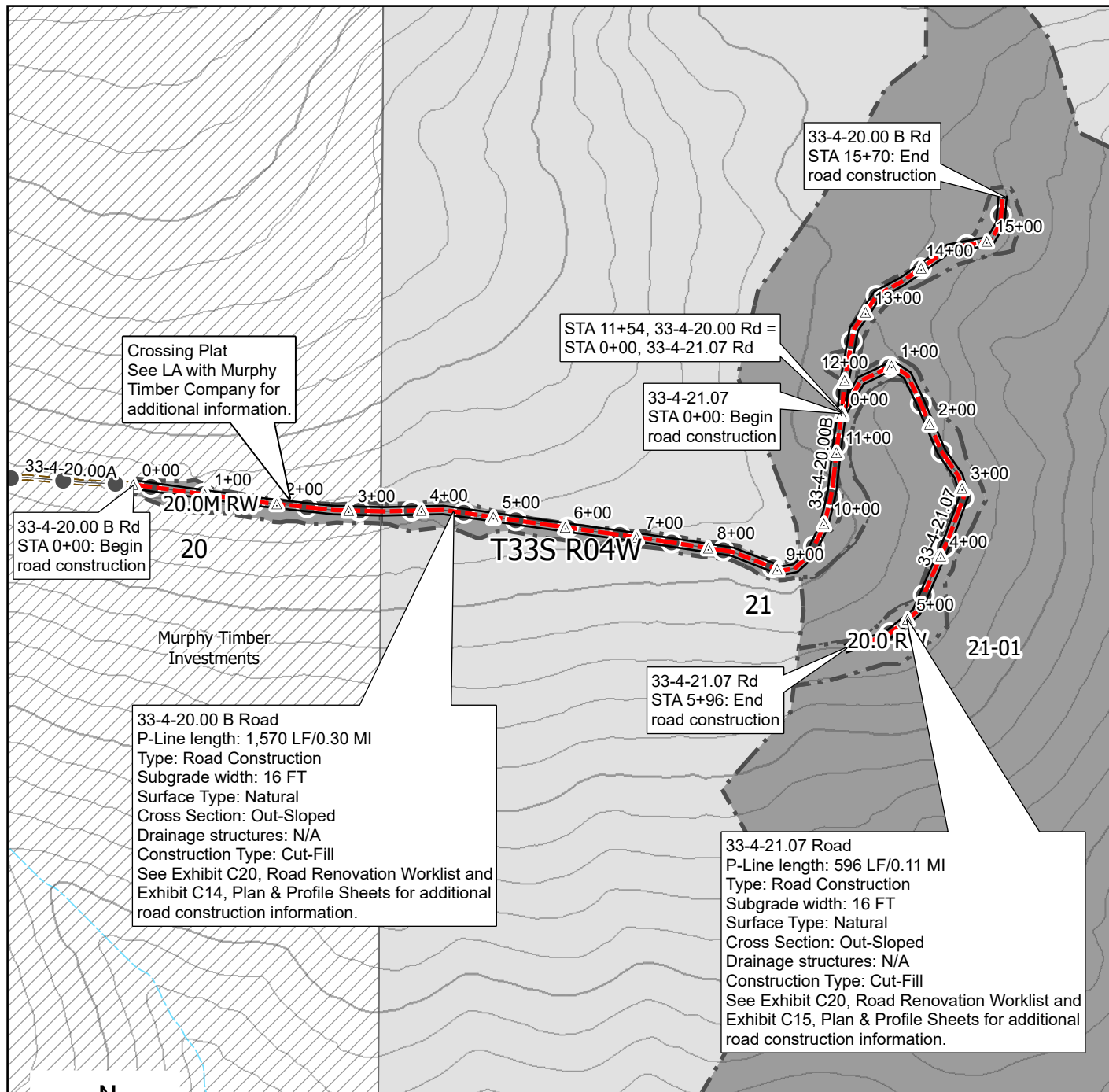


Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD RENOVATION MAP			
GREEN CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: MARCH 2026		SHEET: 12 OF 13	

Exhibit C2-13

Legend

-  King Graves TS Units
-  King Graves Roadside Units
- Land Ownership**
 -  Bureau of Land Management
 -  Private Individual
 -  Industrial Lands
- Roads by Surface Type**
 -  Paved Road
 -  Rocked Road
 -  Natural Surface
 -  Null or Not Known
- Road Construction/Reconstruction**
 -  Perm Construction
 -  Perm Reconstruction
 -  Temp Route Construction
 -  Temp Route Reconstruction
- Road Renovation Responsibility**
 -  Bureau of Land Management
 -  Purchaser



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD RENOVATION MAP			
GREEN CREEK AREA			
DRAFTED BY: BLM		EXHIBIT C2	
DATE: March 2026		SHEET: 13 OF 13	

EXHIBIT C3-1

ROAD NUMBER	FROM	TO	LENGTH	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						RENOVATION				AGGREGATE				SOIL STABILIZATION	ROADSIDE BRUSHING AND CHIPPING	ROADSIDE MANAGEMENT UNITS	MISCELLANEOUS							
					COMMON	ROCK (INCLUDES) RIPRAP ROCK	CORRUGATED METAL PIPE			24" HDPE PIPE	24" FULL ROUND DOWNSPOUT	SPLASH PADS CLASS II RIPRAP	SLIDE REMOVAL	BLADING, WATERING, & ROLLING	DITCH AND/OR CULVERT CLEANING	SCARIFICATION AND/OR HEAVY BLADING	BASE COURSE SCREENED ROCK (4" minus)	SURF. COURSE CRUSHED ROCK (1-1/2" minus)	SLOPE PROTECTION	INSTALL BMPs @ HYDRO POINTS OF CONCERN				CONSTRUCT WATER DIPS	CULVERT REMOVAL	CONSTRUCT TURNAROUND	RECONSTRUCT TURNAROUND	REMOVE EXIST. BERM	CONSTRUCT HELLBANDING		
							18"	24"	30"																						
SPECIFICATION NO. _____			➔	200	300		400						500				900	1200	1400	1800	2100	500	8000								
UNITS ➔	MP/STA	MP/STA	MILE	ACRE	CY	CY	LF	LF	LF	LF	LF	EA	CY	MILE	MILE	MILE	LCY	LCY	CY	ACRE	MILE	MILE	EA	EA	EA	EA	EA	EA	EA	EA	
33-4-20.00A	0.00	0.89	0.89											0.89	0.89						0.89										
33-4-21.01	0.00	1.19	1.19	0.6				34				2		1.19	1.19			15	5		1.19	0.73	1								
33-4-21.02	0.00	0.39	0.39											0.39	0.39						0.39										
33-4-21.05	0.00	1.09	1.09											1.09	1.09						1.09		1								
33-4-21.06	0.00	0.09	0.09											0.09							0.09										
33-4-29.00	0.00	2.33	2.33	0.3				32				1		2.33	2.33			5017			2.33	0.38									
33-4-29.01	0.00	0.16	0.16	0.1										0.16							0.16	0.03									
33-4-29.03	0.00	0.03	0.03											0.03							0.03										
33-4-30.00	0.00	0.09	0.09											0.09	0.09						0.09										
33-4-30.01	0.00	0.77	0.77											0.77							0.77										
33-4-30.02	0.00	0.85	0.85										200	0.85	0.85						0.85		1								
33-4-30.03	0.00	0.18	0.18		222									0.18				392			0.18										
33-4-31.00	0.00	1.07	1.07	0.4										1.07	1.07		20	2293			1.07	0.48	1								
33-4-31.03	0.00	0.76	0.76											0.76	0.76			30			0.76		1								
33-4-31.04	0.00	0.01	0.01											0.01							0.01										
SEE PAGE 2 FOR ROAD TOTALS																															

RENOVATION NOTES

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

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

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

AGGREGATE GRADATION REQUIREMENTS

ITEM 900

SIZE	GRADATION
4 inch	A
3 inch	B
2 inch	C
1 1/2 inch	D

ITEM 1000

SIZE	GRADATION
3 inch	A,C,F
2 inch	B,D,G,H

ITEM 1200

SIZE	GRADATION
1 1/2 inch	C,C-1
1 inch	D,D-1
3/4 inch	E,E-1

ALWAYS
THINK
SAFETY

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

KING GRAVES
TIMBER SALE
ESTIMATE OF QUANTITIES*

DRAFTED BY: BLM

SCALE: NONE

DATE: MARCH 2026

SHEET: 1 OF 3

EXHIBIT C3-2

ROAD NUMBER	FROM	TO	LENGTH	CLEARING AND GRUBBING	EXCAVATION		DRAINAGE						RENOVATION				AGGREGATE			SOIL STABILIZATION	ROADSIDE BRUSHING AND CHIPPING	ROADSIDE MANAGEMENT UNITS	MISCELLANEOUS							
					COMMON	ROCK (INCLUDES RIPPABLE ROCK)	CORRUGATED METAL PIPE			24" HOPE PIPE	24" FULL ROUND DOWNSPOUT	SPLASH PADS CLASS II RIPRAP	SLIDE REMOVAL	BLADING, WATERING, & ROLLING	DITCH AND/OR CULVERT CLEANING	SCARIFICATION AND/OR HEAVY BLADING	BASE COURSE SCREENED ROCK (4" minus)	SURF. COURSE CRUSHED ROCK (1-1 1/2" minus)	SLOPE PROTECTION				INSTALL BMPs @ HYDRO POINTS OF CONCERN	CONSTRUCT WATER DIPS	CULVERT REMOVAL	CONSTRUCT TURNAROUND	RECONSTRUCT TURNAROUND	REMOVE EXIST. BERM	CONSTRUCT MULL LANDING	
							18"	24"	30"																					
SPECIFICATION NO.			➡	200	300		400						500				900	1200	1400	1800	2100	500	8000							
UNITS ➡	MP/STA	MP/STA	MILE	ACRE	CY	CY	LF	LF	LF	LF	LF	EA	CY	MILE	MILE	MILE	LCY	LCY	CY	ACRE	MILE	MILE	EA	EA	EA	EA	EA	EA	EA	
34-4-05.00	0.00	2.56	2.56	0.2										2.56	2.56			2457			2.56	0.18	1							
34-4-05.03	0.00	0.22	0.22												0.22						0.22									
NEW ROAD CONSTRUCTION																														
N33-4-20.0B	0+00	15+80	0.30	1.5	1050	263														0.4							1			
N33-4-21.07	0+00	5+88	0.11	0.6	519	134														0.2							1			
N33-4-29.04	0+00	12+70	0.24	1.2	1494			34				1						764	539	0.3						1				
N33-4-30.04	0+00	9+22	0.17	1	2002			42				1								0.2						1				
N33-4-30.05	0+00	19+12	0.32	2.0	1817			72				2							3	0.5										
N33-4-31.04	0+00	30+06	0.57	2.9	3049			160		144		4								0.7						1				
TOTALS			14.39	10.8	10153	397		374		144		11		12.46	11.44		784	10743		2.3	12.67	1.8	6			5				

RENOVATION NOTES

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

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

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

AGGREGATE GRADATION REQUIREMENTS

ITEM 900

SIZE	GRADATION
4 inch	A
3 inch	B
2 inch	C
1 1/2 inch	D

ITEM 1000

SIZE	GRADATION
3 inch	A,C,F
2 inch	B,D,G,H

ITEM 1200

SIZE	GRADATION
1 1/2 inch	C,C-1
1 inch	D,D-1
3/4 inch	E,E-1

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

KING GRAVES
TIMBER SALE
ESTIMATE OF QUANTITIES*

DRAFTED BY: BLM

SCALE: NONE

DATE: MARCH 2026

SHEET: 2 OF 3

EXHIBIT C3-3

TEMP ROUTE NUMBER	FROM	TO	LENGTH	CLEARING & GRUBBING			EXCAVATION		TEMPORARY DRAINAGE			CONSTRUCTION/RECONSTRUCTION						AGGREGATE		SLOPE PROTECTION	SOIL STABILIZATION	MISCELLANEOUS		
				TOTAL ACRES	CLEARING CLASS (AVG)	CLEARING WIDTH (AVG)	COMMON	RIPPABLE ROCK	SIZE			CONSTRUCT WATERDIPS	CONSTRUCT TURNAROUND	HEAVY REGRADEING	RECONSTRUCT EX. WATER DIPS	RECONSTRUCT EX. TURNAROUND	REMOVE EXIST. BERMBARRICADE	BASE COURSE SCREENED ROCK (4"-min)	SURF. COURSE CRUSHED ROCK (1-1 1/2"-min)			INSTALL BMPs @ HYDRO POINTS OF CONCERN	MEGA GATE REPLACEMENT	RAMP OVER GAS PIPELINE
									18"	24"	36"													
SPECIFICATION NO.			→	200			300		400			500						900	1200	1400	1800	8000		
UNITS →	STA	STA	MILE	ACRE	L/M/H	FEET	CY	CY	LF	LF	LF	EA	EA	MILE	EA	EA	EA	CY	CY	CY	ACRE	EA	EA	EA
TR 25-12A	0+00	13+49	0.26	0.8	H	25	727						1								0.4			
TR 25-12B	0+00	5+61	0.11	0.4	H	25	302						1								0.2			
TR 29-07	0+00	3+53	0.07	0.2	H	25	115						1								0.1			
TR 29-08A	0+00	14+79	0.28	0.9	H	25	1292						1								0.4			
TR 29-08B	0+00	4+77	0.09	0.3	H	25	168						1								0.2			
TR 29-08C	0+00	10+73	0.20	0.7	H	25	953						1								0.3			
TR 31-02	0+00	1+91	0.04	0.1	H	25	50						1								0.4			
TR 31-04A	0+00	13+40	0.25	0.7	H	25							1	0.25							0.4			
TR 31-04B	0+00	4+10	0.08	0.3	H	25							1	0.08				230			0.1			
TEMP ROUTE TOTALS			1.38	4.4			3607						9	0.33				230			2.5			

CONSTRUCTION NOTES

- ALL TEMP ROUTE SUBGRADE OR RUNNING SURFACE WIDTHS SHALL NOT EXCEED 15 FEET.
- TURNOUTS ARE AUTHORIZED BUT SHALL BE CONSTRUCTED AT THE AUTHORIZED OFFICERS DISCRETION AND KEPT TO A MINIMUM QUANTITY TO AVOID UNNECESSARY DISTURBANCE.
- STA's = 100 LINEAR FEET.
- TURNAROUND AREAS SHALL NOT EXCEED 0.25 ACRES OR 60 FOOT RADIUS.

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

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

KING GRAVES
TIMBER SALE
ESTIMATE OF QUANTITIES*

DRAFTED BY: BLM

SCALE: NONE

DATE: MARCH 2026

SHEET: 3 OF 3

EXHIBIT C4-1

ROAD NUMBER	FROM (MP or STA)	TO (MP or STA)	LENGTH (MILES)	TYPICAL SECTION TYPE	ALIGNMENT	ROAD WIDTH ¹⁻³		GRADIENT		CLEARING WIDTH		SURFACING ⁴										REMARKS	
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE					
										TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE ²	GRADATION	MINIMUM WIDTH	COMPACTION DEPTH	TYPE ²	GRADATION		
EXISTING ROAD SURFACING																							
33-4-29.00	0.00	2.33	2.33	-	-	15'	3'	-	-									15'	6"	D	C-1	1 1/2"-minus	
33-4-30.03	0.00	0.18	0.18	-	-	15'	-	-	-									15'	6"	D	C-1	1 1/2"-minus	
33-4-31.00	0.00	1.07	1.07	-	-	15'	3'	-	-									15'	6"	D	C-1	1 1/2"-minus	
34-4-05	0.00	1.14	1.14	-	-	15'	3'	-	-									15'	6"	D	C-1	1 1/2"-minus	
NEW ROAD CONSTRUCTION																							
33-4-20.08	0+00	15+80	0.30	3	-	15'	-	-	9%	5'	5'												
33-4-21.7	0+00	0+95	0.02	1	-	15'	3'	-	8.4%	5'	5'												
	0+95	15+97	0.09	3	-	15'	-	1.7%	14.3%	5'	5'												
33-4-29.4	0+00	12+70	0.24	2	-	15'	3'	-	15.5%	5'	5'			15'	8"	C	A	14.5'	6"	D	C-1	4" minus and 1 1/2"-minus	
33-4-30.4	0+00	4+40	0.17	1	-	15'	3'	-	15.5%	5'	5'												
	4+40	9+22	0.19	3	-	15'	3'	-	15.0%	5'	5'												
33-4-30.5	0+00	9+65	0.18	1	-	15'	3'	3.2%	11.0%	5'	5'												
	9+65	19+12	0.18	3	-	15'	3'	9.6%	15.4%	5'	5'												
33-4-31.4	0+00	30+06	0.57	1	-	15'	3'	14.5%	4.4%	5'	5'												

NOTES

1. EXTRA SUB-GRADE WIDTHS

TO EACH FILL SHOULDER, ADD 1 FOOT FOR FILLS OF 1-6 FEET AND 2 FEET FOR FILLS OVER 6 FEET. WIDEN THE INSIDE SHOULDER OF ALL CURVES AS FOLLOWS WHEN THE DEGREE OF CURVE EQUALS:

7-21 ADD 1 FT.
22-35 ADD 2 FT.
36-48 ADD 3 FT.
49-64 ADD 4 FT.
65-96 ADD 5 FT.

2. SURFACING TYPES

- A. PIT RUN ROCK
- B. GRID ROLLED ROCK MATERIAL
- C. SCREENED ROCK MATERIAL
- D. CRUSHED ROCK MATERIAL

3. TURNOUTS

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

4. SURFACING

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

5. CLEARING WIDTH

SEE SUBSECTION 200

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

UNITED STATES DEPARTMENT OF THE INTERIOR
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MEDFORD DISTRICT - MEDFORD, OREGON

KING GRAVES TIMBER SALE SPECIFICATION SHEET

DRAFTED BY: BLM SCALE: NONE
DATE: MARCH 2026 SHEET: 1 OF 3

EXHIBIT C4-2

ROAD NUMBER	FROM (STA)	TO (STA)	LENGTH (MILES)	TYPICAL STATION TYPE	ALIGNMENT	ROAD WIDTH ¹⁻³		GRADIENT		CLEARING WIDTH		SURFACING ⁴								REMARKS				
					MAXIMUM DEGREE OF CURVE	SUBGRADE	DITCH	MAXIMUM FAVORABLE	MAXIMUM ADVERSE	BEYOND		EXISTING ROAD(S)		BASE COURSE				SURFACE COURSE						
										TOP CUT	TOE FILL	L	R	MINIMUM WIDTH	COMPACTION DEPTH	TYPE ²	GRADING	MINIMUM WIDTH	COMPACTION DEPTH		TYPE ²	GRADING		
TR 25-12A	0+00	13+49	0.26	3	-	15'	-	-	13%	5'	5'													
TR 25-12B	0+00	5+61	0.11	3	-	15'	-	6%	-	5'	5'													
TR 29-07	0+00	3+53	0.07	3	-	15'	-	1%	1%	5'	5'													
TR 29-08A (R)	0+00	5+25	0.10	3	-	15'	-	MATCH EXIST	MATCH EXIST	5'	5'													
TR 29-08A (N)	5+25	14+79	0.18	3	-	15'	-	6%	-	5'	5'													
TR 29-08B (N)	0+00	4+77	0.09	3	-	15'	-	-	1%	5'	5'													
TR 29-08C (N)	0+00	10+73	0.20	3	-	15'	-	17%	-	5'	5'													
TR 31-02 (N)	0+00	1+91	0.04	3	-	15'	-	3%	-	5'	5'													
TR 31-04A (R)	0+00	13+40	0.25	3	-	15'	-	MATCH EXIST	MATCH EXIST	5'	5'													
TR 31-04B (R)	0+00	4+10	0.08	4	-	15'	-	MATCH EXIST	MATCH EXIST	5'	5'							15'	6"	D	C-1	4" minus and 1 1/2"-minus		

NOTES

1. EXTRA SUB-GRADE WIDTHS

TO EACH FILL SHOULDER, ADD 1 FOOT FOR FILLS OF 1-5 FEET AND 2 FEET FOR FILLS OVER 6 FEET. WIDEN THE INSIDE SHOULDER OF ALL CURVES AS FOLLOWS WHEN THE DEGREE OF CURVE EQUALS:

7-21 ADD 1 FT.
22-35 ADD 2 FT.
36-48 ADD 3 FT.
49-64 ADD 4 FT.
65-96 ADD 5 FT.

MATERIALS CUT SLOPE FILL SLOPE

COMMON 1/2 : 1 1 1/2 : 1

SOFT ROCK & SHALE 1/2 : 1 1 1/2 : 1

SOLID ROCK 1/2 : 1 angle of repose

2. SURFACING TYPES

- A. PIT RUN ROCK
- B. GRID ROLLED ROCK MATERIAL
- C. SCREENED ROCK MATERIAL
- D. CRUSHED ROCK MATERIAL

3. TURNOUTS

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

4. SURFACING

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

5. CLEARING WIDTH

SEE SUBSECTION 200

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

KING GRAVES
TIMBER SALE
SPECIFICATION SHEET

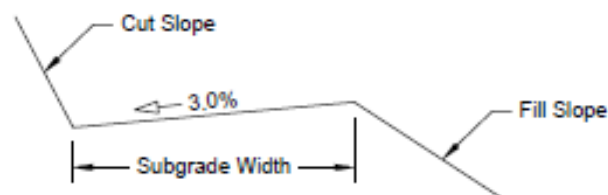
DRAFTED BY: BLM

SCALE: NONE

DATE: MARCH 2026

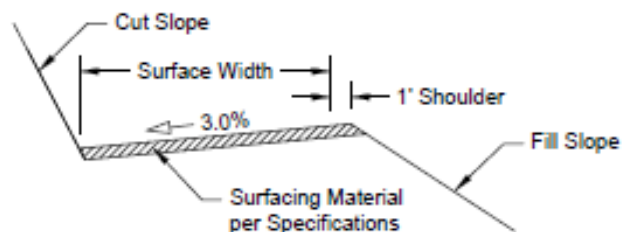
SHEET: 2 OF 3

EXHIBIT C4-3



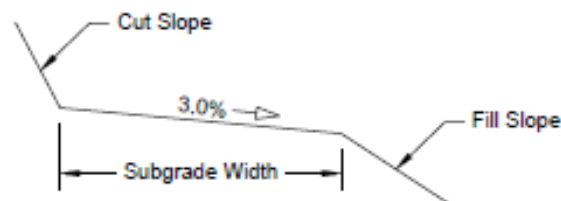
TYPICAL GRADING SECTION

TYPE 1



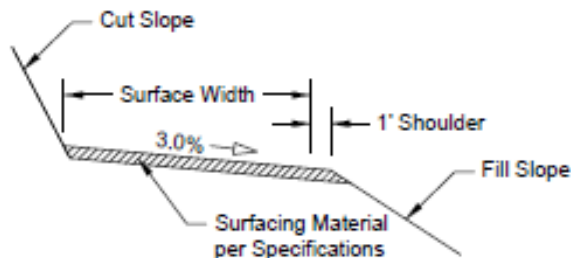
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TYPE 2



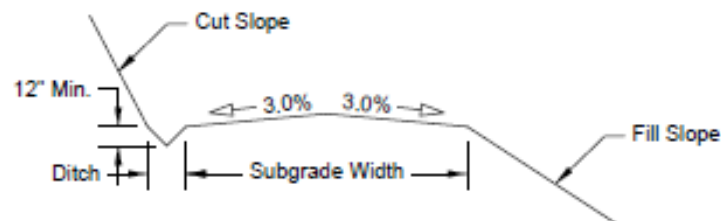
TYPICAL GRADING SECTION

TYPE 3



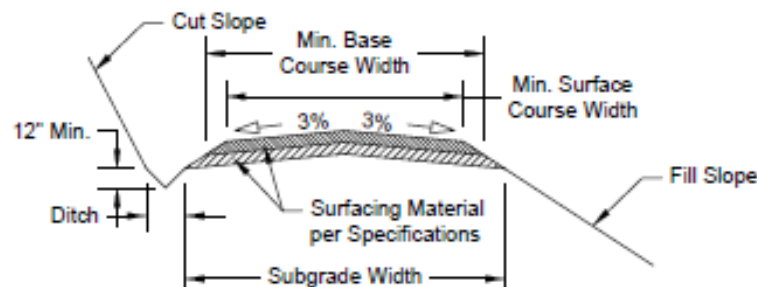
TYPICAL SURFACING SECTION

TYPE 4



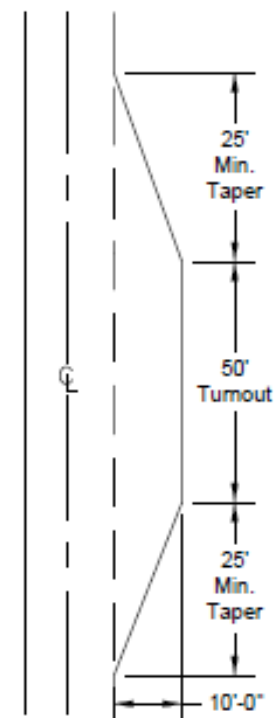
TYPICAL GRADING SECTION

TYPE 5



TYPICAL SURFACING SECTION

TYPE 6



TYPICAL TURNOUT
PLAN VIEW

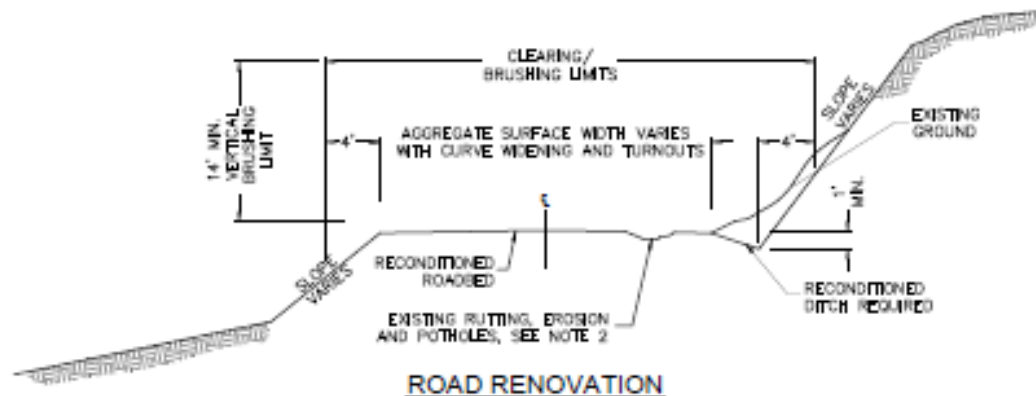
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MEDFORD DISTRICT - MEDFORD, OREGON

KING GRAVES TIMBER SALE SPECIFICATION SHEET

DRAFTED BY: BLM
DATE: MARCH 2026

SCALE: NONE
SHEET: 3 OF 3

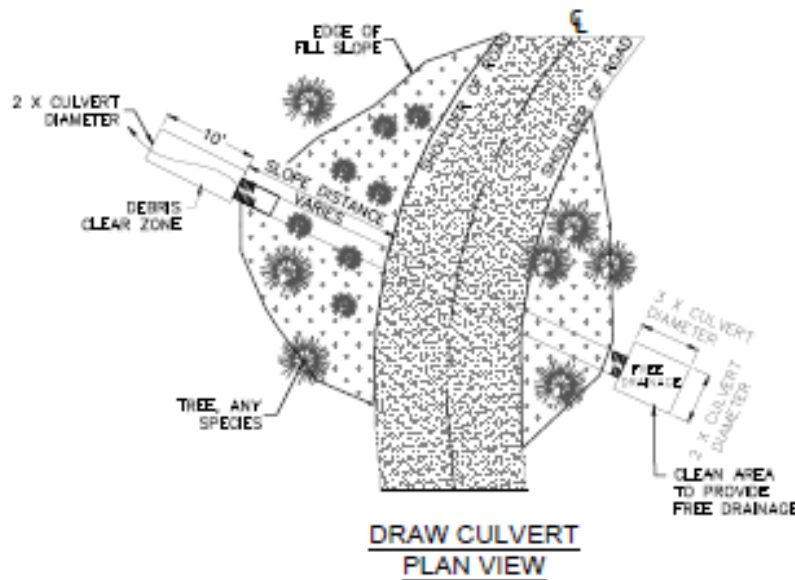
EXHIBIT C5



ROAD RENOVATION

NOTES:

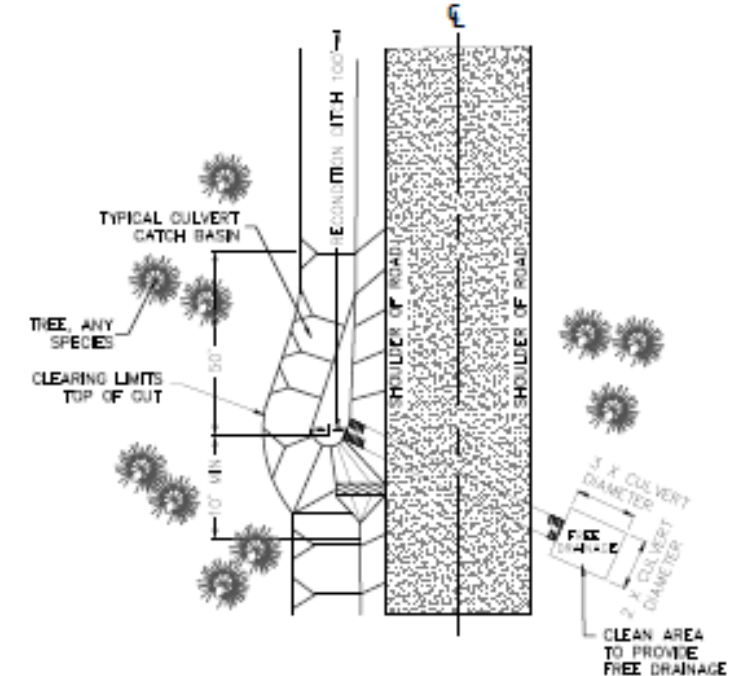
1. RECONDITION ROADS AS SHOWN AND IN ACCORDANCE WITH SECTION 500 OF THE SPECIFICATIONS. REQUIRED RECONDITIONING INCLUDES CURVE WIDENING AND TURNOUTS. DITCH RECONDITIONING INCLUDES CLEANING CULVERT INLETS AND OUTLETS.
2. WHERE RUTTING, EROSION AND POTHOLES EXIST, SCARIFY TO DEPTH OF RUT/EROSION/POTHOLE,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



DRAW CULVERT PLAN VIEW

CLEARING NOTES:

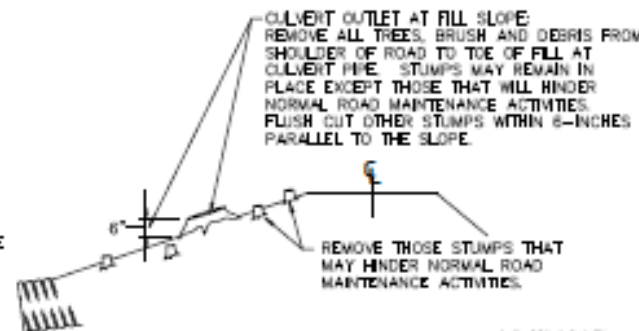
1. NO GRUBBING OR ROOT DISTURBANCE UNLESS NOTED
2. REMOVE VEGETATION BY CUTTING OR MOWING
3. RECONDITION INLET CHANNEL. REMOVE ALL DEBRIS AND OBSTRUCTION A MINIMUM OF 2 X CULVERT DIAMETER & 10 FEET LONG



CROSS DRAIN CULVERT PLAN VIEW

CLEARING NOTES:

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



DRAW CULVERT PROFILE

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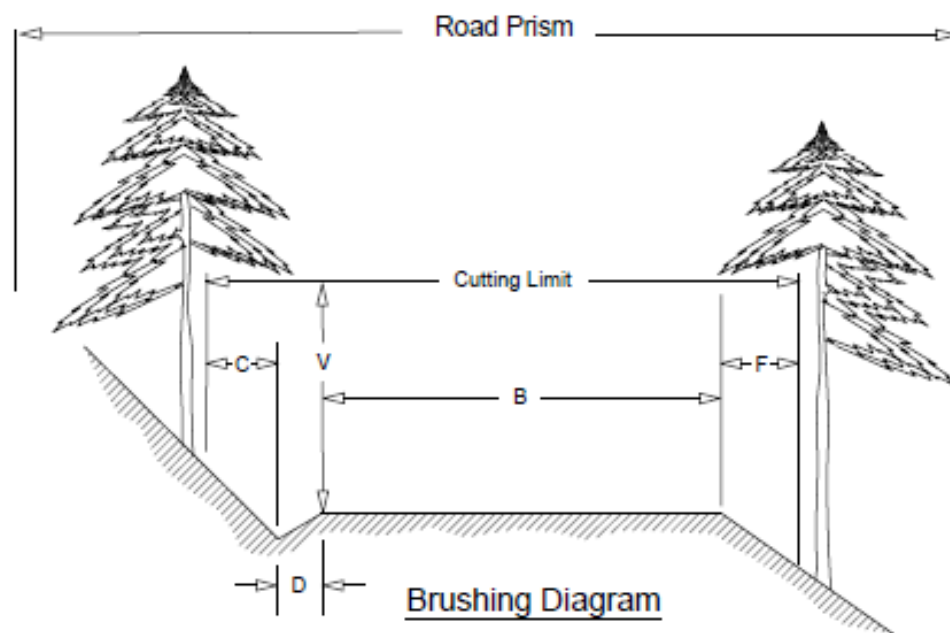
UNITED STATES DEPARTMENT OF THE INTERIOR
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MEDFORD DISTRICT - MEDFORD, OREGON

**KING GRAVES
TIMBER SALE
TYPICAL ROAD RENOVATION**

DRAFTED BY: BLM
DATE: MARCH 2026

SCALE: NONE
SHEET: 1 OF 1

EXHIBIT C6



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

B = Road Bed Subgrade (includes turnouts)

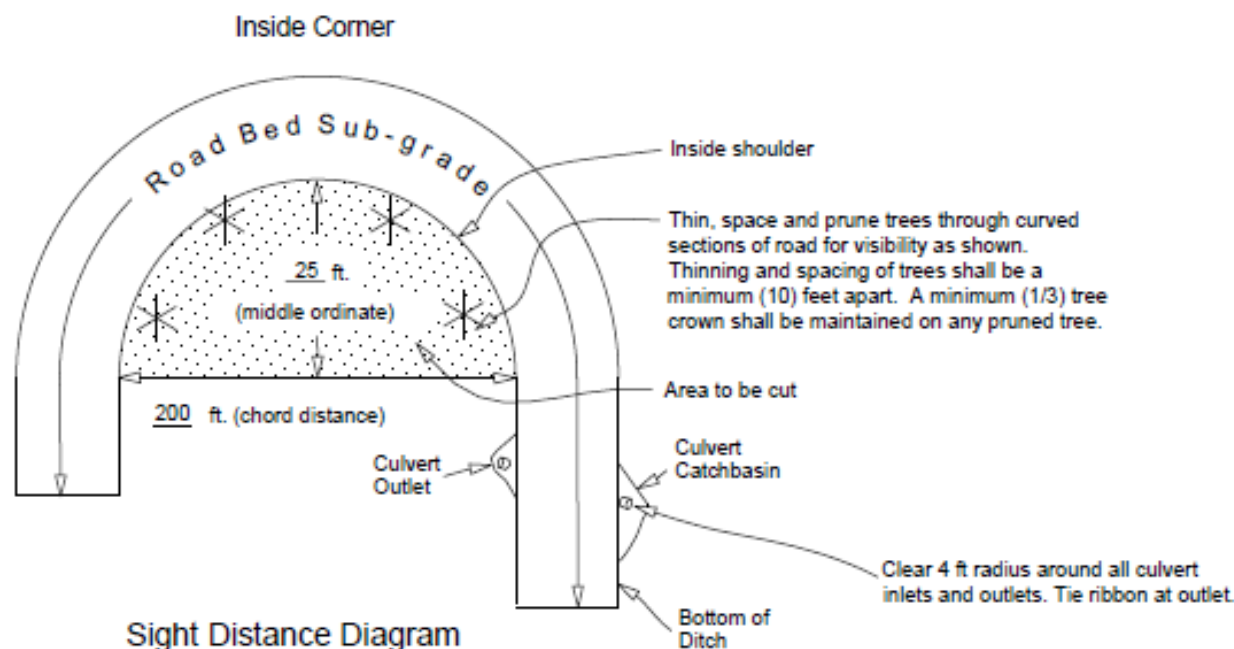
Cut all vegetation to maximum height of 1" flush with the running surface.

C = 6 ft - Distance to be brushed on cut slope beyond centerline of ditch. Cut all vegetation to maximum height of 4".

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

F = 6 ft - Distance to be brushed on fill slope beyond outside shoulder. Cut all vegetation to maximum height of 4".

V = 14 ft - Height of vertical cutting limit



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KING GRAVES
TYPICAL ROADSIDE
BRUSHING DETAIL

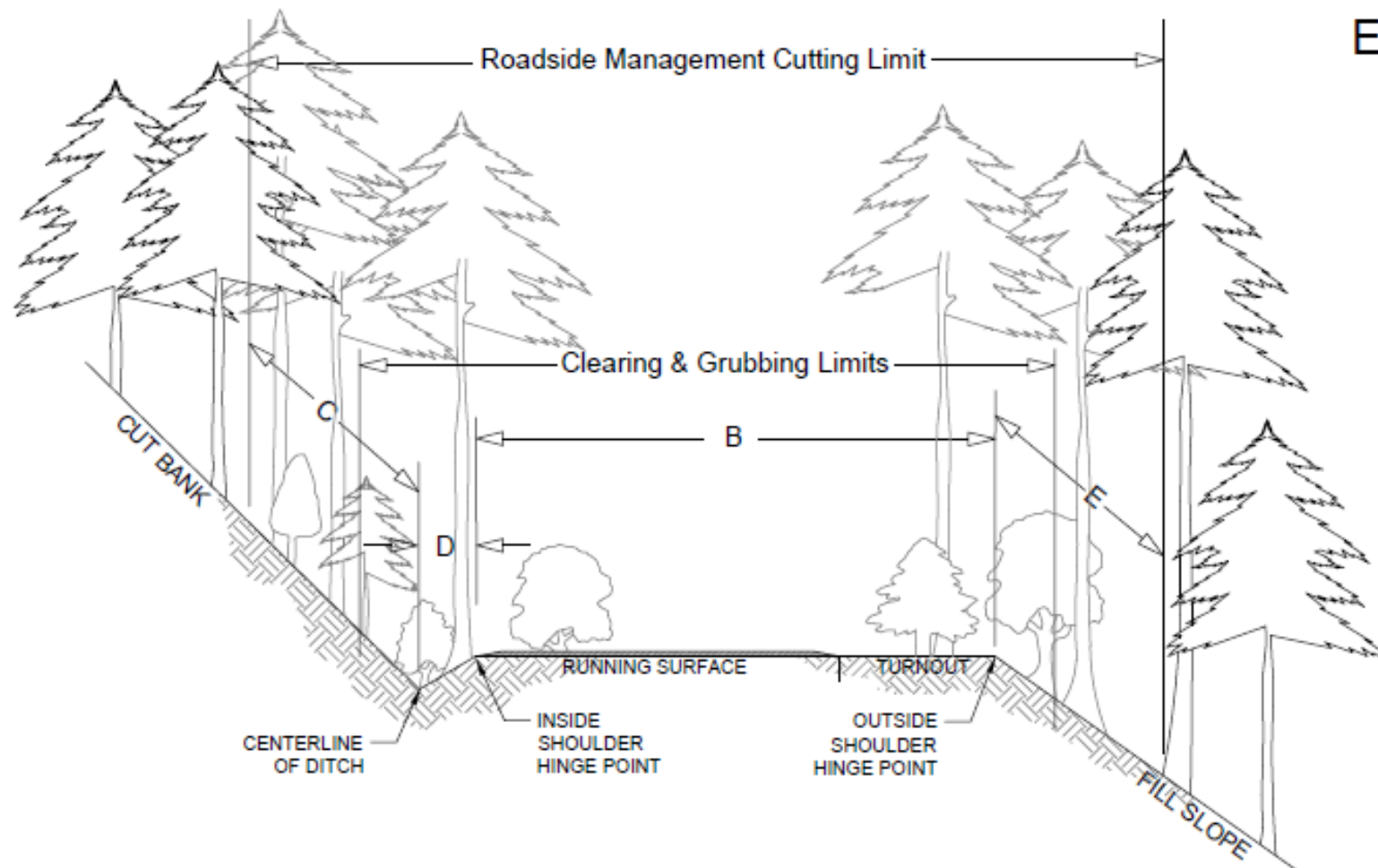
DRAFTED BY: BLM

SCALE: NONE

DATE: MARCH 2026

SHEET: 1 OF 1

EXHIBIT C7



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

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

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

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

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

NOTES:

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

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MEDFORD DISTRICT - MEDFORD, OREGON

KING GRAVES TIMBER SALE
ROADSIDE MANAGEMENT
UNIT DETAIL

DRAFTED BY: BLM

SCALE: NONE

DATE: MARCH 2026

SHEET: 1 OF 1

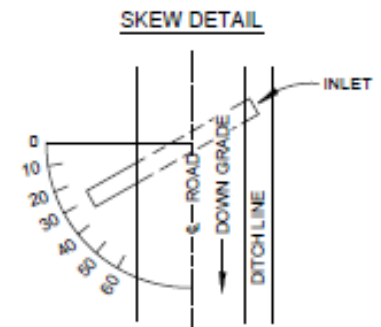
EXHIBIT C8-1

NOTES:

- A. Designed culvert lengths and locations are approximate. Actual lengths and locations will be measured in the field.
- B. Summary of Quantities are shown on Exhibit C3
- C. All downspout pipes are 18 gauge unless otherwise noted.

ELBOW TYPES:*

- ### 1. Turner Type



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MEDFORD DISTRICT - MEDFORD, OREGON

KING GRAVES
TIMBER SALE
CULVERT LIST

DRAFTED BY: BLM

SCALE: NONE

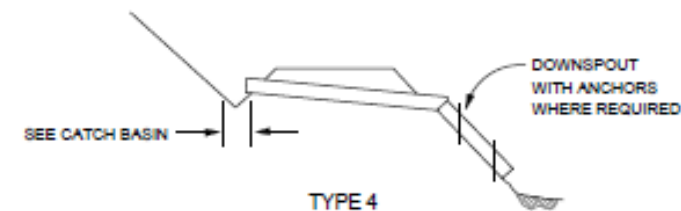
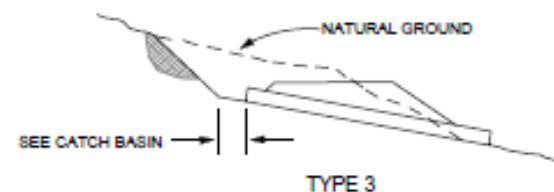
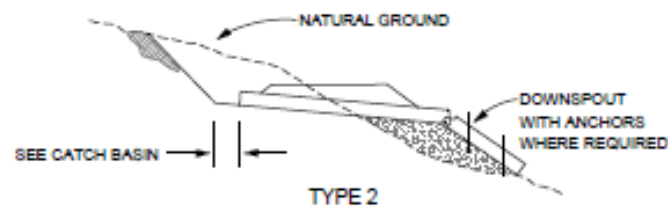
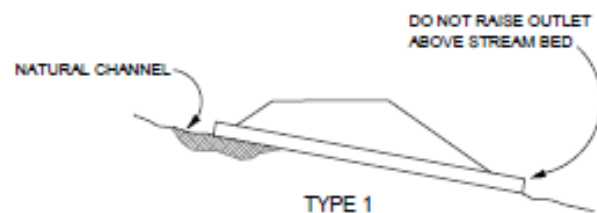
DATE: MARCH 2026

SHEET: 1 OF 1

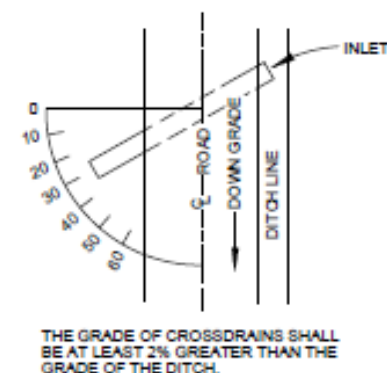
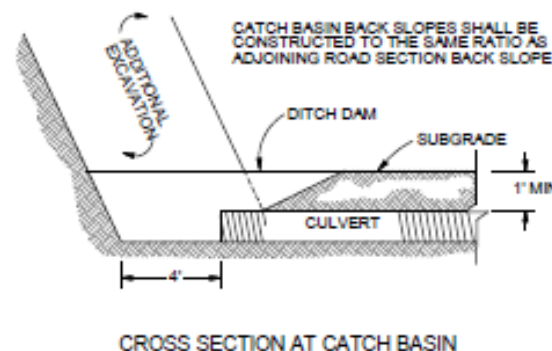
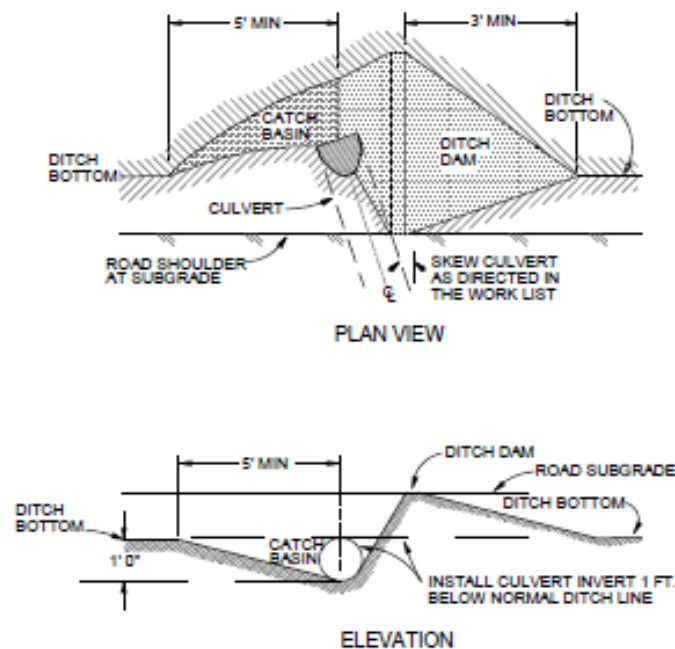
CULVERT LOCATIONS										DOWNSPOUTS				SPLASH PADS NEEDED YES/NO	REMARKS
										1/2 ROUND		FULL ROUND*			
DESIGNED						AS BUILT				SIZE	LENGTH	SIZE	LENGTH		
ROAD NO.	STATION OR M.P.	SIZE	GAUGE	LENGTH	SKEW ANGLE	STATION OR M.P.	SIZE	GAUGE	LENGTH	SIZE	LENGTH	SIZE	LENGTH		
33-4-21.1	0.17	24"	16	34'										YES	
33-4-29.00	1.33	24"	16	32'										YES	
N33-4-29.04	7+47	24"	16	34'										YES	- New installation
N33-4-30.04	3+77	24"	16	42'	30									YES	- New installation
N33-4-30.05	1+04	24"	16	32'										YES	- New installation
	8+39	24"	16	40'										YES	- New installation
N33-4-31.04	5+65	24"	SDR 17	38'										NO	- HDPE Pipe, New installation
	8+40	24"	SDR 17	34'										NO	- HDPE Pipe, New installation
	9+48	24"	SDR 17	32'	20									NO	- HDPE Pipe, New installation
	11+49	24"	SDR 17	40'	30									NO	- HDPE Pipe, New installation
	16+73	24"	16	40'	30									YES	- New installation
	20+70	24"	16	40'	30									YES	- New installation
	22+76	24"	16	40'										YES	- New installation
	26+80	24"	16	40'										YES	- New installation
TOTAL 18" CMP:										TOTAL 24" 1/2 Round:					
TOTAL 24" CMP: 374 LF										TOTAL 30" 1/2 Round:					
TOTAL 30" CMP:										TOTAL 24" Full Round:					
TOTAL 36" CMP:										TOTAL 30" Full Round:					
TOTAL 24" HDPE: 144 LF										TOTAL 36" Full Round:					

EXHIBIT C9-1

CULVERT INSTALLATION TYPES



CATCH BASIN



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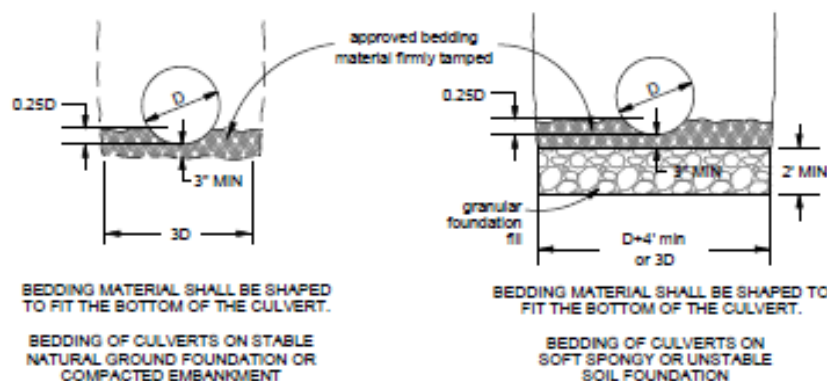
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

KING GRAVES
CULVERT INSTALLATION
DETAILS

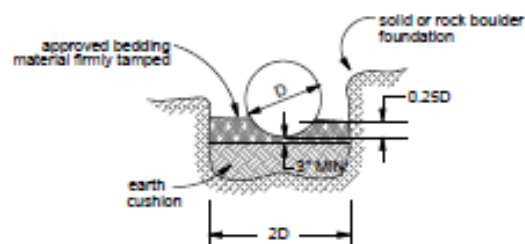
DRAFTED BY: BLM
DATE: MARCH 2026

SCALE: NONE
SHEET: 1 OF 2

BEDDING OF CULVERTS

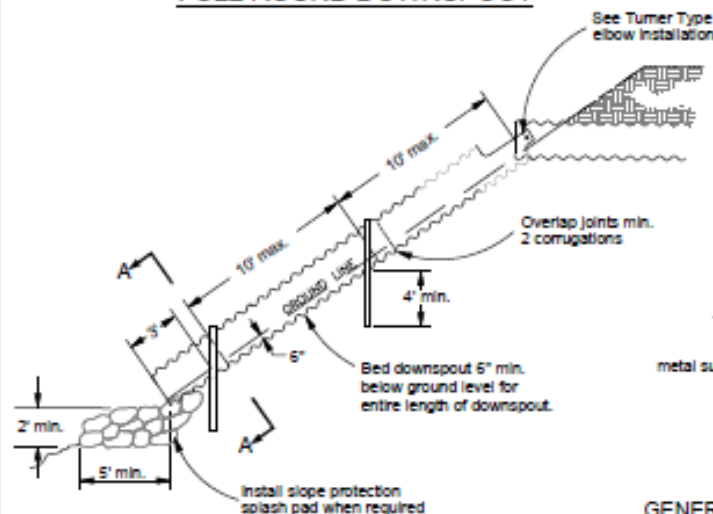


BEDDING OF CULVERT IN SOLID ROCK OR BOULDER FOUNDATION

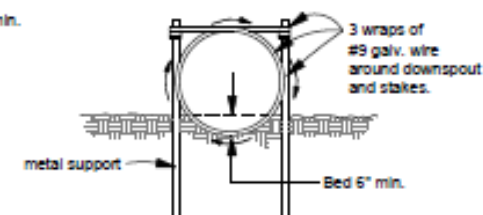


BEDDING MATERIAL SHALL BE SHAPED TO FIT THE BOTTOM OF THE CULVERT. EARTH CUSHIONING OF SILTY CLAY LOAM OR SAND MAY BE USED IF MATERIAL CAN BE PLACED IN THE DRY CONDITION. IF THE EXCAVATION IS WET, USE GRANULAR FOUNDATION FILL MATERIAL. MAINTAIN 8" DEPTH BETWEEN HIGH POINTS OF ROCKS AND/OR BOULDERS AND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

FULL ROUND DOWNSPOUT



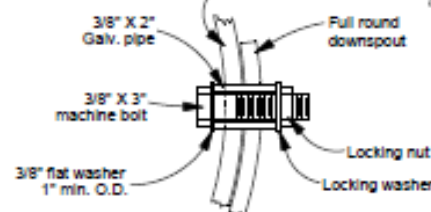
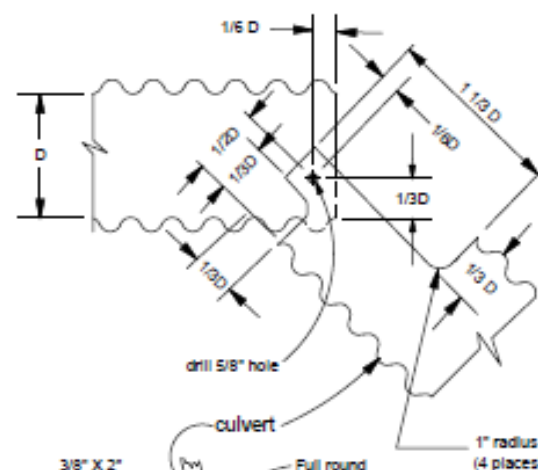
SECTION A-A



GENERAL NOTES:

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

TURNER TYPE ELBOW



BOLT DETAIL

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

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BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

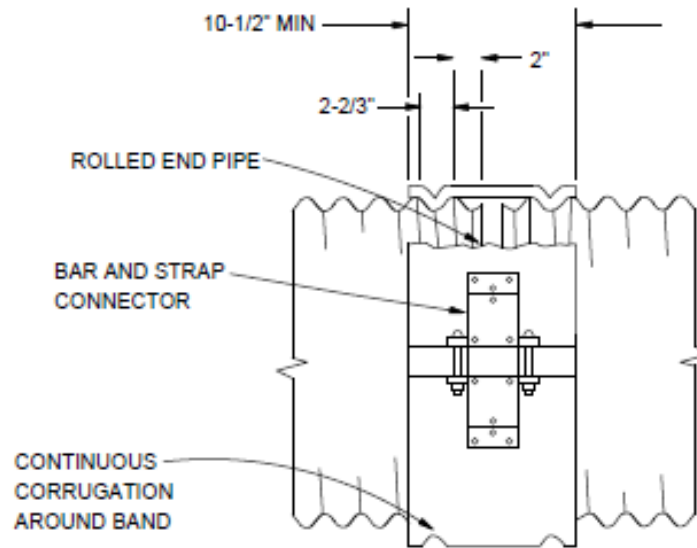
KING GRAVES CULVERT INSTALLATION DETAILS

DRAFTED BY: BLM
DATE: MARCH 2026

SCALE: NONE
SHEET: 2 OF 2

EXHIBIT C10

CSP "HUGGER" COUPLER BANDS



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

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

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

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MEDFORD DISTRICT - MEDFORD, OREGON

KING GRAVES
TIMBER SALE
CULVERT BAND DETAIL

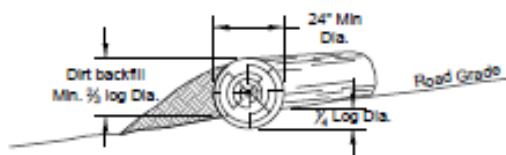
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DATE: MARCH 2026

SCALE: NONE
SHEET: 1 OF 1

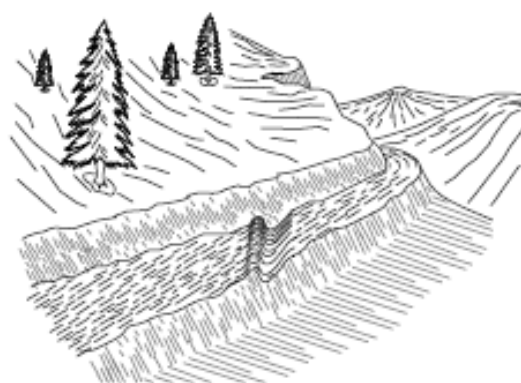
EXHIBIT C11-1



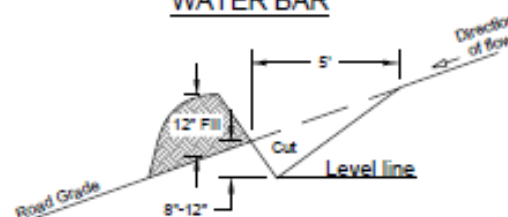
LOG BARRICADE



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



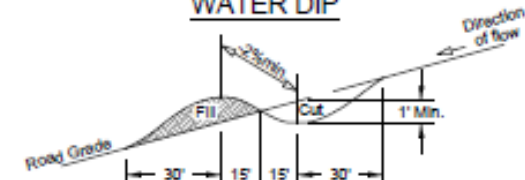
WATER BAR



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



WATER DIP



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

WATER BAR SPACING* BY EROSION CLASS^A

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

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

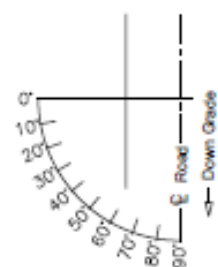
^A The erosion classes include the following rock types:
High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.
Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.
Low: Metasediments, metavolcanics, and hard shale.

WATER DIP SPACING*

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

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

SKEW DIAGRAM



*ALWAYS
THINK
SAFETY*

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

**KING GRAVES
TIMBER SALE
DRAINAGE & EROSION
CONTROL DETAILS**

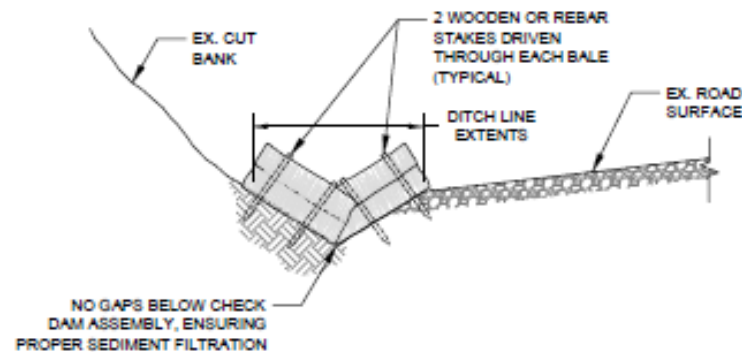
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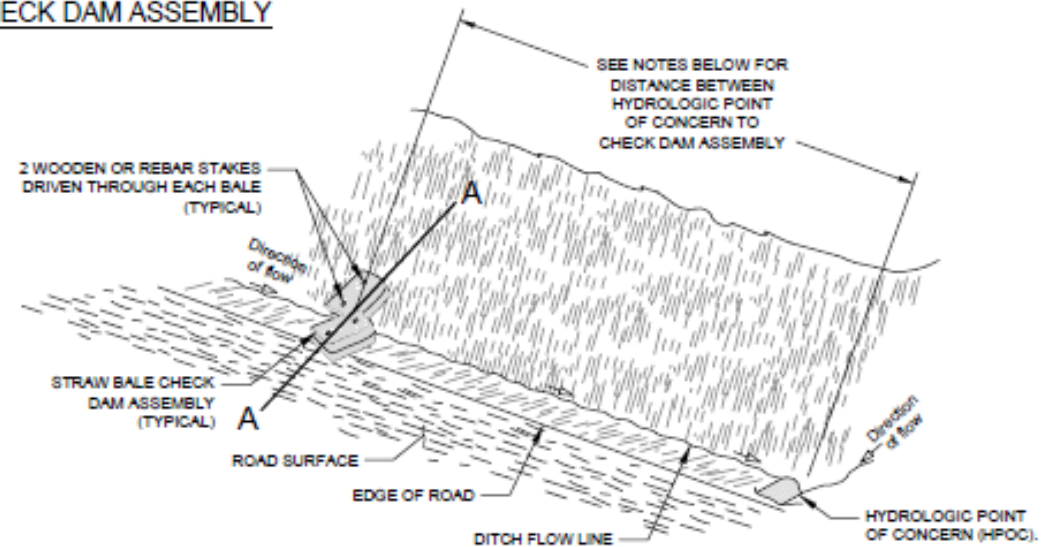
DATE: MARCH 2026

SHEET: 1 OF 2

STRAW BALE CHECK DAM ASSEMBLY



SECTION A-A



PLAN

NOTES:

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

INSTALLATION NOTES:

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

INSPECTION/MAINTENANCE NOTES:

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

ALWAYS
THINK
SAFETY

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

KING GRAVES
TIMBER SALE
DRAINAGE & EROSION
CONTROL INSTALLATION

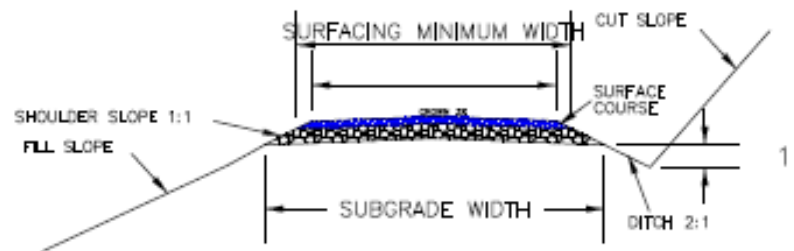
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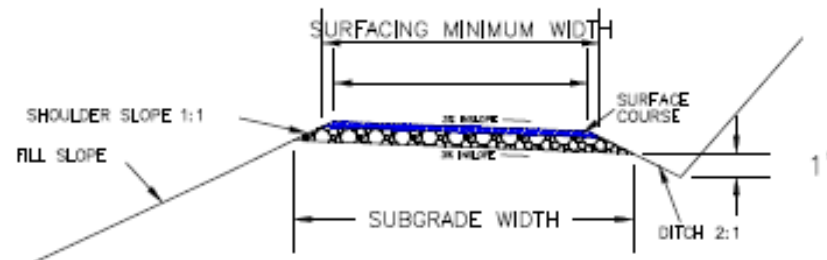
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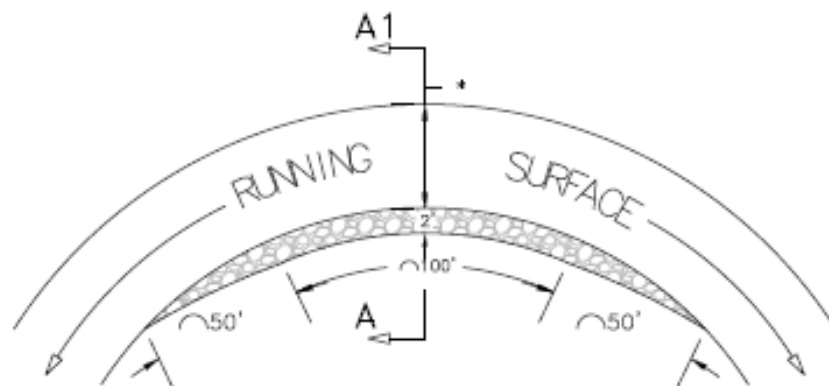
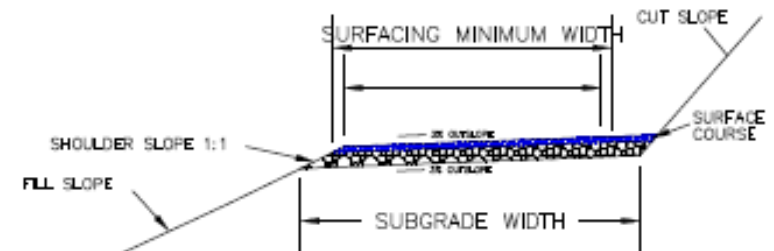
TYPICAL CROWNED SURFACE
EXISTING MIN. BASE COURSE WIDTH



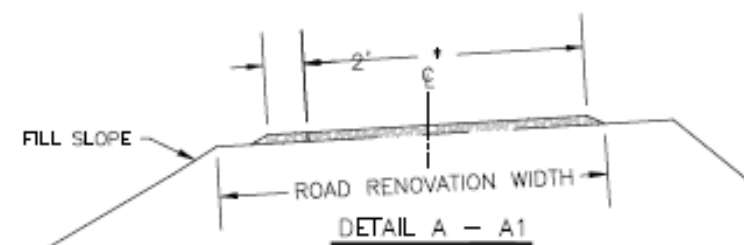
TYPICAL INSLOPED SURFACE
EXISTING MIN. BASE COURSE WIDTH



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**

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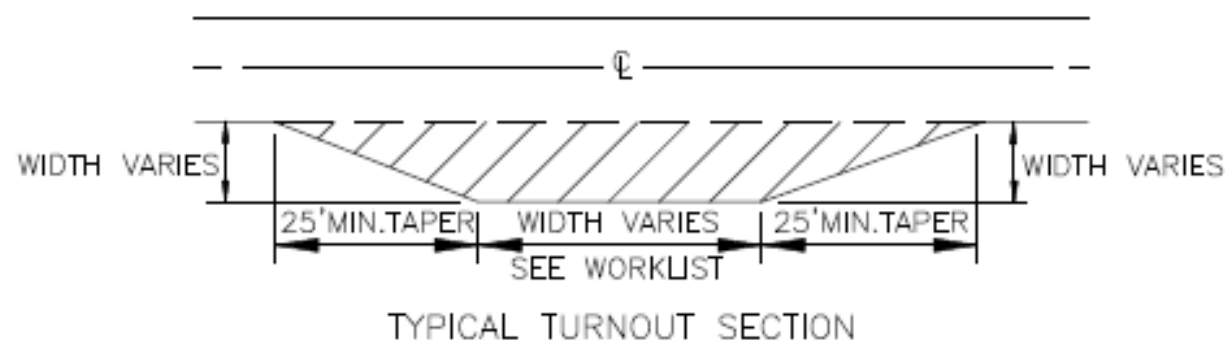
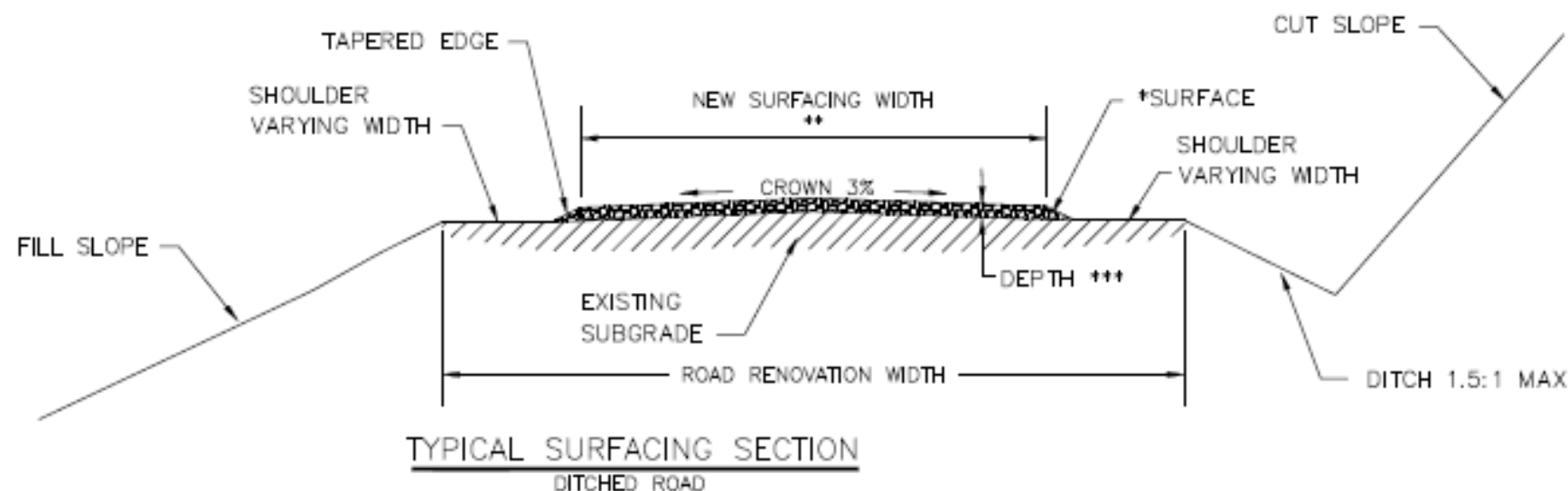
SCALE: AS SHOWN

DATE: MARCH 2026

SHEET 1 OF 1

NOTES:

SURFACING WIDTH EDGES SHALL BE TAPERED TO SUBGRADE. TAPERS SHALL BE SMOOTH AND TRANSITION TO SUBGRADE AS TO NOT CAUSE A SUDDEN DROP OR STEEP EDGE.



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

TYPICAL TURNOUT SECTION

DRAWN: BLM

SCALE: AS SHOWN

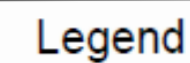
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SHEET 1 OF 1

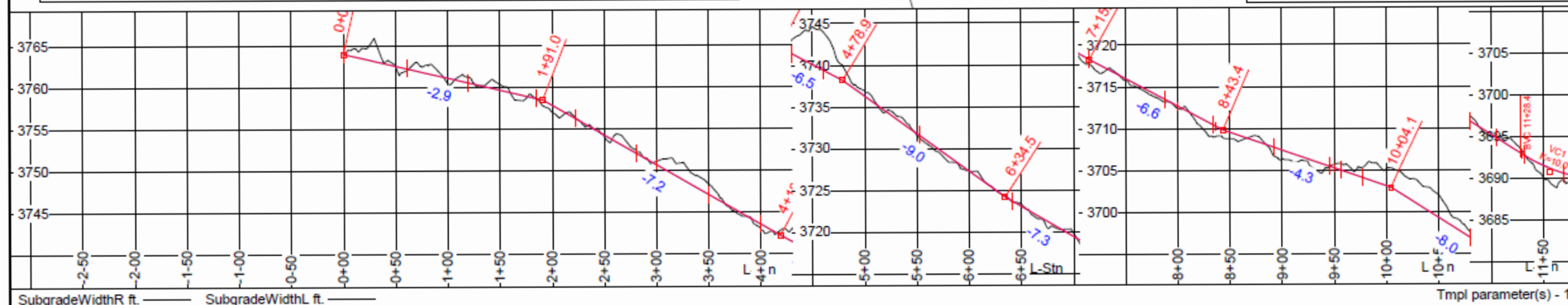


OREGON

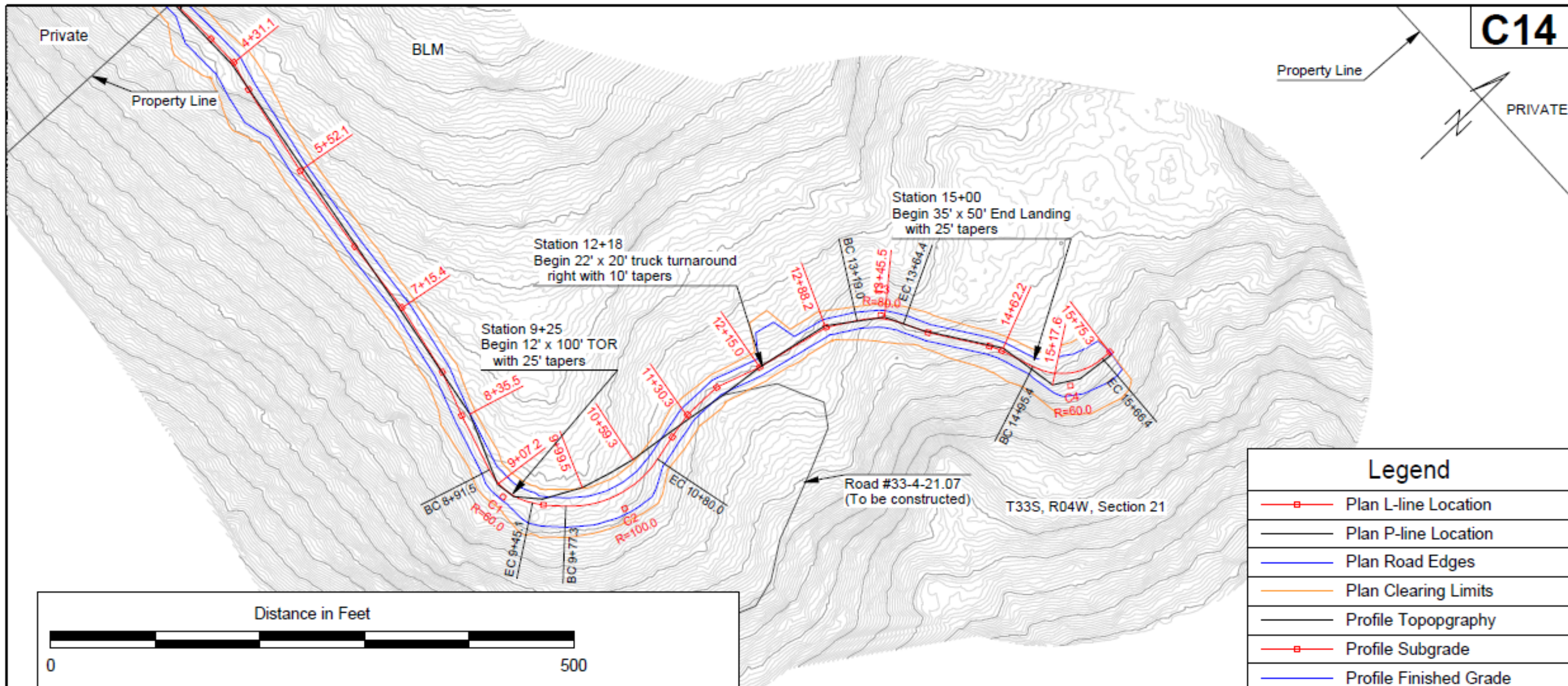
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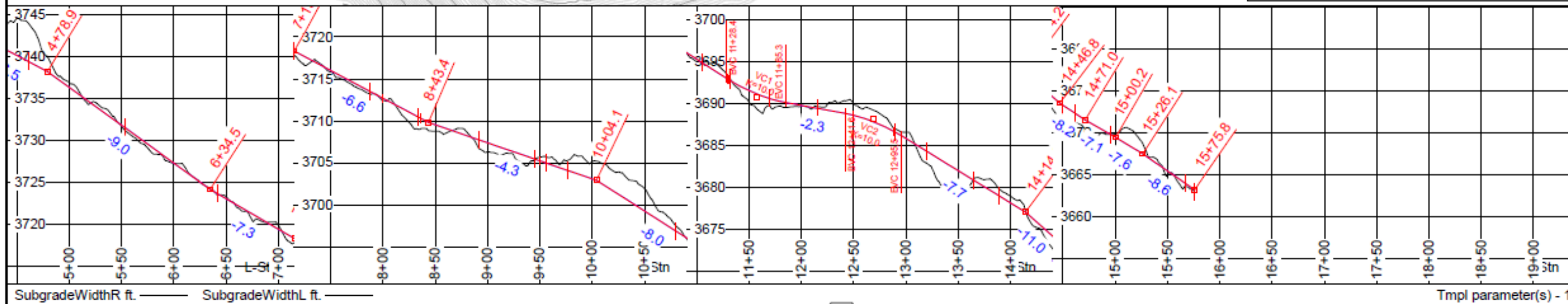
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	Plan P-line Location
	Plan Road Edges
	Plan Clearing Limits
	Profile Topography
	Profile Subgrade
	Profile Finished Grade



PROJECT NO:	
DESIGN OFFICE:	
DESIGNED BY:	
DRAWN BY:	
CHECK BY:	
APPROVED BY:	
DATE:	



Legend	
— □	Plan L-line Location
—	Plan P-line Location
—	Plan Road Edges
—	Plan Clearing Limits
—	Profile Topography
— □	Profile Subgrade
—	Profile Finished Grade





C14

Property Line

PRIVATE

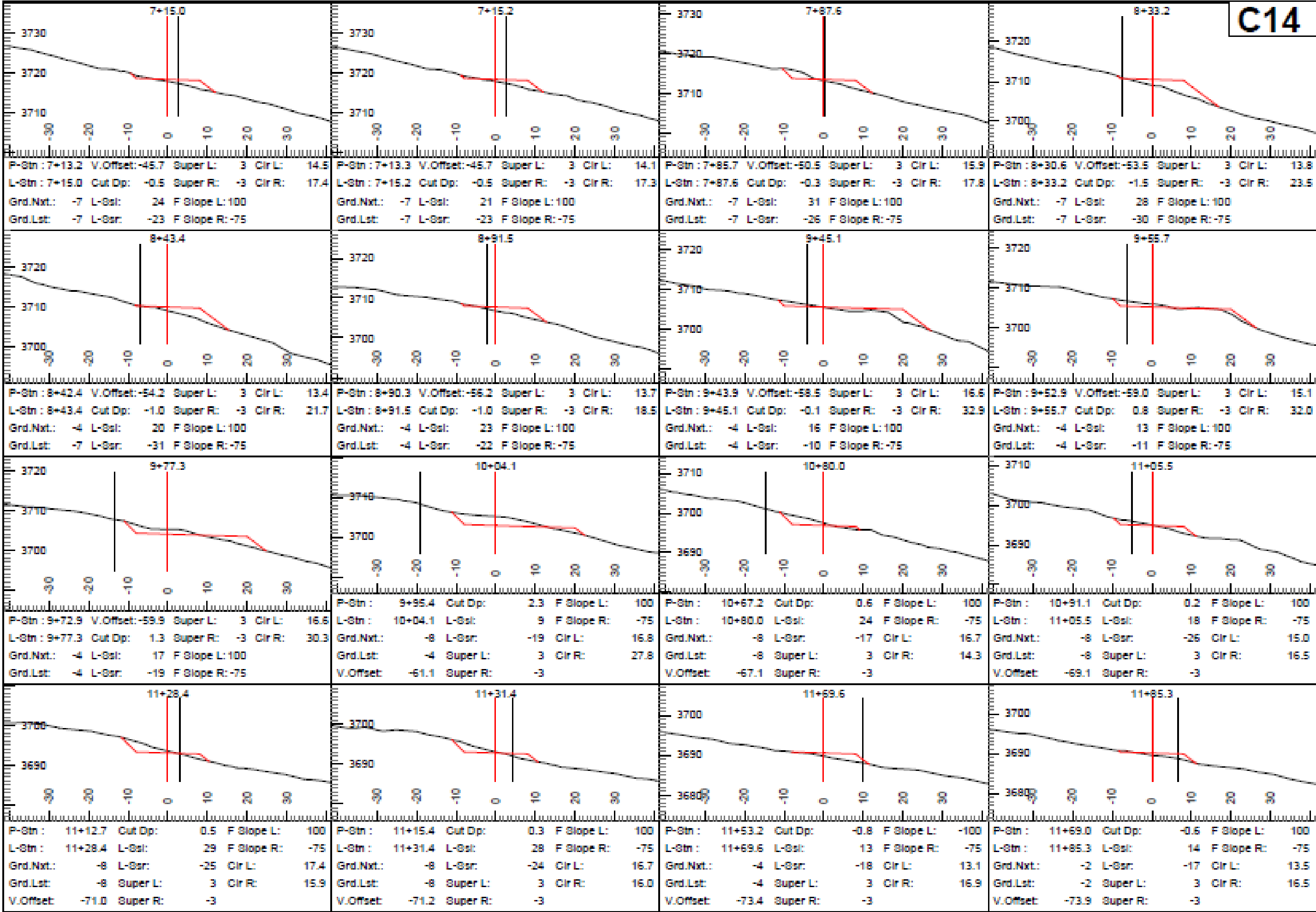
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-20.00B
KING GRAVES TIMBER SALE

MEDFORD DISTRICT

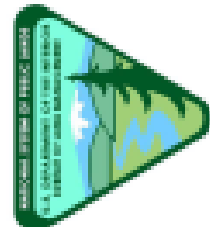
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PROJECT NO.	DESIGN OFFICE	DESIGNED BY	DRAWN BY	CHK'D BY	APPROVED BY	DATE	DESCRIPTION	MARK

SHEET 2 OF 8

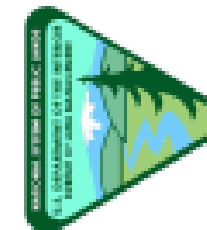


C14



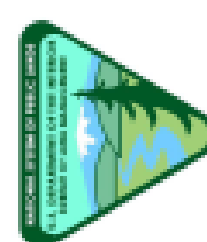
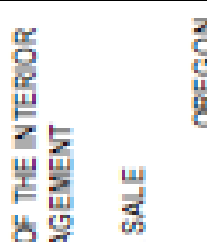
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-20.006
ROTORS UP TIMBER SALE
MEDFORD DISTRICT
OREGON

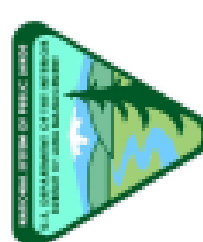
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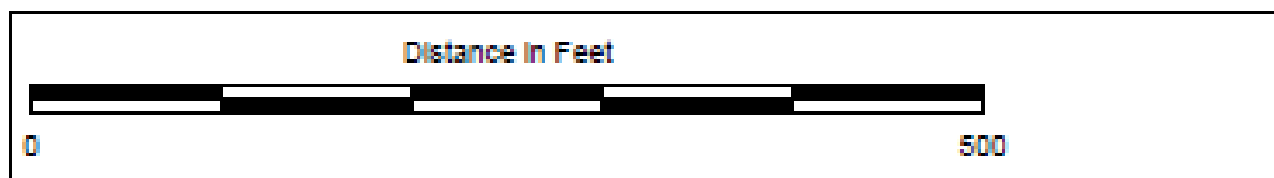
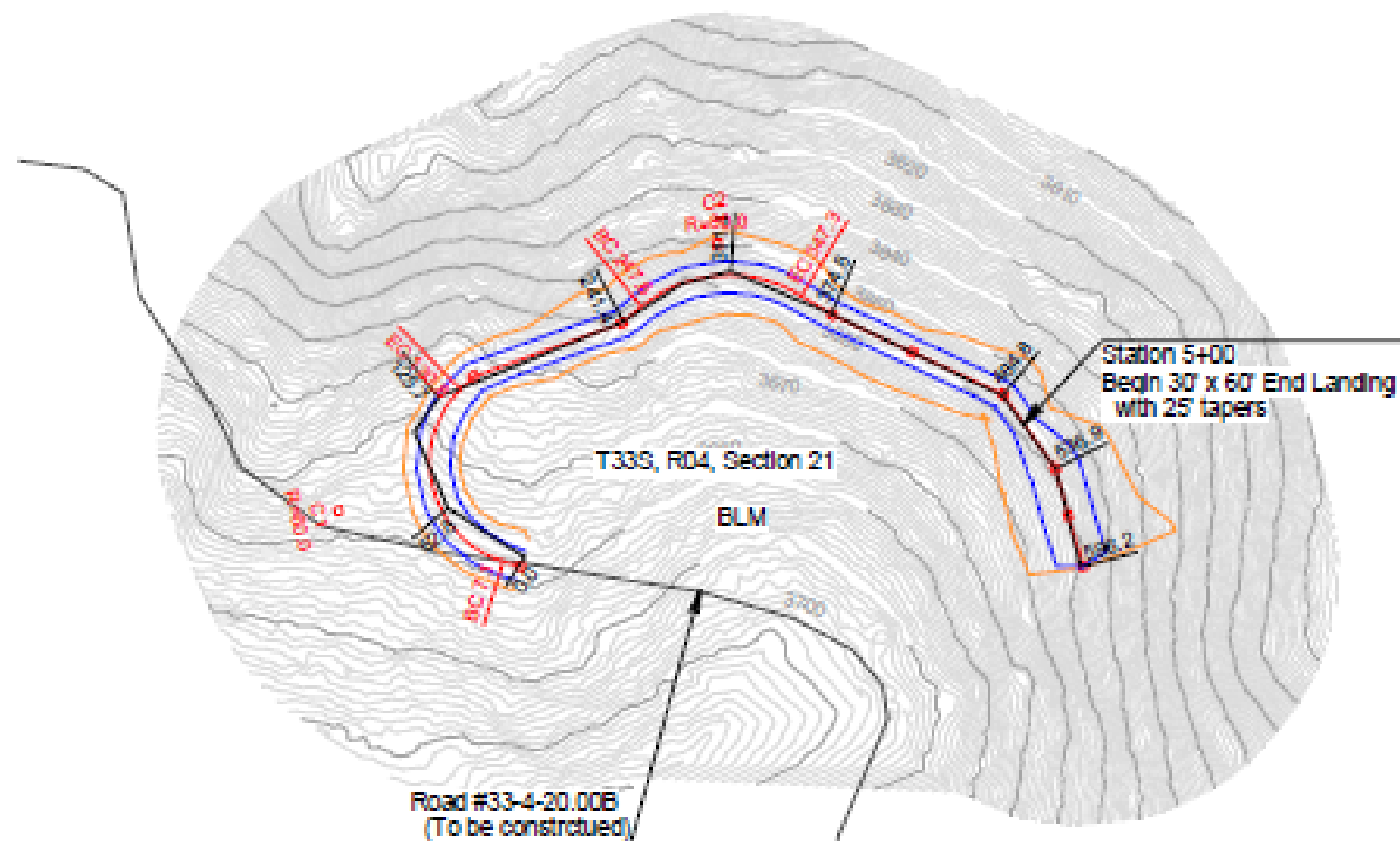
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-20.00B
ROTORS UP TIMBER SALE
MEDFORD DISTRICT OREGON

PROJECT NO.			
DESIGN OFFICE:			
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DATE:			
PROJECT LOCATION:			
PROJECT NO.			

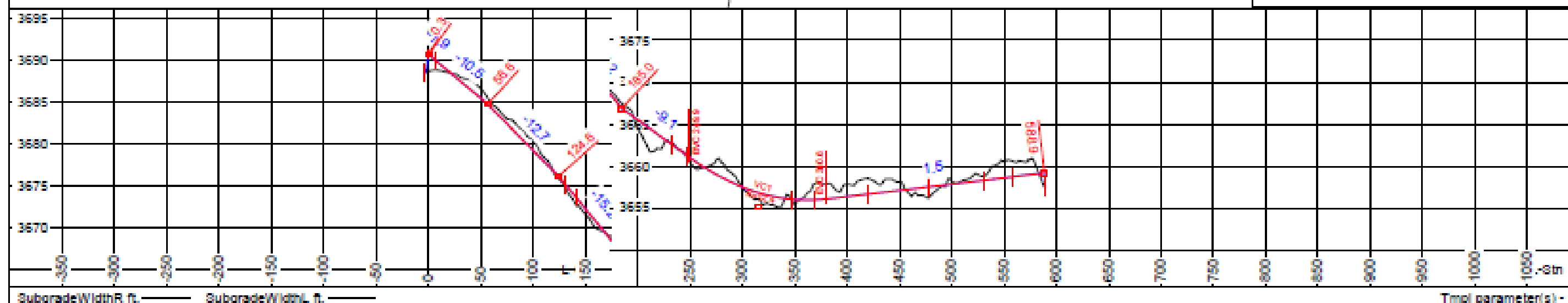
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0+00.0	0.0	0+00.0				0.0	16.1	15.9			UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT 33-4-20.00B ROTORS UP TIMBER SALE MEDFORD DISTRICT OREGON	<table><tr><td>PROJECT NO.</td><td></td><td></td><td></td><td></td><td></td><td></td><td>DATE</td></tr><tr><td>DESIGN OFFICE</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>DESIGNED BY</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>DRAWN BY</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>CHECKED BY</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>APPROVED BY</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>DATE</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	PROJECT NO.							DATE	DESIGN OFFICE								DESIGNED BY								DRAWN BY								CHECKED BY								APPROVED BY								DATE							
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0+60.5	5.8	0+60.7	-3	86.1	43.9	42.2	27.1	25.4																																																												
1+19.6	5.8	1+19.8	-3	89.6	69.1	62.7	22.7	24.2																																																												
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3+98.3	-2.2	3+99.4	-7	31.0	82.5	87.4	15.6	35.3																																																												
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10+22.7		10+32.2		61.0	4.5																																																															
Pg. Tot.				826.2	741.0																																																															
Cum. Tot.				826.2	741.0																																																															

P-Stn ft.	H. Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.	Clr L ft.	Clr R ft.	C14	
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10+22.7	21.7	10+32.2	-8	49.2	8.0	85.0	16.8	27.3		
10+48.1	18.8	10+59.3	-8	18.3	3.9	126.2	16.8	25.5		
10+67.2	13.6	10+80.0	-8	9.4	5.8	140.6	16.7	14.3		
10+89.9	5.2	11+04.2	-8	0.3	0.4	144.2	15.2	16.6		
10+91.1	4.8	11+05.5		13.5	5.5	144.1	15.0	16.5		
11+14.4	-3.6	11+30.3	p -8	0.6	0.3	152.2	17.3	16.3		
11+15.4	-4.0	11+31.4	p -6	6.3	30.8	152.5	16.7	16.0		
11+53.2	-9.7	11+69.6	p -4	0.0	0.3	128.0	13.1	16.9		
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13+68.9	0.0	13+84.8	-8	4.3	0.5	206.7	18.5	15.0		
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15+32.5	-7.6	15+38.5	-9	55.2	106.1	115.2	29.3	43.9		
15+61.4	-2.5	15+66.4	-9	17.7	25.6	64.4	30.1	40.9		
15+70.3	-3.0	15+75.3		0.0	0.1	56.5	12.3	13.5		
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Pg. Tot.				547.4	520.0					
Cum. Tot.				1312.6	1256.7					
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT 33-4-20-008 ROTORS UP TIMBER SALE MEDFORD DISTRICT OREGON										PROJECT NO. DESIGNED BY: DRAWN BY: CHECK BY: APPROVED BY: DATE
SHEET 8 OF 8										

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-21.07
KING GRAVES TIMBER SALE
MEDFORD DISTRICT OREGON



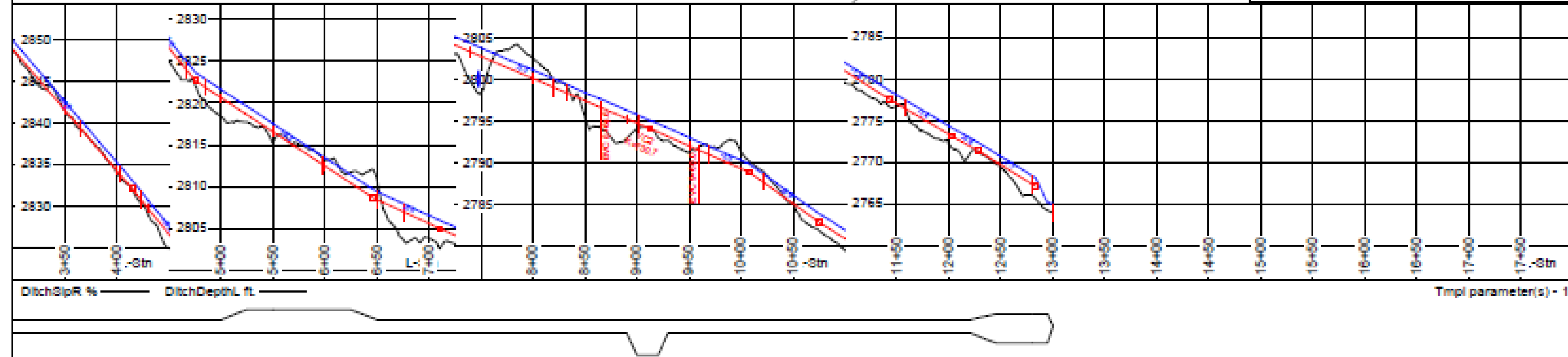
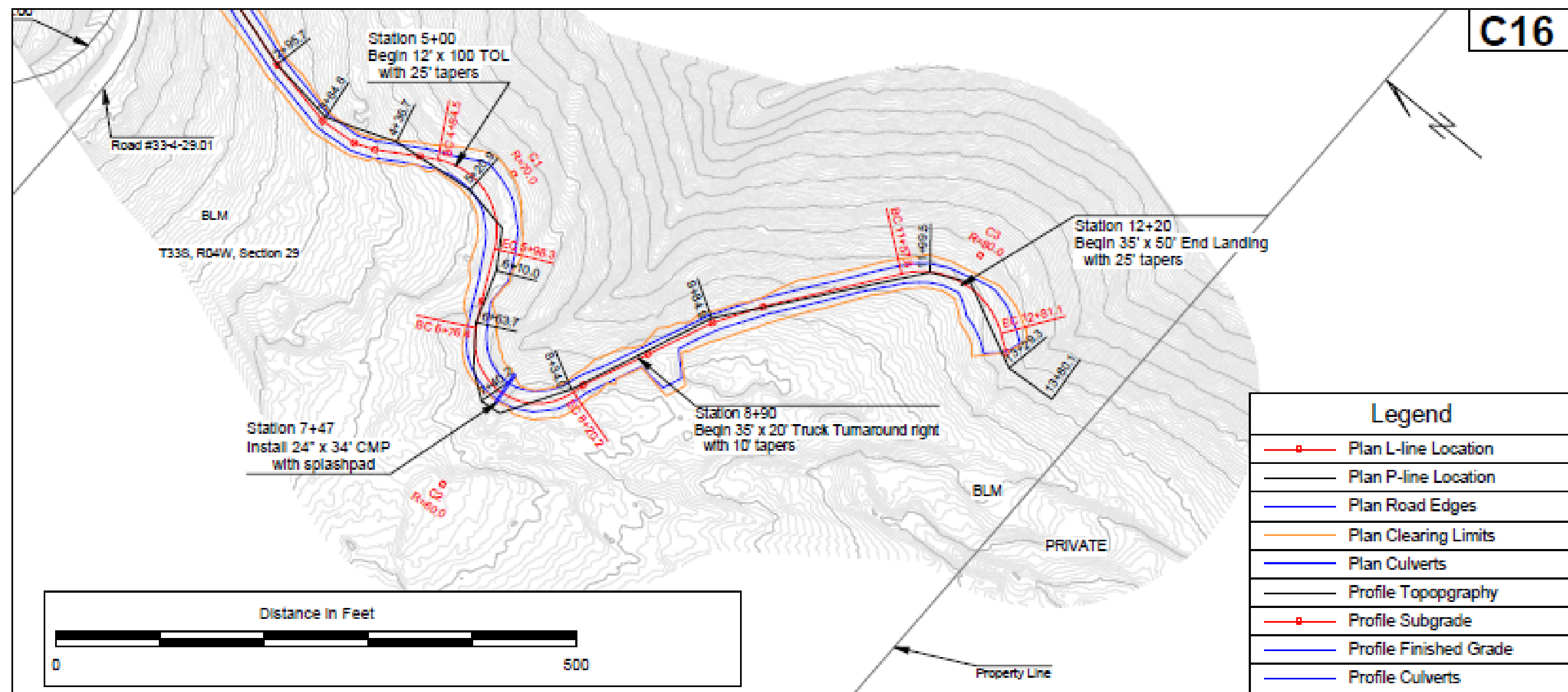
Legend	
	Plan L-line Location
	Plan P-line Location
	Plan Road Edges
	Plan Clearing Limits
	Profile Topography
	Profile Subgrade
	Profile Finished Grade

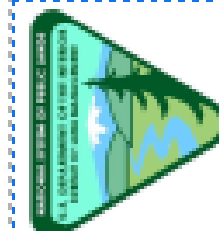
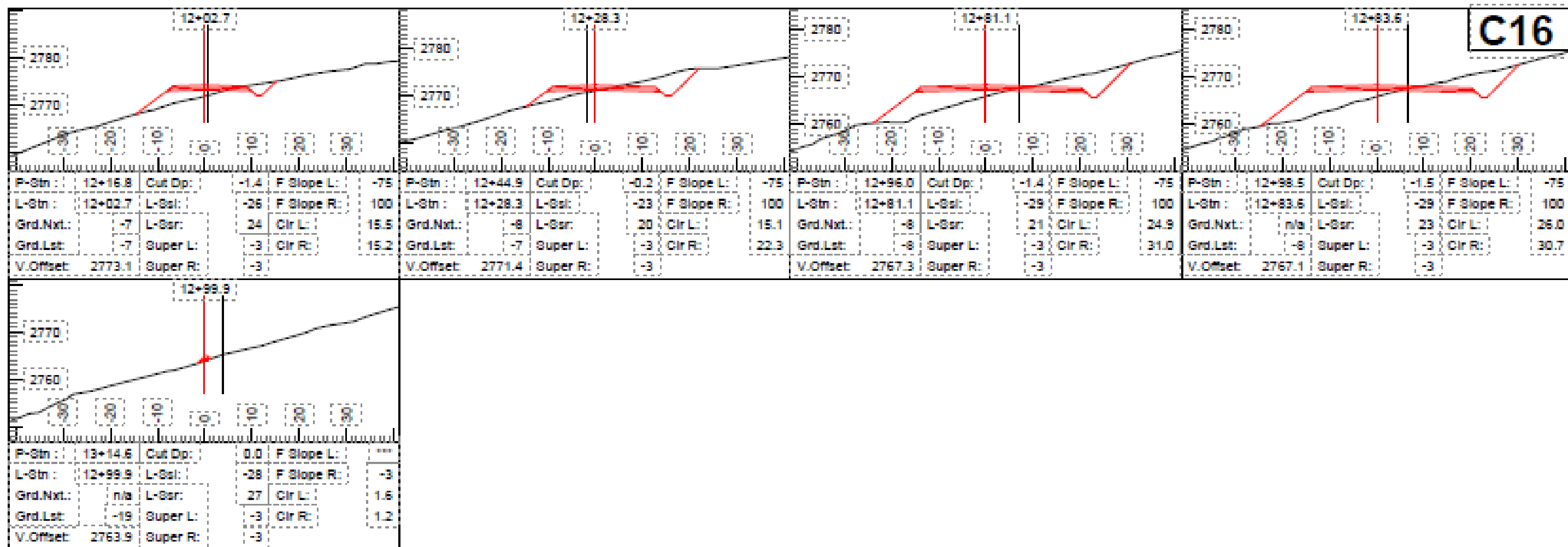


PROJECT NO.	
DESIGN PRICE	
DESIGNED BY	
DRAWN BY	
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APPROVED BY	
DATE	



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-29.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

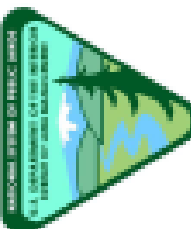
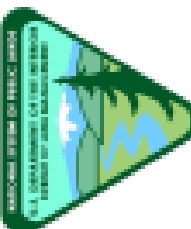
[illegible]



C16

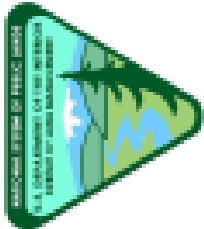
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-29.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

PROJECT NO.				
DESIGN OFFICE				
DESIGNED BY				
DRAWN BY				
CHECK BY				
APPROVED BY				
DATE				
PROJECT NUMBER				

P-Stn ft.		H.Offset ft.		L-Stn ft.		Grade %		SG Cut V. Cu. Yd.		SG Fill V. Cu. Yd.		Mass H. Cu. Yd.		C16	
0+00.0		0.0		0+00.0				0.0		0.0		0.0		UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT 33-4-29.04 KING GRAVES TIMBER SALE MEDFORD DISTRICT OREGON	
0+00.0		0.0		0+00.0		-2		46.3		1.9		0.0			
0+34.3		0.0		0+34.3		-2		24.5		28.0		44.4			
0+65.5		0.9		0+65.5				81.9		91.4		40.9			
1+33.6		0.0		1+33.6				244.3		61.1		31.4			
2+95.7		0.0		2+95.8		-15		57.2		25.6		214.6			
3+64.6		4.5		3+65.1		-15		0.6		0.2		246.2			
3+64.6		4.4		3+65.9		-15		23.0		8.9		246.6			
3+98.9		14.4		4+02.6				5.4		5.7		260.7			
4+19.2		13.8		4+23.0		-15		1.6		9.2		260.3			
4+36.7		10.7		4+39.5		-15		2.4		26.8		252.8			
4+63.1		-0.9		4+67.1		-15		1.8		17.2		228.3			
4+79.2		-7.5		4+84.5				12.4		117.9		212.9			
5+20.9		-10.7		5+28.7		-8		56.3		123.7		107.4			
5+69.1		5.4		5+79.8		-8		38.1		23.8		40.1			
5+89.7		4.4		5+98.3		-8		43.8		18.7		54.3			
6+10.0		6.5		6+17.9		-8		81.5		1.5		79.4			
6+42.7		2.2		6+50.1		-6		20.4		34.3		159.4			
6+63.7		-1.3		6+71.2		-6		0.0		16.2		145.6			
6+69.0		-0.5		6+76.4				6.6		102.8		129.3			
7+07.1		-6.6		7+14.7		-5		5.0		67.0		33.2			
7+40.2		-19.3		7+42.3		-5		0.0		23.2		-28.8			
7+61.2		-19.5		7+47.8		-5		134.4		30.1		-52.0			
8+34.0		3.1		8+19.8		-5		0.4		0.0		52.3			
8+34.1		3.0		8+20.2		-5		12.1		1.8		52.7			
8+45.9		1.3		8+32.2		-5		25.7		121.4		63.0			
9+14.8		3.3		9+01.0				143.4		45.2		-32.7			
9+83.6		4.4		9+69.9		-5		1.2		0.2		65.4			
9+84.9		4.5		9+70.6				111.9		2.5		66.5			
10+35.7				10+21.1											
Pg. Tot.								1182.2		1006.3				PROJECT NO. DESIGNED BY: DESIGNED BY: DRAWN BY: CHECKED BY: APPROVED BY: DATE	SHEET 6 OF 7
Cum. Tot.								1182.2		1006.3					

P-Stn ft.	H.Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.
10+35.7	-0.7	10+21.1	-7	91.5	130.9	175.8
11+72.4	-4.1	11+57.8		12.6	27.7	136.4
11+99.5	-0.1	11+85.3		25.6	45.7	121.3
12+39.4	4.5	12+26.0		130.4	85.3	101.1
12+96.0	-6.8	12+81.1		51.8	36.8	146.3
13+14.6	-3.7	12+99.9				161.3
Pg. Tot.				311.9	326.4	
Cum. Tot.				1494.1	1332.7	

C16



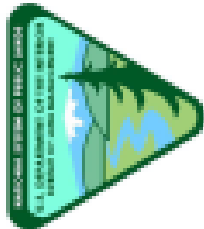
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-29.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

PROJECT NO.						
DESIGNED BY:						
DESIGNED BY:						
DRAWN BY:						
CHECK BY:						
APPROVED BY:						
DATE						

SHEET 7 OF 7

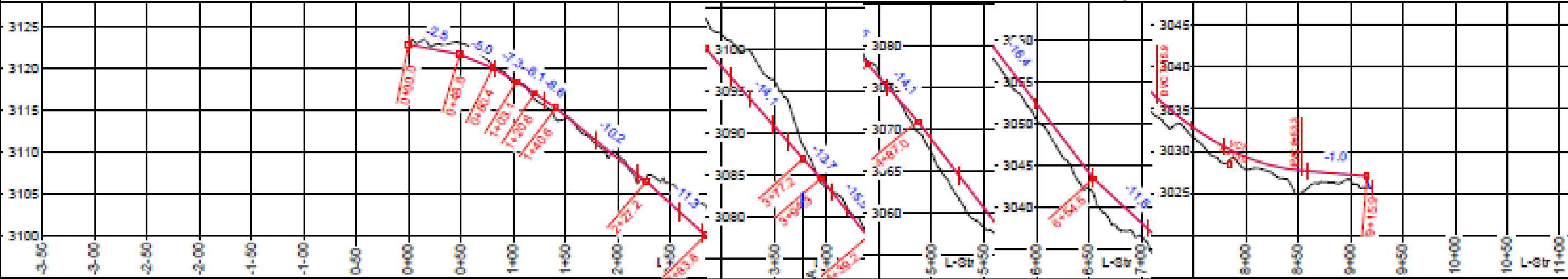
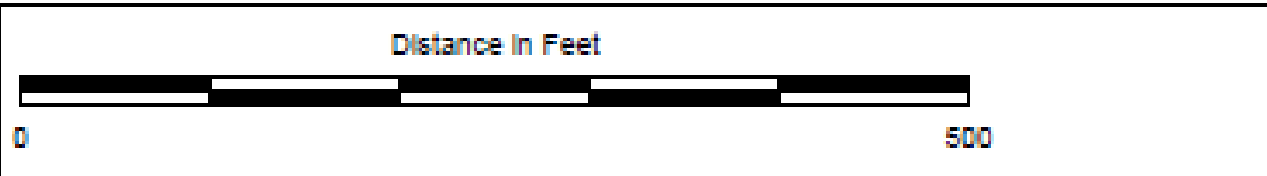
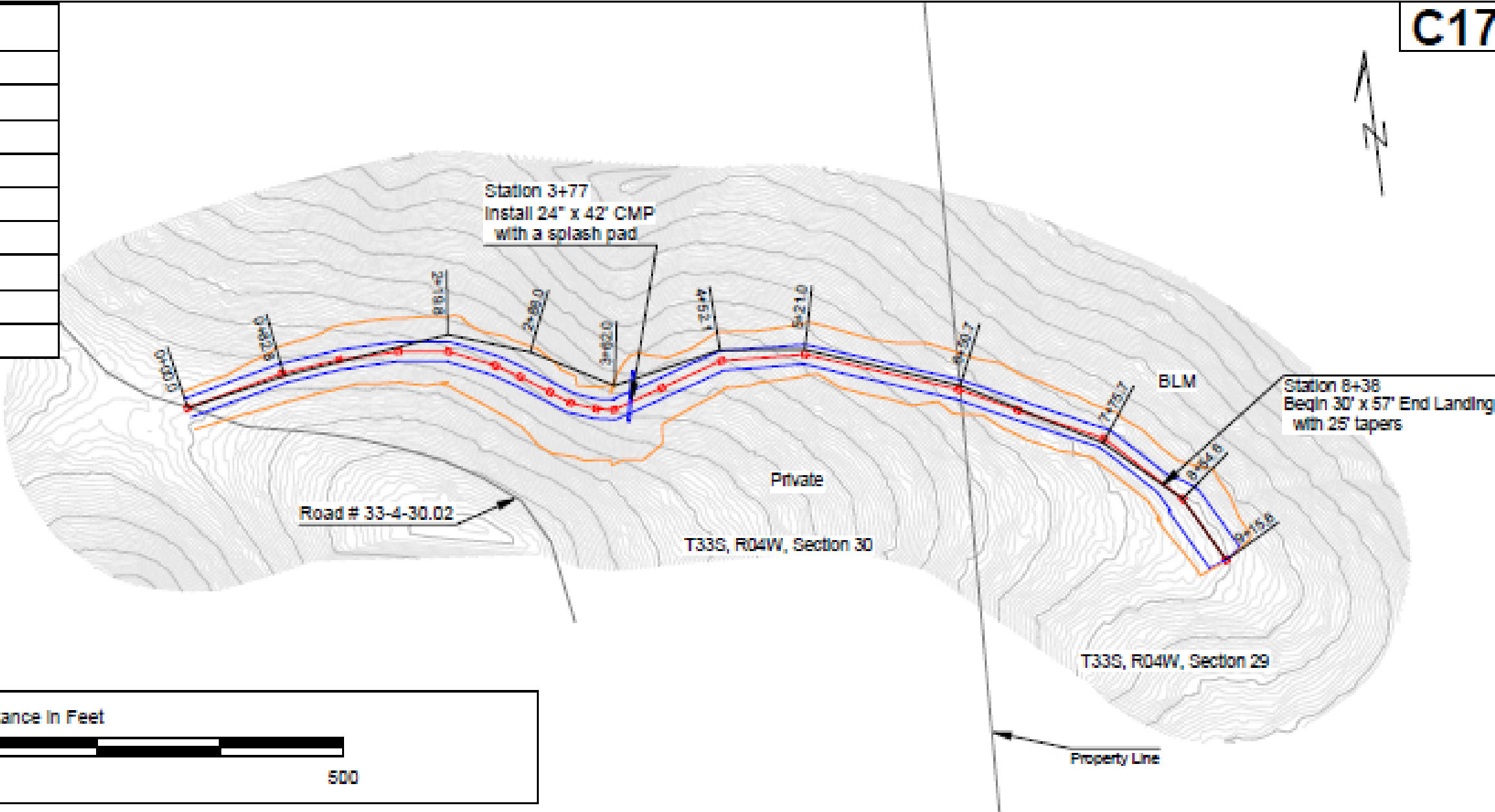
Legend	
	Plan L-line Location
	Plan P-line Location
	Plan Road Edges
	Plan Clearing Limits
	Plan Culverts
	Profile Topography
	Profile Subgrade
	Profile Finished Grade
	Profile Culverts

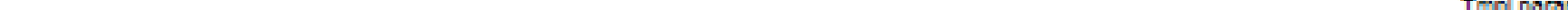
C17



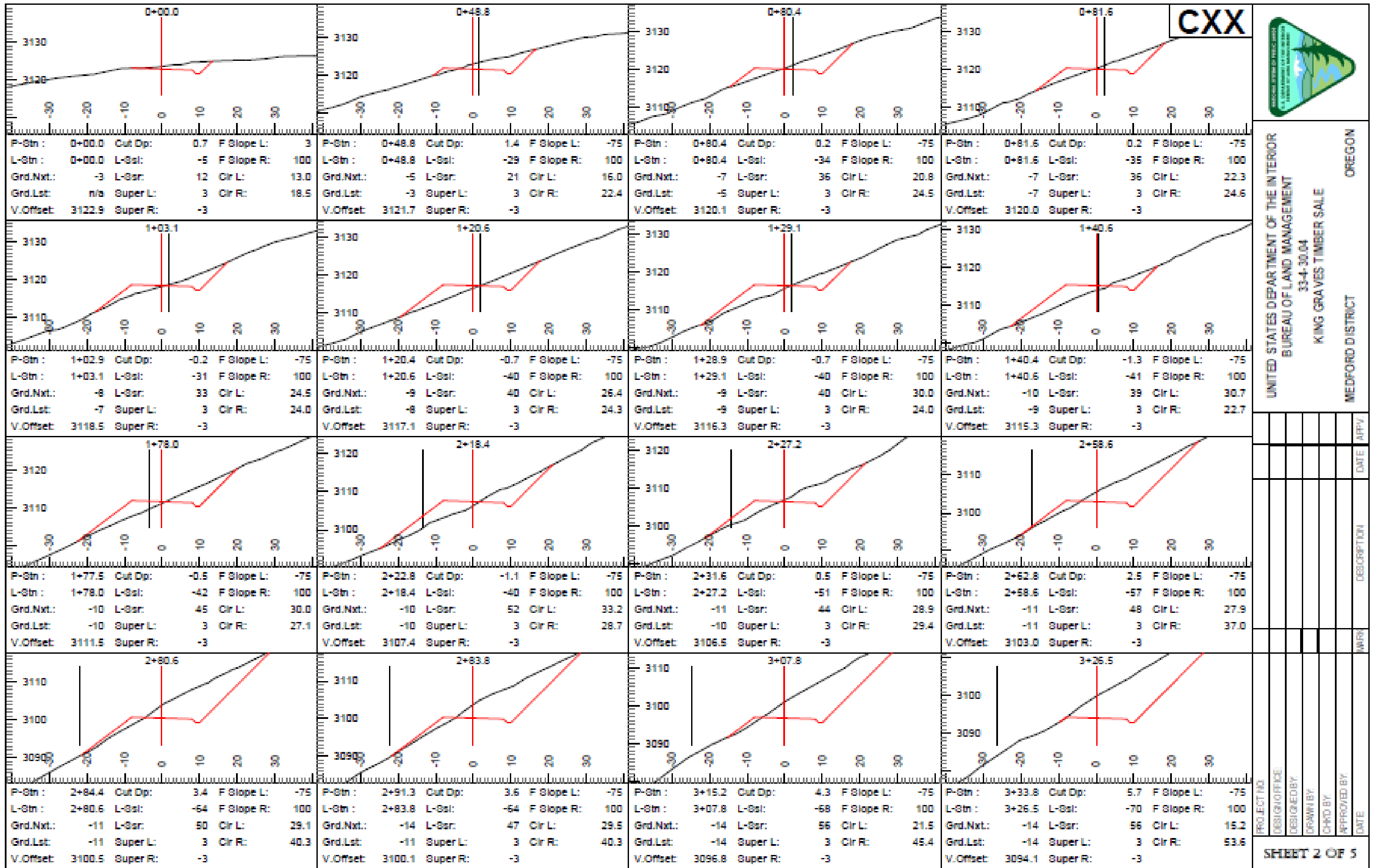
UNITED STATES DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 33-4-30.004
 KING GRAVES TIMBER SALE

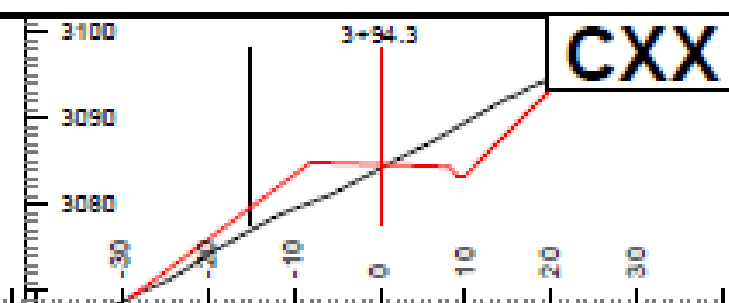
MEDFORD DISTRICT
 OREGON



SubgradeWidthR ft. _____	DitchDepthR (Right) ft. _____	
		

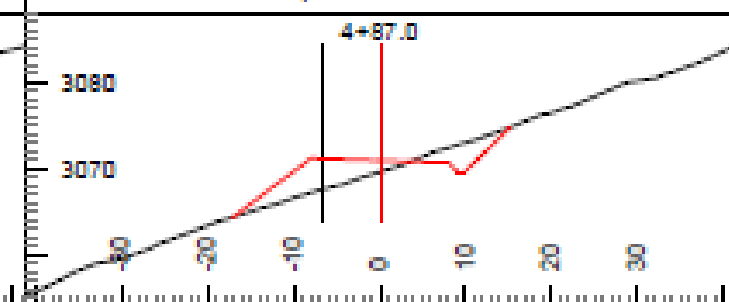
PROJECT NO.	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DATE	DESCRIPTION	DATE	APPR.



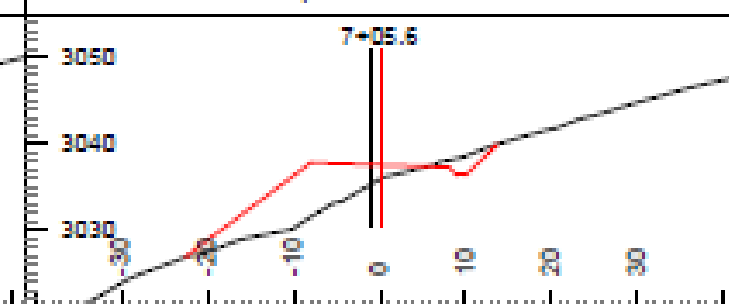


P-Stn :	3+86.9	Cut Dp:	-0.5	F Slope L:	-75
L-Stn :	3+94.3	L-Sst:	-46	F Slope R:	100
Grd.Nxt.:	-15	L-Ssr:	54	Clr L:	38.4
Grd.Lst:	-14	Super L:	3	Clr R:	29.6
V.Offset:	3084.6	Super R:	-3		

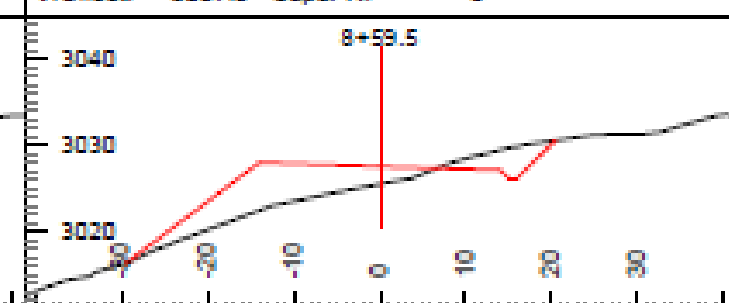
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-30.04
KING GRAVES TIMBER SALE
BEDFORD DISTRICT
OREGON



5	P-Stn :	4+81.9	Cut Dp:	-1.3	F Slope L:	-75
0	L-Stn :	4+87.0	L-Sst:	-31	F Slope R:	100
2	Grd.Next:	-16	L-Ssr:	34	Clr L:	23.6
7	Grd.Lst:	-14	Super L:	3	Clr R:	20.8
	V.Offset:	3070.9	Super R:	-3		

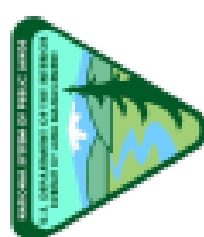


P-Stn :	7+01.8	Cut Dp:	-1.7	F Slope L:	-75
L-Stn :	7+05.6	L-Sst:	-57	F Slope R:	100
Grd.Next:	-12	L-Sst:	27	Clr L:	30.2
Grd.Lst:	-12	Super L:	3	Clr R:	19.0
V.Offset:	3037.5	Super R:	-3		



5	P-Stn :	8+54.6	Cut Dp:	-2.1	F Slope L:	-75
0	L-Stn :	8+59.5	L-Sst:	-20	F Slope R:	100
5	Grd.Next:	-1	L-Ssr:	30	Gr L:	36.9
9	Grd.Lst:	-1	Super L:	3	Gr R:	25.6
	V.Offset:	3027.6	Super R:	-3		

PROJECT NO.			
DESIGN OFFICE			
DESIGNED BY			
DRAWN BY			
CHECK BY			
APPROVED BY:			

P-Stn ft.	H. Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.	Clr L ft.	Clr R ft.	CXX	
0+00.0	0.0	0+00.0				0.0	13.0	18.5		
0+81.6	-2.3	0+81.6		115.8	18.4					
0+82.8	-2.2	0+82.9	-7	2.0	1.1	97.4	22.3	24.6		
1+28.9	-1.6	1+29.1		60.0	55.1	98.4	23.1	24.7		
1+77.5	3.4	1+78.0		67.5	99.9	103.3	30.0	24.0		
2+19.8	13.6	2+18.4	-10	82.5	72.1	70.9	30.0	27.1		
2+22.8	13.3	2+18.4	-10	0.0	0.0	81.3	31.6	27.0		
2+62.8	16.7	2+58.6		140.2	42.3	81.3	33.2	28.7		
2+84.4	21.4	2+80.6	-11	120.6	14.5	179.2	27.9	37.0		
2+88.0	22.0	2+82.4	-11	10.9	1.1	285.3	29.1	40.3		
3+15.2	24.4	3+07.8		184.5	12.3	295.1	29.8	40.4		
3+33.8	26.3	3+26.5	-14	178.4	4.8	467.3	21.5	45.4		
3+55.1	23.1	3+48.1	-14	225.0	1.0	640.9	15.2	53.6		
3+62.0	19.6	3+62.5	-14	134.0	1.1	864.9	18.7	50.8		
3+62.0	19.6	3+62.5	-14	0.8	0.0	997.8	22.9	53.7		
3+97.4	13.9	4+04.8		327.3	54.9	998.6	14.0	48.7		
4+50.5	8.5	4+58.3		108.0	54.6	1271.1	33.5	28.2		
4+52.1	8.6	4+58.5	-14	0.4	0.3	1324.5	24.2	22.7		
5+21.0	3.9	5+25.7		53.1	123.5	1324.6	25.2	24.1		
5+22.0	3.7	5+26.3	-16	0.1	1.9	1254.2	26.7	16.9		
6+50.0	3.4	6+54.3	-16	56.8	340.5	1252.5	28.6	17.8		
6+50.7	3.5	6+54.8		0.3	1.1	968.7	31.3	20.2		
7+01.8	1.0	7+05.6	-12	11.8	173.9	967.9	31.7	20.4		
7+75.3	-3.6	7+79.2		50.8	173.3	805.9	30.2	19.0		
7+75.7	-3.4	7+80.1	p -7	0.2	2.3	683.4	25.4	18.7		
8+54.6	0.0	8+59.5		31.5	157.8	681.3	23.5	19.0		
9+15.6	0.0	9+20.5		39.8	152.7	555.1	36.9	25.6		
						442.1	5.1	5.1		
Pg. Tot.				2002.3	1560.5					
Cum. Tot.				2002.3	1560.5					

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-30.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

PROJECT NO.
DESIGN OFFICE
DESIGNED BY
DRAWN BY
CHECK BY
APPROVED BY
DATE

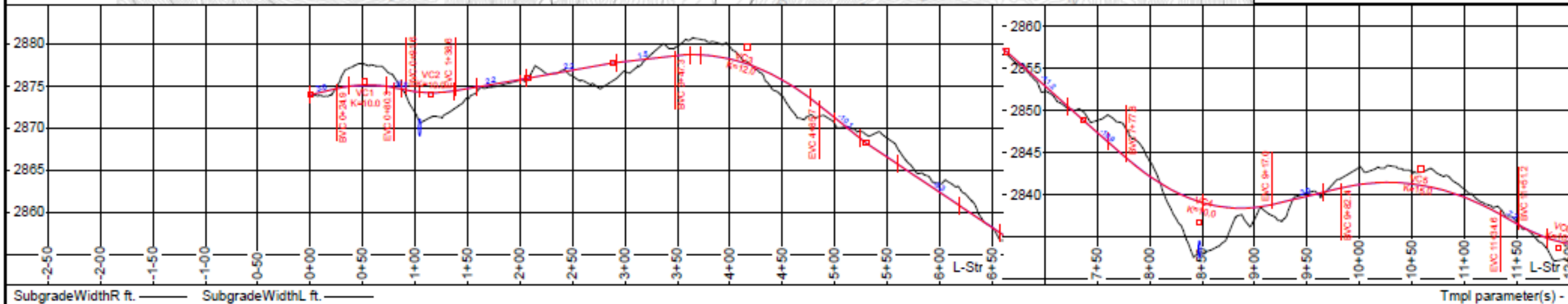
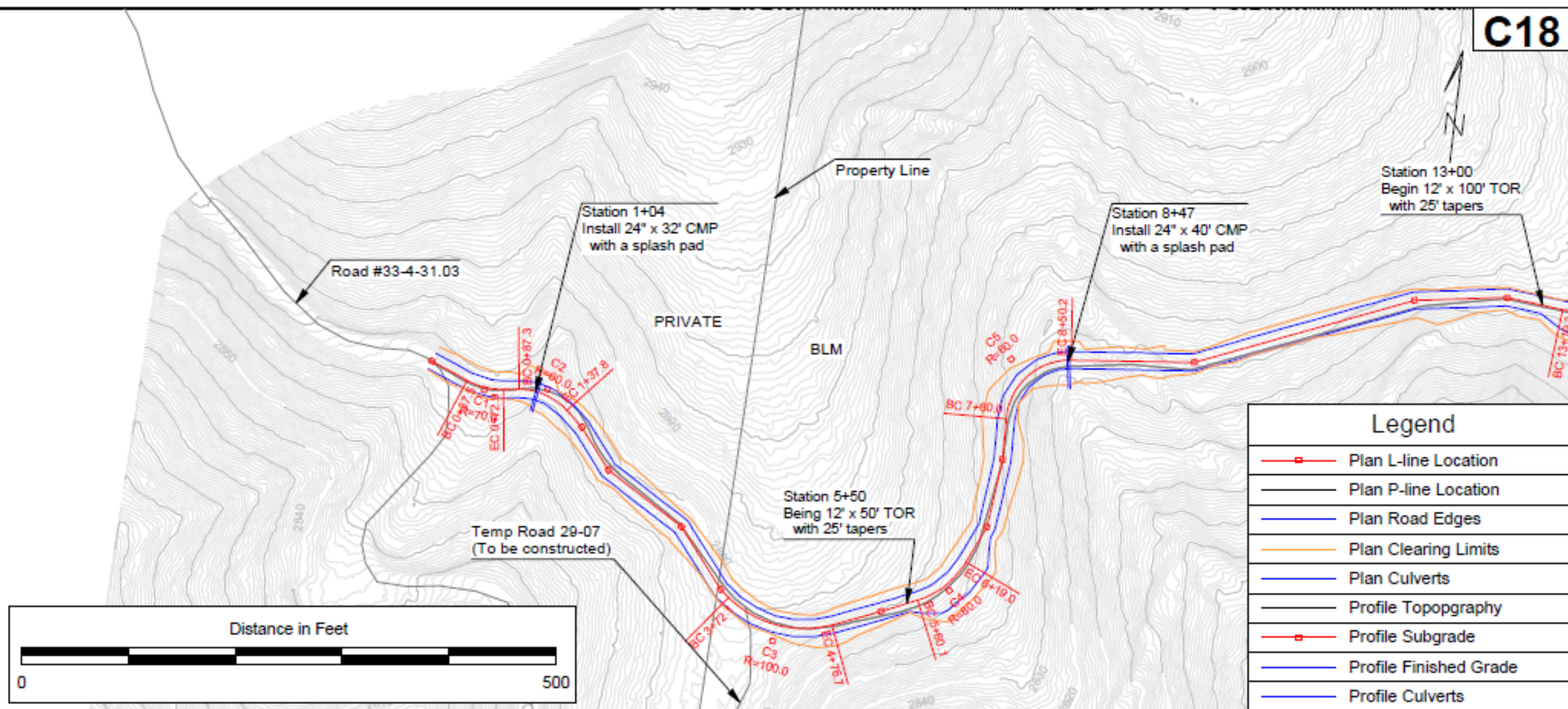
DESCRIPTION
DATE
APPRV

SHEET 5 OF 5

C18

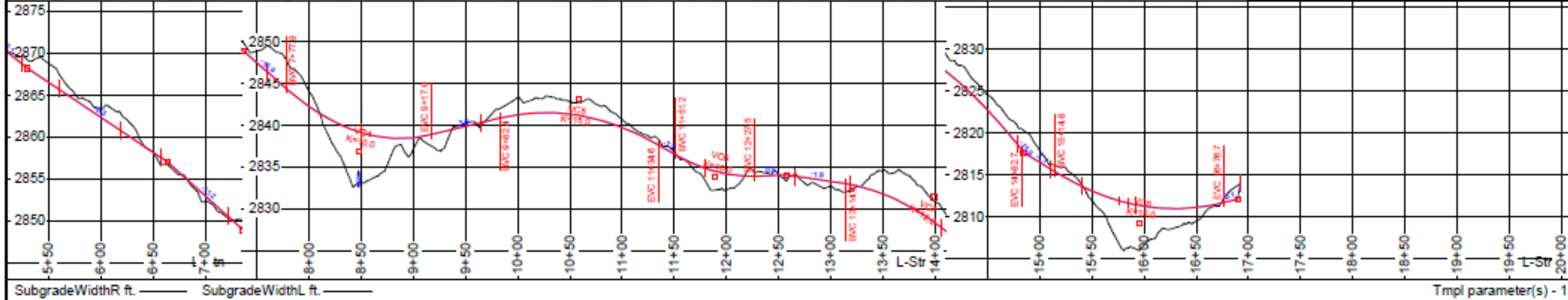
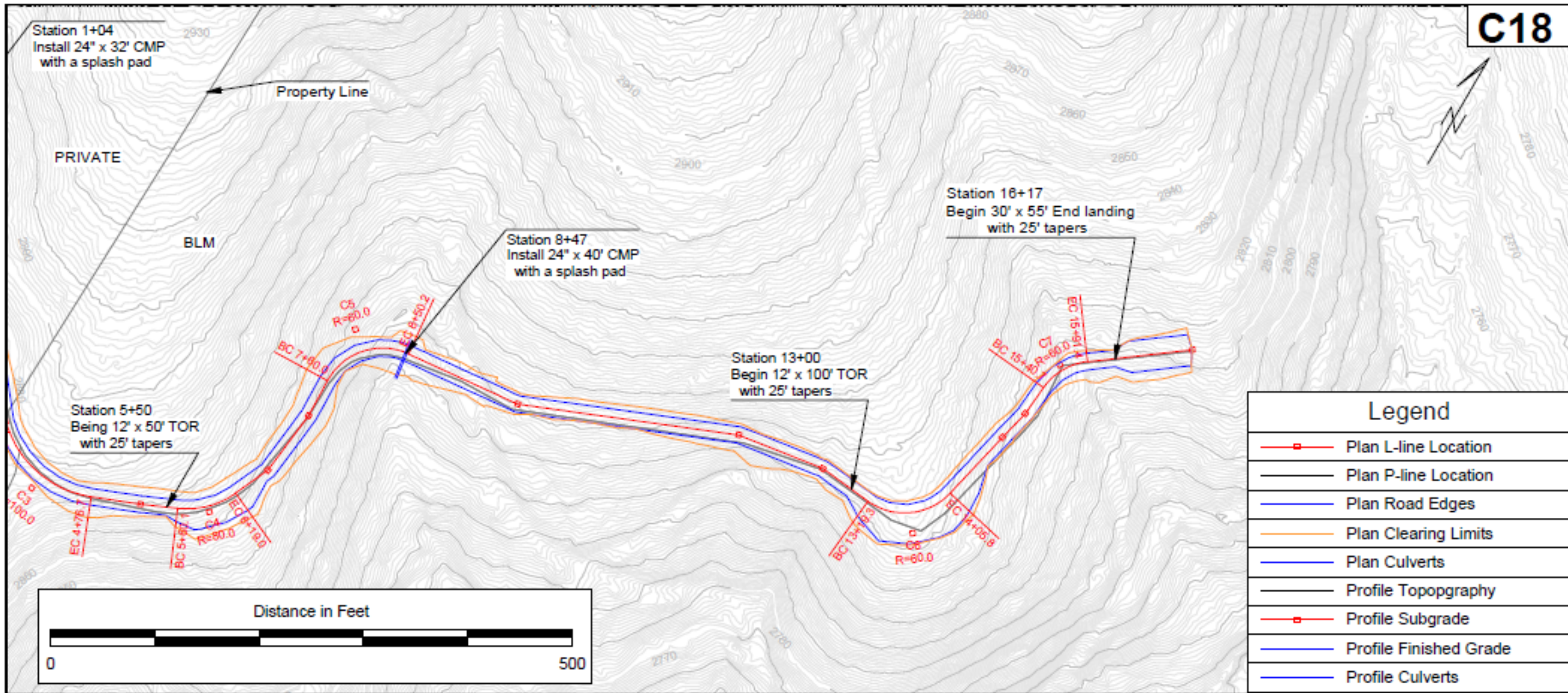


UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-30.05
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON



PROJECT NO.
DESIGN OFFICE:
DESIGNED BY:
DRAWN BY:
CHK'D BY:
APPROVED BY:
DATE:

SHEET 1 OF 8



C18

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-30.05
KING GRAVES TIMBER SALE

MEDFORD DISTRICT
OREGON

PROJECT NO.
DESIGN OFFICE
DESIGNED BY
DRAWN BY
CHECKED BY
APPROVED BY
DATE

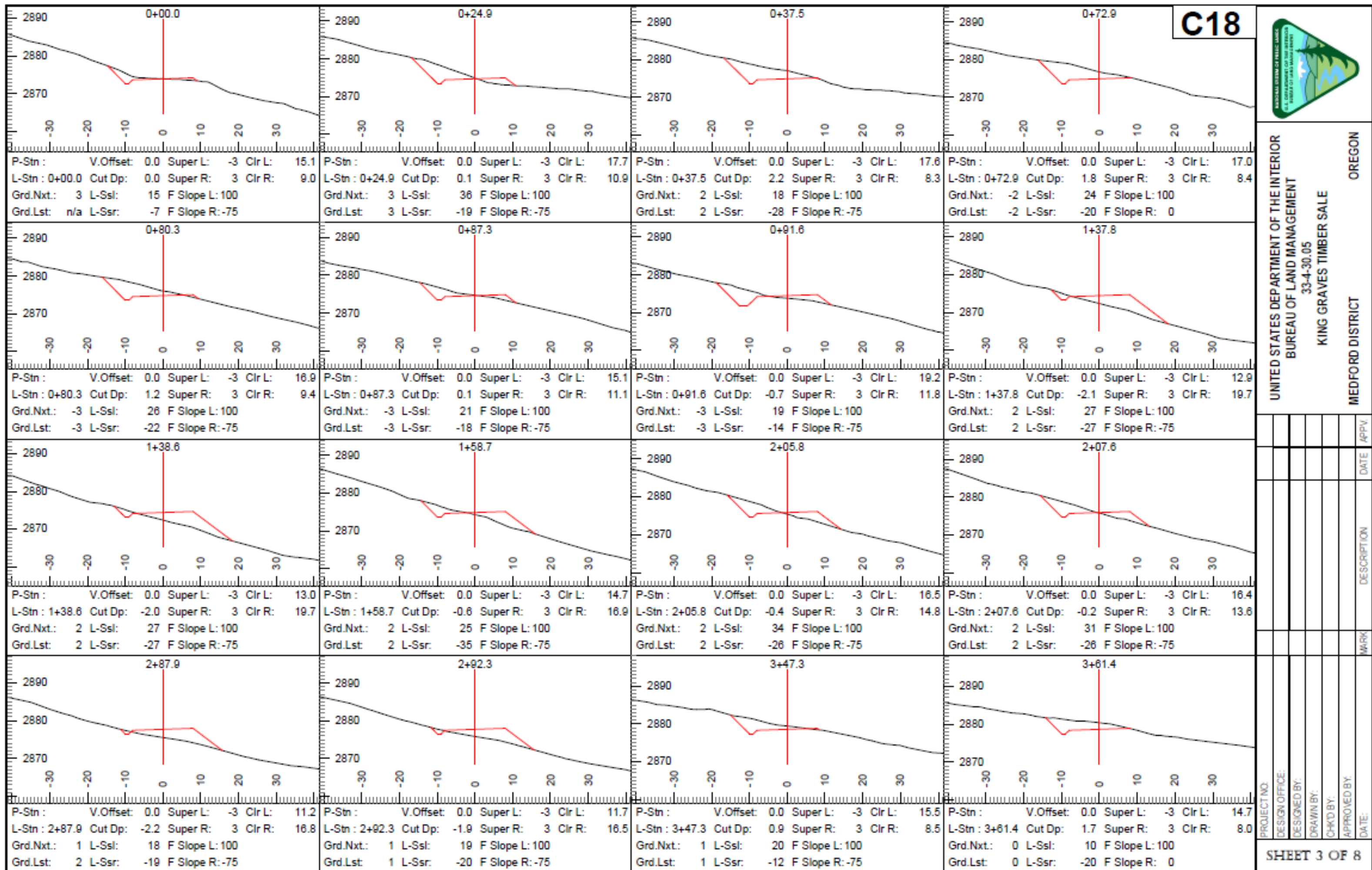
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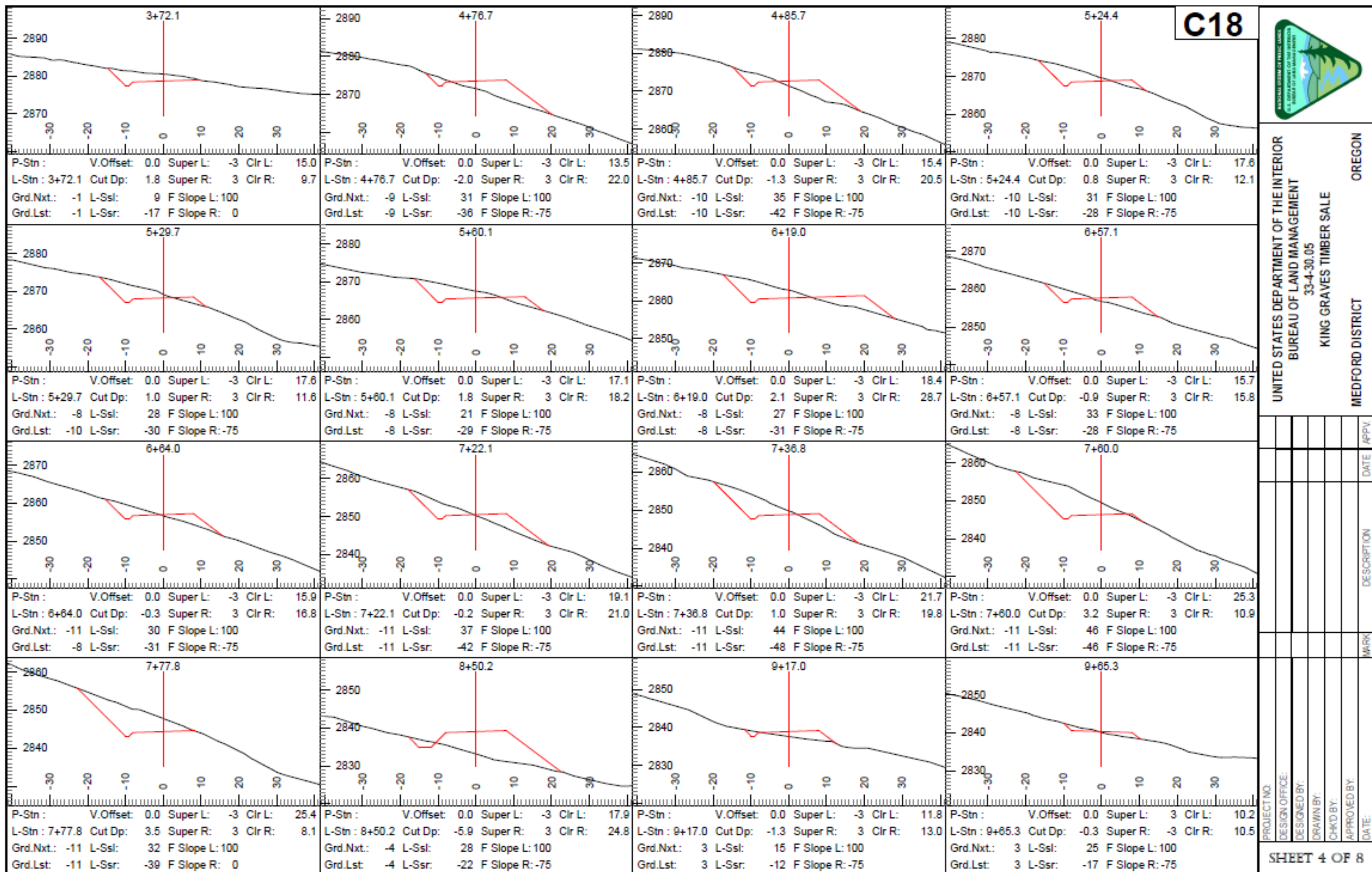
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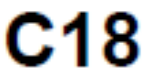
DATE

APPV

SHEET 2 OF 8







UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-30.05
KING GRAVES TIMBER SALE
MEDFORD DISTRICT OREGON

PROJECT NO.			
DESIGN OFFICE:			
DESIGNED BY:			
DRAWN BY:			
CHECKED BY:			
APPROVED BY:			
DATE:	MARK	DESCRIPTION	DATE
			APPRV.

P-Stn ft.	H.Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.
	0.0	0+00.0		45.9	10.0	0.0
	0.0	0+37.5		81.8	0.0	36.0
	0.0	0+72.9	p 0	23.6	1.2	117.8
	0.0	0+87.3		32.3	107.9	140.2
	0.0	1+37.8		8.2	33.7	64.6
	0.0	1+58.7	2	48.5	37.1	39.1
	0.0	2+05.8		67.7	90.1	50.5
	0.0	2+92.3		59.0	36.3	28.0
	0.0	3+61.4	p 0	17.0	0.0	50.8
	0.0	3+72.1	p -5	75.5	98.8	67.8
	0.0	4+76.7		47.3	60.3	44.5
	0.0	5+24.4		74.7	6.5	31.5
	0.0	5+60.1		94.8	96.3	99.7
	0.0	6+19.0	-8	56.8	50.9	98.1
	0.0	6+57.1	-8	78.7	79.0	104.0
	0.0	7+22.1		108.2	31.7	103.8
	0.0	7+60.0		184.1	179.6	180.3
	0.0	8+50.2		38.8	224.5	184.8
	0.0	9+65.3		212.2	47.8	-0.9
		11+79.2				
Pg. Tot.				1355.1	1191.7	
Cum. Tot.				1355.1	1191.7	

C18



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-30.05
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

PROJECT NO:

DESIGN OFFICE:

DESIGNED BY:

DRAWN BY:

CHK'D BY:

APPROVED BY:

DATE:

MARK

DESCRIPTION

DATE

APPV.

SHEET 7 OF 8

P-Stn ft.	H.Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.
	0.0	11+79.2		27.0	93.8	163.5
	0.0	12+65.9		6.0	58.1	96.6
	0.0	13+19.3	p -6	193.2	42.1	44.5
	0.0	14+05.8	p -13	118.1	14.9	195.6
	0.0	14+78.9		44.6	0.2	298.8
	0.0	15+10.5		18.6	2.6	343.2
	0.0	15+40.7	p -4	5.1	128.9	359.3
	0.0	15+91.4		49.8	258.0	235.4
	0.0	16+92.3				27.2
Pg. Tot.				462.4	598.6	
Cum. Tot.				1817.7	1790.5	

C18



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-30.05
KING GRAVES TIMBER SALE

OREGON
MEDFORD DISTRICT

PROJECT NO.

DESIGN OFFICE

DESIGNED BY

DRAWN BY

CHECKED BY

APPROVED BY

DATE

MARK

DESCRIPTION

DATE

APPV.

SHEET 8 OF 8

C19



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

Road #33-4-31.00

Road #34-4-05.00

Station 8+40
Install 24" x 34' HDPE

Station 11+49
Install 24" x 40' HDPE

Station 9+48
Install 24" x 32' HDPE

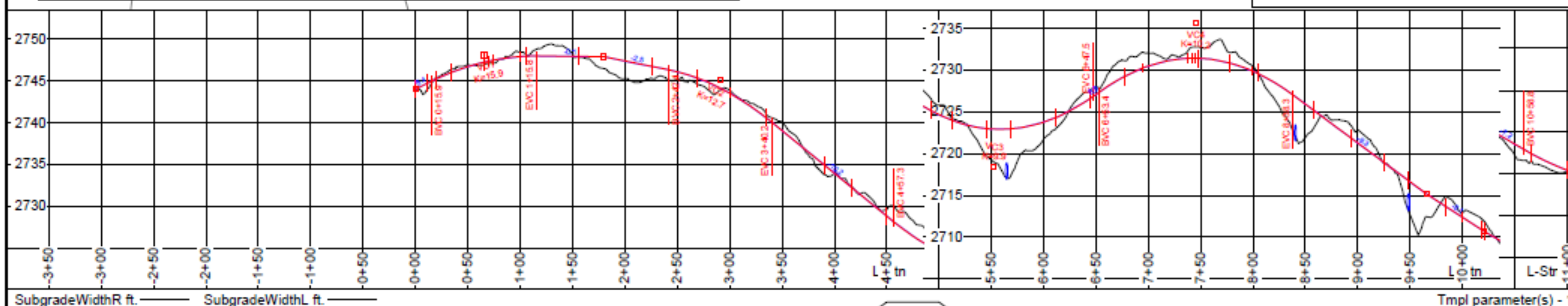
Station 4+25
Begin 12' x 50' TOL
with 25' tapers

Station 5+65
Install 24" x 38' HDPE

Legend

- Plan L-line Location
- Plan P-line Location
- Plan Road Edges
- Plan Clearing Limits
- Plan Culverts
- Profile Topography
- Profile Subgrade
- Profile Finished Grade
- Profile Culverts

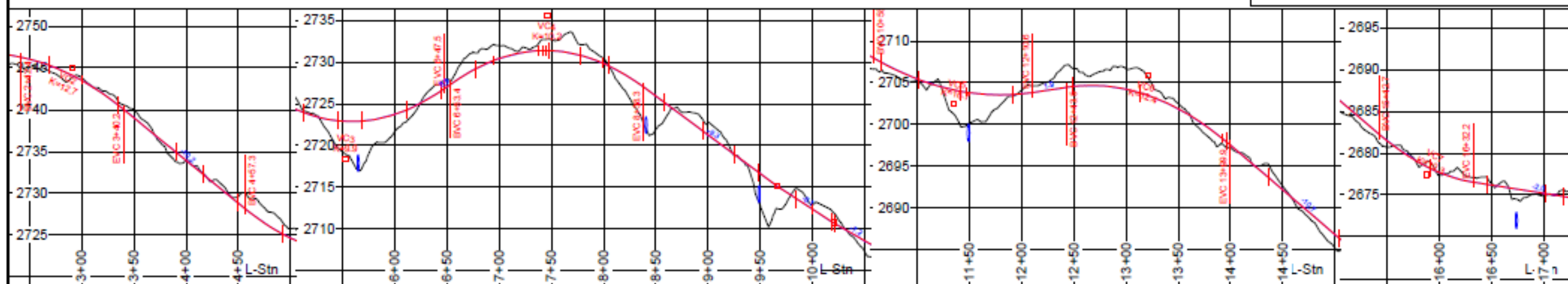
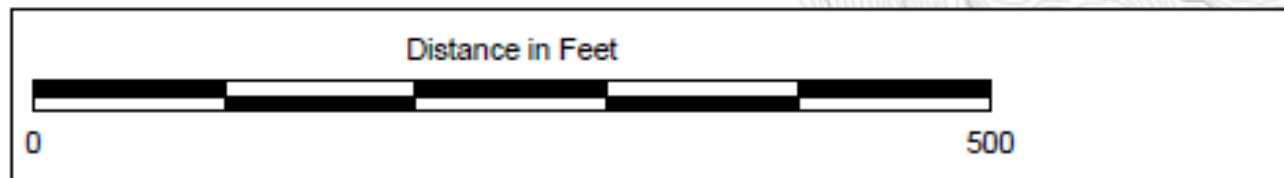
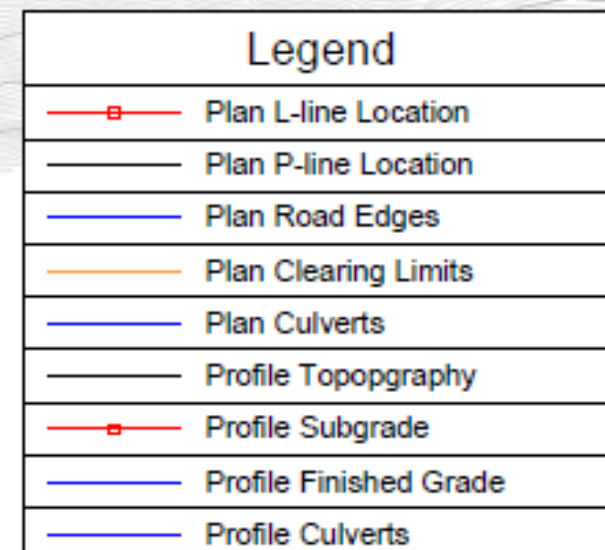
Distance in Feet



PROJECT NO:
DESIGN OFFICE:
DESIGNED BY:
DRAWN BY:
CHKD BY:
APPROVED BY:
DATE

SHEET 1 OF 16

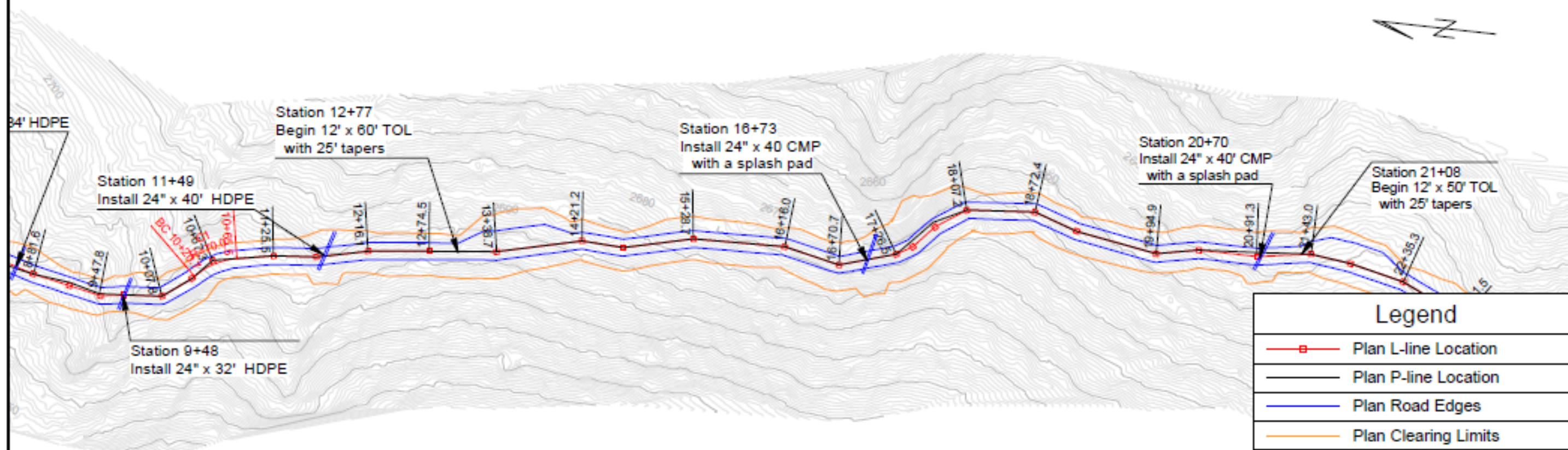
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT OREGON



SubgradeWidthR ft. SubgradeWidthL ft. Tmpl parameter(s) - 1



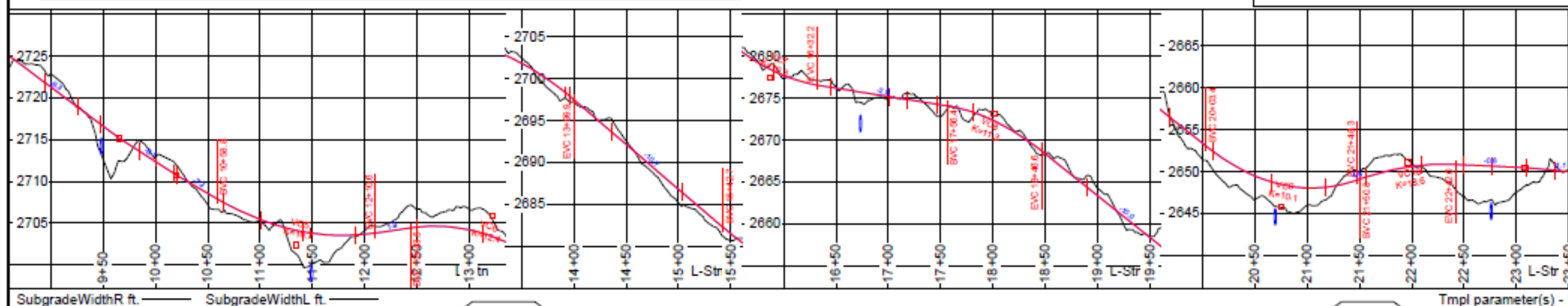
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON



Legend

- Plan L-line Location
- Plan P-line Location
- Plan Road Edges
- Plan Clearing Limits
- Plan Culverts
- Profile Topography
- Profile Subgrade
- Profile Finished Grade
- Profile Culverts

Distance in Feet

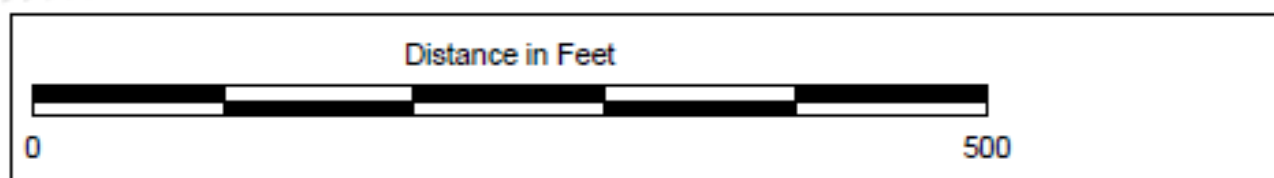
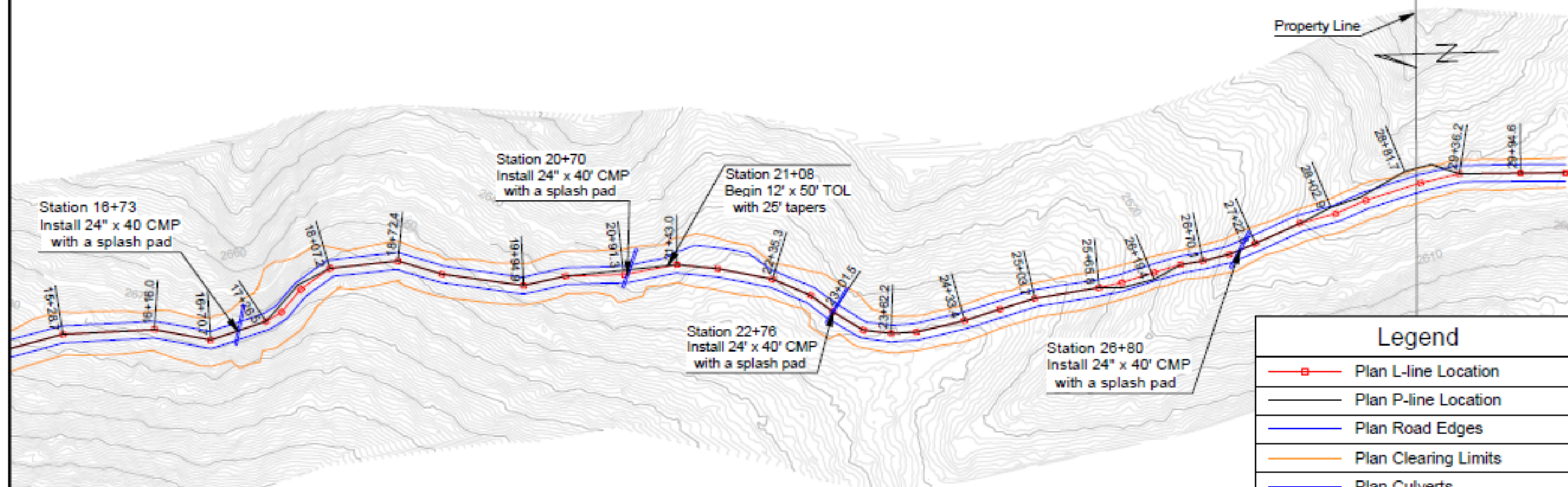


PROJECT NO:
DESIGN OFFICE:
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE

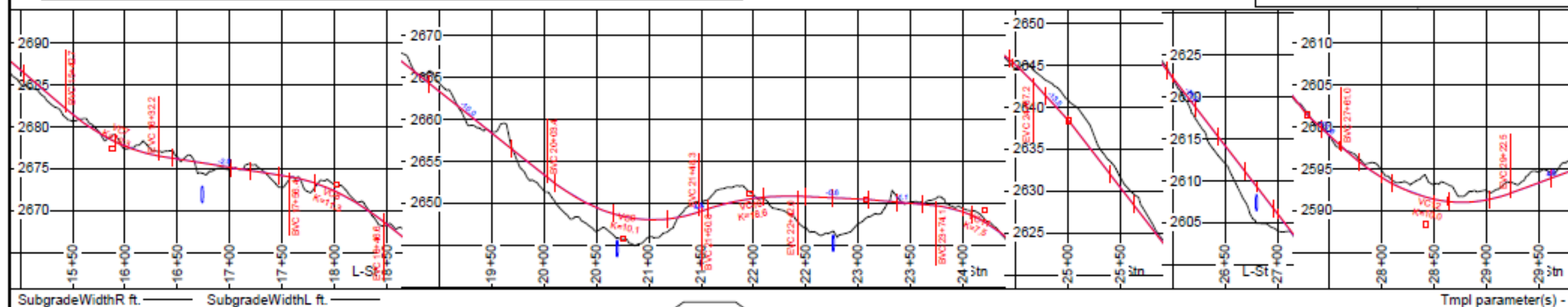
C19



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON



Legend	
— □	Plan L-line Location
—	Plan P-line Location
—	Plan Road Edges
—	Plan Clearing Limits
—	Plan Culverts
—	Profile Topography
— □	Profile Subgrade
—	Profile Finished Grade
—	Profile Culverts

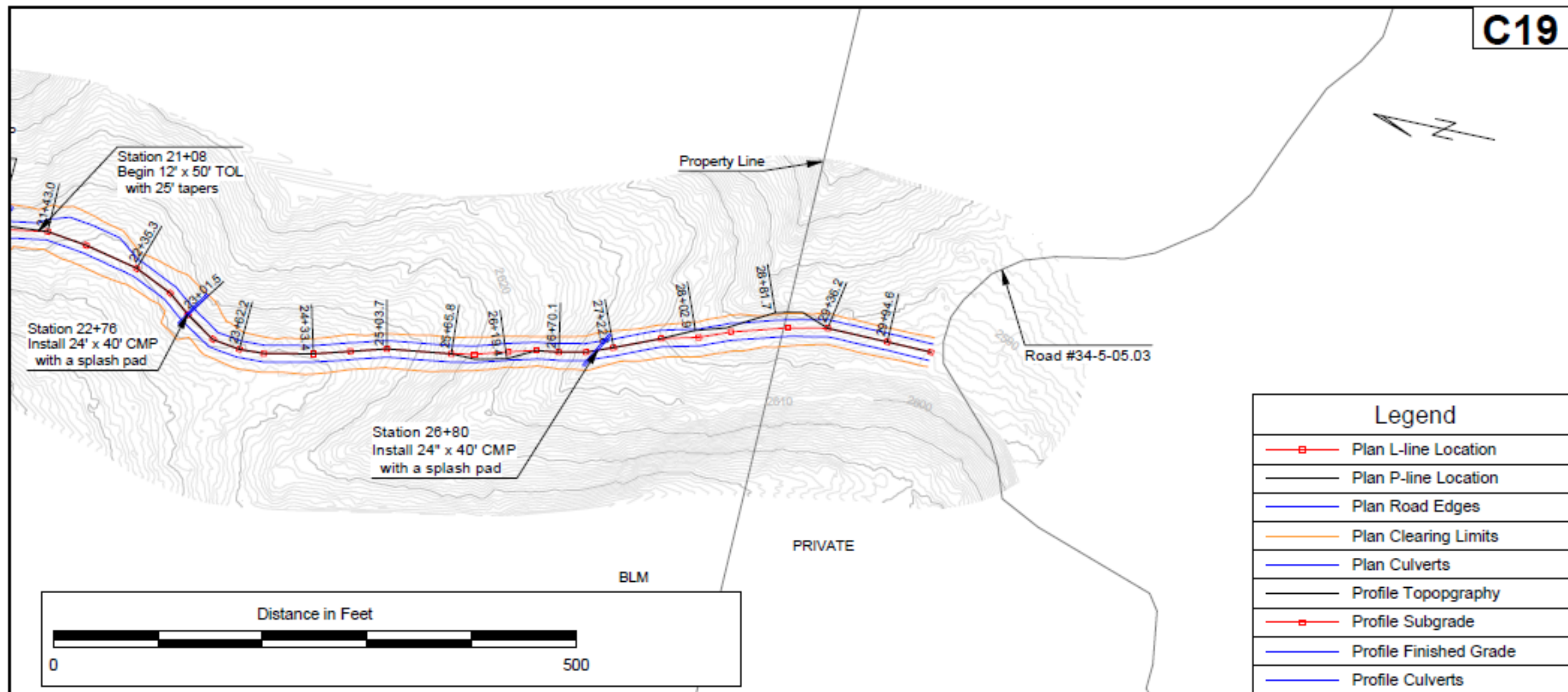


PROJECT NO:	DESIGN OFFICE:	DESIGNED BY:	DRAWN BY:	CHKD BY:	APPROVED BY:	DATE:	MARK:	DESCRIPTION:	DATE:	APPV:

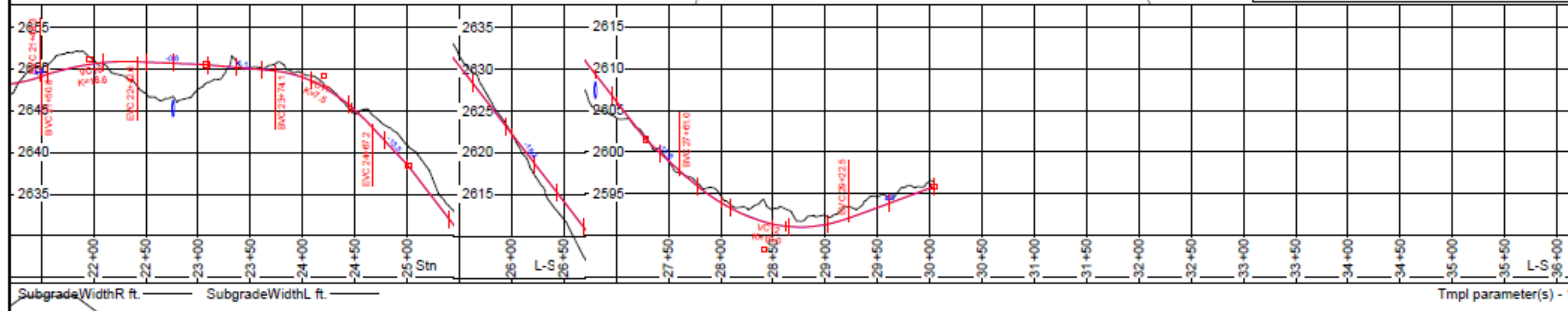
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UNITED STATES DEPARTMENT OF THE INTERIOR
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33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
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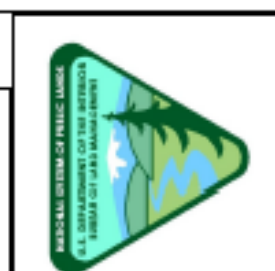
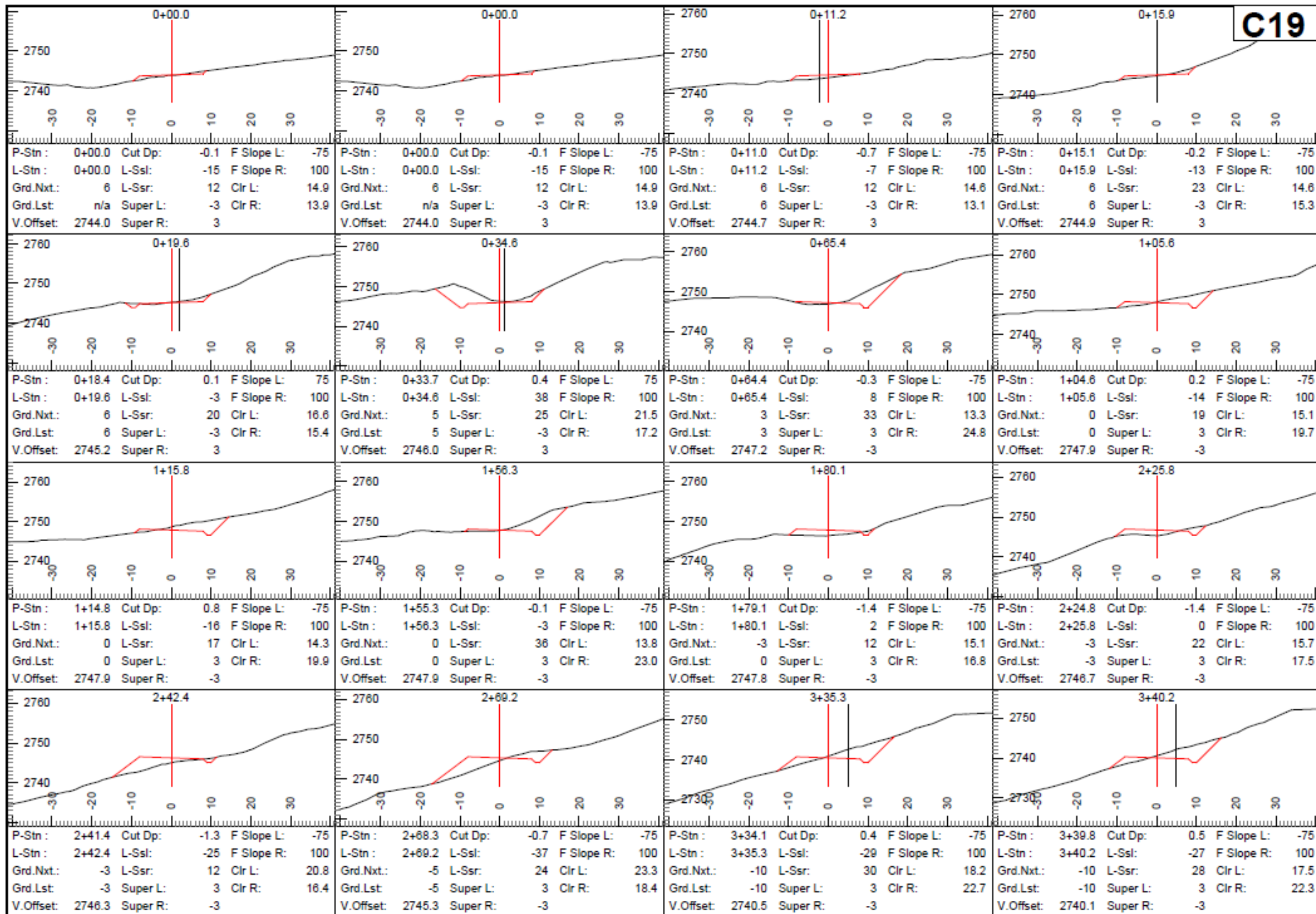


Legend	
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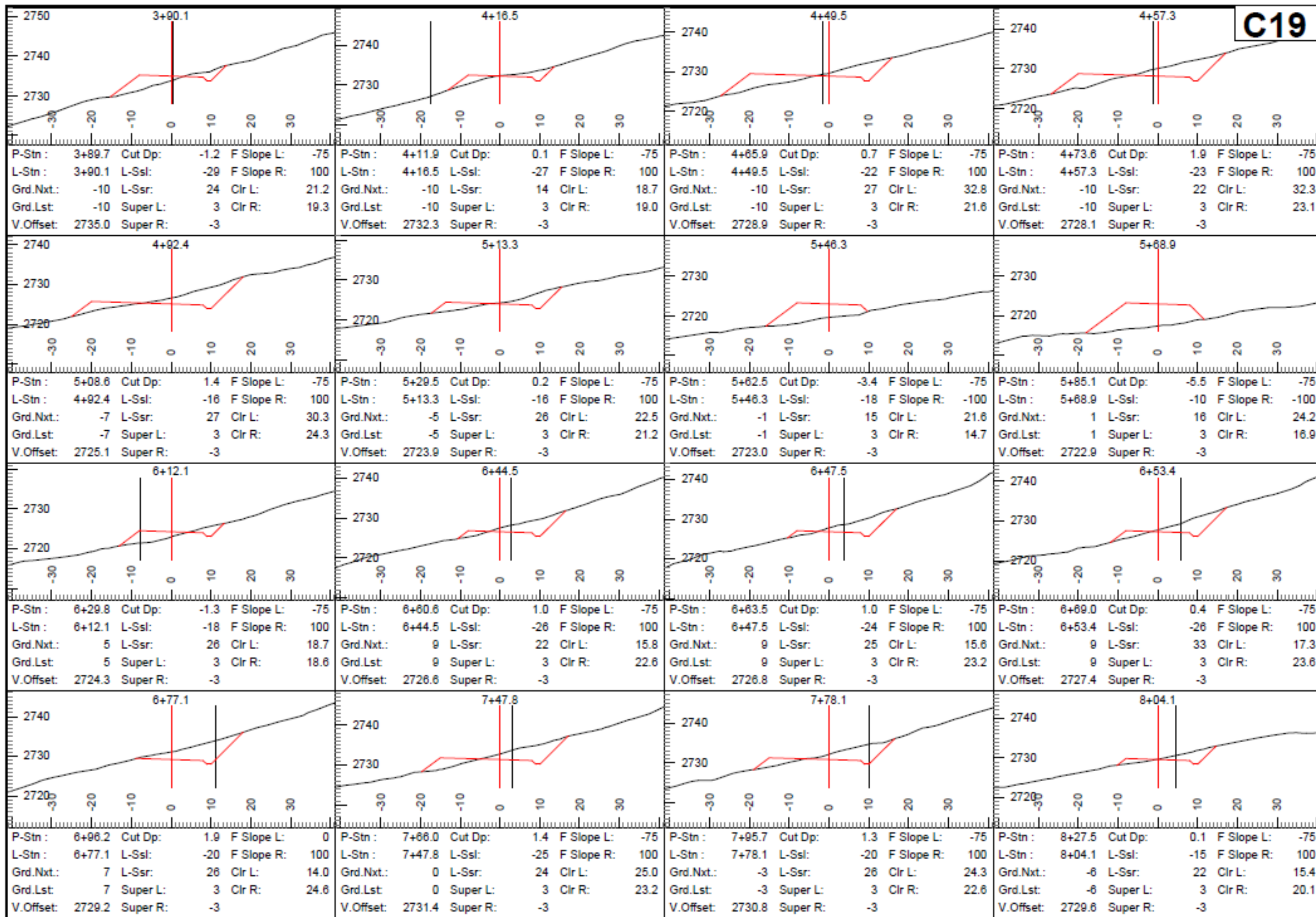
PROJECT NO:
DESIGN OFFICE:
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DRAWN BY:
CHK'D BY:
APPROVED BY:
DATE

SHEET 5 OF 16



UNITED STATES DEPARTMENT OF THE INTERIOR
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33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

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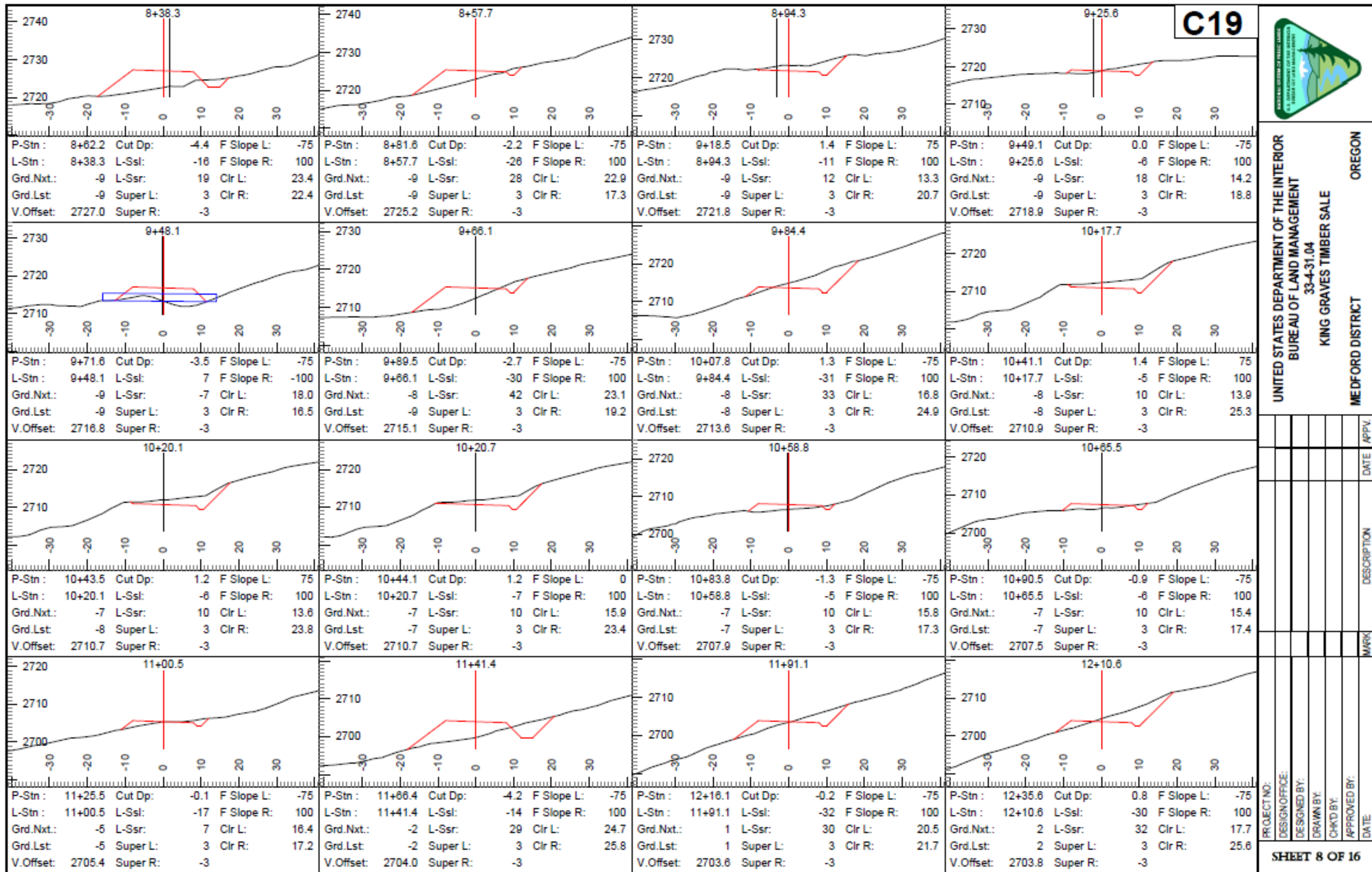


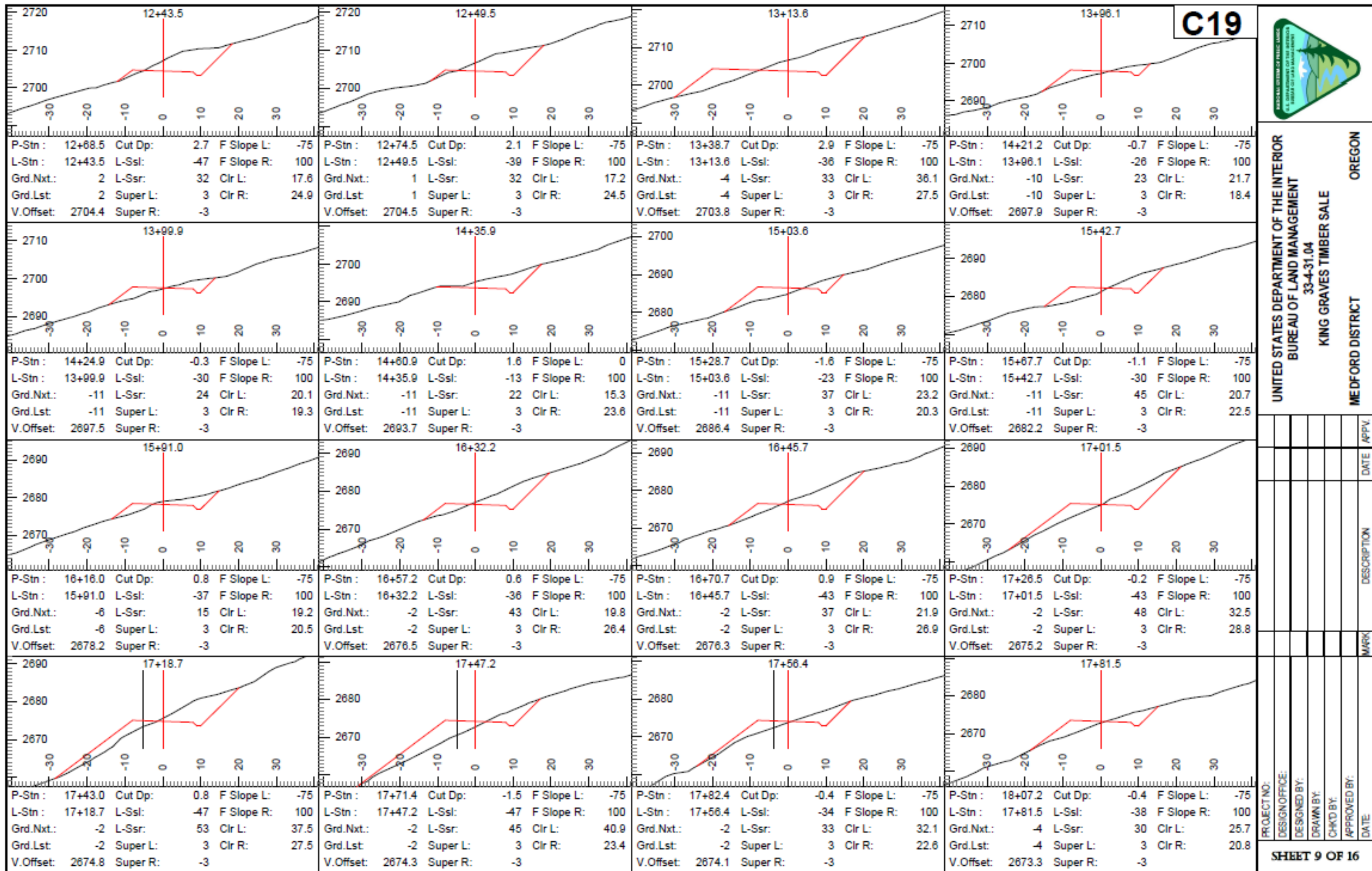
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UNITED STATES DEPARTMENT OF THE INTERIOR
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33-4-31.04
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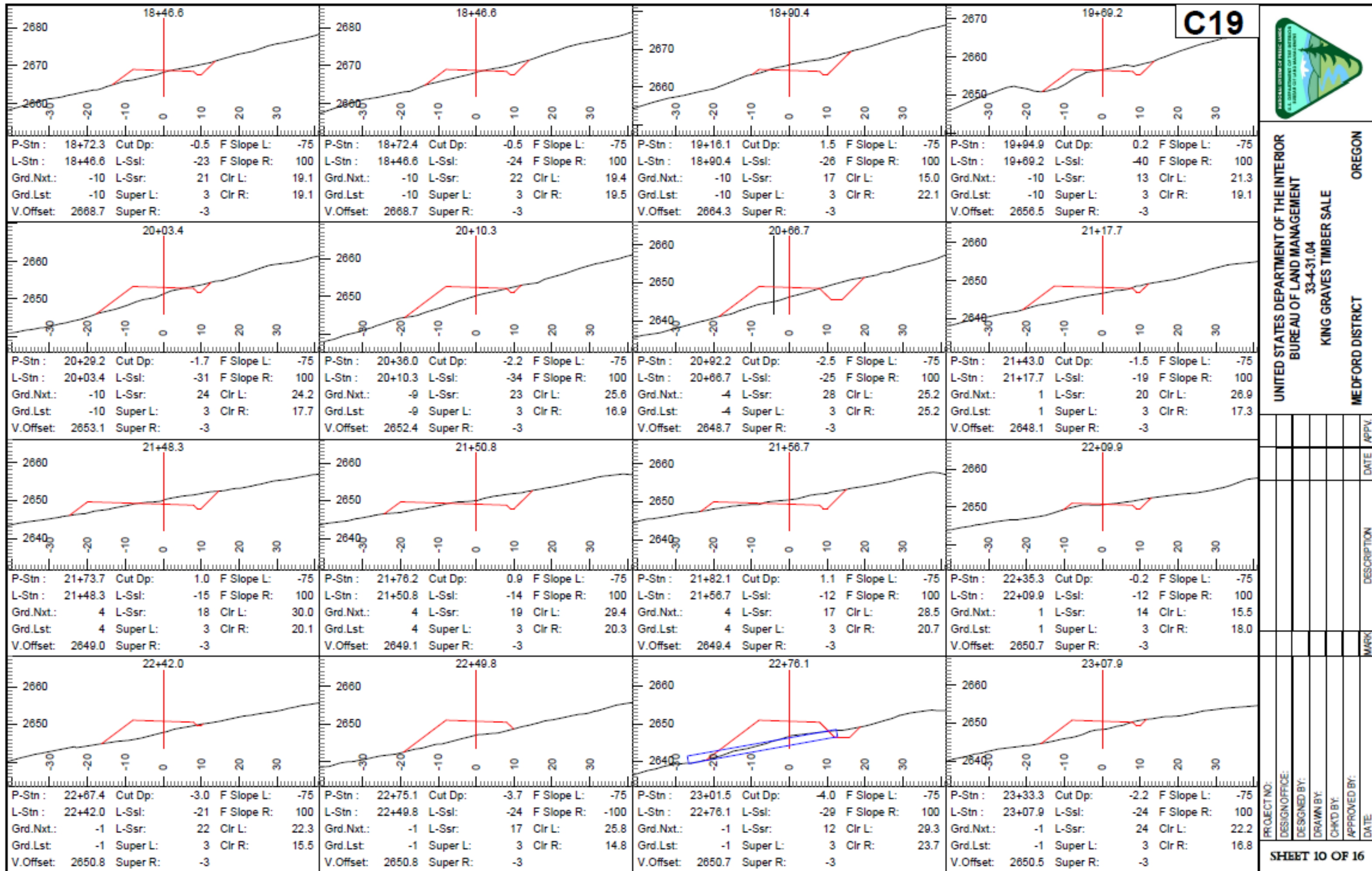


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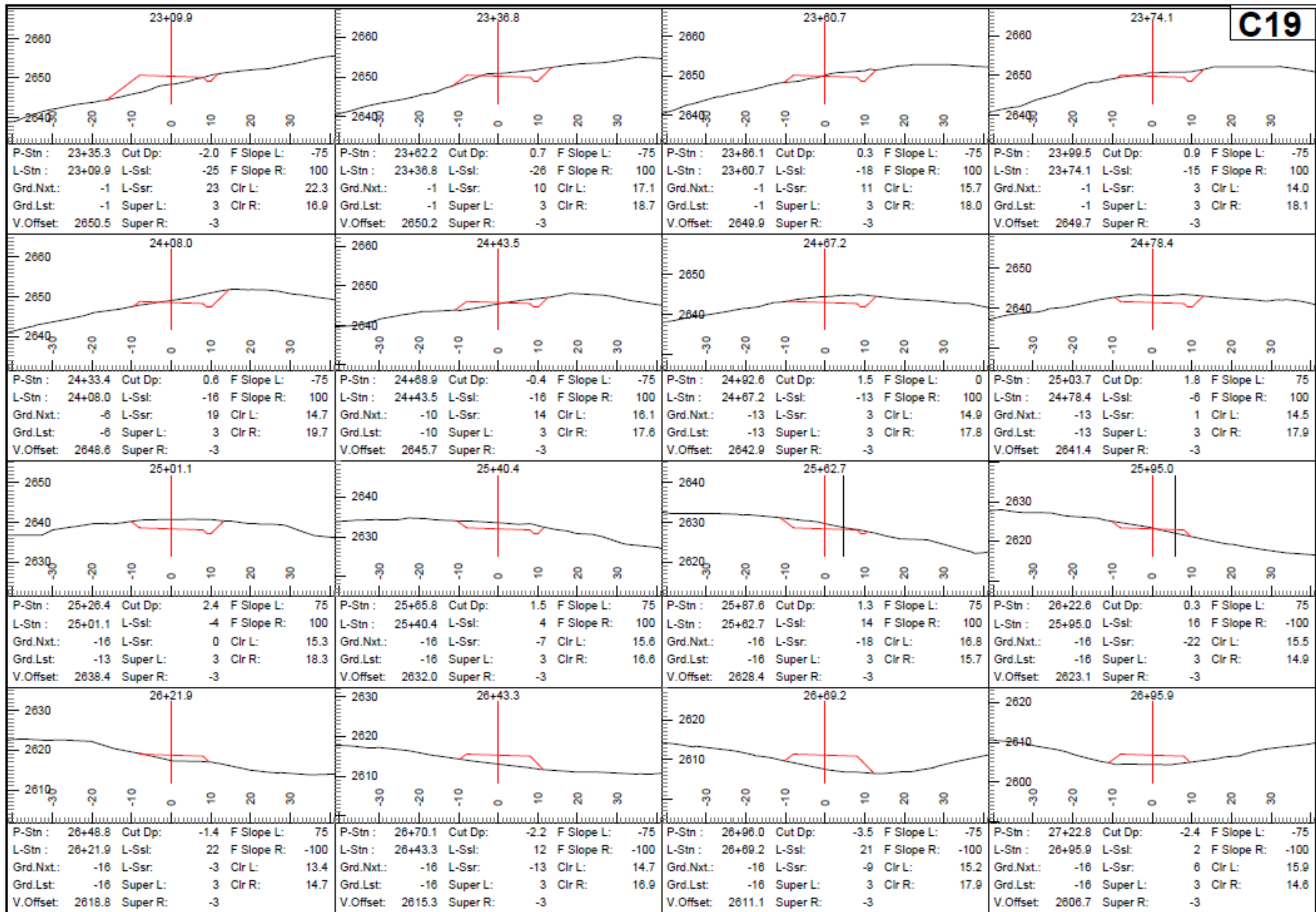
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
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KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

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C19



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

PROJECT NO:	DESIGN OFFICE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:	MARK:	DESCRIPTION:	DATE:	APPV:

P-Stn ft.	H.Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.	C19				
0+00.0	0.0	0+00.0		0.0	0.0	0.0		UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT 33-4-31.04 KING GRAVES TIMBER SALE MEDFORD DISTRICT OREGON			
0+00.0	0.0	0+00.0		0.5	3.3	0.0					APPV.
0+11.0	2.0	0+11.2	6	1.1	1.8	-2.8					DATE
0+18.4	-1.9	0+19.6		0.5	0.0	-3.5					
0+20.2	-2.4	0+21.0	p 6	13.3	0.1	-3.0					
0+33.7	-1.3	0+34.4	p 5	0.3	0.0	10.2					
0+33.7	-1.3	0+34.6	p 5	47.4	0.8	10.5					
0+64.4	0.0	0+65.4	p 4	47.3	8.2	57.1					
1+04.6	0.0	1+05.6	p 2	61.3	3.8	96.2					
1+55.3	0.0	1+56.3		24.2	60.3	153.7					
2+24.8	0.0	2+25.8		10.9	55.5	117.6					
2+68.3	0.0	2+69.2		83.8	50.7	73.0					
3+34.1	-5.1	3+35.3	p -7	1.4	0.4	106.2					
3+35.5	-5.2	3+36.3	p -10	57.4	36.7	107.1					
3+85.8	-1.6	3+86.2		1.9	4.9	127.9					
3+89.7	-0.5	3+90.1	-10	14.6	18.9	124.9					
4+11.9	13.9	4+16.5	-10	3.5	2.7	120.6					
4+29.9	22.3	4+21.9	-10	28.4	29.6	121.4					
4+65.9	1.3	4+49.4	-10	0.1	0.1	120.2					
4+65.9	1.3	4+49.5		94.3	48.5	120.2					
5+08.6	0.0	4+92.4		31.9	15.0	166.0					
5+29.5	0.0	5+13.3	p -6	13.6	37.1	182.9					
5+62.5	0.0	5+46.3	p -3	0.0	96.1	159.4					
5+85.1	0.0	5+68.9	p 0	2.6	101.7	63.3					
6+27.8	7.7	6+11.2	p 3	0.3	1.0	-35.7					
6+29.8	7.6	6+12.1	p 5	33.9	20.1	-36.4					
6+60.6	-2.7	6+44.5	p 7	4.2	0.6	-22.6					
6+63.2	-3.6	6+47.3	p 9	46.1	3.8	-19.0					
6+88.5	-11.6	6+71.6		14.5	0.1	23.3					
6+96.2	-11.1	6+77.1	p 7	117.9	18.5	37.7					
7+65.5	-3.1	7+47.1	p 3	1.3	0.6	137.1					
7+66.0	-3.1	7+47.8	p 0	56.3	23.0	137.8					
7+95.7	-9.5	7+78.1	p -2	1.2	0.4	171.2					
7+99.5	-10.2	7+78.8	p -3	35.4	18.7	172.0					
8+27.5	-4.7	8+04.1	p -5	0.3	0.1	188.7					
8+28.2	-4.7	8+04.5	p -6	21.6	128.4	188.9					
8+81.6	0.0	8+57.7		34.9	22.2	82.1					
9+18.0	3.2	8+94.0	-9	0.4	0.0	94.8					
9+18.5	3.1	8+94.3	-9	36.7	1.4	95.2					
9+47.8	1.7	9+23.9	-9	1.1	0.4	130.4					
9+49.1	2.2	9+25.6	-9	2.7	23.4	131.2					
9+71.6	0.3	9+48.1	-9	24.5	77.5	110.5					
10+07.8	0.0	9+84.4		54.3	6.2	57.6					
10+41.1		10+17.7	-8								MARK
Pg. Tot.				1027.9	922.6			PROJECT NO:			
Cum. Tot.				1027.9	922.6			DESIGN OFFICE:			
								DESIGNED BY:			
								DRAWN BY:			
								CHKD BY:			
								APPROVED BY:			
								DATE			
								SHEET 13 OF 16			

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P-Stn ft.	H.Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.	C19			
19+94.9	0.0	19+69.2		15.3	67.7	418.4			UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT 33-4-31.04 KING GRAVES TIMBER SALE MEDFORD DISTRICT OREGON	
20+36.0	0.0	20+10.3	p -7	23.0	139.3	366.1				
20+91.3	4.0	20+65.7	p -4	1.2	2.4	249.8				
20+92.2	4.1	20+66.7	p -1	18.7	121.2	248.6				
21+43.0	0.0	21+17.7		40.4	52.9	146.1				
21+82.1	0.0	21+56.7	p 3	73.4	11.2	133.6				
22+35.3	0.0	22+09.9		6.2	68.5	195.8				
22+75.1	0.0	22+49.8	-1	8.7	107.5	133.5				
23+01.5	0.0	22+76.1		7.8	117.6	34.7				
23+35.3	0.0	23+09.9	-1	10.2	31.4	-75.1				
23+62.2	0.0	23+36.8	-1	15.2	6.0	-96.3				
23+86.1	0.0	23+60.7		37.9	5.7	-87.1				
24+33.4	0.0	24+08.0	p -8	23.8	9.0	-54.9				
24+68.9	0.0	24+43.5		32.2	5.5	-40.1				
25+03.7	0.0	24+78.4		116.2	0.0	-13.4				
25+65.8	0.0	25+40.4	-16	22.8	0.0	102.8				
25+87.6	-4.5	25+62.7	-16	0.6	0.0	125.6				
25+88.8	-4.7	25+63.3	-16	17.1	1.0	126.3				
26+19.4	-6.4	25+92.7	-16	0.7	0.4	142.4				
26+22.6	-5.9	25+95.0	-16	3.2	12.6	142.7				
26+48.8	0.0	26+21.9	-16	0.1	23.6	133.3				
26+70.1	0.0	26+43.3	-16	0.0	48.1	109.8				
26+96.0	0.0	26+69.2	-16	0.0	61.2	61.7				
27+22.8	0.0	26+95.9		14.8	18.6	0.5				
27+69.5	0.0	27+42.6		16.0	4.6	-3.3				
28+02.9	7.1	27+76.2	p -10	1.2	0.3	8.2				
28+05.4	7.2	27+78.2	p -8	23.9	6.0	9.0				
28+32.4	4.7	28+05.8	p -7	2.8	0.8	26.9				
28+35.7	5.1	28+09.6	p -4	53.8	5.6	28.8				
28+81.7	15.3	28+54.6	p -2	13.8	0.1	77.1				
28+93.7	14.6	28+64.5	p -1	9.7	0.3	90.8				
29+07.6	15.4	28+74.1	p 1	21.4	1.4	100.3				
29+36.2	0.0	29+02.5		46.1	0.8	120.3				
29+94.6		29+60.9								
Pg. Tot.				678.2	931.3					
Cum. Tot.				3051.4	2886.0					
PROJECT NO: DESIGN OFFICE: DESIGNED BY: DRAWN BY: CHKD BY: APPROVED BY: DATE										
SHEET 15 OF 16										

P-Stn ft.	H.Offset ft.	L-Stn ft.	Grade %	SG Cut V. Cu. Yd.	SG Fill V. Cu. Yd.	Mass H. Cu. Yd.
29+94.6	0.0	29+60.9	5	25.7	1.2	165.7
30+37.5	0.0	30+03.8		0.0	0.0	190.2
30+37.5	0.0	30+03.8				190.2
Pg. Tot.				25.7	1.2	
Cum. Tot.				3077.4	2887.3	

C19



UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
33-4-31.04
KING GRAVES TIMBER SALE
MEDFORD DISTRICT
OREGON

PROJECT NO:

DESIGN OFFICE:

DESIGNED BY:

DRAWN BY:

CHECKED BY:

APPROVED BY:

DATE

MARK

DESCRIPTION

DATE

APPV.

SHEET 16 OF 16

Roads Work List

Definitions:

AGG = Aggregate Rock Surface
BST = Bituminous Surface
CL = Center Line of Road
CMP = Corrugated Metal Pipe
CY = Cubic Yard
Jct = Junction/Intersection
HDPE=High-density polyethylene

MP = Mile Post
NAT = Natural or Native Surface
Pvt = Private (Industry or Citizen)
Seg = Segment
WDS = Waste Disposal Site
RMU = Roadside Management Unit

Road Renovation/Construction

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

Roadside Brushing

This consists of work to be performed by the Purchaser's Representative and/or Contractor prior to timber hauling per Section 42(B)(2) of the contract Special Provisions. This work includes, but not limited to, brushing 4 horizontal feet up the cut bank slope from the centerline of ditch and 4 horizontal feet down the fill slope from the outside shoulder hinge point of the road; removing brush at the inlet and outlet of existing culverts; and removing brush, limbs, and small diameter trees along the roadway to improve sight distance. All roadside vegetation to be cut and disposed of will be less than 8 inches in diameter at breast height (≤ 8 " DBH). Disposal from roadside brushing will be lop and scatter unless otherwise noted as chipping in the work list. In areas where the road crosses through private (industry or civilian) property, conifer trees shall be pruned rather than cut down. Brush shall be cut to meet regular specifications. All work shall comply with the contract Special Provisions, Specifications, and Exhibits.

Roadside Vegetation Management Units

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

All stumps remaining after the removal of the RMUs timber that may hinder normal road renovation and maintenance operations as identified on Exhibit C7 as the 'Clearing and Grubbing Limits', will be grubbed and removed or cut below subgrade per Clearing and Grubbing Specifications (200). Any damage that occurs to the road subgrade during stump removal will be properly repaired. Any loose material that remains on site shall be compacted or disposed of at areas designated by the Authorized Officer. Stumps that will not hinder normal road maintenance operations can be left in place.

All disturbed areas shall be seeded and mulched per Slope Protection Specifications (1400). All remaining brush and limbs from tree removal operations shall either be chipped or piled and burned in locations designated by the Authorized Officer or lopped and scattered below the road in accordance with roadside brushing disposal methods in the Roadside Brushing Specifications (2100). No debris, brush, or limbs shall be placed or stacked on the cut-bank. All work shall comply with the contract Special

Provisions, Specifications, and Exhibits.

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

33-4-20.00 Road – Private Road – Nat – Subgrade: 15ft – Ditch: 0Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-21.05 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.04	Existing HDPE Pipe.
0.06	Existing HDPE Pipe.
0.11	WDS Right
0.19	Existing HDPE pipe.
0.22	Existing HDPE pipe.
0.89	Jct w/ new proposed 33-4-20.00B road.
0.89	End Renovations.

33-4-21.01 Road – Upper Green Grave – Agg – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.05	Existing CMP.
0.05	Start RMU.
0.09	Existing CMP.
0.12	Existing CMP.
0.17	Existing CMP. Remove and replace the existing culvert with a new 24" x 34' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details. Upon approval of the roadbed after the culvert replacement, properly place, water, and roll a 15' wide by 40' long by 6" depth aggregate cap which shall consist of 1-1/2"-minus crushed rock (15 CYs) compacted in place from an approved weed free commercial source per contract specifications and details
0.17	Existing CMP.
0.23	End RMU.
0.26	Existing CMP. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
0.28	WDS left.
0.32	Existing CMP.
0.38	Existing CMP.
0.42	WDS right.
0.43	Start RMU.
0.44	Existing CMP.
0.49	Existing CMP.
0.58	Jct w/ 33-4-21.04 road on right
0.62	Existing CMP.
0.71	End RMU.
0.72	Existing CMP.

0.72	Fill slope failure. Repair fill slope failure and rebuild/stabilize the fill slope with approximately 5CY of Class II riprap.
0.82	Existing CMP.
0.89	WDS left.
0.91	Start RMU.
0.92	Jct w/ unnumbered road left.
0.96	Existing CMP.
0.96	Hydrologic Point of Concern (HPOC): Install check dams, or other approved BMPs, per contract specifications and Exhibit C11-2.
0.99	Unit 21-01 boundary on right.
1.01	Existing CMP.
1.14	End unit 21-01 boundary on right.
1.15	Existing CMP.
1.18	End RMU.
1.19	End Renovations.

33-4-21.02 Road – Lower Green Grave – Agg – Subgrade: 15ft – Ditch: 0Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.01	Jct w/ unnumbered road right.
0.20	Property line (into BLM).
0.21	Jct w/ 33-4-21.06 road right.
0.25	Existing CMP.
0.28	Existing CMP.
0.39	Existing CMP.
0.39	End Renovations.

33-4-21.05 Road –Private Road – Agg – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.00	Existing CMP.
0.02	Private Green Gate (Lock N1330).
0.12	Existing CMP.
0.25	Existing CMP.
0.32	Existing CMP.
0.45	Existing CMP.
0.50	Jct w/ unnumbered road right
0.54	Existing CMP.
0.56	Jct w/ unnumbered road right.
0.58	Existing HDPE.
0.60	Existing HDPE.
0.60	Hydrologic Point of Concern (HPOC): Install check dams, or other approved BMPs, per contract specifications and Exhibit C11-2.
0.79	Existing HDPE.
0.85	Existing HDPE.
0.90	Existing HDPE.
0.94	Existing HDPE.
1.09	Jct w/ 33-4-20.0A road right.

1.09 End Renovations.

33-4-21.06 Road – Agg – Subgrade: 16ft – Ditch: 0Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; and roadside brushing and chipping.
0.03	WDS Site Left
0.09	End Renovations.

33-4-29.00 Road – Slate Creek– Agg – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.00	Begin road surfacing. Upon completion of all other road renovation items and approval of the road running surface, properly place, water, and roll a 14' wide by 6" compacted in place depth aggregate surface course which shall consist of 1-1/2"-minus crushed rock from an approved weed free commercial source per contract specifications and details. Surface 4 turnouts per mile (10 total) approximately 10' wide by 50' long with 25' tapers.
0.10	Existing CMP.
0.26	Existing CMP.
0.38	Jct w/ 33-4-29.02 road on the right.
0.40	Property line (into BLM).
0.40	Unit 29-09 boundary on left.
0.41	Jct w/ 33-4-29.03 road on the left.
0.44	Unit 29-08 boundary on right.
0.46	End unit 29-09 on the left.
0.47	RMU start.
0.49	Existing CMP.
0.54	Existing CMP.
0.55	Unit 29-08 boundary on the left.
0.56	RMU end.
0.61	Existing CMP.
0.64	Jct w/ new proposed 33-4-29.04 road on left.
0.67	Jct w/ 33-4-29.01 road left.
0.71	Existing CMP.
0.85	RMU start.
0.86	Existing CMP.
0.88	Jct w/ temp road on the right.
1.01	Existing CMP.
1.11	Existing CMP.
1.12	RMU end.
1.12	Property line (into private property)
1.14	Jct w/ 33-4-30.02 road on the left.
1.18	Existing CMP.
1.20	Jct w/ 33-4-30.03 road on the right.
1.28	Existing CMP.
1.33	Existing CMP. Remove and replace the existing culvert with a new 24" x 32' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
1.43	Jct w/ 33-4-30 road on the right.

1.43	Existing CMP.
1.51	Existing CMP.
1.58	Property line (into BLM).
1.58	Unit 19-07 boundary on right.
1.59	Existing CMP.
1.60	Jct w/ unnumbered road on left.
1.66	Existing CMP.
1.76	End unit 19-07 boundary on right.
1.78	Existing CMP.
1.87	Existing CMP.
1.99	Existing CMP.
2.06	Existing CMP.
2.12	Existing CMP.
2.18	Unit 19-07 boundary on right.
2.19	Existing CMP.
2.24	Existing CMP.
2.27	End unit 19-07 boundary on right.
2.33	Existing CMP.
2.33	End Renovations and road surfacing.

33-4-29.01 Road - Lucky Buck Spur – Agg – Subgrade: 15ft – Ditch: 0Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-29 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; and roadside brushing and chipping.
0.00	Unit 29-07 boundary on left and right.
0.13	Start RMU.
0.13	End unit 29-07.
0.16	End Renovations.

33-4-29.03 Road – Agg – Subgrade: 15ft – Ditch: 0Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-29.01 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; and roadside brushing and chipping.
0.01	Rope Gate “Closing” road
0.03	End Renovations.

33-4-30.00 Road – Lower King Mt – Agg – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-29 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; and roadside brushing and chipping.
0.08	Property line (into BLM)
0.08	Unit 19-07 boundary on left.
0.09	End unit 19-07 boundary on left.
0.09	End Renovations.

33-4-30.01 Road – Baker Creek C Spur – Agg – Subgrade: 16ft – Ditch: 0Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-5 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; and roadside brushing and chipping.

0.08	Property line (into BLM)
0.12	Property line (into private)
0.20	Jct road rt
0.27	Property line (into BLM)
0.73	Unit 31-02 boundary on left.
0.77	Jct w/ new proposed TR 31-02 road on left.
0.77	End renovations and road surfacing.

33-4-30.02 Road – Agg – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.0	Jct w/ 33-4-29 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.04	Remove existing water bar.
0.10	Existing CMP.
0.19	Existing CMP.
0.25	Existing CMP.
0.26	Existing CMP.
0.31	Existing CMP.
0.42	Remove existing water bar.
0.43	Existing CMP.
0.43	Hydrologic Point of Concern (HPOC): Install check dams, or other approved BMPs, per contract specifications and Exhibit C11-2.
0.44	Remove existing water bar.
0.46	Remove existing water bar.
0.47	Remove existing water bar.
0.50	Cut bank slump 150ft long, Remove approximately 200 CY of slump material to a WDS.
0.53	Remove existing water bar.
0.60	Remove existing water bar.
0.69	Remove existing water bar.
0.71	Remove existing water bar.
0.84	WDS site.
0.85	Jct w/ new proposed 33-4-30.04 road on left.
0.85	End renovations and road surfacing.

33-4-30.03 Road – Private Road – Nat – Subgrade: 15ft – Ditch: 0Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-29 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; and roadside brushing and chipping.
0.00	Reconstruct entrance.
0.00	Begin road surfacing. Upon completion of all other road renovation items and approval of the road running surface, properly place, water, and roll a 14' wide by 6" compacted in place depth aggregate surface course which shall consist of 1-1/2"-minus crushed rock from an approved weed free commercial source per contract specifications and details. Surface 4 turnouts per mile (1 total) approximately 10' wide by 50' long with 25' tapers.
0.02	End entrance reconstruction, begin typical road renovations.
0.18	End Renovations and road surfacing.

33-4-31.00 Road – Lower Baker Creek– Agg – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-5 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed;

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	clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.00	Begin road surfacing. Upon completion of all other road renovation items and base rock placement and approval of the road running surface, properly place, water, and roll a 14' wide by 6" compacted in place depth aggregate surface course which shall consist of 1-1/2" minus crushed rock from an approved weed free commercial source per contract specifications and details. Surface 4 turnouts per mile (4 total) approximately 10' wide by 50' long with 25' tapers.
0.18	Abandoned car
0.20	Start RMU.
0.22	Existing culvert.
0.28	Jct w/ 33-4-31.05 road on right.
0.29	Existing culvert.
0.32	Jct w/ 33-4-31.02 road on left.
0.36	Existing culvert at Baker Creek. Spot rock upon approval of the roadbed, properly place, water, and roll a 15' wide by 40' long by 8" depth aggregate cap which shall consist of 4" minus screened rock (20 CYs) compacted in place from an approved weed free commercial source per contract specifications and details.
0.36	Hydrologic Point of Concern (HPOC): Install check dams, or other approved BMPs, per contract specifications and Exhibit C11-2.
0.38	Jct w/ 33-4-31.01 road on left.
0.50	Existing culvert.
0.67	Jct w/ new proposed TR31-04A road on left.
0.68	End RMU.
0.69	Existing culvert.
0.73	Existing culvert.
0.78	Existing culvert.
0.85	Existing culvert.
0.92	Existing culvert.
1.01	Existing culvert.
1.07	Jct w/ 33-4-31.03 road on the right.
1.07	End Renovations and road surfacing.

33-4-31.03 Road – Private Road– Nat – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 33-4-31 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping.
0.01	Jct w/ TR 31-04B road right.
0.02	Remove existing berms (x2).
0.03	Jct w/ unnumbered road left.
0.05	Remove existing water bar.
0.06	Remove existing water bar.
0.07	Remove existing water bar.
0.09	Remove existing water bar.
0.12	Remove existing water bar.
0.14	Remove existing water bar.
0.19	Remove existing water bar.
0.20	Remove existing water bar.
0.22	Remove existing water bar.
0.23	Existing CMP.
0.23	Remove existing water bar.
0.26	Remove existing water bar.

- 0.33 Remove existing water bar.
- 0.37 Remove existing water bar.
- 0.39 Existing CMP.
- 0.39 Existing culvert at Beaver Creek. Hydrologic Point of Concern (HPOC): Install check dams, or other approved BMPs, per contract specifications and Exhibit C11-2.
Spot rock upon approval of the roadbed. Properly place, water, and roll a 15' wide by 80' long by 6" depth aggregate cap which shall consist of 1.5"-minus crushed rock (30 CYs) compacted in place from an approved weed free commercial source per contract specifications and details.
- 0.41 Existing CMP.
- 0.48 Remove existing water bar.
- 0.53 Remove existing water bar.
- 0.56 Remove existing water bar.
- 0.59 Jct w/ unnumbered road left
- 0.61 Remove existing water bar.
- 0.67 Remove existing water bar.
- 0.76 Jct w/ new proposed 33-4-30.05 road on left.
- 0.76 End Renovations and road surfacing.

33-4-31.04 Road – Nat – Subgrade: 15ft – Ditch: 0Ft

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 34-4-5 road. Begin pre-haul road improvements which include reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; and roadside brushing and chipping. |
| 0.01 | End road improvements. See road continuation in new road construction section. |

34-4-5 Road –Baker Crk – Agg/Nat – Subgrade: 15ft – Ditch: 3Ft/0Ft

- | <u>MP</u> | <u>Description</u> |
|-----------|---|
| 0.00 | Jct w/ 34-5-10 road. Begin pre-haul road renovation which includes reshaping road surface (blading, watering, and rolling) to road specifications; scarify rutted road surface as needed; clearing and reshaping existing ditch lines; clearing all culvert inlets and outlets; cleaning all debris or obstructions from inside culverts; and roadside brushing and chipping. |
| 0.00 | Begin road surfacing. Upon completion of all other road renovation items and approval of the road running surface, properly place, water, and roll a 14' wide by 6" compacted in place depth aggregate surface course which shall consist of 1-1/2"-minus crushed rock from an approved weed free commercial source per contract specifications and details. Surface 4 turnouts per mile (5 total) approximately 10' wide by 50' long with 25' tapers. |
| 0.06 | Jct w/ unnumbered road right. |
| 0.08 | Existing CMP. |
| 0.12 | Property line (into BLM) |
| 0.12 | Unit 31-05 boundary on left. |
| 0.12 | Start RMU. |
| 0.19 | Existing CMP. |
| 0.25 | Existing CMP. |
| 0.27 | Existing CMP. |
| 0.27 | Hydrologic Point of Concern (HPOC): Install check dams, or other approved BMPs, per contract specifications and Exhibit C11-2. |
| 0.28 | Existing CMP. |
| 0.30 | Unit 31-05 boundary on right. |
| 0.30 | End RMU. |
| 0.39 | Existing CMP. |
| 0.46 | Existing CMP. |
| 0.51 | Existing CMP. |
| 0.52 | Jct w/ 33-4-31 road right. |

0.60	Jct new 33-4-31.04 road left.
0.64	Existing CMP.
0.75	Existing CMP.
0.89	Existing CMP.
0.89	End Unit 31-05 boundary on left.
1.01	Existing CMP.
1.06	Jct w/ unnumbered road left
1.06	End unit 31-05 boundary on right.
1.14	End road surfacing.
1.14	Jct w/ unnumbered road left.
1.26	Existing CMP.
1.39	Existing CMP.
1.45	Existing CMP.
1.55	Existing CMP.
1.58	Property line (into private)
1.60	Existing CMP.
1.67	Existing CMP.
1.80	Jct w/ 33-4-30.01 road left.
1.80	Jct w/ 33-5-36 road left.
1.86	Property line (into BLM). End rocked surface with ditch, begin native surface without ditch.
1.86	Unit 25-12 boundary on left and right.
1.97	End unit 25-12 boundary on left and right.
2.01	Property line (into private)
2.02	Jct w/ unnumbered road on right, gated.
2.14	Property line (into BLM)
2.20	Unit 25-12 boundary on left.
2.22	Jct w/ unnumbered road on right.
2.23	Jct w/ new proposed TR25-12A road on left.
2.28	Jct w/ 33-5-25 road on right
2.28	Existing CMP.
2.38	Existing CMP.
2.45	Existing CMP.
2.55	End unit 25-12 boundary on left.
2.56	End Renovations.

34-4-5.03 Road –Private Road – Agg – Subgrade: 15ft – Ditch: 3Ft

<u>MP</u>	<u>Description</u>
0.00	Jct w/ 34-5-10 road. Begin pre-haul road renovation which includes clearing and reshaping existing ditch lines and roadside brushing and chipping. Existing road surface is 4" minus rock.
0.01	Private Green gate (No BLM lock).
0.11	Jct w/ unnumbered road left.
0.22	Jct w/ new proposed 33-4-31.04 road on right.
0.22	End Renovations.

New Construction

33-4-20.00B Road – Nat – Subgrade: 16ft – Ditch: 0Ft

(See Exhibit C2-13 for Map and Exhibit C14 for Plan and Profile Sheets)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-20.00A road. Begin new road construction to road specifications and design.
3+60	Begin taper for turnout right
3+85	Begin 12' wide x 100' long turnout right.
4+85	End 12' wide x 100' long turnout right.
5+10	End taper for turnout right.
9+25	Begin taper for turnout right
9+50	Begin 12' wide x 100' long turnout right.
10+50	End 12' wide x 100' long turnout right.
10+75	End taper for turnout right.
11+60	Jct w/ new 33-4-21.07 road right.
12+18	Begin taper for turnout left.
12+28	Begin 22' wide x 20' long turnout left.
12+40	End 22' wide x 20' long turnout left.
12+50	End taper for turnout left.
15+00	Begin taper for end landing left and right.
15+27	Begin 15' wide x 50' long end landing left and right.
15+77	End 15' wide x 50' long end landing left and right.
15+80	End rounding for 30' wide x 50' long end landing. End road construction.

33-4-21.07 Road – Nat – Subgrade: 16ft – Ditch: 0ft

(See Exhibit C2-13 for Map and Exhibit C15 for Plan and Profile Sheets)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-20.00B road. Begin new road construction to road specifications and design.
5+00	Begin taper of ending landing left and right
5+25	Begin 15' wide x 60' long end landing left and right.
5+85	End 15' wide x 60' long end landing left and right.
5+96	End rounding for 30' wide x 60' long landing. End road construction.

33-4-29.04 Road – Agg – Subgrade: 16ft – Ditch: 3Ft

(See Exhibit C2-9 for Map and Exhibit C16 for Plan and Profile Sheets)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 34-4-29.00 road. Begin new road construction to road specifications and design.
0+00	Begin road surfacing. Upon completion of all other road construction items and approval of the road subgrade, properly place, water, and roll a 15' wide by 8" compacted depth aggregate base course which shall consist of 4"-minus screened rock from an approved weed free commercial source per contract specifications and details. Surface all turnouts (3 total) to an 11' width and length shown in the plan and profile sheets. Upon completion of base rock placement and approval, properly place, water, and roll a 14' wide by 8" compacted depth aggregate surface course which shall consist of 1-1/2"-minus crushed rock from an approved weed free commercial source per contract specifications and details. Surface all turnouts (3 total) to a 10' width and length shown in the plan and profile sheets.
5+00	Begin taper for turnout right
5+25	Begin 12' wide x 100' long turnout left.
6+25	End 12' x 100' turnout left.
6+50	End taper for turnout right.
7+47	Install 24" x 34' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial

source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.

7+82	Begin taper for turnout right
8+02	Begin 12' wide x 50' long turnout right.
8+51	End 12' wide x 50' long turnout right.
8+75	End taper for turnout right.
8+90	Begin taper for turnout right
9+00	Begin 35' wide x 20' long turnout right.
9+35	End 35' wide x 20' long turnout right.
9+45	End taper for turnout right.
12+20	Begin taper for end landing left and right.
12+45	Begin 18' wide x 50' long end landing left and right.
12+95	End 18' wide x 50' long end landing left and right.
12+98	End rounding for 35' wide x 50' long end landing.
12+98	End road construction and surfacing.

33-4-30.04 Road – Nat – Subgrade: 16ft – Ditch: 3Ft/0ft

(See Exhibit C2-11 for Map and Exhibit C17 for Plan and Profile Sheets)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-29.04B road. Begin new road construction to road specifications and design.
3+77	Install 24" x 42' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details. specifications and details.
3+90	Begin transition from insloped and ditched road to an outsloped road.
4+40	Outsloped road begin.
8+38	Begin taper for end landing left and right.
8+63	Begin 15' wide x 57' long end landing left and right.
9+20	End 15' wide x 57' long end landing left and right.
9+22	End road construction.

33-4-30.05 Road – Nat – Subgrade: 16ft – Ditch: 3Ft/0ft

(See Exhibit C2-7 for Map and Exhibit C18 for Plan and Profile Sheets)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-31.03 road. Begin new road construction to road specifications and design.
1+04	Install 24" x 32' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
5+50	Begin taper for turnout Right.
5+75	Begin 12' wide x 50' long turnout right.
6+25	End 12' wide x 50' long turnout right.
6+50	End taper for turnout right.
8+47	Install 24" x 40' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
9+40	Begin transition from insloped road with ditch to outsloped road
9+65	Begin outsloped road construction
13+00	Begin taper for turnout left.
13+24	Begin 12' wide x 100' long turnout left.
14+24	End 12' wide x 100' long turnout left.
14+49	End taper for turnout left.
15+88	Construct water dip w/ armored outfall per specifications and details on Exhibit C12-1

16+17	Begin taper for end landing left and right.
16+32	Begin 15' wide x 55' long end landing left and right.
16+89	End rounding for 30' wide x 55' long end landing.
16+92	End road construction.

33-4-31.04 Road – Nat – Subgrade: 16ft – Ditch: 3Ft/0ft
(See Exhibit C2-3 for Map and Exhibit C19 for Plan and Profile Sheets)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-31.04 road. Begin new road construction to road specifications and design.
4+25	Begin taper for turnout left.
4+56	Begin 12' wide x 50' long turnout left.
5+07	End 12' wide x 50' long turnout left.
5+32	End taper for turnout left.
5+65	Install 24" x 38' HDPE pipe per contract details and specifications.
8+40	Install 24" x 34' HDPE pipe per contract details and specifications.
9+48	Install 24" x 32' HDPE pipe per contract details and specifications.
11+49	Install 24" x 40' HDPE pipe per contract details and specifications.
12+77	Begin taper for turnout left.
13+02	Begin 12' wide x 60' long turnout left.
13+62	End 12' wide x 60' long turnout left.
13+87	End taper for turnout left.
16+73	Install 24" x 40' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
20+70	Install 24" x 40' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
21+08	Begin taper for turnout left.
21+33	Begin 12' wide x 50' long turnout left.
21+83	End 12' wide x 50' long turnout left.
22+08	End taper for turnout left.
22+76	Install 24" x 40' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
26+80	Install 24" x 40' Aluminized 16-gauge CMP per contract details and specifications. Properly place a splashpad (2 CYs of Class 2 Riprap material from an approved weed free commercial source) at pipe outlet for fill-slope protection and energy dissipation per contract specifications and details.
27+90	Begin transition to out-sloped road
28+90	Out-sloped road begin.
30+06	Jct w/ 34-4-5.03 road.
30+06	End road construction.

Temporary Routes

All Temporary Routes are native surface and out-sloped, unless noted otherwise. Subgrade width shall not exceed 16 feet (not including turnouts and landings). All temp routes shall be winterized by October 15th if access is needed over two dry seasons. Winterization includes water barring, mulching, and temporarily barricading per Exhibit D Details and Specifications.

TR 25-12 A Road – (See Exhibit C2-5 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 34-4-5 road
6+88	Jct w/ Temp Road 25-12B
12+20	<u>WARNING!!!!!! 1/16 section survey marker below road layout DO NOT DISTURB</u>
13+49	End temp route construction.

TR 25-12 B Road – (See Exhibit C2-5 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ Temp Road 25-12A.
5+61	End temp route construction.

TR 29-07 (See Exhibit C2-7 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-30.05 road. Begin temp route construction (typical cut-fill).
3+53	End temp route construction.

TR 29-08 A Road – (See Exhibit C2-10 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-29 road. Begin temp route reconstruction/improvement.
1+23	Jct w/ Temp Road 29-08C
1+63	Jct w/ Temp Road 29-08B
5+25	Begin temp route construction (typical cut-fill).
14+79	End temp route construction.

TR 29-08 B Road – (See Exhibit C2-10 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ Temp Road 29-08A. Begin temp route construction (typical cut-fill).
4+77	End temp route construction.

TR 29-08 C Road – (See Exhibit C2-10 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ Temp Road 29-08A. Begin temp route construction (typical cut-fill).
10+73	End temp route construction.

TR 31-02 Road – (See Exhibit C2-4 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-30.01 road. Begin temp route construction (typical cut-fill).
1+91	End temp route construction.

TR 31-04 A Road – (See Exhibit C2-6 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-31 road. Begin temp route reconstruction/improvement.
13+40	End temp route improvement.

TR 31-04 B Road – (See Exhibit C2-6 for Map)

<u>STA</u>	<u>Description</u>
0+00	Jct w/ 33-4-31.03 road. Begin temp route reconstruction/improvement. Begin temp route surfacing. Upon completion of all other temp route construction items and approval of the subgrade, properly place, water, and roll a 14' wide by 8" compacted depth aggregate base course which shall consist of 4"-minus crushed rock from an approved weed free commercial source per contract specifications and details.
4+10	End temp route improvement and surfacing.

SPECIAL PROVISIONS - ROADS

1. GENERAL:

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

2. BRIDGE LOAD RESTRICTIONS:

- 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 (See R-4).
- BLM Bridges are located at:
 1. 34-4-28.00 Road, MP 7.21
- BLM haul authorization form for weight restricted structures and/or oversize loads can be obtained from the Authorized Officer. This form shall be properly filled out and submitted for approval a minimum of 14 days prior to driving oversized loads across the bridge.

3. DAMAGE:

- The Purchaser's Representative/Contractor shall protect, and is responsible for, any damage to existing telephone lines, transmission lines, fiber optic lines, fences, ditches, and other existing improvements as required in Section 14. Damage to utilities and other existing improvements shall be promptly paid for or repaired to a condition which is, in the opinion of the Authorized Officer and the governing utility company, as good or better condition than just prior to such damage occurring.

4. PERMITS:

- All required permits are the responsibility of the Purchaser.

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

<u>ACTIVITY</u>	<u>START DATE</u>	<u>END DATE</u>
Road renovation	May 15	October 15
In stream work	June 15	September 15

6. STREAMS:

- All stream channel culverts and inlets shall be cleared and cleaned between **June 15th and September 15th** in accordance with Oregon Department of Fish and Wildlife (ODFW) in-stream work period guidelines, updated January 2022.
- Construct silt fences, or approved equal, 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.

7. DUST ABATEMENT:

- The application of dust abatement materials such as Lignin or other 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.

8. WATER SOURCE:

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

9. 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 the Authorized Officer or Project Engineer prior to entering BLM lands. Provide a 48 hours' notice of inspection to the Authorized Officer or Project Engineer prior to mobilization.

10. SOIL STABILIZATION:

- The Purchaser's Representative/Contractor shall apply native grass seed and certified weed free straw mulch to all disturbed soil for soil stabilization operations per Exhibit C22, Section 1800. Native seed mixture shall be prescribed by the BLM project botanist. Native seed and straw mulch may be purchased from the BLM, **if available**, or purchased from a source approved by the BLM project botanist.

11. 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 timeline. Seasonal restrictions for stream work and wildlife will still apply.
- Loose material cleaned from ditch lines and/or slide material shall not be placed where it can enter wetlands, riparian reserves, floodplains, and waters of the State.

12. ROADSIDE BRUSHING:

- While roadside brushing, there shall be no scarring or other damage of the tree trunk or bole allowed. All debris resulting from roadside brushing activities shall be scattered downslope or chipped according to specifications. Use of Excavators for brush removal will be at the discretion of the Authorized Officer. **All culvert inlets and outlets shall be brushed for a radius of 4 feet.**
- While roadside brushing through private industry lands, conifer trees at the edges of the cleared area (see cutting limit, Exhibit C6) shall have the branches pruned rather than being felled.
- All stumps, designated by the Authorized Officer, which would interfere with normal blading and road renovation/maintenance operations (including turnouts), shall be removed in such a

way as to not cause damage to the drainage ditch or the roadbed. If such damage does occur, the Purchaser's Representative/Contractor shall properly repair the road damage immediately.

13. TEMPORARY ROUTES:

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

14. COMMERCIAL AGGREGATE:

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

15. WILDLIFE RESTRICTIONS:

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

16. WET SEASON HAUL:

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

TIMBER SALE ROAD SPECIFICATIONS

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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
1400	Slope Protection
1700	Erosion Control
1800	Soil Stabilization
2100	Roadside Brushing

GENERAL – 100

101 - Prewrite Conference(s):

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

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

102 - Definitions:

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

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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

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

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

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

End Haul - Excavated material moved, other than by dozer, to an embankment or waste area to prevent side casting 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, grading includes smoothing of the cut bank.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Road Centerline - The longitudinal center of a roadbed.

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

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

Roadway - 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.

Slope ratio notation (horizontal:vertical) – Slope ratios for constructed cut and fill slopes are expressed as a ratio of horizontal units to vertical units.

Spalls - Flakes or chips of stone.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

102a - Tests Used in These Specifications:

<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. 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.

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

The distance between circumferential rows of tamper feet shall be such that the diagonal distance from any foot to the nearest foot in each adjacent row shall be not more than 12 inches. The cross-sectional area of the face of each tamper foot, measured perpendicular to the axis of the stud, shall be not less than 5-1/2 square inches nor more than 8 square inches.

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

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 not 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 not 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 not less than 3 inches nor more than 4 inches. The roller shall be so constructed that counterweights can be used to adjust the gross weight of the roller to not 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 not less than 56 inches, nor more than 66 inches and the drum width shall be 84 inches. Vibratory frequency shall be regulated in seeps from 1200 to 1800 vibrations per minute (VPM), and the centrifugal force developed shall be at least 40,000 pounds at 1800 RPM. The vibratory grid roller shall be self-propelled and have a power unit of not less than 112 horsepower. The "grid" design shall be a herringbone or z-bar pattern around the circumference of the drum. The grid bars shall be 1 inch in height and spaced not more than 8-1/2 inches apart.
- 103i - Other. Compaction equipment approved by the Authorized Officer.

CLEARING AND GRUBBING - 200

- 201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans and as staked on the ground.
- 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.
- 202 - Where clearing limits have not been staked, established by these specifications or shown on the plans, the limits shall extend 5 feet back of the top of the cut slope and 5 feet out from the toe of the fill slope.
- 202b - Where clearing limits for borrow pits or quarries, stockpile sites, channel changes, and ditches have not been staked or shown on the plans, the limits shall extend 6 feet back of the top of the cut slope and 6 feet outside of the outside slope lines.
- 203 - Clearing shall consist of the removal and disposal of trees, logs, rotten material, brush, and other vegetative materials and surface objects in accordance with these specifications and within the limits established for clearing as specified under Subsections 202 and 202b as shown on the plans and as posted.
- 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 and as flagged and tagged on the ground, shall be cruised and paid for in concurrence with the associated RROW License Agreements and signed Crossing Plats.
- 204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the clearing operation in accordance with Subsections 204a, 204c, and 204d between the top of the cut slope and the toe of the fill slope
- 204a - Stumps including those overhanging cut banks, shall be removed within the required excavation limits.

- 204c - On excavated areas, roots and embedded wood shall be removed to a depth not less than **8** inches below the subgrade.
- 204d - On areas to be occupied by embankments having heights greater than 4 feet, no stump or portion thereof shall remain within 3 feet of embankment subgrades or slope surfaces after grubbing is completed.
- 205 - Clearing and grubbing debris shall not be placed or permitted to remain in or under road embankment sections. 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 chipping in accordance with Subsection 209 and/or piling in accordance with Subsection 211 at the following road location(s).

Road/Temp Route.	From MP or STA	To MP or STA	Activity Type	Disposal Method
33-4-21.01	0.05	0.23	RMU	Scatter
33-4-21.01	0.43	0.71	RMU	Scatter
33-4-21.01	0.91	1.18	RMU	Scatter
33-4-29.00	0.47	0.56	RMU	Scatter
33-4-29.00	0.85	1.12	RMU	Scatter
33-4-29.01	0.13	0.16	RMU	Scatter
33-4-31.00	0.20	0.68	RMU	Scatter
34-4-05.00	0.12	0.30	RMU	Scatter
N33-4-20.0B	0+00	15+80	Construction	Pile Burn
N33-4-21.7	0+00	5+88	Construction	Pile Burn
N33-4-29.04	0+00	12+70	Construction	Pile Burn
N33-4-30.4	0+00	9+22	Construction	Pile Burn
N33-4-30.5	0+00	19+12	Construction	Pile Burn
N33-4-31.4	0+00	30+06	Construction	Pile Burn
TR25-12A	0+00	13+49	Construction	Pile Burn
TR25-12B	0+00	5+60	Construction	Pile Burn
TR29-07	0+00	3+50	Construction	Pile Burn
TR29-08A	0+00	5+25	Reconstruction	Pile Burn
TR29-08A	5+25	14+80	Construction	Pile Burn
TR29-08B	0+00	4+77	Construction	Pile Burn
TR29-08C	0+00	10+73	Construction	Pile Burn
TR31-02	0+00	1+91	Construction	Pile Burn
TR31-04A	0+00	13+40	Reconstruction	Pile Burn
TR31-04B	0+00	4+10	Reconstruction	Pile Burn

- 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. 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.
- 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.
- 210a - Disposal of clearing and grubbing debris, stumps, and cull logs on non-government property by scattering, burning, chipping or 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.
- 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.

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.
- 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 shown on the plans, as shown in these specifications, and 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.
- 305a - Material used in the construction of embankment sections shall be free of stumps, cull logs, brush, muck, sod, roots, frozen material, and other deleterious materials and shall be placed and compacted as specified.
- 305b - Embankment materials shall be placed in successive parallel layers on areas cleared of stumps, cull logs, brush, sod, and other vegetative and deleterious materials, except as provided under Subsection 204. Roadway embankments of earth material shall be placed in horizontal layers not exceeding 8 inches in depth.
- 305c - Embankments formed of material containing less than 25 percent rock not larger than 8 inches in the greatest dimension shall be placed in 12-inch layers. Material containing more than 25 percent rock not larger than 12 inches in the greatest

dimension shall be placed in successive layers not exceeding 2 feet in thickness.

- 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, 305c, 305d, and 317 shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103b, 103f, 103g, 103h, and 103i and in accordance with the following table:
 - 306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall be 6 passes over each full-width layer or fraction thereof.
 - 306e - The final subgrade shall be compacted to full width with compacting equipment conforming to the requirements of Subsections 103b, 103f, 103g, 103h, and 103i. Minimum compaction shall be 1 hour of continuous compacting for each 6 stations of road or a fraction of as measured along the center line of the constructed road.
 - 306f - Compaction of embankment layers placed as specified under Subsection 305b, above, shall be accomplished by routing construction equipment over full width of embankment structures except as specified in Subsection 306.
 - 306g - All fill slopes shall be compacted to (75) percent of maximum density, either by walking with cat/excavator or by pressing with excavator bucket, to prevent surface erosion and raveling.
- 308 - In the case of rock fills, placement of material in layers is not required and such material may be placed by end-dumping or other methods approved by the Authorized Officer provided that the rock be reasonably prevented from escaping beyond the embankment toe.
- 309 - The top of cut slopes shall be rounded by blending into the adjacent terrain for a distance not less than 1 foot and not more than 3 feet beyond the top of the cut. Rounding shall be performed in soils that can be shaped without ripping or blasting.

- 311 - In solid rock cuts where pockets that will not drain are formed by blasting below the subgrade elevation, drainage shall be provided by ditching to the edge of the subgrade and backfilling to grade, and compacting the pockets and the ditch with rock fragments, gravel, or other suitable porous material.
- 312 - When material, except solid rock, encountered in cuts at subgrade, is suitable for use in forming the finished roadbed, the top 6-inch layer of the subgrade shall be thoroughly scarified for the full width of the roadbed. Roots, sod, and other deleterious material or stones that will not pass a 6-inch square opening shall be removed. The scarified material shall be processed to the optimum moisture content suitable for maximum density and compacted in accordance with these specifications.
- 313 - In cut areas where solid rock is encountered at, or near subgrade, the rock shall be excavated to a minimum depth of 6 inches below subgrade elevation and the excavated area backfilled with suitable material. The backfill material shall be processed to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.
- 314 - When heavy clays, muck, clay shale, or other deleterious material for forming the roadbed is encountered in cuts at subgrade, it shall be excavated to a minimum depth of 2 feet below the subgrade elevation and the excavated area backfilled with a selected borrow material approved by the Authorized Officer. The backfill material shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density in accordance with the requirements of Subsection 306. Unsuitable material shall be disposed of as directed by the Authorized Officer.
- 316 - Borrow material from sources selected at the Purchaser's option shall be inspected and approved in writing by the Authorized Officer prior to placement.
- 317 - Selected borrow shall consist of talus material, finely broken rock, gravel, or other material of granular or favorable characteristics from sources shown on the plans.
- 318 - Selected borrow or selected roadway excavation material shall be uniformly spread on the roadbed in lifts not to exceed 6 inches in depth until the required thickness shown on the plans is attained.

Each layer shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width in accordance with the requirements of Subsection 306.
- 320 - Ditches shall conform to the slope, grade, dimensions, and shape of the required

cross section shown on the plans. Roots, stumps, rocks, and other projections shall be removed to form smooth, even slopes.

- 321 - Excess excavated, unsuitable, or slide materials shall not be disposed of on areas where the material will encroach on a stream course or other body of water. Such materials shall be disposed of in accordance with Subsection 321a and 321c. Materials not disposed of in this manner shall be retrieved and disposed of at the Purchaser's expense and at the direction of the Authorized Officer.
- 321a - Excess construction materials specified under Subsection 321 shall be loaded, hauled, and placed as embankment for the roadbed on the following road sections:

Watering, rolling, and placement in layers are required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.
- 323 - In the construction of channel changes and stream-crossing embankment sections, natural stream flow shall be maintained unless otherwise provided.
- 324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of 2 feet on the uphill side.
- 327 - The finished grading shall be approved in writing by the Authorized Officer in segments or for the total project. The Purchaser shall give the Authorized Officer 3 days' notice prior to final inspection of the grading operations.
- 328 - The Purchaser shall adopt methods and procedures in using explosives, which will prevent damage to adjacent landscape features, and which will minimize scattering rocks and other debris outside the road prism.
- 328a - The Purchaser shall establish and be responsible for blasting techniques and shall furnish the Authorized Officer, prior to starting drilling operations, a blasting plan specifying drill-hole diameter, drill-hole spacing, depth of drilling, type of explosive to be used, loading pattern, sequence of firing, the location where the plan is to be used, and other relevant data. Acceptance of the drilling and blasting plan does not relieve the Purchaser of responsibility or liability for the results of the blasting.

PIPE CULVERTS - 400

- 401 - This work shall consist of furnishing and installing pipe culverts, full round downspouts, and splash pads in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer upon installation of the appurtenance structures. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 403 - Grade culverts shall have a gradient of from 2 percent to 4 percent greater than the adjacent road grade. Grade culverts shall be skewed down grade 30 degrees as measured from the perpendicular to the centerline unless otherwise specified on the plans.
- 404 - Damage to the spelter, or burn back in excess of 3/8 inch, shall be wire brushed and painted with two coats of zinc-rich paint on zinc-coated and steel pipe, and aluminum-rich paint on aluminum or aluminum-coated pipe.
- 405 - Corrugated steel riveted and helical pipe culverts and 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.
- 405e - Corrugated-polyethylene pipe for culverts 18-inch through 36-inch diameter shall meet the requirements of AASHTO M 294, Type S.
- Corrugated-polyethylene pipe for culverts to be used for downspouts 18-inch through 24-inch diameter shall meet the requirements of AASHTO M 294, Type C.
- Installation will be subject to the same specification as other pipe materials.
- 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.
- 408 - Pipe culverts and pipe-arch culverts shall be placed on the bed starting at the downstream end with the inside circumferential laps pointing downstream and with the longitudinal laps at the side or quarter points. Coupling bands of the type required under these specifications shall be installed so as to provide the circumferential and longitudinal strength necessary to preserve the pipe alignment, prevent separation of the pipe sections, and minimize infiltration of fill material.
- 410 - Pipe shall be unloaded and handled with reasonable care. If the Authorized Officer determines any structure is damaged to the extent that it is unsuitable for use in the road construction, it shall be replaced at the Purchaser's expense.
- 411 - Trenches necessary for the installation of pipe culverts shall conform to the lines, grades, dimensions, and typical diagram included in the plans and in Exhibit C-9, the Culvert Installation Detail Sheet.
- 412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of 24 inches below the invert grade for a width of at least one pipe diameter or span on each side of the pipe and shall be backfilled with selected granular or fine readily compactable soil material or crushed rock material in accordance with Section 1200 gradation C.
- 413 - Pipe culverts and pipe-arch culverts shall be bedded on a selected granular, crushed rock material in accordance with Section 1200 gradation C, or fine readily compactable soil material having a depth of not less than 6 inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.
- 416 - Side-fill material for pipe culverts shall be placed within 1 pipe diameter, or a minimum of 2 feet, of the sides of the pipe barrel, and to 1 foot over the pipe with fine, readily compactable soil, crushed rock material from stockpiles shown on the plans, or granular fill material free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

- 417 - For pipe culverts, side-fill material conforming to the requirements of Subsection 416 shall be placed and compacted under the haunches of the pipe, and shall be brought up evenly and simultaneously on both sides of the pipe to 1 foot above the pipe, in layers not exceeding 6 inches in depth and 1 pipe diameter/span, or a minimum of 2 feet in width each side of, and adjacent to, the full length of the pipe barrel. Each layer shall be moistened or dried to a uniform moisture content suitable for maximum compaction and immediately compacted by approved hand or pneumatic tampers until a uniform density of 85 percent of the maximum density, is attained as determined by AASHTO T 99, Method C.
- 418 - Side fills beyond the compaction limits specified under Subsection 417 shall be compacted as specified under Section 300.
- 419 - The pipe culverts after being bedded and backfilled as required by these specifications shall be protected by a 2-foot cover of fill before heavy equipment is permitted to cross the drainage structures. Removal of the protection fill shall be as directed by the Authorized Officer.
- 423 - Construction of catch basins and ditch dams conforming to the lines, grades, dimensions and typical diagrams shown on the plans, shall be required for all culverts.
- 424 - Construction of splash pads conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for culverts.
- 425 - Where pervious materials are used for backfill and bedding, collars consisting of selected impervious material shall be placed at the inlet and at various intervals along the pipe barrel as shown on the plans and as directed by the Authorized Officer.
- 427 - Record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.
- 428 - Remove and dispose of old culverts in a legal manner, and for any fees required. The Purchaser shall remove the old culverts from the work site within 3 working days of completion of the culvert replacement work for each road.
- 429 - Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site in a manner that will avoid damage to adjacent property. Provide for downstream waterflow with no more that 10% increase in natural stream turbidity due to transport of excavated material or sediment during construction. Diversion streams shall not be returned to the natural channel until

all in-stream work has been completed.

RENOVATION AND IMPROVEMENT OF
EXISTING ROADS - 500

- 501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans and as marked on the ground with stakes.
- 501a - This work shall include the removal and disposal of slides in accordance with these specifications and as marked on the ground with stakes.
- 502 - The existing road surface shall be scarified (where needed) to its full width and to a depth of 6 inches to eliminate surface irregularities and bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground with stakes.
- 502a - Rocks larger than 4 inches in maximum dimension shall be removed from the scarified layers of the roadbed. Material so removed will not be permitted to remain on road shoulders or in ditches.
- 502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.
- 503a - Debris from slides and slumps shall be hauled to designated waste disposal sites as specified in the worklist.
- 504 - Scarified material and existing road surfaces shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to the requirements of Subsections 103f, 103g, 103h, and 103i and as specified in the worklist.
- 504a - Minimum compaction required shall be 6 passes over each full-width layer, or fraction thereof, as measured along the centerline per layer of material.
- 506 - The inlet end of existing drainage structures shall be cleared of vegetative debris and boulders that are of sufficient size to obstruct normal stream flow. Pipe inverts shall be cleared of sediment and other debris lodged in the barrel of the pipe. The outflow area of pipe structures shall be cleared of rock and vegetative obstructions which will impede the structure's designed outflow configuration. Catch basins shall conform to the lines, grade, dimensions, and typical diagram shown on the plans.

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

WATERING - 600

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

AGGREGATE BASE COURSE - 900
SCREENED ROCK MATERIAL

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

Table 903
SCREENED ROCK MATERIAL GRADATION REQUIREMENTS
Percentage by Weight Passing Square Mesh Sieves
(AASHTO T 27)

Sieve Designation	Gradation			
	A	B	C	D
4 inch	100			
3 inch	95-100	100		
2 inch		95-100	100	
1-1/2 inch			95-100	100
1 inch				95-100
No. 4	11-44	16-49	21-54	26-59
No. 200	2-15	2-15	0-15	0-15

- 904 - Screened rock material shall not exceed (35) percent loss as determined by AASHTO T 96.
- 904a - Screened rock material shall show a durability value of not less than 35 as determined by AASHTO T 210.
- 905 - The roadbed as shaped and compacted under Section 300 and 500 of these specifications, shall be approved in writing by the Authorized Officer prior to placement of screened rock materials. Notification for final inspection, prior to rocking, shall be 72 hours prior to that inspection and shall be 5 days prior to start

of rock operations.

- 906 - Screened rock material shall be placed in layers not to exceed 6 inches in thickness. Where the required total thickness is more than 6 inches, the rock material shall be shaped and compacted in two or more layers of approximately equal thickness.
- 906a - Screened rock materials used to repair or reinforce a soft, muddy, frozen, yielding, or rutted subgrades shall not be construed as surfacing under this specification.
- 907 - Filler or binder material obtained from sources shown on the plans and approved by the Authorized Officer shall be uniformly blended with the screened rock material on the road. Filler or binder materials shall be free from stones, vegetative matter, and other deleterious materials.
- 908 - Screened rock material shall be blade-processed and spread to required dimensions. Processing shall be performed in such a manner as to minimize aggregate segregation.
- 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, 103h, and 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.
- 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 available to the Purchaser.

AGGREGATE SURFACE COURSE - 1200
CRUSHED ROCK MATERIAL

- 1201 - This work shall consist of furnishing, loading, hauling, and placing one or more layers of crushed rock material on roadbeds and base courses approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the road at the purchaser's expense.
- 1202a - Crushed rock materials used in this work may be obtained from commercial source(s) selected by the Purchaser, providing the rock materials furnished comply with the specifications.
- 1203 - When crushed rock material is produced from gravel, not less than 65 percent by weight of the particles retained on the No. 4 sieve will have 2 manufactured fractured faces. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.
- 1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1204
AGGREGATE SURFACE COURSE
CRUSHED ROCK MATERIAL
Percentage by weight passing square mesh sieves
AASHTO T 11 & T 27

GRADATION

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

- 1204a - The Purchaser shall be required to take one sample for each 1,000 cubic yards of crushed rock material to be utilized or a minimum of 1 sample per day, using AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures. Prior to testing, each sample shall be split, making one half of the sample, with proper identification, available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within 24 hours of sampling. The Purchaser shall provide test results for the first 500 cubic yards produced prior to commencing production crushing and hauling.
- 1205 - Crushed rock material shall not exceed (35) percent loss as determined by AASHTO T 96.
- 1206 - Crushed rock material shall show a durability value of not less than 35 as determined by AASHTO T210.
- 1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than 35 and a plasticity index of not less than 4 and not more than 12 as determined by AASHTO T 89 and AASHTO T 90.
- 1208 - If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.
- 1208a - Each layer of crushed rock material shall be thoroughly mixed on the roadbed by alternately blading, to full depth, until a uniform mixture has been obtained. The mixture shall then be spread to full width. When completed, the spreading shall produce a surface which is smooth, presents uniform shoulder lines, and conforms to the specified cross section.
- 1209 - Shaping and compacting of roadbed and base course shall be completed and approved in writing, prior to placing crushed rock material, in accordance with the requirements of Subsections 300 and 500 for placing on the roadbed and landings and Section 900 for placing on the base course. Notification for final inspection prior to rocking shall be 72 hours prior to the inspection and shall be 5 days prior to start of surfacing operations.
- 1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed, turnouts, 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.
- 1212 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction and compacted to full width by compacting equipment conforming to the requirements of Subsections 103f, 103g, 103h, 103i. Minimum compaction shall be 6 passes over each full-width layer, or fraction thereof.

SLOPE PROTECTION - 1400

- 1401 - This work shall consist of furnishing, hauling, and placing stone materials for splash pads in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross-sections shown on the plans. Material not conforming to these specifications will be rejected and shall be removed from the slope protection structure at the purchaser's expense and as directed by the Authorized Officer.
- 1402 - Stone material shall consist of (hard angular quarry rock) (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.

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

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

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

1405 - Rip rap shall conform to the following gradations:

TABLE 1405¹

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

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

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

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

1406 - The placement of slope protection stones by the end dumping method shall be conducted to prevent the stones from escaping beyond the embankment toe.

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

EROSION CONTROL - 1700

- 1701 - This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.
- 1704 - The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800 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 (0.5 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 (0.5 acres) after September 15 without prior approval by the Authorized Officer.
- 1706a - The Purchaser shall perform, during the same construction season, erosion control measures on all exposed excavation, borrow, and embankment areas.
- 1707 - Completed and partially completed segments of new roads and temporary roads carried over the winter and early spring periods shall be stabilized by mulching in accordance with Section 1800.
- 1708 - Newly constructed roads to be carried over the winter period, shall be blocked to vehicular traffic.
- 1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using water bars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic.
- 1711 - The Purchaser shall construct catch basins and splash pads for pipe culverts conforming to the requirements and details shown on the respective exhibits and on the plans.
- 1712 - Where shown on the plans, the Purchaser shall provide erosion control measures

for newly 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 a culvert in accordance with the requirements and details as shown in the plans.

SOIL STABILIZATION – 1800

- 1801 - This work shall consist of seeding and mulching on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications. The work is required for road acceptance under Section 18 of this contract.
- 1802 - Soil stabilization work consisting of seeding and mulching shall be performed on existing roads and designated locations in accordance with these specifications.
- 1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new roads construction, landings, disturbed areas, and disposal sites in accordance with these specifications and as shown on the plans.
- 1803 - Soil stabilization work as specified under Subsections 1802 and 1802a shall be performed during the following seasonal periods:

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

- 1803a - The Purchaser shall begin soil stabilization work within 10 days of the starting work date when notified by the Authorized Officer.
- 1806a - Additional soil stabilization work consisting of seeding and mulching may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.
- 1808 - Mulch materials conforming to the requirements of Subsection 1808a shall be furnished by the Purchaser (in the amounts specified under Subsection 1811 and 1813 and applied in accordance with Subsection 1812.
- 1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw mulch shall be in an air-dry condition and suitable for placement.

- 1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.
- 1810 - Bulk mulching material required under these specifications shall be delivered to the work area bound either by twine, string or hemp rope. Wire binding will not be permitted.
- 1811 - The Purchaser shall furnish and apply to approximately **4.8** acres designated for treatment as shown on the plans and as specified under Subsections 1802 and 1806s, a mixture of grass seed and mulch material at the following rate of application:

Grass Seed	10 lbs./acre
Mulch	2,000 lbs./acre

The above proportion and application rate are subject to adjustment by the Authorized Officer during the application operation.

- 1814 - The Purchaser may reduce the application rate on partially covered slopes and refrain from application on areas already well stocked with grass or on rock surfaces as determined by the Authorized Officer.
- 1815 - The seed and mulch materials shall be placed by the dry method in accordance with the requirements set forth in Subsection 1815b.
- 1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipaker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.
- 1819 - The Purchaser shall notify the Authorized Officer at least 3 days in advance of date he intends to commence the specified soil stabilization work.
- 1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.
- 1822 - No materials shall be applied when wind velocities would prevent a uniform application of the mix or slurry or when winds would drift the mix or slurry spray outside of the designated treatment area.

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

ROADSIDE BRUSHING - 2100

- 2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.
- 2102 - Roadside brushing may be performed mechanically with self-powered, self-propelled equipment and/or manually with hand tools, including chain saws.
- 2103 - Vegetation cut manually and/or mechanically less than 8 inches in diameter when at D.B.H. shall be cut to a maximum height of **1-inch** above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the 1 inch area will be severed from the trunk.
- 2103a - Vegetation shall be cut and removed from the roadbed between the outside shoulder(s) and the ditch centerline and such vegetation shall be cut to a maximum height of 1 inch above the ground and running surface. Limbs below the 1 inch area will be severed from the trunk. Sharp pointed ends will not be permitted. Cuts shall be parallel to the ground line or running surface.
- 2104 - Trees in excess of 8 inches in diameter at D.B.H. shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of 14 feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within 1 inch of the trunk to produce a smooth vertical face. Removal of trees larger than 8 inches in diameter for sight distance or safety may be directed by the Authorized Officer.
- 2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within 14 feet in elevation above the running surface shall be cut, to within 1 inch of the trunk to produce a smooth vertical face.
- 2106 - Vegetative growth capable of growing 1 foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.
- 2107 - Inside curves shall be brushed out for a sight distance of 200 feet chord distance or a middle ordinate distance of 25 feet, whichever is achieved first. Overhanging limbs and vegetation in excess of 1 foot in height, shall be cut within these areas.
- 2108 - Self propelled equipment shall not be permitted on cut and fill slopes or in ditches.

- 2110 - Vegetation 8 inches and smaller in diameter shall be chipped where indicated in the worklist. Chips shall be scattered downslope from the roadway. Vegetation over 8 inches in diameter shall be disposed of by direction of the Authorized Officer.
- 2114 - Sections of roadway to have vegetation removed will be marked at start and stop points with red-topped painted stakes.
- 2115 - Mechanical brush cutters shall not be operated when there are people and occupied vehicles within 400 feet of the immediate operating area.
- 2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

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

EXHIBIT D1
KING GRAVES TIMBER SALE
TRACT NO. ORM070-TS-2026.0002

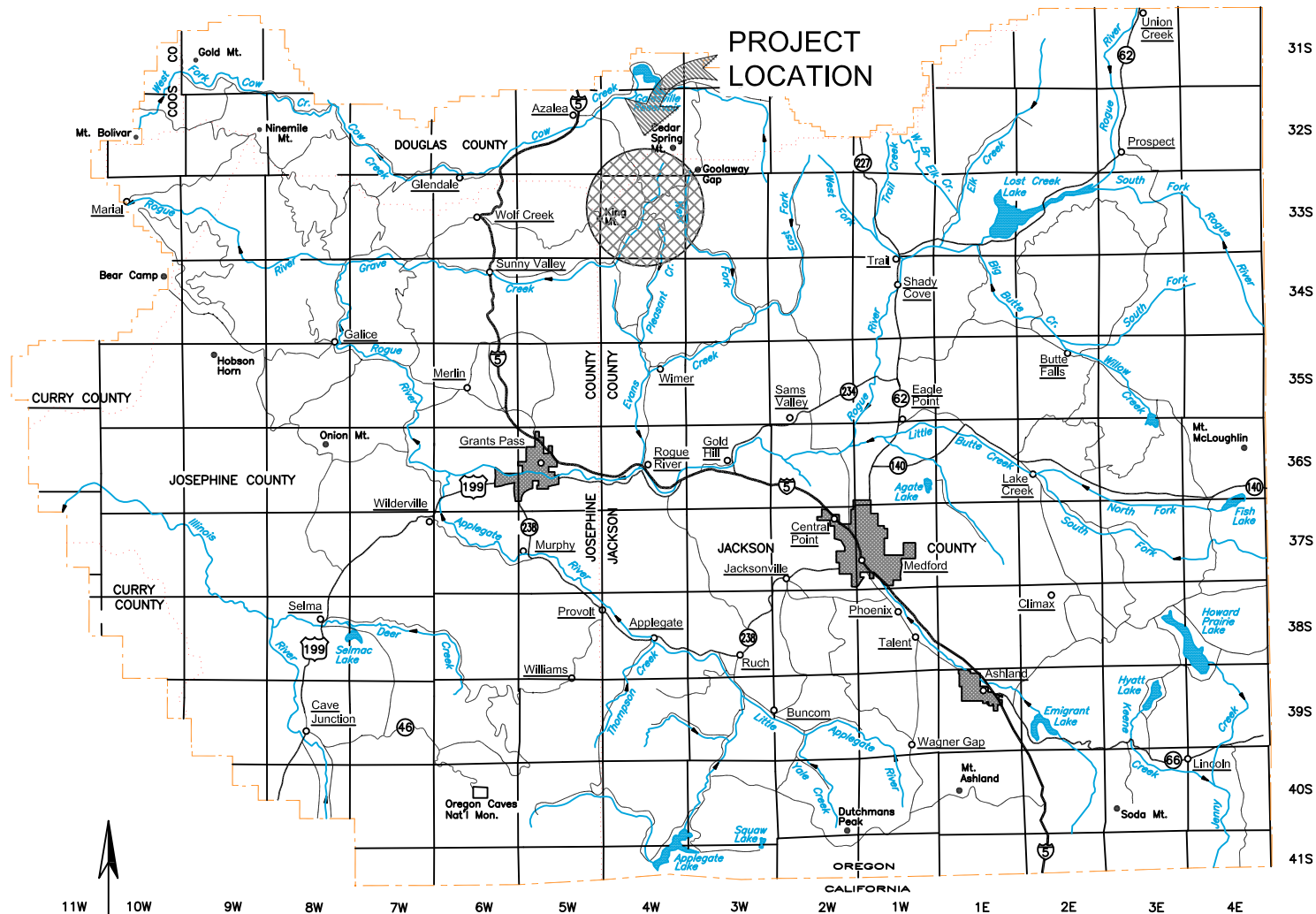


EXHIBIT NO.	DESCRIPTION
D-1	MAINTENANCE TITLE SHEET
D-2	ROAD MAINTENANCE SPECIFICATIONS
D-3	ROAD MAINTENANCE MAPS
D-4	ROAD DECOMMISSIONING WORKLIST
D-5	ESTIMATE OF QUANTITIES
D-6	BARRICADE AND WATER BAR DETAILS
D-7	DECOMPACTION & CULVERT REMOVAL DETAILS
D-8	TYPICAL ROAD CAMOUFLAGE DETAIL

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

KING GRAVES TIMBER SALE
ROAD MAINTENANCE
TITLE SHEET

DRAFTED BY: BLM	SCALE: 1" = 12 MI
DATE: MARCH 2026	SHEET: 1 OF 1

ALWAYS
THINK
SAFETY

ROAD MAINTENANCE SPECIFICATIONS

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GENERAL - 3000

- 3001 - The Purchaser shall be required to maintain all roads as shown on Exhibit D-3 and Exhibit D-5 maps and Exhibit D-6 Maintenance Estimate of Quantities of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 of this exhibit.
- 3001a - The Purchaser shall be required to provide maintenance on roads in accordance with Subsections 3403 and 3404.
- 3002 - The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.
- 3003 - The minimum required maintenance on any roads shall include the provisions specified in Subsections 3101, 3104, and 3105.
- 3004 - The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time.

Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

- 3101 - The Purchaser shall blade and shape the road surface and shoulders with a motor grader. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.
- 3102 - The Purchaser shall furnish (from a commercial source) and place **2000 CY's** of aggregate conforming to the requirements in Section 1200 of Exhibit C of this contract on the roadway and landings at locations and in the amounts designated by the Authorized Officer.

This aggregate shall be used to repair surface failures and areas of depleted surface depth excluding damages covered by Section 12 of this contract. The aggregate shall be furnished, hauled, placed, spread and graded, and compacted by of a vibratory roller or similar equipment.

- 3103 - The purchaser shall maintain established berms and place additional berms using adjacent material where needed to protect fills as directed by the Authorized Officer.
- 3104 - The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.
- 3104a - Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.
- 3104b - The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

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

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

- 3105 - The Purchaser shall be responsible for maintaining normal flow in drainage structures.

This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and water-bars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.

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

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

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

The Purchaser shall also cut trees or brush encroaching on the road prism that are a result of his activities or winter damage during the contract period. Disposal of such vegetative material shall be in accordance with Section 2100 of Exhibit C22.

- 3108 - The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway.

Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.

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

SEASONAL MAINTENANCE - 3200

- 3201 - The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.
- 3202 - The Purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by him, prior to October 15 each year, except as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup until suspension of seasonal operations. This includes all roads used and not used during the proceeding operating seasons.
- 3203 - The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.
- 3204 - The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE - 3300

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

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

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

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

OTHER MAINTENANCE - 3400

- 3401 - The Purchaser shall repair any damage to road surfaces that was specified under Subsection 3108 and 3108a. This repair includes restoring the roadway to the designed standard and replacement of surfacing with approved surface material. This repair is not limited to use of equipment specified in Subsection 3104.
- 3402 - The Purchaser shall be permitted to remove ice and snow from roads authorized for use under this contract only when prior written approval has been secured from the Authorized Officer. The Purchaser shall submit a written request for permission to remove ice and snow in advance of the date operations are to begin.

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

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

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

During drought periods when the transportation of water from the source to the roads noted above exceeds 15 miles, a reduction shall be made in the total purchase price to reflect the additional haul or the substitution of other acceptable dust palliatives in lieu of watering based on equipment rental rates from the current BLM Road Cost Guide.

- 3404 - The Purchaser may at his option and expense substitute lignin sulfonate for water on any or all road segments listed in Subsection 3403 or 3403a provided that written approval is received from the Authorized Officer. Such authorization shall include the approval of product specifications for the application of the product to be used. Multiple applications may be required to maintain the conditions specified in Subsection 3403.
- 3405 - **IF LIGNIN SULFONATE IS USED** - The Purchaser shall be required to furnish and apply lignin sulfonate dust palliatives in accordance with these specifications.

This work shall be performed upon acceptance of the required road construction, renovation, or improvement work and be placed prior to any timber hauling other than

right-of-way timber and rock hauling.

When timber hauling has commenced during the wet weather season, the Purchaser shall apply the required dust palliative during the subsequent summer hauling season as directed by the Authorized Officer.

Other means of dust abatement needed prior to the application of the required dust palliative shall be applied as approved by Authorized Officer.

Turnouts and extra widening shall be included in addition to the spread width.

- 3405a - Additional lignin sulfonate dust palliative may be required at the option of the Authorized Officer when the functional qualities of the dust palliative have been reduced or become ineffective due to third party damage, rain, or other events not under the control of the purchaser.

All materials and labor shall be furnished by the Purchaser and placed in amounts and locations designated by the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost. Costs will be based upon the unit prices set forth in the current BLM Road Cost Guide.

If additional dust palliative is required due to events controlled by the Purchaser, such as split hauling season, the Purchaser shall furnish and place such material at his own expense.

- 3405b - The Purchaser shall notify affected residents along the roads to be treated of the planned application of lignin sulfonate dust palliatives at least 5 days prior to the work. Warning signs shall be posted at key intersections to alert users that the road is being treated. All signs shall be removed by the Purchaser within 30 days of treatment.
- 3406 - Prior to the application of lignin sulfonate dust palliatives, the roadbed shall be bladed and shaped to remove surface irregularities and excess loose material. The prepared surface must have 1/2 to 1 inch of relatively loose material and be visibly moist and drying.
- 3406b - A light application of water to promote penetration shall be made in advance of the application of the specified dust palliative to allow the drying process to begin and to eliminate any saturated surface conditions.
- 3406c - The prepared roadbed shall be approved by the Authorized Officer prior to application of the specified dust palliative.
- 3407 - The Purchaser shall furnish in duplicate, commercial certification signed by vendor of compliance with the lignin sulfonate dust palliatives material requirements

specified under Subsection 3412b. Commercial certification includes the date, identification number of truck or trailer, net mass, and brand name with each shipment. Also provide the net volume and specific gravity at 60 degrees F, percent solids by mass, and PH.

- 3408 - Dust palliatives shall be applied with standard commercial distribution equipment operated in a manner that the material is uniformly applied on variable widths of surface at controlled rates.
- 3409 - The Purchaser shall notify the Authorized Officer a minimum of 5 days in advance of application of required dust palliative.
- 3410 - The Purchaser shall submit an application schedule for all dust palliative work to the Authorized Officer for approval. All work shall be in accordance with the approved plan.
- 3411 - Required lignin sulfonate dust palliatives shall only be applied when the atmospheric temperature is 45° F and steady or rising and when the weather is not foggy or rainy. Do not apply dust palliative if rain is anticipated within 24 hours of application or when the ground is frozen.
- 3412 - The Purchaser shall apply to the prepared roadbed specified under Subsection 3405, a lignin sulfonate dust palliative conforming to the material requirements of Subsection 3412b. The rate of application shall be 0.5 gallons per yd² surface. A second application at the rate of 0.3 gallons per yd² shall be applied at a time designated by the Authorized Officer.

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

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

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

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

- 3412b - Specifications for Lignin Sulfonate:

Lignin sulfonate shall be the chemical residue produced as a byproduct of the acid

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

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

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

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

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

- 3413 - Sampling of lignin sulfonate material may be required to validate certificates furnished by the Purchaser. When sampling is directed by the Government, the actual samples will be taken by the Purchaser or his representative in the presence of the Authorized Officer.

DECOMMISSIONING – 3500

- 3501 - Decommissioning work includes installing water bars, placement of slash or placement of soil stabilization material, and blocking road from access by vehicles as listed in Exhibit D4, Road Decommissioning Worklist. This work is required for road acceptance under Section 18 of this contract.
- 3503 - Decommissioning shall be performed on existing roads in accordance with these specifications, and as shown on the plans at the following locations:

Road No or Site	From Sta/MP	To Sta/MP	Decommission Type
33-4-30.02	0.43	0.85	Long Term Closure
33-4-30.03	0.00	0.19	Long Term Closure
33-4-30.04	0.00	0.17	Long Term Closure
33-4-30.05	0.00	0.36	Long Term Closure
33-4-31.03	0.00	0.76	Long Term Closure
33-4-31.04	0+00	30+86	Long Term Closure
TR25-12A	0+00	13+49	Long Term Closure
TR25-12B	0+00	5+60	Long Term Closure
TR29-07	0+00	3+53	Long Term Closure
TR29-08A	0+00	14+79	Long Term Closure
TR29-08B	0+00	4+77	Long Term Closure
TR29-08C	0+00	10+73	Long Term Closure
TR31-02	0+00	1+91	Long Term Closure
TR31-04A	0+00	13+40	Long Term Closure
TR31-04B	0+00	4+10	Long Term Closure

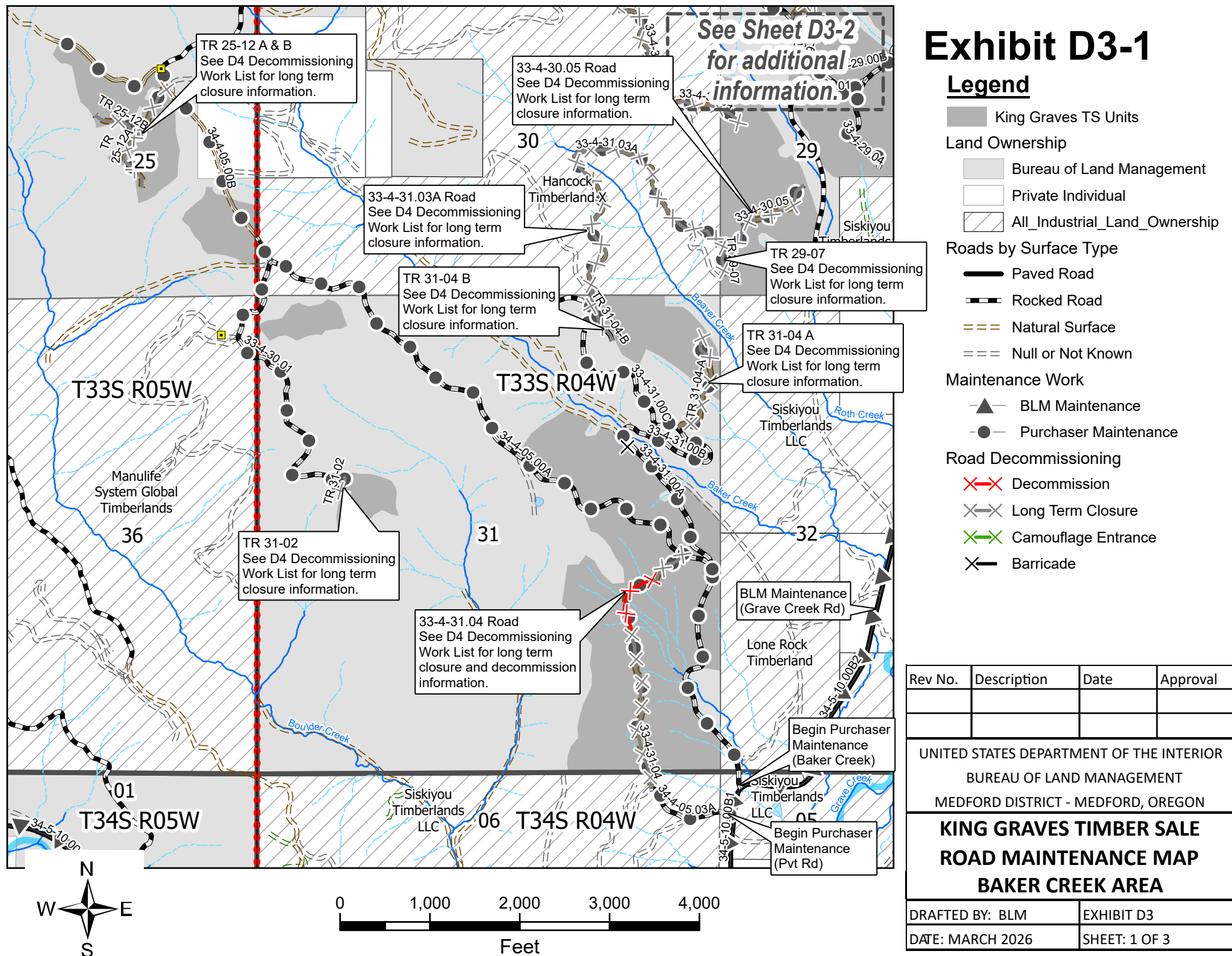
- 3504 - Decommissioning work shall be completed after road use. All decommissioning work shall be performed during the following seasonal periods to address soil moisture:

From: September 1	To: October 15 (of the same year)
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- 3506 - Stockpiled slash shall be used to protect exposed areas created by the Purchaser's decommissioning operations described in these sections. Slash shall be uniformly spread and placed without bunching. The operation shall produce a dense, uniform mat. All slash stockpiles created by the purchaser shall be utilized for decommissioning operations. Where slash is not available, exposed soil areas shall be stabilized in accordance with Section 1800 of Exhibit C22.
- 3507 - Culverts not designated as salvage by the Authorized Officer for the Government shall become the property of the Purchaser. The Purchaser shall be responsible for disposal of materials in a legal manner and for payment of any fees required. Sale of material on site is not allowed unless authorized in writing by the Authorized Officer.

- 3508 - Protect areas with camouflaging and soil stabilization from damage by Purchaser traffic or construction equipment. Damaged areas shall be repaired by the Purchaser.
- 3509 - Access shall be blocked with barricades as shown on the Barricade and Water Bar Details Exhibit D6, Decompaction and Culvert Removal Details Exhibit D7, Typical Road Camouflage Details Exhibit D8, and at locations as shown on Exhibits D3 and D4.
- 3510 - Sections of roadway where ripping or subsoiling is required shall be cleared of all vegetation and slash. The resultant slash shall be stockpiled in a manner that will allow retrieval and uniform spreading in accordance with Subsection 3506. No vegetation or slash shall be mixed with excavated material to be placed.
- 3511 - Ripping, subsoiling, and water barring shall be done on designated roadways and landings. Ripping shall be done with wing-toothed rippers or excavators modified for tillage.
- 3513 - Water bars shall be installed across full width of roadway at spacing shown in the worklist, specifications, and drawings. Water bars shall be constructed as shown on Exhibit D6. No water bar will be installed closer than 50 feet to a draw crossing.
- 3514 - Protection of exposed surfaces shall be accomplished by placement of soil stabilization material in accordance with Section 1800 and placement of slash described in Subsection 3506 on designated roadways, disturbed areas, landings, and other areas disturbed by the purchaser's operations in accordance with these specifications and as shown in the plans.

Legend

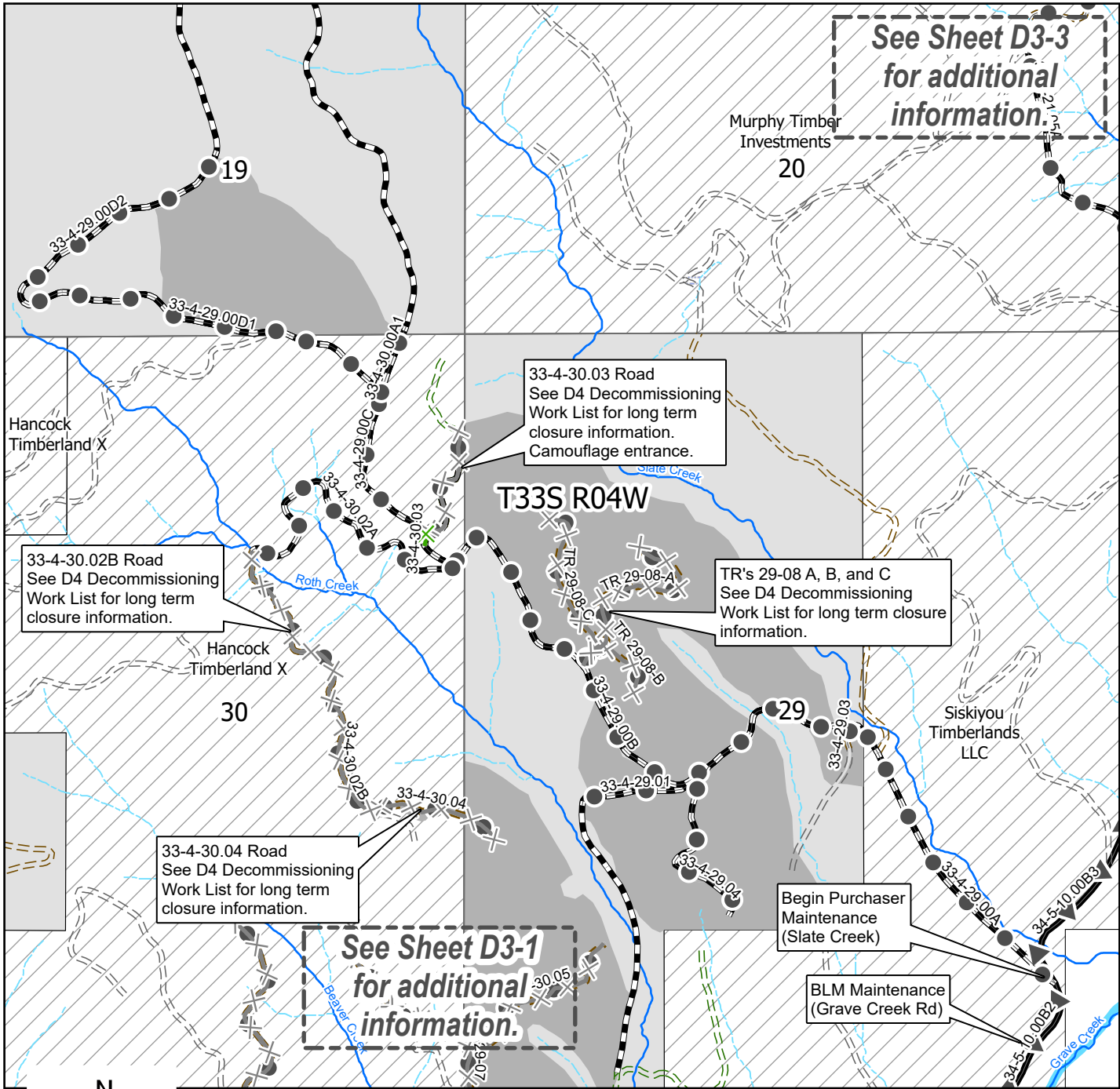


Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD MAINTENANCE MAP BAKER CREEK AREA			
DRAFTED BY: BLM		EXHIBIT D3	
DATE: MARCH 2026		SHEET: 1 OF 3	

Exhibit D3-2

Legend

- King Graves TS Units
- Land Ownership
- Bureau of Land Management
- Private Individual
- All Industrial Land Ownership
- Roads by Surface Type
- Paved Road
- Rocked Road
- Natural Surface
- Null or Not Known
- Maintenance Work
- BLM Maintenance
- Purchaser Maintenance
- Road Decommissioning
- Decommission
- Long Term Closure
- Camouflage Entrance
- Barricade

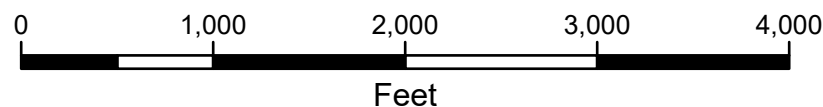
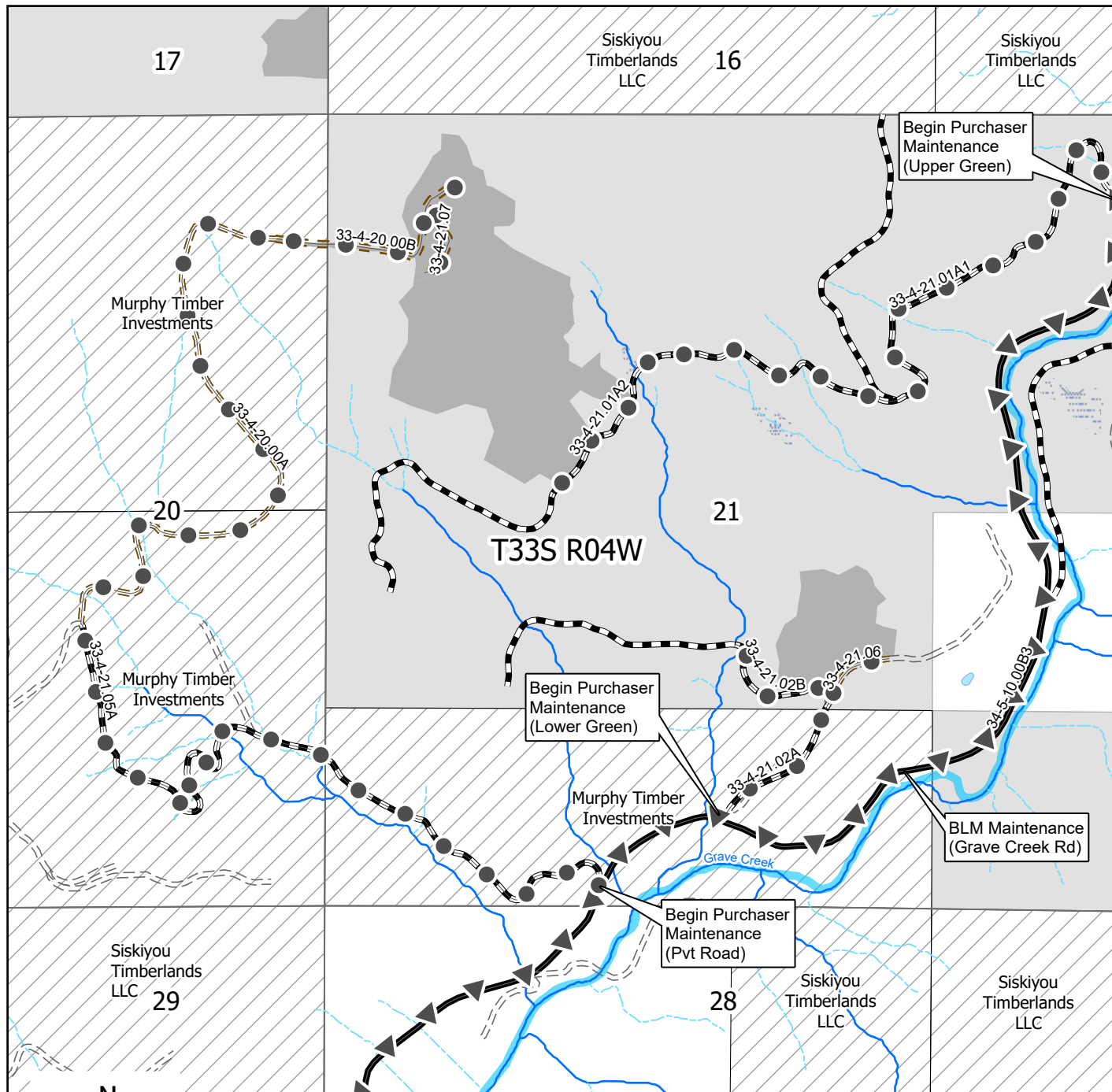


Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR			
BUREAU OF LAND MANAGEMENT			
MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE			
ROAD MAINTENANCE MAP			
SLATE CREEK AREA			
DRAFTED BY: BLM		EXHIBIT D3	
DATE: MARCH 2026		SHEET: 2 OF 3	

Exhibit D3-3

Legend

- King Graves TS Units
- Land Ownership**
 - Bureau of Land Management
 - Private Individual
 - All Industrial Land Ownership
- Roads by Surface Type**
 - Paved Road
 - Rocked Road
 - Natural Surface
 - Null or Not Known
- Maintenance Work**
 - BLM Maintenance
 - Purchaser Maintenance
- Road Decommissioning**
 - Decommission
 - Long Term Closure
 - Camouflage Entrance
 - Barricade



Rev No.	Description	Date	Approval
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON			
KING GRAVES TIMBER SALE ROAD MAINTENANCE MAP GREEN CREEK AREA			
DRAFTED BY: BLM		EXHIBIT D3	
DATE: MARCH 2026		SHEET: 3 OF 3	

Exhibit D4

King Graves Timber Sale

Page 1 of 5

Roads Decommissioning Work List

Definitions:

AGG = Aggregate

BST = Bituminous

CMP = Corrugated Metal Pipe

CY = Cubic Yard

Jct. = Junction/Intersection

MP = Mile Post

NAT = Natural/Native Surface

PVT = Private (Industry, Citizen)

Seg = Segment

STA = Station

Decommission = Decommissioning shall include removing identified culverts (if any) and decompaction of the road surface/subgrade per the Exhibit D7 Decompaction and Culvert Removal Details. Decommissioning shall also include installation of barricades and/or camouflaging road entrances, unless otherwise noted in the work list. All disturbed soils shall be seeded with approved native seed species and mulched with weed-free straw or approved native slash materials. Camouflaged entrances shall consist of logs, slash, boulders, and other debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use per Exhibit D8.

Long Term Closure = Long Term Closure shall include installing water bars per the Water Bar Spacing by Erosion Class Table shown in Exhibit D6, stabilizing, or removing fills on unstable areas, and barricading the road entrance.

Camouflaging = Camouflaged entrances shall consist of logs, slash, boulders, and other debris placed along road entrances for a minimum of 100 feet or to the first curve or hillcrest to discourage vehicle use per Exhibit D8.

Barricade = Barricade entrance only.

33-4-30.02 Road – Private Road – Agg/Nat

<u>MP</u>	<u>Description</u>
0.00	Jct. w/ 33-4-29 road.
0.42	Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-2 for map.
0.42	Construct water bar.
0.44	Construct Barricade.
0.46	Construct water bar.
0.47	Construct water bar.
0.53	Construct water bar.
0.60	Construct water bar.
0.69	Construct water bar.
0.71	Construct water bar.
0.85	Jct. w/ 33-4-30.04 road on left.
0.85	End long term closure.

33-4-30.03 Road - Private Road – Agg

<u>MP</u>	<u>Description</u>
0.00	Jct. w/ 33-4-29 road. Upon completion of use for harvesting operations, begin long term closure and entrance camouflaging. See Exhibit D3-2 for map.
0.00	Camouflage road entrance.
0.04	Construct water bar.
0.08	Construct water bar.
0.12	Construct water bar.

Exhibit D4

King Graves Timber Sale

Page 2 of 5

- 0.16 Construct water bar.
- 0.19 End long term closure.

33-4-30.04 Road – Nat

<u>MP</u>	<u>Description</u>
0.00	Jct. w/ 33-4-30.02 road. See Exhibit D3-2 for map. Upon completion of use for harvesting operations, begin long term closure.
0.02	Construct water bar.
0.04	Construct water bar.
0.06	Construct water bar.
0.08	Construct water bar.
0.11	Construct water bar.
0.15	Construct water bar.
0.17	End long term closure.

33-4-30.05 Road – Nat

<u>MP</u>	<u>Description</u>
0.00	Jct. w/ 33-4-31.03 road. Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-1 for map.
0.03	Construct water bar.
0.06	Construct water bar.
0.09	Construct water bar.
0.11	Construct water bar.
0.14	Construct water bar.
0.17	Construct water bar.
0.20	Construct water bar.
0.23	Construct water bar.
0.26	Construct water bar.
0.28	Construct water bar.
0.31	Construct water bar.
0.34	Construct water bar.
0.36	End long term closure.

33-4-31.03 Road – Nat

<u>STA</u>	<u>Description</u>
0.00	Jct. w/ 33-4-31 road. Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-1 for map.
0.02	Construct Barricade.
0.03	Jct w/ unnumbered road left.
0.05	Construct water bar.
0.06	Construct water bar.
0.07	Construct water bar.
0.09	Construct water bar.
0.12	Construct water bar.
0.14	Construct water bar.
0.19	Construct water bar.
0.20	Construct water bar.
0.22	Construct water bar.
0.23	Construct water bar.
0.26	Construct water bar.
0.33	Construct water bar.
0.37	Construct water bar.
0.48	Construct water bar.

Exhibit D4

King Graves Timber Sale

Page 3 of 5

0.53	Construct water bar.
0.56	Construct water bar.
0.61	Construct water bar.
0.67	Construct water bar.
0.76	Jct. w/ 33-4-30.05 road on left.
0.76	End long term closure.

33-4-31.04 Road – Nat

<u>MP</u>	<u>Description</u>
0.00	Jct. w/ 34-4-5 road. Upon completion of use for harvesting operations, begin long term closure and decommissioning. See Exhibit D3-1 for map.
0.03	Construct water bar.
0.06	Construct water bar.
0.09	Begin decommissioning. Construct Barricade.
0.12	Remove 24" x 38' HDPE, and layback subgrade to allow for unobstructed flow in draw
0.17	Remove 24" x 34' HDPE, and layback subgrade to allow for unobstructed flow in draw
0.19	Remove 24" x 32' HDPE, and layback subgrade to allow for unobstructed flow in draw
0.22	Remove 24" x 40' HDPE, and layback subgrade to allow for unobstructed flow in draw
0.24	Construct Barricade. End decommissioning.
0.27	Construct water bar.
0.35	Construct water bar.
0.47	Construct water bar.
0.59	End long term closure.

TR 25-12 A

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ 33-4-5 road. Upon completion of use for harvesting operations, begin long term closure and entrance camouflage. See Exhibit D3-1 for map.
0+00	Camouflage entrance.
2+00	Construct water bar.
3+00	Construct water bar.
4+50	Construct water bar.
6+00	Construct water bar.
6+88	Jct. w/ temp road 25-12B
7+50	Construct water bar.
9+00	Construct water bar.
10+50	Construct water bar.
12+00	Construct water bar.
13+49	End long term closure.

TR 25-12 B

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ TR 25-12A. Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-1 for map.
2+00	Construct water bar.
4+00	Construct water bar.
5+60	End long term closure.

TR 29-07

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ 33-4-30.05 road. Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-1 for map.
1+50	Construct water bar.

Exhibit D4

King Graves Timber Sale

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3+00	Construct water bar.
3+53	End long term closure.

TR 29-08 A

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ 33-4-29 road. Upon completion of use for harvesting operations, begin long term closure and entrance camouflaging. See Exhibit D3-2 for map.
0+00	Camouflage entrance.
2+00	Construct water bar.
4+00	Construct water bar.
6+00	Construct water bar.
8+00	Construct water bar.
10+00	Construct water bar.
12+00	Construct water bar.
14+79	End long term closure.

TR 29-08 B

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ TR 29-08-A. Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-2 for map.
2+00	Construct water bar.
4+00	Construct water bar.
4+77	End long term closure.

TR 29-08 C

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ temp road 29-08A. Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-2 for map.
1+50	Construct water bar.
3+00	Construct water bar.
4+50	Construct water bar.
6+00	Construct water bar.
7+50	Construct water bar.
9+00	Construct water bar.
10+73	End long term closure.

TR 31-02

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ 33-4-30.01 road. Upon completion of use for harvesting operations, begin long term closure. See Exhibit D3-1 for map.
0+00	Construct barricade.
1+00	Construct water bar.
1+91	End long term closure.

TR 31-04 A

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ 33-4-31 road. Upon completion of use for harvesting operations, begin long term closure and entrance camouflaging. See Exhibit D3-1 for map.
0+00	Camouflage entrance.
2+00	Construct water bar.
4+00	Construct water bar.
6+00	Construct water bar.

Exhibit D4

King Graves Timber Sale

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8+00	Construct water bar.
10+00	Construct water bar.
12+00	Construct water bar.
13+40	End long term closure.

TR 31-04 B

<u>STA</u>	<u>Description</u>
0+00	Jct. w/ 33-4-31.03 road. Upon completion of use for harvesting operations, begin long term closure and entrance camouflaging. See Exhibit D3-1 for map.
4+10	End long term closure.

EXHIBIT D5-1

ROAD NUMBER					MAINTENANCE RESPONSIBILITY					ROAD CLOSURE AND DECOMMISSIONING						
	FROM MILE/STA	TO MILE/STA	LENGTH MILE/STA	BLM MAINTENANCE MILE	PURCHASER MAINTENANCE MILE	THIRD PARTY MAINTENANCE MILE	DUST ABATEMENT/ WATERING MILE	SPOT ROCKING ** MILE								
									INSTALL EARTH/LOG BARRICADE OR MEGA-GATE EA	REMOVE CULVERTS EA	INSTALL WATER BARS EA	CAMOUFLAG ROAD ENTRANCE (100 FT) EA	SUB-SOIL/ RIPPING/ DECOMPACT SUBGRADE MILE/STA	SOIL STABILIZATION (SLASH &OR MULCH) ACRE		
33-4-20.00A	0.00	0.89	0.89		0.89			**								
33-4-20.00B	0.00	0.30	0.30		0.30											
33-4-21.01	0.00	1.19	1.19		1.19			**								
33-4-21.02	0.00	0.39	0.39		0.39			**								
33-4-21.05	0.00	1.09	1.09		1.09											
33-4-21.06	0.00	0.09	0.09		0.09			**								
33-4-21.07	0.00	0.11	0.11		0.11											
33-4-29.00	0.00	2.33	2.33		2.33			**								
33-4-29.01	0.00	0.16	0.16		0.16			**								
33-4-29.03	0.00	0.03	0.03		0.03			**								
33-4-29.04	0.00	0.24	0.24		0.24											
33-4-30.00	0.00	0.09	0.09		0.09			**								
33-4-30.01	0.00	0.77	0.77		0.77			**								
33-4-30.02	0.00	0.85	0.85		0.85			**	1		7					
33-4-30.03	0.00	0.19	0.19		0.19			**			4	1				
33-4-30.04	0.00	0.17	0.17		0.29			**			6					
33-4-30.05	0.00	0.36	0.36		0.36			**			12					
PAGE 1 TOTALS			9.37		9.37				1		29	1				

DECOMMISSIONING NOTES

- ALL TEMP ROUTE ARE TO BE PLACED IN A CLOSED STATUS PER EXHIBIT D SPECIFICATIONS AND DETAILS.
- LONG TERM CLOSURE SHALL INCLUDE WATER BARRING AND BARRICADING.
- DECOMMISSIONING SHALL INCLUDE RIPPING, WATER BARRING, SEEDING & MULCHING, AND BARRICADING.

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

**2000CY OF SURFACE COURSE AGGREGATE FOR ROAD RESURFACING AND SPOT ROCKING SHALL BE FURNISHED AND PLACED ON AGGREGATE ROADS AFTER USE. ROCK SHALL BE OBTAINED FROM A COMMERCIAL SOURCE AND SHALL MEET EXHIBIT C-14 SECTION 1200 SPECIFICATIONS.

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON	
KING GRAVES TIMBER SALE	
ESTIMATE OF QUANTITIES*	

DRAFTED BY: BLM	SCALE: NONE
DATE: MARCH 2026	SHEET: 1 OF 2

EXHIBIT D5-2

				MAINTENANCE RESPONSIBILITY					ROAD CLOSURE AND DECOMMISSIONING						
ROAD NUMBER	FROM	TO	LENGTH	BLM MAINTENANCE	PURCHASER MAINTENANCE	THIRD PARTY MAINTENANCE	DUST ABATEMENT/ WATERING	SPOT ROCKING	INSTALL EARTH/LOG BARRICADE OR MEGA-GATE	REMOVE CULVERTS	INSTALL WATER BARS	CAMOUFLAG ROAD ENTRANCE (100 FT)	SUB-SOIL/ RIPPING/ DECOMPACT SUBGRADE	SOIL STABILIZATION (SEED & MULCH)	
	MILE/STA	MILE/STA	MILE/STA	MILE	MILE	MILE	MILE	MILE	EA	EA	EA	EA	STA	ACRE	
33-4-31.00	0.00	1.07	1.07		1.07			**							
33-4-31.03	0.00	0.76	0.76		0.76			**	1		18				
34-4-05	0.00	2.56	2.56		2.56		1.00	**							
34-4-5.03	0.00	0.22	0.22		0.22			**							
33-4-31.4	0.00	0.58	0.58		0.58			**	2	4	3				
34-4-28A-K	0.00	7.27	7.27	7.27				**							
34-5-10A-B3	0.00	10.57	10.57	10.57				**							
TR 25-12A	0+00	13+49	0.26		0.26			**			8	1	2	0.40	
TR 25-12B	0+00	5+60	0.11		0.11			**			2			0.20	
TR 29-07	0+00	3+53	0.07		0.07			**							
TR 29-08A	0+00	14+79	0.28		0.28			**			6	1	2	0.45	
TR 29-08B	0+00	4+77	0.09		0.09			**			2			0.20	
TR 29-08C	0+00	10+73	0.20		0.20			**			6			0.40	
TR 31-02	0+00	1+91	0.04		0.04			**	1						
TR 31-04A	0+00	13+40	0.25		0.25			**			6	1	2	0.40	
TR 31-04B	0+00	4+10	0.08		0.08			**				1	1	0.1	
PAGE 1 TOTALS			9.37		9.37			**	1		29	1			
PROJECT TOTALS			33.78	17.84	15.94				5	4	80	5	7	2.15	

DECOMMISSIONING NOTES

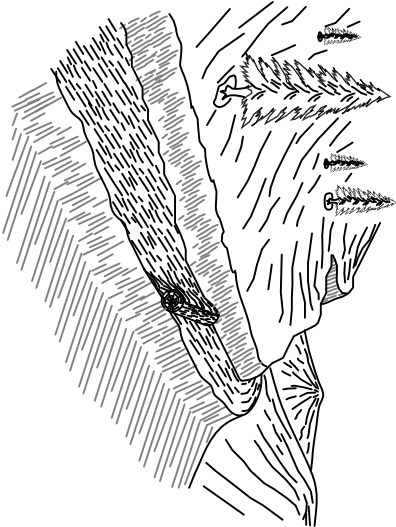
- ALL TEMP ROUTE ARE TO BE PLACED IN A CLOSED STATUS PER EXHIBIT D SPECIFICATIONS AND DETAILS.
- LONG TERM CLOSURE SHALL INCLUDE WATER BARRING AND BARRICADING.
- DECOMMISSIONING SHALL INCLUDE RIPPING, WATER BARRING, SEEDING & MULCHING, AND BARRICADING.

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

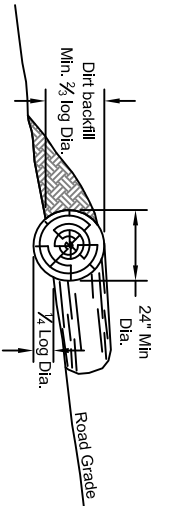
**2000CY OF SURFACE COURSE AGGREGATE FOR ROAD RESURFACING AND SPOT ROCKING SHALL BE FURNISHED AND PLACED ON AGGREGATE ROADS AFTER USE. ROCK SHALL BE OBTAINED FROM A COMMERCIAL SOURCE AND SHALL MEET EXHIBIT C-14 SECTION 1200 SPECIFICATIONS.

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

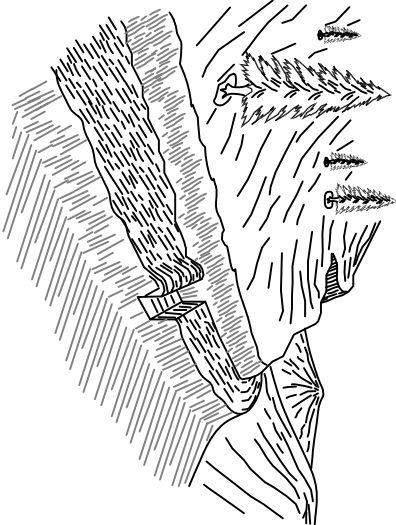
KING GRAVES
TIMBER SALE
ESTIMATE OF QUANTITIES*



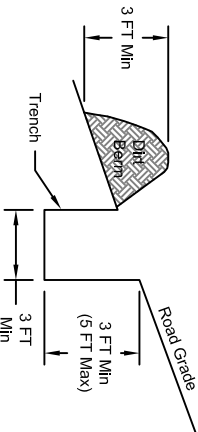
LOG BARRICADE



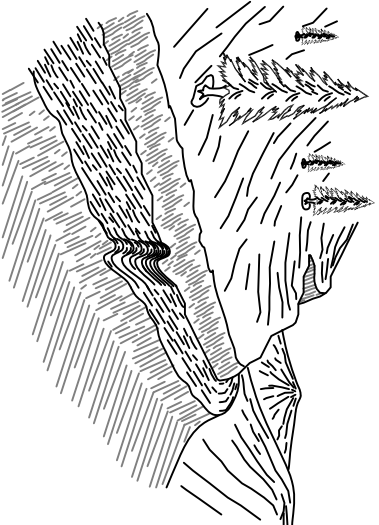
1. Log barricade shall be constructed as shown above.
2. Exact location is listed in Decommissioning Work List.
3. All barricades shall be skewed 30 degrees.
4. The log length shall extend from the cut bank to the fill slope.
5. The minimum small end diameter of the log barricade shall be 24".



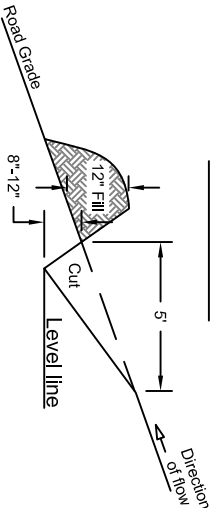
TRENCH BARRICADE



1. Trench barricade shall be constructed as shown above.
2. Exact location is listed in the Decommissioning Work List.
3. All barricades shall be skewed as needed to drain bank to the fill slope or to a point sufficient to prohibit the crossing of motor vehicle traffic.

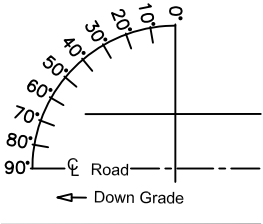


WATER BAR



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

SKREW DIAGRAM



WATER BAR SPACING* BY EROSION CLASS^A

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

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

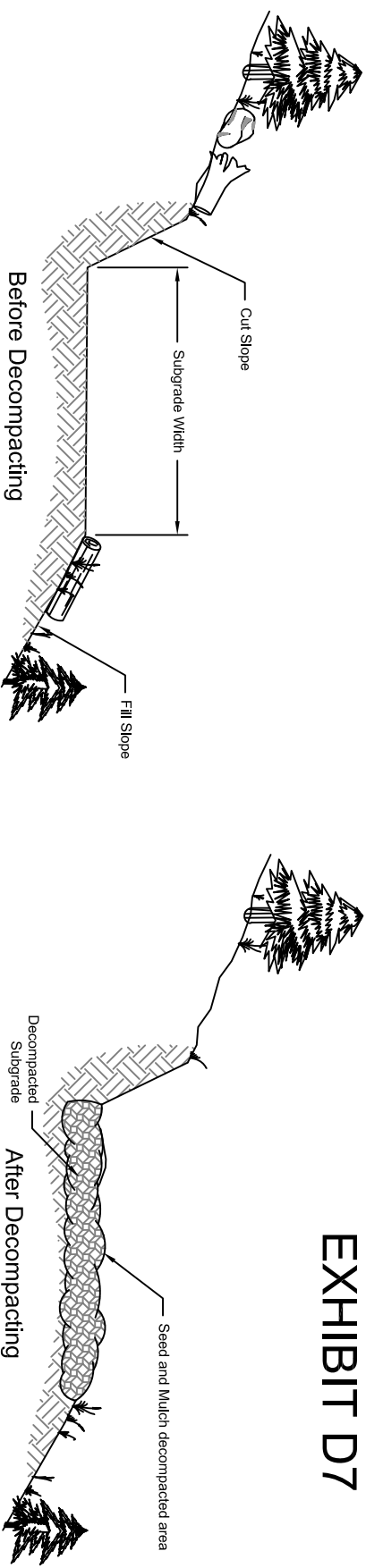
^A The erosion classes include the following rock types:

High: Granite, sandstone, andesite porphyry, glacial or alluvial deposits, soft matrix conglomerate, volcanic ash, and pyroclastics.
Moderate: Basalt, andesite, quartzite, hard matrix conglomerate, and rhyolite.
Low: Metasediments, metavolcanics, and hard shale.

ALWAYS
THINK
SAFETY

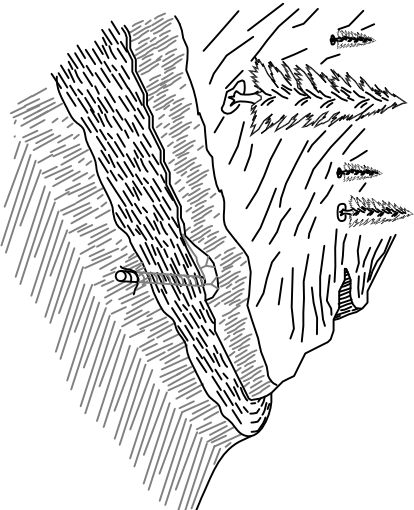
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON	
KING GRAVES TIMBER SALE BARRICADE AND WATER BAR DETAILS	
DRAFTED BY: BLM	SCALE: NONE
DATE: MARCH 2026	SHEET: 1 OF 1

EXHIBIT D7

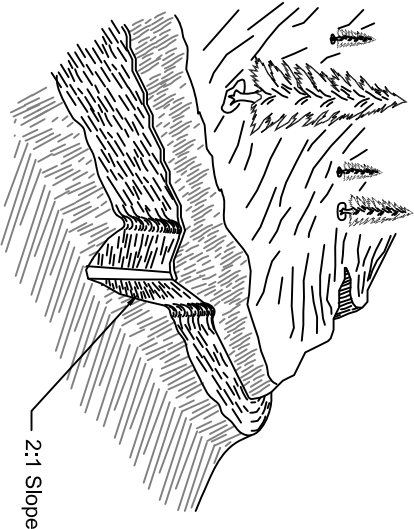


Notes:

1. The Purchaser shall barricade and decompact the identified subgrade. Barricades shall be constructed as shown in Exhibit D6 Barricade and Water Bar Details.
2. Ditch lines at intersecting existing roads will be restored to their original shape.
3. Road surface shall be decompacted for its entire length using mechanical equipment. Decompact road surface to a depth of 8 to 12 inches. 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 identified subgrade, decompaction may be intermittent, or scarification may be used instead. Decompacted areas shall be seed and mulched upon completion.
4. All identified culverts (if any) shall be removed from subgrade entirely. Excavated culvert trenches shall be left open to drain and have side slopes laid back to 2:1. Where draw culverts are removed, the grade of the channel shall be restored to match existing stream grade. Culverts not designated as salvage for the Government shall become the property of the Contractor. The Contractor shall be responsible for legally disposing of material.
5. See Section 1800 for Seeding and Mulching Specifications.



Typical Culvert Removal - Before



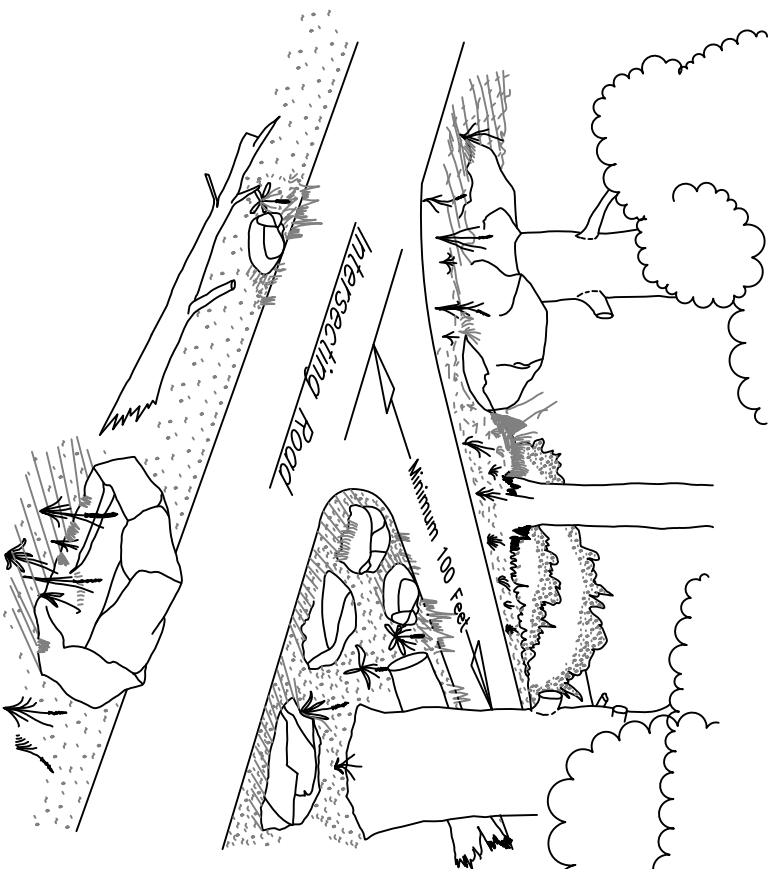
Typical Culvert Removal - After

ALWAYS
THINK
SAFETY

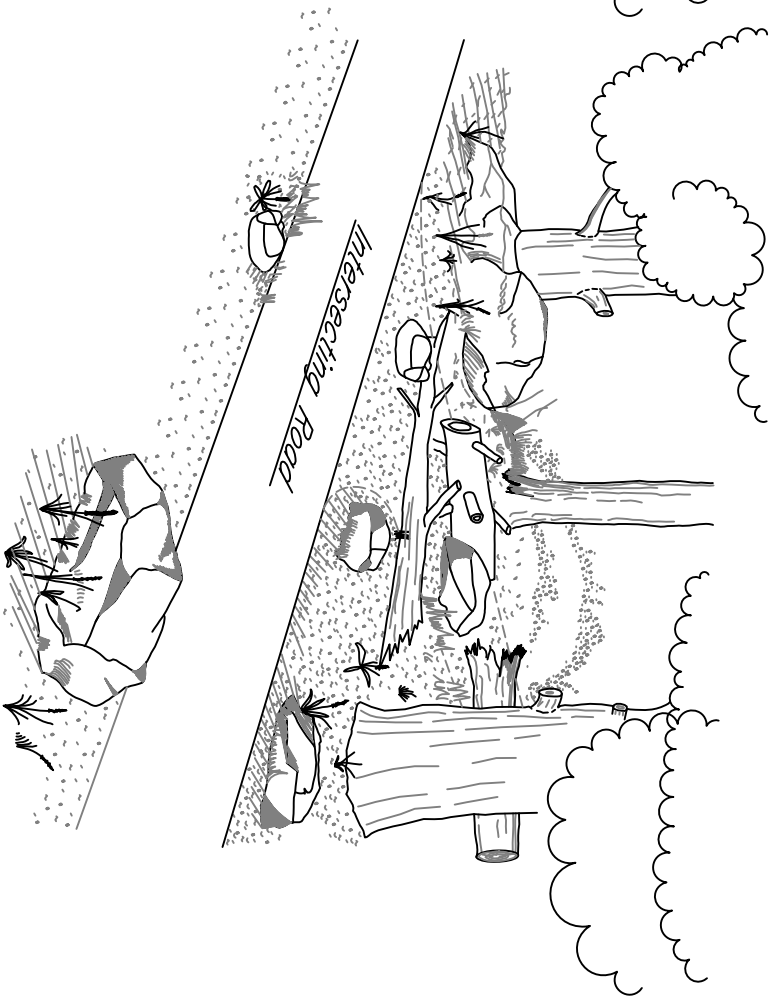
UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
MEDFORD DISTRICT - MEDFORD, OREGON

KING GRAVES TIMBER SALE
DECOMPACTION AND
CULVERT REMOVAL DETAILS

DRAFTED BY: BLM	SCALE: NONE
DATE: MARCH 2026	SHEET: 1 OF 1



Typical Entrance - Before



Typical Entrance - After

NOTES:

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

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT MEDFORD DISTRICT - MEDFORD, OREGON	
KING GRAVES TIMBER SALE TYPICAL ROAD CAMOUFLAGE DETAIL	
DRAFTED BY: BLM	SCALE: NONE
DATE: MARCH 2026	SHEET: 1 OF 1

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sale: King Graves
Sale Date: March
Prep. By : GP BLM
Tract No: ORM07-TS-2026.0002

ROAD MAINTENANCE AND ROAD USE APPRAISAL WORK SHEET

Summary of Costs

1.1) Road Use - Amortization: $\$24,471.90/8407 \text{ MBF} = \$2.91/\text{MBF}$

Road Maintenance Obligation:

(2.1) BLM Maintenance	\$55,202.43
(2.2) BLM Rockwear	\$23,477.96
(5.1) Purchaser Maintenance Rockwear	\$9,335.05
Total Rockwear Payable to BLM	\$32,813.01
(3.1) 3rd Party Maintenance	\$0.00
(3.2) 3rd Party Rockwear	\$997.70
(4.1) Other Maintenance Payments	\$0.00
Total Maintenance Fee Obligation (2.1-5.1)	<u>\$89,013.14</u>

Purchaser Maintenance Allowances:

(5.2A) Move In	\$6,594.84
(5.2B) Culverts, Catch Basins, Downspouts	\$7,719.30
(5.2C) Grading, Ditching	\$12,608.02
(5.2D) Slide Removal and Slump Repair	\$1,666.88
(5.2E) Dust Palliative (Water)	\$758.87
(5.2F) Surface Repair (Aggregate)	\$38,000.00
(5.2G) Other	\$0.00
Total Purchaser Maintenance Allowances (5.2A-5.2G)	<u>\$67,347.91</u>

(2.1-5.2G) Cost $(\$89,013.14 + \$67,347.91) = \$156,361.05$
Cost/MBF $156,361.05 / 8407 \text{ MBF} =$ \$18.59/MBF

(5.2H) Decommissioning \$9,968.16

(5.2H) Cost/MBF $\$9,968.16/8407 \text{ MBF} =$ \$1.19/MBF

(2.1-5.2H) Cost $(\$89,013.14 + \$67,347.91 + \$9,968.16) = \$166,329.21$

Total Cost/MBF (Excluding Road Use) $\$166,329.21/8407 \text{ MBF} =$ \$19.78/MBF

1) Road Use Fees - Amortization

Details

R/W		Rd Use	Vol	Road Use
Number	Road Number	Fee x	MBF =	Obligation
M-660I	33-4-30.02A	12.84	209	\$2,683.56
M-660I	33-4-30.02B	8.44	209	\$1,763.96
M-660I	33-4-31.03	14.85	982	\$14,582.70
M-660I	33-4-30.03	14.16	123	\$1,741.68
M-660J	34-4-5.03A	2.00	316	\$632.00
M-660	33-4-20.00A	2.00	767	\$1,534.00
M-660	33-4-21.05A	2.00	767	\$1,534.00
M-660	33-4-21.02	0.00	251	\$0.00

Subtotal by agreement number

M-660I	\$20,771.90
M-660J	\$632.00
M-660	\$3,068.00

(1.1) Subtotal \$24,471.90

2) BLM Maintenance - Timber Haul

MAINTENANCE (2.1)					ROCKWEAR (2.2)				
Road Number and Segment	A Surf N Type	Mi	Maint x Fee	Vol x MBF =	Maint Fee	x MBF =	Rkwear		
34-5-10 B2	A BST	1.53	0.82	2771	\$3,476.50	0.00	2771	\$0.00	
34-5-10 B3	A BST	1.00	0.82	398	\$326.36	0.00	398	\$0.00	
34-5-10 B3	A BST	0.18	0.82	649	\$95.79	0.00	649	\$0.00	
34-5-10 B3	A BST	1.29	0.82	1416	\$1,497.84	0.00	1416	\$0.00	
34-5-10 B2	A BST	1.53	0.82	2771	\$3,476.50	0.00	2771	\$0.00	
34-5-10 B1	A BST	0.07	0.82	8091	\$464.42	0.00	8091	\$0.00	
34-5-10 B1	A BST	0.21	0.82	8407	\$1,447.69	0.00	8407	\$0.00	
34-4-28.0 C-K	A AGG	5.88	0.74	4203	\$18,288.09	0.95	4203	\$23,477.96	
34-5-10 A1-A6	A BST	6.19	0.82	4204	\$21,338.66	0.00	4204	\$0.00	
34-4-28.0 A-B	A BST	1.39	0.82	4203	\$4,790.58	0.00	4203	\$0.00	

(2.1) Subtotal \$55,202.43

(2.2) Subtotal \$23,477.96

3) Third Party Maintenance and Rockwear

MAINTENANCE (3.1)					ROCKWEAR (3.2)				
Agrmnt Number	Surface Type	Road Number	Mi	x Fee x MBF =	Maint Fee	x MBF =	Rkwear		
M660	AGG	33-4-21.05A	1.09		\$0.95	x 767	= \$794.23		
M660	AGG	33-4-21.02A	0.21		\$0.95	x 251	= \$50.07		
M660	NAT	33-4-20.00A	0.87		\$0.00	x 767	= \$0.00		
M660I	NAT	33-4-30.02B	0.41		\$0.00	x 209	= \$0.00		
M660I	AGG	33-4-30.02A	0.44		\$0.95	x 209	= \$87.36		
M660I	NAT	33-4-30.03	0.18		\$0.00	x 123	= \$0.00		
M660I	NAT	33-4-31.03A	0.73		\$0.00	x 982	= \$0.00		
M660J	AGG	34-4-05.03A	0.22		\$0.95	x 316	= \$66.04		

Subtotal of maintenance fees by agreement number:

Subtotal of rockwear fees by agreement number:

M660	\$844.30
M660I	\$87.36
M660J	\$66.04

(3.1) Subtotal \$0.00

(3.2) Subtotal \$997.70

4) Other Maintenance Payments - USFS or Others Perform Maintenance

Agency	Road Number	Miles (Log)	Vol (mbf)	Fee x MBF/MI	= Cost
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(4.1) Subtotal \$0.00

5) Purchaser Maintenance - Rock Wear

TIMBER HAUL (5.1)

Road No and Segment	A N	Mi	RkWear x Fee	Vol x MBF	Total = RkWear
34-4-5.0B	A	0.23	x \$0.95	x 060	= \$13.11
34-4-5.0B	A	0.29	x \$0.95	x 330	= \$90.92
34-4-5.0B	A	0.24	x \$0.95	x 510	= \$116.28
34-4-5.0A	A	0.86	x \$0.95	x 835	= \$682.20
34-4-5.0A	A	0.31	x \$0.95	x 1535	= \$452.06
34-4-5.0A	A	0.28	x \$0.95	x 3301	= \$878.07
34-4-5.0A	A	0.25	x \$0.95	x 3904	= \$926.49
33-4-30.01	A	0.57	x \$0.95	x 152	= \$82.31
33-4-30.01	A	0.20	x \$0.95	x 329	= \$62.51
33-4-31.0C	A	0.45	x \$0.95	x 1140	= \$487.35
33-4-31.0C	A	0.62	x \$0.95	x 1283	= \$755.69
33-4-31.0B	A	0.15	x \$0.95	x 1283	= \$182.83
33-4-31.0B	A	0.44	x \$0.95	x 1296	= \$541.73
33-4-31.0A	A	0.37	x \$0.95	x 1368	= \$480.85
33-4-21.06	A	0.08	x \$0.95	x 101	= \$7.68
33-4-21.02B	A	0.19	x \$0.95	x 150	= \$27.08
33-4-21.02A	A	0.21	x \$0.95	x 251	= \$50.07
33-4-21.07	N	0.22	x \$0.00	x 403	= \$0.00
33-4-20.0B	N	0.30	x \$0.00	x 767	= \$0.00
33-4-20.0A	N	0.89	x \$0.00	x 767	= \$0.00
33-4-29.0D1	A	0.13	x \$0.95	x 563	= \$69.53
33-4-29.0C	A	0.59	x \$0.95	x 563	= \$315.56
33-4-29.0B	A	0.30	x \$0.95	x 651	= \$185.54
33-4-29.0B	A	0.08	x \$0.95	x 984	= \$74.78
33-4-29.0A	A	0.24	x \$0.95	x 980	= \$223.44
33-4-29.0A	A	0.24	x \$0.95	x 1653	= \$376.884
33-4-29.0A	A	0.23	x \$0.95	x 2491	= \$544.28
33-4-29.0A	A	0.41	x \$0.95	x 2771	= \$1079.31
33-4-30.04	N	0.15	x \$0.00	x 209	= \$0.00
33-4-29.01	A	0.14	x \$0.95	x 94	= \$12.50
33-4-29.04	A	0.19	x \$0.95	x 659	= \$118.95
33-4-21.01 A2	A	0.18	x \$0.95	x 398	= \$68.06
33-4-21.01 A1	A	0.96	x \$0.95	x 398	= \$362.98
33-4-30.05	N	0.32	x \$0.00	x 909	= \$0.00
33-4-31.03	N	0.76	x \$0.00	x 909	= \$0.00
33-4-31.04	N	0.28	x \$0.00	x 316	= \$0.00
34-4-5.03	N	0.22	x \$0.95	x 316	= \$66.04

(5.1) Subtotal \$9,335.05

Purchaser Operational Maintenance

Move In

Equipment	No Move Units	Cost/ x in x	Dist 50 Mi x	Sub- Factor	= total
Motor Grader:	1	4	558	0.63	\$1,406.16
Back Hoe:	1	4	415	0.63	\$1,045.80
Loader:			558	0.63	\$0.00
Water Truck:	1	4	138	0.63	\$347.76
Dump Truck:	3	4	130	0.63	\$982.80
Excavator:	1	4	558	0.63	\$1,406.16
Roller:	1	4	558	0.63	\$1,406.16

(5.2A) Total \$6,594.84

Culvert Maintenance - Including Catch basins and Downpipes

Miles	x	Cost/Mi	=	Subtotal
15		\$514.62		\$7,719.30

(5.2B) Total \$7,719.30

Grading (Includes Ditches and Shoulders)

Miles	x	Cost/Mi	x	Freq	=	Subtotal
Blade w/ Ditch:	11.00		939.38	1		\$10,333.18
Blade w/o Ditch:	4.00		568.71	1		\$2,274.84

(5.2C) Total \$12,608.02

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

Type Equipment	No Slides /Slumps	Hours x Each x	Equip Cost	=	Subtotal
Grader:	2	2	\$187.45		\$749.80
Loader:	2	2	\$117.39		\$469.56
Backhoe:	2	2	\$111.88		\$447.52

(5.2D) Total \$1,666.88

Dust Palliative (Water)

Spreading Hours

No Miles	Freq / MPH	Truck = Hours	x	Days	x	/Day	=	Hours
1.00	10	0.1		22		3		7
Load & Haul =		0.0		0		0		0
Total Hours =		7						

Truck Cost: \$114.98/Hr. x 6.6 Hours = \$758.87

(5.2E) Total \$758.87

Surface Repair (Aggregate)

Quarry / Source Name: Commecrial 1-1/2"

Production Cost: 2000.0 CY x \$19.00/CY = 38,000.00

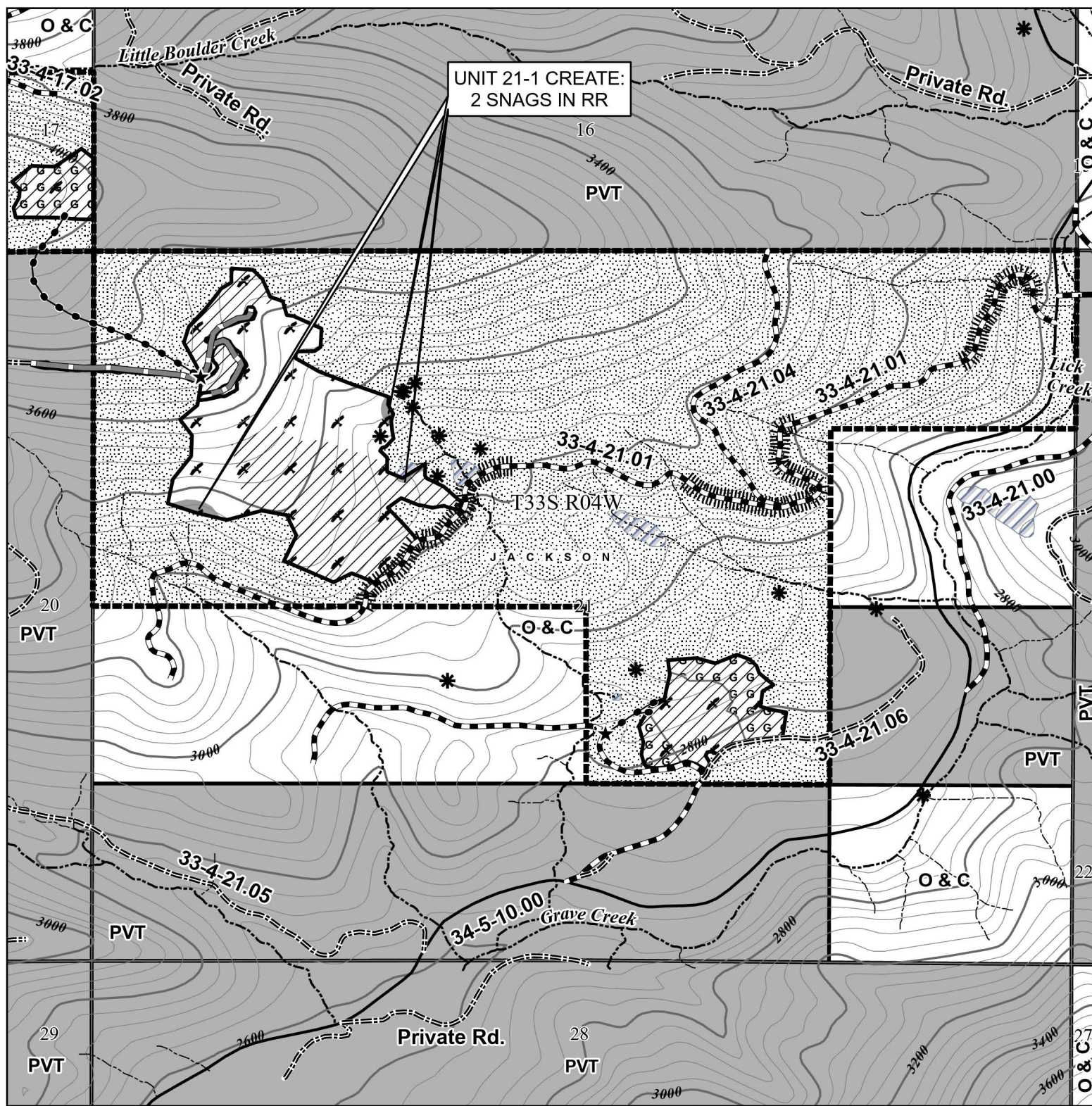
Haul to Stockpile:

Grades > 15% 2000.0 CY x ((\$2.56/CY x 0.00 Mi) + \$0.85) = \$0.00

Grades <= 15% 2000.0 CY x ((\$1.28/CY x 0.00 Mi) + \$0.85) = \$0.00

TR31-04A Excavator - Large (3 CY): 1 EA @ \$500.00/EA	\$500.00
33-4-31.03 Excavator - Large (3 CY): 1 EA @ \$500.00/EA	\$500.00

TR25-12A Excavator - Large (3 CY): 1 EA @ \$500.00/EA	= \$500.00
TR25-12B Slash mulch: 0.2 acre @ \$500.00/acre	= \$100.00
TR25-12A Slash and mulch: 0.4 acre @ \$500.00/acre	= \$200.00
TR29-08A Slash and mulch: 0.45 acre @ \$500.00/acre	= \$225.00
TR29-08B slash and mulch: 0.2 acre @ \$500.00/acre	= \$100.00
TR29-08C Slash and mulch: 0.4 acre @ \$500.00/acre	= \$200.00
TR31-04B slash and mulch: 0.1 acre @ \$500.00/acre	= \$50.00
33-4-30.03 Excavator - Large (3 CY): 1 EA @ \$500.00/EA	= \$500.00
(5.2H) Decommissioning Total	<u>\$9,968.16</u>



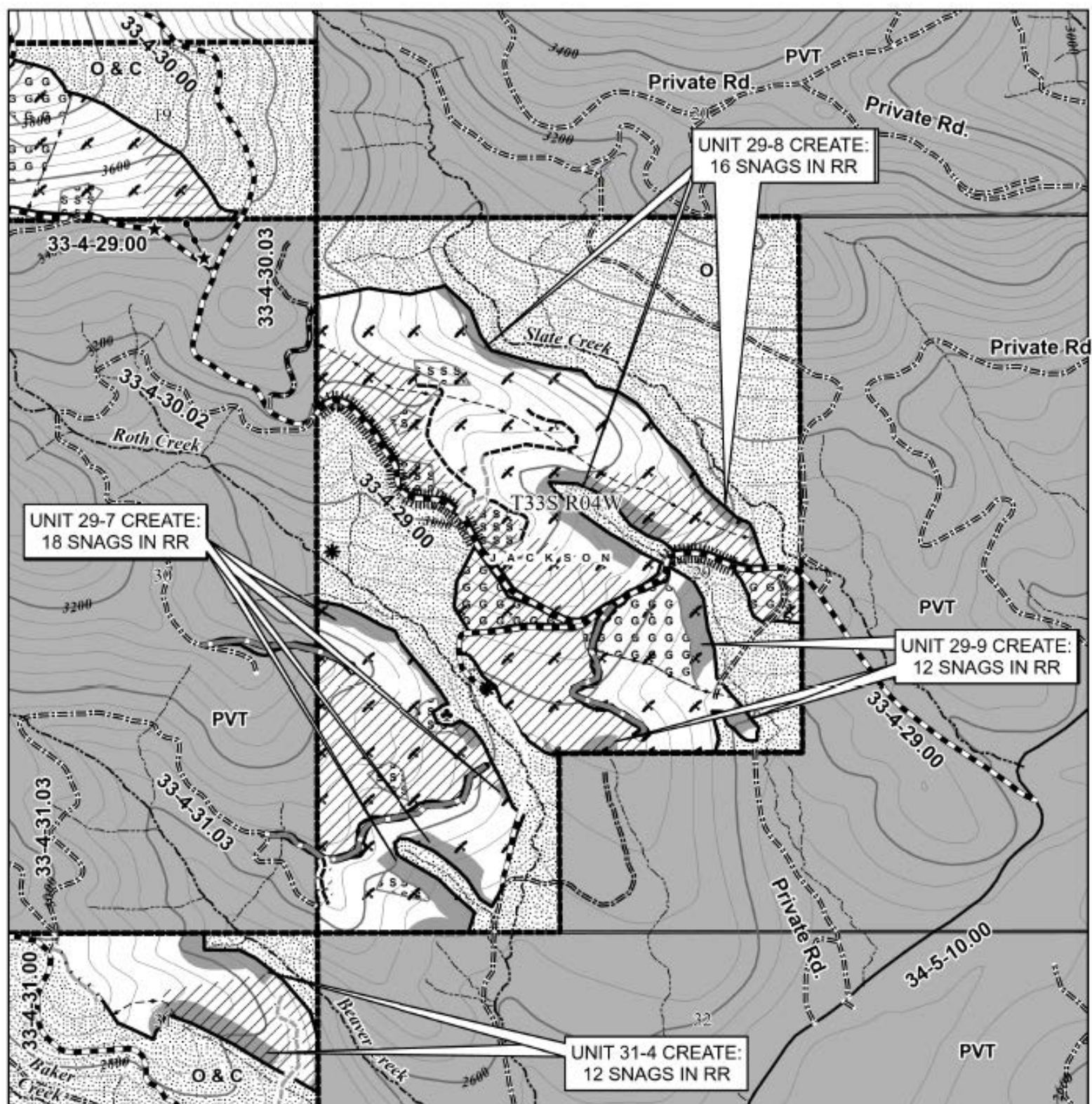
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Feet

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40 FOOT CONTOUR INTERVAL





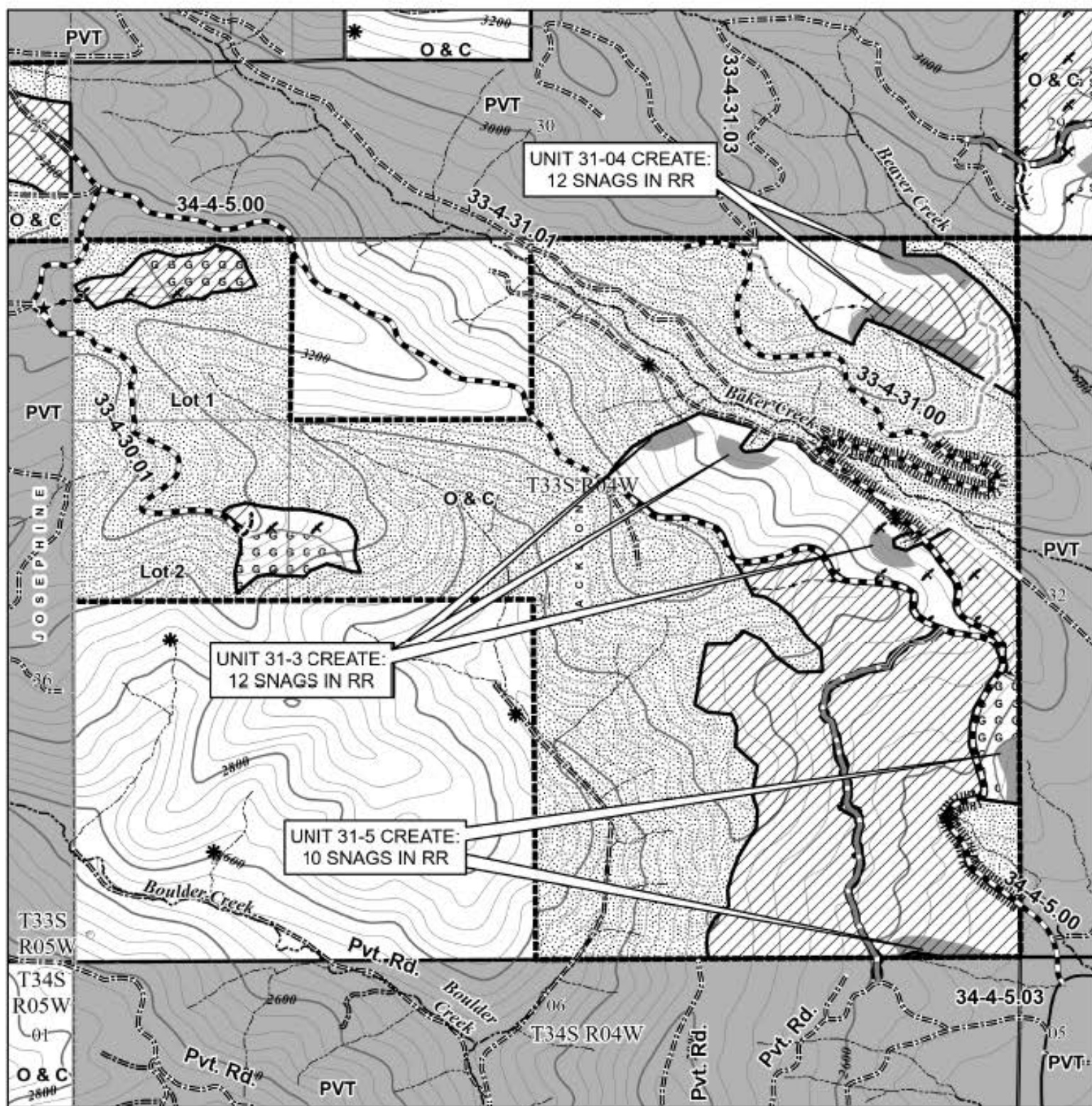
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Feet

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LEGEND

- ★ Designated Landings
- Designated Skid Trails
- +--- Rx/DBH Limit Breaks

King Graves Road Work

- ▬ Perm Construction
- ▬▬ Perm Reconstruction
- Temp Construction
- Temp Reconstruction

Road Surface Type

- Paved
- ▬▬ Rocked
- ▬▬▬ Natural Surface

King Graves Timber Sale Units

- ▬ Cable
- ▬▬ Ground-Based
- ▬ Northern Spotted Owl Seasonal Restrictions
- ▬ King Graves Riparian Reserve Snag Creation Areas
- ▬ Skip
- ▬ Gap
- ▬▬▬ Roadside Clearing Units

- ▬ Contract Area Boundary
- ▬ Reserve Area
- ♣ Plant Site - No Yarding w/in 100 ft.
- * Springs
- Intermittent Stream
- Perennial Stream
- ▬ Waterbodies

Contours

- Index - 200 ft.
- Intermediate - 40 ft.
- ▬ County
- ▬ Township & Range
- ▬ Section
- ▬ Lots

Ownership

- ▬ O&C Bureau of Land Management
- ▬ PVT Private Individual or Company

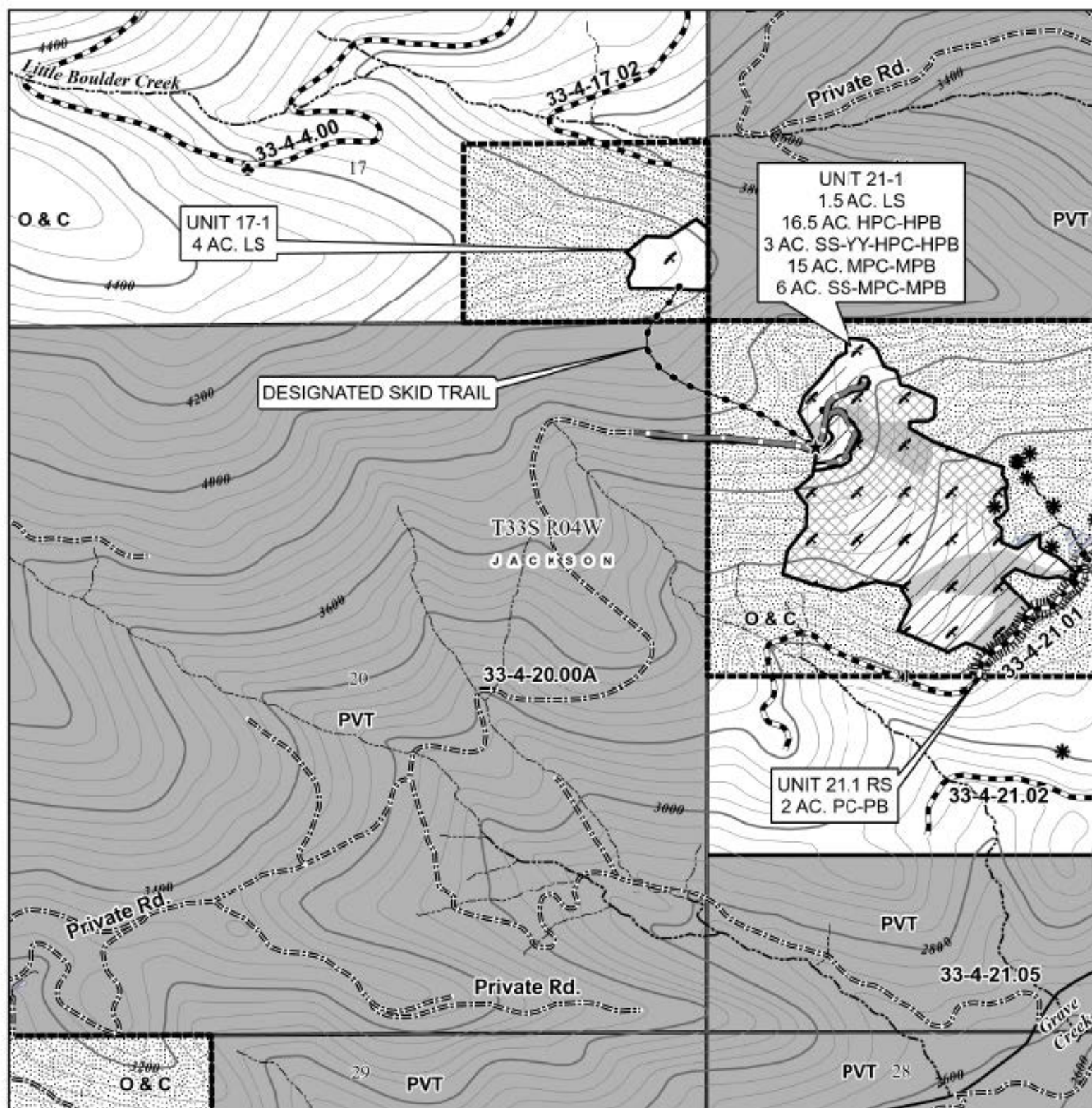
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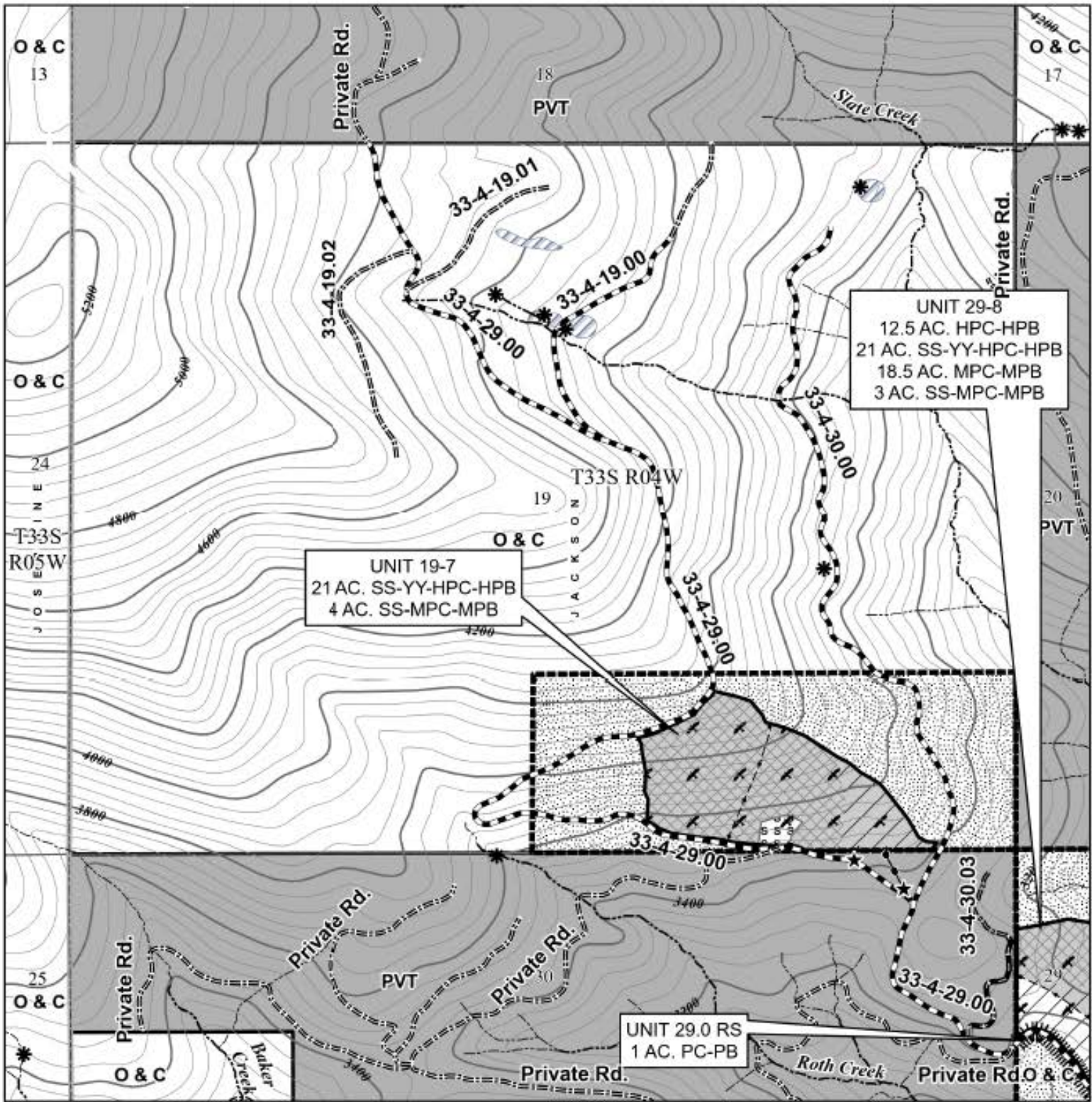


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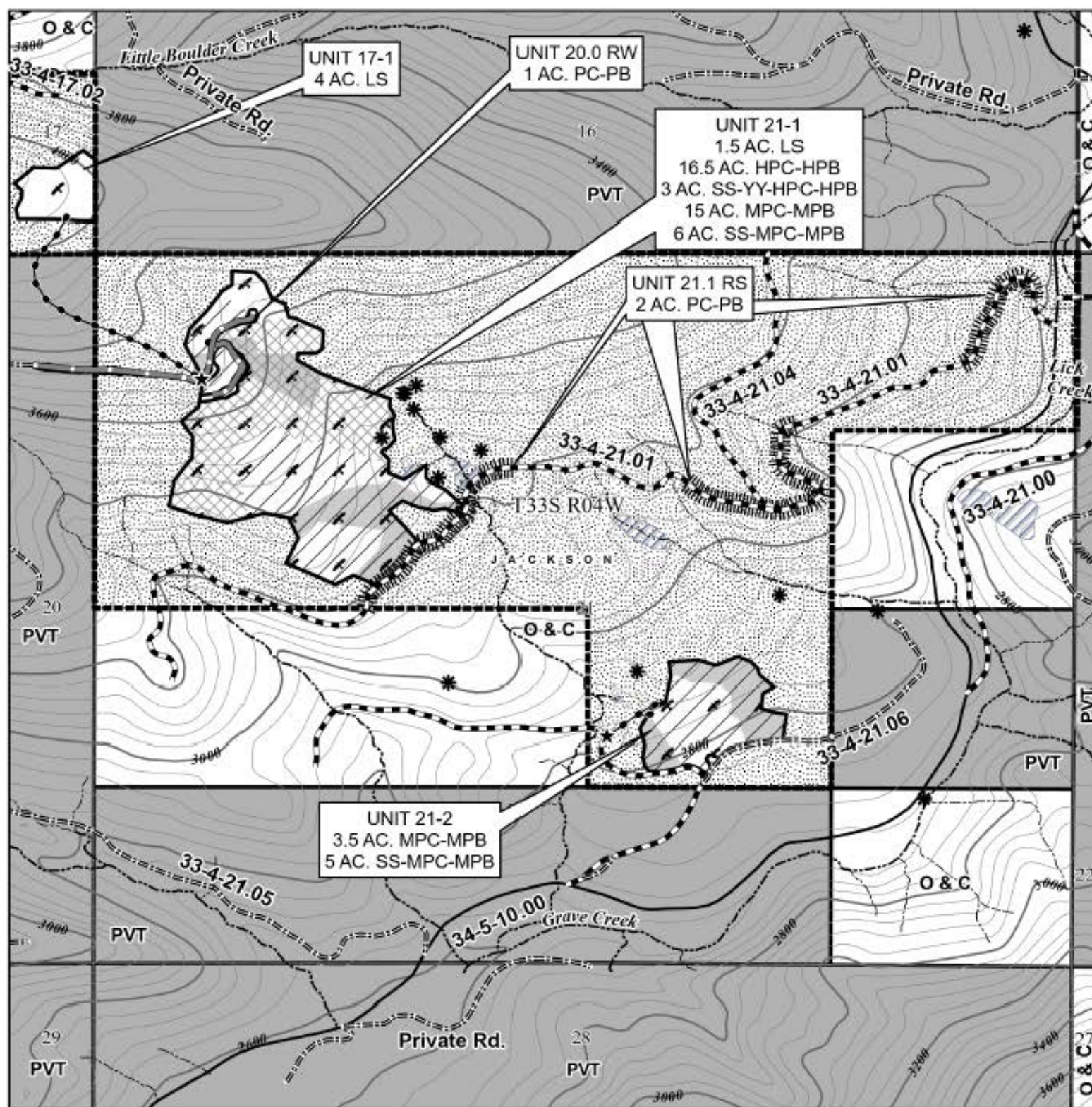
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Foot

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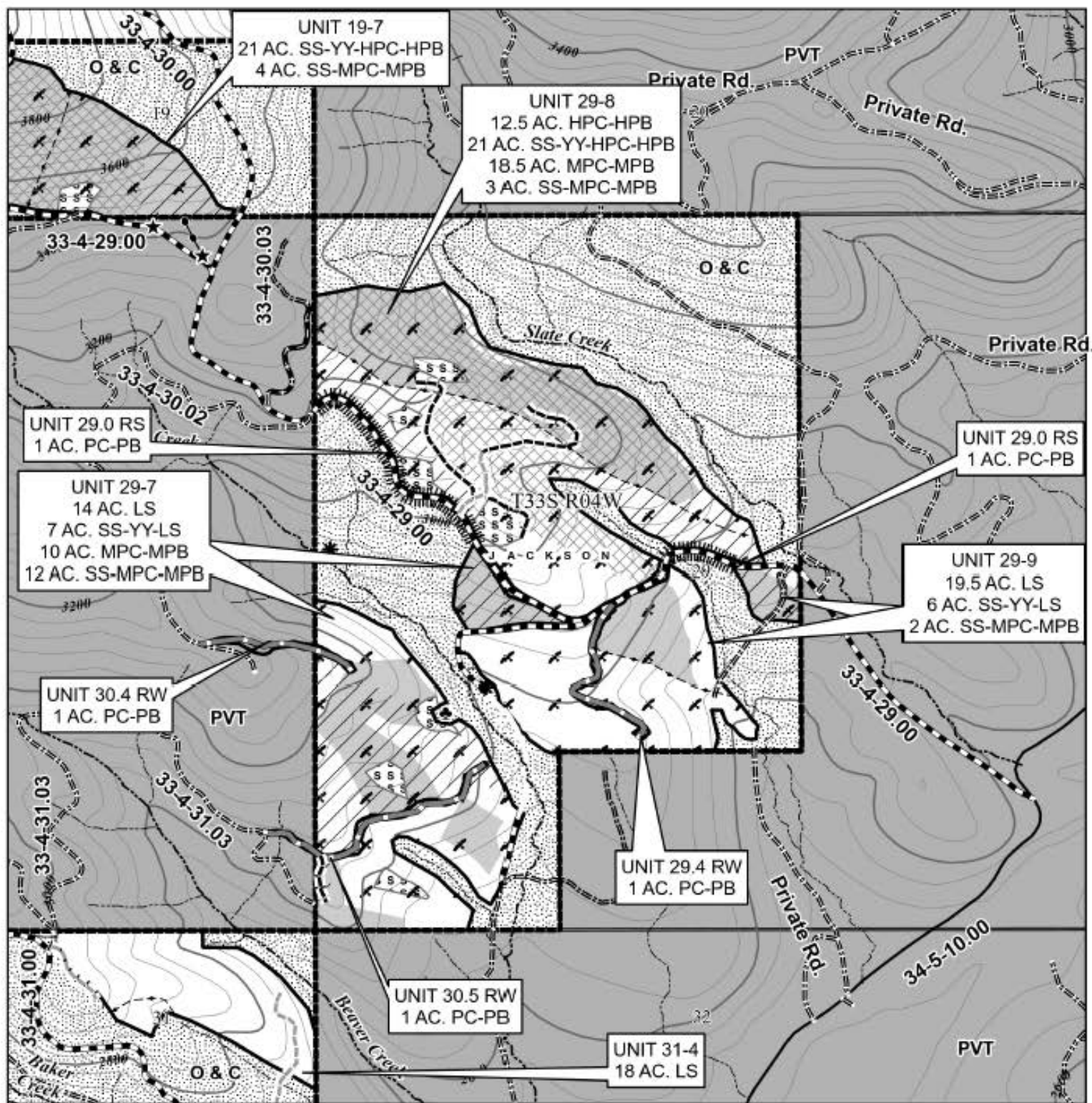
0 750 1,500 3,000 Feet

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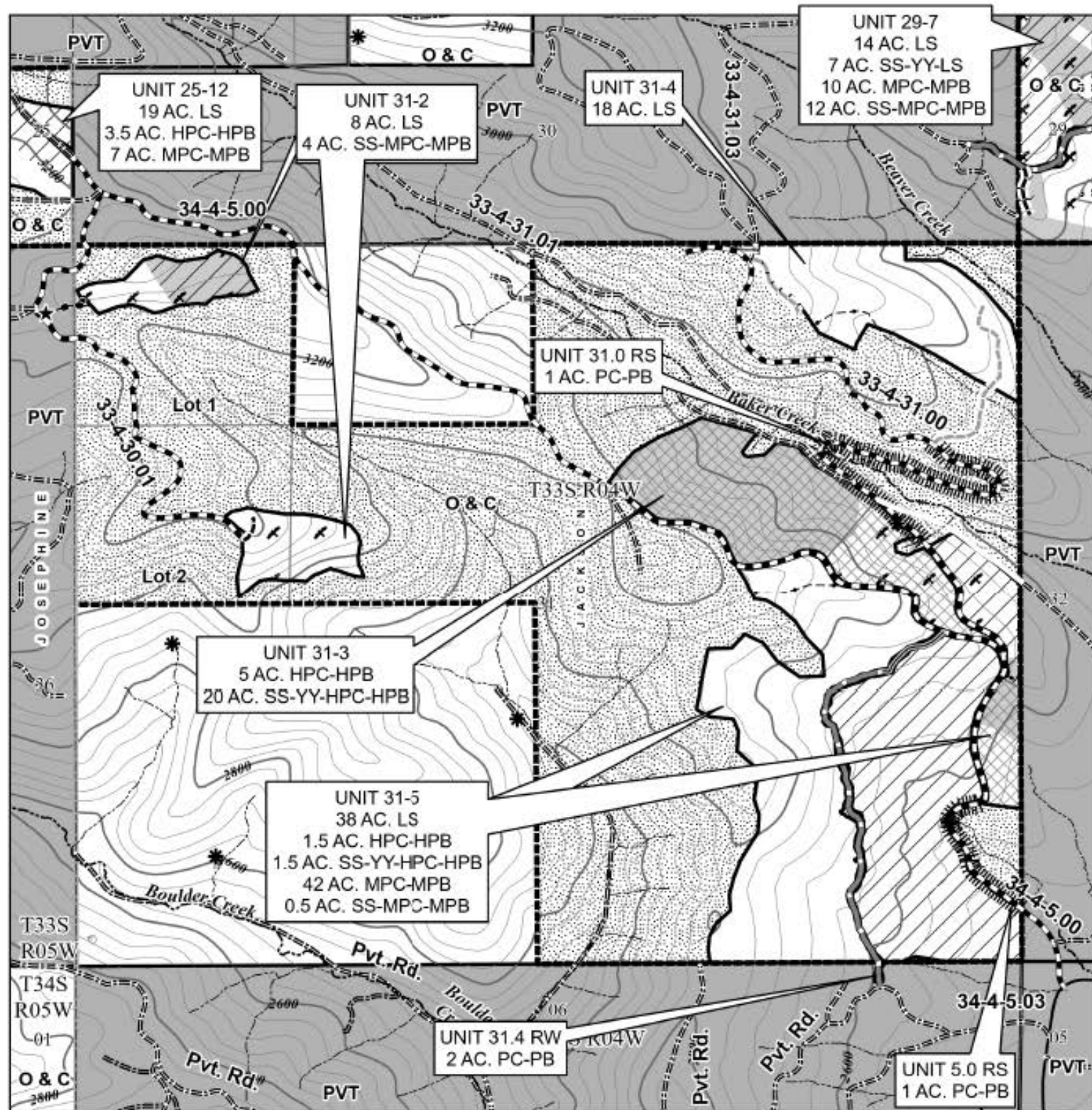
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Feet

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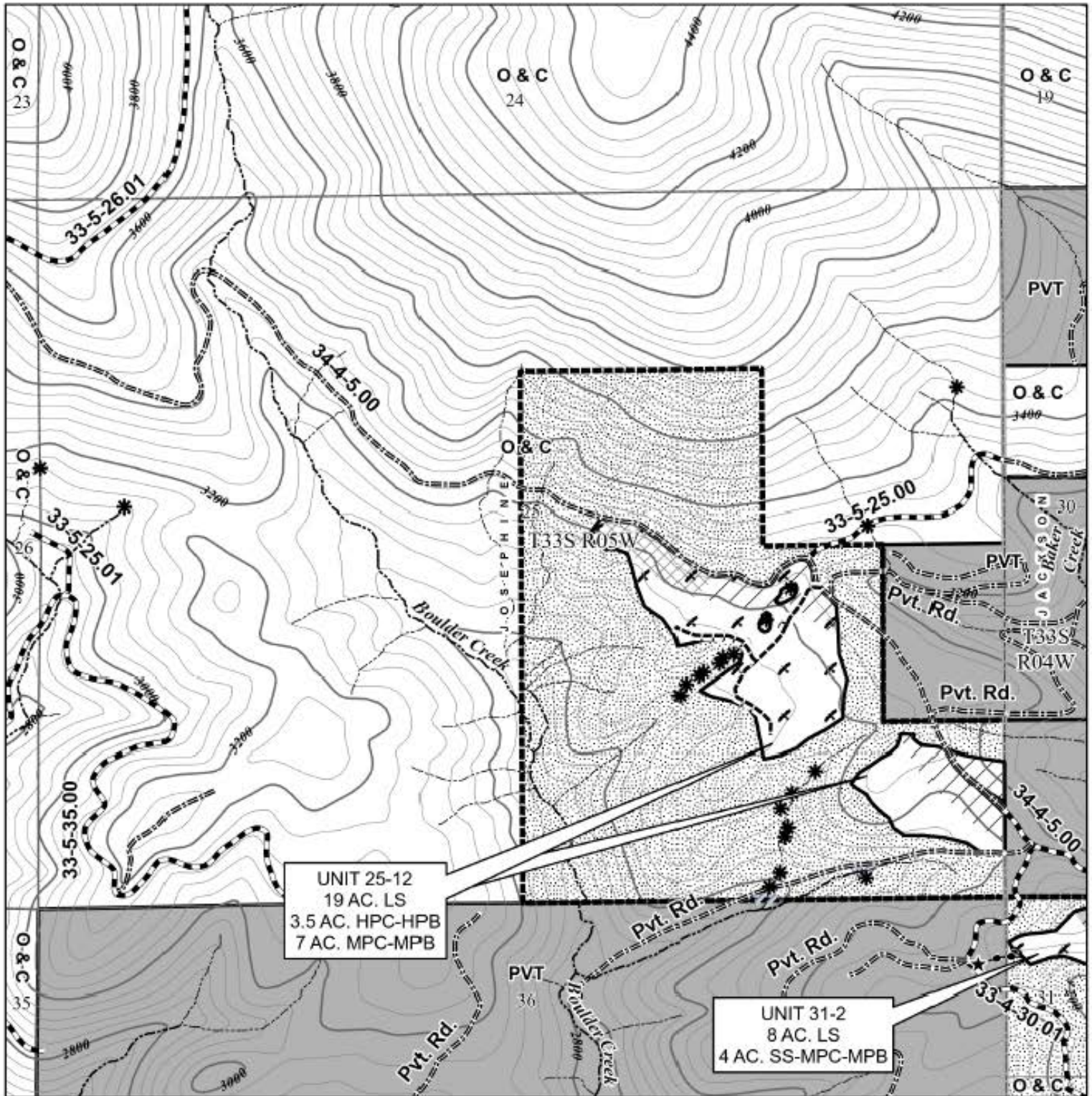
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LEGEND

King Graves Timber Sale Units

Slash Disposal Rx

-  Lop & Scatter
-  Selective Slash - Yum Yard
-  Hardwoods $\leq 20"$ DBH - Lop & Scatter
-  Hand Pile, Cover, & Burn
-  Selective Slash - Yum Yard
-  Hardwoods $\leq 20"$ DBH - Hand Pile, Cover, & Burn
-  Machine Pile, Cover, & Burn
-  Selective Slash - Machine Pile, Cover, & Burn
-  Skip
-  Rx/DBH Limit Breaks
-  Selective Slash & Yum Yard Hardwoods $\leq 20"$ DBH
-  Selective Slash & Machine Pile Hardwoods $\leq 20"$ DBH
-  Roadside Clearing Units
-  Designated Landings
-  Designated Skid Trails

King Graves Road Work

-  Perm Construction
-  Perm Reconstruction
-  Temp Construction
-  Temp Reconstruction

Road Surface Type

-  Paved
-  Rocked
-  Natural Surface
-  Contract Area Boundary
-  Reserve Area
-  Intermittent Stream
-  Perennial Stream
-  Springs
-  Waterbodies
-  Plant Site - No Yarding w/in 100 ft.

Contours

-  Index - 200 ft.
-  Intermediate - 40 ft.
-  County
-  Township & Range
-  Section
-  Lots

Ownership

-  Bureau of Land Management
-  Private Individual or Company

0 750 1,500 3,000 Feet

1:12,000

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SLASH DISPOSAL SUMMARY BY UNIT AND PRESCRIPTION

UNIT	UNIT ACRES	SLASH TREATMENT ACRES (INCLUDING EXTERNAL LANDINGS)	LOP & SCATTER ACRES	SELECTIVE SLASH - YUM YARD - LOP & SCATTER ACRES	HAND PILE, COVER & BURN ACRES	SELECTIVE SLASH - YUM YARD - HAND PILE ACRES	MACHINE PILE, COVER & BURN ACRES	SELECTIVE SLASH - MACHINE PILE ACRES	COVER & BURN ROADSIDE PILES ACRES	LANDINGS COVER & BURN ACRES
17-1	4	4.50	4.00							0.50
19-7	26	26.00				21.00		4.00		1.00
21-1	42	44.50	1.50		16.50	3.00	15.00	6.00		2.50
21-2	10	10.50					3.50	5.00		2.00
25-12	34	35.00	19.00		3.50		7.00			5.50
29-7	46	47.50	14.00	7.00			10.00	12.00		4.50
29-8	66	62.50			12.50	21.00	18.50	3.00		7.50
29-9	31	32.50	19.50	6.00				2.00		5.00
31-2	13	13.00	8.00					4.00		1.00
31-3	28	28.00			5.00	20.00				3.00
31-4	20	20.50	18.00							2.50
31-5	90	96.00	38.00		1.50	1.50	42.00	0.50		12.50
20.0 RW	1	1.00							1.00	
30.4 RW	1	1.00							1.00	
30.5 RW	1	1.00							1.00	
29.4 RW	1	1.00							1.00	
31.4 RW	2	2.00							2.00	
21.1 RS	2	2.00							2.00	
29.0 RS	1	1.00							1.00	
31.0 RS	1	1.00							1.00	
5.0 RS	1	1.00							1.00	
TOTAL	421	431.5	122.0	13.0	39.0	66.5	96.0	36.5	11.0	47.5

* BOUNDARIES OF HARVEST UNITS ARE POSTED AND PAINTED IN ORANGE

LS = LOP & SCATTER

HPC-HPB = HAND PILE & COVER, HAND PILE BURN

MPC-MPB = MACHINE PILE & COVER, MACHINE PILE BURN

SS = SELECTIVE SLASH

YY = YUM YARD

PC-PB = PILE COVER & PILE BURN

RX = PRESCRIPTION

0 750 1,500 3,000
 Feet

1:12,000

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LEGEND

UNIT	UNIT ACRES	SLASH DISPOSAL TREATMENT PRESCRIPTION	TREATMENT AREA DESCRIPTION
17-1	4	LS	LOP & SCATTER WHOLE UNIT.
19-7	26	SS-YY-HPC-HPB/SS-MPC-MPB	SELECTIVE SLASH & HAND PILE CABLE YARD AREA OUTSIDE OF SKIP. SELECTIVE SLASH & MACHINE PILE GROUND-BASED YARD AREA.
21-1	42	LS/HPC-HPB/SS-YY-HPC-HPB/MPC-MPB/SS-MPC-MPB	LOP & SCATTER DDR-TPCC SOILS (SH RX). SELECTIVE SLASH HAND PILE YUM YARD CABLE PORTION OF UNIT WITH HIGH CONCENTRATION OF HARDWOODS. HAND PILE REST OF CABLE YARD AREAS OUTSIDE OF L&S. SELECTIVE SLASH & MACHINE PILE GROUND-BASED AREAS WITH HIGH CONCENTRATIONS OF HARDWOODS. MACHINE PILE REST OF GROUND-BASED AREAS OUTSIDE OF L&S.
21-2	10	MPC-MPB/SS-MPC-MPB	SELECTIVE SLASH & MACHINE PILE GAPS. MACHINE PILE REST OF GROUND-BASED YARD AREAS.
25-12	34	LS/HPC-HPB/MPC-MPB	MACHINE PILE PORTIONS OF UNIT 200' OFF OF ROAD 34-4-5.0 IN GROUND-BASED YARD AREAS. HAND PILE PORTION OF UNIT 200' BELOW ROAD 34-4-5.0 IN CABLE YARD AREAS. LOP & SCATTER REST OF UNIT.
29-7	46	LS/SS-YY-LS/MPC-MPB/SS-MPC-MPB	LOP & SCATTER SELECTIVE SLASH YUM YARD CABLE PORTIONS OF UNIT WITH HIGH CONCENTRATION OF HARDWOODS AND OUTSIDE OF SKIP. LOP & SCATTER REST OF CABLE YARD AREAS. SELECTIVE SLASH & MACHINE PILE GROUND-BASED AREAS WITH HIGH CONCENTRATIONS OF HARDWOODS AND IN GAP AND OUTSIDE OF SKIP. MACHINE PILE REST OF GROUND-BASED AREAS.
29-8	66	HPC-HPB/SS-YY-HPC-HPB/MPC-MPB/SS-MPC-MPB	SELECTIVE SLASH HAND PILE YUM YARD CABLE PORTION OF UNIT WITH HIGH CONCENTRATION OF HARDWOODS OUTSIDE OF SKIP. HAND PILE REST OF CABLE YARD AREAS. SELECTIVE SLASH & MACHINE PILE GROUND-BASED AREAS WITH HIGH CONCENTRATIONS OF HARDWOODS. MACHINE PILE REST OF GROUND-BASED AREAS OUTSIDE OF SKIPS.
29-9	31	LS/SS-YY-LS/MPC-MPB/SS-MPC-MPB	LOP & SCATTER SELECTIVE SLASH YUM YARD CABLE WESTERN PORTION OF UNIT WITH HIGH CONCENTRATION OF HARDWOODS. LOP & SCATTER REST OF WESTERN PORTION OF UNIT. SELECTIVE SLASH & MACHINE PILE GAP IN EASTERN PORTION OF UNIT. MACHINE PILE REST OF EASTERN PORTION OF UNIT.
31-2	13	LS/SS-MPC-MPB	SELECTIVE SLASH & MACHINE PILE GAP IN GROUND-BASED YARD AREA IN UNIT. LOP & SCATTER REST OF UNIT.
31-3	28	HPC-HPB/SS-YY-HPC-HPB	SELECTIVE SLASH HAND PILE YUM YARD PORTION OF UNIT WITH HIGH CONCENTRATION OF HARDWOODS. HAND PILE REST OF UNIT.
31-4	20	LS	LOP & SCATTER WHOLE UNIT.
31-5	90	LS/HPC-HPB/SS-YY-HPC-HPB/MPC-MPB/SS-MPC-MPB	SELECTIVE SLASH HAND PILE YUM YARD PORTION OF UNIT WITH HIGH CONCENTRATION OF HARDWOODS IN CABLE YARD PORTION OF GAP. HAND PILE REST OF CABLE PORTION OF UNIT. SELECTIVE SLASH MACHINE PILE YUM YARD PORTION OF UNIT WITH HIGH CONCENTRATION OF HARDWOODS IN GROUND-BASED YARD PORTION OF GAP. LOP & SCATTER WEST OF 31.4 RW. MACHINE PILE REST OF UNIT.
20.0 RW	1	PC-PB	COVER AND BURN ROADSIDE PILES.
30.4 RW	1	PC-PB	COVER AND BURN ROADSIDE PILES.
30.5 RW	1	PC-PB	COVER AND BURN ROADSIDE PILES.
29.4 RW	1	PC-PB	COVER AND BURN ROADSIDE PILES.
31.4 RW	2	PC-PB	COVER AND BURN ROADSIDE PILES.
21.1 RS	2	PC-PB	COVER AND BURN ROADSIDE PILES.
29.0 RS	1	PC-PB	COVER AND BURN ROADSIDE PILES.
31.0 RS	1	PC-PB	COVER AND BURN ROADSIDE PILES.
5.0 RS	1	PC-PB	COVER AND BURN ROADSIDE PILES.
TOTAL	421		

0 750 1,500 3,000 Feet

1:12,000

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

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40 FOOT CONTOUR INTERVAL

