

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Tillamook Field Office
4610 Third Street
Tillamook, Oregon 97141

Boot Up Timber Sale
ORN04-TS-2020.0401
Date: February 26, 2020

PROSPECTUS

THIS IS A PROSPECTUS ONLY. ATTACHMENTS MAY NOT INCLUDE ALL EXHIBITS REFERRED TO IN THE CONTRACT. THE COMPLETE CONTRACT, INCLUDING ALL EXHIBITS, IS AVAILABLE FOR INSPECTION AT THE TILLAMOOK FIELD OFFICE.

NOTICE IS HEREBY GIVEN that the Bureau of Land Management will offer for sale timber as described herein for oral auction, pursuant to Instructions to Bidders, as stated on Form No. 5440-9, attached. Written and oral bids will be received by the District Manager, or his representative, in the timber sale room at the District Office, 1717 Fabry Road, S.E., Salem, Oregon. Written bids and deposits will be accepted beginning at 8:30 a.m. and the timber sale oral auction will commence at 9:00 a.m., on Wednesday, March 25, 2020.

THIS TIMBER SALE NOTICE does not constitute the decision document for purposes of protest and appeal of a forest management decision. Consistent with 43 CFR Subpart 5003-Administrative Remedies, the notice of a timber sale, when published as a legal ad in a newspaper of general circulation shall constitute the decision document for purposes of protest and appeal. Protests may be filed with the Contracting Officer within 15 days of the publication of the aforementioned decision document in the newspaper. It is anticipated that the decision document will be published in the Yamhill Valley News Register on or about February 28, 2020. BLM does not warrant publication on this exact date. All parties considering protest of the timber sale decision document are encouraged to review the aforementioned newspaper(s) to ensure accurate knowledge of the exact publication date.

AN ENVIRONMENTAL ASSESSMENT was prepared for each timber sale tract, and a Finding of No Significant Impact has been documented. These documents are available for inspection as background for each timber sale tract at the Tillamook Field Office.

A WRITTEN BID on Form 5440-9 at not less than the advertised appraised price on a unit basis per species and the required minimum bid deposit shall be required to participate in oral bidding.

THE SUCCESSFUL BIDDER, as a condition of award, will be required to sign Form 5430-11, a certification that the bid was arrived at by the bidder or offeror independently, and was tendered without collusion with any other bidder or offeror. Also, Form 5450-17, Export Determination must be completed by the successful bidder. To expedite procedure, this form should be completed and submitted with the written bid.

THE VOLUMES LISTED herein are estimates only. The sale volumes listed are based on 16-foot taper breaks which must be taken into consideration if comparisons are made with volume predictions based on other standards. The volumes based on 32-foot taper breaks are shown for comparison purposes. No sale shall be made for less than the advertised appraised price. The Purchaser shall be liable for the total purchase price, without regard to the amount bid per unit, even though the quantity of timber actually cut or removed or designated for taking is more or less than the estimated volume or quantity so listed.

THIS TIMBER SALE has been cruised based upon Eastside Scribner board foot measure. The minimum bid figures shown by species are dollars per thousand board feet (MBF). The minimum bid increment will be \$0.10 per MBF.

A PERFORMANCE BOND in an amount not less than 20 percent of the total purchase price will be required for all contracts of \$2,500 or more. A minimum performance bond of not less than \$500 will be required for all installment contracts less than \$2,500.

QUALIFIED SMALL BUSINESS concerns may apply to SBA for a loan to provide financing for access road construction required under the terms of qualifying timber sale contracts, and necessary contract changes will be made. Approval of loan applications rests with SBA and may be contingent on availability of funds. Applicants for such loans shall notify BLM of their intention to apply for a loan.

PRE-AWARD QUALIFICATIONS. The high bidder may be required to furnish information to determine the ability to perform the obligations of the contract. If the high bidder is determined not qualified, responsible or refuses to respond within fifteen (15) days of a request for information pertaining to qualifications, the contract may be offered and awarded for the amount of the high bid to the highest of the bidders who is qualified, responsible, and willing to accept the contract.

LOG EXPORT AND SUBSTITUTION: All timber sales, including timber from Federal rights-of-ways, shall be subject to the restrictions relating to the export and substitution of unprocessed timber from the United States in accordance with P.L. 94-165 and 43 CFR 5400 and 5420, as amended.

LOG EXPORT AND SUBSTITUTION RESTRICTIONS: Excepting Port-Orford-cedar, all timber offered for sale hereunder is restricted from export from the United States in the form of unprocessed timber and is prohibited from being used as a substitute for exported private timber. The BLM has revised the log export restrictions special provision to reduce the log branding and painting requirements. The new requirements include branding of one end of all logs with a scaling diameter of over 10 inches. All loads of 11 logs or more, regardless of the diameter of the logs, will have a minimum of 10 logs branded on one end. All logs will be branded on loads of 10 logs or less. One end of all branded logs will be marked with yellow paint. At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. The Purchaser shall bear any increased costs for log branding and painting.

CONTRACT MODIFICATION, SUSPENSION OR TERMINATION: A revised Special Provision has been added to the contract which enables the Contracting Officer to suspend the contract to facilitate protection of certain plant or animal species, and/or to modify or terminate the contract when necessary to: (1) Comply with the Endangered Species Act or 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 court order, or; (3) Protect species which were identified for protection through survey and manage and/or protection buffer standards and guidelines or management direction established in the ROD and RMP.

ADDITIONAL INFORMATION concerning this timber sale tract is available at the above District Office. A copy of the timber sale contract is also available for inspection at the District Office. [The prospectus for this/these sale\(s\) is also available online at: https://www.blm.gov/programs/natural-resources/forests-and-woodlands/timber-sales.](https://www.blm.gov/programs/natural-resources/forests-and-woodlands/timber-sales) The prospectus includes maps and tables that cannot be made Section 508 compliant. For help with its data or information, please contact the Tillamook Field Office at 503-815-1100.

Attachments:

Form 5450-17

Form 5430-11

Form 5440-9

TIMBER SALE NOTICE

NORTHWEST OREGON DISTRICT
 TILLAMOOK FIELD OFFICE
 COLUMBIA MASTER UNIT

Sale Date: March 25, 2020

CONTRACT NO.: ORN04-TS-2020.0401, Boot Up Timber Sale, Lump Sum
 YAMHILL COUNTY, OREGON: O&C: **ORAL AUCTION:**
 BID DEPOSIT REQUIRED: **\$438,700.00**

All timber designated for cutting on: SW¹/₄SE¹/₄, **Sec. 10**; NE¹/₄, E¹/₂NW¹/₄, SW¹/₄NW¹/₄, SW¹/₄, SE¹/₄, **Sec. 16**;
 NE¹/₄SE¹/₄, **Sec. 20**; Lot 2, **Sec. 21**; Lot 4, Lot 5, **Sec. 28**; NE¹/₄NE¹/₄, S¹/₂NE¹/₄, N¹/₂SE¹/₄, **Sec. 29**; T. 2 S., R. 6
 W., WM., Oregon.

THIS TIMBER SALE HAS BEEN CRUISED BASED UPON EASTSIDE SCRIBNER MEASURE.

Minimum bid figures shown by species are dollars per thousand board feet (MBF). The minimum bid increment will be \$0.10 per MBF.

Approx. No. Merchantable Trees	Est. Vol. MBF 32' Log	Species	Est. Vol. MBF 16' Log	Appraised Price Per MBF	Estimated Volume Times Appraised Price
32,740	13,643	Douglas-fir	16,665	\$252.50	\$4,207,912.50
2,645	600	western hemlock	753	\$119.10	\$89,682.30
1,102	538	grand fir	668	\$128.00	\$85,504.00
687	25	red alder	31	\$129.10	\$4,002.10
37,174	14,806	Totals	18,117		\$4,387,100.90

LOG EXPORT AND SUBSTITUTION RESTRICTIONS: All timber offered for sale hereunder is restricted from export from the United States in the form of unprocessed timber and also prohibited from substitution of exported private timber.

CRUISE INFORMATION: The timber volumes for the partial cut units were based on a variable plot cruise for estimating the board foot volume of trees. Plots were measured using a 20 basal area factor (BAF) for partial cut units and a 40 BAF for regeneration harvest units. The Right-of-Way volume is based on a 100% cruise for estimating the board foot volume of trees. None of the total sale volume is salvage material. For merchantable Douglas-fir trees the average DBHOB is 19.1 inches; the average gross merchantable log contains 110 bf; the total gross volume is approximately 17,437 MBF; and 95% recovery is expected.

CUTTING AREA: Four (4) units totaling approximately three hundred twenty-six (326) acres, of which two hundred forty-three (243) acres shall be regeneration harvest and seventy-four (74) acres shall be partial cut harvest. Six (6) acres of the regeneration harvest are located within partial cut units and identified as patch cut. In addition, approximately nine (9) acres of right-of-way shall be cut. Acres shown on Exhibit A have been computed using S1 mobile mapper and Trimble R1 GNSS receiver. Acreage was calculated based on Global Positioning System traverse procedures including differential correction.

DURATION OF CONTRACT: Contract length will be 36 months for cutting and removal of timber.

OPTIONAL CONTRIBUTION (Sec. 42.nn.): The Purchaser will have the option of performing Coarse Woody Debris or contributing thirty-one thousand seven hundred fifty-two and 57/100 dollars (\$31,752.57) in lieu thereof. The option must be declared *prior* to contract execution.

LOCATION: The contract area is located approximately thirteen (13) air miles northwest of Yamhill, Oregon. Starting on Oregon Route 47, in Yamhill, head northwest on Pike Road for 4.4 miles. Turn left and follow Rockyford Road for 250 feet, then make an immediate right onto Old Railroad Grade Road. Continue on Old Railroad Grade Road for 4.0 miles. Old Railroad Grade Road turns into Fairdale Road, continue on Fairdale Road for 0.5 miles, then veer to the right onto Toll Road. Continue on Toll Road for 7.6 mile where you will encounter unit 4 of the Boot Up Timber Sale. Consult a project location map.

ACCESS AND ROAD MAINTENANCE:

Access is provided by County, Weyerhaeuser Company, Barbara J. Mitchell, Will and Brenda Reber, and Bureau of Land Management (BLM) controlled roads. All BLM controlled roads used in conjunction with this sale will be maintained by the Purchaser. Purchaser will be required to pay a rockwear obligation of (\$10,159.04) to the Government and spread 715 CY crushed rock on BLM roads for maintenance.

In the use of Weyerhaeuser Company controlled road, under Right-of-Way Agreement No. S-805 (OR044601) and as shown on Exhibit E, the Purchaser will be required to enter into a license agreement which requires: (a) Purchaser maintenance of all Weyerhaeuser controlled roads, except the 2-5-29.0 (Seg. L1-K1, I4-H, F5-A1), (b) Purchaser pay a road use obligation fee of thirty six thousand two hundred thirty four and 00/100 dollars (\$36,234.00), (c) Purchaser pay a rockwear fee of one hundred five thousand six hundred thirty six and 32/100 dollars (\$105,636.32), (d) Purchaser shall pay a maintenance fee of one hundred thirty eight thousand five hundred two and 12/100 dollars (\$138,502.12), (e) Purchaser proved proof of insurance with limits of \$1,000,000/\$1,000,000/\$1,000,000 and a performance bond of \$10,000, (f) Purchaser shall enter into a separate Rock Lease Agreement for the manufacturing and stockpiling of rock from the Section 30 Pit (located in the NE1/4 T. 2S., R. 6W., Section 30, WM) for a 60 day timeframe. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.

In use of Barbara J. Mitchell controlled roads, under Right-of-Way Agreement No. S-1039 (OR048688) and as shown on Exhibit E, the Purchaser will be required to enter into a license agreement which requires: (a) Purchaser provide proof of insurance with limits of \$1,000,000/\$1,000,000/\$1,000,000 and a performance bond of \$1,000. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.

In use of Will Reber controlled roads, under Right-of-Way Agreement No. S-1039A (OR048688) and as shown on Exhibit E, the Purchaser will be required to enter into a license agreement which requires: (a) Purchaser provide proof of insurance with limits of \$1,000,000/\$1,000,000/\$1,000,000 and a performance bond of \$1,000. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.

Road usage obligations and rockwear fees have been calculated using timber volumes based on the actual BLM timber sale cruise volume. Additional fees for road use obligation, maintenance, and rockwear will be calculated at the agreed upon rates (in the license agreement) for additional timber volume for non-BLM controlled roads. Additional fees for rockwear will be calculated at the current rate for additional timber volume for BLM controlled roads and be charged to the Purchaser. Purchaser maintenance shall include frequent blading and shaping or road surface; ditch, culvert, and catch basin cleaning; removal of minor slides and other debris. Purchaser shall implement dust abatement procedures, as approved by the Authorized Officer, on the 2-5-29.0 (MP. 0.000 – 0.612), Old Railroad Grade Road (MP. 0.000 – 0.405, 0.880 – 1.507, 1.656 – 1.797) as marked in field. The Purchaser shall be required to furnish and apply lignin sulfonate dust palliatives when timber hauling has commenced and when haul exceeds 15 passes per day, not to exceed two applications per year (Between May 1

– September 15, or as otherwise directed by Authorized Officer). Roads shall be left in a condition to withstand adverse weather at the end of the seasonal operations. Purchaser shall also spread 205 CY crushed rock on non-BLM roads as needed and instructed by the Authorized Officer.

ROAD CONSTRUCTION AND RENOVATION: The Purchaser will be required to do all work set forth below. The Purchaser shall supply all materials unless otherwise indicated.

1. **New Road Construction:**

- Road 2-6-15.5: 279 feet, 14-foot outsloped subgrade, Natural surfacing, Clearing and Grubbing, Construct turnaround, ditchout, and landing as marked, Spread/Place Spot Rock.
- Road 2-6-15.7 (Sta. 0+00 – 13+69): 1,369 feet, 14-foot ditched/crowned subgrade, Natural surfacing, Clearing and Grubbing, Construct turnaround, turnout, waste area as marked, Spread/Place Spot & Bedding Rock as marked, Place Rip-Rap for Slope Armor, Install 6 Poly Pipes with 1 lead-off ditch, Install 4 Metal “T” Posts as marked, and install 1 sediment catch basin with a straw bale as marked.
- Road 2-6-15.7 (Sta. 13+69 – 37+00): 2,331 feet, 14-foot outsloped subgrade, Natural surfacing, Clearing and Grubbing, Construct turnarounds, turnout, waste area, and landing as marked, Spread/Place Spot & Bedding Rock as marked, Place Rip-Rap for Slope Armor and Dissipator as marked, and Install 1 Poly Pipe, Install 1 Metal “T” Post as marked.
- Road 2-6-15.8 (Sta. 0+00 – 2+87): 287 feet, 14-foot ditched/crowned subgrade, Natural surfacing, Clearing and Grubbing, Spread/Place Spot Rock as marked.
- Road 2-6-16.1: 780 feet, 14-foot outsloped subgrade, Rock surfacing, Clearing and Grubbing, Construct turnaround, turnout, waste area, ditchout as marked, Spread/Place Spot Rock as marked, Spread an 8” lift of 3”-0” Rock (Sta. 0+00 – 7+80), Spread a 4” lift of 1 ½”-0” Rock (Sta. 0+00 – 7+80), Use local material as fill for junction approach.
- Road 2-6-16.2: 224 feet, 14-foot outsloped subgrade, Rock surfaced, Clearing and Grubbing, Construct landing as marked, Spread/Place Spot Rock as marked, Spread an 8” lift of 3”-0” Rock (Sta. 0+00 – 2+24), Spread a 4” lift of 1 ½”-0” Rock (Sta. 0+00 – 2+24).
- Road 2-6-16.5: 2,371 feet, 14-foot ditched/crowned subgrade, Natural surfacing, Clearing and Grubbing, Construct turnaround, turnouts, waste area, and landing as marked, Spread/Place Spot & Bedding Rock as marked, Install 4 Poly Pipes with 1 lead-off ditch, Install 3 Metal “T” Post as marked.
- Road 2-6-16.6: 1,124 feet, 14-foot ditched/crowned subgrade, Natural surfacing, Clearing and Grubbing, Construct turnaround, waste area, ditchouts, and landing as marked, Spread/Place Spot Rock as marked.
- Road 2-6-16.7: 1,006 feet, 14-foot ditched/crowned subgrade, Natural surfacing, Clearing and Grubbing, Construct turnarounds, turnout, waste area, ditchouts, and landing as marked.
- Road 2-6-20.1 (Sta. 0+00 – 1+87, 8+24 – 47+51): 4,114 feet, 14-foot ditched/crowned subgrade, Rocked surfacing, Clearing and Grubbing, Construct turnarounds, turnout, and landing as marked. Spread/Place Spot & Bedding Rock as marked, Place Rip- Rap for outlet dissipator as marked, Spread an 8” lift of 3”-0” Rock (Sta. 0+00 – 1+87, 8+24 – 47+51), Spread a 4” lift of 1 ½”-0” Rock (Sta. 0+00 – 1+87, 8+24 – 47+51), Spread a 2’ lift of 3”-0” Rock as fill (Sta. 18+05 – 19+69), Install 8 Poly Pipes and 1 Perforated Metal Pipe, Install 9 Metal “T” Posts as marked, Construct a Free Draining Fill.
- Road 2-6-20.3: 355 feet, 14-foot outsloped subgrade, Rocked surfacing, Clearing and Grubbing, Construct landing as marked, Remove and Haul brush pile (Sta. 0+40) to waste area, Spread/Place Spot Rock as marked, Spread an 8” lift of 3”-0” Rock (Sta. 0+00 – 3+55), and Spread a 4” lift of 1 ½”-0” Rock (Sta. 0+00 – 3+55).

Road 2-6-29.1 (Sta. 0+00 – 7+06): 706 feet, 14-foot outsloped subgrade (potential blasting required), Rocked surfacing, Clearing and Grubbing, Construct turnaround, and landing as marked with end haul required, Spread/Place Spot & Bedding Rock as marked, Spread an 8” lift of 3”-0” Rock (Sta. 0+00 – 7+06), Spread a 4” lift of 1 ½”-0” Rock (Sta. 0+00 – 7+06), Install 1 Poly Pipe, and Install 1 Metal “T” Post as marked.

Road 2-6-29.1 (Sta. 7+06 – 11+85): 479 feet, 12-foot outsloped subgrade (potential blasting required), Natural surfacing, Full Bench Construction with end haul required.

Road 2-6-29.2: 279 feet, 14-foot outsloped subgrade, Rocked surfacing, Clearing and Grubbing, Construct turnaround, and landing as marked, Spread/Place Spot Rock as marked, Spread an 8” lift of 3”-0” Rock (Sta. 0+00 – 2+79), Spread a 4” lift of 1 ½”-0” Rock (Sta. 0+00 – 2+79).

2. Renovation:

Road 2-6-15.0 (Whiteface Road): 0.174 miles, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct turnout, and curve widening, Spread/Place Spot Rock as marked, and Install 2 Metal “T” Posts as marked.

Road 2-6-15.1: 0.152 miles, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct turnout as marked, Spread/Place Spot Rock as marked, and Install 1 sediment catch basin with a straw bale as marked.

Road 2-6-15.2: 0.189 miles, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Spread/Place Spot Rock as marked.

Road 2-6-15.4: 1,391 feet, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct turnout, ditchout, and landing as marked, Spread/Place Spot & Bedding Rock as marked, Spread an 8” lift of 3”-0” Rock (Sta. 7+68 – 13+91), Spread a 4” lift of 1 ½”-0” Rock (Sta. 7+68 – 13+91), Install 1 Poly Pipe as marked, Install 1 Metal “T” Post, and Install 1 sediment with a straw bale as marked.

Road 2-6-15.6: 0.656 miles, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct turnout as marked, Spread/Place Spot Rock as marked, Install 3 Metal “T” Posts as marked, and Install 3 sediment catch basins with straw bales as marked.

Road 2-6-15.8 (Sta. 2+87 – 14+89): 1,202 feet, 14-foot ditched/crowned subgrade, Natural surfacing, Blading and Compacting Surface, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct turnaround, waste areas, ditchouts, and landings as marked, Spread/Place Spot & Bedding Rock as marked, Install 5 Poly Pipes, Install 5 Metal “T” Posts as marked, Construct a Free Draining Fill, and Install 1 sediment catch basin with straw bale as marked.

Road 2-6-16.0: 1,284 feet, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct turnaround, and ditchouts as marked, Remove existing waterbars, Spread/Place Spot Rock as marked, and Install 1 Metal “T” Post as marked.

Road 2-6-16.3: 271 feet, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and

Compacting Surface, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct ditchout, and landing as marked, and Spread/Place Spot Rock as marked.

Road 2-6-16.4: 519 feet, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Brushing with Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct waste area, ditchout, and landing as marked, Spread/Place Spot Rock as marked, Spread an 8" lift of 3"-0" Rock (Sta. 0+00 – 5+19), and Spread a 4" lift of 1 ½"-0" Rock (0+00 – 5+19).

Road 2-6-20.0 (MP. 0.000 – 0.333, 0.702 – 0.850): 0.481 miles, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Brushing with some Clearing and Grubbing, Ditchline Re-establishment by bunching and hauling, Construct waste area, ditchouts, and turnaround as marked, Spread/Place Spot & Bedding Rock as marked, Spread a 6" lift of 1 ½"-0" Rock (MP. 0.000 – 0.333), Spread an 8" lift of 3"-0" Rock (MP. 0.702 – 0.850), Spread a 4" lift of 1 ½"-0" Rock (MP. 0.702 – 0.850), Install 1 Poly Pipe, and Install 3 Metal "T" Posts as marked.

Road 2-6-20.0 (MP. 0.333 – 0.702): 0.369 miles, 14-foot outsloped subgrade, Rocked surfacing, Blading and Compacting Surface, Light Brushing with some Clearing and Grubbing, Spread an 8" lift of 3"-0" Rock (MP. 0.333 – 0.702), and Spread a 4" lift of 1 ½"-0" Rock (MP. 0.333 – 0.702).

Road 2-6-20.2: 109 feet, 14-foot outsloped subgrade, Rocked surfacing, Blading and Compacting Surface, Light Brushing with some Clearing and Grubbing, Spread/Place Spot Rock as marked, Spread an 8" lift of 3"-0" Rock (Sta. 0+00 – 1+09), and Spread a 4" lift of 1 ½"-0" Rock (Sta. 0+00 – 1+09).

Road 2-5-29.0 (Toll Road): 11.191 miles, 16-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Clearing and Grubbing, Ditchline Re-establishment, Spread/Place Spot & Bedding Rock as marked, Replace 4 Poly Pipes and Replace 1 Metal Pipe, Install 13 Poly Pipes, and Install 1 Poly Downspout Pipe, Install 30 Metal "T" Posts as marked, and Install 13 Sediment Catch Basins with Straw Bale as marked.

Road 2-6-19.0: 0.491 miles, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Clean Culverts, Brushing with some Clearing and Grubbing, Ditchline Re-establishment, and Spread/Place Spot Rock as marked.

3. Improvement:

Road 2-6-20.1 (Sta. 1+87 – 8+24): 637 feet, 14-foot ditched/crowned subgrade, Rocked surfacing, Blading and Compacting Surface, Brushing with Clearing and Grubbing, Ditchline Establishment by bunching and hauling, Construct turnaround, ditchout, and curve widening as marked, Spread/Place Spot Rock as marked, Spread an 8" lift of 3"-0" Rock (Sta. 1+87 – 8+24), and Spread a 4" lift of 1 ½"-0" Rock (Sta. 1+87 – 8+24).

4. Estimated Quantities:

a. Clearing, Grubbing, and Brushing:

13.13 acres of Clearing and Grubbing
3.30 miles of Brushing

b. Culverts:

1,396 feet of 18 inch Corrugated Plastic Pipe (CPP) – Type S (24 Pipes)

10 feet of 18 inch Corrugated Plastic Pipe (CPP) – Type C (1 Pipe)
 240 feet of 24 inch Corrugated Plastic Pipe (CPP) – Type S (5 Pipes)
 176 feet of 36 inch Corrugated Plastic Pipe (CPP) – Type S (3 Pipes)
 50 feet of 24 inch 16 gage Aluminized Steel Pipe (CMP) – (1 Pipe)
 40 feet of 54 inch 14 gage Aluminized Steel Pipe (CMP) - (1 Pipe)
 51 Metal “T” Posts for Inlet Markers

c. Aggregate & Asphalt Material:

<u>Quantity</u>	<u>Description</u>
5,420 cubic yards	1 ½” minus crushed rock – Construction Rock
7,675 cubic yards	3” minus crushed rock – Construction Rock
775 cubic yards	1 ½” minus crushed rock – Culvert Bedding Material
210 cubic yards	1 ½” – ¾” crushed rock – Drain Rock
715 cubic yards	1 ½” minus crushed rock- BLM Maintenance Rock
205 cubic yards	1 ½” minus crushed rock – Non-BLM Maintenance Rock
785 cubic yards	Riprap – (Class 3)
50 cubic yards	Riprap – (Class 5)

Rock Source: All 1 ½”-0”, 3”-0”, and Drain Rock – Weyerhaeuser Section 30 Pit

620 cubic yards Riprap (Class 3) – Commercial Source

165 cubic yards Riprap (Class 3) – 2-6-20.1 Road

50 cubic yards Riprap (Class 5) – Commercial Source

Other:

Compaction of all final grades will be required.

Right of way debris will be disposed of by scattering adjacent to all roads, outside of clearing limits

All roads shall be decommissioned as follows:

The Purchaser shall decommission 2-6-15.5, 2-6-15.7 (Sta. 13+69 – 37+00), 2-6-16.5, 2-6-16.6, and 2-6-16.7, by subsoiling, installing non-drivable waterbars, scattering slash, removing culverts, and blocking. The Purchaser shall decommission 2-6-15.8 by installing non-drivable waterbars and blocking. The Purchaser shall stabilize roads 2-6-15.7 (Sta. 0+00 – 13+69), 2-6-29.1 (Sta. 7+06 – 11+85), by installing drivable water bars.

Grass seeding will be required on all newly disturbed areas. Grass seed will be furnished by the Government.

Straw mulch will be required on all disturbed/seeded soils that are wet and/or within 50 feet each side of “Live stream” locations and all disposal sites. Grass straw will be furnished by the Government.

All waste from re-establishing ditchlines on rock surfaced roads shall be bunched and end-hauled to designated waste area.

All slide removal material shall be end-hauled to designated waste areas.

All culverts removed upon road decommissioning shall be salvaged and delivered to the BLM Maintenance Facility at the SW ¼ of Section 5, T. 3 S., R. 6 W., W.M.

Purchaser shall enter into a separate rock lease agreement with Weyerhaeuser Company to develop, manufacture, and stockpile rock at their Section 30 Pit. Controlled blasting techniques shall be employed during production blasting to reduce the compounding of percussion waves. (The quarry shall be shot in multiple shot with no more than 5,000 CY per blast with a 8-millisecond time delay between shots)

SEASONAL RESTRICTION MATRIX:

Restricted Times are Shaded, Dates with Daily Restrictions marked "Daily"

Activity	JAN		FEB		MAR		APR		MAY		JUN		JUL		AUG		SEP		OCT		NOV		DEC	
	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16
Mechanized falling and Ground-Based yarding																								
Cable yarding and log haul from Roads 2-6-15.5, 2-6-15.7, 2-6-15.8, 2-6-16.5, 2-6-16.6, 2-6-16.7, and 2-6-29.1 (from station 7+06 to 11+85)																								
Cable yarding and log haul from Roads 2-5-29.0 (from MP 0.612 to MP 11.191) , 2-6-15.0, 2-6-15.1, 2-6-15.2, 2-6-15.4, 2-6-15.6, 2-6-16.0, 2-6-16.1, 2-6-16.2, 2-6-16.3, 2-6-16.4, 2-6-20.0, 2-6-20.1, 2-6-20.2, 2-6-20.3, 2-6-29.1 (from station 0+00 to 7+06) and 2-6-29.2																								
Maintenance activities, roadside brushing and rock crushing																								
Log and rock haul from Roads 2-5-29.0 (MP 0.000 to MP 0.612) and Oak Ridge Rd . Daily time restriction will only occur for an approximate three (3) week period from May 1 to June 30 as designated by Authorized Officer. No haul between 9:00 AM to 11:00 PM during the restricted 3 week period									Daily	Daily	Daily	Daily												
Dust Abatement Applications: Lignin sulfonate and water application as directed by Authorized Officer from May 1 to September 15. No more than two (2) lignin applications per year. When water is used for abatement, no more than two (2) applications of water per day will be required.																								
Road renovation, construction, improvement, decommissioning, except 2-6-29.1																								
Blasting in Weyerhaeuser Section 30 Pit. During daily time restriction, no blasting between two (2) hours before sunset and two (2) hours after sunrise between April 1 -September 15							Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily								
Construction and Decommissioning of road 2-6-29.1 shall not begin until 2 hours after sunrise and shall conclude 2 hours before sunset from July 8 to September 15, both days inclusive													Daily	Daily	Daily	Daily								
In-Stream Activities in the North Yamhill River watershed																								
In-Stream Activities in the Trask River watershed																								

TIMBER SALE CONTRACT SPECIAL PROVISIONS

Sec. 41. Timber and Area Reservation Provisions

RESERVED

- a. All timber in the reserve and clump areas shown on Exhibit A, and all trees that are painted orange and posted, which mark the boundaries of the timber sale units.
- b. All trees marked with orange paint above and below stump height within the boundaries of the timber sale units shown on Exhibit A.
- c. All conifer trees less than seven (7) inches diameter at breast height (dbh), all Pacific madrone, all Pacific dogwood, all Oregon ash, and all Oregon white oak in the Sale Areas shown on Exhibit A, outside of posted Right-of-Way, which do not present a safety hazard as determined by the Authorized Officer. If any are felled, they shall be retained on site.
- d. Existing down logs and snags in the Sale Area, as shown on Exhibit A, which do not present a safety hazard as determined by the Authorized Officer. All snags felled shall be retained on site.
- e. Trees felled within road rights-of-way, which are marked with yellow paint above and below stump height shall remain on site and be placed outside of the road prism, and are not included in the timber sale.

Sec. 42. Special Provisions

LOGGING

- a. 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 plans to begin operations. This written notification must be received by the Authorized Officer no less than seven (7) days prior to the date the Purchaser plans to begin or resume operations. The Purchaser shall also notify the Authorized Officer in writing if they intend to cease operations for any period of seven (7) or more days.
- b. Prior to the commencement of operations, the Purchaser shall obtain from the Authorized Officer approval of a written operations and logging plan commensurate with the terms and conditions of the contract which shall include measures needed to assure protection of the environment and watershed. A pre-work conference between the Purchaser's authorized representative and the Authorized Officer must be held before the logging plan will be approved. All logging shall be done in accordance with the approved logging plan. The Purchaser shall provide a minimum of seven (7) days notice when requesting the scheduling of a pre-work conference.
- c. Excessive damage to reserve timber, as determined by the Authorized Officer, will result in suspension of yarding operations until corrective measures to prevent further damages have been approved by the Authorized Officer.

d. In the Special Yarding Area shown on Exhibit A, no ground based equipment shall be used inside the Special Yarding Area boundary.

e. No falling, yarding, or loading is permitted in or through the Reserve Areas, shown on Exhibit A, unless otherwise approved by the Authorized Officer.

f. Prior to attaching any logging equipment to a reserve tree, the Purchaser shall obtain approval from the Authorized Officer, and shall take precautions to protect the tree from damage as directed by the Authorized Officer.

g. At all landings, all non-merchantable logs more than eight (8) inches in diameter at the large end and exceeding eight (8) feet in length that are not removed, shall be scattered, or decked at a location designated by the Authorized Officer.

h. In skyline harvest areas, except where ground-based yarding is allowed in Sec. 42.i., all yarding shall be done with a skyline or similar cable system equipped with a slack pulling carriage capable of yarding two thousand four hundred (2,400) feet slope distance from the landing and at least seventy-five (75) feet laterally from the skyline to the designated sky road. The carriage shall be capable of being held in position on the skyline during all lateral yarding and shall be able to pass intermediate support jacks as required. The leading end of all logs shall be transported free of the ground during yarding. Full suspension is required within fifty (50) feet of streams. The rigging of tail or lift trees, intermediate supports and use of tail holds outside the Sale Areas shall be required where necessary to meet this requirement. Space designated skyline corridors at a minimum of one hundred fifty (150) feet apart unless otherwise agreed to in writing by the Authorized Officer.

i. Ground-based operations are limited to slopes of thirty-five (35) percent or less. The Authorized Officer may approve the use of specialized, ground-based, mechanized equipment (machines specifically designed to operate on slopes greater than 35%) on slopes of fifty (50) percent or less, except within two hundred ten (210) feet of streams. All skidding shall be done by equipment operated entirely on skid trails that have been approved by the Authorized Officer and use existing skid trails where available. The area composed of skid trails shall not exceed fifteen (15) percent of the total yarding area within a unit. Excavation on designated skid trails shall be limited to a maximum cut of one (1) foot unless otherwise approved by the Authorized Officer. The Purchaser shall directionally fall trees into the lead with the skidding direction and winch or carry the logs to the skid trails. Temporary logging roads, skid trails, and harvester/forwarder trails would be water barred and blocked as directed by the Authorized Officer, after each operating season before the fall wet season begins.

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

1. All skid trails 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 yarding of logs with a minimum of damage to reserve trees.

2. The Purchaser may immediately cut and remove additional timber to clear skid trails and cable yarding roads; and provide tail hold, tieback, guy line, lift and intermediate support trees when the trees have been marked with blue or green paint above and below stump height by the Authorized Officer and thereby approved for cutting and removal by the Authorized Officer. When trees are marked with yellow paint above and below stump height they may be cut, but must remain on site. The volume of the timber to be sold will be determined by the Authorized Officer in accordance with Bureau of Land Management prescribed procedures. No timber may be cut or removed under terms of this provision unless sufficient installment payments have been made in accordance with Sec. 3.(b). of the contract or sufficient bonding has been provided in accordance with Sec. 3.(d). of the contract.

3. The Purchaser agrees that sale of this additional timber shall be accomplished by a unilateral modification of the contract executed by the Contracting Officer and that such timber shall be sold at the unit prices shown in Exhibit B of this contract unless: the value of the timber must be reappraised subject to the terms for contract extension set forth in Sec. 9. of the contract; or, the Authorized Officer determines that the tree species are not listed in Exhibit B of this contract and otherwise reserved in Sec. 41. of the contract or any tree that exceeds forty (40) inches dbh shall be appraised and sold by bilateral modification of the contract at current fair market value in accordance with Sec. 8. of the contract.

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

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

SAFETY

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

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

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

SEASONAL RESTRICTIONS

l. No mechanized falling or ground based equipment operation within harvest units shown on Exhibit A during wet season (generally between October 16 of one calendar year and May 31 of the following calendar year) and during periods of wet soil conditions as determined by Authorized Officer.

m. No log or rock hauling in dust abatement areas, as shown in Exhibit E, shall occur between 9:00 A.M. and 11:00 P.M., for an approximate 3 week period each calendar year as determined by the Authorized Officer. The 3 week restriction will generally occur between May 1 and June 30 of the same calendar year.

n. Purchaser shall apply dust abatement as directed by the Authorized Officer, as shown in Exhibit E and described in Exhibit D. Lignin sulfonate and water applications are approved for dust abatement. No more than two (2) applications of lignin sulfonate for dust abatement may be applied per year. When water dust abatement is applied, no more than two (2) applications per day will be required. Dust abatement will generally occur between May 1 of one calendar year and September 15 of the same calendar year as determined by the Authorized Officer.

o. No cable yarding, log hauling, or rock hauling on 2-6-15.5, 2-6-15.7, 2-6-15.8, 2-6-16.5, 2-6-16.6, 2-6-16.7, and 2-6-29.1 (from station 7+06 to 11+85) roads in the Sale Areas shown on Exhibit A during wet season (generally October 16 of one calendar year to May 31 of the following calendar year) and during periods of wet soil conditions as determined by Authorized Officer.

p. No road renovation, road construction, road improvement, or road decommissioning (except roadside brushing, which is permitted year round), shown on Exhibit C, shall be conducted during the wet season, generally between October 16 of one calendar year and May 31 of the following calendar year, or during periods of wet soil conditions during the dry season as determined by Authorized Officer.

q. No road maintenance, as shown on Exhibit E, and described in Exhibit D, shall be conducted during periods of wet soil conditions as determined by the Authorized Officer.

r. No work required in live streams shall be conducted between October 1 of one calendar year and July 14 of the following calendar year in the North Yamhill River watershed, both days inclusive, and between September 16 of one calendar year and June 30 of the following calendar year in the Trask River watershed, both days inclusive, unless BLM receives a waiver from the Oregon Department of Fish and Wildlife, and is approved by the Authorized Officer.

s. Weyerhaeuser Section 30 Rock Pit (T2S., R6W., section 30): Blasting shall not begin until 2 hours after sunrise and shall conclude 2 hours before sunset from April 1 to September 15, both days inclusive, unless otherwise approved by the Authorized Officer.

t. Road construction and road decommissioning on 2-6-29.1, shown on Exhibit C, shall not begin until 2 hours after sunrise and shall conclude 2 hours before sunset from July 8 to September 15, both days inclusive, unless otherwise approved by the Authorized Officer.

ROAD CONSTRUCTION, RENOVATION, IMPROVEMENT, MAINTENANCE AND USE

u. The Purchaser shall construct natural surfaced roads: 2-6-15.5, 2-6-15.7, 2-6-15.8 (Sta. 0+00 – 2+87), 2-6-16.5, 2-6-16.6, and 2-6-16.7. The Purchaser shall construct surfaced roads: 2-6-16.1, 2-6-16.2, 2-6-20.1 (Sta. 0+00 – 1+87, 8+24 – 47+57), 2-6-20.3, 2-6-29.1, and 2-6-29.2. The Purchaser shall renovate natural surfaced roads: 2-6-15.8 (Sta. 2+87 – 14+89). The Purchaser shall renovate surfaced roads: 2-6-15.0, 2-6-15.1, 2-6-15.2, 2-6-15.4, 2-6-15.6, 2-6-16.0, 2-6-16.3, 2-6-16.4, 2-6-20.0, 2-6-20.2, and 2-6-19.0. The Purchaser shall improve surface roads: 2-6-20.1 (Sta. 1+87 – 8+24). Construction, renovation, and improvement shall be done in strict accordance with the plans and specifications shown on Exhibit C, which is attached hereto and made a part hereof.

v. Any required construction, renovation, and improvement shall be completed and accepted prior to the removal of any timber, except right-of-way timber, over the road.

w. The Purchaser shall decommission 2-6-15.5, 2-6-15.7 (Sta. 13+69 – 37+00), 2-6-16.5, 2-6-16.6, and 2-6-16.7, as shown on Exhibit C, by subsoiling, installing non-drivable waterbars, scattering slash, removing culverts, and blocking. The Purchaser shall decommission 2-6-15.8, as shown on Exhibit C, by installing non-drivable waterbars and blocking. The Purchaser shall stabilize roads 2-6-15.7 (Sta. 0+00 – 13+69), 2-6-29.1 (Sta. 7+06 – 11+85), as shown on Exhibit C, by installing drivable water bars. Subsoiling shall consist of loosening the soil to a depth of eighteen (18) inches utilizing excavator attachments, log loader tongs, or other approved equipment acceptable to the Authorized Officer. No subsoiling shall be required where the road traverses rock outcroppings. All natural water courses shall be opened to prevent erosion of the road. Barriers shall be constructed and clearing debris shall be placed on and around the barriers so as to prevent further use of the road by vehicles as shown on Exhibit C. Decommissioning and stabilization shall be completed within thirty (30) days of completion of yarding and hauling operations on that road.

x. The Purchaser is authorized to use the roads listed below and shown on Exhibit E which are under the jurisdiction of the Bureau of Land Management for the removal of Government timber sold

under the terms of this contract and/or the hauling or rock as required in Exhibit C provided the Purchaser complies with the condition set forth in Sections 42.y.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type	Maintenance Responsibility
2-6-15.4 (Seg. B1)	0.118	BLM	Rocked	Purchaser
2-6-15.5	0.053	BLM	Natural	Purchaser
2-6-15.7	0.701	BLM	Natural	Purchaser
2-6-15.8	0.282	BLM	Natural	Purchaser
2-6-16.0 (Seg. A)	0.186	BLM	Rocked	Purchaser
2-6-16.1	0.148	BLM	Rocked	Purchaser
2-6-16.2	0.042	BLM	Rocked	Purchaser
2-6-16.3 (Seg. A1)	0.051	BLM	Rocked	Purchaser
2-6-16.4	0.098	BLM	Rocked	Purchaser
2-6-16.5	0.449	BLM	Natural	Purchaser
2-6-16.6	0.213	BLM	Natural	Purchaser
2-6-16.7	0.191	BLM	Natural	Purchaser
2-6-20.0 (Seg. C2)	0.148	BLM	Rocked	Purchaser
2-6-20.1 (Seg. A, C1-C3)	0.779	BLM	Rocked	Purchaser
2-6-20.3 (Seg. B)	0.040	BLM	Rocked	Purchaser
2-6-29.1	0.224	BLM	Rocked	Purchaser
2-6-29.2	0.053	BLM	Rocked	Purchaser
2-5-29.0 (Seg. J10-J1,G)	1.534	BLM	Rocked	Purchaser

y. The Purchaser shall perform any road repair and maintenance work on roads used, under the terms of Exhibit D, “Road Maintenance Specifications” of this contract which is attached hereto and made a part hereof. Purchaser shall spread **715** cubic yards of crushed rock on BLM controlled roads as directed by the Authorized Officer and as part of maintenance requirements. Purchaser shall also pay a rockwear fee of \$10,159.04 to the Government. Additional fees for rockwear will be calculated at the current rate for additional timber volume for BLM controlled roads and be charged to the Purchaser, and be paid prior to contract termination.

z. In the use of roads listed below and shown on Exhibit E, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement S-805 (OR044601) between the United States of America and Weyerhaeuser Company. The Purchaser will be required to enter into a license agreement with Weyerhaeuser Company prior to commencement of operations. The Purchaser shall furnish to the Authorized Officer a copy of the required executed license agreement. The license agreement conditions include: 1) Purchaser pay a road use obligation fee to Weyerhaeuser Company of ninety thousand five hundred eighty five and 00/100 (\$90,585.00) dollars. Road use fees have been calculated using the actual BLM timber sale cruise volume. Additional fees for road use obligation will be calculated at the agreed upon rates (in the license agreement) for additional timber volume for non-BLM controlled roads. 2) Purchaser pay a rockwear fee to Weyerhaeuser Company of one hundred five thousand six hundred thirty-six and 32/100 dollars (\$105,636.32). Rockwear fees have been calculated using the actual BLM timer sale cruise volume. Additional fees for rockwear will be calculated at the agreed upon rates (in the license agreement) for additional timber volume for non-BLM controlled roads. 3) The Purchaser shall *not* perform maintenance on road 2-5-29.0 (Seg. A1-F5, H-I4, K1-M2). Purchaser shall pay a maintenance

fee to Weyerhaeuser Company of one hundred thirty-eight thousand five hundred two and 12/100 dollars (\$138,502.12). Maintenance fees have been calculated using the actual BLM time of sale cruise volume. Additional fees for maintenance will be calculated at the agreed upon rates (in the license agreement) for additional timber volume for non-BLM controlled roads. 4) The Purchaser shall perform any road repair and maintenance work on road 2-6-15.0 (Seg. A, B1), 2-6-15.1 (Seg. A1), 2-6-15.2 (Seg. A1-A3), 2-6-15.4 (Seg. A1-A2), 2-6-15.6 (Seg. A1-A2), 2-6-16.0 (Seg. B1), 2-6-20.0 (Seg. E1-E3), and 2-6-19.0 (Seg. A1-A3), under the terms of Exhibit D, "Road Maintenance Specifications", of this contract which is attached hereto and made a part hereof. 5) Purchaser shall enter into a separate Rock Lease Agreement with Weyerhaeuser Company for the manufacturing and stockpiling of rock from the Section 30 Pit (located in the NE1/4 T. 2S., R. 6W., Section 30, WM) for a 60 day timeframe. 6) Default by the Purchaser of said Right-of-Way and Road Use Agreement or any license agreement executed pursuant thereto, 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. The Purchaser will be required to carry liability insurance with the limits of \$1,000,000/\$1,000,000/\$1,000,000 and a performance bond of \$10,000.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type	Maintenance Responsibility
2-6-15.0 (Seg. A, B1)	0.174	Weyerhaeuser	Rocked	Purchaser
2-6-15.1 (Seg. A1)	0.152	Weyerhaeuser	Rocked	Purchaser
2-6-15.2 (Seg. A1 – A3)	0.189	Weyerhaeuser	Rocked	Purchaser
2-6-15.4 (Seg. A1-A2)	0.145	Weyerhaeuser	Rocked	Purchaser
2-6-15.6 (Seg. A1-A2)	0.656	Weyerhaeuser	Rocked	Purchaser
2-6-16.0 (Seg. B1)	0.057	Weyerhaeuser	Rocked	Purchaser
2-6-20.0 (Seg. E1-E3)	0.333	Weyerhaeuser	Rocked	Purchaser
2-5-29.0 (Seg. A1-F5, H-I4, K1-M2)	9.657	Weyerhaeuser	Rocked	Weyerhaeuser
2-6-19.0 (A1-A3)	0.491	Weyerhaeuser	Rocked	Purchaser

aa. In the use of roads listed below and shown on Exhibit E, the Purchaser shall comply with the conditions of Right-of-Way and Road use Agreement S-1039 (OR048688) between the United States of America and Barbara J. Mitchell. The Purchaser will be required to enter into a license agreement with Barbara J. Mitchell, prior to commencement of operations. The Purchaser shall furnish to the Authorized Officer a copy of the required executed license agreement. The license agreement conditions include: 1) No payment to Barbara J. Mitchell for road use obligation. 2) No payment to Barbara J. Mitchell for rockwear fees. 3) The Purchaser shall *not* perform maintenance on road 2-6-20.1 (Seg. B). In lieu of a maintenance fee, the Purchaser shall furnish 30 cubic yards of crushed rock under the terms of said license agreement. Additional fees for road maintenance and surface replacement will not be charged. 4) Default by the Purchaser of said Right-of-Way and Road Use Agreement or any license agreement executed pursuant thereto, 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. The Purchaser will be required to carry liability insurance with the limits of \$1,000,000/\$1,000,000/\$1,000,000 and a performance bond of \$1,000.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type	Maintenance Responsibility
2-6-20.1 (Seg. B)	0.121	Barbara J. Mitchell	Rocked	Barbara J. Mitchell

bb. In the use of roads listed below and shown on Exhibit E, the Purchaser shall comply with the conditions of Right-of-Way and Road use Agreement S-1039A (OR048688) between the United States of America and Will and Brenda Reber. The Purchaser will be required to enter into a license agreement with Will and Brenda Reber prior to commencement of operations. The Purchaser shall furnish to the Authorized Officer a copy of the required executed license agreement. The license agreement conditions include: 1) No payment to Will and Brenda Reber for road use obligation. 2) No payment to Will and Brenda Reber for rockwear fees. 3) The Purchaser shall *not* perform maintenance on road 2-6-20.0 (Seg. D1-D2), 2-6-20.2 (Seg. A1), and 2-6-20.3 (Seg. A). In lieu of a maintenance fee, the Purchaser shall furnish 90 cubic yards of crushed rock under the terms of said license agreement. Additional fees for road maintenance and surface replacement will not be charged. 4) Default by the Purchaser of said Right-of-Way and Road Use Agreement or any license agreement executed pursuant thereto, 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. The Purchaser will be required to carry liability insurance with the limits of \$1,000,000/\$1,000,000/\$1,000,000 and a performance bond of \$1,000.

Road No. and Segment	Length Miles Used	Road Control	Road Surface Type	Maintenance Responsibility
2-6-20.0 (Seg. D1-D2)	0.369	Will and Brenda Reber	Rocked	Will and Brenda Reber
2-6-20.2 (Seg. A1)	0.021	Will and Brenda Reber	Rocked	Will and Brenda Reber
2-6-20.3 (Seg. A)	0.027	BLM	Rocked	Will and Brenda Reber

cc. The Purchaser agrees that if they request to use any other private road, subject of a right-a-way agreement with the Government for the removal of Government timber sold under the terms of this contract, and is approved by the Authorized Officer, 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 shares of the capital investment of any such road.

dd. With the prior written approval of the Authorized Officer, the Purchaser may arrange for cooperative maintenance with other users of roads included in Exhibit E; provided, that such cooperative arrangement shall not relieve the Purchaser of his liability for the maintenance and repair of such roads resulting from wear or damage, in accordance with this contract. The Purchaser shall furnish the Authorized Officer a copy of any cooperative maintenance agreements entered into with other users of these roads.

ee. 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 exceed the maximum allowable weights or dimensions established by the State for vehicles operating without a permit or if vehicles meet allowable non-permitted State vehicle weights, but the haul route crosses a structure or segment of road that is posted for reduced weights. The Purchaser agrees to abide

by any special requirements included in said written approval.

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

Details shall include:

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

ff. 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.

gg. The Purchaser shall perform any road repair and maintenance work on roads used (and designated as Purchaser Maintenance), under the terms of Exhibit D, "Road Maintenance Specifications", of this contract which is attached hereto and made a part hereof. Purchaser shall spread **205** cubic yards of crushed rock on non-BLM controlled roads used for this timber sale, as directed by the Authorized Officer as part of maintenance requirements.

ENVIRONMENTAL PROTECTION

hh. In order to prevent the spread of noxious weeds, the Purchaser shall pressure wash all road construction and ground-based logging equipment that will be used off of existing roads, as well as loaders and mechanically propelled brush cutters, prior to entry onto the BLM Land shown on Exhibit A, as directed by the Authorized Officer. Cleaning shall be defined as removal of all dirt, grease, plant parts and material that may carry noxious weed seeds.

ii. The Purchaser shall immediately discontinue specified construction or harvesting operations upon written notice from the Contracting Officer that:

1. 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;

2. when, in order to comply with the Endangered Species Act, or to prevent incidental take of northern spotted owls in accordance with management direction in the Record of Decision (ROD) and Resource Management Plan (RMP), or to protect occupied marbled murrelet sites in

accordance with management direction of the ROD and RMP, the Contracting Officer determines it may be necessary to modify or terminate the contract, or;

3. 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;

4. 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;

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

6. 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;

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

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

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

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

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

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

The Contracting Officer may determine that it is necessary to 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 occupied marbled murrelet sites 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. 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, consistent with marbled murrelet occupied site protection in accordance with the ROD and RMP, consistent with species protection in accordance with management direction established in the ROD and RMP, or court order requirements necessitating the modification or termination.

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.

FIRE PREVENTION

jj. 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 fire season or periods of fire danger, prepare a fire prevention and control plan to the satisfaction of the Authorized Officer. Purchaser shall take such measures for prevention and suppression of fire on the contract area and other adjacent Government lands used or traversed by Purchaser in connection with operations as are required by applicable laws and regulations. However, when in the opinion of the Authorized Officer, weather and other conditions affecting fire incidence and control make special precautions necessary to protect the contract area and said Government lands, Purchaser shall take such additional or other fire prevention and control measures as may be required by the Authorized Officer. The Purchaser shall comply with Oregon Department of Forestry Industrial Fire Precaution Level (IFPL) I Fire Season requirements. At IFPL II and III, additional fire prevention and control provisions may be added as determined by the Authorized Officer and specified in written instructions to the Purchaser to mitigate dry fuel and weather conditions.

LOGGING RESIDUE REDUCTION

kk. In addition to the requirements of Sec. 15 of this contract, and notwithstanding, the Purchasers satisfactory compliance with State laws and regulations regarding offsetting or abating the additional fire hazard created by this operation and the States willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following hazard reduction measure(s) required by this contract: Perform logging residue reduction and site preparation work on approximately ninety-five (95) acres of harvest area located within harvest units. The required work shall consist of any treatment or combination of treatments, 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. Prior to commencement of any operation under this Section of the contract, a slash disposal and pre-work conference between the purchaser's representative and the Authorized Officer must be held at a location designated by the Authorized Officer. The number of acres of each treatment shall be determined by the Authorized Officer. All slash disposal shall be done in accordance with the plans developed at the pre-work conference. Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over as a result of purchasers operations under the terms of this contract.

1. Excavator pile and burn slash within ground based portion of regeneration harvest units from skid trails and within 25 feet of Toll Road (2-5-29) in harvest areas. Slash shall be piled by an excavator equipped with a hydraulic thumb. Finished piles shall be tight and free of dirt.
 - a. Unmerchantable logs greater than six (6) inches on the small end shall be left in place, or positioned so that they will not be burned.
 - b. Machine piles shall be located as far as possible from green trees, snags, or unit boundaries to minimize damage.

c. Machine piles shall be kept free of dirt and other non-wood debris and constructed as compactly as possible. There should be an adequate supply of finer fuels located within and under the covered area of the pile to ensure ignition of the larger fuels.

d. A minimum 10-foot by 10-foot cover of four (4) mil. polyethylene shall cap each machine pile to maintain a dry ignition point. The cover shall be firmly fixed to each pile to hold it in place. Plastic shall be held in place with woody debris or tied with rope or twine. The plastic must be secured so that it is held in place during strong wind conditions. The Purchaser is required to furnish the covering materials. Covering shall be completed as directed by the Authorized Officer.

e. Cutting Areas shall be piled during the same season that they are logged.

f. Conifer trees smaller than seven (7) inches DBH, Pacific madrone, Oregon ash, Oregon white oak, and Pacific dogwood shall be reserved and undamaged

2. Pile and burn landing slash within thirty (30) feet of the edge of each landing, all tops, broken pieces, limbs and debris more than one (1) inch in diameter at the large end and longer than three (3) feet in length shall be piled within fifteen (15) days of completion of hauling logs from that landing. Landing piles shall be kept free of dirt and located adjacent to roads at least twenty (20) feet from any Reserve Tree and/or as directed by the Authorized Officer. Upon completion of landing piling, the Purchaser shall prepare the landing piles for burning by securely covering each landing pile with four (4) mil. thick polyethylene plastic film at least 10 feet wide. Landing piles shall be covered sufficiently to allow for ignition in wet conditions as approved by the Authorized Officer. The plastic shall be oriented southwest to northeast. Pieces of burnable material shall be placed on top of the plastic to secure it from moving and to prevent it from blowing off during strong wind episodes. 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. No landing debris shall be dozed off the landing and covered with dirt. Debris which has been buried and is determined to be the source of holdover fire shall be excavated by the Purchaser, at the Purchaser's expense, with a tractor and/or hydraulic excavator as directed by 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.

II. 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 Section 42(II). The Purchaser shall, under supervision of the Authorized Officer or designated representative, assist in preparing units for burning, mop-up, and patrol by furnishing, at the Purchaser's own expense, the services of personnel and equipment on each unit as shown below:

1. For Igniting, Burning, Mop-up of Piles on Units:

a. One work leader(s) Firefighter Type 1 (FFT1) qualified according to National Wildfire Coordinating Group (NWCG) Wildland Fire Qualifications System

guide, PMS 310-1) to supervise crew and equipment operations, and to serve as Purchaser's representative.

b. Five-person crew Firefighter Type 2 (FFT2) qualified according to National Wildfire Coordination Group (NWCG) Wildland Fire Qualifications System guide, PMS 310-1, with sufficient fuel for burning, six (6) drip torches, one (1) power saw, and one (1) backpack pump, one (1) tool for each crew member.

c. The crew 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) crewmembers.

d. All ignition and mop-up personnel will be directly supervised by a BLM representative.

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. In addition, all listed personnel shall be qualified according to the National Wildfire Coordinating Group (NWCG) Wildland Fire Qualification System Guide, PMS-310-1 and provide documentation of these qualifications. On the day of ignition all listed personnel shall be fluent in speaking and understanding English, clothing shall consist of long pants and long sleeved shirts, and be of approved aramid fabric (Nomex™ or equivalent), as well as being free of diesel fuel oil. All personnel shall wear lug sole boots with minimum eight (8) inch tall uppers that provide ankle support, approved hardhats and leather gloves. Personnel who do not meet these requirements or do not have proper clothing and personal protective equipment (PPE) will not be allowed to participate. 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 cutting unit shown on Exhibit A for seventy-two (72) hours, as directed by the Authorized Officer within a five (5) day period commencing at 8:00 a.m. the day following the completion of ignition in that unit, or until released from such service by the Government, whichever occurs first.

In event of a fire escapement, the Purchaser's personnel and equipment shall, under supervision of the Authorized Officer, take action to control and mop up the escaped fire until released from such service by the Government. If it becomes necessary to use furnished personnel and equipment for the suppression of a fire which escapes from the prescribed fire area for a period beyond the remainder of the day in which the fire escapes, then the Government shall, at its option: (1) reimburse the Purchaser for such additional use of personnel and equipment at wage rates shown in the current Administratively Determined Pay Rates for the Western Area and at equipment rates shown in the current Oregon-Washington Interagency Fire Fighting Equipment Rental Rates schedule until the Purchaser is released from such service by the

Government; or (2) 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 (i.e., trail, road, stream, rock formation, etc.), the Government may permit the Purchaser to remove personnel for that day; provided that all mop up work on the escaped fire 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 as required by this subsection, liability shall be borne by the Purchaser, unless such injury or damage is caused by Government negligence.

Time is of the essence in complying with this provision. In the event the Purchaser fails to provide the personnel and equipment required herein, the Purchaser shall be responsible for all additional cost 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 a deferral of burning and new conditions necessitate additional personnel and equipment to accomplish the planned burn, the Purchaser also shall be responsible for such additional costs.

CREATION OF COARSE WOODY DEBRIS

mm. In the Coarse Woody Debris Creation Units shown on Exhibit F, the Purchaser shall, upon completion of yarding, select and fall, top, high-girdle, or basal-girdle three hundred seventy-one (371) standing live trees in accordance with Exhibit F. No adjustments of volume or value shall be made to meet these requirements.

CONTRIBUTIONS

nn. The Purchaser shall create coarse woody debris in accordance with Section 42.mm. The Purchaser shall have the option of completing this work, or in lieu thereof, may make a contribution to the Bureau of Land Management in the amount of thirty-one thousand seven hundred fifty-two and 57/100 dollars (\$31,752.57) and upon making such contribution, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this contribution prior to the date of execution of this contract, and the Purchaser shall pay such amount in full prior to the commencement of operations.

LOG EXPORT RESTRICTION

oo. 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 being used as a substitute for exported private timber. For the purpose of this contract, unprocessed timber is defined as (1) any logs except those of utility grade or below, such as saw logs, peeler logs, and pulp

logs; (2) cants or squares to be subsequently remanufactured exceeding eight and three-quarters (8-3/4) inches in thickness; (3) split or round bolts or other round wood not processed to standards and specifications suitable for end-product uses; or (4) western red cedar lumber which does not meet lumber of American Lumber Standards Grades of Number 3 dimension or better, or Pacific Lumber Inspection Bureau R-List Grades of Number 3 Common or better.

Thus, timber manufactured into the following will be considered processed: (1) lumber and construction timbers, regardless of size, manufactured to standards and specifications suitable for end product uses; (2) chips, pulp and pulp products; (3) green or dry veneer and plywood; (4) poles and piling cut or treated for use as such; (5) cants, squares, and lumber cut for remanufacturing of eight and three-quarters (8-3/4) inches in thickness or less; (6) shakes and shingles. Substitution will be determined under the definition found in 43 CFR 5400.0-5(n).

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

1. Date of last export sale.
2. Volume of timber contained in last export sale.
3. Volume of timber exported in the past twelve (12) months from the date of last export sale.
4. Volume of Federal timber purchased in the past twelve (12) months from date of last export sale.
5. Volume of timber exported in succeeding twelve (12) months from date of last export sale.
6. Volume of Federal timber purchased in succeeding twelve (12) months from date of last export sale.

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

Additionally, when the other party is an affiliate of the Purchaser, the Purchaser will be required to update information under item (2) of Form 5450-17 (Export Determination) and file the form with the Authorized Officer.

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

Prior to the termination of this contract, the Purchaser shall submit to the Authorized Officer Form 5460-15 (Log Scale and Disposition of Timber Removed Report) which shall be executed by the Purchaser. In addition, the Purchaser is required under the terms of this contract to retain for a three-year period from the date of termination of the contract the records of all sales or transfer of logs involving timber from the sale for inspection and use of the Bureau of Land Management.

Unless otherwise authorized in writing by the Authorized Officer, the Purchaser shall, prior to the removal of timber from the contract area, brand with Purchaser's registered log brand at least one end of each log, bolt, or other roundwood and identify each of these by painting with highway yellow paint.

In the event of the Purchaser's noncompliance with this subsection of the contract, the Authorized Officer may take appropriate action as set forth in Sec. 10. of this contract. In addition, the Purchaser may be declared ineligible to receive future awards of Government timber for a period of one (1) year.

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

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

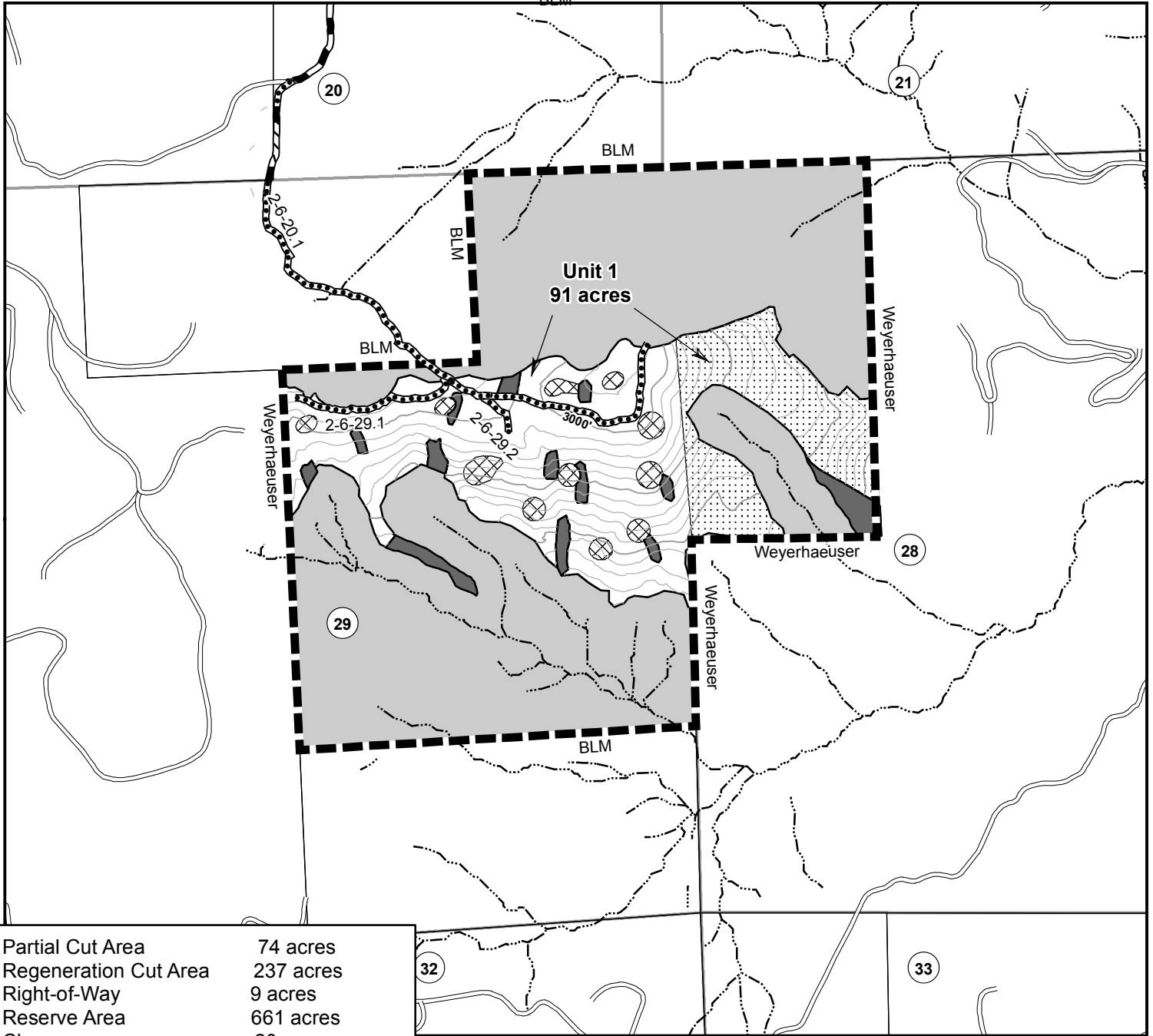
At the discretion of the Contracting Officer, the Purchaser may be required to brand and paint all logs. Any increased costs for log branding and painting shall be the responsibility of the Purchaser.

United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
TIMBER SALE CONTRACT MAP

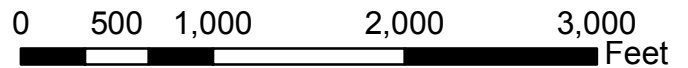
Contract No. ORN04-TS-2020.0401
 Boot Up Timber Sale
 Exhibit A
 Page 1 of 4

2/11/2020

T. 2S. R. 6W, Section 28 and 29 W. M. - NORTHWEST OREGON DISTRICT - OREGON



Partial Cut Area	74 acres
Regeneration Cut Area	237 acres
Right-of-Way	9 acres
Reserve Area	661 acres
Clump	20 acres
Patch Cut	6 acres
Total Contract Area	1007 acres



Contour Interval: 40 feet 1 inch = 1,000 feet

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|--|-----------------------|--|------------------------|
| | Reserve Area | | Road to be constructed |
| | Special Yarding Area | | Road to be improved |
| | Boot Up Contract Area | | Road to be renovated |
| | Partial Cut Area | | Existing Roads |
| | Patch Cut | | Streams |
| | Regeneration Cut Area | | |
| | Clump | | |

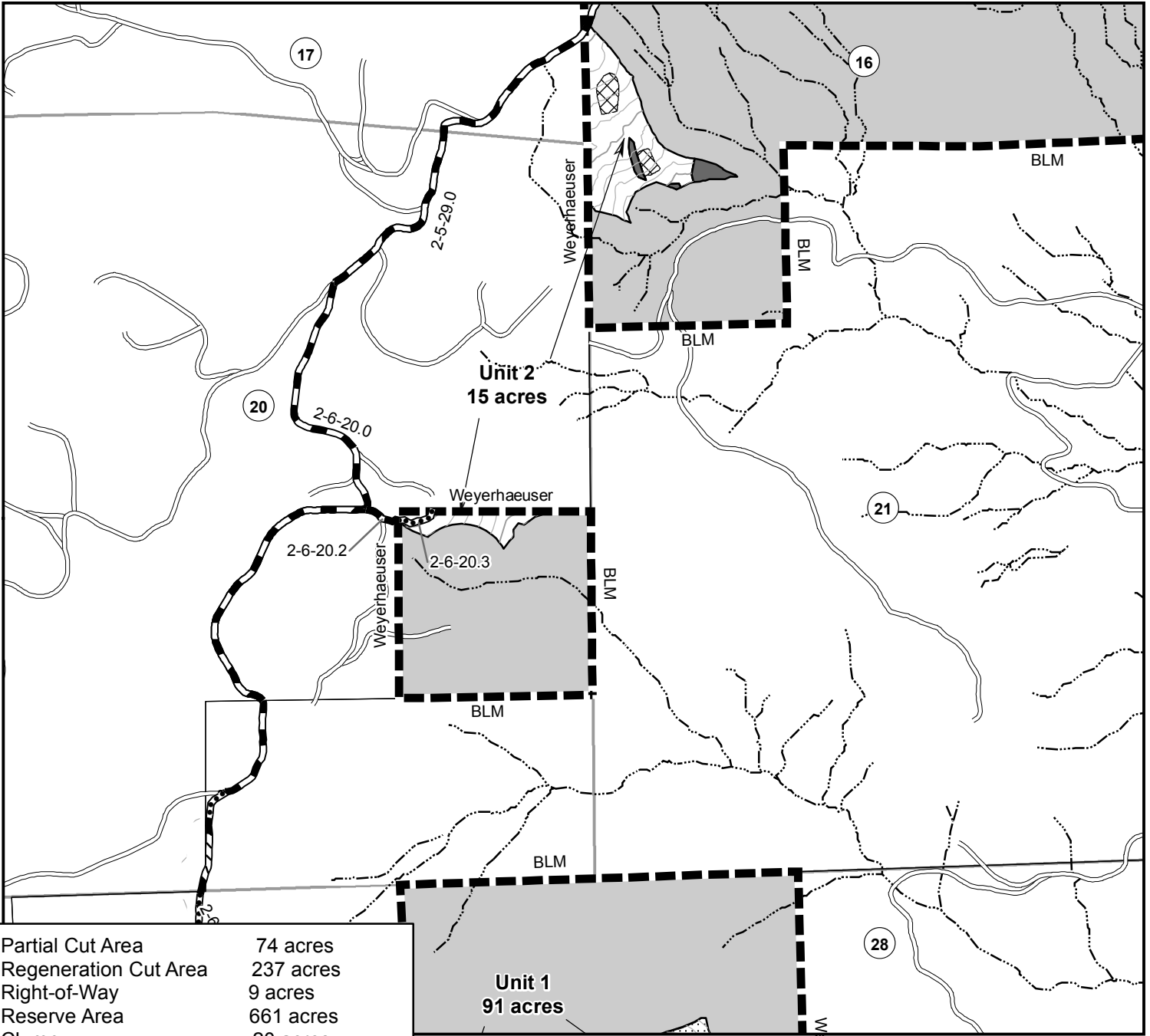
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual or aggregate use with other data. Original data were compiled from various sources and may be updated without notification. Note: Boundaries of harvest area and rights-of-ways (ROW) are painted orange and posted. Harvest area acres do not include existing roads. Acres shown on Exhibit A for harvest area have been computed using a S1 mobile mapper and Trimble R1 GNSS Receiver. Prepared By: dtyler

United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
TIMBER SALE CONTRACT MAP

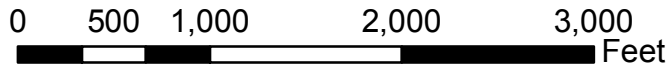
Contract No. ORN04-TS-2020.0401
 Boot Up Timber Sale
 Exhibit A
 Page 2 of 4

2/11/2020













T. 2S. R. 6W, Section 18, 20, 21, 28, and 29 W. M. - NORTHWEST OREGON DISTRICT - OREGON



Partial Cut Area	74 acres
Regeneration Cut Area	237 acres
Right-of-Way	9 acres
Reserve Area	661 acres
Clump	20 acres
Patch Cut	6 acres
Total Contract Area	1007 acres



Contour Interval: 40 feet 1 inch = 1,000 feet

-  Reserve Area
-  Special Yarding Area
-  Boot Up Contract Area
-  Partial Cut Area
-  Patch Cut
-  Regeneration Cut Area
-  Clump
-  Road to be constructed
-  Road to be improved
-  Road to be renovated
-  Existing Roads
-  Streams

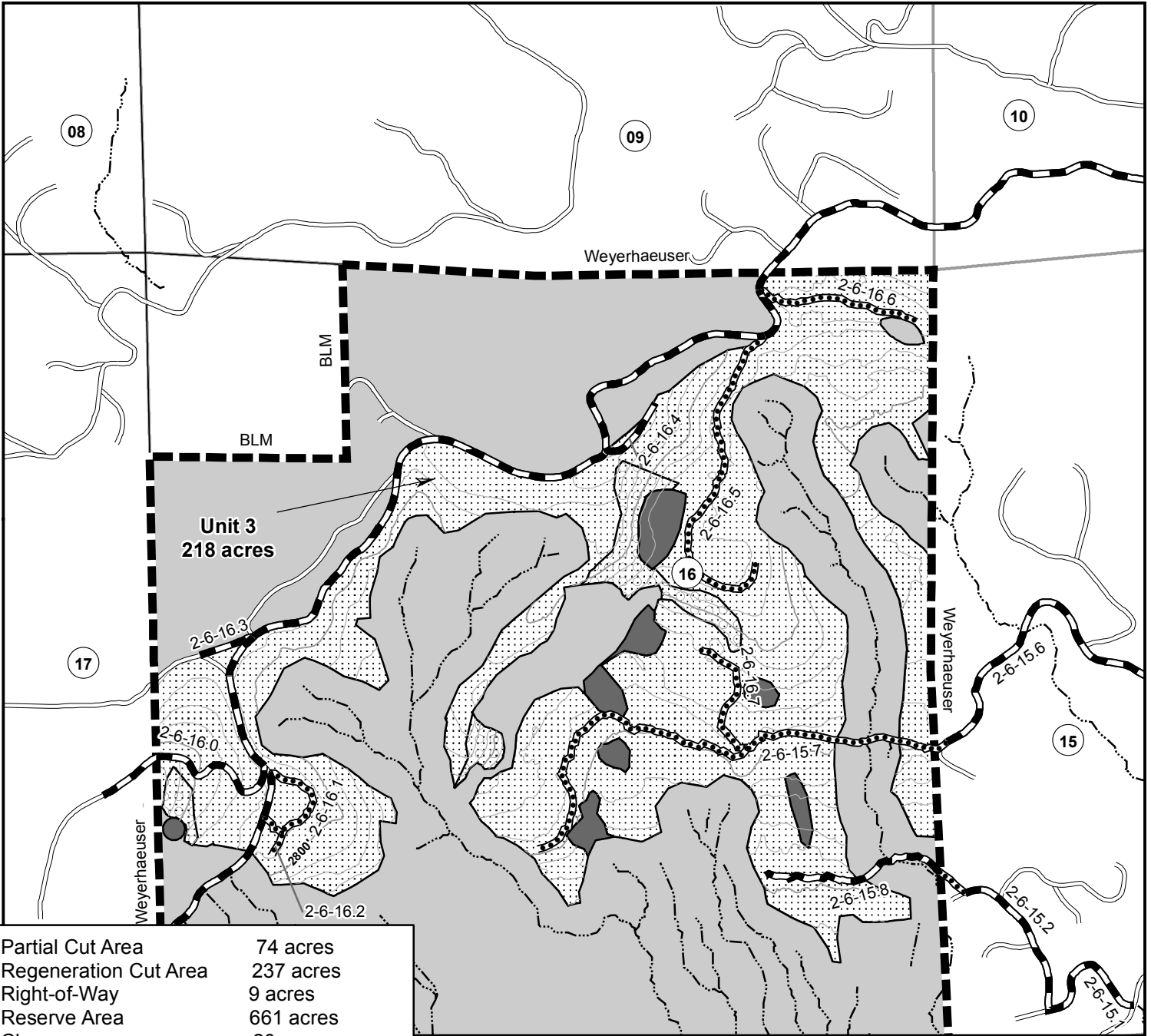
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United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
TIMBER SALE CONTRACT MAP

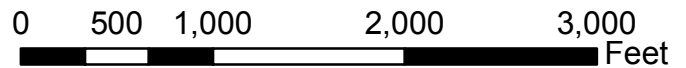
Contract No. ORN04-TS-2020.0401
 Boot Up Timber Sale
 Exhibit A
 Page 3 of 4

2/11/2020

T. 2S. R. 6W, Section 18 W. M. - NORTHWEST OREGON DISTRICT - OREGON



Partial Cut Area	74 acres
Regeneration Cut Area	237 acres
Right-of-Way	9 acres
Reserve Area	661 acres
Clump	20 acres
Patch Cut	6 acres
Total Contract Area	1007 acres



Contour Interval: 40 feet 1 inch = 1,000 feet

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|-----------------------|------------------------|
| Reserve Area | Road to be constructed |
| Special Yarding Area | Road to be improved |
| Boot Up Contract Area | Road to be renovated |
| Partial Cut Area | Existing Roads |
| Patch Cut | Streams |
| Regeneration Cut Area | |
| Clump | |

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. Note: Boundaries of harvest area and rights-of-ways (ROW) are painted orange and posted. Harvest area acres do not include existing roads. Acres shown on Exhibit A for harvest area have been computed using a S1 mobile mapper and Trimble R1 GNSS Receiver. Prepared By: dtyler

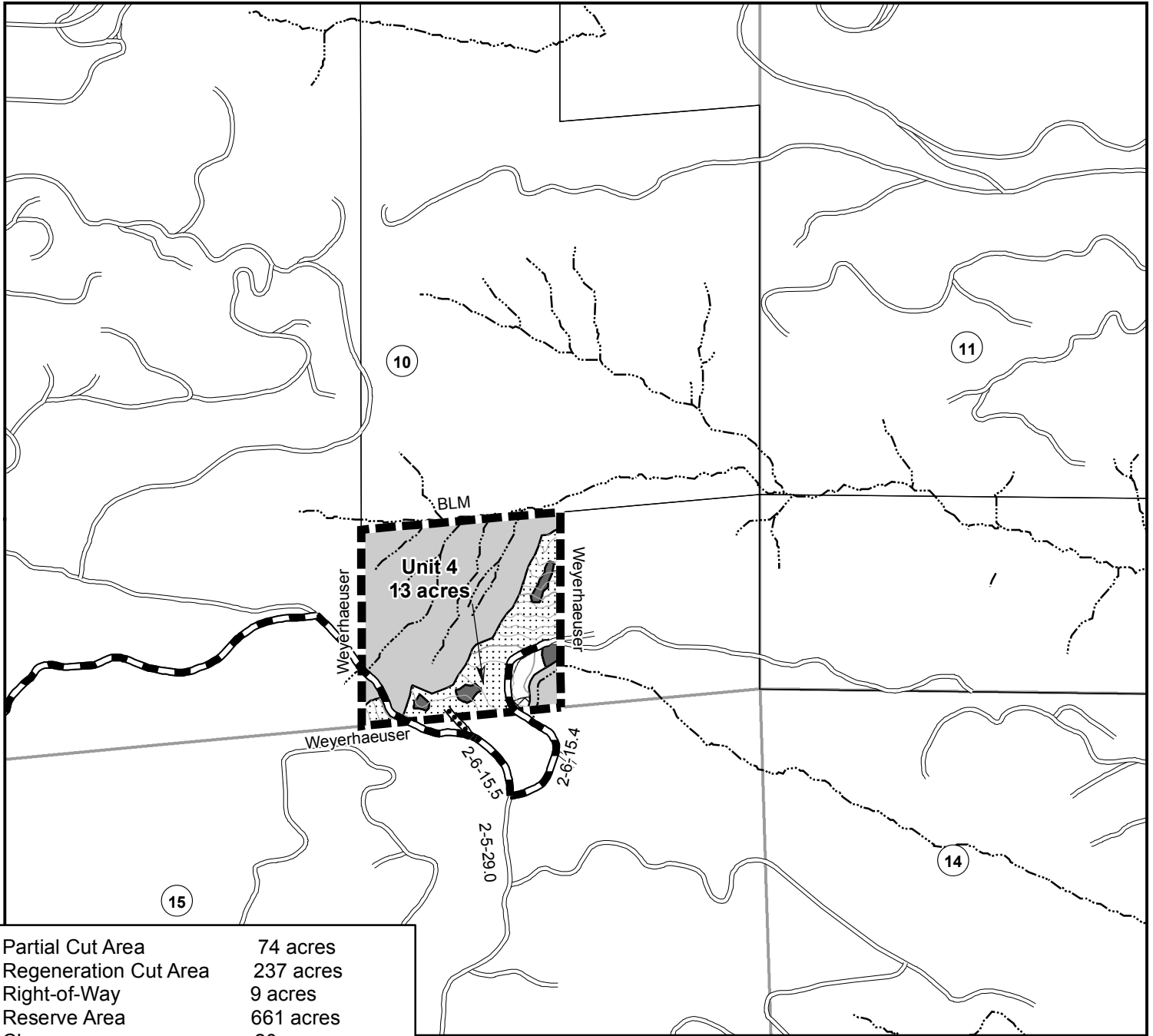


United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
TIMBER SALE CONTRACT MAP

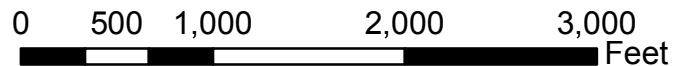
Contract No. ORN04-TS-2020.0401
 Boot Up Timber Sale
 Exhibit A
 Page 4 of 4

2/11/2020

T. 2S. R. 6W, Section 10 W. M. - NORTHWEST OREGON DISTRICT - OREGON



Partial Cut Area	74 acres
Regeneration Cut Area	237 acres
Right-of-Way	9 acres
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Contour Interval: 40 feet 1 inch = 1,000 feet

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| Reserve Area | Road to be constructed |
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| Boot Up Contract Area | Road to be renovated |
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| Patch Cut | Streams |
| Regeneration Cut Area | |
| Clump | |

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. Note: Boundaries of harvest area and rights-of-ways (ROW) are painted orange and posted. Harvest area acres do not include existing roads. Acres shown on Exhibit A for harvest area have been computed using a S1 mobile mapper and Trimble R1 GNSS Receiver. Prepared By: dtyler

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Contract No.
ORN04-TS-2020.0401
Boot Up

EXHIBIT B / PRE-SALE

5450-3

The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11; (2) when payments are due; and (3) value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the Authorized Officer, which has been cut or removed or designated for taking. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on **Exhibit A**.

SPECIES	ESTIMATED VOLUME OR QUANTITY <i>(Units Specified)</i>		PRICE PER UNIT	ESTIMATED VOLUME OR QUANTITY X UNIT PRICE
Douglas Fir	16,665.0	MBF	\$252.50	\$4,207,912.50
Western Hemlock	753.0	MBF	\$119.10	\$89,682.30
Grandfir	668.0	MBF	\$128.00	\$85,504.00
Red Alder	31.0	MBF	\$129.10	\$4,002.10
TOTALS	18,117.0	MBF		\$4,387,100.90

The apportionment of the total purchase price is as follows:

Unit 1

Douglas Fir	2,661.0 MBF	X	\$252.50	=	\$671,902.50
Western Hemlock	151.0 MBF	X	\$119.10	=	\$17,984.10
Grandfir	137.0 MBF	X	\$128.00	=	\$17,536.00
Red Alder	10.0 MBF	X	\$129.10	=	\$1,291.00
Total	2959.0 Mbf				\$708,713.60 ÷ 84.0 acres = \$8,437.07/Acre

Unit 2

Douglas Fir	272.0 MBF	X	\$252.50	=	\$68,680.00
Western Hemlock	21.0 MBF	X	\$119.10	=	\$2,501.10
Grandfir	22.0 MBF	X	\$128.00	=	\$2,816.00
Red Alder	2.0 MBF	X	\$129.10	=	\$258.20
Total	317.0 Mbf				\$74,255.30 ÷ 14.0 acres = \$5,303.95/Acre

Unit 3

Douglas Fir	12,602.0 MBF	X	\$252.50	=	\$3,182,005.00
Western Hemlock	511.0 MBF	X	\$119.10	=	\$60,860.10
Grandfir	358.0 MBF	X	\$128.00	=	\$45,824.00
Red Alder	17.0 MBF	X	\$129.10	=	\$2,194.70
Total	13488.0 Mbf				\$3,290,883.80 ÷ 208.0 acres = \$15,821.56/Acre

Unit 4

Douglas Fir	625.0 MBF	X	\$252.50	=	\$157,812.50
Western Hemlock	26.0 MBF	X	\$119.10	=	\$3,096.60
Grandfir	19.0 MBF	X	\$128.00	=	\$2,432.00
Red Alder	1.0 MBF	X	\$129.10	=	\$129.10
Total	671.0 Mbf				\$163,470.20 ÷ 11.0 acres = \$14,860.93/Acre

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

EXHIBIT B / PRE-SALE

5450-3

Contract No.

ORN04-TS-2020.0401

Boot Up

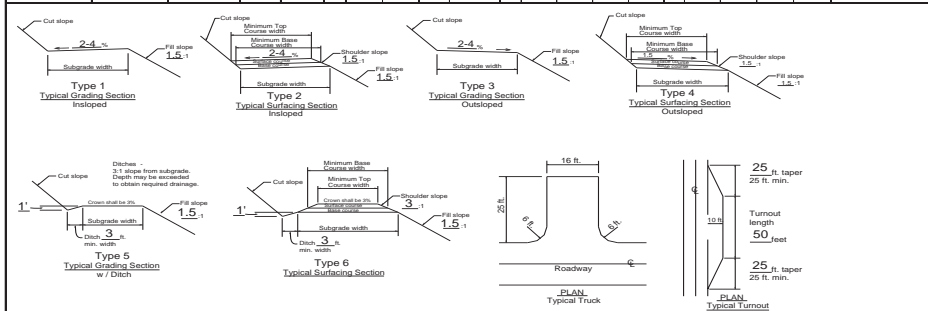
The following estimates and calculations of value of timber sold are made solely as an administrative aid for determining: (1) adjustments made or credits given in accordance with Secs. 6, 9, or 11; (2) when payments are due; and (3) value of timber subject to any special bonding provisions. The value of timber will be determined by multiplying the value per acre as shown below, times the amount of acreage as determined by the Authorized Officer, which has been cut or removed or designated for taking. Except as provided in Sec. 2, Purchaser shall be liable for total purchase price even though quantity of timber actually cut or removed or designated for taking is less than the estimated volume or quantity shown. Cutting areas are shown on **Exhibit A.**

Unit RW

Douglas Fir	505.0 MBF	X	\$252.50	=	\$127,512.50
Western Hemlock	44.0 MBF	X	\$119.10	=	\$5,240.40
Grandfir	132.0 MBF	X	\$128.00	=	\$16,896.00
Red Alder	1.0 MBF	X	\$129.10	=	\$129.10
Total	682.0 Mbf				\$149,778.00 ÷ 9.0 acres = \$16,642.00/Acre

U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE - OREGON
150: ROAD PLAN AND DETAIL SHEET

Road Number	Start Station or Milepost	End Station or Milepost	Total Length	Typical Cross Section	ROAD WIDTH			GRADIENT		SURFACING (*5)					Remarks				
					Min. Curve Radius	Subgrade	Ditch	Max. Favorable	Max. Adverse	BASE COURSE			SURFACE COURSE						
										Min. Width	Comp. Depth	Surface Type (#3)	Grading Size (#3)	Number of Lifts		Min. Width	Comp. Depth	Surface Type (#3)	Grading Size (#3)
2-6-15.0 (Whiteface Rd)	0.000	0.174	0.174	6	14'	2'	---	---	ABC	A			ASC	C	Renovation. Spread 80 CY 1-1/2"-0" Crushed Spot as marked and needed. Spread 80 CY 3"-0" Crushed Base Rock as marked and needed. Widen road (approx 10 feet) for curve widening between MP 0.162 - 0.174 as directed. Re-establish ditchlines and haul material to WA as directed. Construct and Surface Turnout @ MP 0.069 as marked. Catch basin is too deep @ MP 0.158, fix with compacted native soil. Install 2 metal inlet markers as marked. Construct ditchouts and lead-off ditches as needed.				
2-6-15.1	0.000	0.152	0.152	6	14'	2'	---	---	ABC	A			ASC	C	Renovation. Spread 60 CY 1-1/2"-0" Crushed Spot as marked and needed. Spread 40 CY 3"-0" Crushed Base Rock as marked and needed. Re-establish ditchlines and haul material to WA as directed. Construct and Surface Turnout @ MP 0.135 as marked. Install 1 sediment catch basin with straw bale as marked. Construct ditchouts and lead-off ditches as needed.				
2-6-15.2	0.000	0.189	0.189	6	14'	2'	---	---	ABC	A			ASC	C	Renovation. Spread 163 CY 1-1/2"-0" Crushed Spot as marked and needed. Re-establish ditchlines and haul material to WA as directed. Construct ditchouts and lead-off ditches as needed.				
2-6-15.4	0+00	7+68	7+68	6	14'	2'	---	---	ABC	A			ASC	C	Renovation. Spread 100 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 100 CY 3"-0" Crushed Base Spot Rock as marked and needed. Re-establish ditchlines and haul material to WA as directed. Install 1 sediment catch basin with straw bale as marked. Construct ditchouts and lead-off ditches as needed. Install 1 metal inlet marker as marked.				
	7+68	13+91	6+23	6	14'	2'	---	---	13'	8"	ABC	A	2	12'	4"	ASC	C	1	Renovation. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 134 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 290 CY 3"-0" Crushed Base Rock) as directed. Spread 60 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 100 CY 3"-0" Crushed Base Spot Rock as marked and needed. Place 25 CY 1-1/2"-0" Crushed Bedding/Backfill Rock as marked. Re-establish ditchlines and haul material to WA as directed. Construct and Surface Turnout @ Sta. 9+49 as marked. Construct and Surface Roadside Landing Right @ Sta. 11+70 as marked. Construct ditchouts and lead-off ditches as marked and needed. Install 1 culvert.
2-6-15.5	0+00	2+79	2+79	3	14'	0'	10%	10%	ABC	A			ASC	C	New Construct. Spread 10 CY 1-1/2"-0" Crushed Spot rock as marked. Spread 20 CY 3"-0" Crushed Base rock as marked. Construct turnaround as marked. Construct ditch on right side of road in through-cut (Sta. 1+52 - 2+09). Construct ditchout as marked. Use local material to construct approach with 2-6-29.0. Construct Landing as marked (approx. 50 ft diameter).				
2-6-15.6	0.000	0.656	0.656	6	14'	2'	---	---	ABC	A			ASC	C	Renovation. Spread 180 CY 1-1/2"-0" Crushed Spot as marked and needed. Spread 100 CY 3"-0" Crushed Base Rock as marked and needed. Widen 2-6-15.6 to the left and the 2-6-29.0 to the right for approach/curve widening as directed. Re-establish ditchlines and haul material to WA as directed. Construct and Surface Turnout @ MP 0.132 as marked. Install 3 sediment catch basins with straw bales as marked. Construct ditchouts and lead-off ditches as needed. Install 3 metal inlet markers as marked.				
2-6-15.7	0+00	13+69	13+69	5	14'	2'	18%	18%	ABC	A			ASC	C	New Construct. Spread 105 CY 1-1/2"-0" Crushed Spot rock as marked and needed. Spread 130 CY 3"-0" Crushed Base rock as marked. Place 125 CY 1-1/2"-0" Crushed Bedding/Backfill Rock as marked. Place 330 CY Class 3 RipRap @ culvert inlets as fill armor as marked. Place 330 CY Class 3 RipRap @ culvert outlets as fill armor as marked. Place 50 CY Class 5 RipRap to block vehicular traffic around gate. Trees marked with yellow paint (within the right-of-way) are to be cut and left outside of the right-of-way boundary. Install 1 gate as marked. Install 1 sediment catch basin with straw bale as marked. Construct turnarounds, turnouts, and waste areas as marked. Construct ditchouts as needed. Cut material between Sta. 0+17 - 0+50, use as fill between 0+00 - 0+17. Cut material between Sta. 1+50 - 3+16, use as fill between 3+16 - 4+46 & 5+59 - 6+01. Install 6 Culverts. Install 4 metal inlet markers.				
	13+69	37+00	23+31	3	14'	0'	18%	18%	ABC	A			ASC	C	New Construct. Spread 15 CY 1-1/2"-0" Crushed Spot rock as marked. Spread 20 CY 3"-0" Crushed Base rock as marked. Place 20 CY 1-1/2"-0" Crushed Bedding/Backfill Rock as marked. Place 20 CY Class 3 RipRap @ culvert outlet as fill armor/dissipater as marked. Trees marked with yellow paint (within the right-of-way) are to be cut and left outside of the right-of-way boundary. Construct turnarounds, turnout, and waste areas as marked. Use excavated rock between Sta. 29+33 - 29+92 as RipRap. Widen Road to the left (approx. 8 ft.) for curve widening between Sta. 13+69 - 15+48. Install 1 Culvert. Install 1 metal inlet marker. Construct Landing as marked (approx. 40 ft diameter).				
2-6-15.8	0+00	2+87	2+87	5	14'	2'	10%	10%	ABC	A			ASC	C	New Construct. Spread 10 CY 1-1/2"-0" Crushed Spot rock as marked. Place 20 CY 3"-0" Crushed Base rock as marked. Wrap ditchline into ditchline of the 2-6-15.2 @ Sta. 0+11 as directed. Drift excavated material from Sta. 0+11 - 1+08 as fill between Sta. 0+00 - 0+11 for grade transition for approach as directed. Move slash pile @ Sta. 1+08 to designated waste area.				
	2+87	14+89	12+02	5	14'	2'	---	---	ABC	A			ASC	C	Renovation. Spread 75 CY 1-1/2"-0" Crushed Spot as marked. Spread 100 CY 3"-0" Crushed Base Rock as marked. Place 110 CY 1-1/2"-0" Crushed Bedding/Backfill Rock as marked. Place 10 CY Class 3 RipRap @ culvert inlet as fill armor as marked. Between Sta. 3+74 - 4+64; Remove local material in subgrade to approx. 4' depth; Place 100 CY 1-1/2"-3/4" Drain Rock wrapped with 400 SY non-woven fabric as free drain; use local material over wrapped drain rock to establish running surface. Place 50 CY 1-1/2"-3/4" drain rock wrapped with 150 SY non-woven fabric as free drain around pipe @ Sta. 3+74. Widen into cutbank for road width between 8+40 - 9+88 as directed. Trees marked with yellow paint (within the right-of-way) are to be cut and left outside of the right-of-way boundary. Re-establish ditchlines and haul material to WA as directed. Construct waste areas and turnaround as marked. Construct ditchouts as marked and needed. Install 1 sediment catch basin with straw bale as marked. Construct Landing as marked (approx. 40 ft diameter). Install 5 culverts. Install 5 metal inlet markers as marked.				

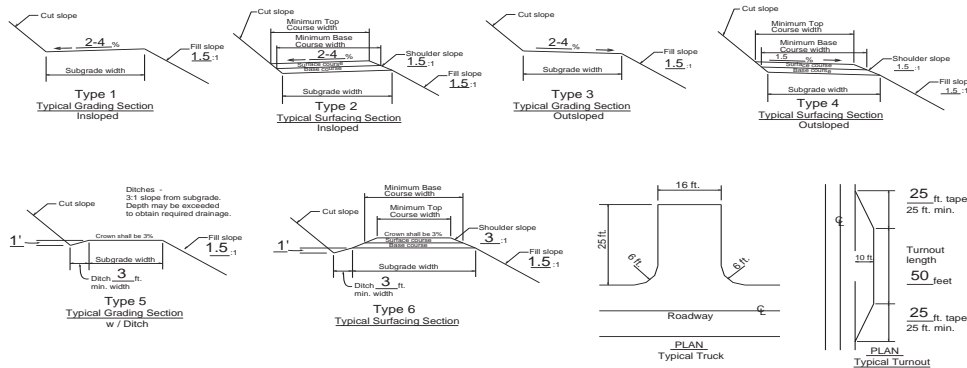


- NOTES**
- Extra subgrade widths. Add to each shoulder: 1 ft. for fills of 1-6 ft. and 2 ft. for fills over 6 ft. Widen the inside side of curves. (See Road Plan Map, Exhibit C)
 - Backstops. Cut slopes. Fill slopes. Angle of repose. Common. Slopes under 55%: 1:1, 1:1-2/3, 1:1-1/2. Slopes over 55%: 3/4:1, 1:1-2/3, 1:1-1/2.
 - Surface prep. PRR - Fill run rock. GRR - Grid rolled rock. SRN - Screened rock. JRR - Jaw run rock. ASC - Adgr. surface course. WC - Wood chips.
 - Turnouts. Width - 10 ft. in addition to subgrade width, or as shown on the plans. Located approximately as shown on the plans. Invertible and not more than 750 ft. apart.
 - Surfacing. Turnouts, curve widening and road approach aprons shall be surfaced.
 - Clearing width. See Section 200. Right-of-Way.
 - As posted and painted for Right-of-Way.
 - Drainage. See Culvert List.
 - Compaction. See Sections 300 and 400.
- Note: Full bench construction is required on side slopes exceeding 60%.
- Grading: A - 3", B - 2", C - 3" jaw run (base course), D - 1-1/2", E - 1", F - 3/4" (surface course).
- * Clearing Limits as posted on ground

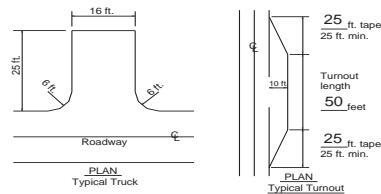


150: ROAD PLAN AND DETAIL SHEET

Road Number	Start Station or Milepost	End Station or Milepost	Total Length	Typical Cross Section	Min. Curve Radius	ROAD WIDTH		GRADIENT		SURFACING (*5)											Remarks			
						Subgrade	Ditch	Max. Favorable	Max. Adverse	BASE COURSE					SURFACE COURSE									
										Min. Width	Comp. Depth	Surface Type (*3)	Grading Size (*3)	Number of Lifts	Min. Width	Comp. Depth	Surface Type (*3)	Grading Size (*3)	Number of Lifts					
2-6-16.0	0+00	12+84	12+84	6		14'	2'																	Renovation. Spread 40 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 60 CY 3"-0" Crushed Base Spot Rock as marked and needed. Re-establish ditchlines and haul material to WA as directed. Construct Turnaround as marked. Construct Roadside Landing Left @ Sta. 6+29 as marked. Construct ditchouts as marked and needed. Remove existing waterbars as marked. Clean buried inlet and outlet of existing culvert @ Sta. 10+16. Remove large boulders from subgrade @ Sta. 9+83 as directed. Install 1 metal inlet marker.
2-6-16.1	0+00	7+80	7+80	4		14'	0'	10%	10%	13'	8"	ABC	A			12'	4"	ASC	C					New Construct. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 168 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 363 CY 3"-0" Crushed Base Rock) as directed. Spread 80 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 120 CY 3"-0" Crushed Base Spot Rock as marked and needed. Construct and Surface Turnout left @ Sta. 3+77 as marked. Construct and Surface Turnaround Right @ Sta. 4+84 as marked. Construct waste area as marked. Use local material as fill for approach between 2-6-16.1 (Sta. 7+80)/2-6-29.0 (MP 9.510) as directed. Construct a ditchout right to disconnect ditchline of the 2-6-29.0 (MP 9.510) for junction.
2-6-16.2	0+00	2+24	2+24	4		14'	0'	10%	10%	13'	8"	ABC	A	2	12'	4"	ASC	C				1		New Construct. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 48 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 104 CY 3"-0" Crushed Base Rock) as directed. Spread 40 CY 1-1/2"-0" Crushed Spot Rock as marked. Spread 70 CY 3"-0" Crushed Base Spot Rock as marked. Construct and Surface Landing @ Sta. 2+24 as marked (approx. 50' diameter). Removal of large sub-surface rocks may be required.
2-6-16.3	0+00	2+71	2+71	6		14'	2'										ASC	C						Renovation. Spread 30 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Re-establish ditchlines and haul material to WA as directed. Construct ditchouts as marked and needed. Construct a roadside landing @ Sta. 2+71 by sweeping existing material right.
2-6-16.4	0+00	5+19	5+19	5		14'	2'			13'	8"	ABC	A	2	12'	4"	ASC	C				1		Renovation. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 117 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 253 CY 3"-0" Crushed Base Rock) as directed. Spread 40 CY 1-1/2"-0" Crushed Spot Rock as marked. Spread 70 CY 3"-0" Crushed Base Spot Rock as marked. Widen to the left for curve widening between Sta. 0+00 - 1+65 (approx. 8 ft) and utilize material to the right for junction/approach. Re-establish ditchlines and haul material to WA as directed. Construct ditchouts as needed. Construct Waste Area as marked. Construct Landing (approx. 50 ft diameter) as marked.
2-6-16.5	0+00	23+71	23+71	5		14'	2'	18%	18%			ABC	A				ASC	C						New Construct. Spread 70 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 80 CY 3"-0" Crushed Base Spot Rock as marked. Place 60 CY 1-1/2"-0" Crushed Bedding/Backfill Rock. Construct a turnout, turnaround, and waste area as marked. Construct Landing (approx. 50 ft diameter) as marked.

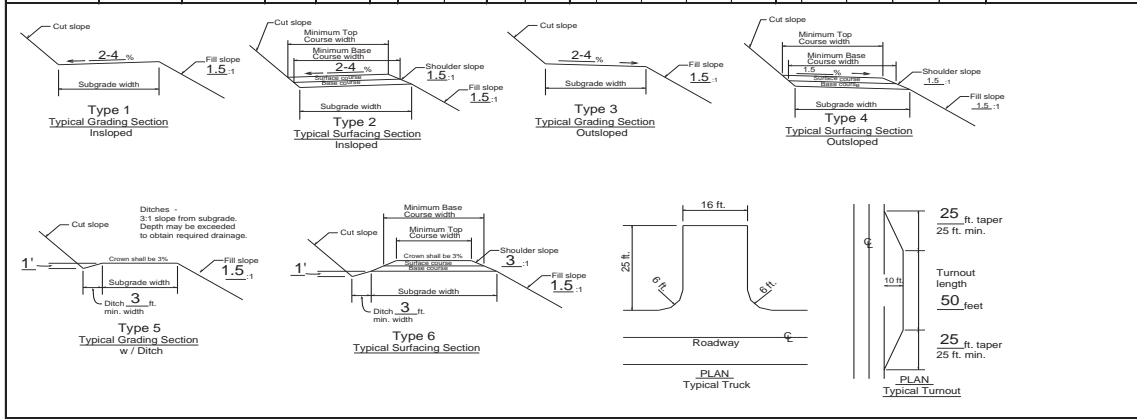


- *NOTES**
- Extra subgrade widths**
Add to each shoulder: 1 ft. for fills of 1-6 ft. and 2 ft. for fills over 6 ft. Widen the inside shoulder of curves as follows:
(See Road Plan Map, Exhibit C)
 - Backslopes**
Materials Cut slopes Fill slopes
Solid rock 1/4:1 Angle of repose
Soft rock and shale 1/2:1
Common
Slopes under 55% 1:1 1-1/2:1
Slopes over 55% 3/4:1 1-1/2:1
 - Surface type**
PRR - Pit run rock
GRR - Grd rolled rock
SRN - Screened rock
JRR - Jaw run rock
ABC - Aggr. base course
ASC - Aggr. surface course
WC - Wood chips
 - Turnouts**
Width - 10 ft. in addition to subgrade width, or as shown on the plans.
Located approximately as shown on the plans.
Intervisible and not more than 750 ft. apart.
 - Surfacing**
Turnouts, curve widening and road approach aprons shall be surfaced.
 - Clearing width**
See Section 200.
 - As posted and painted for Right-of-Way.
 - Drainage**
See Culvert List
 - Compaction**
See Sections 300 and 400
- Note:
Full bench construction is required on side slopes exceeding 60%.
- Grading
A - 3"
B - 2"
C - 3" jaw run (base course)
- Surface type
C - 1-1/2"
D - 1"
E - 3/4" (surface course)
- * Clearing Limits as posted on ground



150: ROAD PLAN AND DETAIL SHEET

Road Number	Start Station or Milepost	End Station or Milepost	Total Length	Typical Cross Section	Min. Curve Radius	ROAD WIDTH		GRADIENT		SURFACING (*5)					Remarks					
						Subgrade	Ditch	Max. Favorable	Max. Adverse	Min. Width	Comp. Depth	BASE COURSE				SURFACE COURSE				
												Surface Type (#3)	Grading Size (#3)	Number of Lifts		Min. Width	Comp. Depth	Surface Type (#3)	Grading Size (#3)	Number of Lifts
2-6-16.6	0+00	11+24	11+24	5		14'	2'	18%	18%			ABC	A			ASC	C	New Construct. Spread 10 CY 1-1/2"-0" Crushed Spot Rock as marked. Spread 20 CY 3"-0" Crushed Base Spot Rock as marked. Construct ditches as marked and needed. Construct a turnaround and 2 waste areas as marked. Construct Landing (approx. 50 ft diameter) as marked.		
2-6-16.7	0+00	10+06	10+06	5		14'	2'	18%	18%									New Construct. Construct ditches as marked and needed. Cut material between Sta. 5+83 - 7+81, use as fill between 4+63 - 5+83. Construct a turnaround, 2 turnarounds, and a waste area as marked. Construct Landing (approx. 50 ft diameter) as marked.		
2-6-20.0	0.000	0.333	0.333	6		14'	2'					ABC	A	12'	6"	ASC	C	2	Renovation. Spread a 6" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 591 CY 1-1/2"-0" Crushed Rock) as directed. Spread 30 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 20 CY 3"-0" Crushed Base Spot Rock as needed. Re-establish ditchlines and haul material to WA as directed. Construct ditches as marked and needed. Clean buried inlet and outlet of existing culvert @ MP 0.046. Install 2 metal inlet markers.	
	0.333	0.702	0.369	4		14'	0'			13'	8"	ABC	A	2	12'	4"	ASC	C	1	Renovation. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 420 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 907 CY 3"-0" Crushed Base Rock) as directed. Construct a stockpile site (approx. 120 CY 1-1/2"-0" Crushed) for Mitchell Maintenance Rock @ MP 0.566 as marked. Remove bank slough @ MP 0.599 and haul to waste area as directed.
	0.702	0.850	0.148	6		14'	2'			13'	8"	ABC	A	2	12'	4"	ASC	C	1	Renovation. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 168 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 364 CY 3"-0" Crushed Base Rock) as directed. Spread 30 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 20 CY 3"-0" Crushed Base Spot Rock as marked. Place 10 CY 1-1/2"-0" Crushed Bedding/Backfill Rock. Re-establish ditchlines and haul material to WA as directed. Construct ditches as marked and needed. Construct a waste area as marked. Construct and Surface a turnaround as marked. Install 1 culvert. Install 1 metal inlet marker.
2-6-20.1	0+00	1+87	1+87	6		14'	2'	24%	24%	13'	8"	ABC	A	2	12'	4"	ASC	C	1	New Construct. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 38 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 87 CY 3"-0" Crushed Base Rock) as directed. Spread 10 CY 1-1/2"-0" Crushed Spot Rock as marked. Spread 20 CY 3"-0" Crushed Base Spot Rock as marked. Construct a ditchout as marked. Cut material between Sta. 0+53 - 1+00, use as fill between 0+00 - 0+53.



- *NOTES
- Extra subgrade widths
Add to each shoulder: 1 ft. for fills of 1-6 ft. and 2 ft. for fills over 6 ft. Widen the inside shoulder of curves as follows:
(See Road Plan Map, Exhibit C)
 - Backslopes
Materials Cut slopes Fill slopes
Solid rock 1/4:1 Angle of repose
Soft rock and shale 1/2:1
Common
Slopes under 55% 1:1 1-1/2:1
Slopes over 55% 3/4:1 1-1/2:1
 - Surface type
PRR - Pit run rock Grading
GRR - Gnd rolled rock A - 3"
SRN - Screened rock B - 2" (base course)
JRR - Jaw run rock C - 3" jaw run
ABC - Aggr. base course D - 1-1/2"
ASC - Aggr. surface course E - 1"
WC - Wood chips F - 3/4" (surface course)
 - Turnouts
Width - 10 ft. in addition to subgrade width, or as shown on the plans.
Located approximately as shown on the plans. Intervisible and not more than 750 ft. apart.
 - Surfacing
Turnouts, curve widening and road approach aprons shall be surfaced.
 - Clearing width 200
 - As posted and painted for Right-of-Way.
 - Drainage
See Culvert List
 - Compaction
See Sections 300 and 400
- * Clearing Limits as posted on ground

150: ROAD PLAN AND DETAIL SHEET

Road Number	Start Station or Milepost	End Station or Milepost	Total Length	Typical Cross Section	SURFACING (*5)													Remarks	
					ROAD WIDTH		GRADIENT		BASE COURSE					SURFACE COURSE					
					Subgrade	Ditch	Max. Favorable	Max. Adverse	Min. Width	Comp. Depth	Surface Type (*3)	Grading Size (*3)	Number of Lifts	Min. Width	Comp. Depth	Surface Type (*3)	Grading Size (*3)		Number of Lifts
2-6-20.1 (cont.)	1+87	8+24	6+37	6	14'	2'	22%	22%	13'	8"	ABC	A	2	12'	4"	ASC	C	1	Improvement. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 137 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 295 CY 3"-0" Crushed Base Rock) as directed. Spread 10 CY 1-1/2"-0" Crushed Spot Rock as marked. Spread 20 CY 3"-0" Crushed Base Spot Rock as marked. Re-establish ditchlines and haul material to WA as directed. Construct ditchouts as marked and needed. Construct and surface a turnaround as marked. Widen road (approx. 2 ft right) for curve widening between Sta. 5+32 - 6+27. Shift Road to the right (approx. 5 ft) for alignment between Sta. 6+27 - 8+24.
	8+24	47+51	39+27	6	14'	2'	16%	16%	13'	8"	ABC	A	2	12'	4"	ASC	C	1	New Construct. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 849 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 1,828 CY 3"-0" Crushed Base Rock) as directed. Spread 140 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 260 CY 3"-0" Crushed Base Spot Rock as marked and needed. Place 100 CY 1-1/2"-0" Crushed Bedding/Backfill Rock as marked. Place 5 CY Class 3 RipRap @ culvert outlet as dissipater as marked. Place 60 CY 1-1/2" 3/4" drain rock wrapped with 150 SY non-woven fabric as free drain around perforated pipe (pipe is also wrapped with 35 SY non-woven fabric) @ Sta. 16+74. Spread a 2" Lift 3"-0" Crushed Base Rock (approx. 250 CY) as fill material over boulders between Sta. 18+05 - 19+69 as marked. Remove boulders from subgrade (between Sta. 16+74 - 22+58) and stream (pipe trench @ Sta. 18+85), use boulders as RipRap where needed and as directed. Use excavated rock between Sta. 20+44 - 22+58 as RipRap. Trees marked with yellow paint (within the right-of-way) are to be cut and left outside of the right-of-way boundary. Cut material between Sta. 12+19 - 13+79, use as fill between 13+79 - 15+98 as grade transition. Cut material between Sta. 23+70 - 24+42, use as fill between 24+42 - 25+45 as grade transition. Use end-hauled material from the 2-6-29.1 as fill between Sta. 32+91 - 36+00 as grade transition. Construct and Surface 1 turnout and 2 turnarounds as marked. Construct and Surface Landing (approx. 50 ft diameter) @ Sta. 47+51 as marked. Construct ditchouts and lead-off ditches as marked and needed. Install 9 culverts (1 is a perforated CMP). Install 9 metal inlet markers.
2-6-20.2	0+00	1+09	1+09	6	14'	2'			13'	8"	ABC	A	2	12'	4"	ASC	C	1	Renovation. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 23 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 50 CY 3"-0" Crushed Base Rock) as directed. Spread 20 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 40 CY 3"-0" Crushed Base Spot Rock as marked and needed. Re-establish ditchlines and haul material to WA as directed. Construct ditchouts as marked and needed.
2-6-20.3	0+00	3+55	3+55	4	14'	0'	15%	15%	13'	8"	ABC	A	2	12'	4"	ASC	C	1	New Construct. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 77 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 165 CY 3"-0" Crushed Base Rock) as directed. Spread 40 CY 1-1/2"-0" Crushed Spot Rock as marked. Spread 70 CY 3"-0" Crushed Base Spot Rock as marked. Move slash pile @ Sta. 0+40 to designated waste area. Construct and Surface Landing (approx. 50 ft diameter) @ Sta. 3+55 as marked.
2-6-29.1	0+00	7+06	7+06	6	14'	2'	17%	17%	13'	8"	ABC	A	2	12'	4"	ASC	C	1	New Construct. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 152 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 329 CY 3"-0" Crushed Base Rock) as directed. Spread 100 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 180 CY 3"-0" Crushed Base Spot Rock as marked and needed. Place 10 CY 1-1/2"-0" Crushed Bedding/Backfill Rock as marked. Removal of boulders from subgrade (between Sta. 4+78 - 7+06), use boulders as RipRap where needed and as directed. Full Bench Construction for grade and/or steep side slope construction needed between: 1+40 - 2+40, 3+85 - 4+10, and 5+90 - 6+79; material excavated to be used as fill material in non-full bench areas of subgrade, turnaround, and landing as directed. Construct and Surface 1 turnaround as marked. Construct and Surface Landing (approx. 50 ft diameter) @ Sta. 7+06 as marked. Construct ditchouts and lead-off ditches as marked and needed. Install 1 culvert. Install 1 metal inlet marker.
	7+06	11+85	4+79	3	12'	0'	13%	13%											New Construct (forwarding trail). Removal of boulders from subgrade (between Sta. 7+06 - 10+17), use boulders as RipRap where needed and as directed. Full Bench Construction for grade and/or steep side slope construction needed between: 9+50 - 11+85; material excavated to be used as fill material in non-full bench areas of subgrade and as fill material @ 2-6-20.1 (Sta. 32+91 - 36+00) for grade transition as directed. Some drill and shoot may be required.

***NOTES**

- Extra subgrade widths**
Add to each shoulder: 1 ft. for fills of 1-6 ft. and 2 ft. for fills over 6 ft. Widen the inside shoulder of curves as follows:
(See Road Plan Map, Exhibit C)
- Backslopes**
Materials: Cut slopes, Fill slopes
Solid rock: 1/4:1 Angle of repose
Soft rock and shale: 1/2:1
Common: Slopes under 55%: 1:1, 1-1/2:1; Slopes over 55%: 3/4:1, 1-1/2:1
- Surface type**
PRR - Pit run rock
GRR - Gird rolled rock
SRN - Screened rock
JRW - Jaw run rock
ABC - Aggr. base course
ASC - Aggr. surface course
WC - Wood chips
- Grading**
A - 3"
B - 2" (base course)
C - 3" jaw run (course)
D - 1-1/2"
E - 1" (surface course)
F - 3/4"
- Turnouts**
Width = 10 ft. in addition to subgrade width, or as shown on the plans. Located approximately as shown on the plans. Intervisible and not more than 750 ft. apart.
- Clearing width**
See Section 200.
- As posted and painted for Right-of-Way:**
- Drainage**
See Culvert List
- Compaction**
See Sections 300 and 400

Note: Full bench construction is required on side slopes exceeding 60%.

* Clearing Limits as posted on ground

PLAN
Typical Truck

PLAN
Typical Turnout

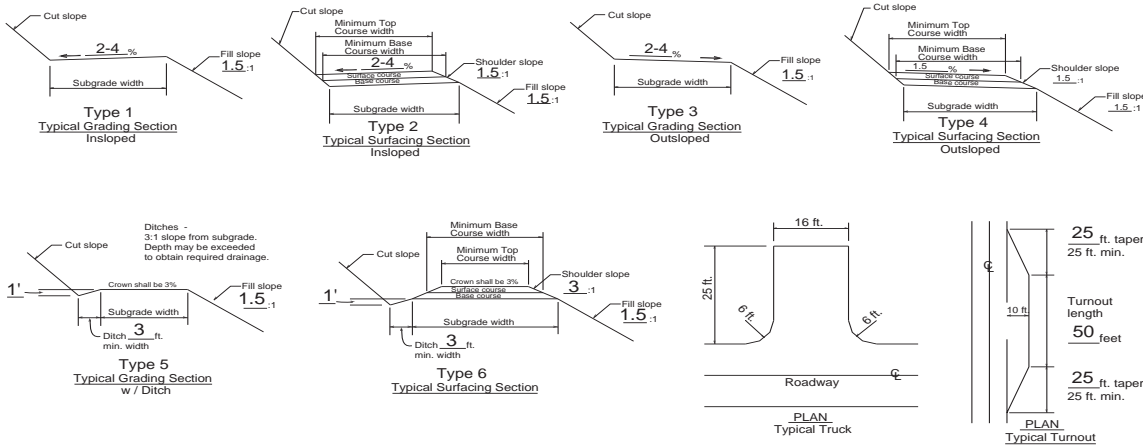
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NORTHWEST OREGON DISTRICT OFFICE - OREGON

ORN04-TS-2020.0401
Boot Up Timber Sale
Exhibit C

150: ROAD PLAN AND DETAIL SHEET

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Road Number	Start Station or Milepost	End Station or Milepost	Total Length	Typical Cross Section	Min. Curve Radius	ROAD WIDTH		GRADIENT		SURFACING (*5)										Remarks	
						Subgrade	Ditch	Max. Favorable	Max. Adverse	Min. Width	Comp. Depth	Surface Type (#3)	Grading Size (#3)	Number of Lifts	Min. Width	Comp. Depth	Surface Type (#3)	Grading Size (#3)	Number of Lifts		
2-6-29.2	0+00	2+79	2+79	4		14'	0'	15%	15%	13'	8"	ABC	A	2	12'	4"	ASC	C	1		New Construct. Spread a 4" Lift 1-1/2"-0" Crushed Cap Rock over Base Rock (approx. 60 CY 1-1/2"-0" Crushed Rock) as directed. Spread an 8" Lift 3"-0" Crushed Base Rock (approx. 130 CY 3"-0" Crushed Base Rock) as directed. Spread 40 CY 1-1/2"-0" Crushed Spot Rock as marked. Spread 70 CY 3"-0" Crushed Base Spot Rock as marked. Construct and Surface 1 turnaround as marked. Construct and Surface Landing (approx. 50 ft diameter) @ Sta. 2+79 as marked.
2-6-29.0 (Toll Road)	0.000	11.191	11.191	6		14'	2'					ABC	A				ASC	C			Renovation. Spread 600 CY 1-1/2"-0" Crushed Spot Rock as marked and needed. Spread 300 CY 3"-0" Crushed Base Rock as marked. Place 315 CY 1-1/2"-0" Crushed Bedding/Backfill Rock as marked. Place 60 CY Class 3 RipRap @ culvert outlet as fill armor/dissipater. Place 20 CY Class 3 RipRap @ culvert inlet as fill armor. Place 10 CY Class 3 RipRap @ culvert inlet as catch basin formation material @ MP 6.637. Re-establish ditchline and haul material to WA on road to the right (from outlet of newly installed culvert to existing cross drain, approx. 440 feet). Re-establish ditchlines and haul material to WA as directed. Catch basin is too deep @ MP 9.170, 9.336, and 9.545 fix with compacted native soil. Construct waste areas as marked and needed. Construct ditchouts and lead-off ditches as marked and needed. Install 13 Sediment Catch Basins with Straw Bales as marked. Remove and dispose of old pipe laying on fill slope @ MP 9.770. Replace 5 culverts. Install 13 culverts and one downspout. Install 30 metal inlet markers.
2-6-19.0 (weyco pit road)	0.000	0.491	0.491	6		14'	2'					ABC	A				ASC	C			Renovation. Spread 130 1-1/2"-0" CY Crushed Spot Rock as needed. Spread 130 CY 3"-0" Crushed Base Rock as needed. Re-establish ditchline and haul material to WA as directed. Construct ditchouts as needed.



*NOTES

- Extra subgrade widths**
Add to each shoulder: 1 ft. for fills of 1-6 ft. and 2 ft. for fills over 6 ft. Widen the inside shoulder of curves as follows:
(See Road Plan Map, Exhibit C)
- Backslopes**
Materials Cut slopes Fill slopes
Solid rock 1:4:1 Angle of repose
Soft rock and shale 1/2:1
Common
Slopes under 55% 1:1 1-1/2:1
Slopes over 55% 3/4:1 1-1/2:1
- Surface type**
PRR - Pit run rock
GRR - Grid rolled rock
SRN - Screened rock
JRR - Jaw run rock
ABC - Aggr. base course
ASC - Aggr. surface course
WC - Wood chips
- Turnouts**
Width - 10 ft. in addition to subgrade width, or as shown on the plans.
Located approximately as shown on the plans. Intervisible and not more than 750ft. apart.
- Surfacing**
Turnouts, curve widening and road approach aprons shall be surfaced.
- Clearing width**
See Section 200
- As posted and painted for Right-of-Way.
- Drainage**
See Culvert List
- Compaction**
See Sections 300 and 400

* Clearing Limits as posted on ground

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Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE - OREGON

Culvert List

CULVERT LOCATIONS							DOWNSPOUT(d) or STANDPIPE(s) *4				AS BUILT			ROCK			REMARKS *6
DESIGNED *2														RIP RAP (GRADING)			
Road #	Sta./ M.P	SIZE	GAGE	LENGTH	CULVERT GRADE	INSTALL TYPE *3	SIZE	TYPE	LENGTH	TYPE OF ELBOW *5	SIZE	GAGE	LENGTH	(a)		Structure inside pipe	
														INLET	OUTLET		
2-6-15.0 (Whiteface Rd)	0.026	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
	0.158	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
2-6-15.4	6+77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
	11+70	18"	--	60'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert in existing ditchline as marked in field. Place 25 CY Crushed Bedding/Backfill. Spread 25 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 20 CY 1-1/2"-0" Crushed Rock. No inlet marker needed.
2-6-15.6	0.052	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
	0.429	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
	0.539	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
2-6-15.7	0+32	18"	--	70'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert in existing ditchline as marked in field. Place 30 CY Crushed Bedding/Backfill. Spread 30 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 25 CY 1-1/2"-0" Crushed Rock. No inlet marker needed.
	3+64	24"	--	60'	--	--	--	--	--	--	--	--	80	80	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer (approx. 10' fill @CL). Place 25 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Place 80 CY Class 3 RipRap at Inlet as fill armor and 80 CY Class 3 RipRap at outlet as fill armor. Install metal inlet marker.
	5+59	36"	--	70'	--	--	--	--	--	--	--	--	250	250	--	--	Stream. Install New Culvert as marked in field and directed by Authorized Officer (approx. 18' fill @ CL). Place 40 CY Crushed Bedding/Backfill. Spread 30 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 20 CY 1-1/2"-0" Crushed Rock. Place 250 CY Class 3 RipRap at Inlet as fill armor and 250 CY Class 3 RipRap at outlet as fill armor. No inlet marker needed.
	6+34	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker. Construct lead-off ditch at culvert outlet (approx. 25').
	9+86	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.

	<table border="1"> <thead> <tr> <th colspan="3">Gage Chart</th> </tr> <tr> <th rowspan="2">Gage</th> <th colspan="2">Dec. Inches</th> </tr> <tr> <th>Steel</th> <th>Alum.</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>.138</td> <td>.135</td> </tr> <tr> <td>12</td> <td>.109</td> <td>.105</td> </tr> <tr> <td>14</td> <td>.079</td> <td>.075</td> </tr> <tr> <td>16</td> <td>.064</td> <td>.060</td> </tr> </tbody> </table>	Gage Chart			Gage	Dec. Inches		Steel	Alum.	10	.138	.135	12	.109	.105	14	.079	.075	16	.064	.060	<p>1. Designed culvert lengths and locations are approximate.</p> <p>*2. all culverts have 2-2/3" x 1/2" unless otherwise noted.</p> <p>**** Corrugated plastic pipe (CPP), Type S (double wall) shall be used for culvert sizes 36" and smaller. All larger culverts shall be aluminized steel. Culverts 20' in length or smaller shall be one piece (no joints). No Culvert piece shall be shorter than 6 foot. Minimization of banding is required.</p>	<p>*4. Downspout or Standpipe Types</p> <p>1) Full 2) Half 3) Flume</p> <p>*** Downspouts and stand pipes (under 36" diameter) shall be CPP, Type C (single wall).</p>	<p>*5. 1) Conventional or Fabricated 2) Turner type 3) Slip joint</p> <p>*6. Include special sections, structures, headwalls, footings & other data.</p>
Gage Chart																								
Gage	Dec. Inches																							
	Steel	Alum.																						
10	.138	.135																						
12	.109	.105																						
14	.079	.075																						
16	.064	.060																						

Culvert List

CULVERT LOCATIONS											ROCK			REMARKS *6						
DESIGNED *2											DOWNSPOUT(d) or STANDPIPE(s) *4				AS BUILT			RIP RAP (GRADING)		
Road #	Sta./ M.P	SIZE	GAGE	LENGTH	CULVERT GRADE	INSTALL TYPE *3	SIZE	TYPE	LENGTH	TYPE OF ELBOW *5	SIZE	GAGE	LENGTH		(a)		Structure inside pipe			
														INLET	OUTLET	(a)		(b)		
2-6-15.7 (cont.)	12+80	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.			
	30+42	18"	--	40'	--	--	--	--	--	--	--	--	--	20	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer (approx. 6' fill @CL). Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Place 20 CY Class 3 RipRap at outlet as fill armor/dissipator. Install metal inlet marker.			
2-6-15.8	3+74	24"	--	40'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer (Free Drain/non-perforated pipe). Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Place 50 CY 1-1/2"-3/4" drain rock wrapped in 150 SY non-woven fabric. Install metal inlet marker.			
	5+98	36"	--	70'	--	--	--	--	--	--	--	--	10	--	--	--	Stream. Remove Log Fill (approx. 6 ft. @ CL). Install culvert as marked in field and directed by Authorized Officer. Place 40 CY 1-1/2"-0" Crushed Bedding/Backfill. Spread 30 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 20 CY 1-1/2"-0" Crushed Rock. Place 10 CY Class 3 RipRap @ inlet as fill armor. Install metal inlet marker.			
	8+70	18"	--	40'	--	--	--	--	--	--	--	--	--	20	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer. Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Place 20 CY Class 3 RipRap at outlet as fill armor/dissipator. Install metal inlet marker.			
	11+09	18"	--	40'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer. Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.			
	14+19	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.			
2-6-16.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CPP.			
2-6-16.5	0+25	18"	--	70'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert in existing ditchline as marked in field. Place 30 CY Crushed Bedding/Backfill. Spread 30 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 25 CY 1-1/2"-0" Crushed Rock. No inlet marker needed.			
	7+14	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.			
	10+11	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.			
	21+48	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker. Construct lead-off ditch at culvert outlet (approx. 25').			

Gage Chart		
Gage	Dec. Inches	
	Steel	Alum.
10	.138	.135
12	.109	.105
14	.079	.075
16	.064	.060

1. Designed culvert lengths and locations are approximate.
*2. all culverts have 2-2/3" x 1/2" unless otherwise noted.

*4. Downspout or Standpipe Types
1) Full
2) Half
3) Flume
*** Downspouts and stand pipes (under 36" diameter) shall be CPP, Type C (single wall).

*5. 1) Conventional or Fabricated
2) Turner type
3) Slip joint

*6. Include special sections, structures, headwalls, footings & other data.

**** Corrugated plastic pipe (CPP), Type S (double wall) shall be used for culvert sizes 36" and smaller. All larger culverts shall be aluminized steel. Culverts 20' in length or smaller shall be one piece (no joints). No Culvert piece shall be shorter than 6 foot. Minimization of banding is required.

Culvert List

CULVERT LOCATIONS											ROCK			REMARKS *6			
DESIGNED *2							DOWNSPOUT(d) or STANDPIPE(s) *4				AS BUILT		RIP RAP (GRADING)				
Road #	Sta./ M.P	SIZE	GAGE	LENGTH	CULVERT GRADE	INSTALL TYPE *3	SIZE	TYPE	LENGTH	TYPE OF ELBOW *5	SIZE	GAGE	LENGTH		INLET	OUTLET	Structure inside pipe
2-6-20.0	0.046	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CPP.
	0.141	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CPP.
	0.754	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker.
2-6-20.1	11+11	18"	--	36'	--	--	--	--	--	--	--	--	--	5	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer (approx. 3' fill @CL). Place 15 CY Crushed Bedding/Backfill. Place 5 CY Class 3 RipRap at outlet as dissipater. Surface with lifts of rock spread on road. Install metal inlet marker.
	16+74	24"	16	50'	--	--	--	--	--	--	--	--	--	--	--	--	Seeps. Install New Culvert as marked in field and directed by Authorized Officer (Free Drain/perforated pipe). Place 60 CY 1-1/2"-3/4" drain rock wrapped in 150 SY non-woven fabric. Surface with lifts of rock spread on road. Install metal inlet marker. Construct lead-off ditch at culvert outlet (approx. 25').
	18+05	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Seeps. Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker.
	18+85	36"	--	36'	--	--	--	--	--	--	--	--	--	--	--	--	Stream. Install New Culvert as marked in field and directed by Authorized Officer (approx. 6' fill @ CL). Place 20 CY Crushed Bedding/Backfill. Use material from excavation ahead and the 3"-0" Crushed Base/Fill Rock over Pipe as fill. Use boulders removed for culvert installation as RipRap on other pipes. Surface with lifts of rock spread on road. Install metal inlet marker.
	19+69	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker. Construct lead-off ditch at culvert outlet (approx. 25').
	30+84	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Seeps. Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker.
	34+38	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker.
	39+18	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker.
	44+42	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker.
2-6-29.1	3+43	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Low Spot. Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Install metal inlet marker.

Gage Chart		
Gage	Dec. Inches	
	Steel	Alum.
10	.138	.135
12	.109	.105
14	.079	.075
16	.064	.060

1. Designed culvert lengths and locations are approximate.

*2. all culverts have 2-2/3" x 1/2" unless otherwise noted.

**** Corrugated plastic pipe (CPP), Type S (double wall) shall be used for culvert sizes 36" and smaller. All larger culverts shall be aluminized steel. Culverts 20' in length or smaller shall be one piece (no joints). No Culvert piece shall be shorter than 6 foot. Minimization of banding is required.

*4. Downspout or Standpipe Types

1) Full *** Downspouts and stand pipes (under 36" diameter) shall be CPP, Type C (single wall).

2) Half

3) Flume

*5. 1) Conventional or Fabricated
2) Turner type
3) Slip joint

*6. Include special sections, structures, headwalls, footings & other data.

Culvert List

CULVERT LOCATIONS											ROCK			REMARKS *6		
DESIGNED *2						DOWNSPOUT(d) or STANDPIPE(s) *4				AS BUILT			RIP RAP (GRADING)			
Road #	Sta./ M.P	SIZE	GAGE	LENGTH	CULVERT GRADE		SIZE	TYPE	LENGTH	TYPE OF ELBOW	SIZE	GAGE	LENGTH	INLET	OUTLET	Structure inside pipe
					INSTALL TYPE *3	INSTALL TYPE *3										
2-6-29.0 (Toll Road)	1.748	18"	--	40'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	2.238	18"	--	50'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer (approx. 9ft fill @ CL). Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	5.001	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	5.179	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	5.289	18"	--	60'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 25 CY Crushed Bedding/Backfill. Spread 25 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 20 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	5.398	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Surface with lifts of rock spread on road. Spread 10 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	6.637	18"	--	60'	--	--	--	--	--	--	--	--	10	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 25 CY Crushed Bedding/Backfill. Spread 25 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 20 CY 1-1/2"-0" Crushed Rock. Place 10 CY Class 3 RipRap at inlet to construct catch basin. Install metal inlet marker.
	6.762	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	6.887	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	7.352	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
	7.383	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CPP.
	8.036	24"	--	60'	--	--	--	--	--	--	--	--	5	15	--	Stream. Replace Existing Culvert as marked in field and directed by Authorized Officer (approx. 6-1/2' fill @ CL, Invert Inlet Elevation: 95.55', Invert Outlet Elevation: 88.95'). Place 25 CY Crushed Bedding/Backfill. Spread 20 CY 3'-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Place 15 CY Class 3 RipRap at outlet as fill armor. Place 5 CY Class 3 RipRap at inlet as fill armor. Install inlet marker.
	8.455	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.
	8.554	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CPP.
	8.799	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CPP.
	8.865	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CPP.
	9.044	--	--	--	--	--	--	--	--	--	--	--	--	--	--	Install metal inlet marker on existing CMP.

<p>1. Designed culvert lengths and locations are approximate.</p>			<p>*4. Downspout or Standpipe Types</p> <p>1) Full 2) Half 3) Flume</p>			<p>*5. 1) Conventional or Fabricated 2) Turner type 3) Slip joint</p>		
<p>*2. all culverts have 2 2/3" x 1/2" unless otherwise noted.</p>			<p>*** Downspouts and stand pipes (under 36" diameter) shall be CPP, Type C (single wall).</p>			<p>*6. Include special sections, structures, headwalls, footings & other data.</p>		
<p>**** Corrugated plastic pipe (CPP), Type S (double wall) shall be used for culvert sizes 36" and smaller. All larger culverts shall be aluminized steel. Culverts 20' in length or smaller shall be one piece (no joints). No Culvert piece shall be shorter than 6 foot. Minimization of banding is required.</p>								

Culvert List

CULVERT LOCATIONS							DOWNSPOUT(d) or STANDPIPE(s) *4				AS BUILT			ROCK			REMARKS *6
DESIGNED *2														RIP RAP (GRADING)			
Road #	Sta./ M.P	SIZE	GAGE	LENGTH	CULVERT GRADE	INSTALL TYPE *3	SIZE	TYPE	LENGTH	TYPE OF ELBOW *5	SIZE	GAGE	LENGTH	INLET	OUTLET	Structure inside pipe	
2-6-29.0 (Toll Road) (cont.)	9.080	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CPP.
	9.170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CPP.
	9.336	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CMP.
	9.423	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CPP.
	9.545	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CPP.
	9.595	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CMP.
	9.627	24"	--	30'	--	--	--	--	--	--	--	--	--	--	20	--	Stream. Replace Existing Culvert as marked in field and directed by Authorized Officer (approx. 6' fill @ CL). Place 15 CY Crushed Bedding/Backfill. Spread 15 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Place 20 CY Class 3 RipRap at outlet as fill armor/dissipater rock. Re-use existing inlet marker.
	9.673	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CMP.
	9.695	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Install metal inlet marker on existing CMP.
	9.746	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	9.770	24"	--	50'	--	--	--	--	--	--	--	--	--	5	15	--	Stream. Replace Existing Culvert as marked in field and directed by Authorized Officer (approx. 11-1/2' fill @ CL, Invert Inlet Elevation: 92.42', Invert Outlet Elevation: 71.42'). Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Place 15 CY Class 3 RipRap at outlet as fill armor. Place 5 CY Class 3 RipRap at inlet as fill armor. Salvage Existing RipRap on Fill Slope in addition to mentioned amounts and use as Fill Aromor. Remove old pipe on fill slope adjacent to stream pipe and dispose of in legal manner. Install inlet marker.
	9.855	18"	--	30'	--	--	18"	1	10'	--	--	--	--	--	--	--	Replace Existing Culvert and Downspout as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	10.504	18"	--	30'	--	--	--	--	--	--	--	--	--	--	--	--	Install New Culvert as marked in field and directed by Authorized Officer. Place 10 CY Crushed Bedding/Backfill. Spread 10 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 10 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.

<p>Gage Chart</p> <table border="1"> <tr> <th rowspan="2">Gage</th> <th colspan="2">Dec. Inches</th> </tr> <tr> <th>Steel</th> <th>Alum.</th> </tr> <tr> <td>10</td> <td>.138</td> <td>.135</td> </tr> <tr> <td>12</td> <td>.109</td> <td>.105</td> </tr> <tr> <td>14</td> <td>.079</td> <td>.075</td> </tr> <tr> <td>16</td> <td>.064</td> <td>.060</td> </tr> </table>			Gage	Dec. Inches		Steel	Alum.	10	.138	.135	12	.109	.105	14	.079	.075	16	.064	.060	<p>1. Designed culvert lengths and locations are approximate.</p> <p>*2. all culverts have 2 2/3" x 1/2" unless otherwise noted.</p> <p>**** Corrugated plastic pipe (CPP), Type S (double wall) shall be used for culvert sizes 36" and smaller. All larger culverts shall be aluminized steel. Culverts 20' in length or smaller shall be one piece (no joints). No Culvert piece shall be shorter than 6 foot. Minimization of banding is required.</p>	<p>*4. Downspout or Standpipe Types</p> <table border="1"> <tr> <td>1) Full</td> <td rowspan="3">*** Downspouts and stand pipes (under 36" diameter) shall be CPP, Type C (single wall).</td> </tr> <tr> <td>2) Half</td> </tr> <tr> <td>3) Flume</td> </tr> </table>	1) Full	*** Downspouts and stand pipes (under 36" diameter) shall be CPP, Type C (single wall).	2) Half	3) Flume	<p>*5. 1) Conventional or Fabricated 2) Turner type 3) Slip joint</p> <p>*6. Include special sections, structures, headwalls, footings & other data.</p>
Gage	Dec. Inches																									
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Culvert List

CULVERT LOCATIONS											AS BUILT			ROCK			REMARKS *6
DESIGNED *2							DOWNSPOUT(d) or STANDPIPE(s) *4				RIP RAP (GRADING)						
Road #	Sta./ M.P	SIZE	GAGE	LENGTH	CULVERT GRADE	INSTALL TYPE *3	SIZE	TYPE	LENGTH	TYPE OF ELBOW *5	SIZE	GAGE	LENGTH	INLET	OUTLET	Structure inside pipe	
2-6-29.0 (Toll Road cont.)	10.658	18"	-	40'	-	-	-	-	-	-	-	-	-	-	-	-	Install New Culvert as marked in field and directed by Authorized Officer. Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.
	10.828	54"	14	40'	-	-	-	-	-	-	-	-	-	10	10	-	Stream. Replace Existing Culvert as marked in field and directed by Authorized Officer (approx. 9' fill @ CL, Invert Inlet Elevation: 93.04', Invert Outlet Elevation: 92.69'). Place 45 CY Crushed Bedding/Backfill. Spread 35 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 25 CY 1-1/2"-0" Crushed Rock. Place 10 CY Class 3 RipRap at outlet as fill armor. Place 10 CY Class 3 RipRap at inlet as fill armor. No inlet marker needed.
	11.152	18"	-	40'	-	-	-	-	-	-	-	-	-	-	-	-	Install New Culvert and Downspout as marked in field and directed by Authorized Officer. Place 20 CY Crushed Bedding/Backfill. Spread 20 CY 3"-0" Crushed Base Rock over Pipe as Surfacing capped with 15 CY 1-1/2"-0" Crushed Rock. Install metal inlet marker.

Gage Chart		
Gage	Dec. Inches	
	Steel	Alum.
10	.138	.135
12	.109	.105
14	.079	.075
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1. Designed culvert lengths and locations are approximate.

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unless otherwise noted.

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*4. Downspout or Standpipe Types

- 1) Full
- 2) Half
- 3) Flume

*** Downspouts and stand pipes (under 36" diameter) shall be CPP, Type C (single wall).

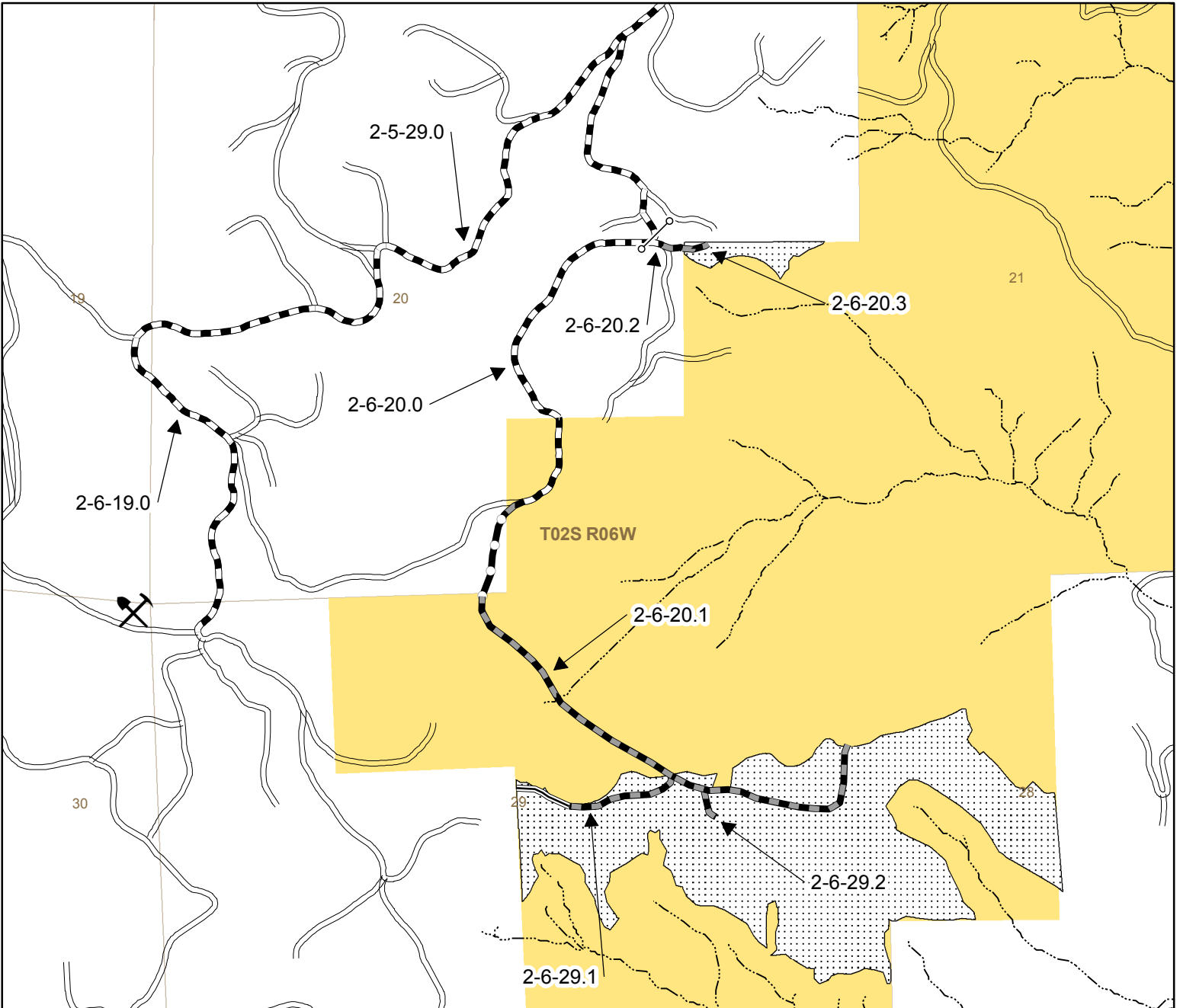
- *5. 1) Conventional or Fabricated
 2) Turner type
 3) Slip joint

*6. Include special sections, structures, headwalls, footings & other data.

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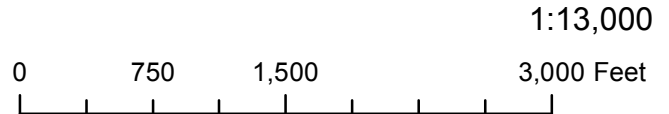
T. 02S. R. 6W Sections 10, 16, 20, 21, 28, & 29 W.M. - NORTHWEST OREGON DISTRICT - OREGON

1/28/2020



- Rock surfaced road to be improved, Open after use
- Rock surfaced road to be constructed, Open after use
- Natural surfaced road to be constructed - Stabilize after use
- Rock surfaced road to be renovated, Open after use
- Existing Roads
- Streams
- Boot Up Project Area
- Bureau of Land Management
- Weyerhaeuser Rock Quarry

Gate

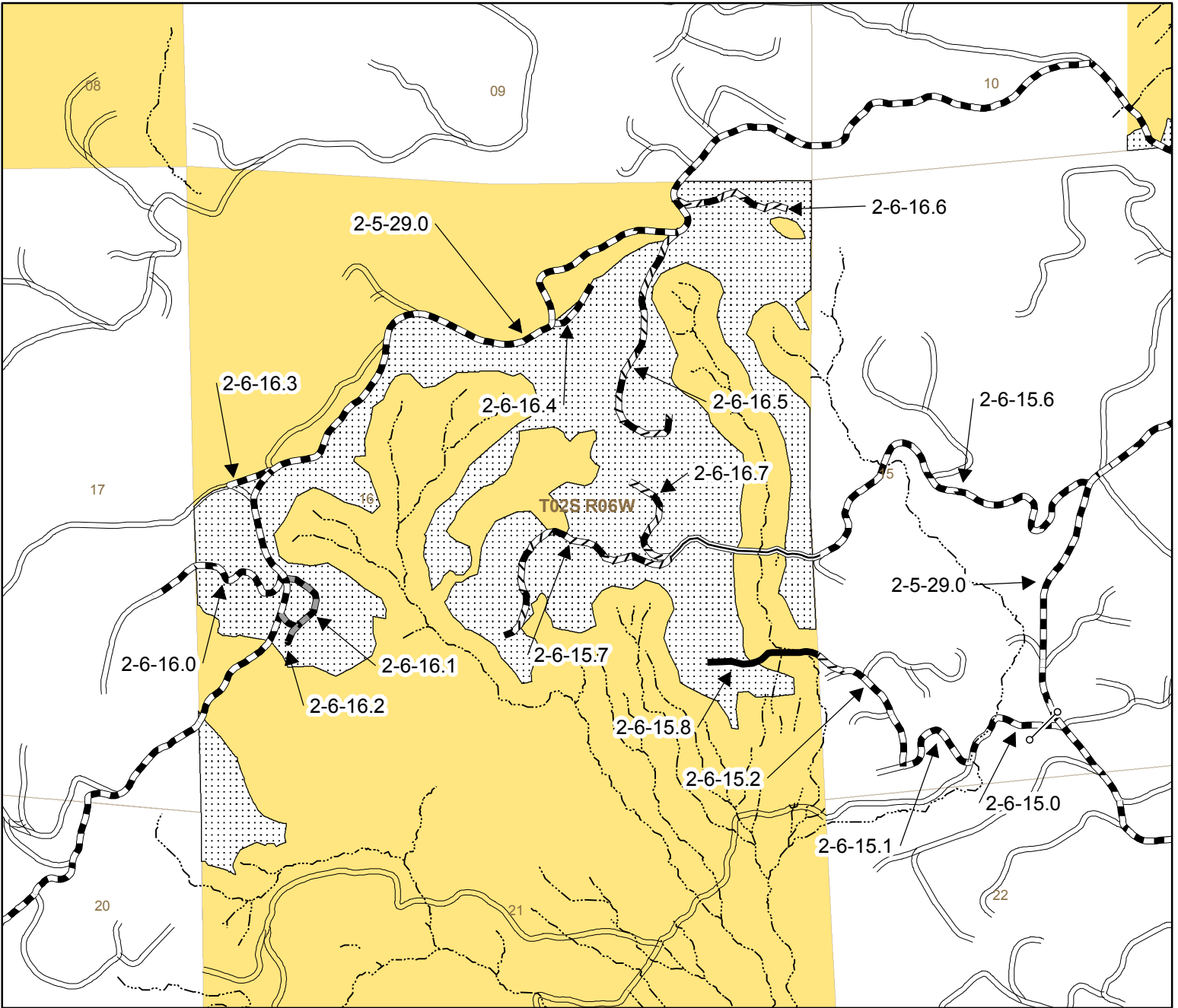











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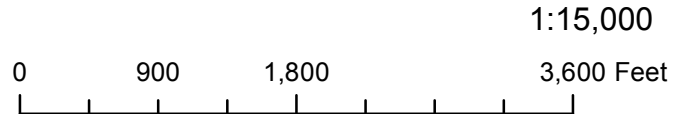
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1/28/2020



-  Rock surfaced road to be constructed, Open after use
-  Natural surfaced road to be constructed, Decommission after use
-  Natural surfaced road to be constructed - Stabilize after use
-  Rock surfaced road to be renovated, Open after use
-  Natural surfaced road to be renovated, Decommission after use
-  Existing Roads
-  Streams
-  Boot Up Project Area
-  Bureau of Land Management

Gate

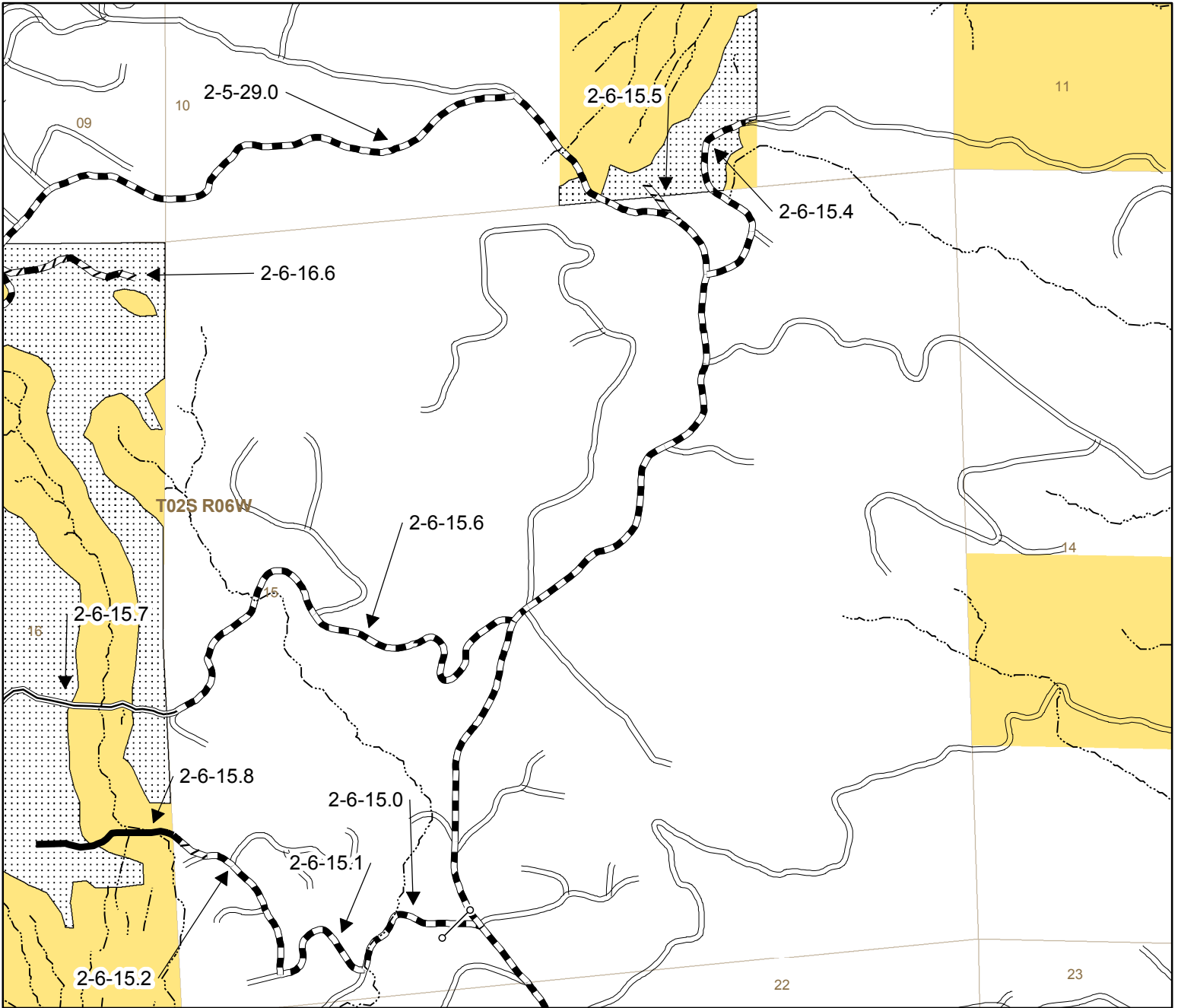











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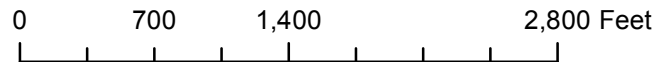
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-  Natural surfaced road to be constructed, Decommission after use
-  Natural surfaced road to be constructed - Stabilize after use
-  Rock surfaced road to be renovated, Open after use
-  Natural surfaced road to be renovated, Decommission after use
-  Existing Roads
-  Streams
-  Boot Up Project Area
-  Bureau of Land Management
-  Gate

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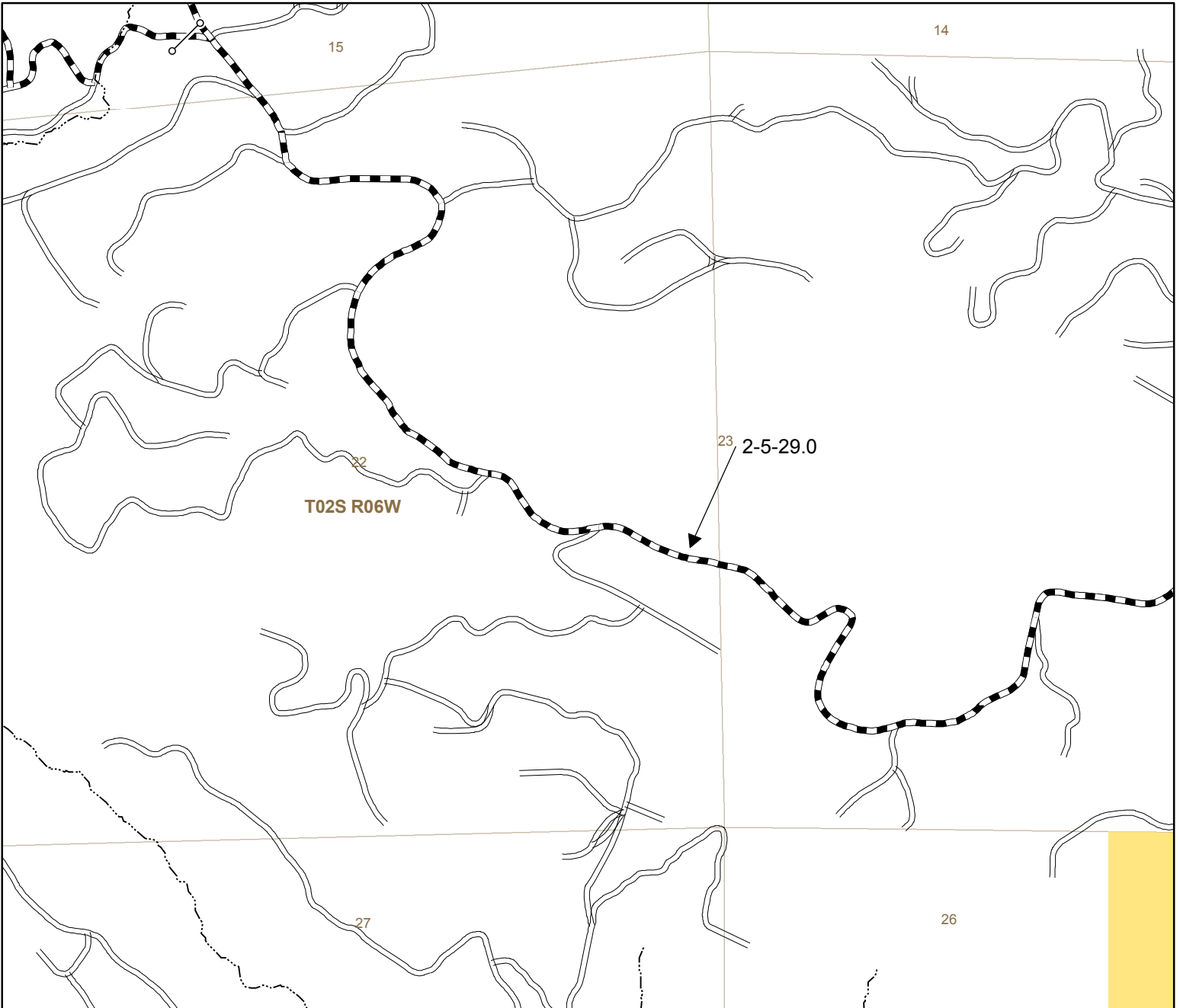



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1/28/2020




 Rock surfaced road to be renovated, Open after use

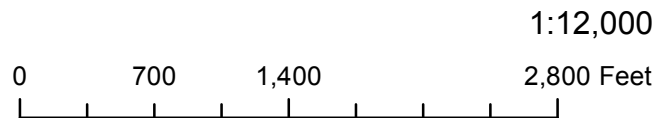
 Existing Roads

 Streams

 Boot Up Project Area

 Bureau of Land Management

 Gate



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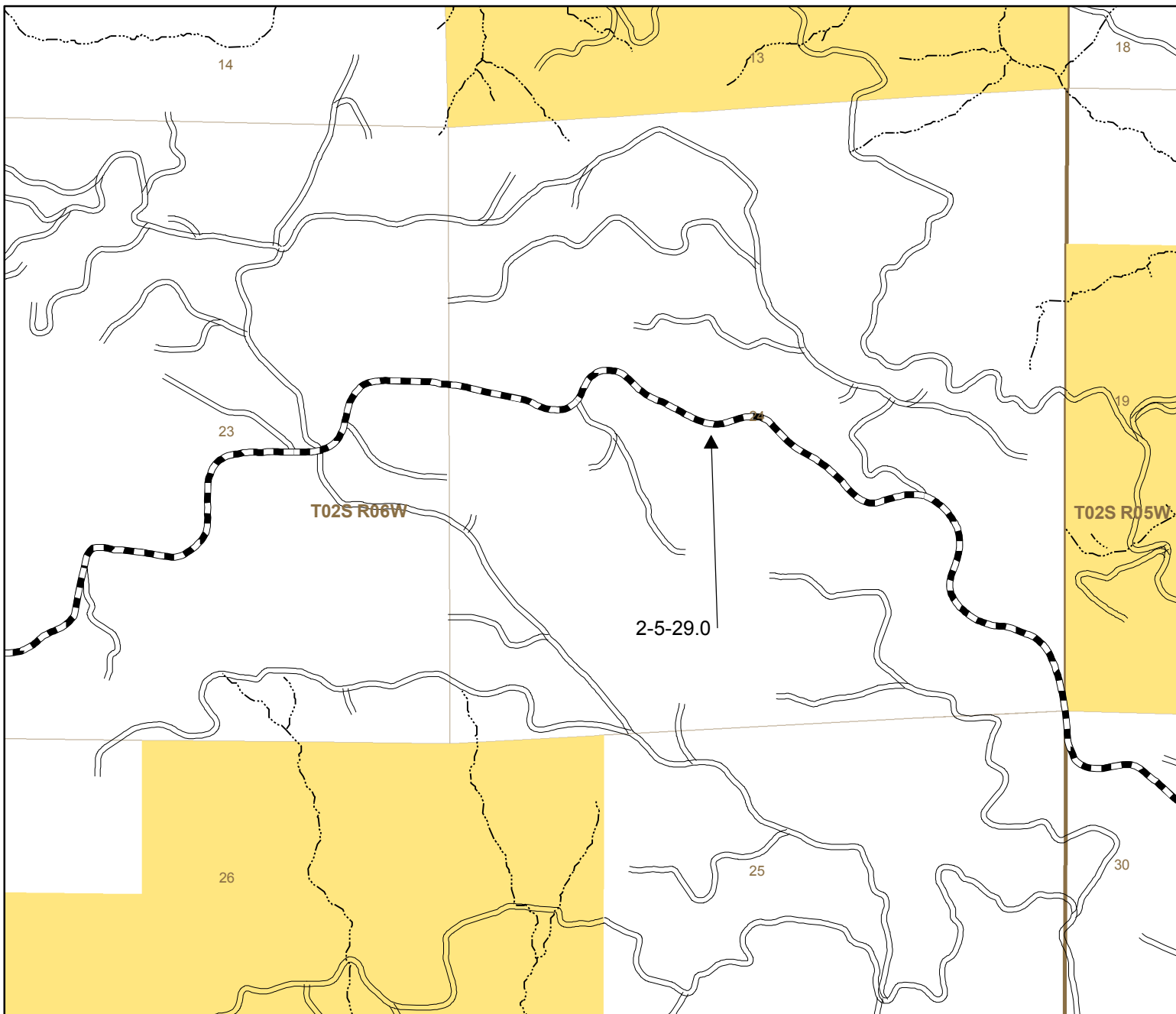


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Boot Up Timber Sale
 Contract NO. ORN04-TS-2020.0401
 Exhibit C
 Page 55 of 72

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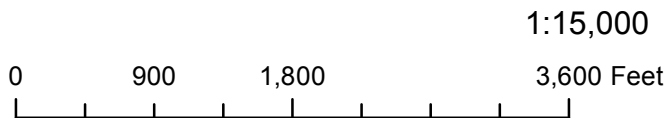
Rock surfaced road to be renovated, Open after use

Existing Roads

Streams

Boot Up Project Area

Bureau of Land Management



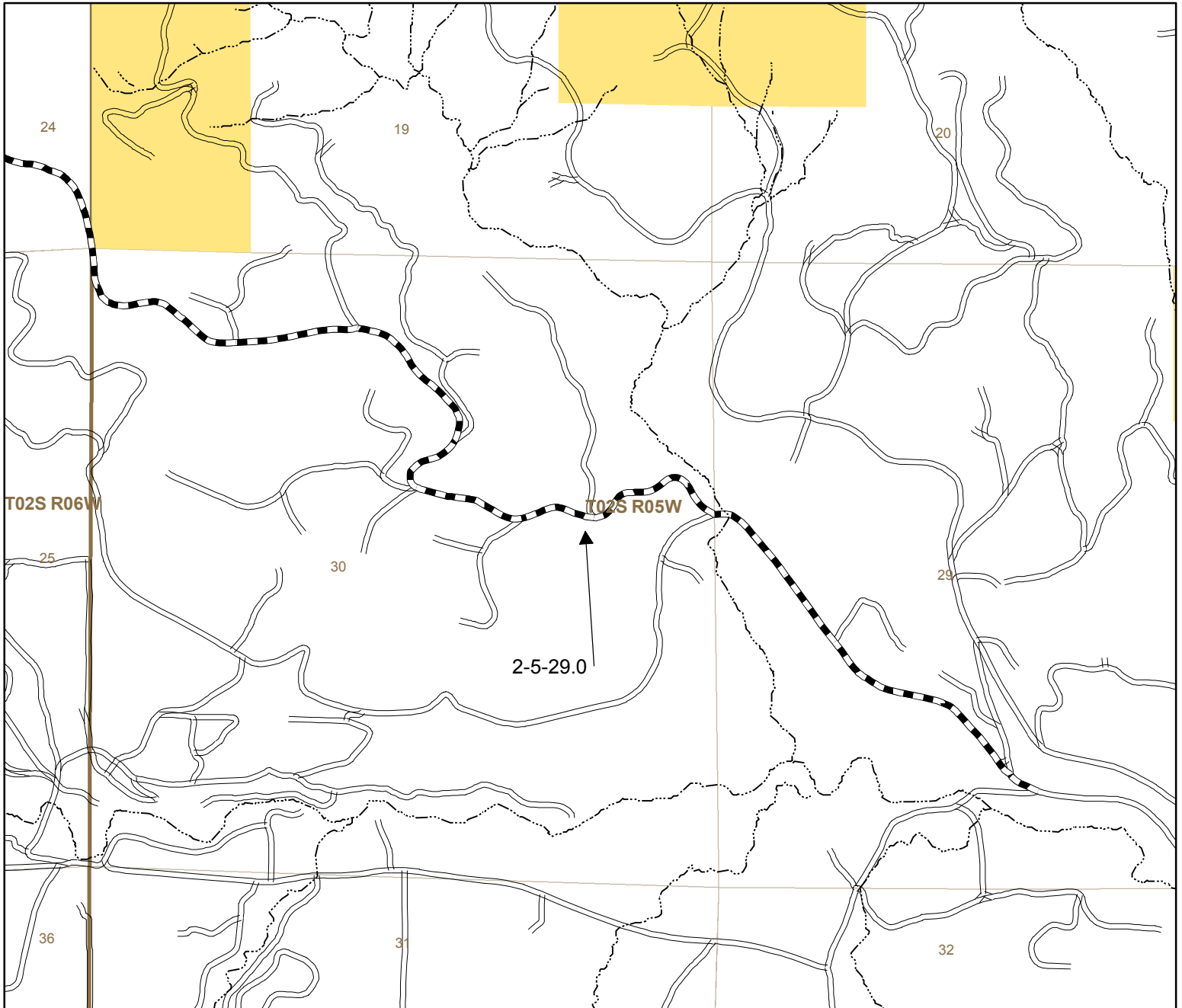
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
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1/28/2020




 Rock surfaced road to be renovated, Open after use

 Existing Roads

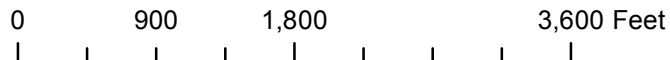
 Streams

 Boot Up Project Area

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0 900 1,800 3,600 Feet



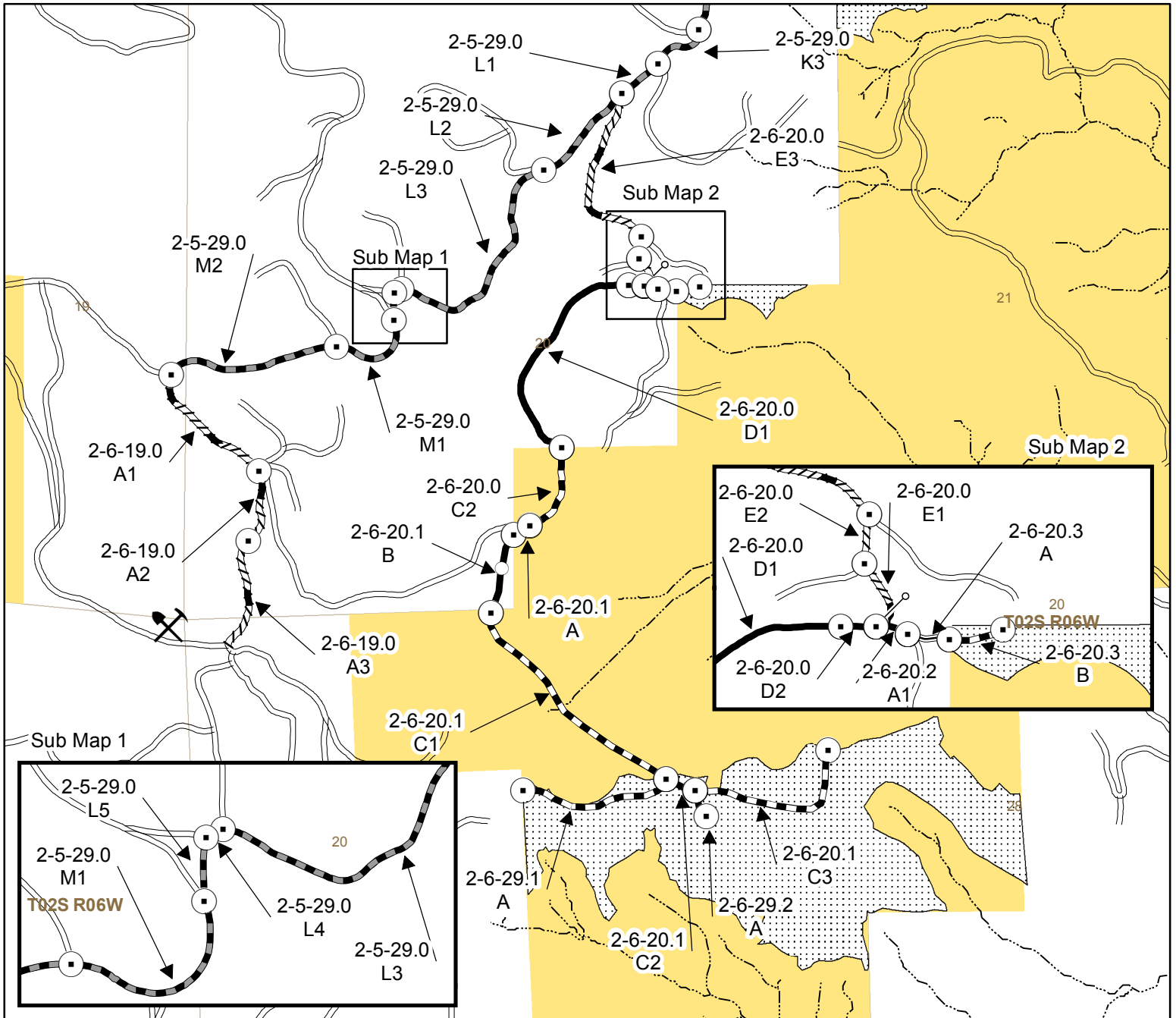
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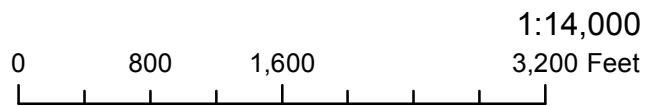
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- Road_Segment_Breaks
- BLM controlled road - Private Maintenance - S-1039A
- BLM controlled road - Purchaser Maintenance
- Private S-1039 controlled road - Private Maintenance - S-1039
- Private - S-1039A controlled road - Private Maintenance - S-1039A
- Weyerhaeuser controlled roads - Purchaser Maintenance
- Weyerhaeuser controlled roads - Weyerhaeuser Maintenance
- Gate
- Weyerhaeuser Rock Quarry

- Streams
- Existing Roads
- Boot Up Project Area
- Bureau of Land Management



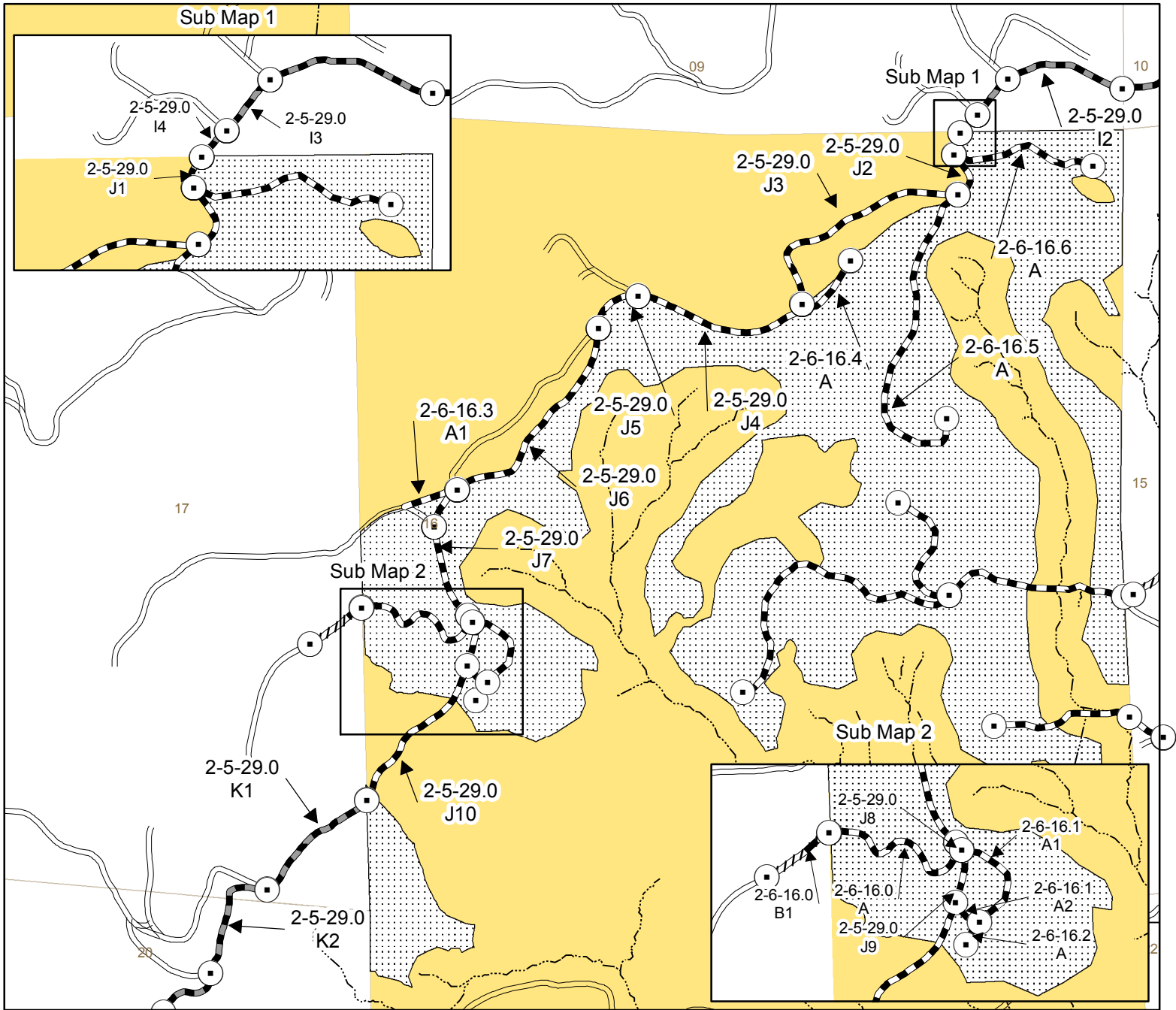
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





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 NORTHWEST OREGON DISTRICT - OREGON
 Road Plan Map

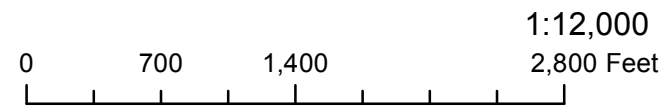


1/28/2020

T. 02S. R. 6W Sections 10, 16, 20, 21, 28, & 29 W.M. - NORTHWEST OREGON DISTRICT - OREGON



-  Road_Segment_Breaks
-  BLM controlled road - Purchaser Maintenance
-  Weyerhaeuser controlled roads - Purchaser Maintenance
-  Weyerhaeuser controlled roads - Weyerhaeuser Maintenance
-  Streams
-  Existing Roads
-  Boot Up Project Area
-  Bureau of Land Management



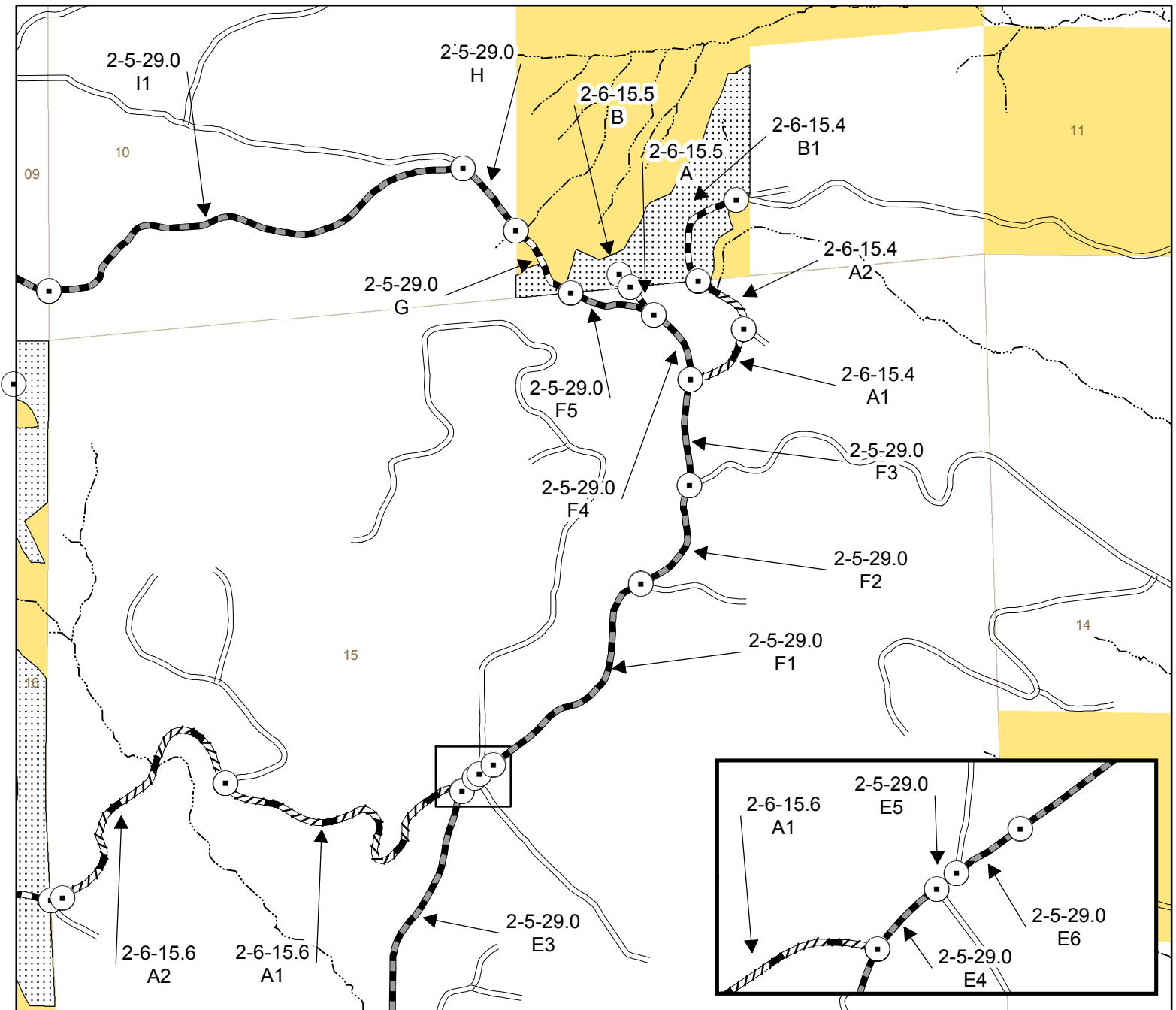
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 Prepared By: Austin E. Bettis









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 BUREAU OF LAND MANAGEMENT
 NORTHWEST OREGON DISTRICT - OREGON
 Road Plan Map

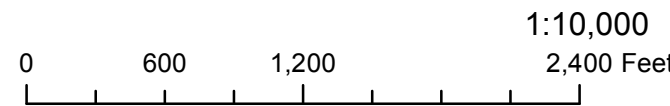
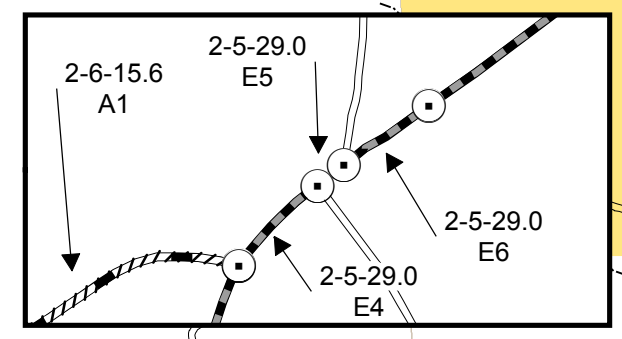


1/28/2020

T. 02S. R. 6W Sections 10, 16, 20, 21, 28, & 29 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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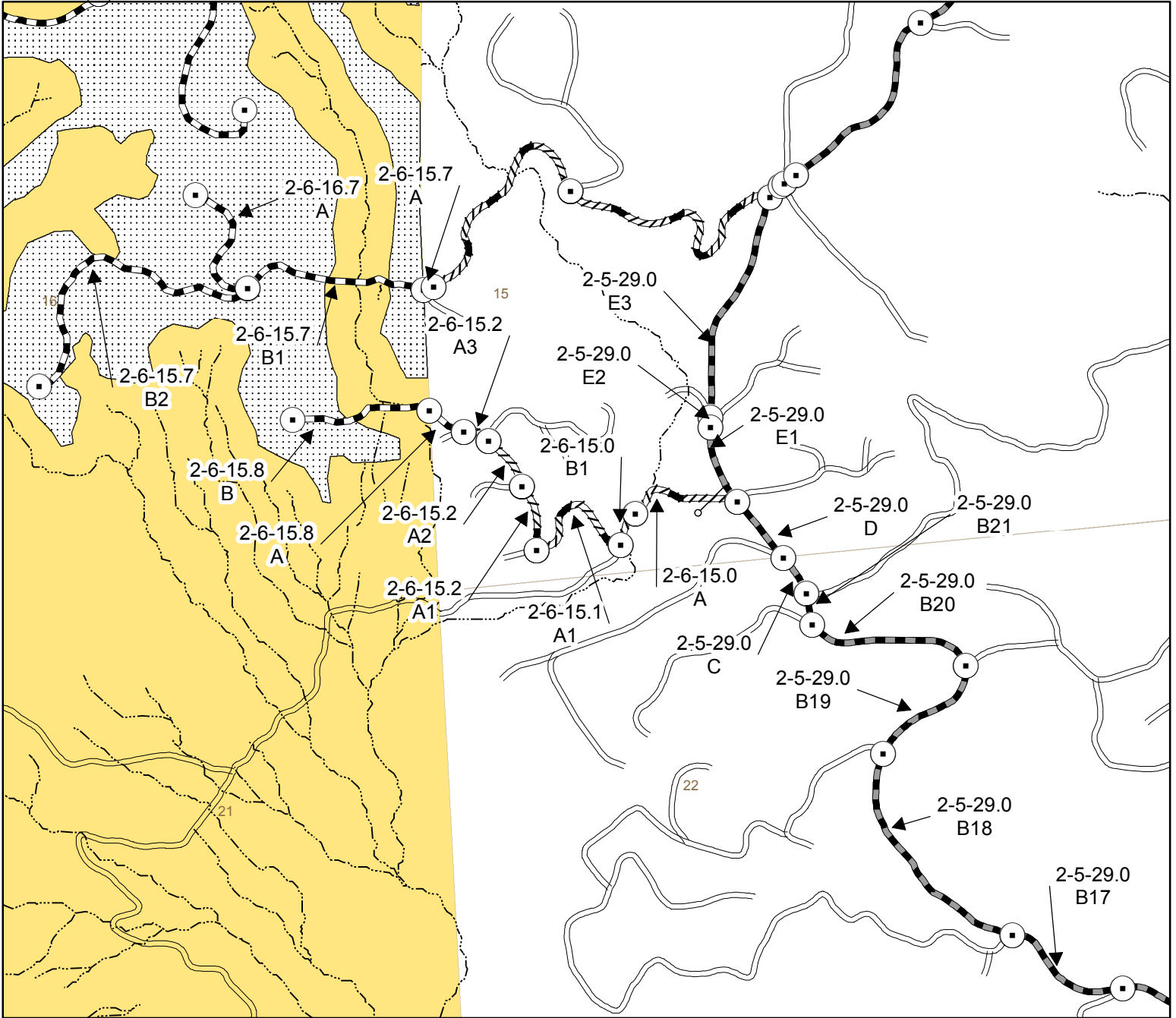
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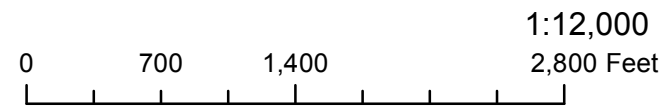


1/28/2020

T. 02S. R. 6W Sections 10, 16, 20, 21, 28, & 29 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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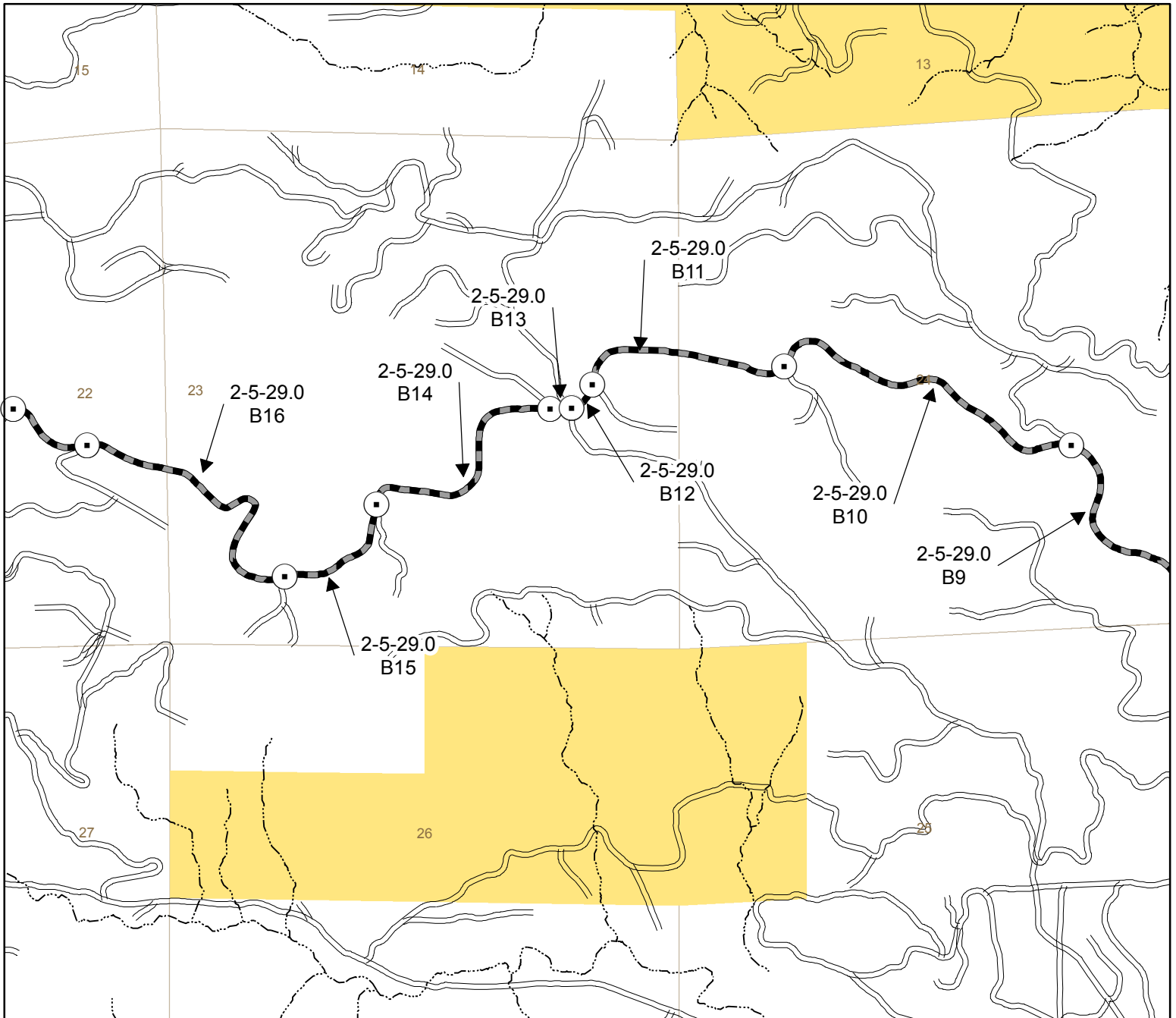
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 NORTHWEST OREGON DISTRICT - OREGON
 Road Plan Map



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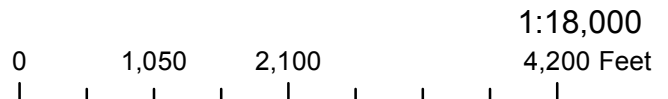
◻ Road_Segment_Breaks

▬ Weyerhaeuser controlled roads - Weyerhaeuser Maintenance

— Existing Roads

⋯ Streams

■ Bureau of Land Management



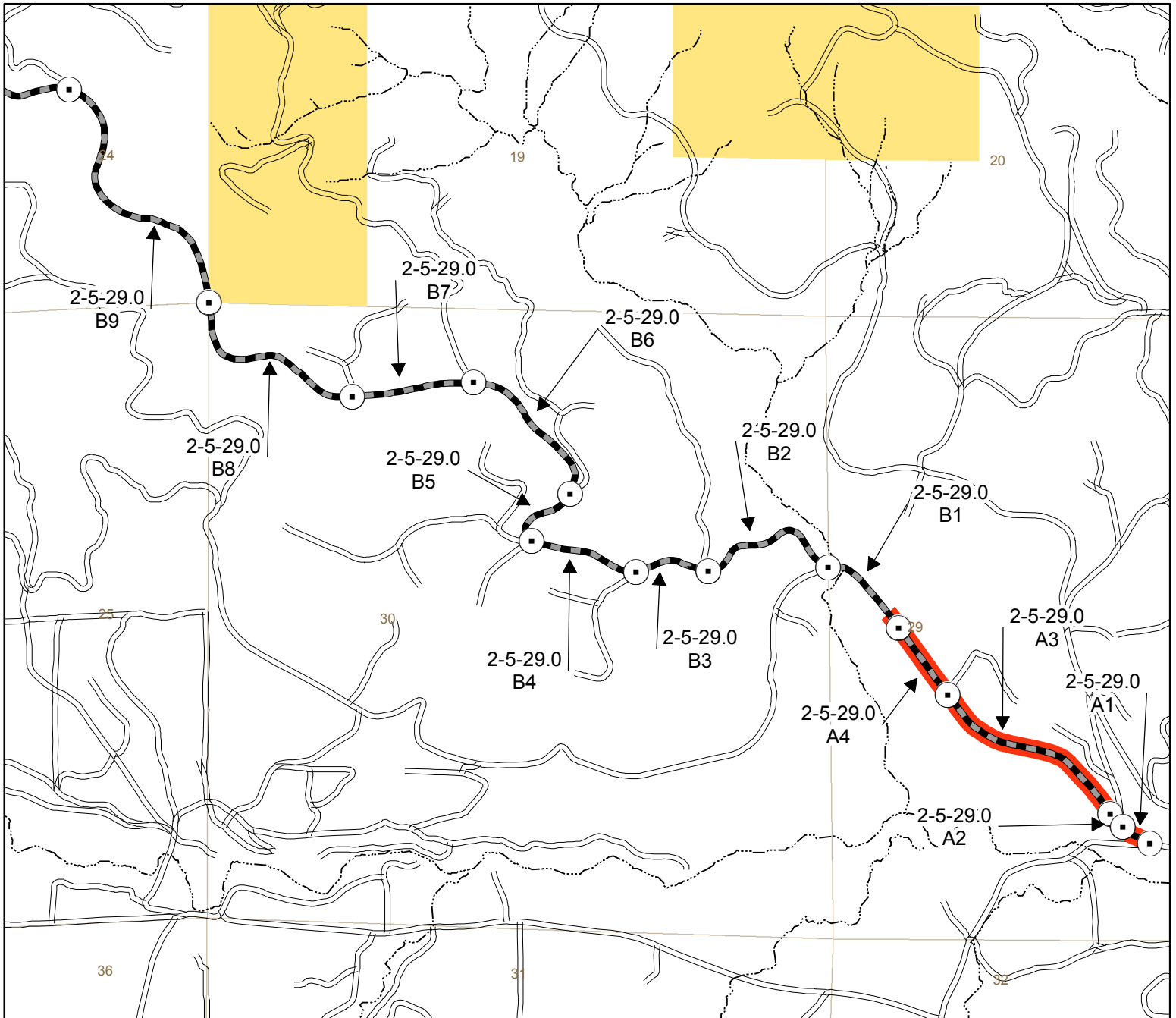
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 NORTHWEST OREGON DISTRICT - OREGON
 Road Plan Map



1/28/2020

T. 02S. R. 6W Sections 10, 16, 20, 21, 28, & 29 W.M. - NORTHWEST OREGON DISTRICT - OREGON



○ Road_Segment_Breaks

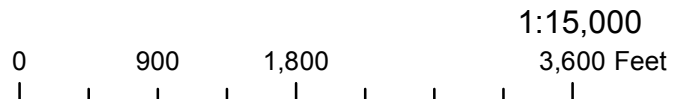
▬ Weyerhaeuser controlled roads - Weyerhaeuser Maintenance

▬ Existing Roads

▬ Dust Abatement Area

▬ Streams

▬ Bureau of Land Management



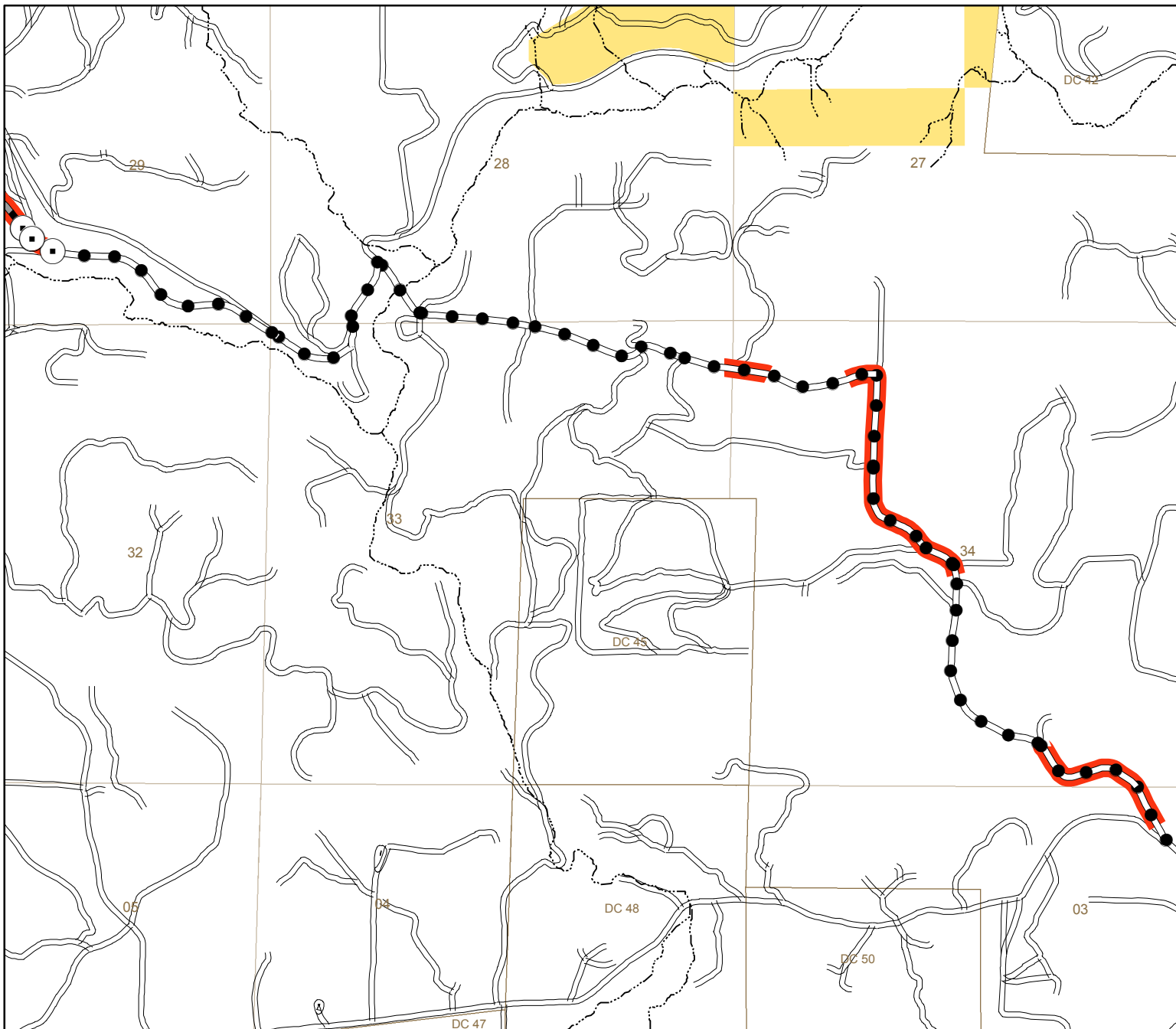
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 NORTHWEST OREGON DISTRICT - OREGON
 Road Plan Map



1/28/2020

T. 02S. R. 6W Sections 10, 16, 20, 21, 28, & 29 W.M. - NORTHWEST OREGON DISTRICT - OREGON



◻ Road_Segment_Breaks

▬ Weyerhaeuser controlled roads - Weyerhaeuser Maintenance

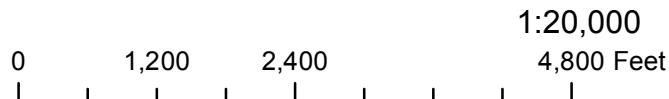
— Existing Roads

● Haul_Route

■ Dust Abatement Area

⋯ Streams

■ Bureau of Land Management



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 Prepared By: Austin E. Bettis

COARSE WOODY DEBRIS (CWD) CREATION

The Purchaser shall select and treat a total of three hundred seventy-one (371) reserve trees in the CWD Creation Units shown on Exhibit F maps (pages 6-10) to create Coarse Woody Debris (CWD) by saw-topping, high-girdling, basal-girdling or felling. Treated trees will be marked with numbered aluminum tags and flagging. The Purchaser shall record the tree tag number, treatment type, tree data, and UTM coordinates for all treated trees.

Treatment of trees to create CWD within any given unit shall not start until all yarding operations within that unit are complete. The Purchaser must provide a proposed schedule of work to the Authorized Officer at least one week prior to commencing the CWD creation activities.

CWD Creation per CWD Unit

CWD Unit Number ¹ (section)	Acres	Total Trees	Saw-Top	High Girdle	Basal Girdle	Fell	Tree Size to be Selected ² (inches at DBH)
1A (28)	26	26	18	0	8	0	28 to 36
1B (29)	67	67	23	22	22	0	16 to 24
2A (16 & 21)	12	12	4	4	4	0	18 to 30
2B (20)	3	3	3	0	0	0	18 to 30
3A (16)	83	106	98	0	8	0	22 to 32
3B (16)	47	47	21	22	4	0	22 to 32
3C (16)	73	73	25	24	24	0	22 to 32
4 (10)	11	11	11	0	0	0	26 to 32
4RR (10)	2	26	7	7	6	6	fell = 18 to 26 snags = 16 to 26
Totals	347	371	210	79	76	6	

¹ See Coarse Woody Debris Creation maps (Exhibit F pages 6-10)

² Select approximately 50% of the trees larger and 50% of the trees smaller than the median tree size for the given range unless stand conditions dictate otherwise. If only trees smaller than the appropriate size are available, select trees of the largest size class present. Do not select the largest, most dominant tree within any given area.

1. **Tree Selection** – The Purchaser shall select three hundred seventy-one (371) reserve trees to create CWD by saw-topping, high-girdling, basal-girdling or felling according to the following guidelines. Numbers of trees and tree sizes to be selected, specific to each CWD unit, are displayed in the table above. Placement of trees to be selected by treatment type within the individual treatment units is displayed on the Coarse Woody Debris Creation maps (Exhibit F pages 6-10). The locations of the selected trees (individually or in small groups; distance from roads or property line) varies by treatment method; see treatment methods below for additional treatment-specific information concerning tree selection.

- Only healthy Douglas-fir trees shall be selected for treatment.
 - No trees marked with any existing metal tags shall be selected for treatment.
 - No trees with nests or any nest-like structures of any birds or mammals, or trees with defects such as cavities, platforms, mistletoe infection, or dead, forked/multiple and/or broken tops shall be selected.
 - Selected trees shall be evenly distributed throughout the CWD units. When selecting trees, select approximately fifty (50) percent of the trees larger than the median tree size for the given range, and approximately fifty (50) percent of the trees smaller than the median tree size for the given range unless stand conditions dictate otherwise. If only trees smaller than the appropriate size are available, select trees of the largest size class present. Do not select the largest, most dominant tree within any given area.
- a. **Saw-topping and High-girdling:** Select healthy appearing Douglas-fir trees with live crown ratios greater than thirty (30) percent and with **average or larger** crown spread. If only trees with smaller live crown ratios than appropriate are available, select trees with the largest crown ratio present. Treatment types and selected trees shall be scattered uniformly throughout the units. Trees selected for saw-topping shall be selected singly. Trees selected for high-girdling shall be selected in groups of three (3) to five (5) trees. Trees selected for saw-topping or high-girdling shall not be located within seventy-five (75) feet of a drivable road (open after use) or a property line boundary where BLM land abuts non-federal ownership (Exhibit F pages 6-10).
- b. **Basal-girdling:** Select healthy Douglas-fir trees with live crown ratios **less** than thirty (30) percent and **smaller** than average crown spread. If only trees with larger live crown ratios than appropriate are available, select appropriately sized trees with the smallest crown ratio present. Selected trees shall be located within the portion of the CWD units designated for basal-girdling and selected in groups of three (3) to five (5) trees. Trees selected for basal-girdling shall not be located within approximately one hundred fifty (150) feet of a drivable road (open after use) or a property line boundary where BLM land abuts non-federal ownership (Exhibit F pages 6-10). Trees selected for basal-girdling shall be those trees which provide minimal amounts or no shade to streams (e.g., north side of stream channel and/or being an area where topography or tree location minimizes the shade afforded to stream by selected tree, such as being located several tree spacings from the stream channel).
- c. **Tree felling:** Select Douglas-fir trees with live crown ratios **less** than thirty (30) percent and **smaller** than average crown spread. If only trees with larger live crown ratios than appropriate are available, select appropriately sized trees with the smallest crown ratio present. Selected trees shall be located within the portion of the CWD unit designated for felling and shall be scattered uniformly throughout the unit. Trees selected for felling shall be and selected singly (not in groups). Trees selected for felling shall be located within one hundred (100) feet of the stream channel and selected so that when felled, the portion of the tree in contact with the stream channel would be at least six (6) inches in diameter. Trees selected for felling shall be those trees which provide minimal amounts or no shade to

streams (e.g., north side of stream channel and/or being an area where topography or tree location minimizes the shade afforded to stream by selected tree, such as being located several tree spacings from the stream channel).

2. CWD Treatments

a. **Saw-Topping** – severing the treetop within the live crown

1. The Purchaser shall climb and top selected trees at a height of at least sixty (60) feet above the ground at a point where approximately twenty to fifty (20-50) percent of the live crown remains; saw-topping heights shall be varied equally within this placement within the live crown. Topping shall be done with power tools (e.g., chainsaws).
2. The Purchaser shall cut several V-type notches that are a minimum of six (6) cuts into the sawn top surface of the tree, each a minimum of six (6) inches deep.
3. To the extent practicable, the Purchaser shall retain all green limbs and the largest dead limbs on the treated trees during the climbing and topping operations.
4. Tree tops shall be completely severed from the tree and fall completely to the ground inside unit boundaries.
5. To the extent practicable, the Purchaser shall directionally fall tops in order to not damage existing snags, under-story conifers, any tree containing a suspected nest of a bird or mammal, or any tree with defects such as hollow cavities, multiple tops, or decay, and avoid to contact with unburned burn piles and drivable roads.
6. The Purchaser shall tie two (2) pieces of flagging of a color approved by the Authorized Officer around the bole of each treated tree, one (1) at a height of approximately twenty to thirty (20-30) feet above the ground and another at four and one-half (4.5) feet above the ground (measured from the uphill side of the tree).
7. A small numbered aluminum tag shall be nailed to the base of the treated tree (uphill side). The tree tag number shall be recorded on the Wildlife Tree Data Recording Form.

b. **High-Girdling** – girdling within the live crown

1. The Purchaser shall climb and girdle selected trees within the live crown at a point where approximately twenty to fifty (20-50) percent of the live crown remains below the point of girdling and at a height of at least sixty (60) feet above the ground; girdling heights shall be varied equally within this placement within the live crown. Girdling may be done with a hand tool or power tool and will consist of removing all bark and cambium in a ten to twelve (10-12) inch band completely around the main stem of the tree.
2. Tool cuts must not penetrate more than one-half (0.5) inches into the wood of high-girdled trees.

3. Live limbs below the point of high-girdling shall not be removed. To the extent practicable, the Purchaser shall retain the largest dead limbs on the trees during the climbing and high-girdling operations.
4. The Purchaser shall tie three pieces of flagging of a color approved by the Authorized Officer to each high-girdled tree. One flag shall be tied on a branch visible from the ground near the point of girdle, a second flag shall be tied around the bole of the tree at a height of approximately twenty to thirty (20-30) feet above the ground and a third flag at four and one-half (4.5) feet above the ground (measured from the uphill side of the tree). The two highest flags shall extend at least four (4) feet from the knot.
5. A small numbered aluminum tag shall be nailed to the base of the treated tree (uphill side). The tree tag number shall be recorded on the Wildlife Tree Data Recording Form.

c. Basal-Girdling

1. The Purchaser shall basal-girdle selected trees by making three (3) parallel cuts around the bole of the tree between three (3) and four (4) feet above ground level measured on the uphill side of the tree; power tools may be used. Each cut must connect with itself completely around the tree and penetrate through the cambium layer into the wood at least one-half (0.5) inches, but not more than one and one-half (1.5) inches. The distance between the top cut and the bottom cut shall not exceed twelve (12) inches.
2. The Purchaser shall tie a piece of flagging of a color approved by the Authorized Officer around the bole of each treated tree four and one-half (4.5) feet above the ground (measured from the uphill side of the tree).
3. A small numbered aluminum tag shall be nailed to the base of the treated tree (uphill side). The tree tag number shall be recorded on the Wildlife Tree Data Recording Form.

d. Felling

1. The Purchaser shall completely sever selected trees from the stump and fall them completely to the ground.
2. Stumps shall be no more than four and one-half (4.5) feet tall measured on the uphill side.
3. No part of a fallen tree shall rest outside of the CWD unit boundaries, or within one hundred fifty (150) feet of any drivable road.
4. Directionally fall trees toward the nearest mapped stream or stream channel.
5. Trees shall be felled into active stream channels only during the Oregon Department of Fish and Wildlife's (ODFW's) in-stream work window (July 15 – September 30) unless a waiver is obtained from ODFW by the BLM.
6. Directionally fall trees away from existing snags, under-story conifers, any tree containing a suspected nest of a bird or mammal, or any green tree with defect such as multiple tops, hollow cavities, or decay.

7. A small numbered aluminum tag shall be nailed to the base of the felled tree. The tree tag number shall be recorded on the Wildlife Tree Data Recording Form.

3. Documentation

- a. The Purchaser shall provide the location for all saw-topped, high-girdled, basal-girdled or felled trees by documenting the UTM coordinates using a GPS unit with NAD83 datum, zone 10. If acceptable GPS satellite coverage cannot be obtained at a site, the point shall be hand drawn onto a map and submitted to the Authorized Officer with the Wildlife Tree Data Recording Forms.
- b. The Purchaser shall provide the Wildlife Tree Data Recording Forms, UTM coordinates, and any hand drawn maps in a digital format once per week to the Authorized Officer for work completed during the previous week.
- c. All information recorded on the Wildlife Tree Data Recording Forms shall be legible, clear and reproducible on a black and white copy machine. All documents shall be reviewed by the Purchaser to ensure completeness, legibility, accuracy, and consistency in style before submitting them to the Authorized Officer.

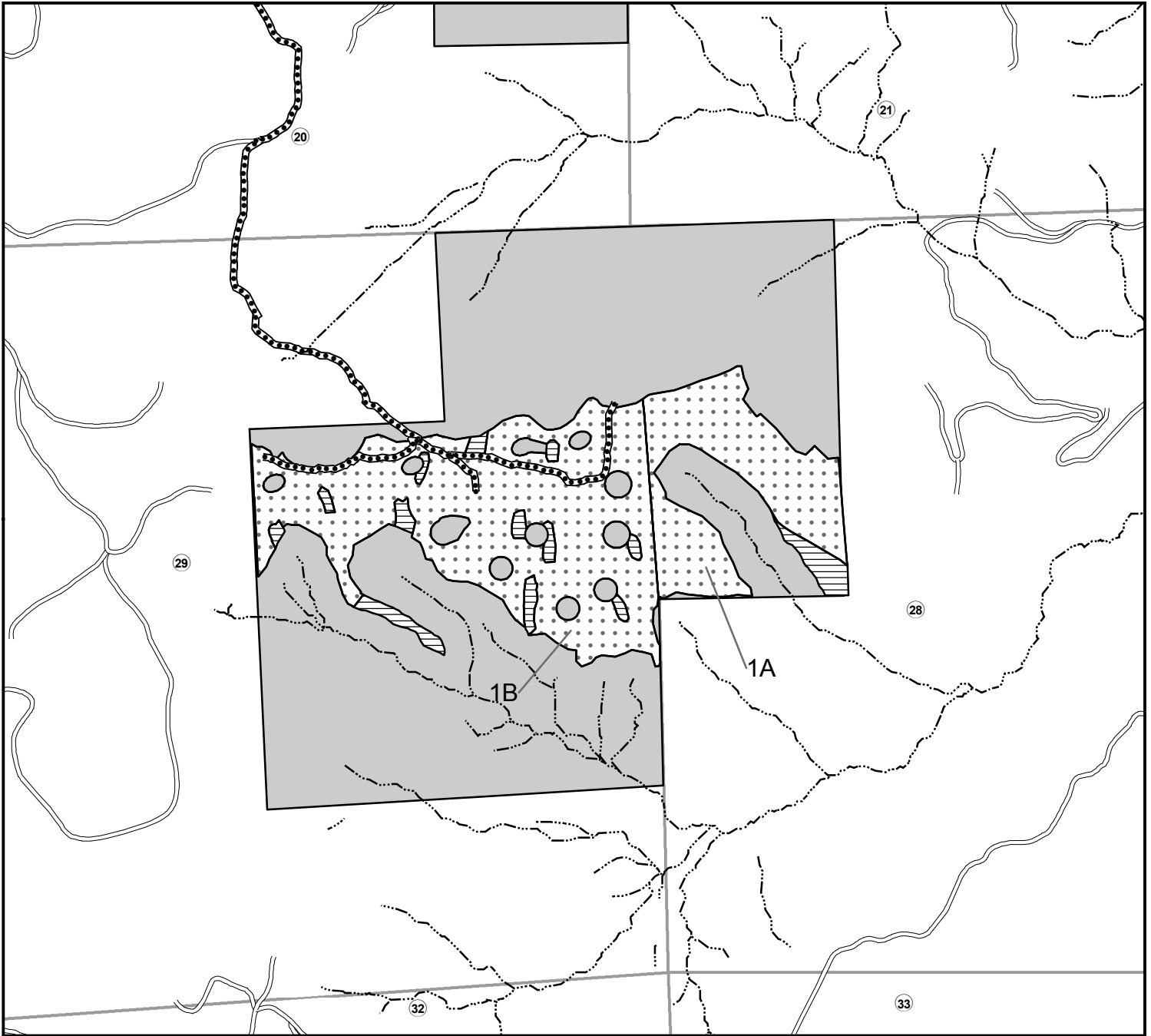


United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
Coarse Woody Debris Creation

Contract No. ORN04-TS-2020.0401
 Boot Up Timber Sale
 Exhibit F
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1/2/2020

T. 2S. R. 6W, Section 28 and 29 W. M. - NORTHWEST OREGON DISTRICT - OREGON



- Streams
- Open After Use
- Existing Roads

- Saw Top and High Girdle
- ▨ Saw Top, High Girdle, and Basal Girdle

Exhibit G CWD Unit	Acres	Total Trees	Saw-Top	High Girdle	Basal Girdle	Fell	Tree Size to be Selected (Inches at DBH)
1A (28)	26	26	18	0	8	0	28 to 36
1B (29)	67	67	23	22	22	0	16 to 24

1 inch = 1,000 feet

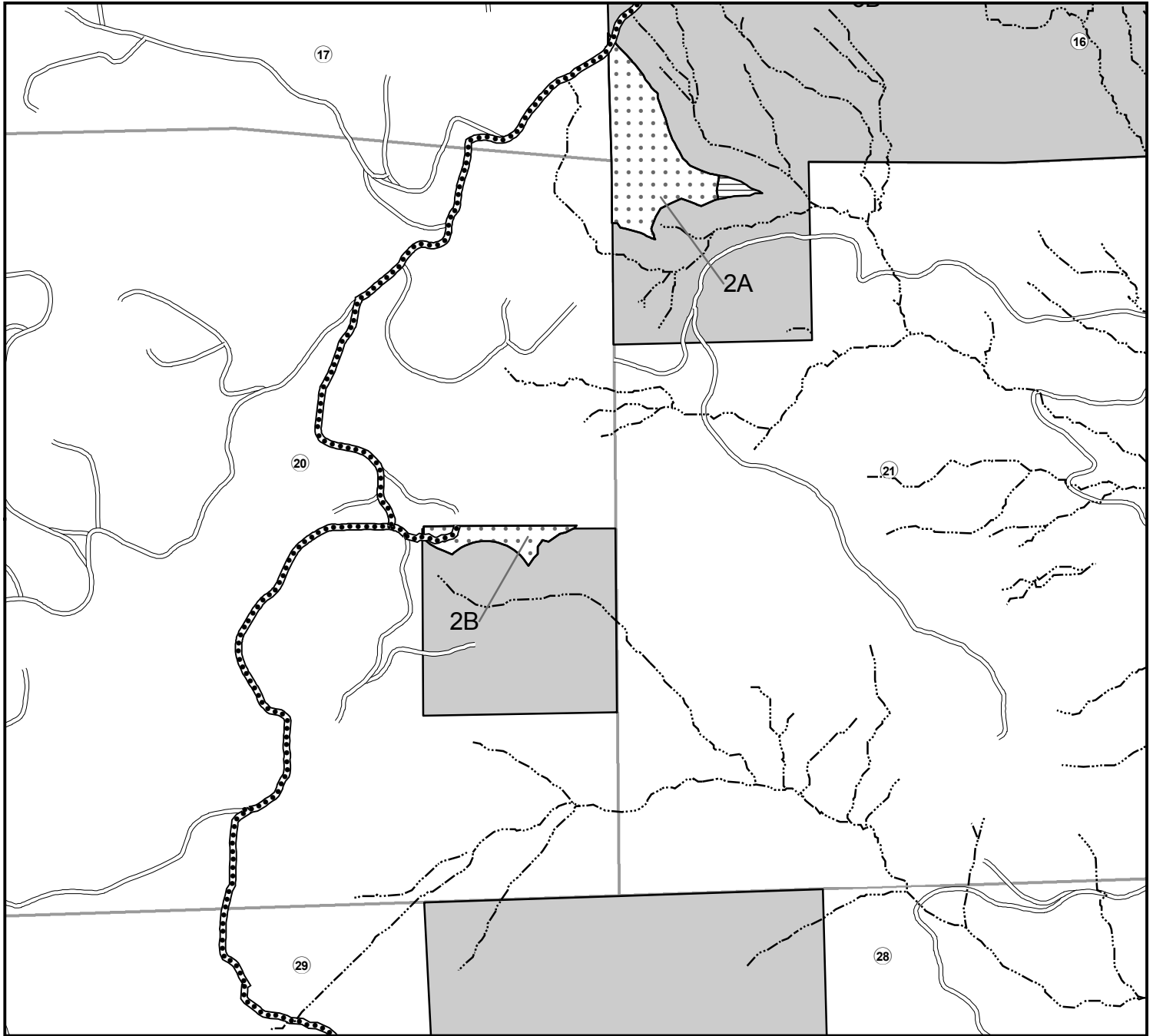


United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
Coarse Woody Debris Creation

Contract No. ORN04-TS-2020.0401
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1/2/2020

T. 2S. R. 6W, Section 16, 20 and 21 W. M. - NORTHWEST OREGON DISTRICT - OREGON



- Streams
- Open After Use
- Existing Roads
- Saw Top and High Girdle
- Saw Top, High Girdle, and Basal Girdle

Exhibit G CWD Unit	Acres	Total Trees	Saw-Top	High Girdle	Basal Girdle	Fell	Tree Size to be Selected (Inches at DBH)
2A (16 & 21)	12	12	4	4	4	0	18 to 30
2B (20)	3	3	3	0	0	0	18 to 30

1 inch = 1,000 feet

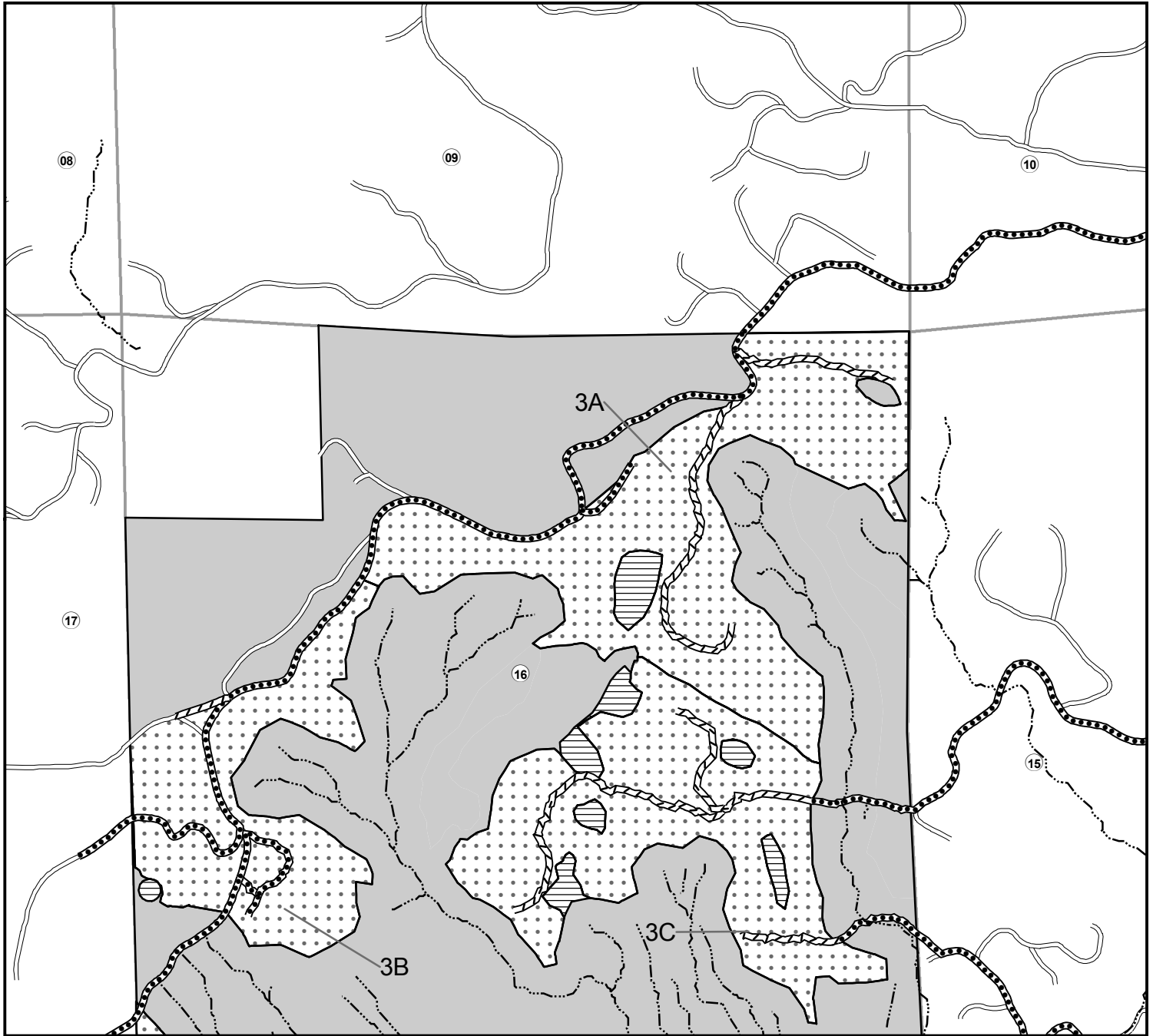


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 BUREAU OF LAND MANAGEMENT
Coarse Woody Debris Creation

Contract No. ORN04-TS-2020.0401
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1/2/2020

T. 2S. R. 6W, Section 16 W. M. - NORTHWEST OREGON DISTRICT - OREGON



- Streams
- ==== Closed After Use
- Open After Use
- ==== Existing Roads
- Saw Top and High Girdle
- ==== Saw Top, High Girdle, and Basal Girdle

Exhibit G CWD Unit	Acres	Total Trees	Saw-Top	High Girdle	Basal Girdle	Fell	Tree Size to be Selected (Inches at DBH)
3A (16)	83	106	98	0	8	0	22 to 32
3B (16)	47	47	21	22	4	0	22 to 32
3C (16)	73	73	25	24	24	0	22 to 32

1 inch = 1,000 feet

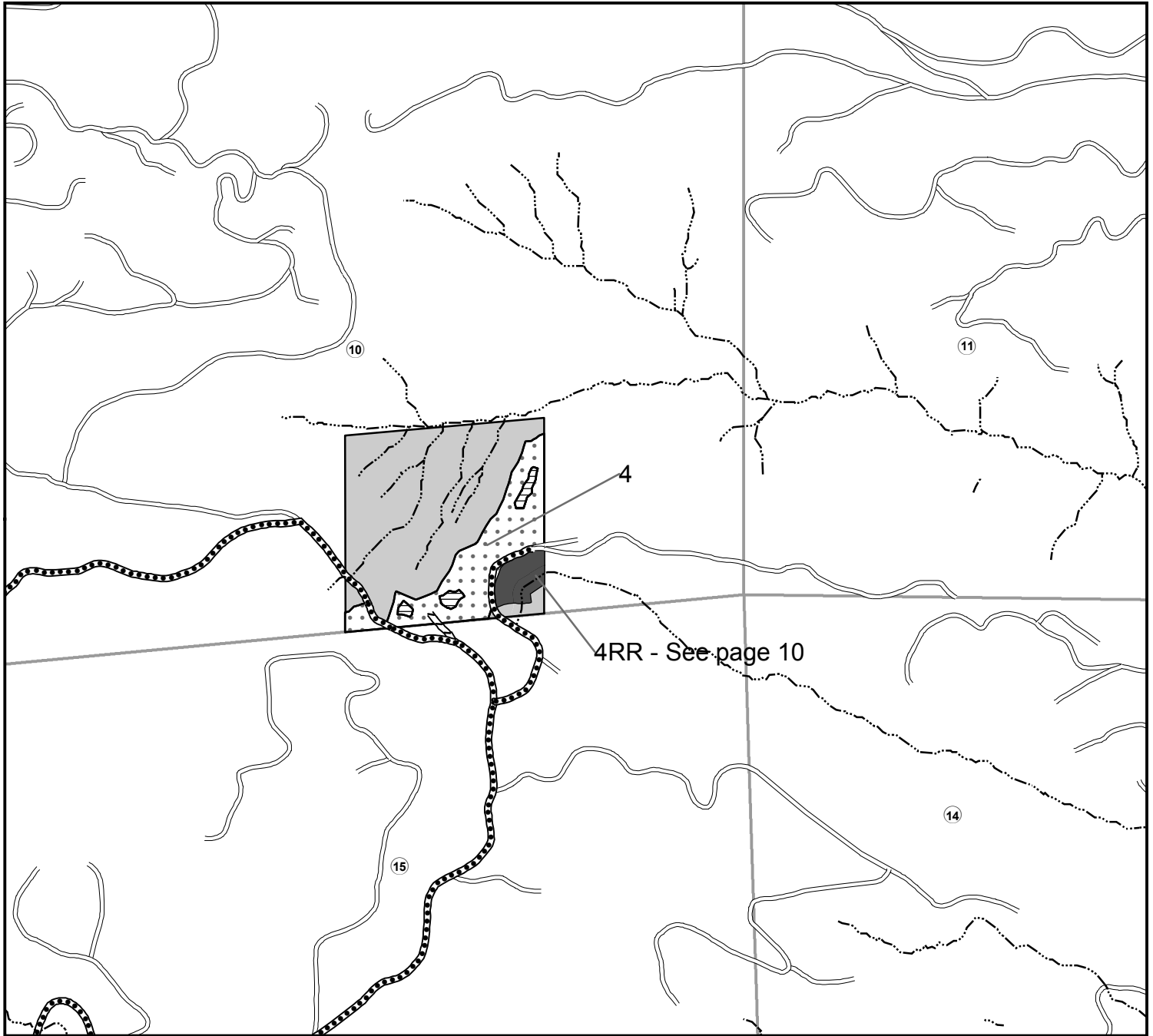


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 BUREAU OF LAND MANAGEMENT
Coarse Woody Debris Creation

Contract No. ORN04-TS-2020.0401
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1/2/2020

T. 2S. R. 6W, Section 10 W. M. - NORTHWEST OREGON DISTRICT - OREGON



- Streams
- ==== Closed After Use
- Open After Use
- ==== Existing Roads
- █ CWD Unit 4RR
- █ Saw Top and High Girdle
- █ Saw Top, High Girdle, Basal Girdle, and Fell
- █ Saw Top, High Girdle, and Basal Girdle

Exhibit G CWD Unit	Acres	Total Trees	Saw-Top	High Girdle	Basal Girdle	Fell	Tree Size to be Selected (Inches at DBH)
4 (10)	11	11	11	0	0	0	26 to 32

1 inch = 1,000 feet

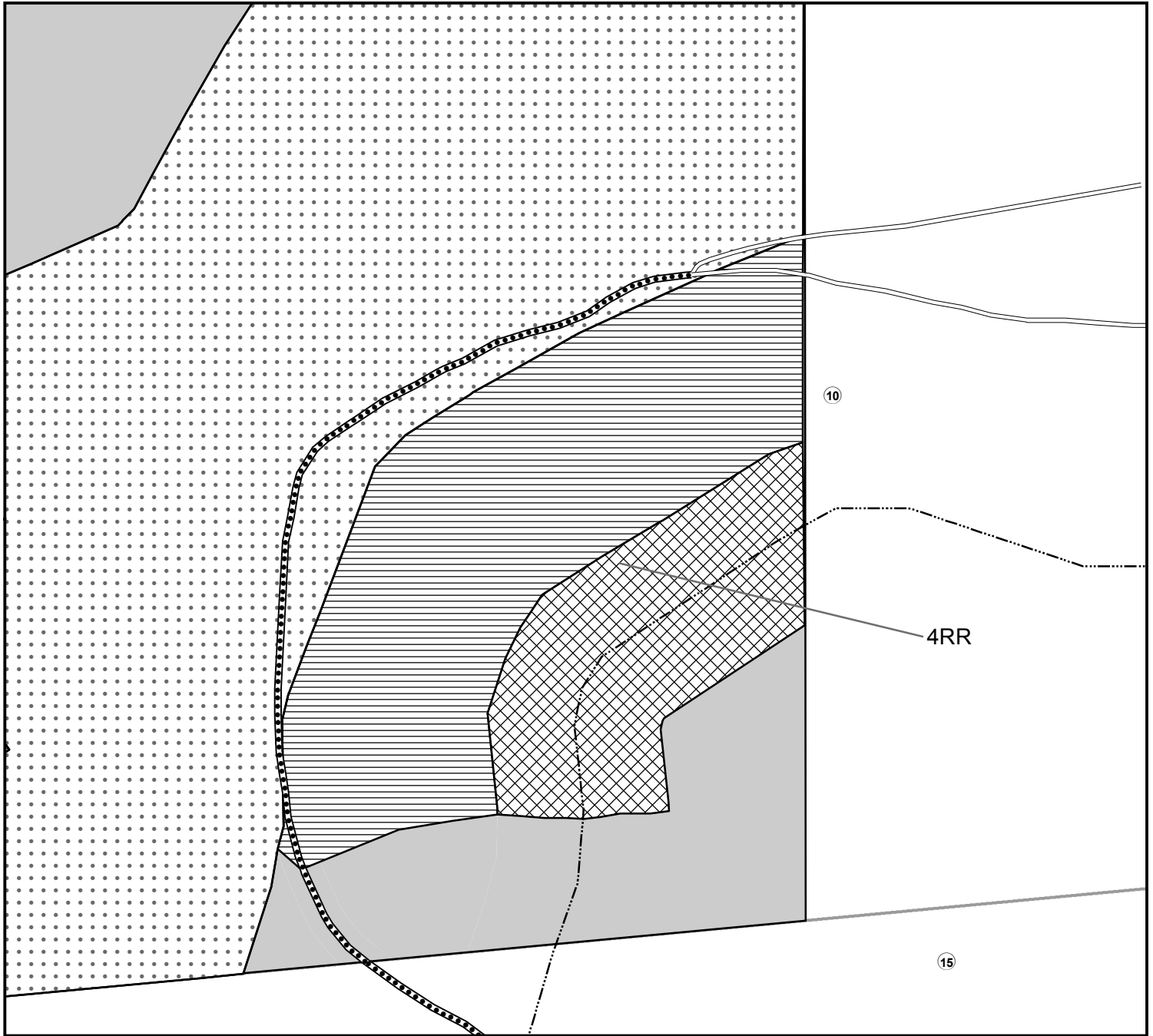


United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
Coarse Woody Debris Creation

Contract No. ORN04-TS-2020.0401
 Boot Up Timber Sale
 Exhibit F
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1/2/2020

T. 2S. R. 6W, Section 10 W. M. - NORTHWEST OREGON DISTRICT - OREGON



- Streams
- Open After Use
- ==== Existing Roads
- Saw Top and High Girdle
- XXXX Saw Top, High Girdle, Basal Girdle, and Fell
- ==== Saw Top, High Girdle, and Basal Girdle

Exhibit G CWD Unit	Acres	Total Trees	Saw-Top	High Girdle	Basal Girdle	Fell	Tree Size to be Selected (Inches at DBH)
4RR (10)	2	26	7	7	6	6	fell = 18 to 26 snags = 16 to 26

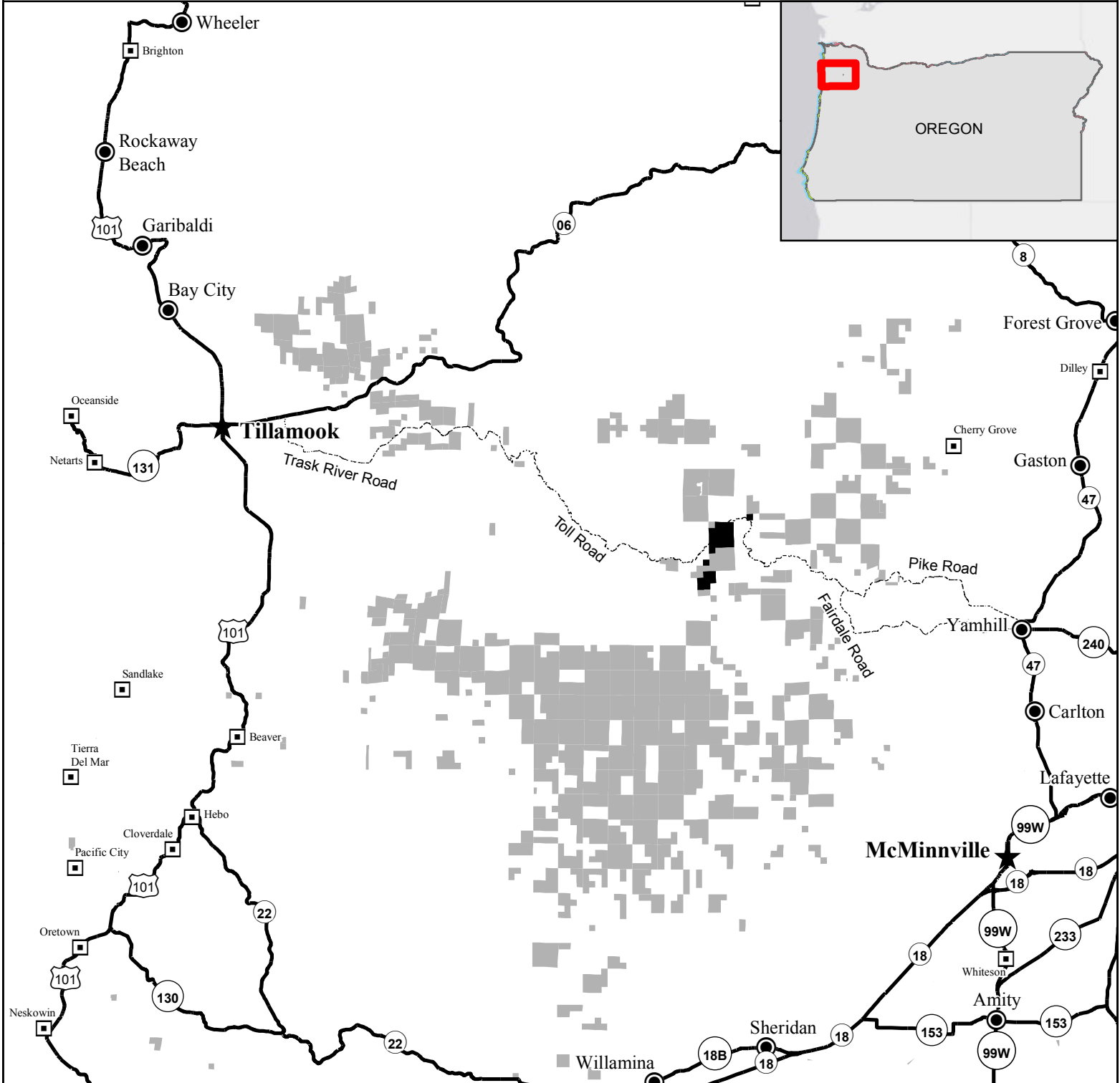
1 inch = 100 feet



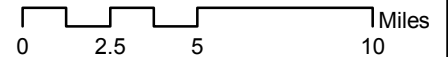
United States Department of the Interior
 BUREAU OF LAND MANAGEMENT
Contract Area Vicinity Map
 Northwest Oregon District - Tillamook Field Office

Contract No. ORN04-TS-2020.0401
 Boot Up Timber Sale
 Vicinity Map
 Page 1 of 1

12/12/2019



- ★ County Seat
- City, Town, or Village
- Community or Locale
- Vicinity Roads
- Highway
- Boot Up Contract Area
- BLM Land



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Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Yamhill	2 S	6 W	10	SW1/4SE1/4	Willamette
O&C	Yamhill	2 S	6 W	16	NE1/4, E1/2NW1/4, SW1/4NW1/4, SW1/4, SE1/4	Willamette
O&C	Yamhill	2 S	6 W	20	NE1/4SE1/4	Willamette
O&C	Yamhill	2 S	6 W	21	Lot 2	Willamette
O&C	Yamhill	2 S	6 W	28	Lot 4, Lot 5	Willamette
O&C	Yamhill	2 S	6 W	29	NE1/4NE1/4, S1/2NE1/4, N1/2SE1/4	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	16,665.0	17,437.0	17,454.0	158,819	424	32,740
Western Hemlock	753.0	800.0	800.0	11,292	0	2,645
Grandfir	668.0	706.0	706.0	5,414	0	1,102
Red Alder	31.0	55.0	68.0	912	1,031	687
Totals	18,117.0	18,998.0	19,028.0	176,437	1,455	37,174

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
243.0	74.0	9.0	326.0	55.6

Logging Costs

Stump to Truck	\$1,667,812.72
Transportation	\$993,363.80
Road Construction	\$664,262.93
Maintenance/Rockwear	\$406,544.98
Road Use	\$90,585.00
Other Allowances	\$73,803.80
Total:	\$3,896,373.23
Total Logging Cost per MBF:	\$215.07

Utilization Centers

<u>Location</u>	<u>Distance</u>	<u>% of Net Volume</u>
Garibaldi	44.0 miles	1 %
Willamina	43.0 miles	99 %

Profit & Risk

Profit	9 %
Risk	3 %
Total Profit & Risk	12 %

Tract Features

Quadratic Mean DBH	18.8 in
Average GM Log	107 bf
Average Volume per Acre	55.6 mbf
Recovery	95 %
<u>Net MBF volume:</u>	
Green	18,117.0 mbf
Salvage	0 mbf
Export	0 mbf
<u>Ground Base Logging:</u>	
Percent of Sale Volume	77 %
Average Yarding Slope	25 %
Average Yarding Distance	300 ft
<u>Cable Logging:</u>	
Percent of Sale Volume	23 %
Average Yarding Slope	45 %
Average Yarding Distance	600 ft
<u>Aerial Logging:</u>	
Percent of Sale Volume	0 %
Average Yarding Slope	0 %
Average Yarding Distance	0 ft

Cruise

Cruise Completed	November 2019
Cruised By	NWO cruisers
Cruise Method	Variable Plot 40 BAF in Regen, 20 BAF in Thin. 3p/VP in RW

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Appraised Price/MBF	Appraised Value
Douglas Fir	32,740	16,665.0	\$531.27	\$63.75	\$215.07	\$0.00	\$252.50	\$4,207,912.50
Western Hemlock	2,645	753.0	\$379.68	\$45.56	\$215.07	\$0.00	\$119.10	\$89,682.30
Grandfir	1,102	668.0	\$389.83	\$46.78	\$215.07	\$0.00	\$128.00	\$85,504.00
Red Alder	687	31.0	\$391.15	\$46.94	\$215.07	\$0.00	\$129.10	\$4,002.10
Totals	37,174	18,117.0						\$4,387,100.90

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				70.0 %	28.0 %	2.0 %	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Western Hemlock				46.0 %	50.0 %	4.0 %	

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Grandfir				80.0 %	19.0 %	1.0 %	

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill	Camp Run
Red Alder						100.0 %

Boot Up**Unit Summary****ORN04-TS-2020.0401****Unit: 1**

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	2,661.0	2,780.0	2,782.0	8,564
Western Hemlock	151.0	160.0	160.0	798
Grandfir	137.0	146.0	146.0	202
Red Alder	10.0	18.0	19.0	172
Totals:	2,959.0	3,104.0	3,107.0	9,736

Net Volume/Acre: 35.2 MBF

Regeneration Harvest	25.0
Partial Cut	59.0
Right of Way	0.0
Total Acres:	84.0

Unit: 2

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	272.0	284.0	284.0	1,442
Grandfir	22.0	24.0	24.0	30
Western Hemlock	21.0	23.0	23.0	150
Red Alder	2.0	3.0	3.0	28
Totals:	317.0	334.0	334.0	1,650

Net Volume/Acre: 22.6 MBF

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

Unit: 3

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	12,602.0	13,188.0	13,202.0	20,669
Western Hemlock	511.0	542.0	542.0	1,394
Grandfir	358.0	378.0	378.0	657
Red Alder	17.0	31.0	42.0	452
Totals:	13,488.0	14,139.0	14,164.0	23,172

Net Volume/Acre: 64.8 MBF

Regeneration Harvest	208.0
Partial Cut	0.0
Right of Way	0.0
Total Acres:	208.0

Unit: 4

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	625.0	654.0	655.0	1,097
Western Hemlock	26.0	28.0	28.0	78
Grandfir	19.0	20.0	20.0	34
Red Alder	1.0	2.0	2.0	24
Totals:	671.0	704.0	705.0	1,233

Net Volume/Acre: 61.0 MBF

Regeneration Harvest	10.0
Partial Cut	1.0
Right of Way	0.0
Total Acres:	11.0

Unit: RW

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	505.0	531.0	531.0	968
Grandfir	132.0	138.0	138.0	179
Western Hemlock	44.0	47.0	47.0	225
Red Alder	1.0	1.0	2.0	11
Totals:	682.0	717.0	718.0	1,383

Net Volume/Acre: 75.8 MBF

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

Total Stump To Truck	Net Volume	\$/MBF
\$1,667,812.72	18,117.0	\$92.06

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	1,357.0	\$137.82	\$187,021.74	Cable Thin @ 5 loads/day
Track Skidder	GM MBF	405.0	\$105.30	\$42,646.50	Ground Thin @ 6 loads/day
Cable: Medium Yarder	GM MBF	3,620.0	\$98.44	\$356,352.80	Cable Regen @ 7 loads/day
Track Skidder	GM MBF	13,616.0	\$78.98	\$1,075,391.68	Ground Regen @ 8 loads/day
Subtotal				\$1,661,412.72	

Additional Costs

Item	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Intermediate Support	Each	3.0	\$300.00	\$900.00	
Subtotal				\$900.00	

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	\$/Unit of Measure	Total Cost	Remarks
Cable: Medium Yarder	Each	1.0	\$1,500.00	\$1,500.00	Large amount of volume with seasonal restrictions
Loader	Each	2.0	\$1,200.00	\$2,400.00	
Track Skidder	Each	2.0	\$800.00	\$1,600.00	Large amount of volume with seasonal restrictions
Subtotal				\$5,500.00	

Comments:

Fuel \$3.00/ Gal.
5MBF/ Load.

Total	Net Volume	\$/MBF
\$993,363.80	18,117.0	\$54.83

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	\$/Unit of Measure	Total Cost	% of Sale Volume
Garibaldi	44.0	Hardwoods	GM MBF	55.0	\$65.31	\$3,592.05	1 %
Willamina	43.0	Conifer	GM MBF	18,943.0	\$52.25	\$989,771.75	99 %

Comments:

Conifer: 5mbf/load @ \$95.00/Hour
 Hardwood : 4mbf/load @ \$95.00/Hour

Engineering Allowances

Total	Net Volume	\$/MBF
\$1,161,392.91	18,117.0	\$64.11

Cost Item	Total Cost
Road Construction:	\$664,262.93
Road Maintenance/Rockwear:	\$406,544.98
Road Use Fees:	\$90,585.00

Comments:

See Engineering Appraisal

Total	Net Volume	\$/MBF
\$73,803.80	18,117.0	\$4.07

Environmental Protection

Cost item	Total Cost
Equipment Wash	\$400.00
Subtotal	\$400.00

Fire Prevention & Control

Cost item	Total Cost
Landing Pile & Cover	\$450.00
Landing Piles Burn	\$450.00
Machine Piles Burn	\$6,675.00
Machine Pile Construct, Cover	\$33,375.00
Subtotal	\$40,950.00

Logging

Cost item	Total Cost
Basal Girdle	\$2,128.00
Fell	\$192.00
High Girdle	\$5,688.00
Saw-Top	\$15,750.00
Truck Assist (Cat Time)	\$6,320.00
CWD Admin Cost	\$2,375.80
Subtotal	\$32,453.80

Comments:

CWD stip from Wildlife appraisal
 Fuels stip from fuels appraisal