UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
Tillamook Field Office
6275 Blimp Boulevard
Tillamook, Oregon 97141

Gopher Broke Timber Sale
ORN04-TS-2026.0401
Date: January 23, 2026

TIMBER SALE PROSPECTUS
ORAL AUCTION

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, February 25, 2026. Before bids are submitted, full information concerning the timber, the conditions of sale and submission of bids, including appraised prices per species, should be obtained from the above District Manager, or designated representative. The right is hereby reserved to waive technical defects in this advertisement and to reject any or all bids. The United States reserves the right to waive any informality in bids received whenever such waiver is in the interest of the United States.

THIS PROSPECTUS does not constitute the decision document for purposes of protest and appeal of a forest management decision. Consistent with 43 CFR Subpart 5003.2(b), the date the BLM posts the forest management decision on the BLM's ePlanning website establishes the effective date of the decision for purposes of an administrative appeal. The decision was posted to the BLM's ePlanning website on December 12, 2025, referring to the Upper Willamina Forest Management Project, DOI-BLM-ORWA-NO40-2021-0001-EA.

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 is also available online at: https://www.blm.gov/or/resources/forests/index.php. 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.

TIMBER SALE NOTICE

SCALE SALE

NORTHWEST OREGON DISTRICT
TILLAMOOK FIELD OFFICE
COLUMBIA MASTER UNIT

Sale Date: February 25, 2026

CONTRACT NO.: ORN04-TS-2026.0401, Gopher Broke Timber Sale, Scale Sale
YAMHILL COUNTY, OREGON: O&C: **Oral Bid**
BID DEPOSIT REQUIRED: $172,500.00

All timber designated for cutting on: SW¼, **Sec. 12;** E½NE¼, E½SE¼, **Sec 21;** NE¼NE¼, S½NE¼, SE¼SW¼, **Sec. 23;** Lot 1, SW¼NW¼, NW¼SW¼, **Sec. 33,** T. 4 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
14,933	5,071	Douglas Fir	6,005	$265.90	$1,596,729.50
950	732	Grand Fir	902	$135.40	$122,130.80
153	28	Red Alder	31	$145.20	$4,501.20
503	34	Bigleaf Maple*	47	$23.60	$1,109.20
16,539	**5,865**		**6,985**		**$1,724,470.70**

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

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 prohibited from substitution of exported private timber.

CRUISE INFORMATION: The timber volumes for the harvest units were based on a variable plot cruise for estimating the board foot volume of trees. Plots were measured using a 40 basal area factor (BAF) for the regen and RW units. A 20 BAF was used in thinning harvest units. None of the total sale volume is salvage material. For merchantable Douglas-fir trees the average DBHOB is 16.8 inches; the average gross merchantable log contains 83 board feet; the total gross volume is approximately 7,320 MBF; and 95% recovery is expected.

CUTTING AREA: Ten (10) units totaling approximately two hundred thirteen (213) acres, of which sixty-seven (67) acres shall be regeneration harvest and one hundred forty-six (146) acres shall be partial cut harvest. These acres are inclusive of Patch Cut and Clump Areas as shown on Exhibit A. In addition, approximately (10) acres of right-of-way shall be cut. Acres shown on Exhibit A have been 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.

LOCATION: The contract area is located approximately eight (8) air miles north of Sheridan, Oregon. Starting in Sheridan Oregon, head east on OR-18 E for approximately 1.5 miles. Turn left (north) on Gopher Valley Road and follow for 7.8 miles. Slight left to stay on Gopher Valley Road and continue for 1.1 miles. Turn left onto 4-6-24.0 and follow for .75 miles where you will encounter unit 6 of the Timber Sale. Consult a project location map.

SPECIAL PROVISION TO NOTE

BUYOUT SECURITIES (Sec. 44. nn.): The Purchaser shall create coarse woody debris in accordance with Sec. 44. mm. The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of one hundred twenty-one thousand, eighty and 78/100 dollars ($121,080.78), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract and the Authorized Officer shall establish a required schedule of payments.

ACCESS AND ROAD MAINTENANCE:
Access is provided by Hamton Resources, Inc., Mid-Valley Resources, Inc., Golden Pond Timberlands Inc., and the Bureau of Land Management (BLM) owned roads. All roads used in conjunction with this sale will be maintained by the Purchaser. The Purchaser will be required to pay a rockwear obligation of one thousand eight hundred ninety-three and 10/100 ($1,893.10) dollars to the Government and spread **95 CY** crushed rock on BLM roads for maintenance requirements.

In the use of Hampton Resources Inc., owned roads, under Right-of-Way Agreement No. S-700 (OR044680) and as listed in section 44, the Purchaser will be required to enter into a license agreement which requires: (a) Purchaser maintenance of all Hampton Resources Inc., owned roads, (b) Purchaser pay a road use obligation fee of thirty-eight thousand nine hundred twenty-one and 33/100 ($38,921.33) dollars, (c) Purchaser pay a rockwear fee of two thousand five hundred twenty and 24/100 ($2,520.24)dollars, (d) Purchaser provide proof of insurance with limit of $1,000,000/$1,000,000/$1,000,000 and a performance bond of $1,000.00. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.

In the use of Mid-Valley Resources Inc., owned roads, under Right-of-Way Agreement No. S-700 (OR044680) and as listed in section 44, the Purchaser will be required to enter into a license agreement which requires: (a) Purchaser maintenance of all Mid-Valley Resources Inc., owned roads, (b) Purchaser pay a road use obligation fee of twelve thousand three hundred seventy-one and 62/100 ($12,371.62) dollars, (c) Purchaser pay a rockwear fee of one thousand three hundred eighty-two and 26/100 ($1,382.26) dollars, (d) Purchaser provide proof of insurance with limit of $1,000,000/$1,000,000/$1,000,000 and a performance bond of $1,500.00. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.

In the use of Hampton Resources Inc., owned roads, under Right-of-Way Agreement No. S-499 (OR044569) and as listed in section 44, the Purchaser will be required to enter into a license agreement which requires: (a) Purchaser maintenance of all Hampton Resources Inc., owned roads, (b) Purchaser pay a rockwear fee of eight hundred forty five and 06/100 ($845.06) dollars, (c) Purchaser provide proof of insurance with limit of $1,000,000/$1,000,000/$1,000,000 and a performance bond of $500.00. Prior to the use of said roads, the Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.

In the use of Golden Pond Timberlands Inc., owned roads, under Right-of-Way Agreement No. S-682D (OR068010) and as listed in section 44, the Purchaser will be required to enter into a license agreement which requires: (a) Purchaser maintenance of all Golden Pond Timberlands Inc., owned roads, (b) Purchaser pay a road use obligation fee of two thousand seven hundred seventy and 00/100 ($2,770.00) dollars, (c) Purchaser pay a rockwear fee of two hundred fifty six and 57/100 ($256.57) dollars, (d) Purchaser provide proof of insurance with limit of $1,000,000/$1,000,000/$1,000,000 and a performance bond of $500.00. Prior to the use of said roads, the

Purchaser shall furnish the Authorized Officer a copy of the executed license agreement.

The designated haul route for all units is out either Gopher Valley Road towards Sheridan, Peavine Road towards McMinnville, or Peavine Road to East Creek Road towards Willamina.

Road use obligations and rockwear fees have been calculated using timber volumes based on the actual BLM timber sale cruise volume. Because this is a scale sale, all road maintenance, rockwear and road use fees shall be calculated with the actual volume hauled over said road segments after all merchantable timber has been cut and scaled. If the actual fees differ from what is mentioned and paid above, the additional/difference shall be reported and paid accordingly. All differences in fees shall be calculated and paid prior to the contract termination.

Purchaser shall also spread **225 CY** crushed rock on non-BLM roads as needed and instructed by the Authorized Officer.

ROAD CONSTRUCTION, IMPROVEMENT, 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:
   Total Length: 207+44 Stations.
   Road construction work to be performed is described in detail in Exhibit C and as shown on Exhibit A and C maps.

2. Renovation:
   Total Length: 328+49 Stations
   Road renovation work to be performed is described in detail in Exhibit C and as shown on Exhibit A and C maps.

3. Estimated Quantities:
   a. Clearing, Grubbing, and Brushing:
      23.28 acres of Clearing and Grubbing
      3.10 miles of Brushing

   b. Culverts: Reference Exhibit C for details
      765 feet of 18-inch Corrugated Plastic Pipe (CPP) – Type S (23 Pipes) – Government Provided
      30 feet of 18-inch Corrugated Plastic Pipe (CPP) – Type C (3 Pipes) – Government Provided
      535 feet of 24-inch Corrugated Plastic Pipe (CPP) – Type S (13 Pipes) – Government Provided
      40 feet of 36-inch 14-gauge Aluminized Steel Pipe (CMP) – (1 Pipe) – Government Provided
      55 feet of 48-inch 14-gauge Aluminized Steel Pipe (CMP) – (1 Pipe) – Purchaser Provided
      65 feet of 54-inch 14-gauge Aluminized Steel Pipe (CMP) – (1 Pipe) – Purchaser Provided
      All bands, gaskets, and hardware shall be provided by the Purchaser.
      All metal "T" posts shall be provided by the Government
      23 Straw Bales for Sediment Catch Basins – Purchaser Provided

   c. Aggregate Material & Rock Source: Reference Exhibit C and D for details

      Commercial Source:
      3,424 CY 6" Jaw Run Base Rock
      1,480 CY 1 ½"-0" Crushed Rock
      320 CY 1-1/2"- 0" Crushed Maintenance Rock
      80 CY Pit-Run Rock
      620 CY Class 5 Rip-Rap

   All rock required for project work shall be obtained from a commercial source.

Other:

- Purchaser may be required to drill and blast on the 4-6-33.1 road to achieve required specifications.
- Purchaser shall supply all seeding and mulching materials as described in section 1800 of Exhibit C.
- Purchaser may be required to apply dust abatement on Gopher Valley Road if they elect to use haul route during the restricted time period.

SEASONAL RESTRICTION MATRIX:

Restricted Times are Shaded

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**																								
Log haul, rock haul, and water haul. Restriction may be waived if Purchaser elects to upgrade roads, at their expense, to all-season haul requirements as approved by Authorized Officer (Sec. 44 m.).																								
Maintenance Activities and Roadside brushing																								
Road renovation, construction, and decommissioning																								
In-Stream Activities in the Yamhill River watershed																								
Log haul and rock haul on Gopher Valley Rd. Daily time restriction will occur from May 1 to June 30; no haul in dust abatement areas between 9:00 AM to 11:00 PM during the restricted period (Sec. 44 n.).																								

***Sec. 43**. Wood Products Reserved from Cutting*

RESERVED

a. All timber in the Reserve and Clump Areas shown on Exhibit A and all trees that are painted orange, and/or posted, which mark the boundaries of the Reserve Area.

b. All trees marked with orange paint above and below stump height within the boundaries of the Cutting Areas shown on Exhibit A.

c. All conifer trees less than seven (7) inches diameter at breast height (dbh), and all hardwoods not listed on Exhibit B in the Contract Area shown on Exhibit A which do not present a safety hazard. If any are felled, they shall be retained on site.

d. Existing down logs and snags in the Contract Area shown on Exhibit A, which do not present a safety hazard. All down logs and felled snags 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 as directed by the Authorized Officer.

***Sec. 44**. 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 plan 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 and felling operations until corrective measures to prevent further damages have been approved by the Authorized Officer.

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

e. 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.

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

g. The Purchaser shall provide flaggers to control traffic on Gopher Valley Road and Rock Creek Road whenever hazardous conditions are present from operations in accordance with Sec. 29. The Purchaser shall not block or close this road without concurrence from Yamhill County.

h. 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 shall be scattered or decked at a location designated by the Authorized Officer.

i. In skyline harvest areas all yarding shall be done with a skyline or similar cable system equipped with a carriage capable of transporting the leading end of the logs clear of the ground. 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 Cutting 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.

j. 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 thirty-five (35) percent) 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. Where ground-based operations are approved by the Authorized Officer, skid trails shall not exceed fifteen (15) percent of the total ground-based yarding area. 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 shall be water barred and blocked as directed by the Authorized Officer, after each operating season before the fall wet season begins. Temporary logging roads, skid trails, and harvester/forwarder trails will be de-compacted/tilled and covered with slash as directed by the Authorized Officer.

k. Before cutting and removing any trees necessary to facilitate logging in the Cutting 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 roads and/or cable yarding roads upon which timber is identified by the Purchaser to be cut and removed in accordance with this special provision must be necessary for the safe and expeditious removal of timber sold under this contact and shall be limited to the minimum width necessary for yarding of logs with a minimum of damage to reserve trees. The width of each skid road and/or cable yarding road shall be limited to twelve (12) feet unless otherwise approved by the Authorized Officer.

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. 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. 43. 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 deemed necessary and appropriate for the Government to safely measure and mark additional timber.

SEASONAL RESTRICTIONS

l. No road renovation (except roadside brushing, which is permitted year-round), road construction, road improvement, or road decommissioning, shown on Exhibit C, shall be conducted

during the wet season (generally between October 16 of one calendar year to May 31 of the following calendar year), and during other periods of wet soil conditions, as determined by the Authorized Officer.

m. No mechanized falling or ground-based equipment operation within harvest units shown on Exhibit A during the wet season and during other periods of wet soil conditions as determined by the Authorized Officer. Based on site specific considerations, as determined by the Authorized Officer, some of these activities may be allowed during the seasonal restriction.

n. No log, rock, or water hauling in dust abatement areas on Gopher Valley Road, as shown in Exhibit E, shall occur between 9:00 A.M. and 11:00 P.M., for an approximate 6-week period each calendar year as determined by the Authorized Officer. The 6-week restriction will generally occur between May 1 and June 30 of the same calendar year.

o. No log, rock, or water hauling in dust abatement areas on Gopher Valley Road, as shown in Exhibit E, shall occur generally between May 1 of one calendar year and September 15 of the same calendar year as determined by the Authorized Officer. Hauling shall be allowed if the Purchaser, at their expense, elects to apply dust abatement as directed by the Authorized Officer, as shown in Exhibit E and described in Exhibit D. Lignin Sulfonate applications are approved for dust abatement. No more than two (2) applications of lignin sulfonate for dust abatement may be applied per year.

p. No log hauling, water hauling, or rock hauling during the wet season or during other periods of wet soil conditions as determined by Authorized Officer. Hauling may be allowed if the Purchaser, at their expense, elects to complete road work necessary to allow for wet season cable yarding and hauling, as determined by the Authorized Officer. Necessary road work will be determined on a road-by-road basis and may include, but is not limited to, rock surfacing, improving drainage features, and more frequent road maintenance.

q. No road maintenance, as shown on Exhibit E, and described in Exhibit D, shall be conducted when activities are likely to adversely affect resources as determined by the Authorized Officer.

r. No work in live streams shall be conducted between October 1 of one calendar year and July 14 of the following calendar year in the Yamhill 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.

ROAD CONSTRUCTION, RENOVATION, IMPROVEMENT, MAINTENANCE AND USE

s. The Purchaser shall haul only on the designated haul route, shown in the tables below and in Exhibit E, unless an alternative route is approved by the Authorized Officer. The designated haul route for all units is out either Gopher Valley Road towards Sheridan, Peavine Road towards McMinnville, or Peavine Road to East Creek Road towards Willamina.

t. The Purchaser shall construct natural surfaced roads: 4-6-12.4, 4-6-12.5, 4-6-13.1 (Sta. 71+90 – 80+10), 4-6-22.1, 4-6-22.2, 4-6-23.0, 4-6-23.2, 4-6-23.3, 4-6-23.4, 4-6-23.5, 4-6-33.1, and 4-6-33.2. The Purchaser shall construct rocked surfaced roads: 4-6-13.1 (Sta. 52+40 – 71+90), and 4-6-23.1 (Sta. 0+00 – 10+29). The Purchaser shall renovate rocked surfaced roads: 4-6-13.1 (Sta. 0+00 – 52+40),

4-6-23.1 (10+29 – 23+37), 4-6-24.0 (Sta. 0+00 – 50+66), 4-6-27.1 (MP. 0.000 – 0.855), 4-6-27.2, 4-6-35.0, and Gopher Valley Road. The Purchaser shall renovate natural surfaced roads: 4-6-22.0, 4-6-24.0 (Sta. 50+66 – 67+16), and 4-6-27.1 (MP. 0.855 – 1.700) 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.

u. 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.

v. Any required construction, renovation, and improvement shall be completed and accepted prior to rock haul outside of the dry season (generally June 1 – October 15).

w. The Purchaser shall decommission 4-6-12.4, 4-6-12.5, and 4-6-13.1 (Sta. 71+90 – 80+10), as shown on Exhibit C, by subsoiling, installing non-drivable waterbars, scattering slash, removing culverts, and blocking. The Purchaser shall decommission 4-6-22.1, 4-6-22.2, 4-6-23.0, 4-6-23.2, 4-6-23.3, 4-6-23.4, 4-6-23.5, 4-6-24.0 (Sta. 50+66 – 67+16), 4-6-33.1, and 4-6-33.2, as shown on Exhibit C, by installing non-drivable waterbars, spreading grass seed, and blocking. The Purchaser shall stabilize 4-6-27.1 (MP. 0.878 – 1.700) and 4-6-27.2by installing drivable waterbars. 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 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 of rock and water as required in Exhibit C, Exhibit D, and Exhibit E provided the Purchaser complies with the condition set forth in Sec. 44(y).

Road No. and Segment	Length Used	Road Control	Road Surface Type	Maintenance Responsibility
4-6-12.4	2,576’	BLM	Natural	Purchaser
4-6-12.5	1,656’	BLM	Natural	Purchaser
4-6-13.1 (C1- C3)	2,770	BLM	Rocked and Natural	Purchaser
4-6-22.1	2,294’	BLM	Natural	Purchaser
4-6-22.2	2,358’	BLM	Natural	Purchaser
4-6-23.0	2,363’	BLM	Natural	Purchaser
4-6-23.1 (A1 – B1)	1,029’	BLM	Rocked	Purchaser
4-6-23.2	762’	BLM	Natural	Purchaser
4-6-23.3	553’	BLM	Natural	Purchaser
4-6-23.4	632’	BLM	Natural	Purchaser
4-6-23.5	798’	BLM	Natural	Purchaser
4-6-24.0 (A1 – A3, C1 – C3)	4,911’	BLM	Rocked and Natural	Purchaser

4-6-33.1	1,907’	BLM	Natural	Purchaser
4-6-33.2	496’	BLM	Natural	Purchaser

y. The Purchaser shall perform any road repair and maintenance work on roads used and designated above, under the terms of Exhibit D, “Road Maintenance Specifications” of this contract which is attached hereto and made a part hereof. Purchaser shall spread **95** 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 one thousand eight hundred ninety-three and 10/100 ($1,893.10) dollars to the Government. This is a scale sale, so all road maintenance and rockwear fees will be calculated with the actual volume hauled after all merchantable timber has been cut and scaled. If the actual fees differ from what is mentioned and paid above, the additional/difference shall be reported and paid accordingly using fees at the time of contract execution. Final maintenance shall be completed no later than one (1) year after contract expiration unless otherwise approved by the Authorized Officer.

z. In the use of the roads listed below and shown on Exhibit, E, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement S-700 (OR044680) between the United States of America and Hampton Resources Inc. The Purchaser will be required to enter into a license agreement with Hampton Resources Inc. 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 total road use fee of thirty-eight thousand nine hundred twenty-one and 33/100 ($38,921.33) dollars. Road use fees have been calculated using the actual BLM timber sale cruise volume. 2) Purchaser pays a rockwear fee to Hampton Resources Inc. of two thousand five hundred twenty and 24/100 ($2,520.24) dollars. Rockwear fees have been calculated using the actual BLM timber sale cruise volume. This is a scale sale, so all road use and rockwear fees will be calculated with the actual volume hauled after all merchantable timber has been cut and scaled. If the actual fees differ from what is mentioned and paid above, the additional/difference shall be reported and paid accordingly using the fees within the License Agreement. 3) The Purchaser shall perform any road repair and maintenance work on Hampton Resources Inc. controlled roads listed below under the terms of Exhibit D, “Road Maintenance Specifications”, of this contract which is attached hereto and made a part hereof. 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 $1,000.00.

Road No. and Segment	Length Used	Road Control	Road Surface Type	Maintenance Responsibility
4-6-13.1 (A1- B1)	5,240’	Hampton Resources Inc.	Rocked	Purchaser
4-6-23.1 (C1- C2)	1,308’	Hampton Resources Inc.	Rocked	Purchaser
4-6-35.0	0.732 mi.	Hampton Resources Inc.	Rocked	Purchaser

aa. In the use of the roads listed below and shown on Exhibit, E, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement S-700 (OR044680) between the United States of America and Mid-Valley Resources Inc. The Purchaser will be required to enter into a license agreement with Mid-Valley Resources Inc. 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 total road use fee of twelve thousand three hundred seventy-one and 62/100 ($12,371.62) dollars. Road use fees have been calculated using the actual BLM timber sale cruise volume. 2) Purchaser pays a rockwear fee to Mid-Valley Resources Inc. of one thousand three hundred eighty-two and 26/100 ($1,382.26) dollars. Rockwear fees have been calculated using the actual BLM timber sale cruise volume. This is a scale sale, so all road use and rockwear fees will be calculated with the actual volume hauled after all merchantable timber has been cut and scaled. If the actual fees differ from what is mentioned and paid above, the additional/difference shall be reported and paid accordingly using the fees within the License Agreement. 3) The Purchaser shall perform any road repair and maintenance work on Mid-Valley Resources Inc. controlled roads listed below under the terms of Exhibit D, "Road Maintenance Specifications", of this contract which is attached hereto and made a part hereof. 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 $1,500.00.

Road No. and Segment	Length Used	Road Control	Road Surface Type	Maintenance Responsibility
4-6-22.0	1,601'	Mid-Valley Resources Inc.	Natural	Purchaser
4-6-27.1 (B1 – B9)	1.505 mi.	Mid-Valley Resources Inc.	Rocked and Natural	Purchaser
4-6-27.2	0.952 mi.	Mid-Valley Resources Inc.	Rocked	Purchaser

bb. In the use of the roads listed below and shown on Exhibit, E, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement S-499 (OR044569) between the United States of America and Hampton Resources Inc. The Purchaser will be required to enter into a license agreement with Hampton Resources Inc. 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 pays a rockwear fee to Hampton Resources Inc. of eight hundred forty-five and 06/100 ($845.06) dollars. Rockwear fees have been calculated using the actual BLM timber sale cruise volume. This is a scale sale, so all rockwear fees will be calculated with the actual volume hauled after all merchantable timber has been cut and scaled. If the actual fees differ from what is mentioned and paid above, the additional/difference shall be reported and paid accordingly using the fees within the License Agreement. 2) The Purchaser shall perform any road repair and maintenance work on Hampton Resources Inc. controlled roads listed below under the terms of Exhibit D, "Road Maintenance Specifications", of this contract which is attached hereto and made a part hereof. 3) 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 $500.00.

Road No. and Segment	Length Used	Road Control	Road Surface Type	Maintenance Responsibility
4-6-24.0 (B1)	1,805’	Hampton Resources Inc.	Rocked	Purchaser

cc. In the use of the roads listed below and shown on Exhibit, E, the Purchaser shall comply with the conditions of Right-of-Way and Road Use Agreement S-682D (OR068010) between the United States of America and Golden Pond Timberlands, Inc. The Purchaser will be required to enter into a license agreement with Golden Pond Timberlands, Inc. 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 lump sum road use fee of two thousand seven hundred seventy and 00/100 ($2,770.00) dollars. Road use fees have been calculated using the actual BLM timber sale cruise volume. 2) Purchaser pays a rockwear fee to Golden Pond Timberlands, Inc. of two hundred fifty-six and 57/100 ($256.57) dollars. Rockwear fees have been calculated using the actual BLM timber sale cruise volume. This is a scale sale, so all road use and rockwear fees will be calculated with the actual volume hauled after all merchantable timber has been cut and scaled. If the actual fees differ from what is mentioned and paid above, the additional/difference shall be reported and paid accordingly using the fees within the License Agreement. 3) The Purchaser shall perform any road repair and maintenance work on Golden Pond Timberlands Inc. controlled roads listed below under the terms of Exhibit D, “Road Maintenance Specifications”, of this contract which is attached hereto and made a part hereof. 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 $500.00.

Road No. and Segment	Length Used	Road Control	Road Surface Type	Maintenance Responsibility
4-6-27.1 (A1)	0.195 mi.	Golden Pond Timberlands Inc.	Rocked	Purchaser

dd. The Purchaser agrees that if they request to use any other private road, subject of a right-of-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.

ee. 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 with other users of these roads.

ff. The Purchaser shall be responsible for repair of any damage to roads or structures caused using 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 **225** cubic yards of crushed rock on non-BLM roads used for this timber sale, as directed by the Authorized Officer as part of maintenance requirements.

hh. Tracked type equipment shall not be allowed to cross over concrete bridge decks, other concrete surfaced structures, or asphalt surfaced roads without the proper protection of that surface. Prior approval shall be obtained from the Authorized Officer when crossing with protective devices. No loading or yarding from asphalt surfaces is permitted.

ENVIRONMENTAL PROTECTION

ii. To prevent the spread of noxious weeds, the Purchaser shall clean all road construction equipment (except dump trucks) and clean all ground-based logging equipment that will be used off existing roads, as well as loaders and mechanically propelled brush cutters, prior to each 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 parts or seeds.

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 State's willingness to release the Purchaser from liability for such hazard, the Purchaser shall remain responsible to the Government for performance of the following hazard reduction measure(s) required by this contract: Perform logging residue reduction and site preparation work on approximately forty-five (45) acres of harvest area located within Cutting Areas. 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 this pre-work conference. Slash, as defined for this section, shall mean all material (brush, limbs, tops, unmerchantable stems, and chunks) severed or knocked over because of Purchaser's operations under the terms of this contract.

1. Excavator pile and burn up to forty-five (45) acres of slash within ground-based portion and along roads as directed by the Authorized Officer. 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 in diameter on the small end shall be left in place or positioned so that they will not be burned.

b. Slash less than six (6) inches in diameter would be less than one (1) foot in height.

c. Machine piles shall be located as far as possible from retention trees, snags, or unit boundaries to minimize damage.

d. 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.

e. A minimum ten (10) foot by ten (10) foot cover of four (4) mil (0.004) inch thick polyethylene shall be placed on top of 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.

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

2. Slashing of approximately four (4) acres shall be completed as directed by the Authorized Officer.

a. All standing woody vegetation (brush), over one (1) foot in height shall be cut (slashed) and lopped into four (4) foot or smaller lengths in harvest units as directed by the Authorized Officer.

b. All woody vegetation, and whips shall be completely severed from the stump/ stem(s). Stump/stem height shall not exceed six (6) inches measured on the uphill side.

c. All conifers, Pacific madrone, Pacific dogwood, Oregon ash, and Oregon white oak, and Pacific yew trees shall be reserved and undamaged.

3. Pile and burn approximately one (1) acres of 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 (0.004) inch thick polyethylene plastic film at least ten (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.

ll. 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 Sec. 42. The Purchaser shall, under supervision of the Authorized Officer or designated representative, assist in preparing units for burning, 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 (1) 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 top, high-girdle, basal-girdle, or fell five hundred fifteen (515) live trees in accordance with Exhibit F. No adjustments of volume or value shall be made to meet these requirements. Coarse wood creation will be completed within one year of completion of yarding the timber in the sale.

BUYOUT SECURITIES

nn. The Purchaser shall create coarse woody debris in accordance with Sec. 44(jj). The Purchaser shall have the option of completing this work, or in lieu thereof, may make a buyout security deposit to the Bureau of Land Management in the amount of one hundred twenty-one thousand, eighty and 78/100 dollars ($121,080.78), and upon making such deposit, the Purchaser shall be relieved of the obligations set out in this subsection. The Purchaser shall notify the Authorized Officer of their intention to make this deposit prior to the date of execution of this contract and the Authorized Officer shall establish a required schedule of payments.

LOG EXPORT RESTRICTION

oo. 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.

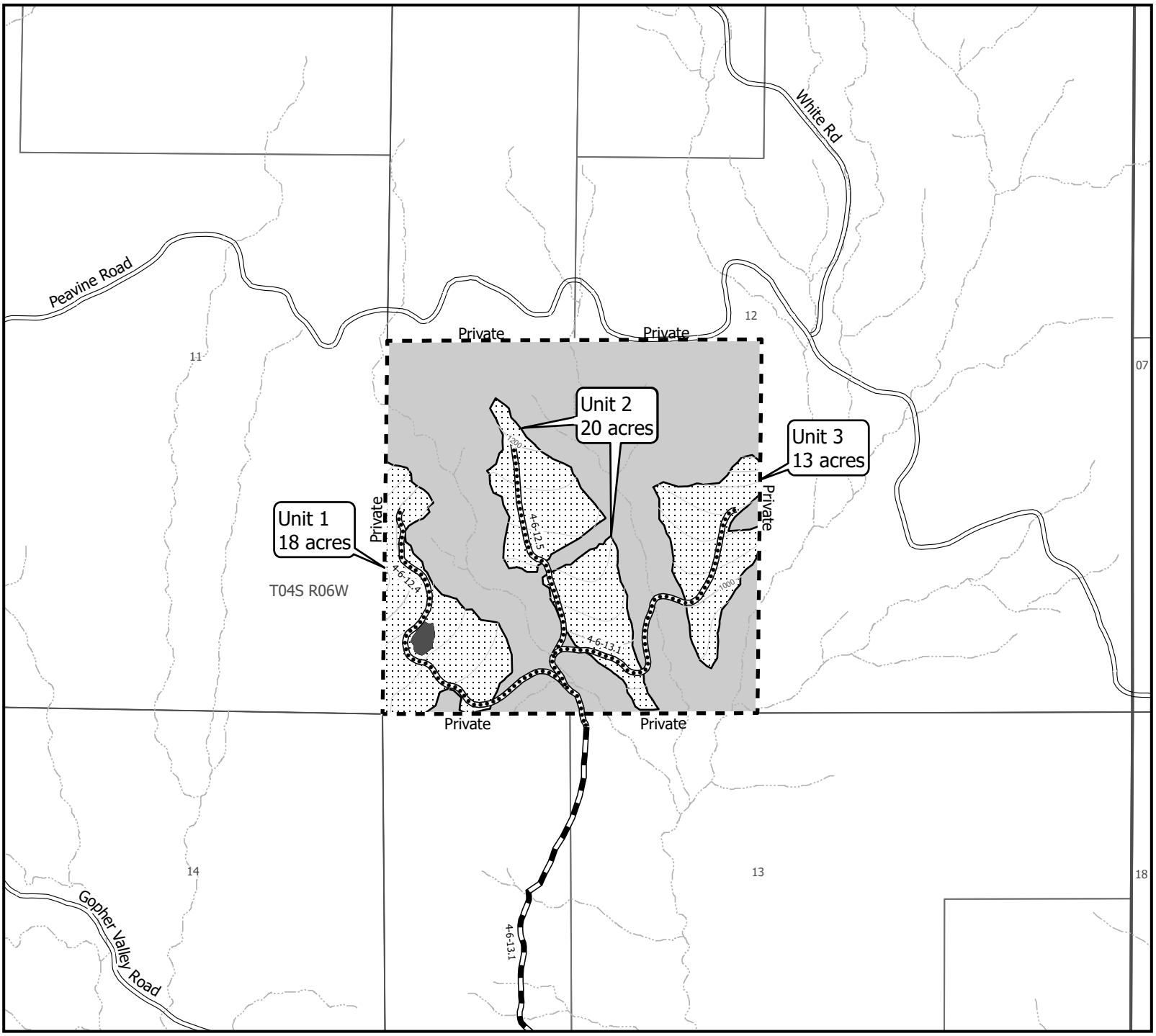
If multiple trailers (mule trains) are used, each bunked load shall be considered an individual load, and these guidelines will apply to each bunked load. If a flatbed stake trailer is used, each bundle will be treated as a separate load.

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

1/14/2026

T. 4S. R. 6W, Section 12 W. M.



Partial Cut Area	146 acres
Regen Cut Area	67 acres
Right-of-Way	10 acres
Reserve Area	325 acres
Clump Area	9 acres
Patch Cut Area	9 acres
Total Contract Area	548 acres

0 500 1,000 2,000 3,000 Feet

- Contract Area
- Reserve Area
- Regen Cut Area
- Clump Area
- Road - Construct
- Road - Renovate
- Existing Road
- Streams

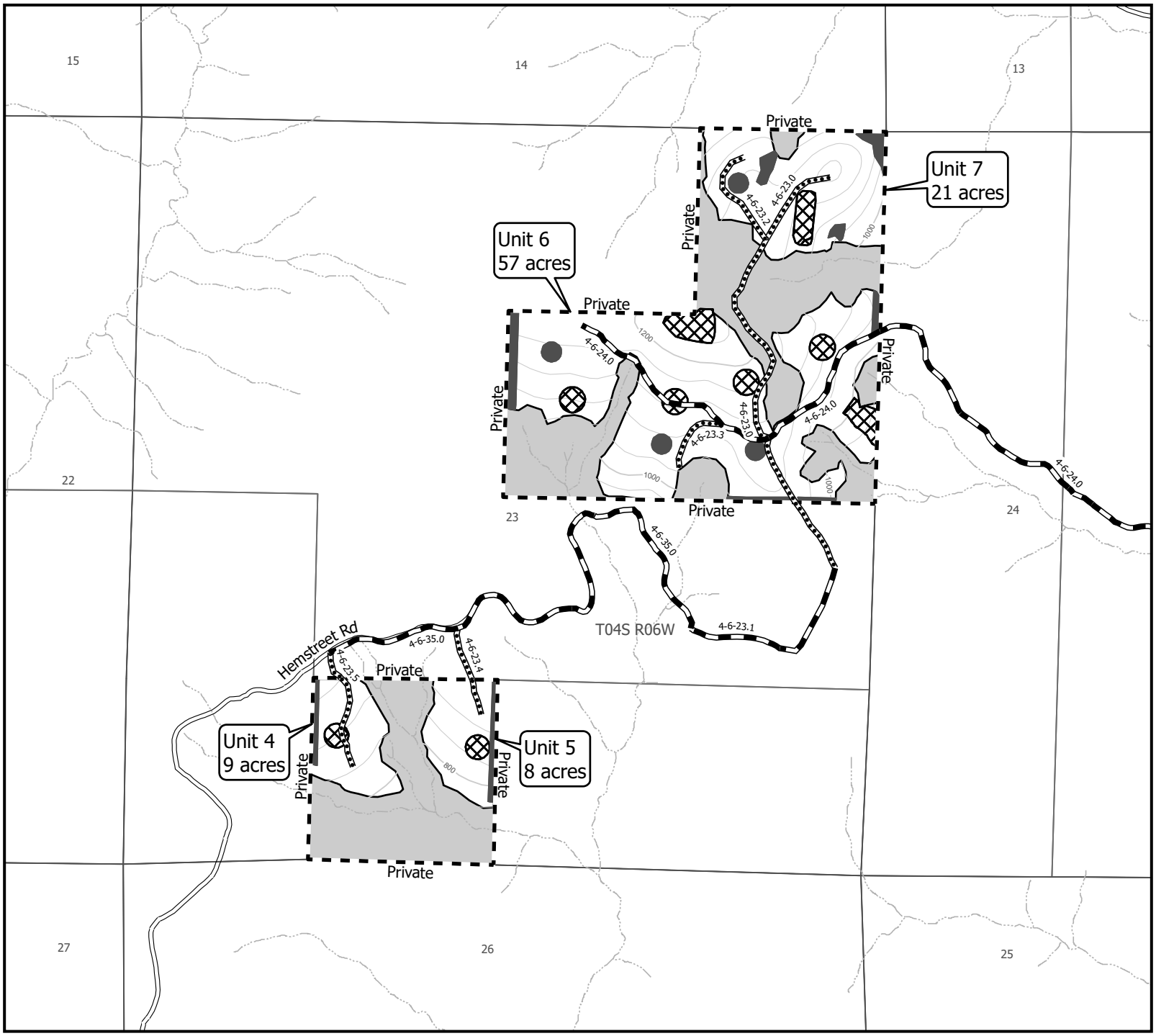
Contour Interval: 40 feet

Prepared by: Ryan Chen

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

1/14/2026

T. 4S. R. 6W, Section 23 W. M.



Partial Cut Area	146 acres
Regen Cut Area	67 acres
Right-of-Way	10 acres
Reserve Area	325 acres
Clump Area	9 acres
Patch Cut Area	9 acres
Total Contract Area	548 acres

0 500 1,000 2,000 3,000 Feet

- Contract Area
- Reserve Area
- Partial Cut Area
- Patch Cut Area
- Clump Area
- Road - Construct
- Road - Renovate
- Existing Road
- Streams

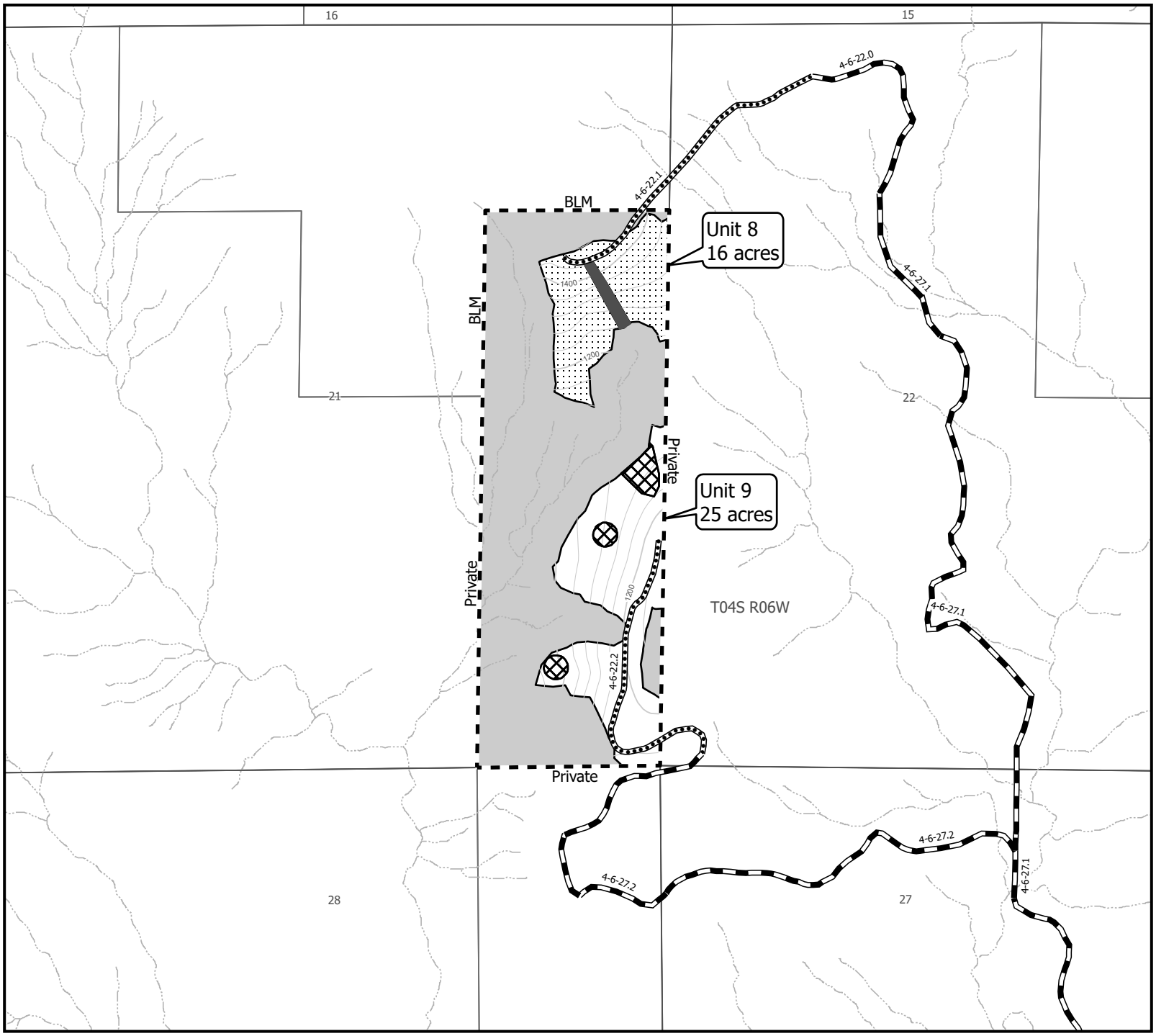
Contour Interval: 40 feet

Prepared by: Ryan Chen

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

1/14/2026

T. 4S. R. 6W, Section 21 W. M.



Partial Cut Area	146 acres
Regen Cut Area	67 acres
Right-of-Way	10 acres
Reserve Area	325 acres
Clump Area	9 acres
Patch Cut Area	9 acres
Total Contract Area	548 acres

0 500 1,000 2,000 3,000 Feet

- Contract Area
- Reserve Area
- Partial Cut Area
- Regen Cut Area
- Patch Cut Area
- Clump Area
- Road - Construct
- Road - Renovate
- Streams

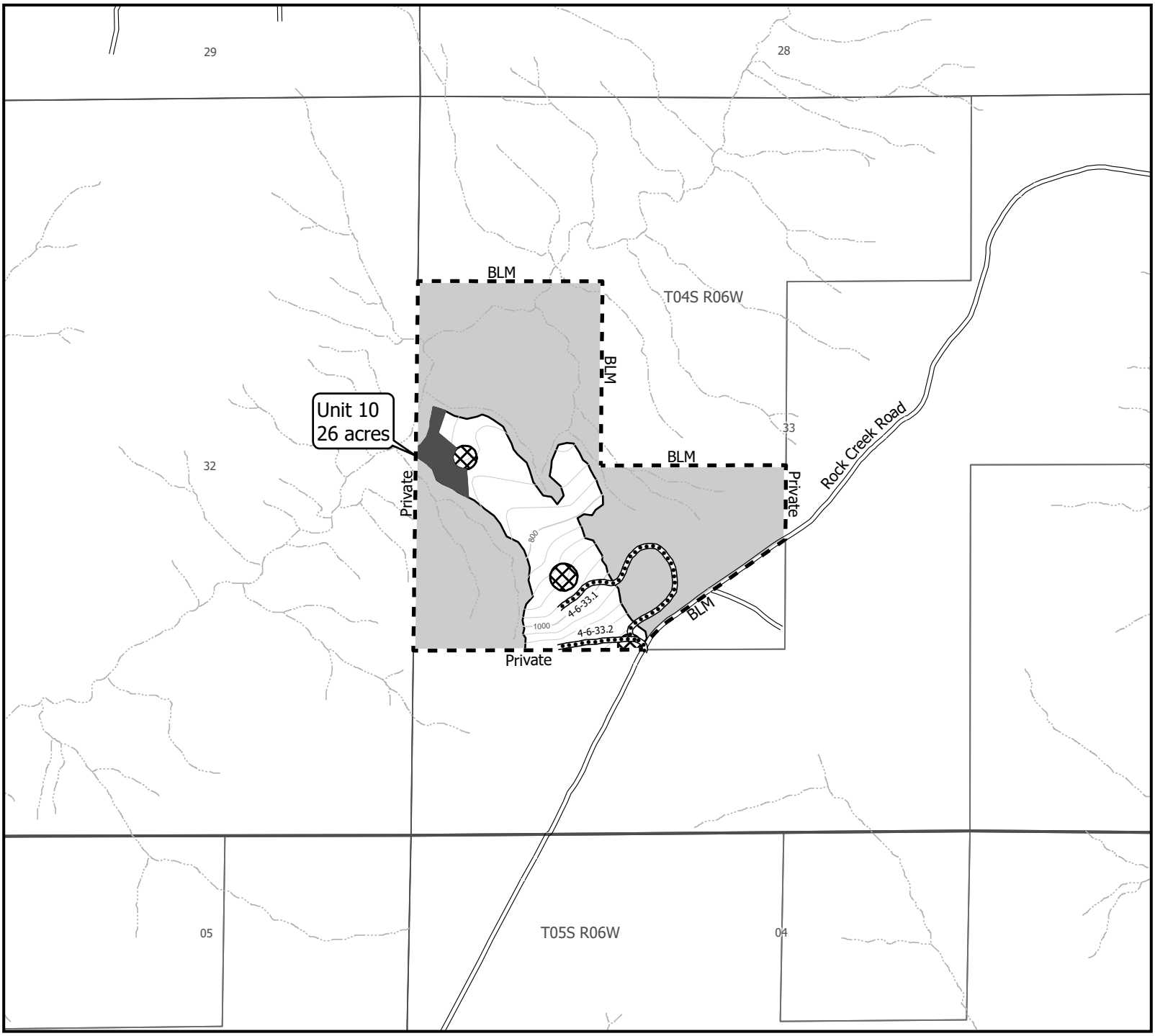
Contour Interval: 40 feet

Prepared by: Ryan Chen

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

1/14/2026

T. 4S. R. 6W, Section 33 W. M.



Partial Cut Area	146 acres
Regen Cut Area	67 acres
Right-of-Way	10 acres
Reserve Area	325 acres
Clump Area	9 acres
Patch Cut Area	9 acres
Total Contract Area	548 acres

0 500 1,000 2,000 3,000 Feet

- Contract Area
- Reserve Area
- Partial Cut Area
- Patch Cut Area
- Clump Area
- Road - Construct
- Existing Road
- Streams

Contour Interval: 40 feet

Prepared by: Ryan Chen

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT

EXHIBIT B - PRESALE
SCALE SALE

PURCHASE PRICE SCHEDULE AND MEASUREMENT SPECIFICATIONS

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

Timber Schedule		
Species	**Unit of Measure**	**Price Per Measurement Unit**
Douglas Fir	MBF	$265.90
Grand Fir	MBF	$135.40
Red Alder	MBF	$145.20
Bigleaf Maple	MBF	$23.60

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

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

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

- Log or portion of a log that is:

- One third (1/3) sound.
- Small End Diameter Inside Bark (DIB) – Six (6) inches
- Length – Eight (8) feet four (4) inches

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

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

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

Left Standing Timber	Felled Timber Not Removed
Diameter at Breast Height (DBH): 8	Small End DIB: 6
Log Height: 16 feet	Log Length: 16 feet
% Sound: 33.3	% Sound: 33.3
Net Tree Volume: 20 BF	Net Log Volume: 20 BF

V. **Measurement Standards**

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

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

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

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

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

economical and safe manner.

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

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

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

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

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

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

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

scales in use.

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

VI. **Accountability**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Total Estimated Purchase Price for Timber and Other Wood Products			
Species/Product	**Estimated Volume (MBF or Tons)**	**Bid Price ($/MBF or $/Ton)**	**Estimated Value**
Douglas Fir	6,005 MBF	$265.90	$1,596,729.50
Grand Fir	902 MBF	$135.40	$122,130.80
Red Alder	31 MBF	$145.20	$4,501.20
Bigleaf Maple	47 MBF	$23.60	$1,109.20
Total Estimated Purchase Price:			**$1,724,470.70**

TABLE OF CONTENTS

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT – OREGON
TIMBER SALE CONTRACT
ROAD SPECIFICATIONS

Road Number	New Construction (Stations and Miles)	Renovation (Stations and Miles)
4-6-12.4	Sta. 25+76 = 0.488 Miles	
4-6-12.5	Sta. 16+56 = 0.314 Miles	
4-6-13.1	Sta. 27+70 = 0.525 Miles	Sta. 52+40 = 0.992 Miles
4-6-22.0		Sta. 16+01 = 0.303 Miles
4-6-22.1	Sta. 22+94 = 0.434 Miles	
4-6-22.2	Sta. 23+58 = 0.447 Miles	
4-6-23.0	Sta. 23+63 = 0.448 Miles	
4-6-23.1	Sta. 10+29 = 0.195 Miles	Sta. 13+08 = 0.248 Miles
4-6-23.2	Sta. 7+62 = 0.144 Miles	
4-6-23.3	Sta. 5+53 = 0.105 Miles	
4-6-23.4	Sta. 6+32 = 0.120 Miles	
4-6-23.5	Sta. 7+98 = 0.151 Miles	
4-6-24.0		Sta. 67+16 = 1.272 Miles
4-6-27.1		Sta. 89+76 = 1.700 Miles
4-6-27.2		Sta. 50+27 = 0.952 Miles
4-6-33.1	Sta. 19+07 = 0.361 Miles	
4-6-33.2	Sta. 4+96 = 0.094 Miles	
4-6-35.0		Sta. 38+65 = 0.732 Miles
Gopher Valley Road		Sta. 1+16 = 0.022 Miles

GENERAL – 100

101 - Pre-work Conference(s):

A pre-work conference will be held prior to the start of new construction, renovation, improvement, quarry development, and decommissioning operations. The Purchaser shall request the conference at least forty-eight (48) hours prior to the time it is to be held. The conference will be attended by the Purchaser and/or their representatives, subcontractors or their representatives and the Authorized Officer and/or their representatives.

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

102 - Definitions:

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

ACI - American Concrete Institute

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

ASTM - American Society for Testing and Materials.

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

BLM - Bureau of Land Management

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

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

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

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

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

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

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

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

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

Landing – A cleared area that facilitates harvest operations and safely accommodates logging equipment, trucks, and felled timber.

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

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

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

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

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

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

Road Centerline - The longitudinal center of a roadbed.

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

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

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

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

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

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

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

Spalls - Flakes or chips of stone.

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

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

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

Sub-base - Reinforcement of the subgrade with large particles of pit-run rock or crushed stone. Usually confined to roads having wet subgrades or subgrades with weak support characteristics.

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

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

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

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

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

Turnaround – Extra widening of the roadbed used for allowing commercial vehicles to turnaround.

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

102a - Tests Used in These Specifications:

AASHTO T 11 Quantity of rock finer than No. 200 sieve.

AASHTO T 27 Sieve analysis of fine and coarse aggregate using sieves with square openings; gradation.

AASHTO T 89 Liquid limit of material passing the No. 40 sieve. Water content at which the soil passes from a plastic to a liquid state.

AASHTO T 90 Plastic limits and plasticity index of soil.
a. Plastic limit - lowest water content at which the soil remains plastic.
b. Plasticity index - range of water content, within which the material is in a plastic state. Numerical difference between the liquid and plastic limits of the soil.

AASHTO T 96 Resistance to abrasion of small size coarse aggregate by use of the Los Angeles machine.

AASHTO T 99 Relationship between soil moisture and density of soil.
Method A - 4" mold, soil passing a No. 4 sieve
25 blows/layer & 3 layers.
Method C - 4" mold, soil passing a 3/4-inch sieve
25 blows/layer & 3 layers.
Method D - 6" mold, soil passing a 3/4-inch sieve. 56 blows/layer & 3 layers.

AASHTO T 119 Slump of hydraulic cement concrete.

AASHTO T 152 Air content of freshly mixed concrete.

AASHTO T 166 Specific Gravity of compacted Bituminous Mixtures.

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

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

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

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

AASHTO T 209 Maximum Specific Gravity of Bituminous Paving Mixtures.

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

AASHTO T 224 Correction for coarse particles in the soil.

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

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

ASTM D 4564 Determination of relative density of cohesion less soils.

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

103 - Compaction equipment shall meet the following requirements:

103b - Sheepsfoot/Tamping rollers. A tamping roller unit shall consist of two (2) watertight metal drums mounted in frames in such manner as to be fully oscillating, together with a tractor having sufficient weight and power under actual working conditions to pull the roller drums at a minimum speed of two and a half (2.5) miles per hour. The drums shall be no less than sixty (60) inches in diameter and no less than fifty-four (54) inches in length, measured at the drum's surface, and shall be studded with tamping feet projecting not less than seven (7) inches from the face of the drums.

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

The weight of the tamping-roller unit shall be such as to exert a minimum pressure of two hundred fifty (250) pounds per square inch on the ground area in contact with the tamping feet, and the roller shall be so designed that the weight may be increased to exert a pressure up to five hundred (500) pounds per square inch on the ground area in contact with the tamping feet.

The ground pressure shall be determined by dividing the total weight of the roller unit, not including the weight of the tractor, by the total cross-sectional area of the tamping feet in one (1) row of tamping feet parallel to the axis of the roller.

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

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

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

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

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

CLEARING AND GRUBBING - 200

201 - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions within the clearing limits in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans and as marked on the ground.

201a - This work shall consist of clearing, grubbing, removing and disposing of vegetation, debris, surface objects, and protruding obstructions from borrow pits, quarries, channel changes, stockpile sites, etc., in accordance with these specifications and as staked on the ground.

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

202b - Where clearing limits for channel changes and waste areas have not been staked or shown on the plans, the limits shall extend ten (10) feet back of the top of the cut slope and five (5) feet outside of the outside slope lines.

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

203b - Standing trees and snags to be cleared shall be felled within the limits established for clearing, unless otherwise authorized. Felled snags shall be left as down woody debris outside of the clearing limits.

203c - Disposal of logs from private timber cleared within the limits established shall consist of decking at a location designated by the Authorized Officer.

204 - Grubbing shall consist of the removal and disposal of stumps, roots, and other wood material embedded in the ground and protruding obstacles remaining as a result of the

clearing operation. Undisturbed stumps, roots and other solid objects which will be a minimum of four (4) feet below subgrades or slope surfaces or embankments are excluded.

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

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

206a - Notwithstanding Subsections 204 and 205, clearing and grubbing debris resulting from landing construction, waste area construction, turnaround construction, or log fill replacement shall be placed at disposal sites and shall not be covered with excavated material. Location of disposal sites will be determined by the Authorized Officer.

210 - Disposal of clearing and grubbing debris, stumps and cull logs shall be by scattering over government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer. The areas for such scattering shall have the prior approval of the Authorized Officer.

210a - Disposal of clearing and grubbing debris, stumps, and cull logs on non-government property shall be by scattering over non-government owned lands outside of established clearing limits in a manner acceptable to the Authorized Officer.

211 - For slopes greater than 35% or areas designated by the Authorized Officer, disposal of clearing and grubbing debris, stumps, and cull logs shall be by end hauling and piling in designated waste areas and in a manner acceptable to the Authorized Officer.

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

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

EXCAVATION AND EMBANKMENT - 300

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

302 - Excavation shall also consist of the excavation of road and landing cut sections, borrow sites, backfilling, leveling, ditching, grading, compaction, and other earth moving work

necessary for the construction of the roadway in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and as marked on the ground.

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

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

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

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

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

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

306 - Layers of embankment and selected borrow, as specified under Subsections 305a, 305b, and 317 shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103b, 103g, or 103i. Final Subgrades shall be moistened or dried to a uniform optimum moisture content suitable for maximum density and compacted to full width with compacting equipment conforming to requirements of Subsections 103f or 103i and approved by the Authorized Officer.

306a - Minimum compaction for each layer of embankment, selected borrow, and selected roadway excavation material placed at optimum moisture shall have a minimum compaction of six (6) passes over each full-width layer, or fraction thereof.

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

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

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

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

315 - Borrow material required for the construction of embankment or for other portions of the work shall be obtained from sources adjacent to the roadway.

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

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

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

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

321c - End-dumping will be permitted for the placement of excess materials under Subsection 321 in designated disposal areas or within areas approved by the Authorized Officer. Watering, rolling, and placement in layers are not required. Materials placed shall be sloped, shaped, and otherwise brought to a visible condition acceptable to the Authorized Officer.

322 - When so indicated on the plans, selected coarse rock encountered in the excavation shall be conserved for slope protection or special rock embankment purposes and placed in accordance with the requirements and details of Section 1400 of these specifications and as shown on the plans.

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

324 - Excavated material shall not be allowed to cover boles of standing trees to a depth in excess of a half (1/2) feet on the uphill side.

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

328 - The Purchaser shall adopt methods and procedures in using explosives, which will prevent damage to adjacent landscape features, and which will minimize scattering rocks and other debris outside the road prism.

328a - The Purchaser shall establish and be responsible for blasting techniques and shall furnish the Authorized Officer, prior to starting drilling operations, a blasting plan specifying drill-hole diameter, drill-hole spacing, depth of drilling, type of explosive to be used, loading pattern, sequence of firing, the location where the plan is to be used, and other relevant data. Acceptance of the drilling and blasting plan does not relieve the Purchaser of responsibility or liability for the results of the blasting. The Purchaser is subjected to the terms and conditions of Rock Permits, and regulations as administered by the State of Oregon Department of Geology and Mineral Industries (DOGAMI) which may include, but are not limited to, the following requirements: payment of a royalty fee, obtaining liability insurance and performance bond, and compliance with development plans. The Purchaser shall comply with local and State Safety Codes covering blasting operations, warning signs, seismic monitoring, and traffic control. All blasting operations will be conducted by appropriately licensed personnel; i.e. blasting and powder handler's license, etc.

329 - If solid rock is encountered during excavation activities on the roads identified below such that drilling and blasting are required, as determined by the Authorized Officer, a reduction in the total purchase price shall be made to offset the cost of such activities. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.

Road No.	From Sta./M.P.	To Sta./M.P.
4-6-33.1	0+00	19+07

PIPE CULVERTS - 400

401 - This work shall consist of installing pipe culverts (and furnishing 2 culverts described in the Construction Worklist), downspouts, and other erosion control devices in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans. Individual lengths and locations are approximate; final lengths and locations will be determined by the Authorized Officer upon completion of the roadbed and upon installation of the appurtenance structures. Additional pipe and erosion control devices may be required at the option of the Authorized Officer, in which case a reduction in the total purchase price shall be made to offset the cost of furnishing and installing such items. Additionally, pipe culverts, downspouts, and erosion control devices may be unnecessary at the option of the Authorized Officer, in which case the Authorized Officer may request the Purchaser to only furnish such items. Costs will be based upon the unit prices set forth in the current BLM Timber Appraisal Production Cost Schedule.

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

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

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

405e - Corrugated-polyethylene pipe for culverts 18-inch through 24-inch diameter shall meet the requirements of AASHTO M 294, Type S.

Corrugated-polyethylene pipe for culverts to be used for downspouts 18-inch through 24-inch diameter shall meet the requirements of AASHTO M 294, Type C.

Installation will be subject to the same specification as other pipe materials.

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

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

406e - Neoprene gaskets shall be used to join aluminum pipe culverts.

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

409 - Structural-plate pipe culverts and pipe-arch culverts shall be installed in accordance with the plans and detailed erection instructions furnished by the manufacturer. One copy of the erection instructions shall be submitted to the Authorized Officer (3) days prior to erection.

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

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

412 - Where ledge rock, boulders, soft, or spongy soils are encountered, they shall be excavated a minimum of twenty-four (24) inches below the invert grade for a width of at least one (1) pipe diameter or span on each side of the pipe and shall be backfilled with selected granular or fine readily compactable soil material or crushed rock material.

413 - All pipe culverts shall be bedded on a 1-1/2”-0” crushed rock material in accordance with Section 1200 gradation. Bedding shall have a depth of not less than six (6) inches as shown on plans. Foundation material shall be of uniform density throughout the length of the structure and shall be shaped to fit the pipe.

414a - The invert grade of the bedding shall be cambered at the middle ordinate a minimum of 1 percent of the total length of the drainage structure. Camber shall be developed on a parabolic curve.

415 - Inspection of pipe culverts having a diameter of (30) inches and pipe-arch culverts

having a height of (40) inches or a cross sectional area of (13) or larger shall be made before backfill is placed. Culverts found to be out of alignment or damaged shall be replaced, reinstalled or repaired as directed by the Authorized Officer at the Purchaser's expense.

416 - Side-fill material for pipe culverts shall be placed within one (1) pipe diameter, or a minimum of one (1) foot, of the sides of the pipe barrel, and to a half (1/2) pipe diameter on round pipes with granular material (or 1-1/2”-0” crushed rock material in accordance with Section 1200 gradation if crushed bedding/backfill is required in the rock sheets and Section 413).

The remaining fill material shall be of fine, readily compactable soil and be free of excess moisture, muck, frozen material, roots, sod, or other deleterious or caustic material and devoid of rocks or stones of sizes which may impinge upon and damage the pipe or otherwise interfere with proper compaction.

419 - The pipe culverts, after being bedded and backfilled as required by these specifications, shall be protected by an 18” cover of fill before heavy equipment is permitted to cross the drainage structures.

421 - Trenches and bedding rock necessary for the installation of perforated pipe shall conform to the lines, grades, dimensions and typical diagram as shown on the plans.

423 - Construction of catch basins conforming to lines, grades, dimensions and typical diagrams shown on the plans, shall be required for grade culverts.

424 - Construction of splash pads and energy dissipaters conforming to lines, grades, dimensions and typical diagram shown on the plans, shall be required for grade culverts and culverts as listed on the culvert sheet.

426 - Culvert markers consisting of six (6) foot steel fence posts painted blue shall be furnished, fabricated, and installed by the Purchaser at the inlet of all culverts (installed and existing) as marked. Marker shall be installed within six (6) inches of upslope side of culvert inlet.

427 - The Purchaser shall record culvert sizes, lengths and location actually installed on a copy of the culvert list. This culvert list shall be furnished to the Authorized Officer.

428 - The Purchaser shall remove and dispose of old culverts (removed in the construction phase) in a legal manner, off of Government property, and pay any fees required. The Purchaser shall remove the old culverts from the work site prior to road acceptance.

429 - Keep the excavation site dewatered so that the installation of culverts is completed under dry conditions. Dispose of excess water by using pumping or natural drainage ways near the site in a manner that will avoid damage to adjacent property. Provide for downstream waterflow with no more than ten (10) percent increase in natural stream turbidity due to transport

of excavated material or sediment during construction. Diversion streams shall not be returned to the natural channel until all in-stream work has been completed.

430 - During culvert installations or replacement activities, all stream flow shall be diverted around the culvert work occurring in live streams, as to maintain downstream flows and minimize turbidity. Woody material removed from stream channels during culvert work shall be placed in the stream channel downstream of the culvert.

RENOVATION AND IMPROVEMENT OF EXISTING ROADS - 500

501 - This work shall consist of reconditioning and preparing the roadbed and shoulders, minor excavation and/or embankment, cleaning and shaping drainage ditches, trimming vegetation from cut and embankment slopes, and cleaning and repairing drainage structures of existing roads in accordance with these specifications, as shown on the plans, and as marked on the ground.

501a - This work shall include the removal and disposal of slides in accordance with these specifications and as marked on the ground.

502 - The existing road surface shall be bladed and shaped to the lines, grades, dimensions, and typical cross sections shown on the plans.

502b - Drainage ditches shall be bladed and shaped in accordance with the lines, grades, dimensions, and typical cross sections shown on the plans.

503a - Material from the ditchline reestablishment excavation shall be hauled to designated disposal sites or at locations directed by the Authorized Officer.

504 - Existing road surface shall be uniformly moistened or dried to the optimum moisture content suitable for maximum density and compacted to full width with equipment conforming to requirements of Subsections 103f and 103i.

504a - Minimum compaction required shall be six (6) passes over each full-width layer, or fraction thereof, as measured along the centerline per layer of material.

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

508 - Vegetation encroaching on the roadbed and the drainage ditches of existing roads shall be removed by cutting and disposed of in accordance with Subsection 2100 of these specifications.

509 - The finished grading and compacting shall be approved by the Authorized Officer. The Purchaser shall give the Authorized Officer three (3) days' notice prior to final inspection of the grading operations.

WATERING - 600

601 - This work shall consist of furnishing and applying water required for the compaction of embankments, roadbeds, backfills, base courses, surface courses, finishing and reconditioning of existing roadbeds, laying dust, or for other uses in accordance with these specifications.

602 - Water, when needed for compaction or laying dust, shall be applied at the locations, in the amounts, and during the hours as directed by the Authorized Officer. Amounts of water to be provided will be the minimum needed to properly execute the compaction requirements in conformance with these specifications.

603 - Water trucks used in this work shall be equipped with a distributing device of ample capacity and of such design as to ensure uniform application of water on the roadbed.

604 - Water required under these specifications shall be obtained at the times and at the locations indicated below:

	Willamette Meridian			Dates Available	
Common Name	Section	T	R	From	To
4-6-4.3 MP 0.110	4	4S	6W	TBD	TBD
Gopher Valley Road/Peavine Road Junction	11	4S	6W	TBD	TBD

Use of water sources are subject to applicable State water regulations. If the required water is not available at the locations specified, water shall be obtained from a source approved by the Authorized Officer as permitted by Oregon Water Resources. A reduction shall be made in the total purchase price to reflect additional hauling distance based on rental rates from current BLM Timber Appraisal Cost Schedules. It is estimated that approximately forty thousand (30,000) gallons may be required for processing rock.

605 - The Purchaser shall secure the necessary water permits and pay all required water fees for use of the water sources specified under Subsection 604 for use of water sources

approved by the Authorized Officer. Purchaser shall notify the Bureau of Land Management when an agreement has been met and shall provide a copy of the documentation.

AGGREGATE BASE COURSE - 700
PIT-RUN ROCK MATERIAL

701 - This work shall consist of furnishing, hauling, and placing one or more layers of pit-run rock material on roadbeds and as backfill material approved for placing pit-run materials in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.

Material not conforming to these specifications will be rejected and shall be removed from the road or stockpile at the purchaser's expense. Unutilized material shall remain the property of the BLM and shall be handled as directed by the Authorized Officer.

702a - Pitrun rock materials shall be obtained from a commercial source selected by the Purchaser at his option providing that the rock materials selected comply with the specifications in this section.

703 - Pit-run rock materials shall consist of talus rock, partly decomposed granite or basalt, or other approved materials. The materials shall be reasonably free from vegetative matter or other deleterious material. The material obtained from the sources identified under Section 1600 shall consist of the best material available from these sources as designated by the Authorized Officer.

704 - Pit-run rock material shall consist of native materials of such a size and grading that it can be taken directly from the source and placed on the road without crushing or screening.

705 - Pit-run rock material shall be placed in layers of sufficient thickness to accommodate the material as directed by Authorized Officer.

706 - Oversize material that cannot be accommodated in the layer shall be removed at the source or on the road and shall be disposed of as directed by the Authorized Officer.

707 - When so indicated by the plans, filler or binder obtained from the chosen sources shall be uniformly blended with pit-run rock material on the road.

708 - The Ditchline as shaped under sections 150, 300, and 500 of these specifications shall be approved by the Authorized Officer prior to placement of pit-run rock material. Notification for final inspection of base rock shall be three (3) days prior to the spreading of crushed cap rock.

709 - Pit-run rock material shall be placed on Ditchline blade processed and spread to required dimensions.

AGGREGATE BASE COURSE - 1000
CRUSHED ROCK MATERIAL

1001 - This work shall consist of furnishing, hauling, and placing one or more layers of crushed rock material on roadbeds and culvert bedding approved for placing crushed rock material, in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans.

Material not conforming to these specifications will be rejected and shall be removed from the road or stockpile at the purchaser's expense. Unutilized material shall remain the property of the BLM and shall be handled as directed by the Authorized Officer.

1002a - Crushed rock materials shall be obtained from a commercial source selected by the Purchaser at his option providing that the rock materials selected comply with the specifications in this section.

1003 - Crushed rock material produced from gravel shall have two (2) manufactured fractured faces on sixty-five (65) percent, by weight, of the material retained on the No. 4 sieve. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.

1004 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

TABLE 1004
AGGREGATE BASE COURSE
CRUSHED ROCK MATERIAL
Percentage by weight passing square mesh sieves
AASHTO T 11 & T 27
GRADATION

Sieve Designation	ABC - D
6-inch	95
4-inch	-
3-inch	45-65
1-1/2-inch	-
1-inch	-
¾-inch	-
No. 4	10 Max
No. 10	-
No. 40	-

When requested by the Authorized Officer, the Purchaser shall follow the sampling and testing procedures as described in sections 1004a and provide results to the Authorized Officer.

1004a - The Purchaser shall be required to take one sample of each 2,000 cubic yards of crushed rock material produced, using approved AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or shall perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures and perform testing for sand equivalency requirements using AASHTO T 176 testing procedures. Prior to testing, each sample shall be split as requested by the Authorized Officer, making one-half of the sample with proper identification available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within twenty-four (24) hours of receiving sampling results. The Purchaser shall provide test results for the first five hundred (500) cubic yards produced prior to commencing production crushing and hauling.

1005 - Crushed rock material shall not exceed thirty-five (35) percent loss as determined by AASHTO T 96.

1006 - Crushed rock material shall show a durability value of not less than thirty-five (35) as determined by AASHTO T210.

1007 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than thirty (35) and a plasticity index of not less than four (4) and not more than twelve (12) as determined by AASHTO T 89 and AASHTO T 90.

1008 - If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.

1009 - Shaping and compacting of roadbed shall be completed and approved prior to placing crushed rock material, in accordance to the requirements of Subsections 300, 400, and 500. Notification for final inspection of base rock shall be three (3) days prior to the spreading of crushed cap rock.

1010 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed, turnarounds, and landings in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and marked on the ground. Compacted layers shall not exceed nine (9) inches in depth. Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.

1010a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification unless approved by the Authorized Officer in advance.

1012 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction, determined by Authorized Officer, and compacted to full width by compacting equipment conforming to the requirements of Subsections 103f and 103i . Minimum compaction shall be six (6) passes over each full-width layer, or fraction thereof.

AGGREGATE SURFACE COURSE – 1200
CRUSHED ROCK MATERIAL

1201 - This work shall consist of furnishing, hauling, and placing one (1) or more layers of crushed rock material on roadbeds, base courses, and culvert bedding approved for placing crushed rock material in accordance with these specifications and conforming to the dimensions and typical cross sections shown on the plans. Material not conforming to these specifications will be rejected, and shall be removed from the road or stockpile at the purchaser's expense. Unutilized material shall remain the property of the BLM and shall be handled as directed by the Authorized Officer.

1202a - Crushed rock materials used in this work shall be obtained from commercial source selected by the Purchaser at his option providing that the rock materials selected comply with the specifications in this section.

1203 - When crushed rock material is produced from gravel, not less than seventy-five (75) percent by weight of the particles retained on the No. 4 sieve will have 4 manufactured fractured faces. If necessary to meet the above requirements or to eliminate an excess of filler, the gravel shall be screened before crushing.

1204 - Crushed rock material shall consist of hard durable rock fragments conforming to the following gradation requirements:

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

Sieve Designation	ASC -C
1-1/2-inch	95
1-inch	-
3/4-inch	60-90
1/2-inch	-
No. 4	30-55
No. 8	22-43
No. 30	11-27
No. 40	-
No. 200	3-15

When requested by the Authorized Officer, the Purchaser shall follow the sampling and testing procedures as described in sections 1204a and provide results to the Authorized Officer.

1204a - The Purchaser shall be required to take one sample for each 1,000 cubic yards of crushed rock material to be utilized using AASHTO sampling procedures. The Purchaser shall submit samples to a certified lab or perform testing for gradation requirements using AASHTO T 11 and AASHTO T 27 testing procedures and also perform testing for sand equivalency requirements using AASHTO T 176 testing procedures. Prior to testing, each sample shall be split as requested by Authorized Officer, making one half of the sample, with proper identification, available for testing by the Authorized Officer. Each sample and the results of Purchaser testing shall be made available to the Authorized Officer within 24 hours of receiving sampling results. The Purchaser shall provide test results for the first (500) cubic yards produced prior to commencing production crushing and hauling.

1205 - Crushed rock material retained on the No. 4 sieve shall have a percentage of loss of not more than thirty-five (35) at five hundred (500) revolutions, as determined by AASHTO T 96.

1206 - Crushed rock material shall show a durability value of not less than thirty-five (35) as determined by AASHTO T210.

1207 - That portion of crushed rock material passing the No. 40 sieve, including blending filler, shall have a liquid limit of not more than thirty-five (35) and a plasticity index of not less

than four (4) and not more than twelve (12) as determined by AASHTO T 89 and AASHTO T 90.

1208 - If additional binder or filler material is necessary to meet the grading or plasticity requirements or for satisfactory bonding of the material, it shall be uniformly blended with the crushed rock material at the crushing and screening plant prior to placing on the road, unless otherwise agreed. The material for such purposes shall be obtained from sources approved by the Authorized Officer and shall be free from stones, vegetative matter, and other deleterious materials.

1209 - Shaping and compacting of roadbed, base course, or culvert trench shall be completed and approved prior to placing crushed rock material, in accordance to the requirements of Subsections 300, 400, 500, and 700. Notification for final inspection of base rock shall be three (3) days prior to the spreading of crushed cap rock.

1210 - Crushed rock material conforming to the requirements of these specifications shall be placed on the approved roadbed, landings, base course and culvert trench in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the plans and marked on the ground. Compacted layers shall not exceed 4 inches in depth. When more than one (1) layer is required, each shall be shaped, processed, compacted, and approved by the Authorized Officer before the succeeding layer is placed.

Irregularities or depressions that develop during compaction of the top layer shall be corrected by loosening the material at these places and then adding or removing crushed rock material until the surface is smooth and uniform.

1210a - Crushed rock material used to repair or reinforce soft, muddy, frozen, yielding, or rutted roadbed shall not be construed as surfacing required by this specification unless approved by the Authorized Officer in advance.

1212 - Each layer of crushed rock material placed, processed, and shaped as specified shall be moistened or dried to a uniform moisture content suitable for maximum compaction, as determined by Authorized Officer, and compacted to full width by compacting equipment conforming to the requirements of Subsections 103f, 103g, and 103i . Minimum compaction shall be six (6) passes over each full-width layer, or fraction thereof.

SLOPE PROTECTION - 1400

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

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

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

1402a - Stone materials used in this work shall be obtained from the 4-6-3.5 road, as directed by the Authorized Officer, or a commercial source selected by the Purchaser at his option providing that the rock materials selected comply with the specifications in this section.

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

1405 - Rip rap shall conform to the following gradations:

TABLE 1405

Class	% of Rock Equal of Smaller by Count, Dx	Range of Intermediate Dimensions, inches	Range of Rock Mass, pounds
5	100	33-39	2900-4850
	85	23-28	990-1800
	50	17-20	400-650
	15	11-15	110-270

Rocks smaller than six inches in diameter are not counted.

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

1406a - The embankment shall be placed in successive horizontal layers of sufficient depth to contain the maximum size rock present in the material. Spalls and finer fragments of stone other than specified in Subsection 1405 shall be used to chock the larger stones solidly in position and to fill voids between the major stones as laid in the embankment. The exposed face of the embankment shall be reasonably smooth and uniform; material shall be prevented from escaping beyond the toe of the structure

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

1408 - Trenches for slope protection structures shall be excavated to the lines, elevations, and typical diagram shown on the plans. They shall be of sufficient size to permit the placing of structure footing of the full widths and length shown. Trenches shall be approved by the Authorized Officer prior to placement of slope protection material.

1408a - Foundation trenches and other required excavation as shown on the plans shall be approved prior to placing the slope protection material.

EROSION CONTROL - 1700

1701 - This work shall consist of measures to control soil erosion or water pollution during the construction operation through the use of berms, dikes, dams, sediment basins, fiber mats, netting, gravel, mulches, grasses, slope drains, and other erosion control devices or methods in accordance with these specifications and conforming to the lines, grades, dimensions and typical cross sections shown on the plans.

1704 - The erosion control provisions specified under this Subsection shall be coordinated with the Soil Stabilization requirements of Section 1800 and the Geotextile requirement of Section 1300.

1708 - Newly constructed and renovated roads to be carried over the winter period, shall be blocked to vehicular traffic and waterbars installed prior to the wet season.

1708a - Road segments not completed during dry weather periods shall be winterized, by providing a well-drained roadway using waterbars, maintaining drainage, and performing additional measures necessary to minimize erosion and other damage to the roadway, as directed by the Authorized Officer. Portions of roads not having surface rock in place will be blocked or barricaded to prevent vehicular traffic. A winterization plan shall be submitted to the Authorized Officer no later than September 15th of each harvest season.

1711 - The Purchaser shall construct sediment catch basins with straw bales at the following locations: 4-6-13.1 (Sta. 30+06, 30+36, 32+11, 38+38, 38+48, 56+82, 57+72, 58+65, 69+57, 70+02), 4-6-24.0 (Sta. 13+55, 22+22, 27+90), 4-6-27.2 (MP. 0.044, 0.393, 0.461, 0.507), and 4-6-35.0 (MP. 0.034, 0.045, 0.232, 0.242, 0.492, 0.576). Construct sediment catch basins to the dimensions of the sediment catch basin detail on Pg. 32 of Exhibit C.

1711a - Straw bales required for sediment catch basins shall be furnished by the Purchaser. Straw bales shall be certified weed free from commercial grain fields and native grass fields. Straw bales shall be from oats, wheat, rye, or other approved grain crops and shall be free from, mold, or other objectionable material. Straw bales shall be in an air-dry condition and suitable for placement. The Purchaser shall provide the weed free certification to the Authorized Officer upon request.

SOIL STABILIZATION – 1800

1801 - This work shall consist of seeding on designated cut, fill, borrow, disposal, and special areas in accordance with these specifications and as shown on the plans. This work is not required for road acceptance under Sec. 18 of this contract.

1802a - Soil stabilization work consisting of seeding and mulching shall be performed on new road construction, road renovation and improvement, landings, borrow sites, and disposal sites in accordance with these specifications and as shown on the plans. The seed shall be spread at a rate of ten (10) pounds/acre.

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

From	To
April 15	May 15
September	October 31

The Authorized Officer may modify the above seasonal dates to conform to existing weather conditions and changes in the construction schedule.

1804 - The Purchaser shall furnish the following species of grass seed meeting corresponding germination, purity, and weed-content requirements:

Species	Germination Min. %	Purity Min. %	Crop and Weed Content Max. %	Noxious Weed Content Max. %
Red Fescue	85%	97%	0%	0%

Furnished seed shall meet or exceed the factors in the above table. Prior to applying seed, the contractor will supply the BLM with the seed label showing testing results.

If seed is not available that meets the factors in the above table, the project area would be sown with seed approved by the resource area botanist. Prior to applying seed, the contractor will supply the BLM with the seed label showing testing results. Seed shall meet Oregon Certified Seed (Blue Tag) requirements.

1806a - Additional soil stabilization work consisting of seeding, fertilizing, and mulching, may be required at the option of the Authorized Officer. Providing the additional stabilization is not due to Purchaser negligence as specified in Sec. 12 of the contract, a reduction in the total purchased price shall be made to offset the cost of furnishing and applying such additional stabilization material. Cost shall be based upon the unit price set forth in the current BLM Timber Appraisal Production Cost Schedule.

1808 - Mulch materials conforming to the requirements of Subsections 1808a shall be furnished by the Purchaser and applied in accordance with Subsection 1812.

1808a - Straw mulch shall be certified weed free from commercial grain fields and native grass fields. Straw mulch shall be from oats, wheat, rye, or other approved grain crops which are free from mold, or other objectionable materials. Straw mulch shall be in an air-dry condition and suitable for placement.

1809 - Mulch material shall be delivered to the work area in a dry state. Material found to be wet will not be accepted. Material to be used in the mulching operation may be stockpiled along the road designated for treatment provided that it is maintained in a dry state and has the approval of the Authorized Officer.

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

1811 - The Purchaser shall apply to the disturbed soils that are wet and/or within fifty (50) feet each side of “live stream” locations and all disposal sites a mixture of grass seed and straw mulch material at the application rate to be determined by Authorized Officer based on visual observation of trial applications.

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

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

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

1815b - Dry Method - Blowers, mechanical seeders, seed drills, landscape seeders, cultipaker seeders, fertilizer spreaders, or other approved mechanical seeding equipment may be used when seed and fertilizer are to be applied in dry form.

1817 - At the beginning of each day's operation, a measured area will be seeded and mulched to assure uniform application.

1819 - The Purchaser shall notify the Authorized Officer at least three (3) days in advance of date they intends to commence the specified soil stabilization work.

1821 - Mulch that collects at the end of culverts or accumulates to excessive depths on the slopes shall be evenly spread by hand methods, as directed by the Authorized Officer.

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

ROADSIDE BRUSHING - 2100

2101 - This work shall consist of the removal of vegetation from the road prism - variable distance, and inside curves in accordance with these specifications and conforming to the lines, grades, dimensions, and typical cross sections shown on the Roadside Brushing Detail Sheet of this exhibit, at designated locations as shown in the plans.

2102 - Roadside brushing may be performed mechanically with self powered, self-propelled equipment, or manually with hand tools, including chain saws.

2103 - Vegetation cut manually or mechanically less than six (6) inches in diameter shall be cut to a maximum height of two (2) inches above the ground surface or above obstructions such as rocks or stumps on cut and fill slopes and all limbs below the six (6) inch area will be severed from the trunk.

2104 - Trees in excess of six (6) inches in diameter shall be limbed, so that no limbs extend into the treated area or over the roadbed to a height of fourteen (14) feet above the running surface of the roadway on cut and fill slopes, within the road prism-variable distance. Limbs shall be cut to within four (4) inches of the trunk to produce a smooth vertical face. Removal of trees larger than six (6) inches in diameter for sight distance or safety may be directed by the Authorized Officer.

2105 - Vegetation that is outside of the road prism-variable distance that protrudes into the road prism and within fourteen (14) feet in elevation above the running surface shall be cut, to within four (4) inches of the trunk to produce a smooth vertical face.

2106 - Vegetative growth capable of growing one (1) foot in height or higher shall be cut, within the road prism-variable distance or as directed by the Authorized Officer.

2107 - Inside curves shall be brushed out for a sight distance of two hundred (200) feet chord distance and/or a middle ordinate distance of twenty-five (25) feet, whichever is achieved first. Overhanging limbs and vegetation in excess of one (1) foot in height, shall be cut within these areas.

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

2112 - Roadside brushing shall be performed during the following seasonal periods:

*From	To
June 1	October 15

*Brushing may occur during the "wet season" given the following guidelines are followed:

1) Activity would be suspended when conditions exist that could generate sediment inputs into streams, such as times of intense or prolonged rainfall where water in ditches is flowing, or streamflow, as measured above and below the effects of the road, becomes discolored.

2) Activity would be suspended when road surface shows signs of serious deterioration such as excessive rutting or pumping of fines from the sub-grade.

3) Activity would be suspended upon decision of Authorized Officer.

2113 - Roadside brushing shall be accomplished on the following road segments: 4-6-13.1 (Sta. 0+00 – 51+30), 4-6-24.0, and 4-6-27.1 (MP. 0.000 – 0.855).

2116 - Traffic warning signs shall be required at each end of the work area. Signs shall meet the requirements of the Manual on Uniform Traffic Devices.

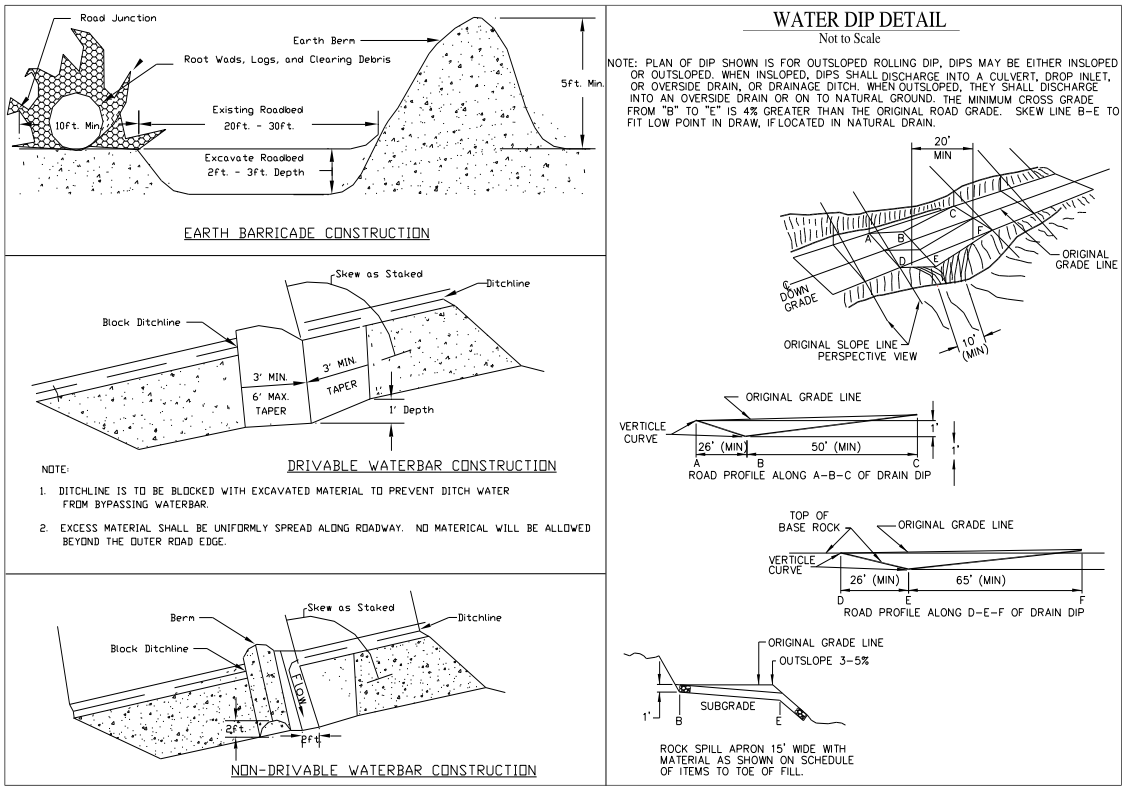
BARRICADES AND CONTROL DEVICES - 2700

2701 - This work will consist of furnishing and placement of barricades, warning signs, and other protection required to prevent injury to people and damage to property due to culvert installations, brushing, and other construction work. Purchaser shall submit a site plan showing how the specifications in this section and of Sec. 44 will be accomplished.

2702 - Maintain condition, operation, and effectiveness of traffic control devices throughout period of use. Materials used for the temporary structures and controls are property of Contractor and shall be removed from Government land when need for their service has ended.

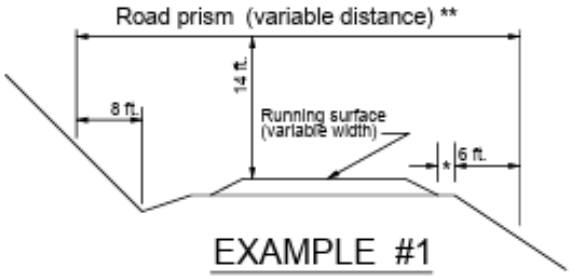
U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE – OREGON

Earth Barricade, Waterdip, Drivable and Non-Drivable Waterbar Details

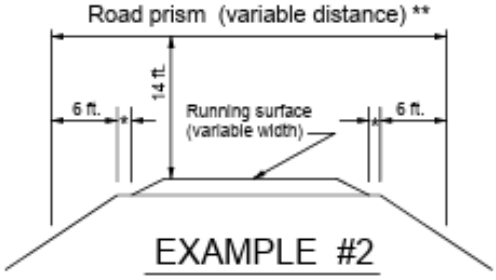


U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE – OREGON

Brushing Details

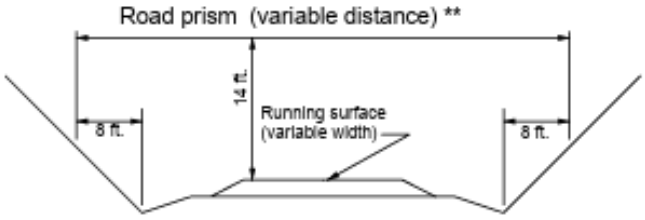


EXAMPLE #1



EXAMPLE #2

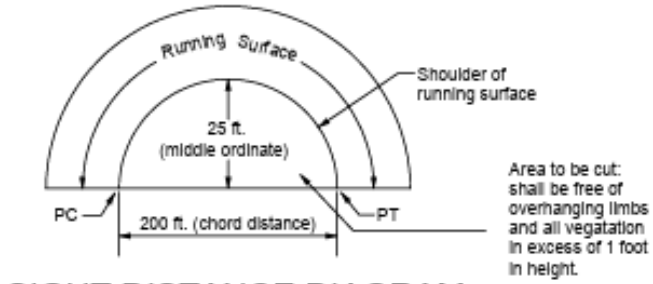
(NO SCALE)



EXAMPLE #3

* Variable distance between running surface and start of fill slope.

** All areas within the variable distance shall be free of all vegatation capable of growing one (1) foot in height or higher and all overhanging limbs and branches 14 feet in elevation above the running surface.



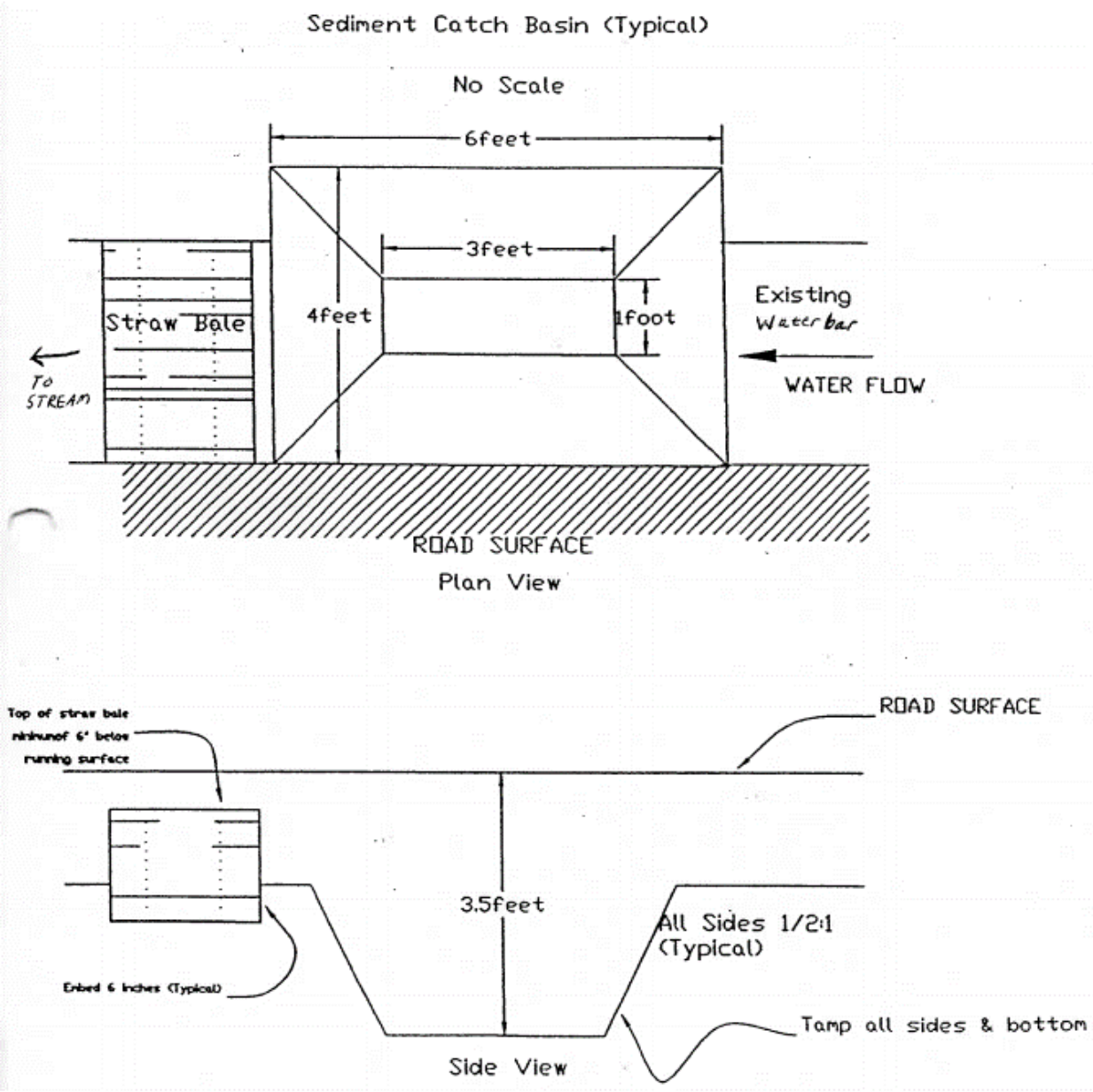
Area to be cut: shall be free of overhanging limbs and all vegatation in excess of 1 foot in height.

SIGHT DISTANCE DIAGRAM

NOTE:

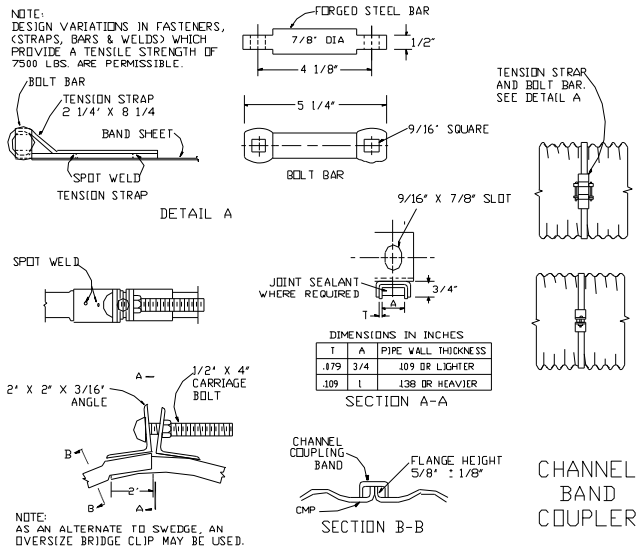
Prior to beginning roadside brushing the purchaser shall establish a control section in a location determined by the Authorized Officer. This section will be used to physically and visually establish acceptable cutting and cleanup standards to be used for the remaining roadside brushing.

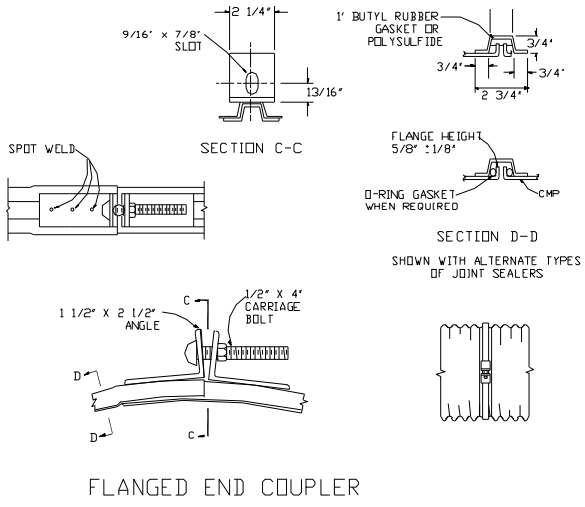
U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE – OREGON
Sediment Catch Basin with Straw Bale Details

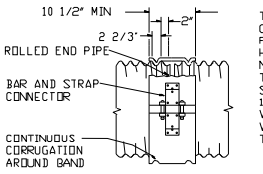


U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE – OREGON

Culvert Band Details







THE HUGGER COUPLER BAND OR AN APPROVED EQUIVALENT COUPLER BAND SHALL BE MADE OF THE SAME MATERIAL AND FINISH AS THE PIPES JOINED. THE COUPLER BANDS SHALL HAVE A MINIMUM WIDTH OF 10 1/2 INCHES AND MAY BE TWO NUMERICAL THICKNESSES LIGHTER THAN THE GAGE OR THICKNESS DESIGNATED FOR THE CONDUIT JOINED. THE BAND SHALL BE DESIGNED TO BE DRAWN TOGETHER WITH TWO 1/2 INCH BOLTS THROUGH USE OF A BAR AND STRAP SUITABLY WELDED TO THE BAND. THE BAND SHALL ENGAGE AND MESH WITH THE SECOND ANNULER CORRUGATION INWARD FROM THE END OF EACH OF THE CONDUIT SECTIONS JOINED.

STANDARD CONSTRUCTION IS 1 PIECE 12" THRU 48" AND 2 PIECE 54" AND ABOVE

GASKETS AND "HUGGER" TYPE BANDS, OR AN APPROVED EQUIVALENT COUPLER, SHALL BE INSTALLED INSTALLED ON ALL 48" AND LARGER METAL PIPES.

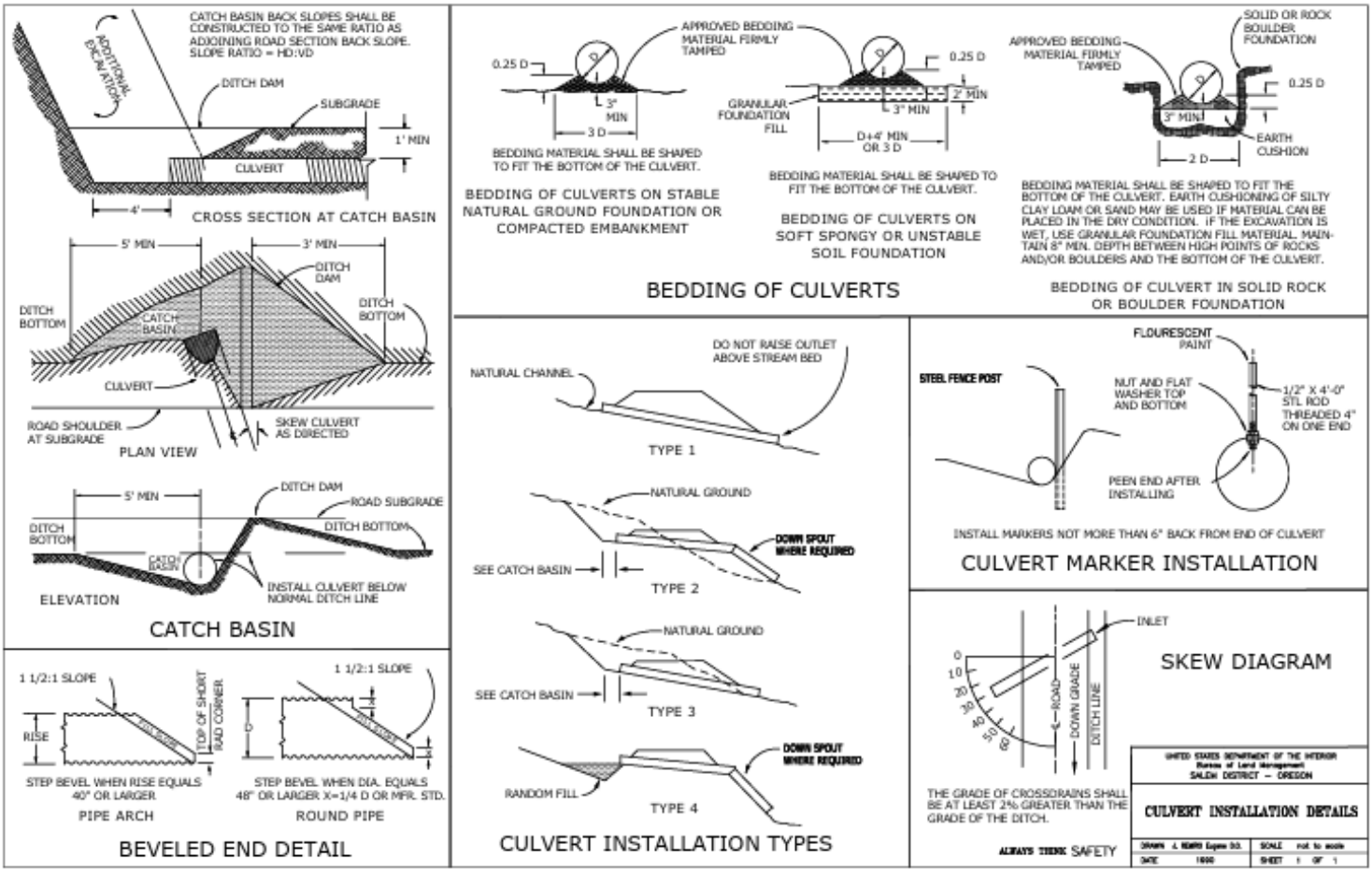
"HUGGER" COUPLER BANDS

STANDARD COUPLER BANDS								
CORRUGATED								
CULVERT SIZE INCHES	STD. ANNULAR		HELICAL		3" x 1"		6" X 1"	
	WIDTH	NO. OF BOLTS	WIDTH	NO. OF BOLTS	WIDTH	NO. OF BOLTS	WIDTH	NO. OF BOLTS
UNDER 18	7	2	7	2				
18 TO 54	12	3	12	3	14	3	18	3
OVER 54	24	5	24	5	24	5	24	4

DATA IN THIS BLOCK DOES NOT APPLY TO PERFORATED PIPE UNDERDRAIN.
FOR BANDS WITH "PUNCH-OUT" TYPE CONNECTIONS, 2 BOLTS ARE PERMISSIBLE FOR EACH LAP. BANDS SHALL LAP 1/2 WIDTH ONTO EACH SECTION OF PIPE AND MUST FULLY ENCIRCLE THE JOINT FORMING A NEARLY WATERTIGHT CONNECTION.

Ⓐ BANDS WITH ANGLES
Ⓑ BANDS WITH TENSION TYPE CONNECTIONS

U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE – OREGON
Culvert Installation Detail

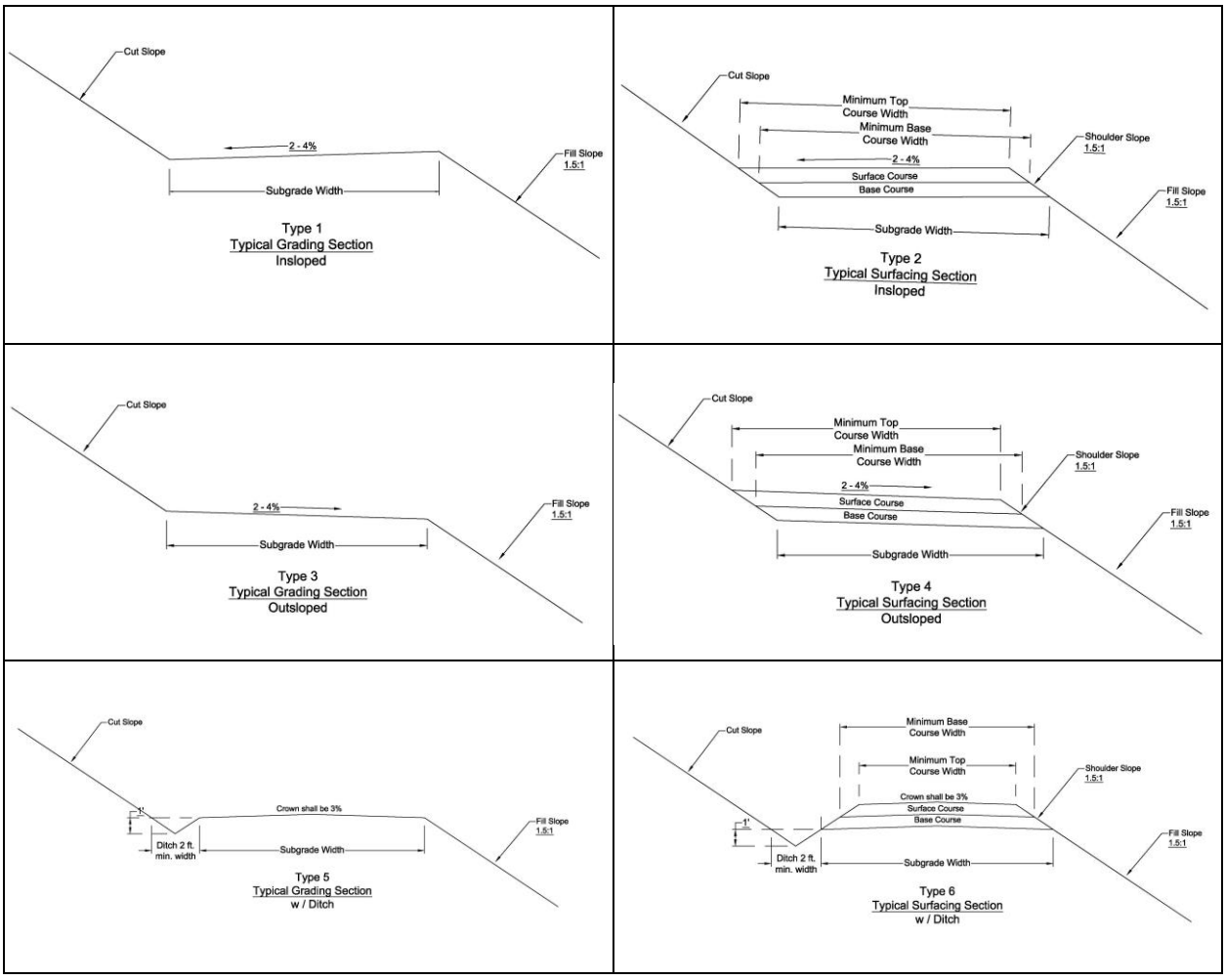


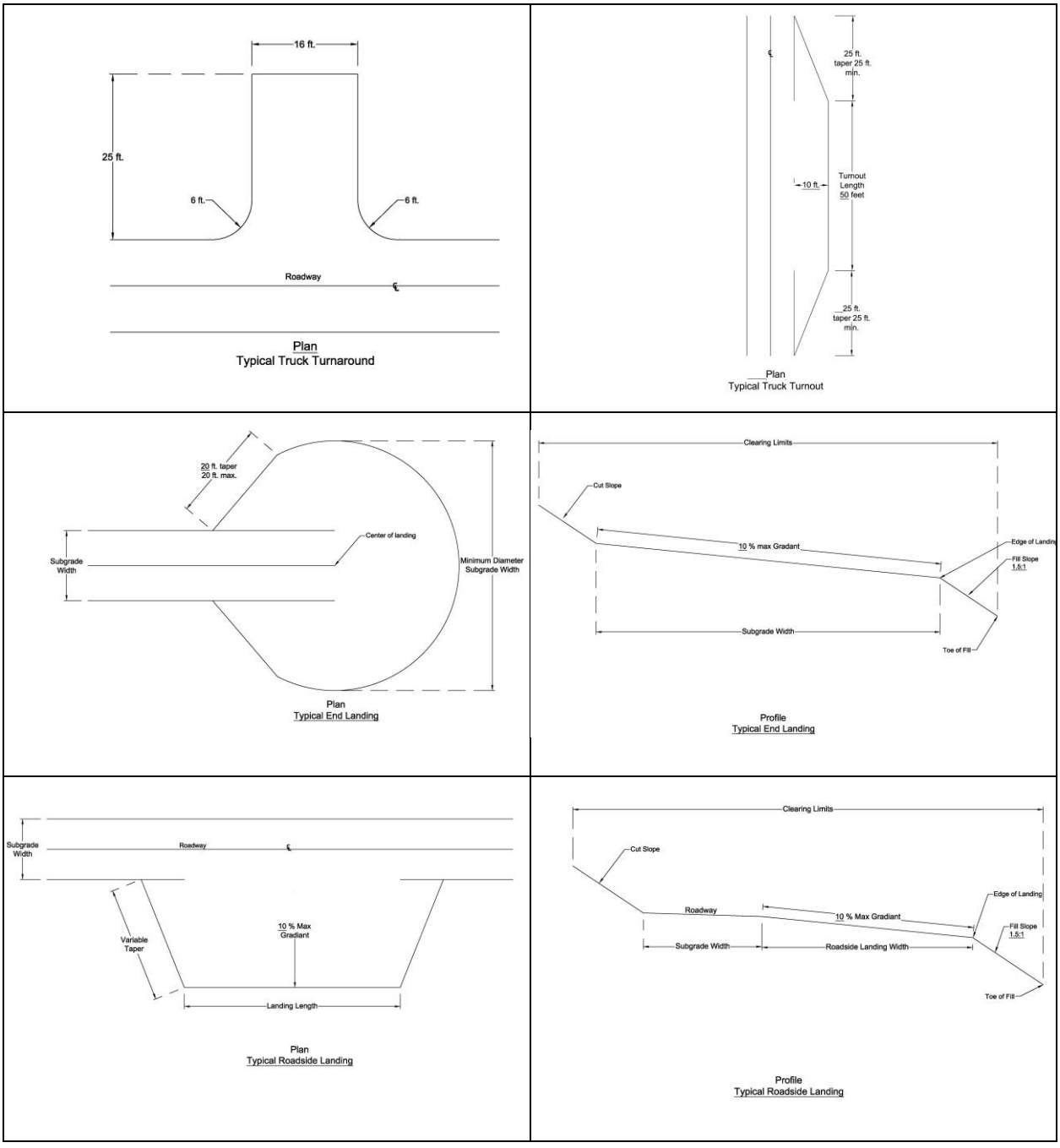
Note: Culverts 20’ in length or smaller shall be one piece (no joints). No culvert piece shall be shorter than (5) foot. Minimization of banding is required.

U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE – OREGON

Road Prism Detail

Typical Road Cross Section: The diagram below shows the typical road cross section, truck turnout, truck turnaround, and landing types that the Purchaser will be required to follow when specified or when directed by the Authorized Officer. Road type specifications can be found in the construction work list.





Extra Subgrade Widths: Add to each shoulder one (1) foot for fills of one to six (1-6) feet and add to each shoulder two (2) feet for fills over six (6) feet. Widen the inside shoulder of curves as shown on Exhibit C Road Plan Maps.

Backslopes: The Purchaser shall construct backslopes as shown in the table below unless otherwise specified by the Authorized Officer:

Material	Cut Slopes	Fills Slopes
Solid Rock	1/4:1	Angle of Repose
Soft Rock and Shale	1/2:1	Angle of Repose
Common: Slopes under 55%	1:1	1-1/2:1
Common: Slopes over 55%	3/4:1	1-1/2:1

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

Turnouts: Width of turnout is ten (10) feet in addition to subgrade width or as specified in construction worklist. Located approximately as described in construction worklist or intervisible and not more than seven hundred fifty (750) feet apart.

U.S. DEPT. OF THE INTERIOR
Bureau of Land Management
NORTHWEST OREGON DISTRICT OFFICE – OREGON
Road Plan and Construction Work List Details

4-6-12.4: New construct of a 14' ditched/crowned subgrade with natural surfacing (Max grade 18%, Type 5) and new construct of a 14' outsloped subgrade with natural surfacing (Max grade 18%, Type 3). Clearing and grubbing required for establishment of road and ditch, ditchouts, turnouts, turnaround, roadside landing/turnarounds, landing, and culvert installations. Grading, compacting, and construction of road and ditch, ditchouts, turnouts, turnaround, roadside landing/turnarounds, landing, and culvert installations. Spread 20 CY of 6" Jaw Run Base Rock as marked (ABC – D) as marked. Spread 10 CY of 1 ½" -0" Crushed Spot Rock as marked (ASC- C) as marked. Place 60 CY of 1 ½"-0" Crushed Bedding/Backfill Rock as marked (ASC-C). Place 50 CY of Class 5 RipRap as marked. Install 1 culverts (Government Provided). Install 1 inlet markers. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required. Design notes are available upon request from Authorized Officer.

0+00 - Junction with 4-6-13.1 (Sta. 54+76). Start new construct of a 14' ditched/crowned subgrade with natural surfacing. Spread 20 CY of 6" jaw run base rock capped with 10 CY of 1 ½"-0" crushed spot rock for junction apron. Within riparian area. On BLM land. Start of segment A1. Excavate down cut bank to achieve desired grade and smooth transition at junction. Ditch on the left. Tie ditchlines together.

0+65 - Existing draw that has signs of water flow. Install a 24" x 85' CPP across 4-6-12.4 and 4-6-13.1 roads (approx. 4' fill @ inlet, 15' fill @ outlet, 9.5' fill @ CL) ensure the grade and fill cover is appropriate for both roads. Place 60 CY of 1 ½"-0" crushed bedding/backfill rock. Place 50 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker. Entering through cut, start ditching on both sides.

1+30 - End of through cut, end of ditch on the right.

3+80 - End of ditch on the left, start of ditch on the right. Construct a ditchout to the right.

6+30 - Construct a truck turnout to the left.

6+44 - Timber sale boundary. Entering Gopher Broke timber sale.

7+35 - Construct a roadside landing/truck turnaround to the left.

9+50 - Construct a ditchout to the right.

10+55 - Construct a ditchout to the right.

11+90 - Construct a roadside landing/truck turnaround to the left.

15+18 - Entering through cut, start ditching on both sides. Construct a ditchout to the left and right.

15+68 - End of through cut, end of ditch on left and right. End new construct of a 14' ditched/crowned subgrade with natural surfacing. Start new construct of 14' outsloped subgrade with natural surfacing.

17+66 - Construct a roadside landing/truck turnaround to the left.

22+19 - Construct a roadside landing/truck turnaround to the left.

25+76 - Construct a 100' x 100' landing. End of segment A1. End of new construct.

4-6-12.5: New Construct of a 14' ditched/crowned subgrade with natural surfacing (Max grade 18%, Type 5). Clearing and grubbing required for establishment of road and ditch, ditchouts, roadside landing/turnarounds, landing, and culvert installations. Grading, compacting, and construction of road and ditch, ditchouts, roadside landing/turnarounds, landing, and culvert installations. Spread 20 CY of 6" Jaw Run Base Rock as marked (ABC – D) as marked. Spread 10 CY of 1 ½" -0" Crushed Spot Rock as marked (ASC- C) as marked. Place 35 CY of 1 ½"-0" Crushed Bedding/Backfill Rock (ASC – C) as marked. Install 2 culverts (Government Provided). Install 2 inlet markers. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required. Design notes are available upon request from Authorized Officer.

0+00 - Junction with 4-6-13.1 (Sta. 57+52). Spread 20 CY of 6" jaw run base rock capped with 10 CY of 1 ½"-0" crushed spot rock for junction apron. On BLM land. Ditch on the left. Tie into ditchline and sediment catch basin described on the 4-6-13.1 road. Start of segment A1.

0+70 - Entering through cut, start ditching on both sides. Construct a ditchout to the right and drain towards ditchline of 4-6-13.1.

1+50 - End of though cut, end of ditch on the left.

1+81 - Timber sale boundary. Entering Gopher Broke timber sale.

2+62 - Construct a ditchout to the left and right.

6+06 - Construct a roadside landing/truck turnaround to the left as marked.

7+06 - Construct a ditchout to the right.

8+32 - Trench with evidence with some overland flow. Install an 18" x 35' CPP. Place 15 CY of 1 ½"-0" crushed bedding/backfill rock. Install inlet marker.

11+23 - Construct a roadside landing/truck turnaround to the left as marked.

14+15 - Install an 18” x 40’ CPP. Place 20 CY of 1 ½”-0” crushed bedding/backfill rock. Install inlet marker.

16+56 - Construct a 50’ diameter landing. End of new construct.

4-6-13.1: Renovation of a 14’ outsloped subgrade with a 12’ rocked running surface (Type 4), renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface (Type 6), New Construct of a 16’ ditched/crowned subgrade with a 13’ rocked running surface (Type 6 – Max grade 16 %), and New Construct of a 14’ ditched/crowned subgrade with natural surfacing (Type 3 – Max grade 18 %). Medium brushing with clearing and grubbing required for road and ditchline establishment, turnouts, turnarounds, waste areas, roadside landings/turnarounds, ditchouts, landings, and culvert installations. Grading (including ditchline establishment), compacting, and construction of road and ditch, turnouts, turnarounds, waste areas, roadside landings/turnarounds, ditchouts, landings, and culvert installations. Spread a 9” lift of “ Jaw Run Base Rock (ABC – D)(1 Lift; approx. 1,212 CY) as marked. Spread 75 CY of 6” Jaw Run Base Rock as marked (ABC – D) as marked. Spread 215 CY of 1 ½” -0” Crushed Spot Rock as marked (ASC- C) as marked. Place 280 CY of 1 ½”-0” Crushed Bedding/Backfill Rock as marked (ASC-C). Place 440 CY of Class 5 RipRap as marked. Replace 2 culverts (Government Provided) and Install 12 culverts (10 Government Provided, 2 Purchaser Provided). Install 15 inlet markers. Construct 10 sediment catch basins with straw bales as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with Gopher Valley Road (MP. 9.993). Start renovation of a 14’ outsloped subgrade with 12’ rocked running surface. Spread 20 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock for junction apron. Existing CMP in fair condition. On Hampton land. Start of segment A1.

0+35 - Existing orange gate with additional steel members to block side entrances.

9+28 - Junction with road to the right. End of segment A1, start of segment A2.

19+08 - Junction with road to the left. End of segment A2, start of segment A3.

19+57 - Existing wide spot to the right. Construct a truck turnout to the right.

21+45 - Junction with road to the right. End of segment A3, start of segment A4.

30+06 - Construct a sediment catch basin with a straw bale to the left.

30+15 - Stream crossing. Existing CMP in fair condition. Install a inlet marker.

30+36 - Construct a sediment catch basin with a straw bale to the left. End renovation of a 14’ outsloped subgrade with a 12’ rocked running surface. Start renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface.

31+03 - Construct a truck turnout to the right.

32+11 - Construct a sediment catch basin with a straw bale to the left.

32+43 - Stream crossing. Existing CMP in bad condition. Replace with a 24” x 40’ CPP (4’ fill @ inlet, 7’ fill @ outlet, 5.5’ fill @ CL). Place 20 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 20 CY of 6” jaw run base rock capped with 15 CY of 1 ½”-0” crushed rock. Place 5 CY of Class 5 RipRap at outlet as fill armor and energy dissipater. Install inlet marker.

33+39 - Construct a truck turnout to the right.

33+89 - Existing CPP in good condition. Install inlet marker.

38+38 - Construct a sediment catch basin with straw bale to the left.

38+43 - Stream crossing. Existing CMP in bad condition. Replace with a 24” x 40’ CPP (3’ fill @ inlet, 8’ fill @ outlet, 5.5’ fill @ CL). Place 20 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 20 CY of 6” jaw run base rock capped with 15 CY of 1 ½”-0” crushed rock. Place 5 CY of Class 5 RipRap at outlet as fill armor and energy dissipater. Install inlet marker.

38+48 - Construct a sediment catch basin with straw bale to the left. Old cat road to the right.

38+48 - End renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface. Start renovation of a 14’ outsloped subgrade with a 12’ rocked running surface.

48+44 - Existing wide spot left. Construct a truck turnaround. Start renovation of a 16’ ditched/crowned subgrade with 13’ rocked running surface. Install an 18” x 35’ CPP past turnaround. Place 15 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 15 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock. Install inlet marker.

51+30 - End of drivable portion of road. Start a 9” lift of 6” jaw run base rock.

52+40 - Install an 18” x 30’ CPP. Place 10 CY 1 ½”-0” crushed bedding/backfill rock. Spread 10 CY of 1 ½”-0” crushed spot rock capped over rock lift. Install inlet marker. Property line. Leaving Hampton land, entering BLM land. End of segment A4, start of segment B1. End renovation of a 16’ ditched/crowned subgrade with a 13’ rocked running surface. Start new construct of a 16’ ditched/crowned subgrade with a 13’ rocked running surface.

52+70 - Entering inner riparian area.

53+77 - Install an 18” x 40’ CPP. Place 20 CY 1 ½”-0” crushed bedding/backfill rock. Spread 15 CY of 1 ½”-0” crushed spot rock capped over rock lift. Install inlet marker.

54+76 - Junction with 4-6-12.4 to the left. End of segment B1, start of segment B2. Connect and tie ditchlines together.

55+15 - Existing draw and stream crossing. See 4-6-12.4 notes for culvert installation plans. Install culvert across both roads in existing draw. Ensure grade and centerline fill depth is appropriate for both roads.

55+55 - Install an 18” x 35’ CPP. Place 15 CY 1 ½”-0” crushed bedding/backfill rock. Spread 10 CY of 1 ½”-0” crushed spot rock capped over rock lift. Install inlet marker.

56+53 - Approximate location to start through fill.

56+82 - Construct a sediment catch basin with a straw bale to the left.

56+90 - Stream crossing. Install a 48” x 55’ aluminized CMP **(Purchaser Provided)** with bands and gaskets (4’ fill @ inlet, 13’ fill @ outlet, 6’ fill @ CL). Place 40 CY 1 ½”-0” crushed bedding/backfill rock. Spread 30 CY of 1 ½”-0” crushed spot rock capped over rock lift. Place 20 CY of Class 5 RipRap at inlet as fill armor. Install inlet marker.

56+10 – 57+05 - Place 160 CY of Class 5 RipRap on fill slope as stabilization wall and fill armor for the culvert install at Sta. 56+90.

57+30 - Approximate location to stop through fill.

57+72 - Junction with 4-6-12.5 to the left. End of segment B2, start of B3. Tie both ditchlines together. Construct a sediment catch basin with a straw bale to the left. Additionally, use junction as truck turnout.

58+18 - Leaving inner riparian area.

58+75 - Stream entering road and creating a seep area. Excavate catch basin and tie channel on the cut bank and fill slope side of road. Install a 24” x 45’ CPP (3’ fill @ inlet, 6’ fill @ outlet, 4.5’ fill @ CL). Place 20 CY of 1 ½”-0” crushed bedding/backfill rock. Place 20 CY of 1 ½”-0” crushed spot rock over rock lifts. Place 10 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker.

58+65 - Construct a sediment catch basin with straw bale to the left.

59+27 - Stream crossing/Seep flowing across road. Excavate catch basin and tie channel on the cut bank and fill slope side of road. Install a 24” x 45’ CPP (3’ fill @ inlet, 8’ fill @ outlet, 5.5’ fill @ CL). Place 20 CY of 1 ½”-0” crushed bedding/backfill rock. Place 20 CY of 1 ½”-0” crushed spot rock over rock lifts. Place 10 CY of Class 5 RipRap at inlet as fill armor. Place 10 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker.

59+20 - Timber sale boundary. Entering Gopher Broke timber sale.

60+20 - Existing flat area to the right. Use as a waste area as needed.

62+90 - Install an 18” x 30’ CPP. Place 10 CY 1 ½”-0” crushed bedding/backfill rock. Spread 10 CY of 1 ½”-0” crushed spot rock capped over rock lift. Install inlet marker.

63+78 - Construct a large roadside landing/truck turnaround to the right as marked.

64+22 - Timber sale boundary. Leaving Gopher Broke timber sale.

67+80 - Install an 18" x 35' CPP. Place 15 CY 1 ½"-0" crushed bedding/backfill rock. Spread 10 CY of 1 ½"-0" crushed spot rock capped over rock lift. Install inlet marker.

67+55 - Construct a truck turnout to the right.

69+30 - Approximate location to start through fill.

69+57 - Construct a sediment catch basin with a straw bale to the left.

69+67 - Large stream crossing. Install a 54" x 65' aluminized CMP **(Purchaser Provided)** with gaskets and bands (11' fill @ inlet, 15' fill @ outlet, 13' fill @ CL). Place 50 CY of 1 ½"-0" crushed bedding/backfill rock. Spread 30 CY of 1 ½"-0" crushed spot rock over rock lift. Place 90 CY of Class 5 RipRap at inlet as fill armor. Place 130 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker. Construction will need fill to achieve desired grade and cover.

70+02 - Construct a sediment catch basin with straw bale to the left.

70+28 - Approximate location to stop through fill and start through cut. Construct a ditchout to the right.

70+80 - Leaving inner riparian area.

71+16 - Approximate location to stop through cut. Ditch on the right ends.

71+60 - Install an 18" x 30' CPP. Place 10 CY 1 ½"-0" crushed bedding/backfill rock. Spread 10 CY of 1 ½"-0" crushed spot rock capped over rock lift. Install inlet marker.

71+90 - Timber sale boundary. Entering Gopher Broke timber sale. End of 9" lift of 6" jaw run base rock. End new construct of a 16' ditched/crowned subgrade with a 13' rocked running surface. Start new construct of a 14' ditched/crowned subgrade with natural surfacing.

72+35 - Construct a large roadside landing/truck turnaround to the right as marked.

75+85 - Install an 18" x 35' CPP. Place 15 CY 1 ½"-0" crushed bedding/backfill rock. Install inlet marker.

78+70 - Entering through cut, start ditching both sides. Construct a ditchout to the right.

80+10 - Construct a 50' diameter landing. Construct a ditchout on the backside of landing. End of new construct.

4-6-22.0: Renovation of a 14' ditched/crowned subgrade with natural surfacing (Max grade 18%, Type 5). Clearing and grubbing required for re-establishment of road and ditch, ditchouts,

turnout, and culvert installation. Grading (including ditchline re-establishment), compacting, and construction of ditchout, turnout, and culvert installation. Place 20 CY of 1 ½"-0" Crushed Bedding/Backfill Rock (ASC – C) as marked. Install 1 culvert (Government Provided). Install 1 inlet marker. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-27.1 (MP 1.700). On Hampton land. Start of segment A1.

0+20 - Ditchline of 4-6-27.1 runs water. Install an 18" x 50' CPP. Place 20 CY of 1 ½"-0" crushed bedding/backfill rock. Install inlet marker.

1+85 - Leaving riparian area.

2+30 - Saddle. Construct a ditchout to the left and right.

4+00 - Saddle. Construct a ditchout to the left and right.

8+00 - Saddle. Construct a ditchout to the left.

10+45 - Construct a truck turnout to the right.

13+03 - Grade steepens. Approximate location to start filling to achieve desired grade.

14+24 - Approximate location to stop filling and start cutting and drifting to achieve desired grade.

16+01 - Junction with 4-6-22.1 to the left. Excavate and blend material so it creates a smooth transition in each direction. End of segment A1. End of renovation.

4-6-22.1: New Construct of a 14' outsloped subgrade with natural surfacing (Max grade 9%, Type 3) and new construct of a 14' ditched/crowned subgrade with natural surfacing (Max grade 18%, Type 5). Clearing and grubbing required for establishment of road and ditchline, turnout, roadside landing/turnarounds, turnaround, landing, and culvert installations. Grading, compacting, and construction of road and ditchline, turnout, roadside landing/turnarounds, turnaround, landing, and culvert installations. Place 80 CY of 1 ½"-0" Crushed Bedding/Backfill Rock (ASC – C) as marked. Place 40 CY of Class 5 RipRap as marked. Install 5 culverts (Government Provided). Install 5 inlet markers. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required. Design notes are available upon request from Authorized Officer.

0+00 - Junction 4-6-22.0 (Sta. 16+01). Start new construct of a 14' outsloped subgrade with natural surfacing. Excavate down and create smooth transition at junction. On Hampton land. Start of segment A1

5+77 - Stream crossing. Install a 24" x 30' CPP (approx. 3' @ inlet, 5' @ outlet, 4' @ CL). Place 15 CY of 1 ½"-0" crushed bedding/backfill rock. Place 10 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker.

6+97 - Stream crossing. Install a 24" x 35' CPP (approx. 3' @ inlet, 5' @ outlet, 4' @ CL). Excavate a large catch basin to capture all water draining to this location. Place 15 CY of 1 ½"-0" crushed bedding/backfill rock. Place 10 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker.

10+02 - Stream crossing. Install a 24" x 35' CPP (approx. 3' @ inlet, 5' @ outlet, 4' @ CL). Place 15 CY of 1 ½"-0" crushed bedding/backfill rock. Place 10 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker. Signs of large boulders in subsurface starting here.

13+01 - Stream crossing. Install a 24" x 40' CPP (approx. 3' @ inlet, 8' @ outlet, 5.5' @ CL). Place 20 CY of 1 ½"-0" crushed bedding/backfill rock. Place 10 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker. Property line. Leaving Hampton land, entering BLM land. End of segment A1, start of B1.

14+89 - Construct a roadside landing/turnaround to the left. End new construct of a 14' outsloped subgrade with natural surfacing. Start new construct of a 14' ditched/crowned subgrade with natural surfacing.

15+74 - Install an 18" x 35' CPP. Place 15 CY of 1 ½"-0" crushed bedding/backfill rock. Install inlet marker.

16+00 - Timber sale boundary. Entering Gopher Broke timber sale.

19+45 - Construct a roadside landing/turnaround to the left. Lots of subsurface boulders.

22+03 - Construct a truck turnaround to the left.

22+94 - Construct a 100' x 100' landing. End of segment B1. End of new construct.

4-6-22.2: New Construct of a 14' ditched/crowned subgrade with natural surfacing (Max grade 18%, Type 5) and new construct of a 14' outsloped subgrade with natural surfacing (Max grade 12%, Type 3). Clearing and grubbing required for establishment of road and ditchline, ditchout, turnaround, roadside landing/turnarounds, landings, and culvert installation. Grading, compacting, and construction of road and ditchline, ditchout, turnaround, roadside landing/turnarounds, landings, and culvert installation. Spread 20 CY of 6" Jaw Run Base Rock (ABC -D) as marked. Spread 10 CY of 1 ½"-0" Crushed Spot Rock (ASC – C) as marked. Place 15 CY of 1 ½"-0" Crushed Bedding/Backfill Rock (ASC – C) as marked. Install 1 culvert (Government Provided). Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-27.2 (MP. 0.952). Start new construct of a 14' ditched/crowned subgrade with natural surfacing. Spread 20 CY of 6" jaw run base rock capped with 10 CY of 1 ½"-0" crushed spot rock for junction apron. Excavate cut bank of existing road down to create smooth transition and desired grade. Ditch on the left, tie into existing ditchline. Install an 18" x 35' CPP. Place 15 CY of 1 ½"-0" crushed bedding/backfill rock. Cap culvert with the provided junction apron rock. On Hampton land. Start of segment A1.

1+40 - Approximate location to entering through cut, either start ditching on both sides and construct a ditchout to the right, or, daylight all material.

2+92 - Approximate location to end through cut, end of ditch on the left.

3+79 - End new construct of a 14' ditched/crowned subgrade with natural surfacing. Start new construct of a 14' outsloped subgrade with natural surfacing.

3+88 - Property line. Leaving Hampton land, entering BLM land. End of segment A1, start of segment B1. Timber sale boundary. Entering Gopher Broke timber sale.

10+78 - Construct a truck turnaround to the right.

14+05 - Construct a roadside landing/truck turnaround to the left.

18+04 - Excavate and construct a roadside landing/truck turnaround to the left.

23+58 - Construct a 50' diameter landing. End of new construct.

4-6-23.0: New Construct of a 14' outsloped subgrade with natural surfacing (Max grade 15%, Type 3). Clearing and grubbing required for establishment of road, turnout/turnaround/landings, roadside landings, turnaround, and landing. Grading, compacting, and construction of road, turnout/turnaround/landings, roadside landings, turnaround, and landing. Spread 20 CY of 6" Jaw Run Base Rock as marked (ABC – D) as marked. Spread 10 CY of 1 ½" -0" Crushed Spot Rock as marked (ASC- C) as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-24.0 (Sta. 50+66). Spread 20 CY of 6" jaw run base rock capped with 10 CY of 1 ½"-0" crushed spot rock for junction apron. On BLM land. Within Gopher Broke timber sale. Start of segment A1.

1+97 - Construct a truck turnout/turnaround/roadside landings to the left and right.

4+92 - Timber sale boundary. Leaving Gopher Broke timber sale.

6+46 - Construct a large roadside landing to the right that ties into adjacent unit

15+96 - Timber sale boundary. Entering Gopher Broke timber sale.

16+45 - Junction with 4-6-23.2 to the left. End of segment A1, start of segment A2.

19+74 - Construct a truck turnaround to the right.

23+63 - Construct a 100' x 100' landing. End of segment A2. End of new construct.

4-6-23.1: New Construct of a 15' outsloped subgrade with 13' rocked running surface (Max grade 15%, Type 4) and renovation of a 14' outsloped subgrade with a 12' rocked running surface (Type 4). Clearing and grubbing required for establishment of road and roadside landing/turnarounds. Grading, compacting, and construction of road and roadside landing/turnarounds. Spread a 9" lift of " Jaw Run Base Rock (ABC – D)(1 Lift; approx. 559 CY) as marked. Spread 20 CY of 6" Jaw Run Base Rock as marked (ABC – D) as marked. Spread 110 CY of 1 ½" -0" Crushed Spot Rock as marked (ASC- C) as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-24.0 (Sta. 50+66). Start new construct of a 15' outsloped subgrade with a 13' rocked running surface. Spread 20 CY of 6" Jaw Run Base Rock capped with 10 CY of 1 ½"-0" crushed spot rock for junction apron. Start a 9" lift of 6" jaw run base rock. On BLM land. Within Gopher Broke timber sale. Start of segment A1.

2+85 - Construct a roadside landing/truck turnaround to the left and right.

4+83 - Property line. Leaving BLM land, entering Hampton land. End of segment A1, start of segment B1. Timber sale boundary. Leaving Gopher Broke timber sale.

10+29 - Junction with road. End of new construct of a 15' outsloped subgrade with a 13' rocked running surface. Start renovation of a 14' outsloped subgrade with a 12' rocked running surface. End 9" lift of 6" jaw run base rock. End of segment B1, start of segment C1. Heavy grading required to remove existing rutting on road.

11+95 – 15+78 – Spread 100 CY of 1 ½"-0" crushed spot rock to repair running surface.

15+88 - Junction with road to the left. End of segment C1, start of segment C2. Start of small through cut.

19+55 - Construct a ditchout to the right.

23+24 - Existing CPP in good condition. Clean buried outlet. Construct a lead-off ditch. Install inlet marker. Seep in ditchline running to here.

23+37 - Junction with 4-6-35.0. End of segment C2. End of renovation.

4-6-23.2: New Construct of a 14’ outsloped subgrade with natural surfacing (Max grade 11%, Type 3). Clearing and grubbing required for establishment of road, turnaround, and landing. Grading, compacting, and construction of road, turnaround, and landing. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-23.0 (Sta. 16+45). On BLM land. Within Gopher Broke timber sale. Start of segment A1.

4+18 - Construct a truck turnaround to the left.

7+62 - Construct a 100’ x 100’ landing. End of segment A1. End of new construct.

4-6-23.3: New Construct of a 14’ outsloped subgrade with natural surfacing (Max grade 10%, Type 3). Clearing and grubbing required for establishment of road, turnout/turnaround, and landing. Grading, compacting, and construction of road, turnout/turnaround, and landing. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-24.0 (Sta. 54+26). On BLM land. Within Gopher Broke timbe sale. Start of segment A1.

3+47 - Construct a truck turnaround/turnout to the right.

5+53 - Construct a 100’ x 100’ landing. End of segment A1. End of new construct.

4-6-23.4: New Construct of a 14’ outsloped subgrade with natural surfacing (Max grade 11%, Type 3). Clearing and grubbing required for establishment of road, turnaround, and landing. Grading, compacting, and construction of road, turnaround, and landing. Spread 20 CY of 6” Jaw Run Base Rock as marked (ABC – D) as marked. Spread 10 CY of 1 ½” -0” Crushed Spot Rock as marked (ASC- C) as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-35.0 (MP 0.572). Spread 20 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock for junction apron. On Hampton land. Start of segment A1.

3+82 - Property line. Leaving Hampton land, entering BLM land. End of segment A1, start segment B1. Timber sale boundary. Entering Gopher Broke timber sale.

5+80 - Construct a truck turnaround to the right.

6+32 - Construct a 100’ x 100’ landing. End segment B1. End of new construct.

4-6-23.5: New Construct of a 14’ outsloped subgrade with natural surfacing (Max grade 15%, Type 3). Clearing and grubbing required for establishment of road, roadside landing/turnout, turnaround, and landing. Grading, compacting, and construction of road, roadside landing/turnout, turnaround, and landing. Spread 20 CY of 6” Jaw Run Base Rock as marked (ABC – D) as marked. Spread 10 CY of 1 ½” -0” Crushed Spot Rock as marked (ASC-C) as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-35.0 (MP 0.732). Spread 20 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock for junction apron. On Hampton land. Start of segment A1.

1+85 - Property line. Leaving Hampton land, entering BLM land. End of segment A1, start segment B1. Timber sale boundary. Entering Gopher Broke timber sale.

4+60 - Construct a roadside landing/turnout to the left.

6+85 - Construct a truck turnaround to the right.

7+98 - Construct a 100’ x 100’ landing. End of segment B1. End of new construct.

4-6-24.0: Renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface (Type 6), renovation of a 16’ ditched/crowned subgrade with a 13’ rocked running surface (Type 6), renovation of a 15’ outsloped subgrade with a 13’ rocked running surface (Type 4), and renovation of a 14’ outsloped subgrade with natural surfacing (Type 3). Medium brushing with some clearing and grubbing required for re-establishment of road and ditch, ditchouts, turnout, roadside landing/turnarounds, roadside landings, turnaround, landing, and culvert installations. Grading (including ditchline re-establishment), compacting, and construction of ditchouts, turnout, roadside landing/turnarounds, roadside landings, turnaround, landing, and culvert installations. Spread a 9” lift of “ Jaw Run Base Rock (ABC – D)(1 Lift; approx. 1,138 CY) as marked. Spread 80 CY of 6” Jaw Run Base Rock as marked (ABC – D) as marked. Spread 85 CY of 1 ½” -0” Crushed Spot Rock as marked (ASC- C) as marked. Place 70 CY of 1 ½”-0” Crushed Bedding/Backfill Rock as marked (ASC-C). Place 65 CY of Class 5 RipRap as marked. Replace 4 culverts (Government Provided) and Install 1 culverts (Government Provided). Install 6 inlet markers. Construct 3 sediment catch basins with straw bales as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with Gopher Valley Road (MP 9.051). Start renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface. Spread 20 CY of 1 ½”-0” crushed spot rock for junction apron. Additionally, widen road to the right and create a subgrade/running surface to the right to allow haul to go to the North. Spread 20 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed spot rock onto newly widened area. Ditch on right. On Private land. Start of segment A1.

0+40 - Existing farm gate, needs to stay open. Re-establishment ditchout to the right to allow for proper drainage.

6+45 - Existing CMP in fair condition. Clean buried inlet. Install inlet marker.

13+34 - Stream crossing. Existing CMP in bad condition. Replace with a 24” x 40’ CPP (approx. 3’ fill @ inlet, 8’ fill @ outlet, 5.5’ fill @ CL). Place 20 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 20 CY of 6” jaw run base rock capped with 15 CY of 1 ½”-0” crushed rock. Place 5 CY of Class 5 RipRap at inlet as fill armor. Place 20 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker.

13+55 - Construct a sediment catch basin with a straw bale to the right.

18+51 - Junction with road to the right. End of segment A1, start of segment A2.

18+77 - Existing CMP in bad condition. Replace with an 18” x 30’ CPP with a lead off ditch. Place 10 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 10 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock. Install inlet marker.

20+21 - Junction with road to the left. End of segment A2, start of segment A3.

21+29 - Property line. Leaving Private land, entering Hampton land. End of segment A3, start of segment B1. Existing gate.

22+07 - Stream crossing. Existing CMP in bad condition. Replace with a 24” 35’ CPP (approx. 4’ fill @ inlet, 8’ fill @ outlet, 6’ fill @ CL). Place 15 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 15 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock. Place 20 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker.

22+22 - Construct a sediment catch basin with straw bale to the right.

27+64 - Stream crossing. Existing CMP in bad condition. Replace with a 24” x 30’ CPP (approx. 4’ fill @ inlet, 7’ fill @ outlet, 5.5’ fill @ CL). Place 15 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 15 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock. Excavate deposited material in catch basin. Place 10 CY of Class 5 RipRap at inlet and create an artificial stream channel and direct water in culvert inlet. Place 10 CY of Class 5 RipRap at outlet as fill armor. Install inlet marker.

27+90 - Construct a sediment catch basin with straw bale to the right.

30+02 - Junction with road to the left. End renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface. Start renovation of a 16’ ditched/crowned subgrade with a 13’ rocked running surface. Start a 9” lift of 6” jaw run base rock.

30+70 - Existing wide spot left. Construct a truck turnout to the left.

31+25 - Multiple locations from this station ahead that will need material on the outside edge daylighted out. Excavate and daylight or excavate and haul to designated waste area. Construct a ditchout to the left.

31+70 - Entering through cut, start ditching on both sides. Construct a ditchout on the right.

32+63 - End of through cut, end of ditch on the left.

33+34 - Entering through cut, start ditching on both sides. Construct a ditchout to the left. Install an 18" x 30' CPP. Place 10 CY of 1 ½"-0" crushed bedding/backfill rock. Spread 10 CY of 1 ½"-0" crushed rock to cap over rock lift. Install inlet marker.

36+75 - Construct a ditchout to the right. Then resume ditching on both sides of through cut.

38+88 - End of through cut, end of ditching on both sides. Construct a ditchout to the right. End renovation of 16' ditched/crowned subgrade with a 13' rocked running surface. Start renovation of 15' outsloped subgrade with a 13' rocked running surface. Daylight all material as needed on road edge unless otherwise indicated.

39+34 - Property line. Leaving Hampton land, entering BLM land. End of segment B1, start of segment C1. Timber sale boundary. Entering Gopher Broke timber sale.

42+09 - Construct a roadside landing/turnaround to the left.

45+48 - Construct a roadside landing/turnaround to the left.

47-28 - Construct a roadside landing to the right.

50+66 - Junction with 4-6-23.1 to the left and 4-6-23.0 to the right. End of segment C1, start of segment C2. End renovation of a 15' outsloped subgrade with a 13' rocked running surface. Start renovation of a 14' outsloped subgrade with natural surfacing. End of 9" lift of 6" jaw run base rock.

54+26 - Junction with 4-6-23.3 to the left. End of segment C2, start of segment C3,

55+92 - Construct a roadside landing to the left. Excavate material from the right to use as fill.

62+13 - Within inner riparian. Existing mudhole. Grade and shape and repair subgrade.

65+54 - Construct a truck turnaround to the right.

67+16 - Construct a 50' diameter landing. End of segment C3. End of renovation.

4-6-27.1: Renovation of a 14’ outsloped subgrade with a 12’ rocked running surface (Type 4), renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface (Type 6), renovation of a 14’ outsloped subgrade with natural surfacing (Type 3), and renovation of 14’ ditched/crowned subgrade with natural surfacing (Type 5). Medium brushing. Grading (including ditchline re-establishment), compacting, and construction of turnout and culvert installation. Spread 120 CY of 1 ½”-0” Crushed Spot Rock (ASC – C) as marked. Place 10 CY of 1 ½”-0” Crushed Bedding/Backfill Rock (ASC – C) as marked. Install 1 culvert (Government Provided). Install 1 inlet marker. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0.000 - Junction with Rock Creek Road. Start renovation of a 14’ outsloped subgrade with a 12’ rocked running surface. Spread 20 CY of 1 ½”-0” crushed spot rock for junction apron. On Golden Pond Timberlands land. Start of segment A1.

0.022 - Existing gate. Needs to be closed and locked outside of active operations.

0.080 - Junction with old skid road to the left.

0.161 - Existing truck turnout. Use as needed.

0.195 - Property line. Leaving Golden Pond Timberlands land, entering Hampton land. End of segment A1, start of segment B1.

0.250 - End renovation of a 14’ outsloped subgrade with a 12’ rocked running surface. Start renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface. Ditch on the left.

0.251 - Existing CPP in good condition.

0.255 - Junction with road to the left. End of segment B1, start of segment B2.

0.304 - Existing CPP in good condition.

0.309 - Entering riparian area. Junction with road to the right. End of segment B2, start of segment B3.

0.332 - Stream crossing. Existing CPP in good condition.

0.354 - Leaving riparian area.

0.365 - Existing CPP in good condition.

0.412 - Existing CPP in good condition.

0.441 - Existing CPP in good condition. Excavate bank and clean existing slide material. Additionally, clean out material in catch basin.

0.512 - Existing CPP in good condition.

0.553 - Entering riparian area.

0.553 – 0.575 – Spread 20 CY of 1 ½”-0” crushed spot rock to repair running surface.

0.574 - Junction with road to the left. End of segment B3, start of segment B4.

0.584 - Large stream crossing. Existing CMP in good condition.

0.632 - Junction with 4-6-27.2 to the left. End of segment B4, start of segment B5.

0.657 - Leaving riparian area.

0.679 - Entering riparian area. Old skid road to the left.

0.711 - Stream crossing. Existing CPP in good condition. Spread 20 CY of 1 ½”-0” crushed spot rock to repair running surface.

0.737 - Leaving riparian area.

0.843 - Berms on both sides from heavy rutting. Heavy grading required to reshape road.

0.855 - End renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface. Start renovation of a 14’ outsloped subgrade with natural surfacing.

0.878 - Junction with road to the right. End of segment B5, start of segment B6.

1.029 - Existing wide spot left. Construct a truck turnout to the left.

1.092 - Existing CPP in good condition. End renovation of a 14’ outsloped subgrade with natural surfacing. Start renovation of a 14’ ditched/crowed subgrade with natural surfacing.

1.121 - Evidence of water coming off of cutbank. Ensure it is captured in ditchline.

1.250 - Existing CPP in good condition.

1.343 - Entering riparian area.

1.360 - Stream crossing. Existing CPP in good condition. Spread 20 CY of 1 ½”-0” crushed spot rock to repair running surface.

1.373 - End of riparian area.

1.383 - Junction with road to the right. End of segment B6, start of segment B7.

1.483 - Junction with road to the left. End of segment B7, start of segment B8.

1.508 - Entering riparian area.

1.526 - Stream crossing. Existing CPP in good condition. Spread 20 CY of 1 ½”-0” crushed spot rock to repair running surface.

1.546 - Junction with road to the right. End of segment B8, start of segment B9.

1.589 - Stream crossing. Existing CPP in good condition. Water flow has scoured ditchline and road edge. Grade and shape to repair road damage. Remove berm of material on left to achieve desired road width and to obtain fill material needed to repair ditchline. Spread 20 CY of 1 ½”-0” crushed spot rock to repair running surface.

1.612 - Install an 18” x 30’ CPP with 20’ lead-off ditch to capture seep and discharge prior to entering ditchline. Place 10 CY of 1 ½”-0” crushed bedding/backfill rock. Install inlet marker. End renovation of a 14’ ditched/crowned subgrade with natural surfacing. Start renovation of a 14’ outsloped subgrade with natural surfacing.

1.700 - Junction with 4-6-22.0 to the right. End of segment B9. End of renovation.

4-6-27.2: Renovation of a 14’ outsloped subgrade with a 12’ rocked running surface (Type 4) and renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface (Type 6). Grading (including ditchline re-establishment), compacting, and construction of turnouts, ditchouts, and culvert installations. Spread 65 CY of 6” Jaw Run Base Rock as marked (ABC – D) as marked. Spread 55 CY of 1 ½” -0” Crushed Spot Rock as marked (ASC- C) as marked. Place 45 CY of 1 ½”-0” Crushed Bedding/Backfill Rock as marked (ASC-C). Place 5 CY of Class 5 RipRap as marked. Place 35 CY of PitRun as marked. Replace 3 culverts (Government Provided) and Install 1 downspout (Government Provided). Install 9 inlet markers. Construct 4 sediment catch basin with straw bales as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0.000 - Junction with 4-6-27.1 (MP. 0.632). Start renovation of a 14’ outsloped subgrade with 12’ rocked running surface. Spread 20 CY of 1 ½”-0” crushed spot rock for junction apron. On Hampton land. Within inner riparian area. Start of segment A1.

0.031 - Stream crossing. Existing CPP in fair condition. Clean out catch basin. Install inlet marker.

0.044 - Existing CPP in bad condition. Replace with an 18” x 35’ CPP. Place 15 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 15 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed rock. Install inlet marker. End renovation of a 14’ outsloped subgrade with a 12’ rocked running surface. Start renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface. Start of ditch on the right. Rutting occurring in ditchline, pull and re-shape. Construct a sediment catch basin with a straw bale after the outlet of pipe.

0.053 - Leaving inner riparian area.

0.080 - Existing CPP in good condition, however is backfilled with material. Replace with an 18” x 30’ CPP with a lead-off ditch. Place 10 CY of 1 ½”-0” crushed bedding/backfill rock. Spread 10 CY of 6” jaw run base rock capped with 10 CY of 1 ½”- 0” crushed rock. Install inlet marker.

0.110 - Entering through cut, start ditching on both sides. Construct a ditchout to the left.

0.148 - End of through cut, end of ditch on the left. Excavate berm material on the left and either daylight or end haul material.

0.160 - Existing wide spot. Construct a truck turnout to the left.

0.198 - Re-establish ditchout to the left.

0.269 - Existing CPP in fair condition. Clean buried inlet. Install an 18" x 10' CPP downspout. Install inlet marker.

0.324 - Existing CPP in good condition. Install inlet marker.

0.389 - Seep. Existing CPP collapsed and in bad condition. Replace with a 24" x 35' CPP (3' fill @ inlet, 12' fill @ outlet, 7.5' fill @ CL). Place 20 CY of 1 ½"-0" crushed bedding/backfill rock. Spread 20 CY of 6" jaw run base rock capped with 15 CY of 1 ½"-0" crushed rock. Install inlet marker.

0.393 - Construct a sediment catch basin with straw bale to the right.

0.461 - Construct a sediment catch basin with straw bale to the right.

0.464 - Stream crossing. Existing CPP in good condition. Place 5 CY of Class 5 RipRap at outlet as energy dissipater. Install inlet marker.

0.464 – 0.507 - Ditchline is seeping and holding standing water. Heavy ditchline re-establishment required. Place 35 CY of Pitrun in ditchline to act as armor and filter.

0.489 - Existing CPP in good condition. Install inlet marker.

0.507 - Construct a sediment catch basin with straw bale to the right Junction with road to the left. End of segment A1, start of segment A2. Spread 20 CY of 6" jaw run base rock to repair subgrade. End renovation of a 14' ditched/crowned subgrade with a 12' rocked running surface. Start renovation of a 14' outsloped subgrade with a 12' rocked running surface.

0.637 - Junction with road to the left. End of segment A2, start of segment A3.

0.722 - Junction with road to the left. End of segment A3, start of segment A4.

0.843 - Existing CPP in good condition. Install inlet marker. Place material in catch basin to backfill and allow water to properly drain into culvert. End renovation of a 14' outsloped subgrade with a 12' rocked running surface. Start renovation of a 14' ditched/crowned subgrade with a 12' rocked running surface.

0.932 - Existing wide spot. Construct a truck turnout to the right.

0.952 - Junction with 4-6-22.2 to the left. End of segment A4. End of renovation.

4-6-33.1: New Construct of a 14’ ditched/crowned subgrade with natural surfacing (Max grade 18%, Type 5), new construct of a 16’ ditched/crowned subgrade with natural surfacing (Max grade 18%, Type 5), and 14’ new construct of an outsloped subgrade with natural surfacing (Max grade 18%, Type 3). Clearing and grubbing required for establishment of road and ditch, roadside landing, ditchouts, roadside landing/turnaround, landing, and culvert installations. Grading, compacting, and construction of road and ditch, roadside landing, ditchouts, roadside landing/turnaround, landing, and culvert installations. Spread 20 CY of 6” Jaw Run Base Rock (ABC - D) as marked. Spread 10 CY of 1 ½”-0” Crushed Spot Rock (ASC – C) as marked. Place 35 CY of 1 ½”-0” Crushed Bedding/Backfill Rock (ASC – C) as marked. Install 3 culverts (Government Provided). Install 3 inlet markers. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required. ROAD MAY REQUIRE DRILLING AND SHOOTING, COORDINATE WITH AUTHORIZED OFFICER. Design notes are available upon request from Authorized Officer.

0+00 - Junction with Rock Creek Road. Start new construction of a 14’ ditched/crowned subgrade with natural surfacing. Spread 20 CY of 6” jaw run base rock capped with 10 CY of 1 ½”-0” crushed spot rock for junction apron. On BLM land. Timber sale boundary. Entering Gopher Broke timber sale. Ditch on the right. Start of segment A1.

0+75 - Junction with 4-6-33.2 to the left. End of segment A1, start of segment A2. Entering through cut, start ditching on both sides past road junction.

1+75 - Construct a roadside landing to the left. Daylight all material. End of through cut, construct a ditchout to the left on backside of roadside landing.

2+00 – 6+85 – Full bench constructed required through this section. Subsurface rock showing throughout this section. Drill and blast may be required in this section to remove required material. Do not fill on slope and use material ahead as fill as needed. Any rock removed from slope may be utilized for project as needed.

2+69 - Install an 18” x 30’ CPP with a 10’ CPP downspout. Place 10 CY of 1 ½”-0” crushed bedding/backfill rock. Install inlet marker.

5+62 - Large wildlife tree at the top of cut. DO NOT REMOVE OR DISTRUB THROUGHOUT CONSTRUCTION.

6+25 - Install an 18” x 35’ CPP with a 10’ CPP downspout. Place 15 CY of 1 ½”-0” crushed bedding/backfill rock. Install inlet marker.

7+16 - End new construct of a 14’ ditched/crowned subgrade with natural surfacing. Start new construct of a 16’ ditched/crowned subgrade with natural surfacing. Entering large through fill.

8+10 - End new construct of a 16’ ditched/crowned subgrade with natural surfacing. Start new construct of a 14’ ditched/crowned subgrade with natural surfacing. End of through fill.

9+04 - Entering through cut, start ditching on both sides.

10+16 - End of through cut, entering a through fill. Construct a ditchout to the left and right. End of new construct of a 14’ ditched/crowned subgrade with natural surfacing. Start new construct of 16’ ditched/crowned subgrade with natural surfacing.

12+15 - End of through fill. End new construct of a 16’ ditched/crowned subgrade with natural surfacing. Start new construct of a 14’ ditched/crowned subgrade with natural surfacing. Ditch on the left

14+37 - End new construct of a 14’ ditched/crowned subgrade with natural surfacing. Start new construct of a 14’ outsloped subgrade with natural surfacing. Install an 18” x 30’ CPP with lead off ditch. Place 10 CY of 1 ½”-0” crushed bedding/backfill rock. Install inlet marker.

15+58 - Construct a roadside landing/truck turnaround to the right.

16+19 - Entering through fill.

16+78 - End of through fill.

19+07 - Construct a 50’ diameter landing. End of new construct.

4-6-33.2 New Construct of a 14’ outsloped subgrade with natural surfacing (Max grade 12%, Type 3). Clearing and grubbing required for establishment of road and landing. Grading, compacting, and construction of road and landing. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0+00 - Junction with 4-6-33.1 (Sta. 0+75). Cut down road to match junction grade and create a smooth transition. On BLM land. Within Gopher Broke timber sale.

4+96 - Construct a landing with footprint as marked on the ground, will be limited space. End of new construct.

4-6-35.0: Renovation of a 14’ ditched/crowned subgrade with a 12’ rocked running surface (Type 6) and renovation of a 14’ outsloped subgrade with 12’ rocked running surface (Type 4). Clearing and grubbing required for re-establishment of road and ditchline, ditchouts, turnouts, and culvert installations. Grading (including ditchline re-establishment), compacting, and construction of ditchouts, turnouts, and culvert installations. Spread 35 CY of 6” Jaw Run Base Rock as marked (ABC – D) as marked. Spread 80 CY of 1 ½” -0” Crushed Spot Rock as marked (ASC- C) as marked. Place 45 CY of 1 ½”-0” Crushed Bedding/Backfill Rock as marked (ASC-

C). Place 20 CY of Class 5 RipRap as marked. Place 45 CY of PitRun Rock as marked. Replace 1 culverts (Government Provided) and Install 2 culvert (Government Provided). Install 4 inlet markers. Construct 6 sediment catch basins with straw bales as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required.

0.000 - Junction with 4-6-23.2 (Sta. 23+37). Start renovation of a 14' ditched/crowned subgrade with a 12' rocked running surface. Spread 20 CY of 1 ½"-0" crushed spot rock for junction apron. Heavy grading required to removed existing rutting on road. On Hampton land. Start of segment D1. Ditch on right.

0.007 - Start of inner riparian area.

0.034 - Construct a sediment catch basin with straw bale to the right.

0.040 - Stream crossing. Existing CMP in bad condition. Replace with a 36" x 40' aluminized CMP with bands and gaskets (5' fill @ CL). Place 25 CY of 1 ½"-0" crushed bedding/backfill rock. Spread 25 CY of 6" jaw run base rock capped with 20 CY of 1 ½"-0" crushed rock. Install inlet marker.

0.045 - Construct a sediment catch basin with straw bale to the right.

0.055 - Existing truck turnaround to the left. Use as needed.

0.059 - Entering through cut, start ditching on both sides. Construct a ditchout to the left.

0.089 - End of through cut, end of ditch on the left.

0.123 - Existing CPP in good condition. Install inlet marker. Seep flowing in ditchline draining to here. Clean buried outlet.

0.138 - End of seep entering ditchline.

0.209 - Entering inner riparian area.

0.232 - Junction with old road to the right. End of segment D1, start of segment D2. Construct a sediment catch basin with straw bale to the right.

0.239 - Stream crossing. Existing CMP in good condition. Clean logging debris from inlet. Place 20 CY of Class 5 RipRap at outlet as fill armor/energy dissipater. Install inlet marker.

0.242 - Construct a sediment catch basin with straw bale to the right.

0.249 - Existing wide spot. Construct a truck turnout to the left. End renovation of a 14' ditched/crowned subgrade with a 12' rocked running surface. Start renovation of a 14' outsloped subgrade with a 12' rocked running surface.

0.258 - Leaving inner riparian area.

0.279 - Junction with old road to the left. End of segment D2, start of segment D3.

0.379 - On curve, construct a truck turnout to the left.

0.482 - End renovation of a 14' outsloped subgrade with a 12' rocked running surface. Start renovation of a 14' ditched/crowned subgrade with a 12' rocked running surface.

0.490 - Stream crossing. Existing CPP in good condition.

0.492 - Construct a sediment catch basin with a straw bale to the right.

0.510 - Entering inner riparian area.

0.519 - Stream crossing. Existing CPP in good condition. Ditchline is seeping and weeping water. Place 45 CY of pitrun in ditchline 2' x 2' to act as a armor and filter.

0.564 - Existing truck turnout to the left. Use as needed.

0.572 - Junction with 4-6-23.4 to the left. End of segment D3, start of segment D4.

0.574 - Existing CPP in good condition. However, install an additional 18" x 20' CPP on the end to improve curve onto 4-6-12.4 road. Place 10 CY of 1 ½"-0" crushed bedding/backfill rock.

0.576 - Construct a sediment catch basin with straw bale above culvert.

0.584 - End 2' x 2' pitrun ditchline armoring and filter.

0.611 - Install an 18" x 30' CPP. Place 10 CY of 1 ½"-0" crushed bedding/backfill rock. Spread 10 CY of 6" jaw run base rock capped with 10 CY of 1 ½"-0" crushed rock. Install inlet marker.

0.633 - Junction with road to the right. End of segment D4, start of segment D5.

0.640 - Exiting CPP in good condition.

0.690 - Existing CPP in good condition.

0.700 - Spread 10 CY of 1 ½"-0" crushed spot rock to repair running surface.

0.716 - Stream crossing. Existing CPP in good condition.

0.732 - Junction with 4-6-23.5 to the left. End of segment D5. Spread 20 CY of 1 ½"-0" crushed spot rock to repair running surface.

Gopher Valley Road: Renovation of a 18' ditched/crowned subgrade with a 14' rocked running surface (Type 6). Clearing and grubbing required for curve widening. Grading, compacting, and construction of curve widening. Spread 100 CY of 6" Jaw Run Base Rock as

marked (ABC – D) as marked. Spread 50 CY of 1 ½" -0" Crushed Spot Rock as marked (ASC-C) as marked. Cut and fill as needed or as directed by Authorized Officer to dimensions specified, end hauling or borrow sites may be required. Obtain authorization from Yamhill County prior to beginning of work.

9.933 – 9.955 – Junction with 4-6-13.1 to the left. Widen road to the left to allow haul to make turn and travel to the West. A 50' curve radius with the disturbed area being approximately 125' x 30' in size. Spread 100 CY of 6" jaw run base rock capped with 50 CY of 1 ½"-0" crushed rock to newly widened area. End of renovation.

Culvert Quantities:

765 feet of 18-inch Corrugated Plastic Pipe (CPP) – Type S (23 Pipes) – Government Provided

30 feet of 18-inch Corrugated Plastic Pipe (CPP) – Type C (3 Pipes) – Government Provided

535 feet of 24-inch Corrugated Plastic Pipe (CPP) – Type S (13 Pipes) – Government Provided

40 feet of 36-inch 14-gauge Aluminized Steel Pipe (CMP) – (1 Pipe) – Government Provided

55 feet of 48-inch 14-gauge Aluminized Steel Pipe (CMP) – (1 Pipe) – Purchaser Provided

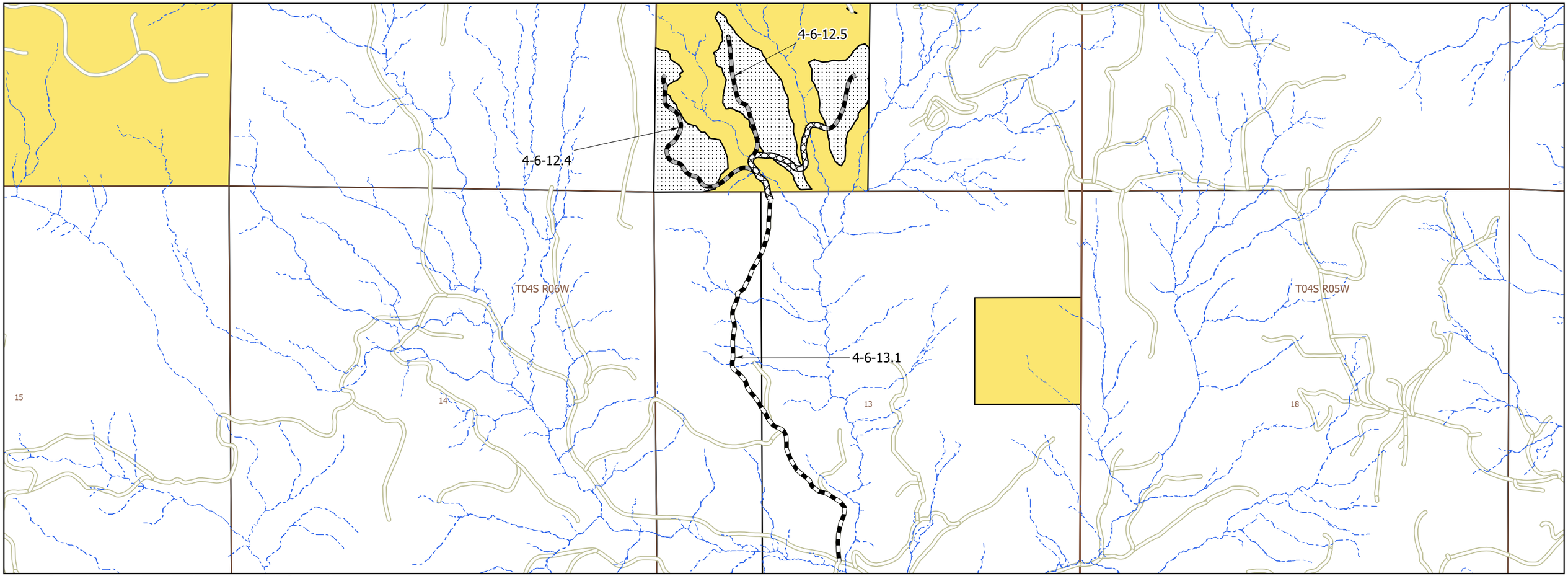
65 feet of 54-inch 14-gauge Aluminized Steel Pipe (CMP) – (1 Pipe) – Purchaser Provided

All bands, gaskets, and hardware shall be provided by the Purchaser.

All metal "T" posts shall be provided by the Government

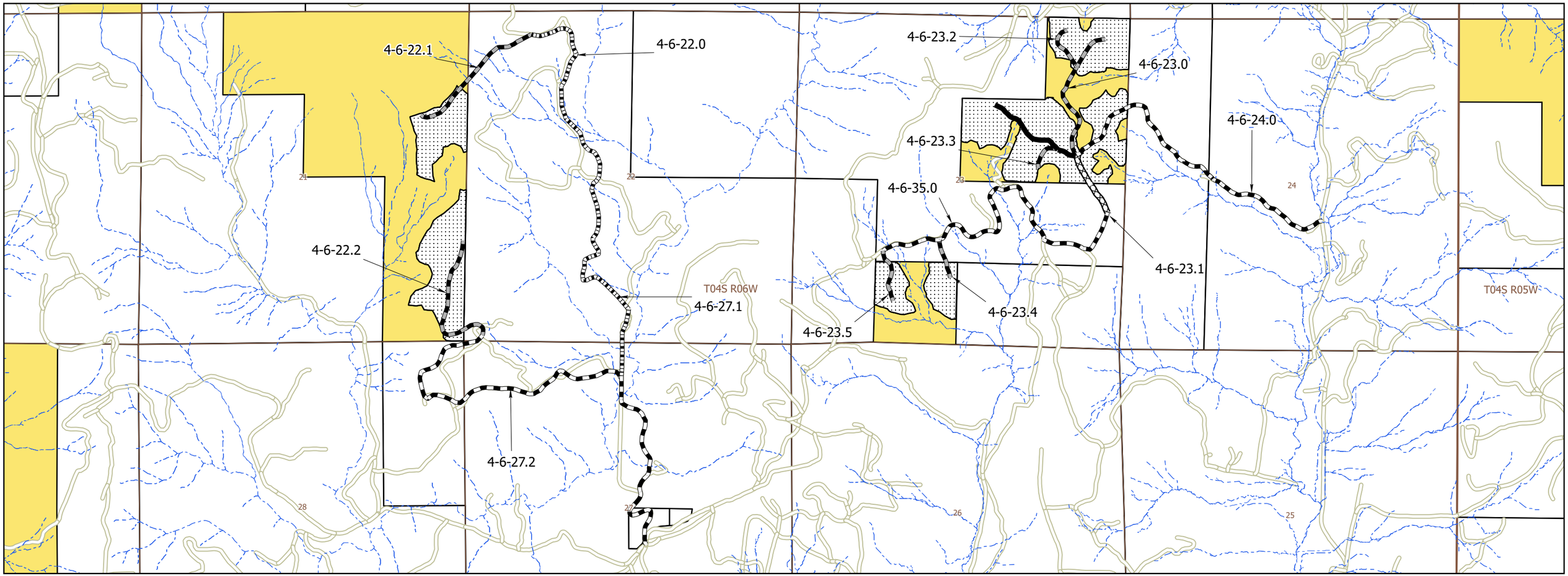
United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map

T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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

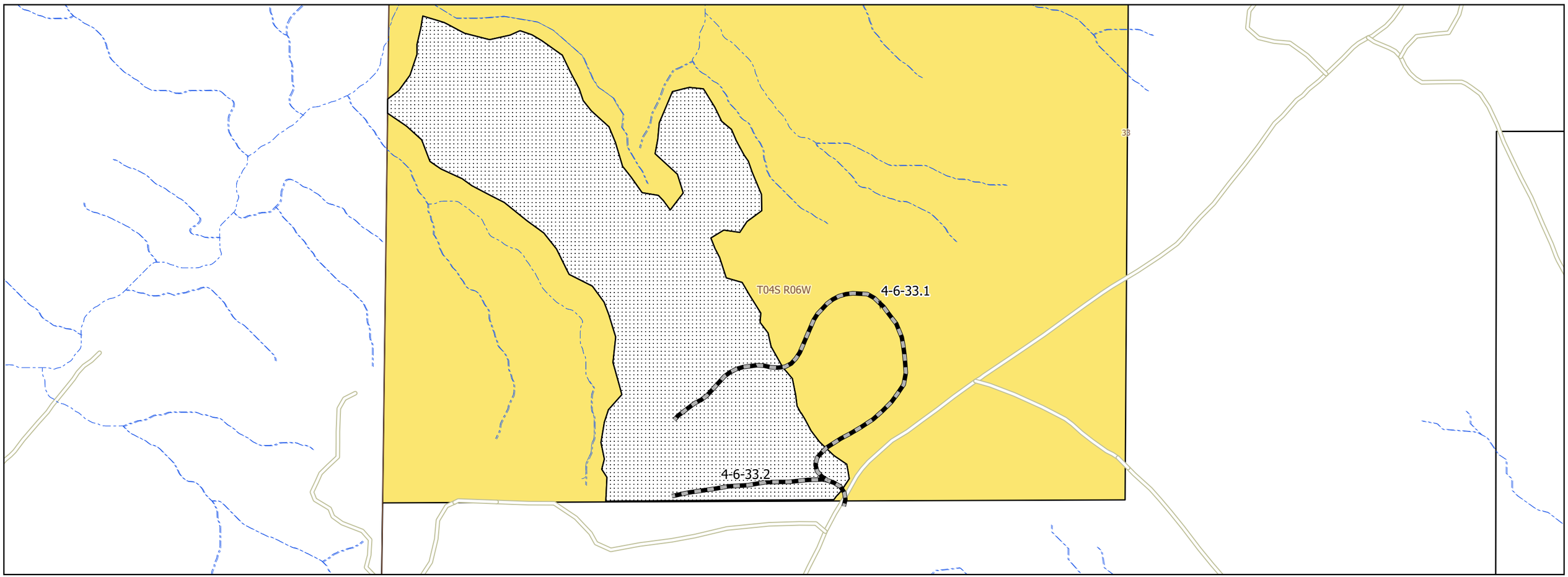
United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map
T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map

T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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

ROAD MAINTENANCE SPECIFICATIONS

General road maintenance specifications are designated by numeric symbols according to the type of work performed as follows:

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

GENERAL - 3000

3001 The Purchaser shall be required to maintain all roads as shown on the Exhibit E maps of this contract in accordance with Sections 3000, 3100, 3200, 3300, 3400, and 3500 of this exhibit.

3001a The Purchaser shall be required to provide maintenance on roads in accordance with Subsections 3405, 3405a, 3405b, 3406b.

3002 The Purchaser shall maintain the cross section of existing dirt or graveled roads to the existing geometric standards. Any roads required to be constructed, improved, or renovated under terms of this contract shall be maintained to the geometric standards required in Exhibit C of this contract.

3003 The minimum required maintenance on any Purchaser maintained roads shall include the provisions specified in Subsections 3101, 3104, and 3105.

3004 The Purchaser shall be responsible for providing timely maintenance and cleanup on any roads with logging units substantially completed prior to moving operations to other roads. The maximum length of non-maintained or non-cleanup of the road prism shall not exceed the sum of one (1) mile at any time. Release of maintenance requirements may be granted, upon written request, when the conditions specified in Sections 3300 and 3400 are met satisfactorily.

OPERATIONAL MAINTENANCE - 3100

3101 The Purchaser shall blade and shape the road surface and shoulders with a motor grader, when directed by the Authorized Officer. Banks shall not be undercut. Back blading with tractors or similar equipment will be allowed only around landings and other areas when approved by the Authorized Officer.

3102 The Purchaser shall furnish and place 320 cu.yds. of aggregate conforming to the requirements in Sections 1200 of Exhibit C of this contract on the roadway at locations and in the amounts designated by the Authorized Officer.

95 cu.yds. - To be placed on BLM controlled roads as directed by Authorized Officer (maintenance rock: Section 44.y.).

225 cu yds – To be placed on non-BLM controlled roads as directed by the Authorized Officer (maintenance rock: Section 44.gg.)

This aggregate shall be used to repair surface failures and areas of depleted surface depth excluding damages covered by Section 12 of this contract. The aggregate shall be furnished, hauled, placed, spread, and compacted by use of dump trucks, water trucks, and motor grader or similar equipment. Unutilized

material shall remain the property of the BLM and shall be handled as directed by the Authorized Officer.

3104 The purchaser shall perform other road cleanup including removal of debris, fallen timber, bank slough, and slides which can practicably be accomplished by a motor grader, rubber tired front end bucket loader, rubber tired backhoe or comparable equipment, and by the use of hand tools.

3104a Removal of bank slough and slide material includes placement of material at the nearest designated, suitable disposal site where material cannot erode into streams, lakes, or reservoirs or cause undue damage to road fill slopes which have been planted or mulched to control soil erosion as directed by the Authorized Officer.

3104b The Purchaser shall be responsible for removal of all slides or slough, up to fifteen station yards in quantity, at any one site. This work includes unlimited multiple sites on all roads required to be maintained by the purchaser.

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

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

3105 The Purchaser shall be responsible for maintaining normal flow in drainage structures. This includes cleaning out drainage ditches, catch basins, clearing pipe inverts of sediment and other debris lodged in the barrel of the pipe, and maintaining water dips and waterbars using equipment specified in Subsection 3104 and other culvert cleaning and flushing equipment.

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

Upon completion of agreed upon work, a reduction in timber sale purchase price will be made to offset the cost of the work based upon current BLM Road Cost

Guide. Adjustments in purchase price for completed work shall be made as necessary and no less than once per year when actual work is ongoing.

3108 The Purchaser shall avoid fouling gravel or bituminous surfaces through covering with earth and debris from side ditches, slides or other sources. The Purchaser shall also avoid blading surfacing material off the running surface of the roadway. (Skidding of logs on the roadway in or outside designated logging units is not authorized without prior written approval by the Authorized Officer. Repair required caused by such skidding activity is not considered maintenance and shall be repaired at the Purchaser's expense.)

SEASONAL MAINTENANCE - 3200

3201 The Purchaser shall perform preventative maintenance at the end of Purchaser's hauling each season and during non-hauling periods which occur between other operations on the contract area. This includes requirements specified in Section 3100.

3202 The purchaser shall perform and complete maintenance specified in Sections 3000, 3100, and 3200 on all roads maintained by Purchaser, during times when there is a low potential to deliver sediment to streams, as determined by Authorized Officer, and as specified in Subsection 3203, after initial commencement of construction or logging operations. Thereafter, all roads shall have continuous preventive maintenance and road cleanup. This includes all roads used and not used during the preceding operating seasons.

3203 The Purchaser shall complete road cleanup and maintenance, as specified in Section 3100, at the completion of logging operations on any roads located in an area separate from the area where logging activities will resume.

3204 The Purchaser shall be responsible for performing post storm inspections and maintenance during the winter season to minimize erosion and potential road or watershed damage.

FINAL MAINTENANCE - 3300

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

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

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

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

OTHER MAINTENANCE - 3400

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

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

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

3405 The Purchaser may be required to furnish and apply lignin sulfonate dust palliatives, not to exceed two applications per year (generally between May 1 – September 15th, or as otherwise directed by Authorized Officer), in accordance with these specifications

When timber and rock hauling has commenced, the Purchaser shall apply the required dust palliative during the hauling season when directed by the Authorized Officer.

When lignin sulfonate is used, apply it according to the label, do not apply within 24 hours of a forecasted rain event, and do not apply within 25 feet of a stream channel or other waterbody.

The specified dust palliative shall be applied evenly over the specified road surface width of the following roads:

Road No.	From Sta./M.P.	to Sta./M.P.	Spread Width
Gopher Valley Road	0.071	0.213	20
Gopher Valley Road	0.253	0.948	20
Gopher Valley Road	1.342	1.438	20

Turnouts and extra widening shall not be included in addition to the spread width.

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

3405b The Purchaser shall notify Yamhill County of the planned application of lignin sulfonate dust palliatives at least (3) days prior to the work. Warning signs shall be posted at key intersections to alert users that the road is being treated. All signs shall be removed by the Purchaser within (thirty) days of treatment.

3406b The prepared roadbed shall be approved by the Authorized Officer prior to application of the specified dust palliative.

3407 The Purchaser shall furnish in duplicate, commercial certification signed by vendor of compliance with the lignin sulfonate dust palliatives material requirements specified under Subsection (3412a) (3412b). Commercial certification includes the date, identification number of truck or trailer, net mass, and brand name with each shipment. Also provide the net volume and specific gravity at 60 degrees F, percent solids by mass, and PH.

3408 Dust palliatives shall be applied with standard commercial distribution equipment operated in a manner that the material is uniformly applied on variable widths of surface at controlled rates.

3409 The Purchaser shall notify the Authorized Officer a minimum of (3) days in advance of application of required dust palliative.

3410 The Purchaser shall submit an application schedule for all dust palliative work to the Authorized Officer for approval. All work shall be in accordance with the approved plan.

3411 Required lignin sulfonate dust palliatives shall only be applied when the atmospheric temperature is at least 45° F and steady or rising and when the weather is not foggy or rainy. Do not apply dust palliative if rain is anticipated within 24 hours of application or when the ground is frozen.

3412 The Purchaser shall apply to the prepared roadbed specified under Subsection 3405, a lignin sulfonate dust palliative conforming to the material requirements of Subsection (3412a) (3412b). The rate of application shall be 0.5 gallons per yd^2 surface. A second application at the rate of 0.5 gallons per yd^2 shall be applied at a time designated by the Authorized Officer.

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

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

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

3412b Specifications for Lignin Sulfonate:

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

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

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

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

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

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

DECOMMISSIONING – 3500

3501 Decommissioning on the following roads shall consist of removing cross drains and draw culverts. Work includes subsoiling, installing non-drivable waterbars, scattering slash, removing culverts, and blocking roads from access by vehicles. This work is *not* required for road acceptance under Section 18 of this contract.

Road No or Site	From Sta/MP	To Sta/MP	Length
4-6-12.4	0+00	25+76	2,576 feet
4-6-12.5	0+00	16+56	1,656 feet
4-6-13.1	71+90	80+10	820 feet

3501c Decommissioning on the following roads shall consist of removing cross drains and draw culverts. Work includes installing non-drivable waterbars, spreading grass seed, and blocking roads from access by vehicles. This work is *not* required for road acceptance under Section 18 of this contract.

Road No or Site	From Sta/MP	To Sta/MP	Length
4-6-22.1	0+00	22+94	2,294 feet
4-6-22.2	0+00	23+58	2,358 feet
4-6-23.0	0+00	23+63	2,363 feet
4-6-23.2	0+00	7+62	762 feet
4-6-23.3	0+00	5+53	553 feet
4-6-23.4	0+00	6+32	632 feet
4-6-23.5	0+00	7+98	798 feet
4-6-24.0	50+66	67+16	1,650 feet
4-6-33.1	0+00	19+07	1,907 feet
4-6-33.2	0+00	4+96	496 feet

3501d Stabilization of the following roads shall consist of installing drivable waterbars/waterdips (as directed). This work is *not* required for road acceptance under Section 18 of this contract.

Road No or Site	From Sta/MP	To Sta/MP	Length
4-6-27.1	0.878	1.700	0.822 miles
4-6-27.2	0.000	0.952	0.952 miles

3504 Decommissioning and Stabilization work shall be completed after all harvesting activities requiring that road segment have ceased, unless otherwise authorized in writing by the Authorized Officer. All decommissioning and stabilization work shall be performed during times when there is a low potential to deliver sediment to streams, as determined by the Authorized Officer (except in-stream work, which is in North Yamhill River Watershed:

From	To
July 15	September 30

3505 Where draw crossing fill material is to be excavated and removed, the finished bottom of draw profile shall be reestablished to its original channel grade, and resulting adjacent banks shall be constructed to a 2:1 backslope ratio.

3507 Culverts and Inlet Markers removed during decommissioning shall become the property of the BLM. All culverts and bands removed from the roadbed shall be recovered in such a manner as to preserve the pipe from rips and holes. The Purchaser shall be responsible for delivering culvert materials to the BLM Cedar

Creek Storage Facility (SW¼ sec. 5, T. 3 S., R. 6 W., WM.) and for payment of any fees required. This task shall be done prior to termination of this contract.

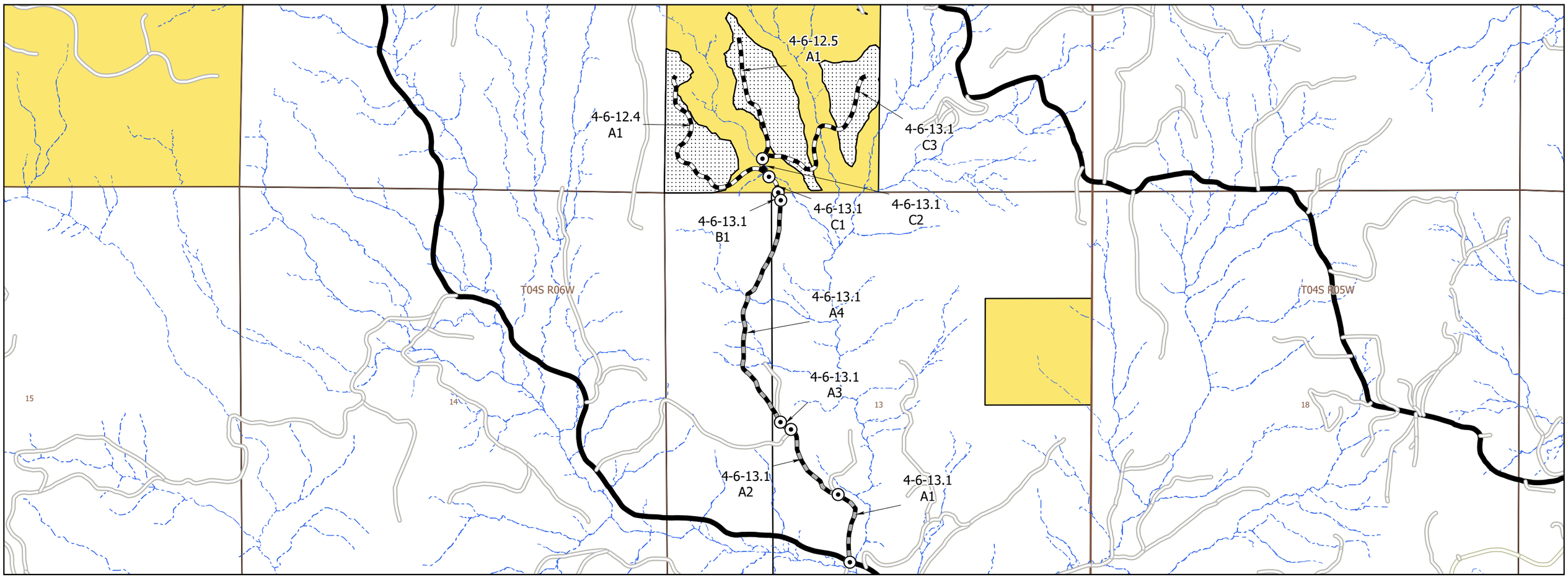
3509 Decommissioned roads shall have access blocked with barricades as shown on Exhibit C page 31. Stumps and woody debris used in the construction of barricades shall be material piled and stored during the clearing and grubbing process of road construction.

3511 Subsoiling shall be accomplished by using excavator attachments or other acceptable equipment capable of de-compacting the soil to a depth of 18 inches. The full width of the roadbed shall be loosened by the subsoiling operation, with no portion of the bed having been left at the original compacted density. Ripper entries into the roadbed shall be spaced where total subgrade subsoiling is accomplished.

3513 Waterbars (drivable and non-drivable)/Waterdips shall be installed across full width of roadway at locations marked in the field by Authorized Officer and constructed to the dimensions of the waterbar detail on Page 31 of Exhibit C.

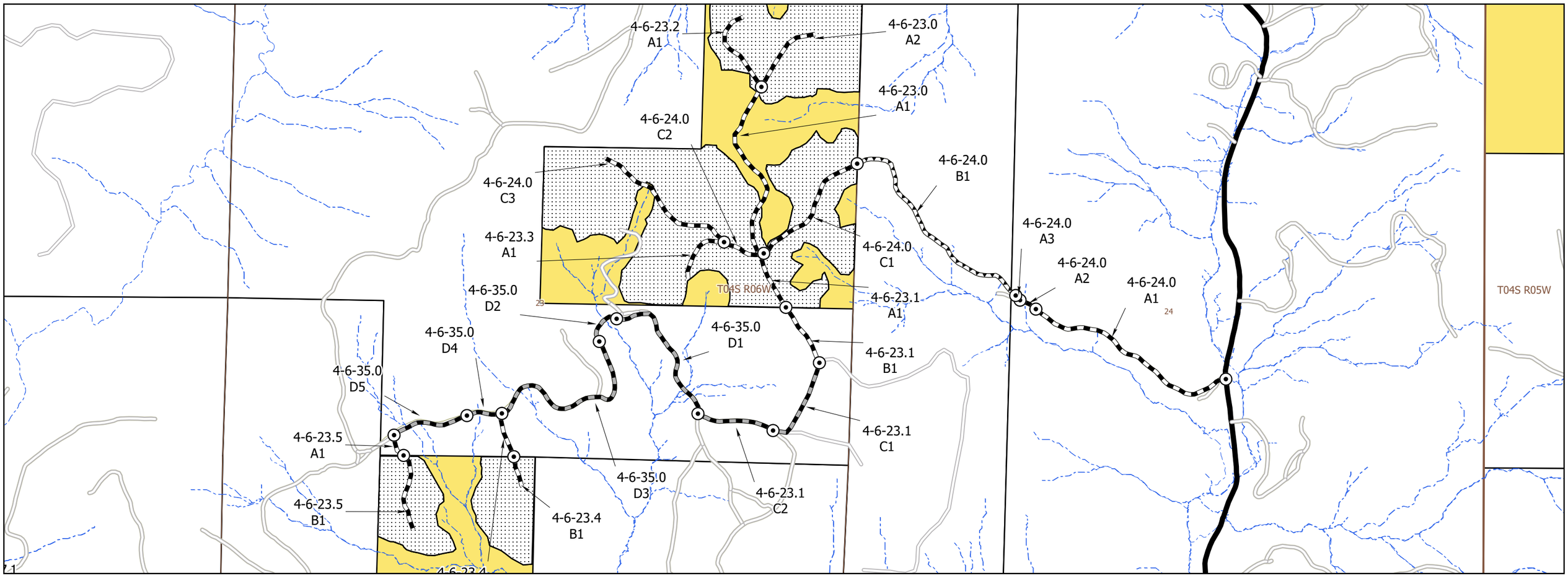
United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map

T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map
T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON

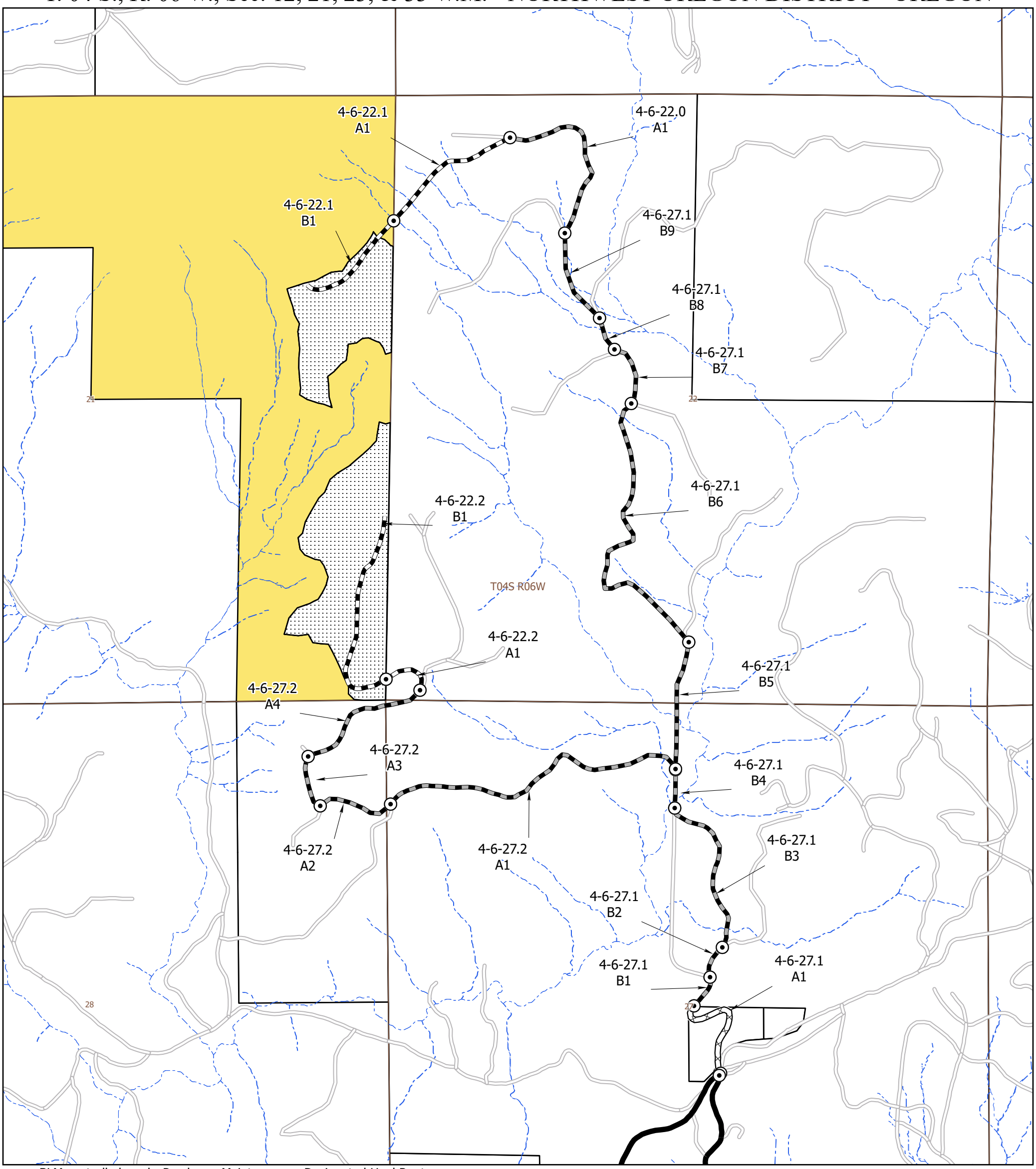


- BLM controlled road - Purchaser Maintenance - Desingated Haul Route
- Hampton Resources Inc. (S-499,) - Purchaser Maintenance - Designated Haul Route
- Hampton Resources Inc. (S-700,) - Purchaser Maintenance - Designated Haul Route
- Designated Haul Route
- Existing Roads
- Gopher Broke Project Area
- Streams
- Bureau of Land Management
- Private

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

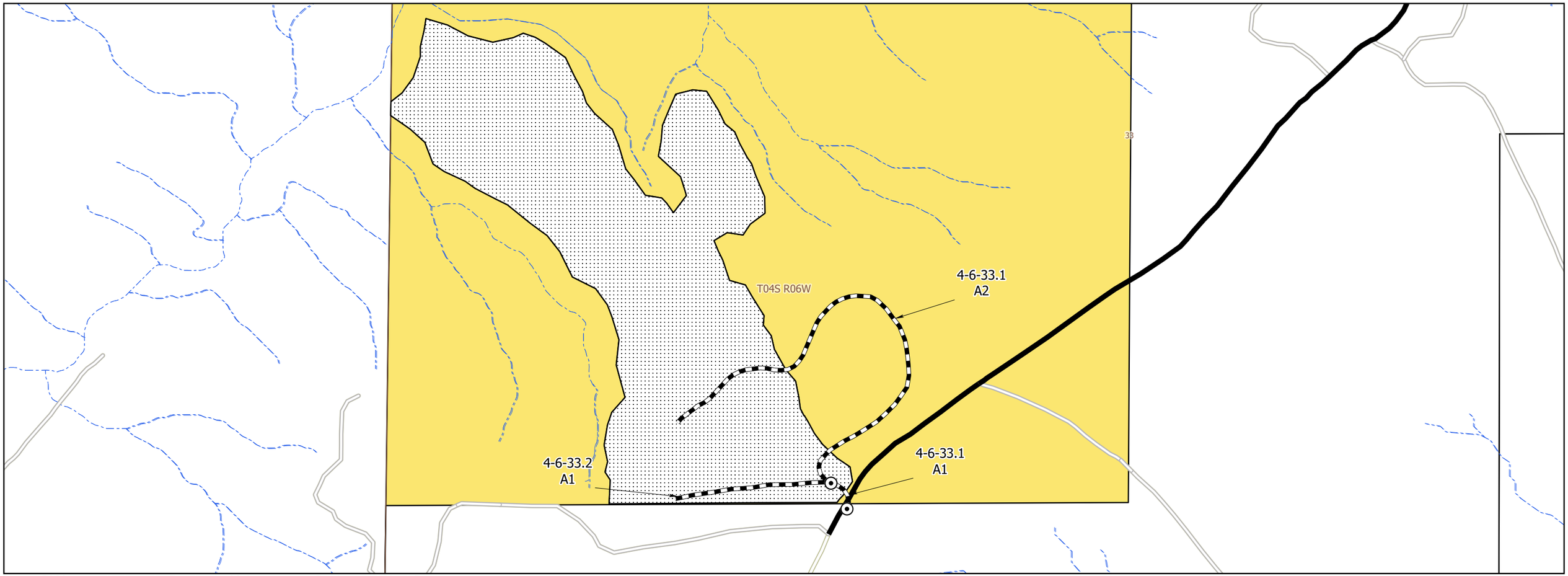
United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map

T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map

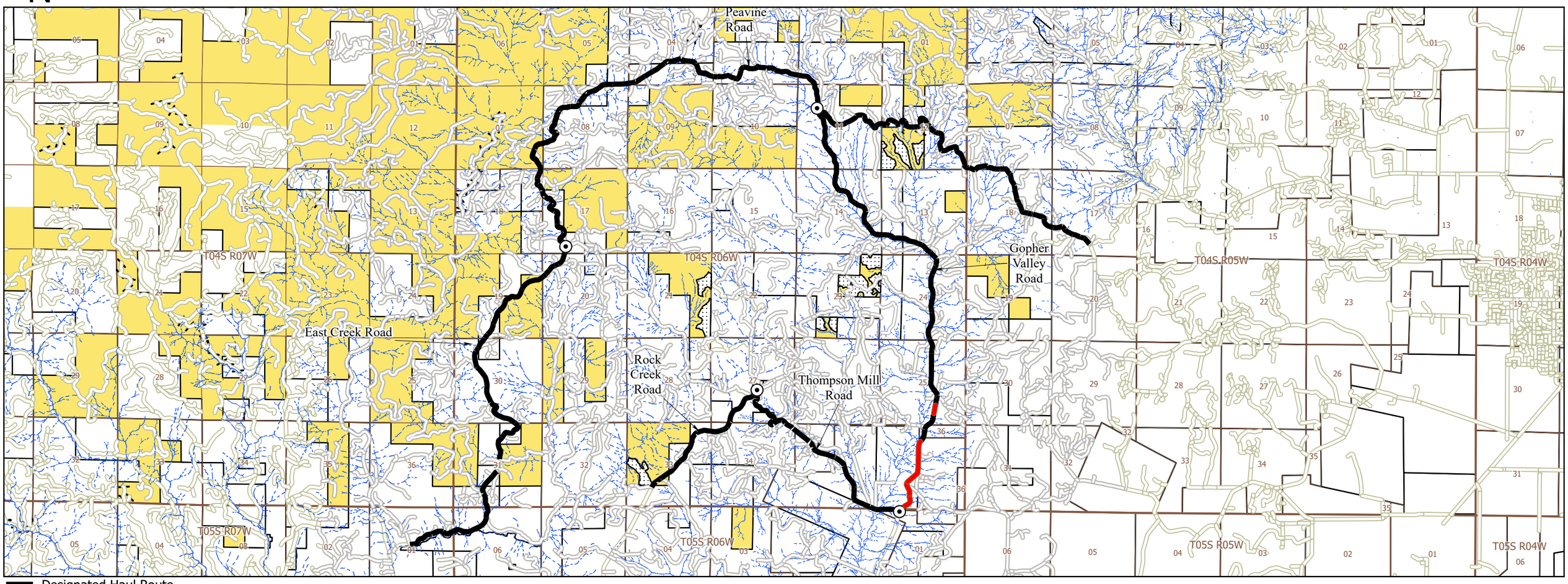
T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
NORTHWEST OREGON DISTRICT - OREGON
Road Plan Map

T. 04 S., R. 06 W., Sec. 12, 21, 23, & 33 W.M. - NORTHWEST OREGON DISTRICT - OREGON



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

COARSE WOODY DEBRIS (CWD) CREATION REQUIREMENTS

1. Coarse Woody Debris (CWD) Tree Selection and Location

a. The Purchaser shall select five hundred and fifteen (515) reserve trees to treat for the creation of coarse woody debris (CWD) by saw-topping, high-girdling, basal-girdling, or felling. The sizes and quantities of trees to select within each CWD treatment unit are displayed in Table 1. Individual CWD units are depicted on the CWD Creation maps (Exhibit F pages 5-12).

b. For all methods of CWD creation, the Purchaser shall adhere to the following stipulations:

   i. Select only healthy, live Douglas-fir trees.

   ii. Select trees within CWD unit boundaries, unless designated otherwise by the Authorized Officer.

   iii. Select trees within the specified DBH ranges for each CWD unit, as displayed in Table 1.

   iv. Distribute selected trees and treatment types evenly throughout the CWD units.

c. For all methods of CWD creation, do not select trees with any of the following characteristics:

   i. Trees with any nests or nest-like structures.

   ii. Trees with unique structures, such as cavities, mistletoe, platforms, forked/multiple tops, spike tops, broken tops, defects, fire scars, and mechanical damage.

   iii. The largest, most dominant tree within any given area.

   iv. Trees marked with any metal tags.

   v. Trees that will be within striking distance, after the CWD treatment has been completed, of any road, designated trail, property line, power line, or structure.

d. Trees selected for saw-topping and high-girdling shall have live crown ratios greater than thirty (30) percent. If the only available trees have live crown ratios smaller than thirty (30) percent, select trees with the largest crown ratio present.

e. Trees selected for basal-girdling and felling shall be from the smaller diameter classes available within each CWD unit and listed in Table 1.

f. Trees selected for felling shall be trees which provide minimal to no shade to streams (e.g., trees located along the north side of the stream channel).

2. CWD Treatments

a. **Saw-Topping**

i. 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.

ii. Live limbs below the point of saw-topping shall not be removed. To the extent practicable, the Purchaser shall retain the largest dead limbs on the trees during the climbing.

iii. Saw-topped trees must be severed completely from the bole and fall to the ground. No tops shall be left hung up in other trees or left leaning against the bole of the tree.

iv. No part of the severed top shall rest on non-BLM land.

v. To the extent practicable, directionally fall tops to avoid damaging 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 contact with unburned burn piles and drivable roads.

vi. The Purchaser shall tie two pieces of flagging of a color approved by the Authorized Officer around the bole, or on a branch, directly below the topped point. Flagging shall extend a minimum of three feet downward and must be visible from the ground.

b. **High-Girdling**:

i. The Purchaser shall climb and high-girdle selected trees at a height of at least sixty (60) feet above the ground, and within the live crown at a point where approximately twenty to fifty (20-50) percent of the live crown remains below the girdle site.

ii. Girdling shall consist of removing all bark and cambium in a twelve (12) inch wide or greater band completely encircling the bole of the tree. Tool cuts must not penetrate more than one-half (0.5) inches into the wood of girdled trees.

iii. Live limbs below the girdle site shall not be removed. To the extent practicable, the Purchaser shall retain the largest dead limbs on the trees during climbing.

iv. The Purchaser shall tie two pieces of flagging of a color approved by the Authorized Officer around the bole, or on a branch, directly below the girdled site. Flagging

shall extend a minimum of three (3) feet downward and must be visible from the ground.

c. **Basal-Girdling**

i. The Purchaser shall basal-girdle selected trees at or below breast height.

ii. Girdling shall consist of removing all bark and cambium in a twelve (12) inch wide or greater band completely encircling the bole of the tree. Tool cuts must not penetrate more than one-half (0.5) inches into the wood of girdled trees.

iii. The Purchaser shall tie one piece of flagging of a color approved by the Authorized Officer around the bole of each treated tree, near breast height.

d. **Felling**

i. Trees shall be selected singly, not in groups.

ii. Trees shall be directionally felled perpendicular to the stream channel. The portion of the tree in contact with the stream channel shall be at least six (6) inches in diameter.

iii. From October 1 to July 14 of the following calendar year, no work within live streams shall be conducted in the Yamhill River watershed, unless the BLM receives a waiver from the Oregon Department of Fish and Wildlife and it is approved by the Authorized Officer.

3. <u>Documentation</u>

a. The Purchaser shall locate CWD units in the field using a GPS-enabled device capable of georeferencing PDF maps. The BLM will provide PDF maps of the CWD units; units will not be delineated in the field.

b. The Purchaser shall provide a schedule of work to the BLM prior to implementation.

c. The Purchaser shall provide the location of all treated trees by collecting GPS points and submitting the point features to the Authorized Officer.

d. The Purchaser shall tally all treated trees by two-inch diameter class, species, treatment type, and unit number daily. The Authorized Officer may request the tally at any time during CWD treatment operations. The Purchaser shall submit a completed tally to the Authorized Officer upon completion of operations.

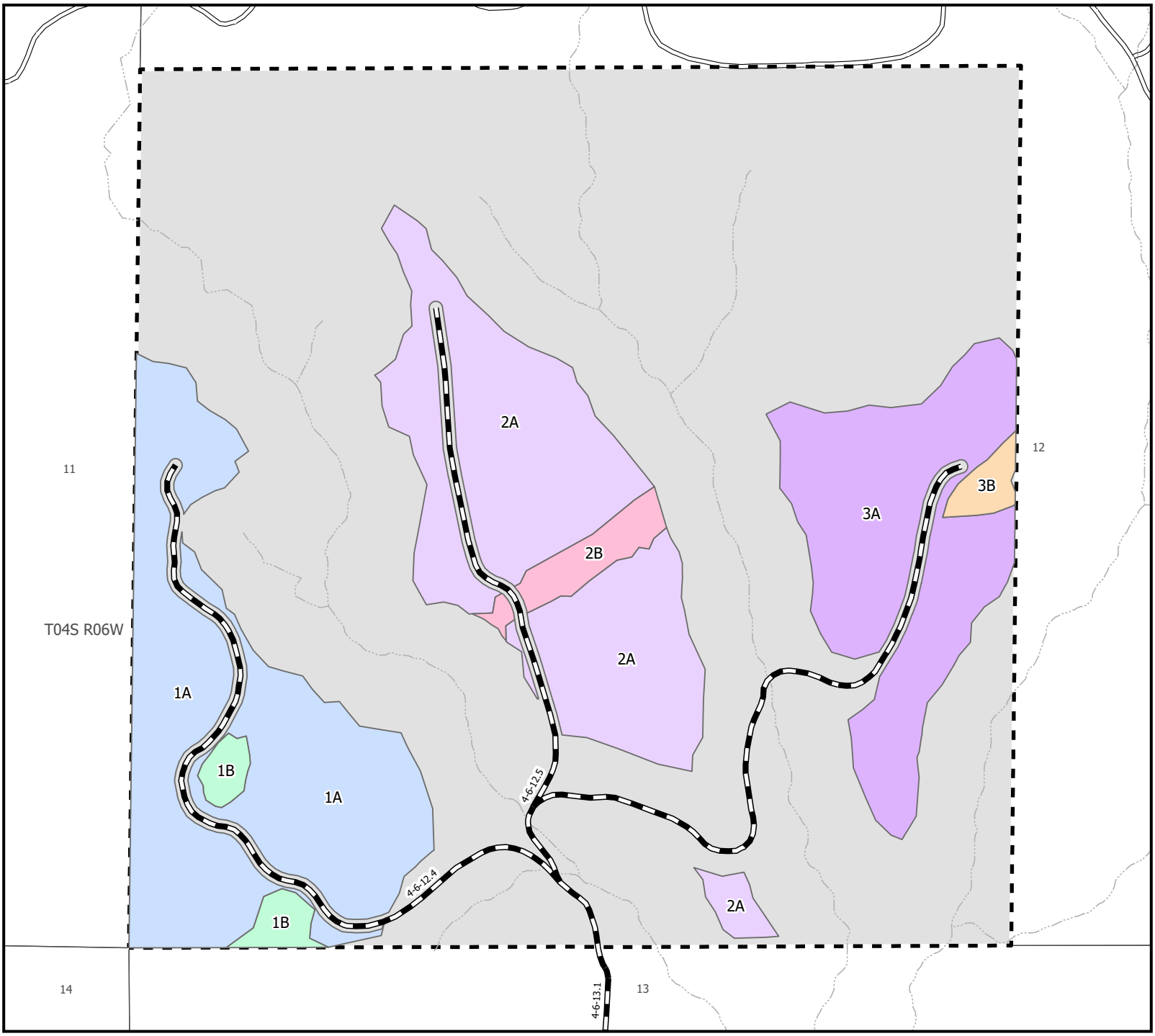
Table 1. Unit treatments and tree sizes to select for coarse woody debris (CWD) creation.

CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	Tree Size (Inches DBH)
1A	17.5	7	4	3	0	0	20-30
1B	1.2	12	6	6	0	0	20-30
2A	17.0	6	3	3	0	0	20-30
2B	1.5	16	8	8	0	0	20-30
3A	12.5	6	3	3	0	0	20-30
3B	0.7	8	4	4	0	0	20-30
4A	3.2	2	1	1	0	0	20-30
4B	0.5	3	2	1	0	0	20-30
4C	4.1	12	6	6	0	0	20-30
4D	3.8	28	2	2	24	0	16-24
5A	4.1	2	1	1	0	0	20-30
5B	0.7	3	2	1	0	0	20-30
5C	3.1	9	5	4	0	0	20-30
5D	3.1	21	2	1	18	0	16-24
6A	21.5	11	6	5	0	0	20-30
6B	2.8	28	14	14	0	0	20-30
6C	3.5	4	2	2	0	0	20-30
6D	1.6	4	2	2	0	0	20-30
6E	1.0	4	2	2	0	0	20-30
6F	4.0	40	5	5	30	0	16-24
6G	4.5	14	7	7	0	0	20-30
6H	4.3	42	6	6	30	0	16-24
7A	13.1	4	2	2	0	0	20-30
7B	1.4	14	7	7	0	0	20-30
7C	3.4	2	2	0	0	0	20-30
7D	1.3	2	2	0	0	0	20-30
7E	2.4	8	2	0	6	0	16-24
8A	14.0	1	1	0	0	0	20-30
8B	1.7	16	8	8	0	0	16-24
9A	21.3	3	3	0	0	0	20-30
9B	3.2	25	13	12	0	0	16-24
10A	12.8	7	4	3	0	0	20-30
10B	0.8	9	5	4	0	0	20-30
10C	9.0	18	9	9	0	0	16-24
10D	1.4	12	6	6	0	0	16-24
10E	12.3	70	5	5	60	0	16-24
10F	2.7	42	0	0	0	42	16-24
Total	**217.0**	**515**	**162**	**143**	**168**	**42**	

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 12 W. M.



CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
1A	17.5	7	4	3	0	0	20-30
1B	1.2	12	6	6	0	0	20-30
2A	17	6	3	3	0	0	20-30
2B	1.5	16	8	8	0	0	20-30
3A	12.5	6	3	3	0	0	20-30
3B	0.7	8	4	4	0	0	20-30

0 175 350 700 Feet

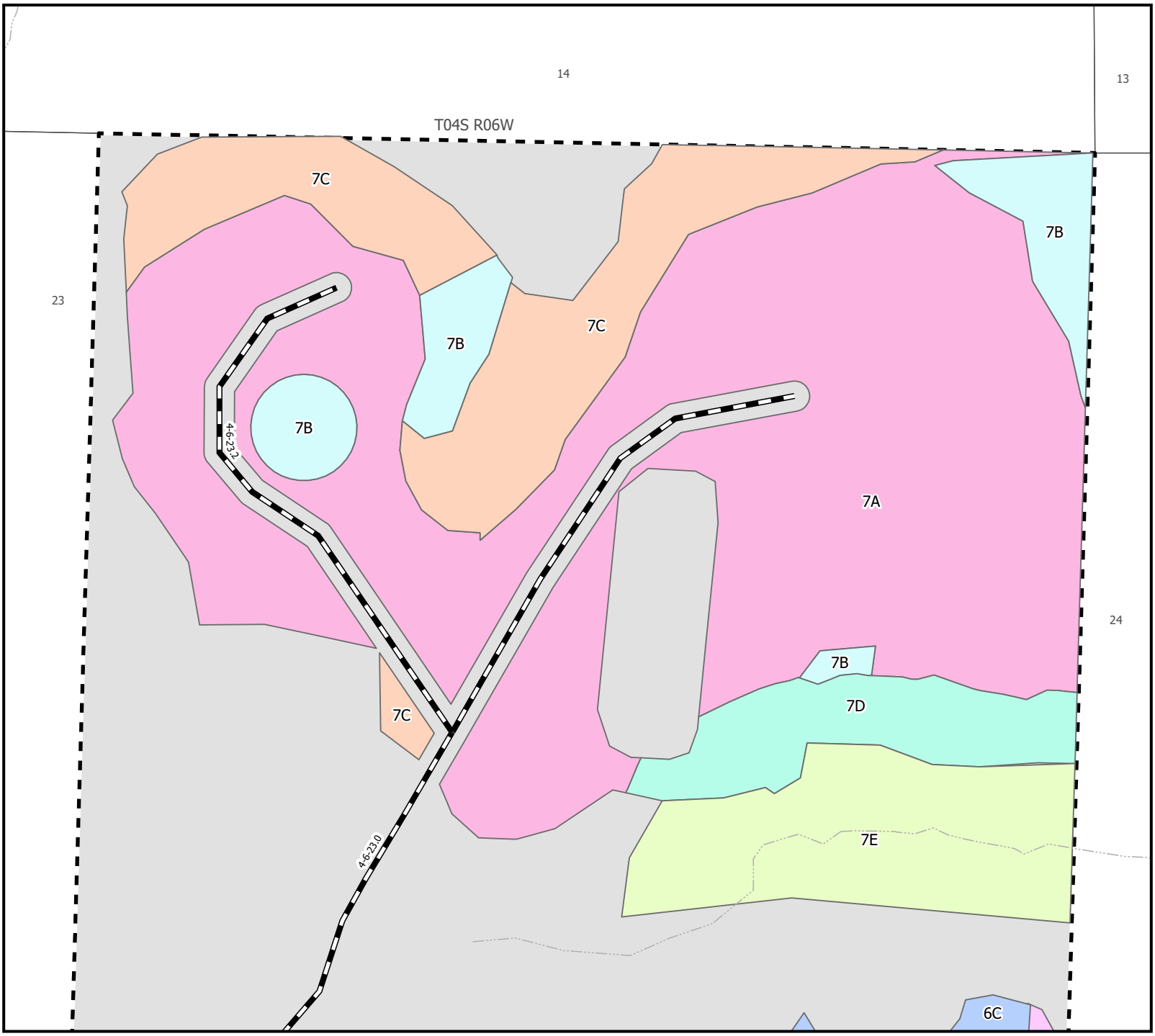
Road Activity
Other Roads
Contract Area
Streams

Prepared by: Ryan Chen

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 23 W. M.



CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
7A	13.1	4	2	2	0	0	20-30
7B	1.4	14	7	7	0	0	20-30
7C	3.4	2	2	0	0	0	20-30
7D	1.3	2	2	0	0	0	20-30
7E	2.4	8	2	0	6	0	16-24

0 75 150 300 Feet

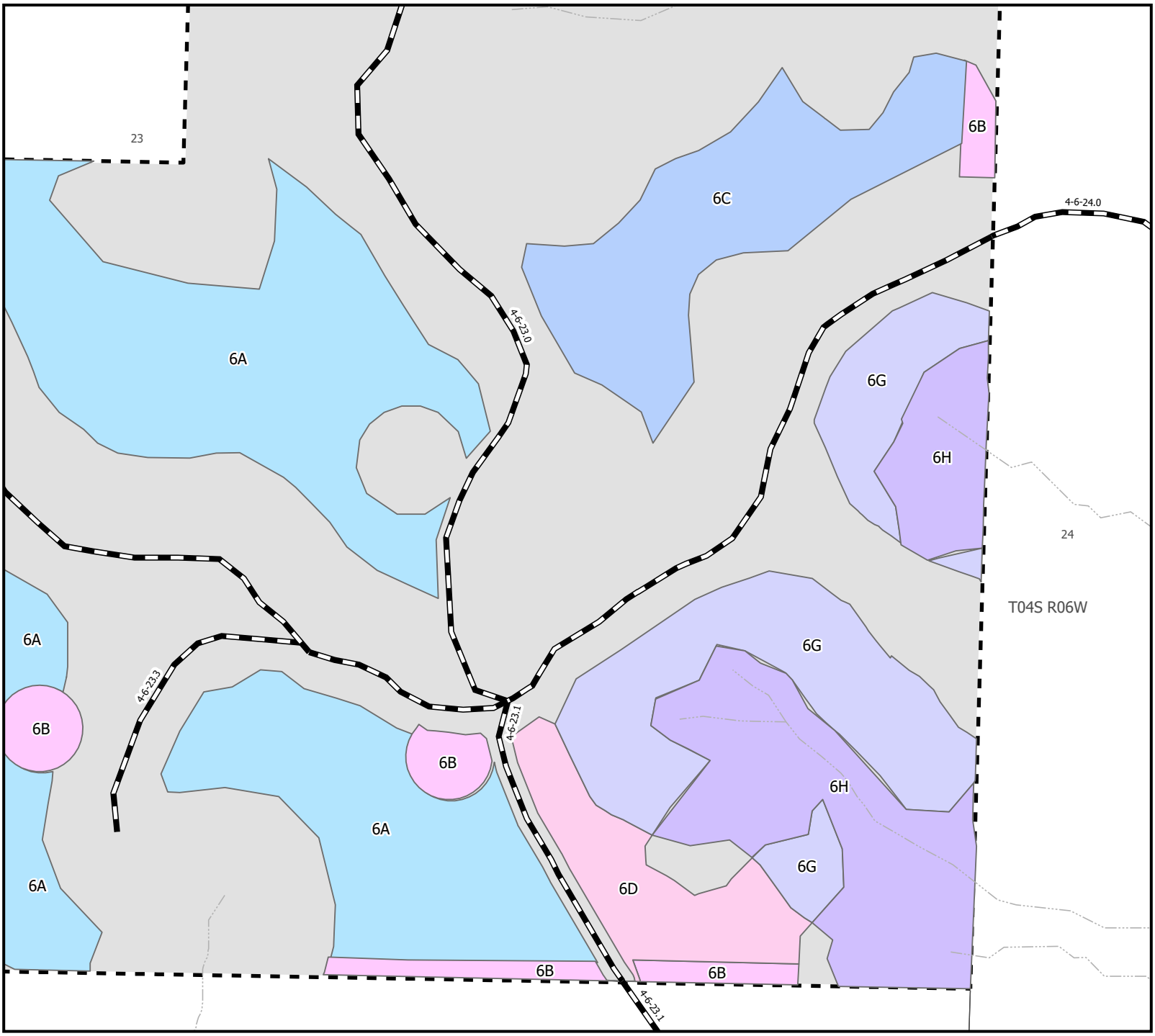
Road Activity
Other Roads
Contract Area
Streams

Prepared by: Ryan Chen

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 23 W. M.



CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
6A	21.5	11	6	5	0	0	20-30
6B	2.8	28	14	14	0	0	20-30
6C	3.5	4	2	2	0	0	20-30
6D	1.6	4	2	2	0	0	20-30
6G	4.5	14	7	7	0	0	20-30
6H	4.3	42	6	6	30	0	16-24

0 95 190 380 Feet

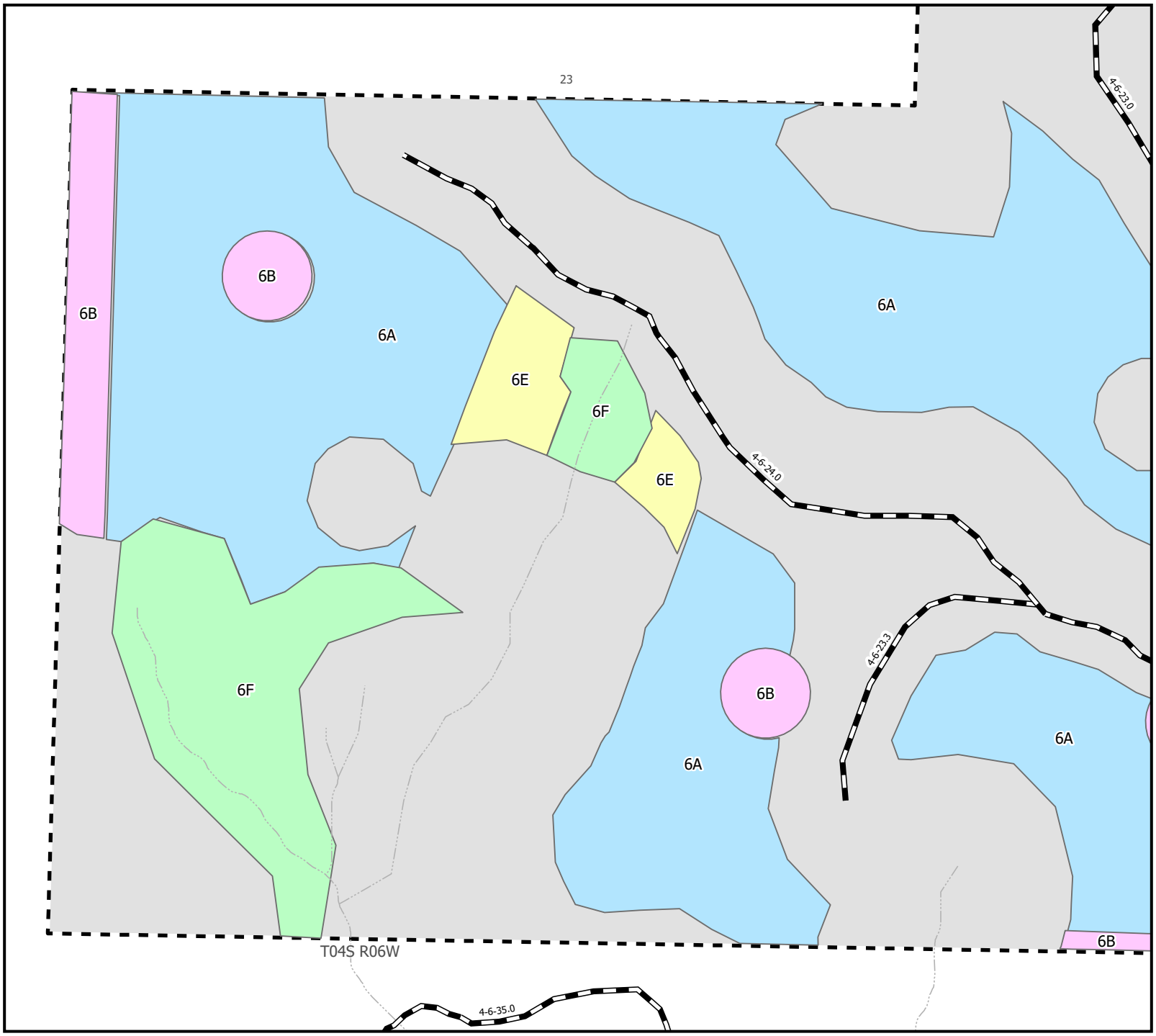
Road Activity
Other Roads
Contract Area
Streams

Prepared by: Ryan Chen

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 23 W. M.



CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
6A	21.5	11	6	5	0	0	20-30
6B	2.8	28	14	14	0	0	20-30
6E	1	4	2	2	0	0	20-30
6F	4	40	5	5	30	0	16-24

0 90 180 360 Feet

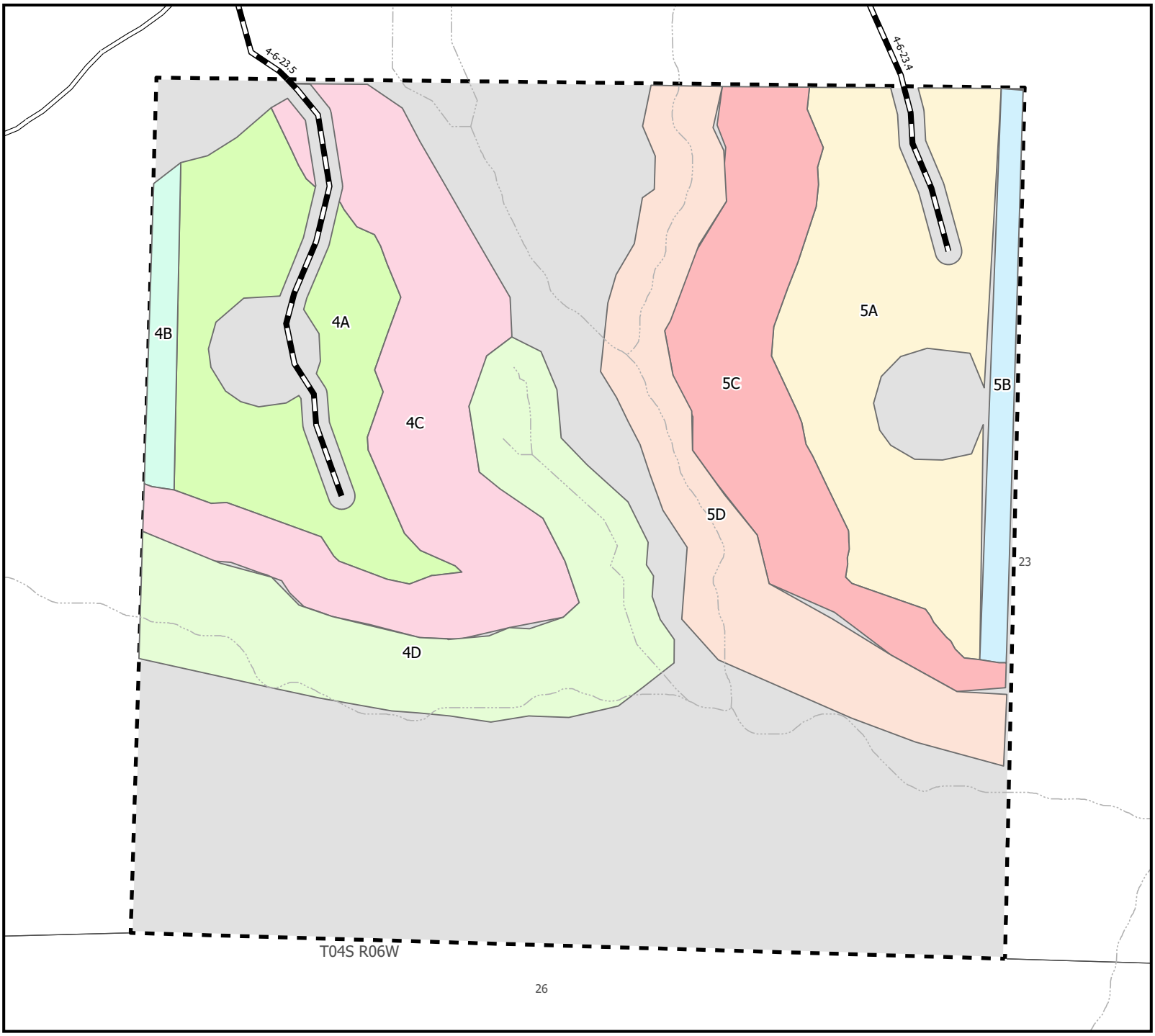
Road Activity
Other Roads
Contract Area
Streams

Prepared by: Ryan Chen

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 23 W. M.



CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
4A	3.2	2	1	1	0	0	20-30
4B	0.5	3	2	1	0	0	20-30
4C	4.1	12	6	6	0	0	20-30
4D	3.8	28	2	2	24	0	16-24
5A	4.1	2	1	1	0	0	20-30
5B	0.7	3	2	1	0	0	20-30
5C	3.1	9	5	4	0	0	20-30
5D	3.1	21	2	1	18	0	16-24

0 87.5 175 350 Feet

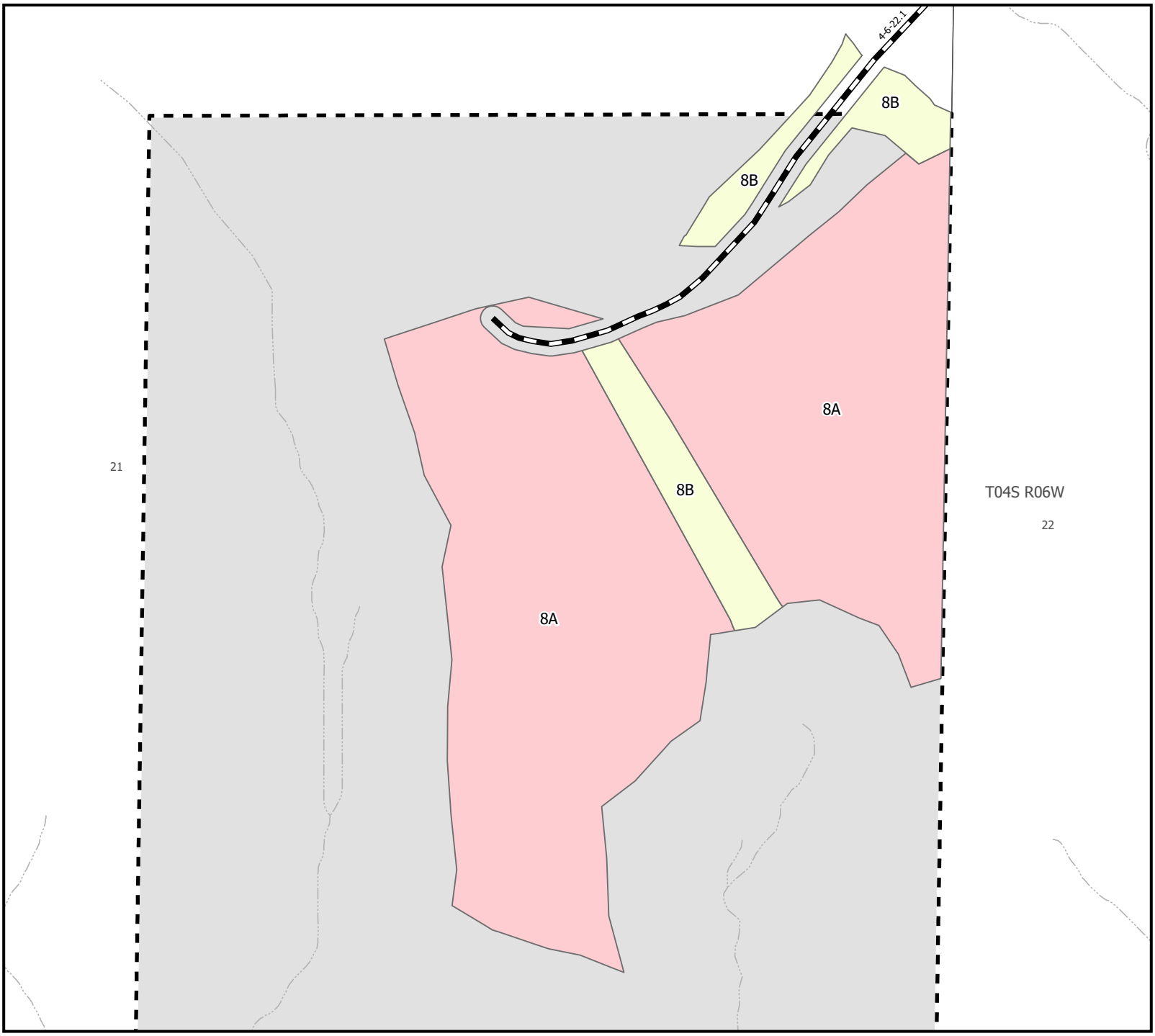
Road Activity
Other Roads
Contract Area
Streams

Prepared by: Ryan Chen

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 21 W. M.



CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
8A	14	1	1	0	0	0	20-30
8B	1.7	16	8	8	0	0	16-24

0 95 190 380 Feet

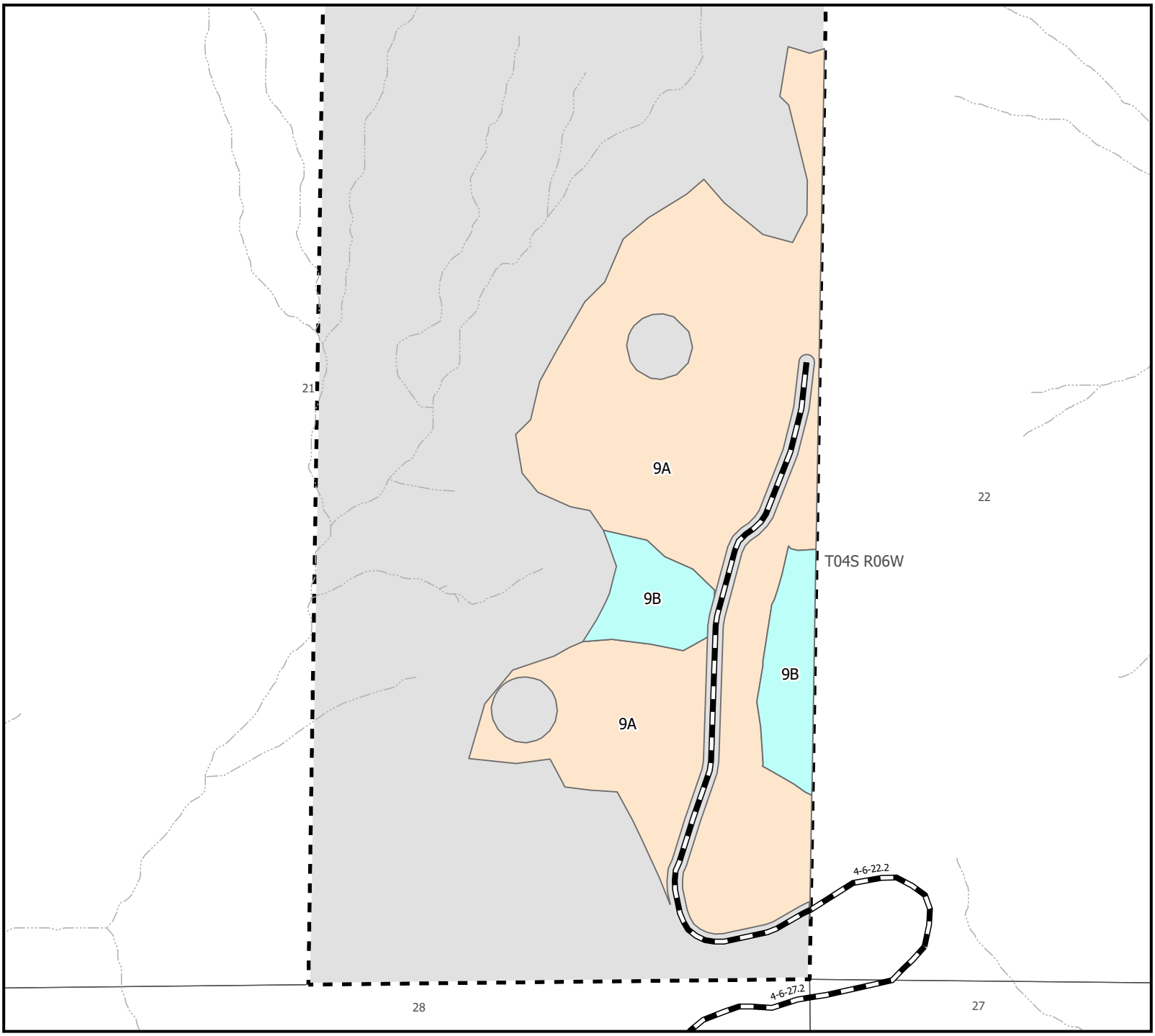
Road Activity
Other Roads
Contract Area
Streams

Prepared by: Ryan Chen

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 21 W. M.



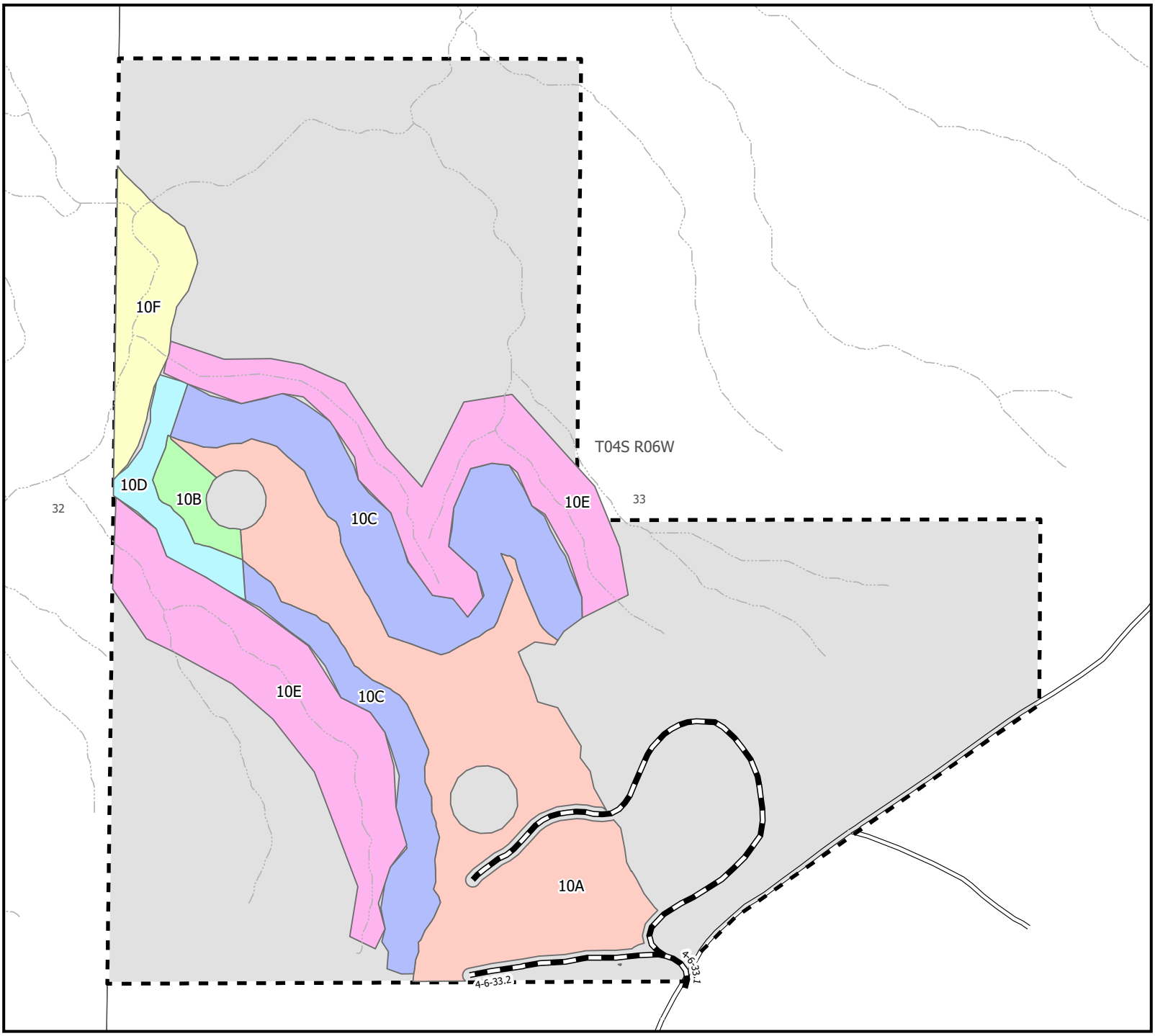
CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
9A	21.3	3	3	0	0	0	20-30
9B	3.2	25	13	12	0	0	16-24

Prepared by: Ryan Chen

United States Department of the Interior
BUREAU OF LAND MANAGEMENT
COARSE WOODY DEBRIS MAP

1/14/2026

T. 4S. R. 6W, Section 33 W. M.



CWD Unit	Acres	Total Trees	Saw Top	High Girdle	Basal Girdle	Fell	DBH Range
10A	12.8	7	4	3	0	0	20-30
10B	0.8	9	5	4	0	0	20-30
10C	9	18	9	9	0	0	16-24
10D	1.4	12	6	6	0	0	16-24
10E	12.3	70	5	5	60	0	16-24
10F	2.7	42	0	0	0	42	16-24

0 165 330 660 Feet

Road Activity
Other Roads
Contract Area
Streams

Prepared by: Ryan Chen

United States
Department of the Interior
Bureau of Land Management

Timber Appraisal

Sale Name:	Gopher Broke	**Sale Date:**	Wednesday, February 25, 2026
BLM District:	NW Oregon DO	**Unit of Measure:**	16' MBF
Contract #:	ORN04-TS-2026.0401	**Contract Term:**	36 months
Sale Type:	Advertised	**Contract Mechanism:**	5450-004 Scale Sale of Timber and other Wood Products

Content

Prepared By: Rainey, Matthew D - 1/21/2026
Approved By: Rainey, Matthew D - 1/21/2026

Legal Description of Contract Area

Land Status	County	Township	Range	Section	Subdivision	Meridian
O&C	Yamhill	4S	6W	23	NE¼NE¼, S½NE¼, SE¼SW¼	Willamette
O&C	Yamhill	4S	6W	12	SW¼	Willamette
O&C	Yamhill	4S	6W	21	E½NE¼, E½SE¼	Willamette
O&C	Yamhill	4S	6W	33	Lot 1, SW¼NW¼, NW¼SW¼	Willamette

Species Totals

Species	Net	Gross Merch	Gross	# of Merch Logs	# of Cull Logs	# of Trees
Douglas Fir	6,005.0	6,202.0	6,223.0	79,500	369	14,933
Grandfir	902.0	955.0	955.0	6,336	0	950
Bigleaf Maple	47.0	67.0	98.0	852	723	503
Red Alder	31.0	41.0	45.0	484	181	153
Totals	**6,985.0**	**7,265.0**	**7,321.0**	**87,172**	**1,273**	**16,539**

Cutting Area Acres

Regeneration Harvest Acres	Partial Cut Acres	Right of Way Acres	Total Acres	Net Volume per Acre
67.0	146.0	10.0	223.0	31.3

Logging Costs

Stump to Truck	$769,822.06
Transportation	$310,314.00
Road Construction	$603,749.49
Maintenance/Rockwear	$66,283.19
Road Use	$51,292.95
Other Allowances	$129,796.66
Total:	**$1,931,258.35**
Total Logging Cost per MBF:	**$276.49**

Utilization Centers

Location	Distance	% of Net Volume
Willamina	17.0 miles	99%
Garibaldi	57.0 miles	1%

Profit & Risk

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

Tract Features

Quadratic Mean DBH	17.1 in
Average GM Log	83 bf
Average Volume per Acre	31.3 mbf
Recovery	95%
Net MBF volume:	
Green	6,985.0 mbf
Salvage	0 mbf
Export	0 mbf
Ground Base Logging:	
Percent of Sale Volume	80%
Average Yarding Slope	30%
Average Yarding Distance	600 ft
Cable Logging:	
Percent of Sale Volume	20%
Average Yarding Slope	55%
Average Yarding Distance	1300 ft
Aerial Logging:	
Percent of Sale Volume	0%
Average Yarding Slope	0%
Average Yarding Distance	0 ft

Cruise

Cruise Completed November 2025

Cruised By Bill Bryant, Karissa Hadermann

Cruise Method

Variable Plot 40 BAF in Regen units and RW 20 BAF in Thinning units

Stumpage Computation

Species	# of Trees	Net Volume	Pond Value	(-) Profit & Risk	(-) Logging Costs	(+) Marginal Log Value	Stumpage Adjustment	Appraised Price/MBF		Appraised Value ($)
Douglas Fir	14,933	6,005.0	$610.24	$67.13	$276.49	$0.00	($0.72)	$265.90		$1,596,729.50
Grandfir	950	902.0	$463.16	$50.95	$276.49	$0.00	($0.29)	$135.40		$122,130.80
Bigleaf Maple	503	47.0	$235.10	$25.86	$276.49	$0.00	$0.00	$23.60	*	$1,109.20
Red Alder	153	31.0	$474.18	$52.16	$276.49	$0.00	($0.32)	$145.20		$4,501.20
Totals	**16,539**	**6,985.0**								**$1,724,470.70**

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

Percent of Volume By Log Grade

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

Species	Peeler	No. 1 Sawmill	Special Mill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	Camp Run
Grandfir				83.0%	17.0%		

Species	No. 1 Sawmill	No. 2 Sawmill	No. 3 Sawmill	No. 4 Sawmill	No. 5 Sawmill		Camp Run
Bigleaf Maple							100.0%

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

Unit: 1

Net Volume/Acre: 41.3 MBF

Douglas Fir	685.0	709.0	709.0	1,651
Bigleaf Maple	11.0	14.0	23.0	119
Totals:	**743.0**	**773.0**	**783.0**	**1,866**

Partial Cut	0.0
Total Acres:	**18.0**

Unit: 2

Net Volume/Acre: 41.3 MBF

Douglas Fir	761.0	788.0	788.0	1,835
Bigleaf Maple	13.0	20.0	26.0	133
Totals:	**826.0**	**864.0**	**871.0**	**2,074**

Partial Cut	0.0
Total Acres:	**20.0**

Unit: 3

Net Volume/Acre: 41.3 MBF

Douglas Fir	495.0	512.0	512.0	1,193
Bigleaf Maple	8.0	11.0	17.0	86
Totals:	**537.0**	**560.0**	**566.0**	**1,348**

Partial Cut	0.0
Total Acres:	**13.0**

Unit: 4

Net Volume/Acre: 24.8 MBF

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	180.0	186.0	187.0	461
Grandfir	41.0	44.0	44.0	35
Red Alder	2.0	2.0	2.0	5
Totals:	**223.0**	**232.0**	**233.0**	**501**

Partial Cut	9.0
Total Acres:	**9.0**

Unit: 5

Net Volume/Acre: 24.4 MBF

Douglas Fir	158.0	163.0	164.0	404
Red Alder	1.0	2.0	2.0	5

Partial Cut	8.0
Total Acres:	**8.0**

Unit: 6

Net Volume/Acre: 26.4 MBF

Douglas Fir	1,218.0	1,255.0	1,265.0	3,116
Red Alder	9.0	11.0	12.0	35

Partial Cut	57.0
Total Acres:	**57.0**

Unit: 7

Net Volume/Acre: 26.6 MBF

Douglas Fir	451.0	465.0	468.0	1,154
Red Alder	4.0	5.0	5.0	13

Partial Cut	21.0
Total Acres:	**21.0**

Unit: 8

Species	Net	Gross Merch	Gross	# of Trees
Douglas Fir	571.0	591.0	591.0	1,376
Grandfir	38.0	40.0	40.0	67
Bigleaf Maple	9.0	13.0	19.0	99
Red Alder	1.0	2.0	2.0	12
Totals:	**619.0**	**646.0**	**652.0**	**1,554**

Net Volume/Acre: 38.7 MBF

Partial Cut	0.0
Total Acres:	**16.0**

Unit: 9

Douglas Fir	564.0	581.0	584.0	1,442
Red Alder	5.0	6.0	6.0	16

Net Volume/Acre: 27.9 MBF

Partial Cut	25.0
Total Acres:	**25.0**

Unit: 10

Douglas Fir	541.0	558.0	561.0	1,384
Red Alder	5.0	6.0	6.0	16

Net Volume/Acre: 25.7 MBF

Partial Cut	26.0
Total Acres:	**26.0**

Unit: RW

Douglas Fir	381.0	394.0	394.0	917
Bigleaf Maple	6.0	9.0	13.0	66
Totals:	**414.0**	**431.0**	**436.0**	**1,036**

Net Volume/Acre: 41.4 MBF

Partial Cut	0.0
Total Acres:	**10.0**

Total Stump To Truck	Net Volume	$/MBF
$769,822.06	6,985.0	$110.21

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	1,069.0	$261.52	$279,564.88	Thinning units
Cable: Medium Yarder	GM MBF	387.0	$130.76	$50,604.12	Regen units
Shovel	GM MBF	2,922.0	$95.45	$278,904.90	Thinning units
Shovel	GM MBF	2,887.0	$55.68	$160,748.16	Regen units
Subtotal				**$769,822.06**	

Additional Costs

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

Additional Moves

Equipment	Unit of Measure	# of Units of Measure	$/Unit of Measure	Total Cost	Remarks
Subtotal				**$0.00**	

Comments:
Cable Thinning: 4 Loads/day @ 5mbf/load.
Cable Regen: 8 Loads/day @ 5mbf/load.
Shovel Thinning: 7 Loads/day @ 5mbf/load.
Shovel Regen: 12 Loads/day @ 5mbf/load.

Total	Net Volume	$/MBF
$310,314.00	6,985.0	$44.43

Utilization Center	One Way Mileage	Description	Unit of Measure	# of Units	$/Unit of Measure	Total Cost	% of Sale Volume
Garibaldi	57.0	Hardwoods	GM MBF	108.0	$90.00	$9,720.00	1%
Willamina	17.0	Conifer	GM MBF	7,157.0	$42.00	$300,594.00	99%

Comments:
Conifers: 1.75 hr. @ $120/hr. 5mbf per load.
Hardwoods: 3 hr. @$120/hr. 4mbf per load.

Engineering Allowances

Total	Net Volume	$/MBF
$721,325.63	6,985.0	$103.27

Cost Item	Total Cost
Road Construction:	$603,749.49
Road Maintenance/Rockwear:	$66,283.19
Road Use Fees:	$51,292.95

Total	Net Volume	$/MBF
$129,796.66	6,985.0	$18.58

Environmental Protection

Cost item	Total Cost
Equipment Washing	$400.00
Subtotal	**$400.00**

Logging

Cost item	Total Cost
Road Flagging	$600.00
Snag Creation	$101,671.66
Subtotal	**$102,271.66**

Slash Disposal & Site Prep

Cost item	Total Cost
Slash Disposal	$27,125.00
Subtotal	**$27,125.00**

Comments:
FUELS ALLOWANCE SUMMARY
UNIT # Treatment Type Quantity Measure Allowance C1? Total
Units 1,2,3 Landing pile and cover 0 acres $125.00 N
Hand pile and cover 0 acres $- N
Machine Pile and Cover 19 acres $450.00 N $8,550.00
Landing Pile Burn 0 acres $125.00 N
Handpile Burn 0 acres $- N
Machine Pile Burn 19 acres $125.00 N $2,375.00
Slashing - L1 0 acres $- N

$10,925.00

Units 4,5,6,7 Landing pile and cover 0 acres $125.00 N $-
Hand pile and cover 0 acres $- N $-
Machine Pile and Cover 8 acres $450.00 N $3,600.00
Landing Pile Burn 0 acres $125.00 N $-

Handpile Burn 0 acres N $-
Machine Pile Burn 8 acres $125.00 N $1,000.00
Slashing - L1 0 acres N $-

$4,600.00

Units 8, 9 Landing pile and cover 0 acres $125.00 N $-
Hand pile and cover 0 acres $- N $-
Machine Pile and Cover 8 acres $450.00 N $3,600.00
Landing Pile Burn 0 acres $125.00 N $-
Handpile Burn 0 acres N $-
Machine Pile Burn 8 acres $125.00 N $1,000.00
Slashing - L1 0 acres N $-

$4,600.00

Unit 10 Landing pile and cover 1 acres $125.00 N $125.00
Hand pile and cover 0 acres $- N $-
Machine Pile and Cover 6 acres $450.00 N $2,700.00
Landing Pile Burn 1 acres $125.00 N $125.00
Handpile Burn 0 acres N $-
Machine Pile Burn 6 acres $125.00 N $750.00
Slashing - L1 0 acres N $-

$3,700.00

All Units Landing pile and cover 0 acres $- N $-
Hand pile and cover 0 acres $750.00 N $-
Machine Pile and Cover 4 acres $450.00 N $1,800.00
Landing Pile Burn 0 acres $- N $-
Handpile Burn 0 acres $100.00 N $-
Machine Pile Burn 4 acres $125.00 N $500.00
Slashing - L1 4 acres $250.00 N $1,000.00

$3,300.00

Total $27,125.00

Remarks: No Buy-out offered
Total landing acres are 1 and total machine piling are 45 acres and 4 acres of slashing for a total of 50 acres.

Snag creation Appraisal.
Treatment Type Quantity 2029 Price Total
Saw Top (16-24) 58 $225.47 $13,077.34
Saw Top (20-30) 104 $289.89 $30,148.75
High Girdle (16-24) 54 $217.42 $11,740.62
High Girdle (20-30) 89 $281.84 $25,083.69
Base Girdle (16-24) 168 $64.42 $10,822.63
Fell (16-24) 42 $37.04 $1,555.75
Total Trees: 515 Base Cost: $92,428.78
+10% Admin Fee: $9,242.88

= $101,671.66
+ 19.09% IDR: $19,409.12
= 100% Buyout (BO) Total Cost: $121,080.78