



TIMBER NOTICE OF SALE

SALE NAME: PUNCH BOWL VRH THIN

AGREEMENT NO: 30-104119

AUCTION: February 29, 2024 starting at 10:00 a.m., COUNTY: Clark
Pacific Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 10 miles northeast of Camas, WA

PRODUCTS SOLD AND SALE AREA:

All timber, except leave trees bound by yellow "Leave Tree Area" tags, leave trees marked with blue paint, all down timber existing 5 years prior to the day of sale, all downed timber existing 5 years prior to day of sale, all down timber greater than 24 inches diameter, all western redcedar and snags bounded by the following:

Unit 1 VRH, white "Timber Sale Boundary" tags with pink flagging, reprod, and the L-1500 road;

Unit 2 VRH, white "Timber Sale Boundary" tags with pink flagging and reprod;

Unit 3 VRH, white "Timber Sale Boundary" tags with pink flagging, reprod, and the L-1580 road;

Unit 4 Thin, white "Timber Sale Boundary" tags with pink flagging, reprod and the L-1552 road;

Unit 5 Thin, white "Timber Sale Boundary" tags with pink flagging, reprod, and the L-1520 road;

Unit 6 and 7 ROW, orange "Right-of-Way Boundary" tags with orange flagging;

All forest products above located on part(s) of Sections 1 and 12 all in Township 2 North, Range 4 East, Sections 36 all in Township 3 North, Range 4 East, W.M., containing 159 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BVC-SFIFM-018227)

ESTIMATED SALE VOLUMES AND QUALITY:

Table with columns: Species, Avg DBH, Ring Count, Total MBF, Total \$/MBF, and MBF by Grade (1P, 2P, 3P, SM, 1S, 2S, 3S, 4S, UT). Rows include Douglas fir, Hemlock, Red alder, and Sale Total.

MINIMUM BID: \$237/MBF (est. value \$605,000.00) BID METHOD: Sealed Bids

PERFORMANCE SECURITY: \$100,000.00 SALE TYPE: MBF Scale

EXPIRATION DATE: October 31, 2025 ALLOCATION: Export Restricted



TIMBER NOTICE OF SALE

BIDDABLE SPECIES: Douglas fir

BID DEPOSIT: \$60,500.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Cable, Shovel, and Track skidder. Cable, shovel or tracked skidder. Ground Based Yarding will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

ROADS: 34.51 stations of optional construction. 15.95 stations of optional reconstruction. 340.70 stations of required prehaul maintenance. Rock used in accordance with the quantities on the ROCK LIST may be obtained from the Jackson Pass Pit located in Sec 11 and Sec 12, T2N, R4E on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source.

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. The hauling of forest products will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

ACREAGE DETERMINATION

CRUISE METHOD: The sale acres were determined by GPS. The sale area was cruised using a variable plot cruise method.

FEES: Check in the amount of \$737.77 made payable to Weyerhaeuser Timber Holdings, Inc. for RUP, must be provided to DNR within 30 days of auction. DNR will forward the check to Weyerhaeuser Timber Holdings, Inc. \$46,631.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

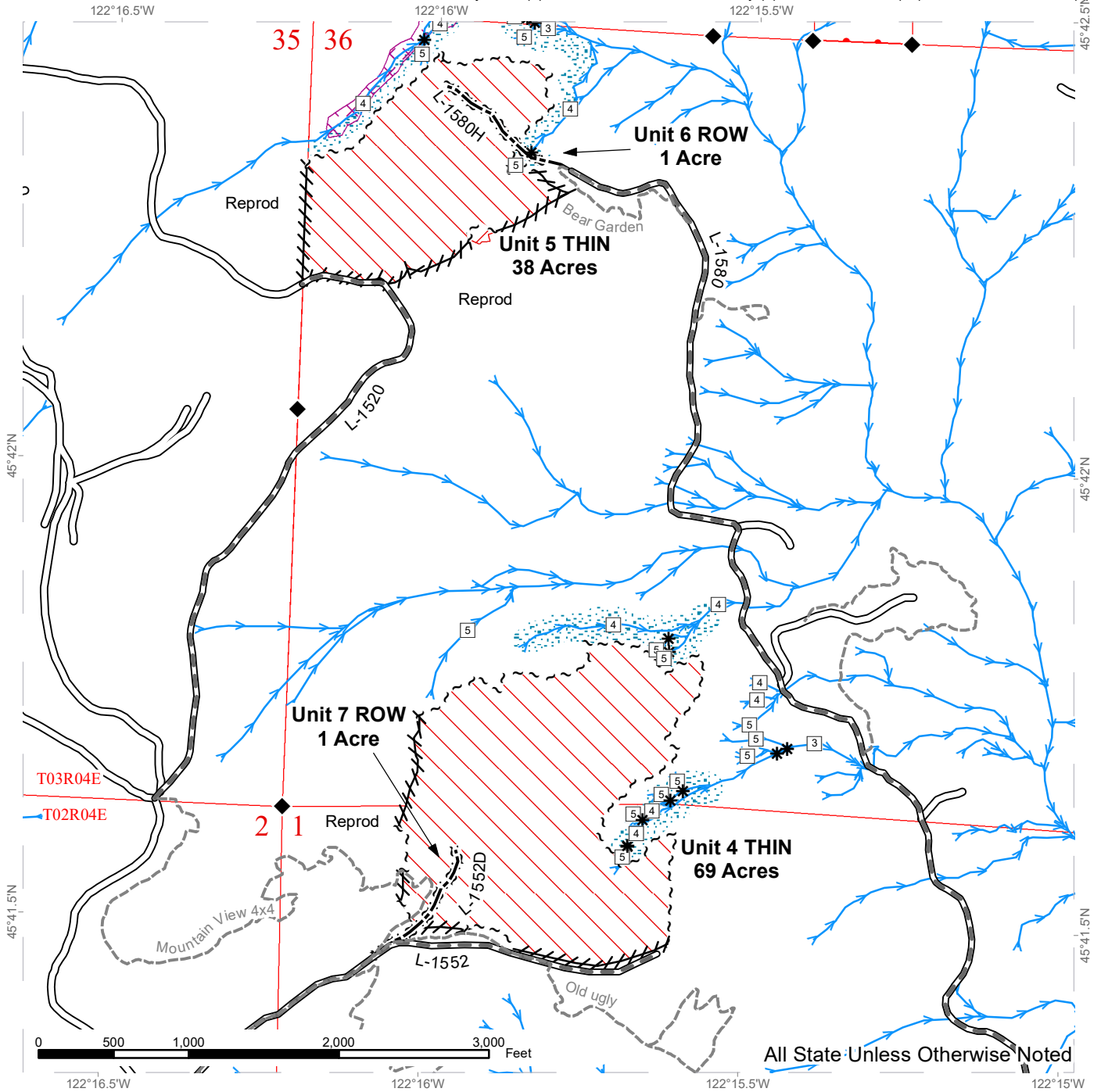
SPECIAL REMARKS: This sale has approximately 4 MBF SM DF, 258 MBF of High Quality 2 Saw DF, 155 MBF of High Quality 3 Saw DF and 17 MBF of Pole Quality DF. See cruise for details.

Hazard abatement is required along the L-1500 road. See clause S-020 for more details.

TIMBER SALE MAP

SALE NAME: THE PUNCH BOWL VRH THIN
AGREEMENT #: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520

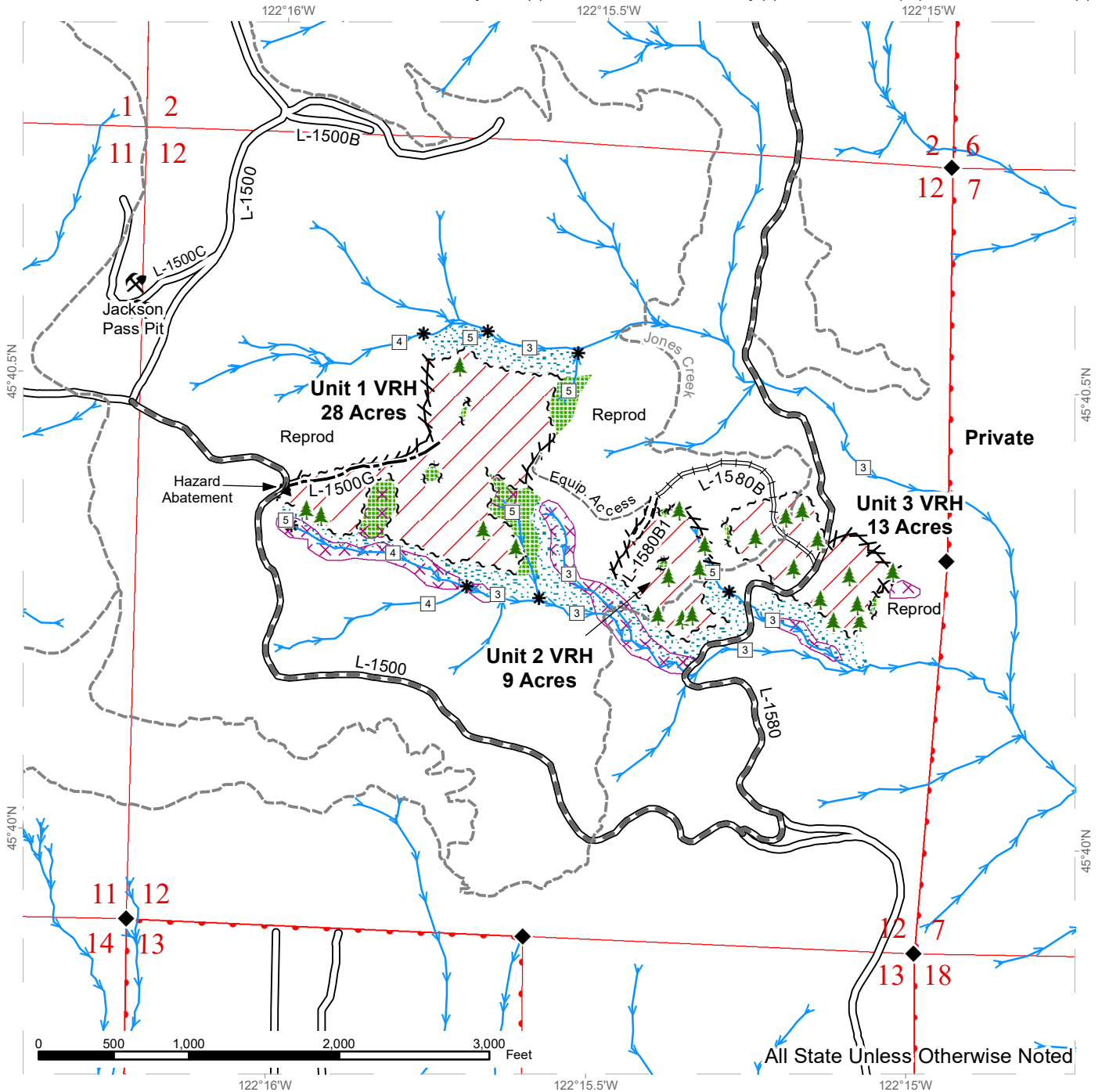


Commercial Thinning	Sale Boundary Tags	Existing Roads	Streams
Talus	Leave Tree Tags	Required Pre-Haul Maintenance	Stream Type
Riparian Mgt Zone	Right of Way Tags	Optional Construction	Stream Type Break
Forested Wetland	Property Line	Motorized Trail	Survey Monument
Potentially Unstable Slopes	Flag Line		

TIMBER SALE MAP

SALE NAME: THE PUNCH BOWL VRH THIN
AGREEMENT #: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Peal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



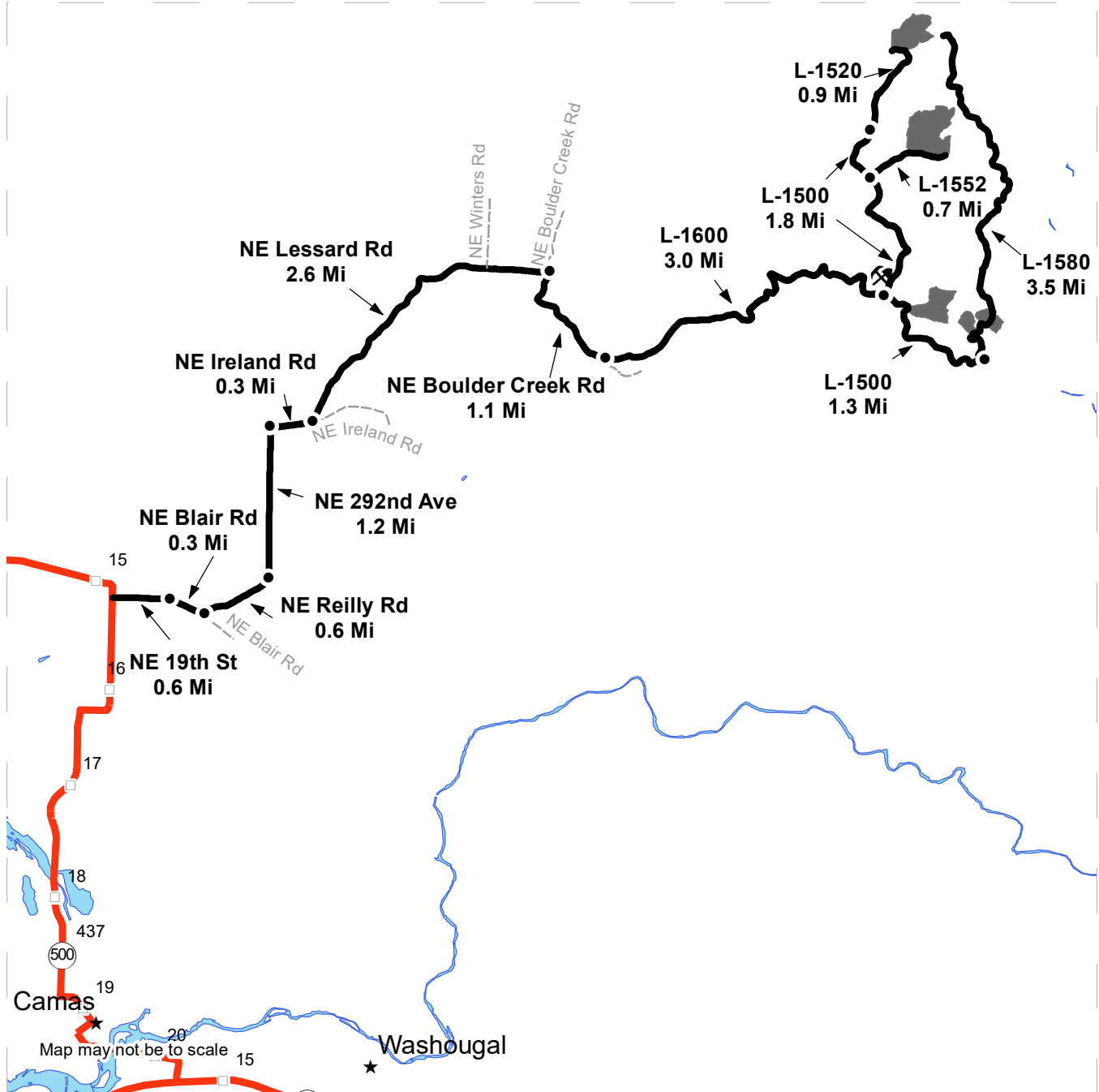
Variable Retention Harvest	Sale Boundary Tags	Existing Roads	Streams
Leave Tree Area	Leave Tree Tags	Required Pre-Haul Maintenance	Stream Type
Riparian Mgt Zone	Right of Way Tags	Required Construction	Stream Type Break
Potentially Unstable Slopes	Property Line	Required Reconstruction	Survey Monument
	Flag Line	Optional Construction	Leave Tree Area
		Equipment Access Route	Rock Pit
		Motorized Trail	
		Hazard Abatement Area	



DRIVING MAP

SALE NAME: THE PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



- Timber Sale Unit
- Haul Route
- View Only Route
- Milepost Markers
- Distance Indicator
- Town
- Rock Pit

DRIVING DIRECTIONS:
 From State Route 500 (milepost 15.2), turn east onto NE 19th St and travel 0.6 miles.
 Veer right (southeast) onto NE Blair Rd and follow for 0.3 miles.
 Turn left (northeast) onto NE Reilly Rd and follow for 0.6 miles.
 Continue north onto NE 292nd Ave and travel 1.2 miles.
 Turn right (east) onto NE Ireland Rd and travel 0.3 miles.
 Veer left (northeast) onto NE Lessard Rd and follow for 2.6 miles.
 Continue on NE Boulder Creek Rd for 1.1 miles.
 Turn left (northeast) onto the L-1600 Rd (gravel) for 3.0 miles.
 Turn right (southeast) onto the L-1500 Rd for roughly .2 miles to reach the west side of Unit 1.
 Continue along the L-1500 road another 1.1 miles and turn left (north) onto the L-1580 Rd to access Units 1, 2, 3, and 5.
 From the L-1600 Rd, turn left (north) onto the L-1500 Rd for 1.3 miles and turn right (east) onto the L-1552 Rd for 0.7 miles to access Unit 4.
 Continue north along the L-1500 Rd for 0.5 miles and turn right (northeast) onto the L-1520 Rd for 0.9 miles to access Unit 5.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

**BILL OF SALE AND CONTRACT FOR
FOREST PRODUCTS**

Export Restricted MBF Scale AGREEMENT NO. 30-0104119

SALE NAME: PUNCH BOWL VRH THIN

**THE STATE OF WASHINGTON DEPARTMENT OF NATURAL
RESOURCES, HEREINAFTER ACTING SOLELY, IN ITS PROPRIETARY
CAPACITY, STATE, AND PURCHASER, AGREE AS FOLLOWS:**

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

Bill of Sale and Contract for Forest Products: Contract between the Purchaser and the State, which sets forth the procedures and obligations of the Purchaser in exchange for the right to remove forest products from the sale area. The Bill of Sale and Contract for Forest Products may include a Road Plan for any road construction or reconstruction, where applicable.

Contract Administrator: Region Manager's designee responsible for assuring that the contractual obligations of the Purchaser are met.

Forest Product: Any material derived from the forest for commercial use.

Purchaser: The company or individual that has entered into a Bill of Sale and Contract for Forest Products with the State for the right to harvest and remove forest products from the timber sale area.

Road Construction: Includes building new and maintaining existing forest roads and associated work that may be optional or required as described in the Road Plan.

State: The Washington State Department of Natural Resources, landowner and seller of Forest Products from the timber sale area. The State is represented by the Region Manager as designated on the contract signature page. Contractual obligations to the State are enforced by the Region Manager or the designated Contract Administrator.

Subcontractor: Individual or company employed by the Purchaser to perform a portion or all of the services required by The Bill of Sale and Contract for Forest Products. The Purchaser is responsible for independently negotiating, procuring and paying for all subcontracted services rendered.

G-010 Products Sold and Sale Area

Purchaser was the successful bidder on February 29, 2024 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase, cut, and remove the following forest products: All timber, except leave trees bound by yellow "Leave Tree Area" tags, leave trees marked with blue paint, all down timber existing 5 years prior to the day of sale, all downed timber existing 5 years prior to day of sale, all down timber greater than 24 inches diameter, all western redcedar and snags bounded by the following:

Unit 1 VRH, white "Timber Sale Boundary" tags with pink flagging, reprod, and the L-1500 road;

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Unit 4 Thin, white "Timber Sale Boundary" tags with pink flagging, reprod and the L-1552 road;

Unit 5 Thin, white "Timber Sale Boundary" tags with pink flagging, reprod, and the L-1520 road;

Unit 6 and 7 ROW, orange "Right-of-Way Boundary" tags with orange flagging;, located on approximately 159 acres on part(s) of Sections 1, and 12 all in Township 2 North, Range 4 East, Section 36 in Township 3 North, Range 4 East W.M. in Clark County(s) as shown on the attached timber sale map and as designated on the sale area.

All forest products described above from the bole of the tree that meet or exceed 2 inches diameter inside bark on the small end are eligible for removal. Above ground components of a tree that remain as by-products after the manufacture of logs, including but not limited to tree tops, branches, limbs, needles, leaves, stumps, are not eligible for removal under the terms of this contract.

Forest products purchased under a contract that is designated as export restricted shall not be exported until processed. Forest products purchased under a contract that is designated as exportable may be exported prior to processing.

G-020 Inspection By Purchaser

Purchaser hereby warrants to the State that they have had an opportunity to fully inspect the sale area and the forest products being sold. Purchaser further warrants to the State that they enter this contract based solely upon their own judgment of the value of the forest products, formed after their own examination and inspection of both the timber sale area and the forest products being sold. Purchaser also warrants to the State that they enter this contract without any reliance upon the volume estimates, acreage estimates, appraisals, pre-bid documentation, or any other representations by the State Department of Natural Resources.

G-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	Punch Bowl VRH Thin

G-030 Contract Term

Purchaser shall remove the forest products conveyed and complete all work required by this contract prior to October 31, 2025.

G-040 Contract Term Adjustment - No Payment

Purchaser may request an adjustment in the contract term. A claim must be submitted in writing and received by the State within 30 days after the start of interruption or delay. The claim must also indicate the actual or anticipated length of interruption or delay. The State may grant an adjustment without charge only if the cause for contract term adjustment is beyond Purchaser's control. The cause must be one of the following and the adjustment may be granted only if operations or planned operations under this contract are actually interrupted or delayed:

- a. Road and bridge failures which deny access.
- b. Access road closures imposed by road owner.
- c. Excessive suspensions as provided in clause G-220.
- d. Regulatory actions not arising from Purchaser's failure to comply with this contract which will prevent timber harvest for a period less than 6 months.

G-050 Contract Term Extension - Payment

Extensions of this contract term may be granted only if, in the judgment of the State, Purchaser is acting in good faith and is endeavoring to remove the forest products conveyed. The term of this contract may be extended for a reasonable time by the State if all of the following conditions are satisfied:

- a. A written request for extension of the contract term must be received prior to the expiration date of the contract.
- b. Completion of all required roads and compliance with all contract and regulatory requirements.
- c. For the first extension, not to exceed 1 year, payment of at least 25 percent of the contract value based on the contract payment rate and advertised volume.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the contract value based on the contract payment rate base and advertised volume.

The payments shall not include the initial deposit which shall be held according to the provisions of RCW 79.15.100.

- d. Payment of an amount based on 12 percent interest per annum on the unpaid portion of the timber value of the contract.

To determine the unpaid portion of the contract, multiply the contract payment rate for each item by the remaining volume for each item based on the volumes from the Timber Notice of Sale. In addition, all cash deposits that can be used for timber payments, except the initial deposit, will be deducted from the unpaid portion of the contract.

- e. Payment of \$30.00 per acre per annum for the acres on which an operating release has not been issued in VRH Units. Payment of \$3.00 per acre per annum for the acres on which an operating release has not been issued in Thinning Units.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

Whenever the State determines that a survey for sensitive, threatened, or endangered species is prudent, or when Purchaser determines a survey is prudent and the State agrees, Purchaser shall perform such surveys at Purchaser's expense and to the standards required by the State. The survey information shall be supplied to the State.

G-060 Exclusion of Warranties

The PARTIES AGREE that the IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE and ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARE EXCLUDED from this transaction and shall not apply to the goods sold. For example, THE FOLLOWING SPECIFIC MATTERS ARE NOT WARRANTED, and are EXCLUDED from this transaction:

- a. The **MERCHANTABILITY** of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The **CONDITION** of the forest products. The forest products will be conveyed "AS IS."
- c. The **ACREAGE** contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The **VOLUME, QUALITY, OR GRADE** of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The **CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE**. These documents have been prepared for the State's appraisal purposes only.
- f. **THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES** or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. **THAT THE FORESTRY OPERATIONS** to be performed under this contract **WILL BE FREE FROM REGULATORY ACTIONS** by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-061 Inadvertent Discovery of Cultural Resources

Purchaser acknowledges that cultural resources as defined in WAC 222-16-010 may exist within the timber sale area and that the existence and location of such resources may be unknown at the time this contract is executed. Purchaser has a duty to exercise due care in its operations and in the event any human skeletal remains are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify local law enforcement in the most expeditious manner possible then notifying the Contract Administrator. In the event cultural resources are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify the Contract Administrator.

Any potential resources shall not be removed or disturbed. Purchaser shall resume operations as directed in writing by the Contract Administrator.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. TE812521-1 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

By signing this contract, Purchaser agrees to comply with the terms and conditions of the ITP, and the HCP, which shall become terms of this contract. The State agrees to authorize the lawful activities of the Purchaser carried out pursuant to this contract, PROVIDED the Purchaser remains in compliance with the terms and conditions of both the HCP and ITP. The requirements set forth in this contract are intended to comply with the terms and conditions of the HCP and ITP. Accordingly, non-compliance with the terms and conditions of the HCP and ITP will render the authorization provided in this paragraph void, be deemed a breach of the contract and may subject Purchaser to liability for violation of the Endangered Species Act.

Any modifications to the contract shall be proposed in writing by Purchaser, shall continue to meet the terms and conditions of the HCP and ITP, and shall require the prior written approval of the Region Manager before taking effect.

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator

safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.

- c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

Purchaser is responsible for obtaining any permits not already obtained by the State that relate to Purchaser's operation. Forest Practice Application / Hydraulic Project Approval permits obtained by the State shall be transferred to Purchaser. Purchaser is responsible for all permits, amendments and renewals.

G-065 Regulatory Disclaimer

The State disclaims any responsibility for, or liability relating to, regulatory actions by any government agency, including actions pursuant to the Forest Practices Act, Ch. 76.09 RCW that may affect the operability of the timber sale.

G-066 Governmental Regulatory Actions

a. Risk

Purchaser shall be responsible for any increased operational costs arising from any applicable foreign or domestic governmental regulation or order that does not cause contract performance to become commercially impracticable or that does not substantially frustrate the purpose of the contract. If impracticability or frustration results from Purchaser's failure to comply with this contract, Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

When portions of the sale area become subject to a foreign or domestic governmental regulation or order that will likely prevent timber harvest for a period that will exceed the expiration date of this contract, and Purchaser has complied with this contract, the following shall apply:

i. RCW 79.15.140 shall govern all adjustments to the contract area.

c. Adjustment of Price

The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be measured. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage. However, variations in species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of unamortized roads Purchaser constructed but was unable to fully use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

In the event of a breach of any provision of this contract by the State, the exclusive remedy available to Purchaser will be limited to a return of the initial deposit, unapplied payments, and credit for unamortized improvements made by Purchaser. The State shall not be liable for any damages, whether direct, incidental or consequential.

G-080 Scope of State Advice

No advice by any agent, employee, or representative of the State regarding the method or manner of performing shall constitute a representation or warranty that said method, manner or result thereof will conform to the contract or be suitable for Purchaser's purposes under the contract. Purchaser's reliance on any State advice regarding the method or manner of performance shall not relieve Purchaser of any risk or obligation under the contract. Purchaser retains the final responsibility for its operations under this contract and State shall not be liable for any injuries resulting from Purchaser's reliance on any State advice regarding the method or manner of performance.

G-090 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-100 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract

Administrator. Added forest products become a part of this contract and shall be paid for at the same rate and manner as other forest products under this contract.

G-110 Title and Risk of Loss

Title to the forest products conveyed passes at confirmation of the sale. Purchaser bears the risk of loss of or damage to and has an insurable interest in the forest products in this contract from the time of confirmation of the sale of forest products. In the event of loss of or damage to the forest products after passage of title, whether the cause is foreseeable or unforeseeable, the forest products shall be paid for by Purchaser. Breach of this contract shall have no effect on this provision. Title to the forest products not removed from the sale area within the period specified in this contract shall revert to the State as provided in RCW 79.15.100.

G-116 Sustainable Forestry Initiative® (SFI®) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative 2022 Forest Management Standard under certificate number: BVC-SFIFM-018227.

Purchaser shall have at least one person regularly on-site during active operations that have completed training according to the requirements outlined within the SFI Standard. Purchaser shall designate in writing the name(s) of the individual(s) who will be on-site and provide proof of their successful completion of an approved training program prior to active operations.

G-120 Responsibility for Work

All work, equipment, and materials necessary to perform this contract shall be the responsibility of Purchaser. Any damage to improvements, except as provided in clause G-121 or unless the State issues an operating release pursuant to clause G-280, shall be repaired promptly to the satisfaction of the State and at Purchaser's expense.

G-121 Exceptions

Exceptions to Purchaser's responsibility in clause G-120 shall be limited exclusively to the following. These exceptions shall not apply where road damage occurs due to Purchaser's failure to take reasonable precautions or to exercise sound forest engineering and construction practices.

The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

Road is defined as the road bed, including but not limited to its component parts, such as cut and fill slopes, subgrade, ditches, culverts, bridges, and cattle guards.

For the purposes of this clause, damage will be identified by the State and is defined as:

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;

2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and
3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources.

For each event, Purchaser shall be solely responsible for the initial \$5,000 in repairs. For repairs in excess of \$5,000, the parties shall share equally the portion of costs between \$5,000 and \$15,000. The State shall be solely responsible for the portion of the cost of repairs that exceed \$15,000.

Nothing contained in clauses G-120 and G-121 shall be construed as relieving Purchaser of responsibility for, or damage resulting from, Purchaser's operations or negligence, nor shall Purchaser be relieved from full responsibility for making good any defective work or materials. Authorization to haul does not warrant that Purchaser built roads are free from material defect and the State may require additional work, at Purchasers expense regardless of cost, to remedy deficiencies at any time.

G-140 Indemnity

To the fullest extent permitted by law, Purchaser shall indemnify, defend and hold harmless State, agencies of State and all officials, agents and employees of State, from and against all claims arising out of or resulting from the performance of the contract. "Claim" as used in this contract means any financial loss, claim, suit, action, damage, or expense, including but not limited to attorneys' fees, attributable for bodily injury, sickness, disease or death, or injury to or destruction of tangible property including loss of use resulting therefrom. Purchasers' obligations to indemnify, defend, and hold harmless includes any claim by Purchasers' agents, employees, representatives, or any subcontractor or its employees. Purchaser expressly agrees to indemnify, defend, and hold harmless State for any claim arising out of or incident to Purchasers' or any subcontractors' performance or failure to perform the contract. Purchasers' obligation to indemnify, defend, and hold harmless State shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials. Purchaser waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless State and its agencies, officials, agents or employees.

G-150 Insurance

Purchaser shall, at its cost and expense, buy and maintain insurance of the types and amounts listed below. Failure to buy and maintain the required insurance may result in a breach and/or termination of the contract at State's option. State may suspend Purchaser operations until required insurance has been secured.

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

The State of Washington, Department of Natural Resources region office of sale origin shall be provided written notice before cancellation or non-renewal of any insurance referred to therein, in accord with the following specifications:

1. Insurers subject to Chapter 48.18 RCW (admitted and regulated by the Insurance Commissioner): The insurer shall give the State 45 days advance notice of cancellation or non-renewal. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.
2. Insurers subject to Chapter 48.15 RCW (surplus lines): The State shall be given 20 days advance notice of cancellation. If cancellation is due to non-payment of premium, the State shall be given 10 days advance notice of cancellation.

Before starting work, Purchaser shall furnish State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized representative of each insurer, showing compliance with the insurance requirements specified in the contract. Insurance coverage shall be obtained by the Purchaser prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

Purchaser shall include all subcontractors as insured under all required insurance policies, or shall furnish separate certificates of insurance and endorsements for each subcontractor. Subcontractor(s) must comply fully with all insurance requirements stated herein. Failure of subcontractor(s) to comply with insurance requirements does not limit Purchaser's liability or responsibility.

The State of Washington, Department of Natural Resources, its elected and appointed officials, agents and employees shall be named as an additional insured via endorsement on all general liability, excess, umbrella, and property insurance policies.

All insurance provided in compliance with this contract shall be primary as to any other insurance or self-insurance programs afforded to or maintained by State. Purchaser waives all rights against State for recovery of damages to the extent these damages are covered by general liability or umbrella insurance maintained pursuant to this contract.

By requiring insurance herein, State does not represent that coverage and limits will be adequate to protect Purchaser and such coverage and limits shall not limit Purchaser's liability under the indemnities and reimbursements granted to State in this contract.

The limits of insurance, which may be increased as deemed necessary by State of Washington, Department of Natural Resources, shall not be less than as follows:

Commercial General Liability (CGL) Insurance. Purchaser shall maintain general liability (CGL) insurance, and, if necessary, commercial umbrella insurance with a limit of not less than \$1,000,000.00 per each occurrence. If such CGL insurance contains aggregate limits, the General Aggregate limit shall be at least twice the "each occurrence" limit. CGL insurance shall have products-completed operations aggregate limit of at least two times the "each occurrence" limit. CGL coverage shall include a Logging and Lumbering Endorsement (i.e. Logger's Broad-Form) to cover the events that include, but are not limited to, fire suppression expenses, accidental timber trespasses, and wildfire property damage with limits of not less than \$2,000,000.00 each occurrence.

CGL insurance shall be written on Insurance Services Office (ISO) occurrence form CG 00 01 (or a substitute form providing equivalent coverage). All insurance shall cover liability arising out of premises, operations, independent contractors, products completed operations, personal injury and advertising injury, and liability assumed under an insured contract (including the tort liability of another party assumed in a business contract), and contain separation of insured (cross liability) condition.

Employer's Liability "Stop Gap" Insurance. Purchaser shall buy employers liability insurance, and, if necessary, commercial umbrella liability insurance with limits not less than \$1,000,000.00 each accident for bodily injury by accident or \$1,000,000.00 each employee for bodily injury by disease.

Workers' Compensation Coverage. Purchaser shall comply with all State of Washington workers' compensation statutes and regulations. Workers' compensation coverage shall be provided for all employees of Purchaser and employees of any subcontractor or sub-subcontractor. Coverage shall include bodily injury (including death) by accident or disease, which exists out of or in connection with the performance of this contract. Except as prohibited by law, Purchaser waives all rights of subrogation against State for recovery of damages to the extent they are covered by workers' compensation, employer's liability, commercial general liability, or commercial umbrella liability insurance.

If Purchaser, subcontractor or sub-subcontractor fails to comply with all State of Washington workers' compensation statutes and regulations and State incurs fines or is required by law to provide benefits to or obtain coverage for such employees, Purchaser shall indemnify State. Indemnity shall include all fines, payment of benefits to Purchaser or subcontractor employees, or their heirs or legal representatives, and the cost of effecting coverage on behalf of such employees.

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any

Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

The State's rights and duties will be exercised by the Region Manager at Castle Rock, Washington. The Region Manager will notify Purchaser in writing who is responsible for administering the contract. The Region Manager has sole authority to waive, modify, or amend the terms of this contract in the manner prescribed in clause G-180. No agent, employee, or representative of the State has any authority to bind the State to any affirmation, representation, or warranty concerning the forest products conveyed beyond the terms of this contract.

Purchaser is required to have a person on site during all operations who is authorized to receive instructions and notices from the State. Purchaser shall inform the State in writing who is authorized to receive instructions and notices from the State, and any limits to this person's authority.

G-170 Assignment and Delegation

No rights or interest in this contract shall be assigned by Purchaser without prior written permission of the State. Any attempted assignment shall be void and ineffective for all purposes unless made in conformity with this paragraph. Purchaser may perform any duty through a delegate, but Purchaser is not thereby relieved of any duty to perform or any liability. Any assignee or delegate shall be bound by the terms of the contract in the same manner as Purchaser.

G-180 Modifications

Waivers, modifications, or amendments of the terms of this contract must be in writing signed by Purchaser and the State.

G-190 Contract Complete

This contract is the final expression of the Parties' agreement. There are no understandings, agreements, or representations, expressed or implied, which are not specified in this contract.

G-200 Notice

Notices required to be given under the following clauses shall be in writing and shall be delivered to Purchaser's authorized agent or sent by certified mail to Purchaser's address of record:

G-210 Violation of Contract

G-220 State Suspends Operations

All other notices required to be given under this contract shall be in writing and delivered to the authorized agent or mailed to the Party's post office address. Purchaser agrees to notify the State of any change of address.

G-210 Violation of Contract

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.
- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operations

The Contract Administrator may suspend any operation of Purchaser under this contract when the State is suffering, or there is a reasonable expectation the State will suffer environmental, monetary, or other damage if the operation is allowed to continue.

Purchaser shall be in breach of this contract if the operation continues after the suspension notice or if the operation resumes without prior approval and notice from the Contract Administrator.

Purchaser may request a modification of a suspension within 30 days of the start of suspension through the dispute resolution process in clause G-240. If this process results in a finding that the suspension exceeded the time reasonably necessary to stop or prevent damage to the State, Purchaser is entitled to request a contract term adjustment under clause G-040.

If it reasonably appears that the damage that the State is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and Purchaser has complied with this contract, the

provisions of clause G-066 shall govern just as if the harvest was prevented by an applicable foreign or domestic governmental regulation or order.

G-230 Unauthorized Activity

Any cutting, removal, or damage of forest products by Purchaser, its employees, agents, or invitees, including independent contractors, in a manner inconsistent with the terms of this contract or State law, is unauthorized. Such activity may subject Purchaser to liability for triple the value of said forest products under RCW 79.02.320 or RCW 79.02.300 and may result in prosecution under RCW 79.02.330 or other applicable statutes.

G-240 Dispute Resolution

The following procedures apply in the event of a dispute regarding interpretation or administration of this contract and the parties agree that these procedures must be followed before a lawsuit can be initiated.

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.
- c. Within ten business days of receipt of the Region Manager's decision, Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, a conference will be held by the Deputy Supervisor - Uplands within 30 calendar days of the receipt of Purchaser's request for review of the Region Manager's written decision. Purchaser and the Region Manager will have an opportunity to present their positions. The Deputy Supervisor - Uplands will issue a decision within a reasonable time of being presented with both Parties' positions.

G-250 Compliance with All Laws

Purchaser shall comply with all applicable statutes, regulations and laws, including, but not limited to; chapter 27.53 RCW, chapter 68.50 RCW, WAC 240-15 and WAC 296-54. Failure to comply may result in forfeiture of this contract.

G-260 Venue

This contract shall be governed by the laws of the State of Washington. In the event of a lawsuit involving this contract, venue shall be proper only in Thurston County Superior Court.

G-270 Equipment Left on State Land

All equipment owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining

unclaimed on State land 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280 Operating Release

An operating release is a written document, signed by the State and Purchaser, indicating that Purchaser has been relieved of certain rights or responsibilities with regard to the entire or a portion of the timber sales contract. Purchaser and State may agree to an operating release for this sale, or portion of this sale, prior to the contract expiration, when all contract requirements pertaining to the release area have been satisfactorily completed. Upon issuance of a release, Purchaser's right to cut and remove forest products on the released area will terminate.

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; L-1500, L-1500B, L-1500C, L-1500G, L-1520, L-1552, L-1552D, L-1580, L-1580B, L-1580B1, L-1580H and L-1600 roads. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330 Pre-work Conference

Purchaser shall arrange with the Contract Administrator to review this contract and to examine the sale area before beginning any operations. A plan of operations shall be developed and agreed upon by the Contract Administrator and Purchaser before beginning any operations. To the extent that the plan of operations is inconsistent with the contract, the terms of the contract shall prevail. State's acceptance and approval of Purchaser's plan of operations shall not be construed as any statement or warranty that the plan of operations is adequate for Purchaser's purposes or complies with applicable laws.

G-340 Preservation of Markers

Any legal land subdivision survey corners and witness objects are to be preserved. If such are destroyed or disturbed, the Purchaser shall, at the Purchaser's own expense, re-establish them through a licensed land surveyor in accordance with U.S. General Land Office standards. Corners and/or witness objects that must be disturbed or destroyed in the process of road construction or logging shall be adequately referenced and/or replaced in accordance with RCW 58.24.040(8). Such references must be approved by the Contract Administrator prior to removal of said corners and/or witness objects.

G-360 Road Use Reservation

The State shall have the right to use, without charge, all existing roads and any road constructed or reconstructed on State lands by Purchaser under this contract. The State may extend such rights to others. If the State grants such rights to others, the State shall require performance or payment, as directed by the State, for their proportionate share of maintenance based on their use.

G-370 Blocking Roads

Purchaser shall not block the L-1500, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

Purchaser agrees to comply with the terms and conditions of the attached:

Easement #000151 between State and Boise Cascade dated 2/22/1974.

G-430 Open Fires

Purchaser shall not set, or allow to be set by Purchaser's employees, agents, invitees and independent contractors, any open fire at any time of the year without first obtaining permission, in writing, from the Contract Administrator.

G-450 Encumbrances

This contract and Purchaser's activities are subject to the following:

DATA MISSING

Section P: Payments and Securities

P-010 Initial Deposit

Purchaser paid DATA MISSING initial deposit, which will be maintained pursuant to RCW 79.15.100(3). If the operating authority on this contract expires without Purchaser's payment of the full amount specified in the 'Payment for Forest Products' clause, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-021 Payment for Forest Products

Purchaser agrees to pay the following rates per MBF Scribner net log scale for forest products conveyed and cut or removed from the sale area plus \$46,631.00 on day of sale and \$9.00 per MBF upon removal in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause.

DATA MISSING

Species that are conveyed but are not listed in the table above shall be paid for at a rate to be determined by the State.

Utility logs, special cull and peelable cull logs of all species, included on loads of logs that are required to be removed and scaled per clause H-150 will be paid for on an adjusted gross scale basis at the rate of \$20.00 per MBF plus fees.

P-027 Payment for Removal of Optional Forest Products

Purchaser agrees to weigh all loads and pay the rate of \$2.00 per ton for forest products approved for removal from the sale area under clause H-157.

P-040 Weighing and Scaling Costs

Purchaser agrees to pay for all scaling and weighing costs for logs and other products sold under this contract. Purchaser also agrees to pay for all costs associated with the transmission and reporting of scale or weight data.

P-045 Guarantee of Payment

Purchaser will pay for forest products prior to cutting or will guarantee payment by posting an approved payment security. The amount of cash or payment security shall be determined by the State and shall equal or exceed the value of the cutting proposed by Purchaser.

P-050 Billing Procedure

The State will compute and forward to Purchaser statements of charges provided for in the contract. Purchaser shall deliver payment to the State on or before the date shown on the billing statement.

P-070 Payment for Products: Damage, Theft, Loss, or Mismanufacture

Forest products included in this agreement which are destroyed, damaged, stolen, lost, or mismanufactured shall be paid for by Purchaser on demand of the State. The rates contained in clause P-021 shall apply.

P-080 Payment Account Refund

Advance payments made under P-045 or P-045.2 remaining on account above the value for the charges shall be returned to Purchaser within 30 days following the final report of charges. Refunds not made within the 30 day period will accrue interest at the interest rate, as established by WAC 332-100-030, computed on a daily basis until paid.

P-090 Performance Security

Purchaser agrees to furnish, within 30 days of the confirmation date, security acceptable to the State in the amount of \$100,000.00. The Security provided shall guarantee performance of all provisions of this contract and payment of any damages caused by operations under this contract or resulting from Purchaser's noncompliance with any rule or law. Acceptable performance security may be in the form of a performance bond, irrevocable letter of credit, cash, savings or certificate of deposit account assignments, and must name the State as the obligee or beneficiary. A letter of credit must comply with Title 62A RCW, Article 5. Performance security must remain in full force over the duration of the contract length. Surety bonds issued shall conform to the issuance and rating requirements in clause G-150. The State shall retain the performance security pursuant to RCW 79.15.100. Purchaser shall not operate unless the performance security has been accepted by the State. If at any time the State decides that the security document or amount has become unsatisfactory, Purchaser agrees to suspend operations and, within 30 days of notification, to replace the security with one acceptable to the State or to supplement the amount of the existing security.

P-100 Performance Security Reduction

The State may reduce the performance security after an operating release has been issued if the State determines that adequate security exists for any remaining obligations of Purchaser.

Section L: Log Definitions and Accountability

L-010 Forest Products Conveyed

Forest products conveyed are all logs or parts of logs described by the 'Products Sold and Sale Area' (G-010) clause meeting the removal requirements listed in the 'Required Removal of Forest Products' (H-150) clause.

L-020 Short Logs - Peeler Blocks

Logs or parts of logs which are removed from the sale area that fail to meet the minimum gross length requirements shall be scaled and graded as short logs or peeler blocks. Such material shall be paid for at the forest products rates specified in this contract.

L-060 Load Tickets

Purchaser shall complete and use load tickets as directed by the Contract Administrator and, if required, use other identification as directed by the State to ensure accounting of forest products removed from the sale area. A load ticket must be fixed, as designated by the Contract Administrator, to each truck and trailer load prior to leaving the landing.

Purchaser shall account for all load tickets issued by the Contract Administrator and return unused tickets at termination of the contract, or as otherwise required by the Contract Administrator. Unused tickets not returned shall be subject to liquidated damages per clause D-030.

The State may also treat load tickets either not accounted for or not returned as lost forest products per clause P-070. All costs associated with computing the billings for lost forest products shall be borne by Purchaser

L-071 Log and Load Reporting Service

This contract requires the use of a State approved third party Log and Load Reporting Service (LLRS). Purchaser shall ensure log volume measurement data and/or load and weight data is received by the LLRS within 1 business day of logs being measured or weighed. Purchaser agrees to pay the LLRS for log and load data supplied to the State.

If during the term of this contract, the State discontinues use of the LLRS, the State will notify the Purchaser in writing and the Purchaser will then be responsible to send log scale and/or weight information to the State.

L-080 Scaling Rules

Determination of volume and grade of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Westside log

scaling and grading rules and Scribner Volume Table, revised July 1, 1972, contained in the Northwest Log Rules Eastside and Westside Log Scaling Handbook (developed and produced by the Northwest Log Rules Advisory Group) and in effect on the date of confirmation of this contract.

Special scaling specifications shall be noted on the State's Brand Designation form which is hereby incorporated to this contract by reference.

L-110 State Approval of Log Scaling and Weighing Locations

Forest Product measurement and weighing facilities required by this contract must be approved by the State. Forest products sold under the contract which require log scaling shall be scaled, measured, or counted by a State approved third party log scaling organization. Forest products sold under the contract which require weighing shall be weighed at a location that meets Washington State Department of Agriculture approval.

Prior to forest products being hauled, the Contract Administrator must authorize in writing the use of State approved measurement and/or weighing facilities that are at or enroute to final destinations. Forest products from this sale shall be measured or weighed at facilities, which are currently approved for use by the State and are currently authorized for this sale. The State reserves the right to verify load volume and weights with State employees or contractors at the State's own expense. The State reserves the right to revoke the authorization of previously approved measurement locations.

L-120 Long Log Taper Distribution

Forest products over 40 feet long plus trim shall be segment scaled and the lower segment diameters shall be determined using actual taper. In order to utilize taper rules for determining segment diameters for poles and pilings greater than 40 feet in length plus trim, Purchaser must request use of a Pole and Piling Scaling Specification Agreement on file in the region office. Approval for usage of a special Pole and Piling Scaling Specification Agreement may be granted at the sole discretion of the State.

Following State approval for usage of the Pole and Piling Scaling Specification Agreement, the Brand Designation form shall be amended to incorporate the long log taper rules. The volume reported by the scaling organization for forest products over 40 feet plus trim will be expanded by 5 percent and the additional 5 percent volume shall be billed to the purchaser at the contract rate.

L-130 Conversion Factors

Forest products removed from the sale area that are not measured in units specified in the 'Payment for Forest Products' clause of this contract shall be converted to board feet using Department of Natural Resources' standard conversion factors.

Section H: Harvesting Operations

H-001 Operations Outside the Sale Boundaries

No operations shall occur outside the sale boundaries, as described within the contract, unless approved in writing by the State.

H-010 Cutting and Yarding Schedule

Ground Based Yarding will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

H-011 Certification of Fallers and Yarder Operators

All persons engaged in the felling and yarding of timber must receive certification in writing from the Contract Administrator. Certification may be revoked when the Contract Administrator determines that non-compliance of leave tree selection criteria or cut tree selection criteria is occurring, or excessive damage to leave trees or skid trails is occurring.

Excessive damage for leave trees is defined in clause H-012.

Excessive damage for reserve trees is defined in clause H-013.

Excessive skid trail damage is defined in clause H-015 or H-016.

When leave tree damage exceeds the limits set forth in clause H-012,

Purchaser shall be subject to liquidated damages (clause D-040)

When reserve tree damage exceeds the limits set forth in clause H-013,

Purchaser shall be subject to liquidated damages (clause D-041).

H-012 Leave Tree Damage Definition

Leave trees are trees required for retention within the sale boundary. Purchaser shall protect leave trees from being cut, damaged, or removed during operations.

Leave tree damage exists when more than 5 percent of the leave trees are damaged in a unit and when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

- a. A leave tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.
- b. A leave tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A leave tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

If the Contract Administrator determines that a leave tree has been cut or damaged, the Purchaser may be required to pay liquidated damages for Excessive Leave Tree Damage as detailed in clause D-040.

H-013 Reserve Tree Damage Definition

Reserve trees are trees required and designated for retention within the sale boundary. Purchaser shall protect reserve trees from being cut, damaged, or removed during operations.

Reserve tree damage exists when one or more of the following criteria occur as a result of Purchaser's operation, as determined by the Contract Administrator:

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 100 square inches.
- b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and species within the sale unit containing the damaged leave tree, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

Removal of designated reserve trees from the sale area is unauthorized, and may invoke the use of the G-230 'Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-014 Cable Yarding Corridor Requirements

Cable yarding corridors are subject to the following requirements:

- a. Location of cable yarding corridors must be marked by Purchaser and approved by the Contract Administrator prior to use.
- b. Cable corridor shall not exceed 14 feet in width, including rub trees.
- c. Cable yarding corridors shall be a minimum of 75 feet apart as measured from the center of the corridors.
- d. Excessive soil damage is not permitted within corridors. Excessive soil damage is described in clause H-017.
- e. Avoid cable yarding in, across, adjacent, or parallel to stream channels where possible. When it is necessary to yard across stream channels, crossings need to be as close to perpendicular as possible and cribbing shall be in place when full suspension is not possible.
- f. Corridors shall be located in a manner to minimize the damage to or removal of leave and/or reserve trees. Leave tree damage is described in clause H-012. Reserve tree damage is described in clause H-013.
- g. Timber in cable yarding corridors shall be felled and yarded prior to the falling of adjacent timber.

- h. Corridors shall be water barred at the time of completion of yarding, if required by the Contract Administrator.
- i. Once a cable yarding corridor is closed, Purchaser may not reopen that cable yarding corridor unless approved in writing by the Contract Administrator.

Purchaser shall not deviate from the requirements set forth in this clause without prior written approval from the Contract Administrator

H-015 Skid Trail Requirements

A skid trail is defined as an area that is used for more than three passes by any equipment.

Purchaser shall comply with the following during the yarding operation:

- a. Skid trails will not exceed 14 feet in width, including rub trees.
- b. Skid trails shall not cover more than 5 percent of the total acreage on one unit.
- c. Skid trail location will be pre-approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

Purchaser shall not deviate from the requirements set forth in this clause without prior written approval from the Contract Administrator.

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 4 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other

mitigation measures. Suspended operations shall not resume unless approval to do so has been given, in writing, by the Contract Administrator.

H-025 Timing Requirements for Timber Removal

All timber must be removed within 30 days of being felled.

H-030 Timber Falling

Trees shall be felled and logs shall be bucked to obtain the greatest practicable utilization of forest products and other valuable materials conveyed.

H-035 Fall Trees Into Sale Area

Trees shall be felled into the sale area unless otherwise approved by the Contract Administrator.

H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for all units. The plan shall address the felling, bucking and yarding, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

H-050 Rub Trees

Trees designated for cutting along skid trails and cable corridors shall be left standing as rub trees until all timber that is tributary to the skid trail or cable corridor has been removed.

H-052 Branding and Painting

Forest products shall be branded with a brand furnished by the State prior to removal from the landing. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

For pulp loads purchased under a contract designated as export restricted, Purchaser shall brand at least 3 logs with legible brands at one end. Also, 10 logs shall be painted at one end with durable red paint.

H-060 Skid Trail Locations

Locations of skid trails must be marked by Purchaser and approved by the Contract Administrator prior to the felling of timber.

H-080 Snags Not to be Felled

Snags not required to be felled for safety reasons may be left standing. Snags felled for safety reasons shall not be removed and must remain where felled.

H-110 Stump Height

Trees shall be cut as close to the ground as practicable. Stump height shall not exceed 12 inches in height measured on the uphill side, or 2 inches above the root collar, whichever is higher.

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using ground-based, cable or cable-assist systems. Authority to use other equipment or to operate outside the equipment specifications detailed above must be approved in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-126 Tailholds on State Land

If Purchaser tailholds on State land, methods to minimize damage to live trees outside the sale area shall be employed and must be approved in writing by the Contract Administrator.

H-127 Tailholds on Private Land

If Purchaser chooses to tailhold on private property, Purchaser shall obtain permit(s) and assumes responsibility for all costs and damages associated with the permit(s). Purchaser must provide the State with a copy of the executed permit(s) or a letter from the landowner indicating that a satisfactory tailhold permit(s) has been consummated between Purchaser and the landowner.

H-130 Hauling Schedule

The hauling of forest products will not be permitted from November 1 to April 30 unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Active Haul Routes will be posted with CB channels by Purchaser.

B. Ground based yarding equipment shall only operate during dry soil conditions.

C. Track mounted machines with hydraulic boom and grapple will be allowed.

D. Shovels must be large enough to pick up one end of the largest log 35 feet from machine.

E. Ground based yarding equipment will not be permitted on sustained slopes over 40 percent.

F. All corridors within Unit 4 and Unit 5 will be marked by purchaser and approved by Contract Administrator prior to felling.

G. Cable assist operations will not be permitted on slopes over 70 percent.

H. Cable-assist will only be allowed in areas where a written harvest plan has been provided to the CA and the CA has provided written approval for cable-assist logging to occur.

I. No operations will be permitted, including hanging cable lines, in the following areas: North of Unit 5 boundary.

J. All tailhold settings must be pre-approved by the Contract Administrator.

K. Tailhold locations will be marked by the purchaser to avoid Rule Identified Landforms and approved in writing by the Contract Administrator prior to commencement of operations.

L. Trail closures will be posted by the purchaser prior to operations at each end of the harvest unit and at the nearest junction with another trail or road. Posting will include the date posted, closure periods, and anticipated re-opening. Closure signs will be maintained by the purchaser during the sale and will be removed after approval of the final trail cleaning following harvest.

M. No trees over 50 inches in diameter shall be felled without CA approval. No western redceder shall be harvested. Older, large down woody debris will be left on site.

N. Within shovel logging areas, the shovel operator shall break up concentrations of logging debris greater than 10 feet by 10 feet to allow exposure of natural soils to ensure proper reforestation.

O. Lookouts will be required on all designated trails when timber falling takes place within 200 feet of the trail. Warning signs will be required and posted where yarding activity takes place within 200 feet of designated trails. If cable logging occurs over the trail when the trail is open for use, the affected portions of the trails shall be completely closed. No tops, limbs or other slash shall be left within 25 feet of either side of the trail. The contractor will repair trail to pre-harvest conditions within 15 days of completion of harvest activities.

Permission to do otherwise must be granted in writing by the Contract Administrator.

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Sediment delivery from roads will not be allowed. Hauling operations will be shut down as needed until conditions improve or work can be completed that eliminates the delivery of sediment.

B. No Yarding will be permitted through or over areas identified as potentially unstable slopes on the FPA Slope Stability Form and all maps.

C. Any and all snags cut because of safety concerns cannot be removed and must remain where they were felled.

Permission to do otherwise must be granted in writing by the State.

H-150 Required Removal of Forest Products

Purchaser shall remove from the sale area and present for scaling or weighing all forest products conveyed in the G-010 clause that meet the following minimum dimensions:

Species	Net bd ft	Log length (ft)	Log dib
Conifer	10	12	5
Hardwood	20	16	5

The State may treat failure to remove forest products left on the sale area that meet the above specifications as a breach of this contract. At the State's option, forest products that meet the above specifications and are left on the sale area may be scaled for volume or measured and converted to weight by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling, measuring and computing the billing will be borne by the Purchaser.

H-157 Optional Removal of Forest Products Not Designated

If in the course of operations, Purchaser decides to remove forest products that are below the minimum designated removal specifications per the 'Required Removal of Forest Products' (H-150), the payment rates in clause P-027 shall apply.

Forest products designated as optional shall be decked separately from forest products designated as required for removal. Prior to removal from the sale area, optional forest products as described in this clause must be inspected and approved by the Contract Administrator. Optional forest products may not be mixed with forest products that are required for removal by this contract and shall be removed from the sale area in separate truck loads using load tickets specified by the Contract Administrator.

All material removed under this clause is subject to the same log and load accountability rules as defined in the Log Definitions and Accountability section of this contract. Purchaser shall follow the payment procedures as required in the P-052 clause and will submit a separate summary report for all forest products removed from the sale area under the authority of this clause.

H-160 Mismanufacture

Mismanufacture is defined as forest products remaining on the sale area that would have met the specifications in clause H-150 if bucking lengths had been varied to include such products.

The State may treat mismanufacture as a breach of this contract. At the State's option, forest products that are left on the sale area may be scaled for volume by the State or a third party scaling organization and billed to Purchaser at the contract payment rate. All costs associated with scaling and computing the billing will be borne by Purchaser.

H-180 Removal of Specialized Forest Products or Firewood

Prior to the removal of conveyed specialized forest products or firewood from the sale area, Purchaser and the State shall agree in writing to the method of accounting for/and removal of such products.

H-190 Completion of Settings

Operations begun on any setting of the sale area shall be completed before any operation begins on subsequent settings unless authorized in writing by the Contract Administrator.

H-220 Protection of Residual or Adjacent Trees

Unless otherwise specified by this contract, the Contract Administrator shall identify damaged adjacent or leave trees that shall be paid for according to clause G-230.

H-230 Tops and Limbs Outside the Sale Boundary

Tops and limbs outside the sale boundary as a result of Purchaser's operation shall be removed concurrently with the yarding operation unless otherwise directed by the Contract Administrator.

H-250 Additional Falling Requirements

Within Units 1, 2 and 3, all non-merchantable hardwood stems 2 inches DBH or 10 feet tall, shall be felled concurrently with felling operations. Areas of young or immature timber may be excluded from this requirement by the Contract Administrator.

Section C: Construction and Maintenance**C-040 Road Plan**

Road construction and associated work provisions of the Road Plan for this sale, dated 1/23/2023 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on L-1500B, L-1500C, L-1500G, L-1520, L-1552, L-1552D, L-1580, L-1580B, L-1580B1 and L-1580H roads. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on all roads not listed in Clause C-050.

Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the equipment rate schedule on file at the Region office or Engineering Division in Olympia. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-080 Landing Locations Approved Prior to Construction

Landings shall be marked by Purchaser and approved by the Contract Administrator prior to construction.

C-140 Water Bars

Purchaser shall, as directed by the Contract Administrator, construct water bars across haul roads, skid trails and fire trails as necessary to control soil erosion and water pollution.

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

An Emergency Response Plan (ERP) shall be provided to the Contract Administrator containing but not limited to, valid contact numbers and procedures for medical emergencies, fire, hazardous spills, forest practice violations and any unauthorized or unlawful activity on or in the vicinity of the sale area. The Contract Administrator and the State shall be promptly notified whenever an incident occurs requiring an emergency response.

The ERP must be presented for inspection at the prework meeting and kept readily available to all personnel, including subcontractors, on site during active operations.

S-010 Fire Hazardous Conditions

Purchaser acknowledges that operations under this Contract may increase the risk of fire. Purchaser shall conduct all operations under this agreement following the requirements of WAC 332-24-005 and WAC 332-24-405 and further agrees to use the highest degree of care to prevent uncontrolled fires from starting.

In the event of an uncontrolled fire, Purchaser agrees to provide equipment and personnel working at the site to safely and effectively engage in first response fire suppression activity.

Purchaser's failure to effectively engage in fire-safe operations is considered a breach and may result in suspension of operations.

S-020 Extreme Hazard Abatement

Purchaser shall provide a written Extreme Hazard Abatement plan that meets the requirements of WAC 332-24 prior to the beginning of logging operations. The plan must be acceptable to the Contract Administrator. The plan will identify how Purchaser will accomplish abatement. Purchaser shall also provide, and keep current, a written timetable for completion of all specified work in the plan. The Contract Administrator's acceptance and approval of Purchaser's hazard abatement plan shall not

be construed as any statement or warranty that the hazard abatement plan is adequate for Purchaser's purposes or complies with applicable laws.

In Unit 1 at the junction of the L-1500 and L-1500G.

S-030 Landing Debris Clean Up

Landing debris shall be disposed of in a manner approved in writing by the Contract Administrator.

S-035 Logging Debris Clean Up

Slash and debris created from harvest activities shall be treated in a manner approved in writing by the Contract Administrator.

S-040 Noxious Weed Control

Purchaser shall notify the Contract Administrator in advance of moving equipment onto State lands. Purchaser shall thoroughly clean all off road equipment prior to entry onto State land to remove contaminated soils and noxious weed seed. If equipment is moved from one DNR project area to another, the Contract Administrator reserves the right to require the cleaning of equipment. Equipment shall be cleaned at a location approved by the Contract Administrator.

S-050 Cessation of Operations for Low Humidity

When the humidity is 30 percent or lower on the sale area, all operations must cease unless authority to continue is granted by the State in writing.

S-060 Pump Truck or Pump Trailer

Purchaser shall provide a fully functional pump truck or pump trailer equipped to meet the specifications of WAC 332-24-005 and WAC 332-24-405 during the "closed season" or as extended by the State and shall provide trained personnel to operate this equipment on the sale area during all operating periods.

S-070 Water Supply

Purchaser shall provide, during the "closed season", a water supply with a minimum capacity of 500 gallons for rapid filling of pump trucks or trailers at a location designated by the Contract Administrator.

S-100 Stream Cleanout

Slash or debris which enters any stream as a result of operations under this contract and which is identified by the Contract Administrator shall be removed and deposited in a stable position. Removal of slash or debris shall be accomplished in a manner that avoids damage to the natural stream bed and bank vegetation.

S-120 Stream Protection

No timber shall be felled into, across, or yarded through any typed stream.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

Purchaser is responsible for understanding and complying with all applicable local, state, and federal hazardous material/waste laws and regulations for operations conducted under this contract. Such regulations pertain to, but may not be limited to, hazardous material storage, handling and transport, personnel protection, release notification and emergency response, cleanup, and waste disposal.

Purchaser shall be responsible for restoring the site in the event of a spill or other releases of hazardous material/waste during operations conducted under this contract.

b. Hazardous Materials Spill Prevention

All operations shall be conducted in a manner that avoids the release of hazardous materials, including petroleum products, into the environment (water, air or land).

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 10 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

Releases of oil or hazardous materials to the environment must be reported according to the State Department of Ecology (ECY). It is the responsibility of the Purchaser to have all emergency contact information readily available and a means of remote communication for purposes of quick notification. In the event of a spill covered in part a., the Purchaser is responsible for immediately notifying all the following:

- Department of Emergency Management at 1-800-258-5990
- National Response Center at 1-800-424-8802
- Appropriate Department of Ecology (ECY) at 1-800-645-7911
- DNR Contract Administrator

S-131 Refuse Disposal

As required by RCW 70.93, All Purchaser generated refuse shall be removed from state lands for proper disposal prior to termination of this contract. No refuse shall be burned, buried or abandoned on state forest lands. All refuse shall be transported in a manner such that it is in compliance with RCW 70.93 and all loads or loose materials shall be covered/secured such that these waste materials are properly contained during transport.

S-150 Recreation Trail Cleanout

At the completion of logging operations Jones Creek, Bear Garden, Mountain View 4x4, Hagen Creek, Old Ugly, Purchaser shall repair any damage to and clean out all logging debris from recreational trail(s).

Section D: Damages

D-010 Liquidated Damages

The clauses in the DAMAGES section of this contract provide for payments by Purchaser to the State for certain breaches of the terms of this contract. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State caused by Purchaser's breach. These liquidated damages provisions are agreed to by the State and Purchaser with the understanding of the difficulty of proving loss and the inconvenience or infeasibility of obtaining an adequate remedy. These liquidated damages provisions provide greater certainty for the Purchaser by allowing the Purchaser to better assess its responsibilities under the contract.

D-020 Failure to Remove Forest Products

Purchaser's failure to remove all or part of the forest products sold in this agreement prior to the expiration of the contract term results in substantial injury to the State. The value of the forest products sold at the time of breach is not readily ascertainable. Purchaser's failure to perform disrupts the State's management plans, the actual cost of which is difficult to assess. A resale involves additional time and expense and is not an adequate remedy. Therefore, Purchaser agrees to pay the State as liquidated damages a sum calculated using the following formula:

$$LD = .35V-ID-P+C+A$$

Where:

LD = Liquidated Damage value.

V = The unremoved value at the date of breach of contract. The value is determined by subtracting the removal volume to date from the State's cruise volume multiplied by the contract bid rates.

ID = Initial Deposit paid at date of contract that has not been applied to timber payments.

- P = Advance payments received but not yet applied to specific contract requirements.
- C = Charges assessed for contract requirements completed prior to breach of contract but not paid for.
- A = Administrative Fee = \$2,500.00.

The above formula reflects the Purchaser's forfeiture of the initial deposit in accordance with clause P-010 by deducting the initial deposit from the amount owed. In no event shall the liquidated damages be less than zero. Interest on the liquidated damage is owed from the date of breach until final payment, calculated using the following formula: $\text{Interest} = r \times \text{LD} \times N$.

Where:

- r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.
- LD = Liquidated damage value.
- N = Number of days from date of breach to date payment is received.

D-030 Inadequate Log Accountability

Removal of forest products from the sale area without adequate branding and/or valid load tickets attached to the load and scaling forest products in a location other than the facility approved by the State can result in substantial injury to the State. Failure to properly account for loads and scaling and/or weighing information can result in loss to the State. The potential loss from not having proper branding, ticketing, scaling and/or weighing location and accountability is not readily ascertainable. Purchaser's failure to perform results in a loss of log weight and scale accountability, increases the potential for unauthorized removal of forest products, and increases the State's administration costs, the actual costs of which are difficult to assess.

Enforcement actions for unauthorized removal of forest products for each improperly branded load, improperly ticketed load, lost or unaccounted for tickets, or use of a facility not authorized for this sale or improper submission of scaling data are impractical, expensive, time consuming and are not an adequate remedy. Therefore, Purchaser agrees to pay the State, as liquidated damages, a sum of \$100 each time a load of logs does not have branding as required in the contract, \$250 each time a load of logs does not have a load ticket as required by the contract, \$250 each time a load ticket has not been filled out as required by the plan of operations, \$250 each time a load is weighed or scaled at a location not approved as required under this contract, \$250 each time a log ticket summary report is not submitted properly, and if a third party Log and Load Reporting Service is required, \$250 each time scaling or weight data is not properly submitted to the Log and Load Reporting Service per clause L-071, and \$250 each unused ticket that is not returned to the State, for any reason.

D-040 Leave Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged trees in Units 4 and 5.

D-041 Reserve Tree Excessive Damage

When Purchaser's operations exceed the damage limits set forth in clause H-013, Reserve Tree Damage Definition, and when the Contract Administrator determines that a suitable replacement for a damaged reserve tree is not possible, the damaged trees result in substantial injury to the State. The value of the damaged reserve trees at the time of the breach is not readily ascertainable. Therefore, the Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged reserve trees that are not replaced in Units 1, 2 and 3.

SIGNATURES

This agreement may be executed in any number of counterparts (including by electronic mail in portable document format (.pdf), or by facsimile) each of which shall be deemed an original but all of which, when taken together, shall constitute one and the same Agreement binding on all parties.

IN WITNESS WHEREOF, the Parties hereto have entered into this contract.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Print Name

Scott Sargent
Pacific Cascade Region Manager

Date: _____
Address: _____

Date: _____

CORPORATE ACKNOWLEDGEMENT
(Required for both LLC and Inc. Entities)

STATE OF _____)

COUNTY OF _____)

On this _____ day of _____, 20____, before me personally appeared _____

_____ to me known to be the _____ of the corporation that executed the within and foregoing instrument and acknowledged said instrument to be the free and voluntary act and deed of the corporation, for the uses and purposes therein mentioned, and on oath stated that (he/she was) (they were) authorized to execute said instrument.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

Notary Public in and for the State of

My appointment expires _____

Schedule A
Punch Bowl VRH Thin

Schedule A

Thinning Criteria

General Requirements for Upland Thinning Units 4 and 5:

1. Remove all hardwoods except where no conifers exist; hardwood species shall be used to fulfill the spacing requirements when no conifers exist.
2. No tree of any species can be removed that is equal to or greater than 20" diameter at breast height (DBH) unless otherwise authorized by the contract administrator.
3. Do not cut any western red cedar. Western red cedar can be counted toward the final basal area requirements if they are free of damage and defect.
4. Openings created by felling trees shall not exceed 30 feet between leave trees. If openings in the stand exceed this distance, sufficient trees shall be left on the perimeter of the opening to maintain the appropriate basal area per acre.

Unit #4

An average residual basal area of 160 square feet per acre shall be maintained of the best trees in the stand. Trees greater than 24" DBH may not be removed unless the trees are severely damaged or deformed as defined below or need to be removed for ground based yarding corridors.

Unit #5

An average residual basal area of 150 square feet per acre shall be maintained of the best trees in the stand. Trees greater than 21" DBH may not be removed unless the trees are severely damaged or deformed as defined below or need to be removed for ground based yarding corridors.

Leave Tree Definition:

Leave trees in the unit will be selected by comparing their characteristics with other trees in the stand. Leave trees will be the best trees from the largest diameter classes available and evenly distributed over the landscape.

Preferred leave tree species in order of preference are:

1. western red cedar
2. Pacific silver fir
3. Douglas-fir
4. western hemlock
5. red alder

Best tree definition is having the following characteristics:

1. Fullest and most vigorous crowns
2. Free of major defect and damage
3. Best form: tallest tree, straightest boles, and smallest limb diameters

Definitions:

Deformed Tree: any tree that has forked tops, broken tops, large spike knots, or severe sweep in the bole.

Damaged Tree: any tree with severe cat faces (bark removed on more than half of the circumference of the tree) or recent damage to the bark or root system.

Ground-based Yarding Corridors:

Corridors are limited to 14 feet wide (including rub trees) and should be located in a manner that reduces the damage to or removal of leave trees.

Compliance

Variable radius plots will be measured by the Contract Administrator to determine basal area per acre. The number of trees in a plot will be multiplied by the basal area factor (BAF) of the instrument to determine the basal area of the plot. The average tree count for all plots in a unit will determine the basal area for that unit. Only trees greater than or equal to 7" DBH will be measured.

Certification of Fallers and Yarder Operators (additional requirements beyond those outlined in the H-011):

The contract administrator and faller/harvest operator will jointly review the take tree selection criteria as outlined in Schedule B of the sale contract. In conjunction with the Contract administrator, the faller/ harvest operator will mark a designated area as a test plot within the sale area boundary. Satisfactory thinning of the test plot completes the certification process.

Certifications will be issued to the individuals when they demonstrate to the Contract Administrator their ability to perform within the requirements set forth in the contract.

PRE-CRUISE NARRATIVE

Sale Name: Punch Bowl VRH THIN		Region: Pacific Cascade	
Agreement #: 30-104119		District: Yacolt	
Contact Forester: Kayla Swerin Phone / Location: 360 280 9415		County(s): Clark	
Alternate Contact: Aaron Nelson Phone / Location: 360 601 0296		Other information: Click here to enter text.	

Type of Sale: MBF Scale	
Harvest System: Ground based	35%
Harvest System: Cable thinning	62%
Harvest System: Uphill cable	3%

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1 VRH	12/02/04E	01 06 10	48	14	6	0	0	28	GPS (Trimble)
2 VRH	12/02/04E	01 06	15	6	<1	0	0	9	GPS (Trimble)
3 VRH	12/02/04E	01 06	17	3	<1	<1	0	13	GPS (Trimble)
4 THIN	01/02/04E	03	77	8	0	0	0	69	GPS (Trimble)
5 THIN	36/03/04E	03	42	4	0	0	<1 (Talus)	38	GPS (Trimble)
6 ROW	36/03/04E	03	1	<1	0	0	0	1	GPS (Trimble)
7 ROW	01/02/04E	03	1	0	0	0	0	1	GPS (Trimble)
TOTAL ACRES			201	35	7	<1	0	159	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1 VRH	Unit 1 is a Variable Retention Harvest bounded by white "Timber Sale Boundary" tags, pink flagging, reprod, and the L-1500 road. Clumped leave trees are bound with yellow "Leave Tree Area" tags and pink flagging. Individual leave trees are marked with a ring of blue paint.		327 clumped and scattered leave trees
2 VRH	Unit 2 is a Variable Retention Harvest bounded by white "Timber Sale Boundary" tags, pink flagging, and reprod. Clumped leave trees are bounded with yellow "Leave Tree Area" tags and pink flagging. Individual leave trees are marked with a ring of blue paint.		77 clumped and scattered leave trees
3 VRH	Unit 3 is a Variable Retention Harvest bounded by white "Timber Sale Boundary" tags, pink flagging, reprod, and the L-1580 Road. Clumped leave trees are bounded with yellow "Leave Tree Area" tags and pink flagging. Individual leave trees are marked with a ring of blue paint.		109 clumped and scattered leave trees
4 THIN	Unit 4 is a Commercial Thinning Harvest bounded by white "Timber Sale Boundary" tags, pink flagging, reprod, and the L-1552 Road.		N/A
5 THIN	Unit 5 is a Commercial Thinning Harvest bounded by blue "Timber Sale Boundary" tags, pink flagging, reprod, the L-1520 Road, and private property along the western edge of the unit. Property line between state and private land is marked with pink flagging.		N/A
6 ROW	Unit 6 is a Right-of-Way unit bounded by orange "Right-of-Way Boundary" tags and orange flagging.		100% harvest within the ROW area

7 ROW	Unit 7 is a Right-of-Way unit bounded by orange "Right-of-Way Boundary" tags and orange flagging.		100% harvest within the ROW area
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OTHER PRE-CRUISE INFORMATION:

Unit #	Primary, secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1 VRH	DF, RA 695 MBF	L-1500 road provides access. No key is necessary.	Logging Plan/Cruise Map and Driving Map
2 VRH	DF, RA 165 MBF	L-1580 road provides access. A masterlock key is needed to access the road.	Logging Plan/Cruise Map and Driving Map
3 VRH	DF, RA 298 MBF	L-1580 road provides access. A masterlock key is needed to access the road.	Logging Plan/Cruise Map and Driving Map
4 THIN	DF, WH, NF, RA 966 MBF	L-1552 road via the Hagen Creek Trail provides access. A masterlock key is needed to access the road.	Logging Plan/Cruise Map and Driving Map
5 THIN	DF, WH, RA 543 MBF	L-1520 and L-1580 roads provide access. PCP-1 key is needed to access the L-1520 road and a masterlock key is needed to access the L-1580 road.	Logging Plan/Cruise Map and Driving Map
6 ROW	DF, WH, RA 38 MBF	Unit 6 is a Right-of-Way harvest through RMZ to facilitate construction of the L-1580G Road.	Logging Plan/Cruise Map and Driving Map
7 ROW	DF, WH, NF, RA 38 MBF	Unit 7 is a Right-of-Way harvest through Unit 4 to facilitate construction of the L-1552D Road.	Logging Plan/Cruise Map and Driving Map

TOTAL MBF	2,743		
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REMARKS:

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Prepared By: Date:	Title:	CC:
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Timber Sale Cruise Report Punch Bowl VRH THIN

Sale Name: PUNCH BOWL VRH THIN

Sale Type: MBF SCALE

Region: PACIFIC CASC,PACIFIC CASC

District: YACOLT,YACOLT

Lead Cruiser: Dylan Buchanan

Other Cruisers:B. Warnstadt, A. Douglas

Cruise Narrative:

Location: The 158 acre Punch Bowl sale is located 8 miles northeast of Washougal. It can be accessed by taking the L-1600 to the L-1500s form Jones Creek ORV Trailhead. This sale has 3 VRH stands and 2 ROWs totaling 52 acres along with 106 acres in the 2 thinning units.

Cruise Design: Units 1 and 5 were cruised using a 46.94 BAF with a cruise to count ratio of 1:1. Unit 2 plots were 100% cruised with a 40 BAF. Unit 3 was cruised with a 40 BAF with a cruise to count ratio of 1:1. Unit 4 was cruised with a 54.44 for DF and a 40 BAF on all other species. Cruise to count ratio in Unit 4 was 2:3. Units 6 and 7 ROWs were 100% cruised with a 46.94 BAF. Tree selections were sighted at 4.5 feet in all stands. Conifers were cruised to 40' preferred log lengths and hardwoods cruised to 30" log lengths.

Timber Quality: This sale is mostly DF with a secondary component of WH. There is a small amount of RA and a trace of RC, MA and NF. DF is a mix of domestic saw logs with both High Quality B and SM. Observed defects include old storm damage, light insect damage, and spike knots.

Units 1, 2 and 3 are mostly DF with an average DBH of 17.2" to 19.1" with a mix of domestic saw logs and high quality B.

UNIT 4 THIN has DF with an average DBH of 19.5" UNIT 5 THIN has DF with 16.6" average DBH. Both units contain a mix of domestic and high quality B and SM logs. Target take trees are small diameter and damaged or deformed oversized trees. The majority of oversized take trees have broken tops with good lower logs. WH in these units have ok form factors and some old bear damage.

Logging and Stand Conditions: This sale is estimated to be 35% ground based logging and 65% cable logged/thinned.

General Remarks:

Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	18.5	7.6		2,427	4	1,503	721	185	14
WH	17.1			302		205	57	37	3
RA	13.4			14		4		10	
ALL	17.9	7.6		2,743	4	1,711	778	232	18

Timber Sale Notice Weight (tons)

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	18,597	20	10,435	6,268	1,760	114
WH	2,651		1,584	625	412	29
RA	137		29		108	
ALL	21,384	20	12,048	6,893	2,280	143

Timber Sale Overall Cruise Statistics

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
228.8	2.8	141.2	2.2	32,088	3.6

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
PUNCH BOWL U1	B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	28.0	34.4	28	16	1
PUNCH BOWL U2	B1: VR, 1 BAF (40) Measure All, Sighting Ht = 4.5 ft	9.0	8.9	8	8	1
PUNCH BOWL U3	B1C: VR, 1 BAF (40) Measure/Count Plots, Sighting Ht = 4.5 ft	13.0	13.0	13	9	0
PUNCH BOWL U4	B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	69.0	69.1	68	30	0
PUNCH BOWL U5	B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	38.0	37.6	38	20	0
PUNCH BOWL U6 ROW	B1: VR, 1 BAF (46.94) Measure All, Sighting Ht = 4.5 ft	1.0	1.0	2	2	0
PUNCH BOWL U7 ROW	B1: VR, 1 BAF (46.94) Measure All, Sighting Ht = 4.5 ft	1.0	1.1	2	2	0
All		159.0	164.9	159	87	2

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	15.6	40	8,112	7,778	4.1	8,557.9	1,236.8
DF	LIVE	2 SAW	HQ-A	13.9	40	437	437	0.0	494.4	69.5
DF	LIVE	2 SAW	HQ-B	13.8	40	1,201	1,188	1.1	1,316.7	188.9

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Pole	12.7	40	47	47	0.0	65.7	7.5
DF	LIVE	3 SAW	Domestic	8.9	38	3,620	3,510	3.1	4,967.9	558.1
DF	LIVE	3 SAW	HQ-B	10.4	40	994	976	1.7	1,241.8	155.3
DF	LIVE	3 SAW	Pole	9.1	40	50	50	0.0	58.7	8.0
DF	LIVE	4 SAW	Domestic	5.6	28	1,204	1,154	4.1	1,743.4	183.5
DF	LIVE	4 SAW	Pole	6.4	28	8	8	0.0	16.4	1.3
DF	LIVE	CULL	Cull	6.6	6	89	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	20.8	40	23	23	0.0	20.1	3.6
DF	LIVE	UTILITY	Pulp	7.1	14	91	91	0.3	113.9	14.4
RA	LIVE	2 SAW	Domestic	13.3	30	24	23	6.6	29.0	3.6
RA	LIVE	4 SAW	Domestic	5.3	35	70	66	7.0	107.5	10.4
RA	LIVE	CULL	Cull	5.0	4	1	0	100.0	0.0	0.0
WH	LIVE	2 SAW	Domestic	16.0	39	1,405	1,288	8.3	1,584.1	204.8
WH	LIVE	3 SAW	Domestic	9.1	37	373	359	3.9	625.0	57.0
WH	LIVE	4 SAW	Domestic	5.2	28	236	231	2.1	412.4	36.8
WH	LIVE	CULL	Cull	8.6	6	30	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	5.7	13	19	19	0.0	29.4	3.1

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 7	LIVE	Domestic	5.9	32	1,904	3.1	2,939.0	302.8
DF	5 - 7	LIVE	Cull	6.0	5	0	100.0	0.0	0.0
DF	5 - 7	LIVE	Pulp	6.1	13	44	0.5	57.8	6.9
DF	5 - 7	LIVE	Pole	6.4	28	8	0.0	16.4	1.3
DF	8 - 11	LIVE	Pole	9.1	40	50	0.0	58.7	8.0
DF	8 - 11	LIVE	Cull	9.3	7	0	100.0	0.0	0.0
DF	8 - 11	LIVE	Domestic	9.7	37	2,691	3.3	3,684.3	427.8
DF	8 - 11	LIVE	Pulp	9.7	14	27	0.0	38.3	4.3
DF	8 - 11	LIVE	HQ-B	10.5	40	976	1.7	1,241.8	155.3
DF	12 - 19	LIVE	Pole	12.7	40	47	0.0	65.7	7.5
DF	12 - 19	LIVE	HQ-B	13.9	40	1,117	1.1	1,255.5	177.6
DF	12 - 19	LIVE	Pulp	13.9	15	20	0.0	17.8	3.2
DF	12 - 19	LIVE	HQ-A	14.0	40	437	0.0	494.4	69.5
DF	12 - 19	LIVE	Domestic	14.7	40	5,664	3.8	6,602.0	900.6
DF	12 - 19	LIVE	Cull	14.9	5	0	100.0	0.0	0.0
DF	20+	LIVE	HQ-A	20.8	40	23	0.0	20.1	3.6
DF	20+	LIVE	HQ-B	21.7	40	71	0.0	61.2	11.3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	20+	LIVE	Domestic	23.4	39	2,183	5.0	2,043.9	347.1
RA	5 - 7	LIVE	Cull	5.0	4	0	100.0	0.0	0.0
RA	5 - 7	LIVE	Domestic	5.2	33	66	7.0	107.5	10.4
RA	12 - 19	LIVE	Domestic	13.3	30	23	6.6	29.0	3.6
WH	5 - 7	LIVE	Pulp	5.4	13	17	0.0	25.2	2.8
WH	5 - 7	LIVE	Domestic	5.5	30	277	1.8	512.6	44.0
WH	5 - 7	LIVE	Cull	6.6	5	0	100.0	0.0	0.0
WH	8 - 11	LIVE	Pulp	8.5	15	2	0.0	4.2	0.3
WH	8 - 11	LIVE	Cull	9.2	6	0	100.0	0.0	0.0
WH	8 - 11	LIVE	Domestic	9.7	37	313	4.4	524.8	49.7
WH	12 - 19	LIVE	Cull	12.0	6	0	100.0	0.0	0.0
WH	12 - 19	LIVE	Domestic	14.6	39	801	7.0	1,060.7	127.3
WH	20+	LIVE	Domestic	22.7	40	488	10.5	523.3	77.5
WH	20+	LIVE	Cull	28.3	15	0	100.0	0.0	0.0

Cruise Unit Report PUNCH BOWL U1

Unit Sale Notice Volume (MBF): PUNCH BOWL U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	19.1	7.0		688	482	148	52	6
WH	24.0			7	6	1		
ALL	19.2	7.0		695	488	149	52	6

Unit Cruise Design: PUNCH BOWL U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	28.0	34.4	28	16	1

Unit Cruise Summary: PUNCH BOWL U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	56	100	3.6	1
WH	1	1	0.0	0
ALL	57	101	3.6	1

Unit Cruise Statistics: PUNCH BOWL U1

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	167.6	52.5	9.9	146.6	35.4	4.7	24,579	63.3	11.0
WH	1.7	529.2	100.0	139.1	0.0	0.0	233	529.2	100.0
ALL	169.3	51.9	9.8	146.5	35.1	4.6	24,812	62.6	10.9

Unit Summary: PUNCH BOWL U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	56	ALL	19.1	68	89	25,293	24,579	2.8	84.3	167.6	38.4	688.2
WH	LIVE	CUT	1	ALL	24.0	79	99	249	233	6.4	0.5	1.7	0.3	6.5
ALL	LIVE	CUT	57	ALL	19.1	68	89	25,543	24,812	2.9	84.8	169.3	38.7	694.7
ALL	ALL	ALL	57	ALL	19.1	68	89	25,543	24,812	2.9	84.8	169.3	38.7	694.7

Cruise Unit Report PUNCH BOWL U2

Unit Sale Notice Volume (MBF): PUNCH BOWL U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	17.3	7.0		153	107	32	14
WH	26.0			9	8		0
RA	9.0			3			3
ALL	16.5	7.0		165	116	32	18

Unit Cruise Design: PUNCH BOWL U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (40) Measure All, Sighting Ht = 4.5 ft	9.0	8.9	8	8	1

Unit Cruise Summary: PUNCH BOWL U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	21	21	2.6	1
WH	1	1	0.1	0
RA	1	1	0.1	0
ALL	23	23	2.9	1

Unit Cruise Statistics: PUNCH BOWL U2

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	105.0	81.3	28.7	162.1	38.3	8.4	17,017	89.9	29.9
WH	5.0	282.8	100.0	195.6	0.0	0.0	978	282.8	100.0
RA	5.0	282.8	100.0	74.7	0.0	0.0	373	282.8	100.0
ALL	115.0	65.6	23.2	159.7	39.1	8.1	18,368	76.3	24.6

Unit Summary: PUNCH BOWL U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	21	ALL	17.3	66	87	17,581	17,017	3.2	64.3	105.0	25.2	153.2
RA	LIVE	CUT	1	ALL	9.0	32	48	373	373	0.0	11.3	5.0	1.7	3.4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	LIVE	CUT	1	ALL	26.0	101	127	1,032	978	5.3	1.4	5.0	1.0	8.8
ALL	LIVE	CUT	23	ALL	16.6	61	82	18,987	18,368	3.3	77.0	115.0	27.9	165.3
ALL	ALL	ALL	23	ALL	16.6	61	82	18,987	18,368	3.3	77.0	115.0	27.9	165.3

Cruise Unit Report PUNCH BOWL U3

Unit Sale Notice Volume (MBF): PUNCH BOWL U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	17.2	8.0		291	132	123	35
WH	31.0			7	7		
ALL	17.4	8.0		298	139	123	35

Unit Cruise Design: PUNCH BOWL U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (40) Measure/Count Plots, Sighting Ht = 4.5 ft	13.0	12.9	13	9	0

Unit Cruise Summary: PUNCH BOWL U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	30	55	4.2	1
WH	1	1	0.1	0
ALL	31	56	4.3	1

Unit Cruise Statistics: PUNCH BOWL U3

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	169.2	44.4	12.3	132.2	31.5	5.8	22,367	54.4	13.6
WH	3.1	360.6	100.0	171.5	0.0	0.0	528	360.6	100.0
ALL	172.3	40.6	11.3	132.9	31.3	5.6	22,895	51.3	12.6

Unit Summary: PUNCH BOWL U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	30	ALL	16.8	72	91	22,969	22,367	2.6	109.9	169.2	41.3	290.8
WH	LIVE	CUT	1	ALL	31.0	88	110	570	528	7.5	0.6	3.1	0.6	6.9
ALL	LIVE	CUT	31	ALL	16.9	72	91	23,539	22,895	2.7	110.5	172.3	41.8	297.6
ALL	ALL	ALL	31	ALL	16.9	72	91	23,539	22,895	2.7	110.5	172.3	41.8	297.6

Cruise Unit Report PUNCH BOWL U4

Unit Sale Notice Volume (MBF): PUNCH BOWL U4

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	19.4	8.0		757	507	204	42	4
WH	15.9			203	146	31	24	2
RA	11.6			7			7	
ALL	18.0	8.0		966	653	236	73	6

Unit Cruise Design: PUNCH BOWL U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B2C: VR, 2 BAF (54.44, 40 for some species) Measure/Count Plots, Sighting Ht = 4.5 ft	69.0	69.1	68	30	0

Unit Cruise Summary: PUNCH BOWL U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	75	286	4.2	1
WH	29	53	0.8	0
RA	2	3	0.0	0
ALL	106	342	5.0	1

Unit Cruise Statistics: PUNCH BOWL U4

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	228.5	42.7	5.2	141.2	33.9	3.9	32,277	54.5	6.5
WH	32.7	151.2	18.3	127.8	56.4	10.5	4,173	161.4	21.1
RA	1.8	824.6	100.0	54.2	10.6	7.5	96	824.7	100.3
ALL	263.0	34.2	4.1	139.0	40.4	3.9	36,546	52.9	5.7

Unit Summary: PUNCH BOWL U4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	75	ALL	19.5	69	91	11,542	10,968	5.0	37.4	77.7	17.6	756.8
DF	LIVE	LEA	86	ALL	31.6	106	136	22,426	21,310	5.0	27.7	150.9	26.8	1,470.4

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
RA	LIVE	CUT	2	ALL	11.6	39	50	109	96	12.0	2.4	1.8	0.5	6.6
WH	LIVE	CUT	29	ALL	15.9	46	58	3,208	2,944	8.2	16.7	23.0	5.8	203.1
WH	LIVE	LEA	9	ALL	29.6	88	111	1,340	1,230	8.2	2.0	9.6	1.8	84.8
ALL	LIVE	CUT	106	ALL	18.2	61	80	14,858	14,007	5.7	56.5	102.5	23.9	966.5
ALL	LIVE	LEA	95	ALL	31.5	105	134	23,766	22,540	5.2	29.7	160.5	28.6	1,555.2
ALL	ALL	ALL	201	ALL	23.6	76	99	38,624	36,546	5.4	86.2	263.0	52.5	2,521.7

Cruise Unit Report PUNCH BOWL U5

Unit Sale Notice Volume (MBF): PUNCH BOWL U5

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	16.9			493	241	209	39	4
WH	13.8			46	14	20	11	1
RA	20.0			4	4		0	
ALL	16.3			543	258	228	50	6

Unit Cruise Design: PUNCH BOWL U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	38.0	37.6	38	20	0

Unit Cruise Summary: PUNCH BOWL U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	48	192	5.1	1
WH	10	14	0.4	0
RA	1	1	0.0	0
ALL	59	207	5.4	1

Unit Cruise Statistics: PUNCH BOWL U5

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	237.2	23.4	3.8	141.9	24.8	3.6	33,658	34.1	5.2
WH	17.3	239.6	38.9	97.2	42.0	13.3	1,681	243.3	41.1
RA	1.2	616.4	100.0	87.1	0.0	0.0	108	616.4	100.0
ALL	255.7	19.4	3.1	138.6	28.7	3.7	35,447	34.7	4.9

Unit Summary: PUNCH BOWL U5

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	48	ALL	17.1	75	100	13,569	12,973	4.4	57.3	91.4	22.1	493.0
DF	LIVE	LEA	59	ALL	25.4	101	129	21,637	20,686	4.4	41.4	145.8	28.9	786.1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
RA	LIVE	CUT	1	ALL	20.0	54	62	116	108	7.3	0.6	1.2	0.3	4.1
WH	LIVE	CUT	10	ALL	13.8	47	61	1,325	1,201	9.4	11.9	12.4	3.3	45.6
WH	LIVE	LEA	4	ALL	27.4	90	113	530	480	9.4	1.2	4.9	0.9	18.3
ALL	LIVE	LEA	63	ALL	25.5	101	129	22,167	21,166	4.5	42.6	150.7	29.9	804.3
ALL	LIVE	CUT	59	ALL	16.6	70	93	15,010	14,281	4.9	69.8	105.0	25.7	542.7
ALL	ALL	ALL	122	ALL	20.4	82	106	37,177	35,447	4.7	112.4	255.7	55.6	1,347.0

Cruise Unit Report PUNCH BOWL U6 ROW

Unit Sale Notice Volume (MBF): PUNCH BOWL U6 ROW

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	26.1			35	4	27	4	0
WH	20.0			3		2	1	
ALL	25.0			38	4	30	4	0

Unit Cruise Design: PUNCH BOWL U6 ROW

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (46.94) Measure All, Sighting Ht = 4.5 ft	1.0	1.0	2	2	0

Unit Cruise Summary: PUNCH BOWL U6 ROW

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	7	7	3.5	0
WH	1	1	0.5	0
ALL	8	8	4.0	0

Unit Cruise Statistics: PUNCH BOWL U6 ROW

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
DF	164.3	20.2	14.3	210.7	29.5	11.1	34,616	35.7	18.1
WH	23.5	141.4	100.0	138.5	0.0	0.0	3,250	141.4	100.0
ALL	187.8	35.4	25.0	201.7	31.2	11.0	37,865	47.2	27.3

Unit Summary: PUNCH BOWL U6 ROW

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	7	ALL	26.1	97	135	35,614	34,616	2.8	44.2	164.3	32.2	34.6
WH	LIVE	CUT	1	ALL	20.0	86	108	3,411	3,250	4.7	10.8	23.5	5.2	3.2
ALL	LIVE	CUT	8	ALL	25.0	95	129	39,024	37,865	3.0	55.0	187.8	37.4	37.9
ALL	ALL	ALL	8	ALL	25.0	95	129	39,024	37,865	3.0	55.0	187.8	37.4	37.9

Cruise Unit Report PUNCH BOWL U7 ROW

Unit Sale Notice Volume (MBF): PUNCH BOWL U7 ROW

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
WH	22.8			28	22	4	1
DF	16.8			10	6	2	2
ALL	20.3			38	28	6	3

Unit Cruise Design: PUNCH BOWL U7 ROW

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (46.94) Measure All, Sighting Ht = 4.5 ft	1.0	1.1	2	2	0

Unit Cruise Summary: PUNCH BOWL U7 ROW

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
WH	9	9	4.5	0
DF	4	4	2.0	0
ALL	13	13	6.5	0

Unit Cruise Statistics: PUNCH BOWL U7 ROW

Sp	BA (sq ft/acre)	BA CV (%)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR CV (%)	V-BAR SE (%)	Net Vol (bf/acre)	Vol CV (%)	Vol SE (%)
WH	211.2	141.4	100.0	130.2	53.1	17.7	27,502	151.1	101.6
DF	93.9	70.7	50.0	110.2	41.0	20.5	10,347	81.7	54.0
ALL	305.1	76.1	53.8	124.1	49.6	13.8	37,849	90.9	55.6

Unit Summary: PUNCH BOWL U7 ROW

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
DF	LIVE	CUT	4	ALL	16.8	47	65	11,623	10,347	11.0	61.0	93.9	22.9	10.3
WH	LIVE	CUT	9	ALL	22.8	61	74	29,305	27,502	6.2	74.5	211.2	44.2	27.5
ALL	LIVE	CUT	13	ALL	20.3	55	70	40,928	37,849	7.5	135.5	305.1	67.1	37.8
ALL	ALL	ALL	13	ALL	20.3	55	70	40,928	37,849	7.5	135.5	305.1	67.1	37.8



Forest Practices Application/Notification Notice of Decision

FPA/N No: 2942018

Effective Date: 11/29/2023

Expiration Date: 11/29/2026

Shut Down Zone: 602 ; .

EARR Tax Credit: Eligible Non-eligible

Reference: Punch Bowl VRH Thin

30-104119

Decision

- Notification Accepted Operations shall not begin before the effective date.
- Approved This Forest Practices Application is subject to the conditions listed below.
- Disapproved This Forest Practices Application is disapproved for the reasons listed below.
- Withdrawn Applicant has withdrawn the Forest Practices Application/Notification (FPA/N).
- Closed All forest practices obligations are met.

FPA/N Classification

Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

4 years 5 years

Conditions on Approval/Reasons for Disapproval

No additional conditions.

Issued By: Michael Rutledge

Region: Pacific Cascade Region

Title: Forest Practices Forester

Date: 11/29/2023

Copies to: Landowner, Timber Owner, and Operator

Issued in person: LO TO OP By: *Jacquie Spahr* Date: 11/29/23

Appeal Information

You have thirty (30) days to **file** (i.e., **actually deliver**) an appeal in writing of this Decision and any related State Environmental Policy Act (SEPA) determinations to the Pollution Control Hearings Board, the Attorney General's Office, and the Department of Natural Resources' region office. See RCW 76.09.205. The appeal period starts when the applicant receives this decision, which usually happens electronically on the date indicated below.

You must file your appeal at all three addresses below:

Pollution Control Hearings Board	Office of the Attorney General Natural Resources Division	Department Of Natural Resources Pacific Cascade Region
<u>Physical Address</u> 1111 Israel Road, SW Suite 301 Tumwater, WA 98501	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504	<u>Physical Address</u> 601 Bond Rd Castle Rock WA 98611
<u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Mailing Address</u> Post Office Box 280 Castle Rock, WA 98611-0280

Information regarding the Pollution Control Hearings Board can be found at: <https://eluhu.wa.gov>

Other Applicable Laws

Operating as described in this application/notification does not ensure compliance with the Endangered Species Act, or other federal, state, or local laws.

Transfer of Forest Practices Application/Notification (WAC 222-20-010)

Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at region offices and on the Forest Practices website <https://www.dnr.wa.gov/programs-and-services/forest-practices/review-applications-fpars/forest-practices-forms-and>. Notify DNR of new Operators within 48 hours.

Continuing Forestland Obligations (RCW 76.09.060, RCW 76.09.070, RCW 76.09.390, and WAC 222-20-055)

Obligations include reforestation, road maintenance and abandonment plans, conversions of forestland to non- forestry use and/or harvest strategies on perennial non-fish habitat (Type Np) waters in Eastern Washington.

Before the sale or transfer of land or perpetual timber rights subject to continuing forest and obligations, the seller must notify the buyer of such an obligation on a form titled "Notice of Continuing Forest Land Obligation". The seller and buyer must both sign the "Notice of Continuing Forest Land Obligation" form and send it to the DNR Region Office for retention. This form is available at DNR region offices.

If the seller fails to notify the buyer about the continuing forestland obligation, the seller must pay the buyer's costs related to continuing forestland obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forestland obligation against the seller.

Failure by the seller to send the required notice to DNR at the time of sale will be prima facie evidence in an action by the buyer against the seller for costs related to the continuing forestland obligation prior to sale.

DNR Declaration of Mailing

I Jacqui Spahr caused the Notice of Decision for FPA/N No. . to be placed in the United States mail at Castle Rock, WA, postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

(Date)

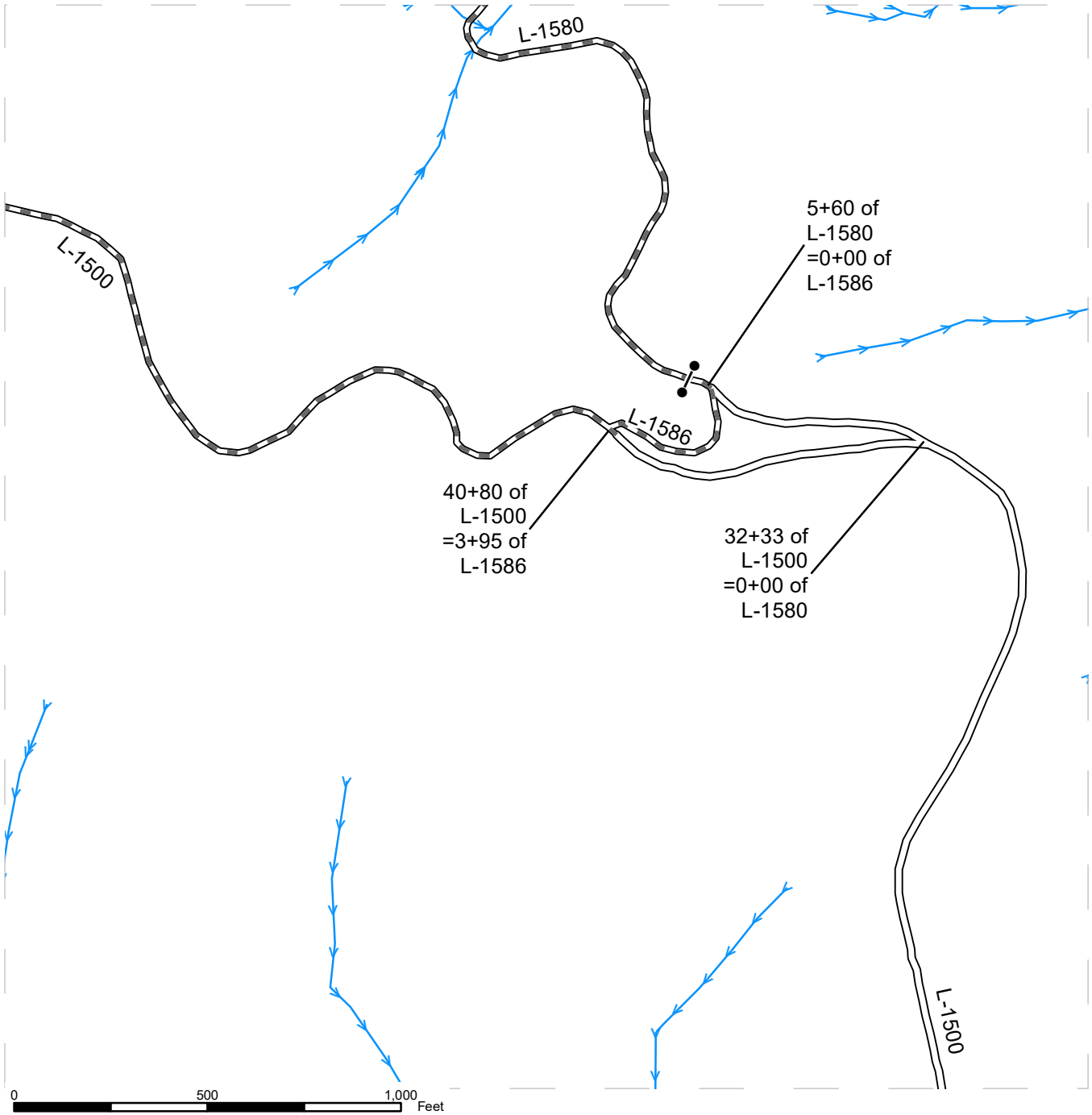
Castle Rock, WA
(City & State where signed)

Jacqui Spahr
(Signature)

ROAD PLAN MAP

SALE NAME: PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520

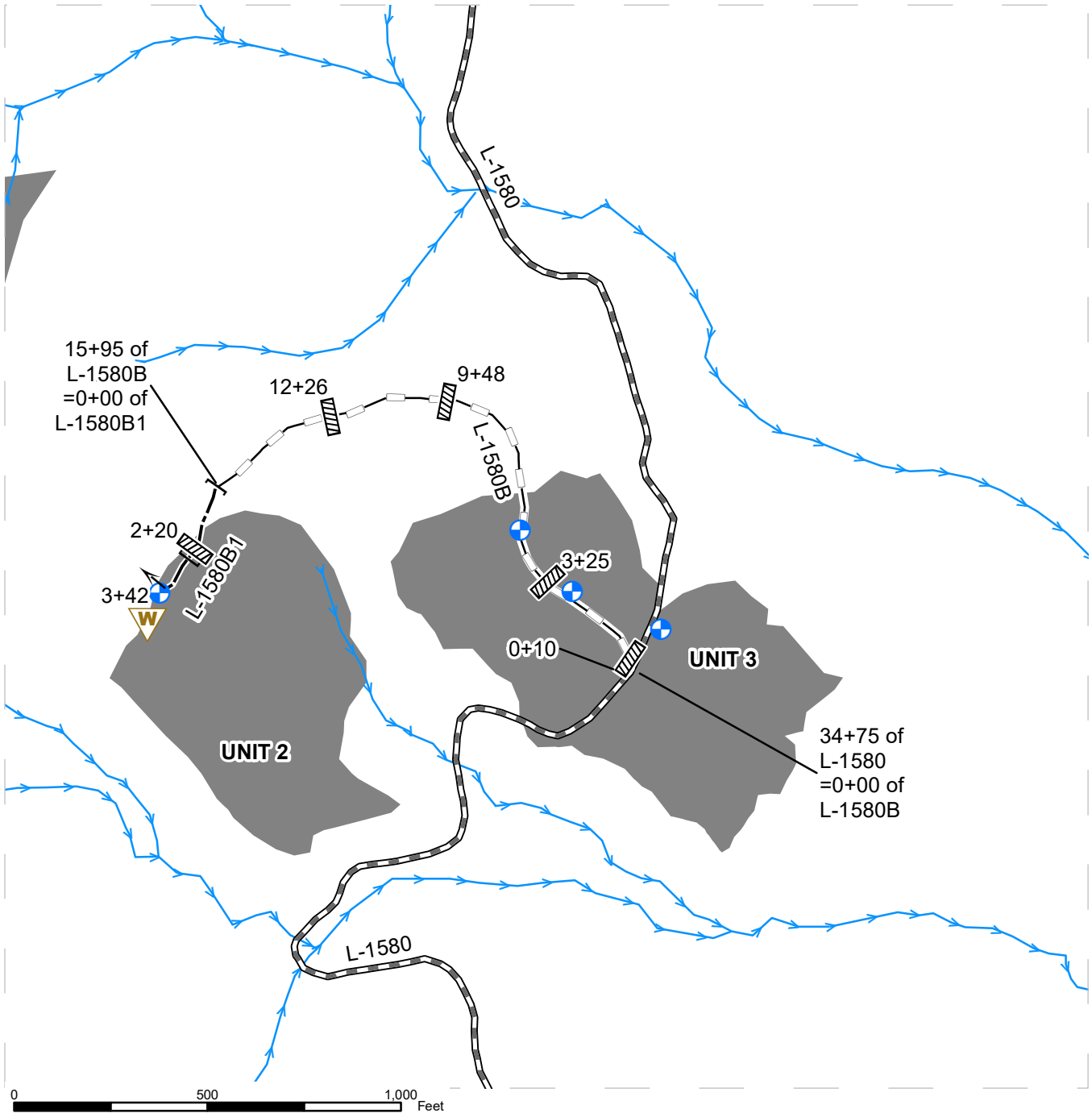


<p> Existing Roads </p> <p> Required Pre-Haul Maintenance </p>	<p> Gate (PCP 1-1) </p> <p> ➤ Streams </p>
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ROAD PLAN MAP

SALE NAME: PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
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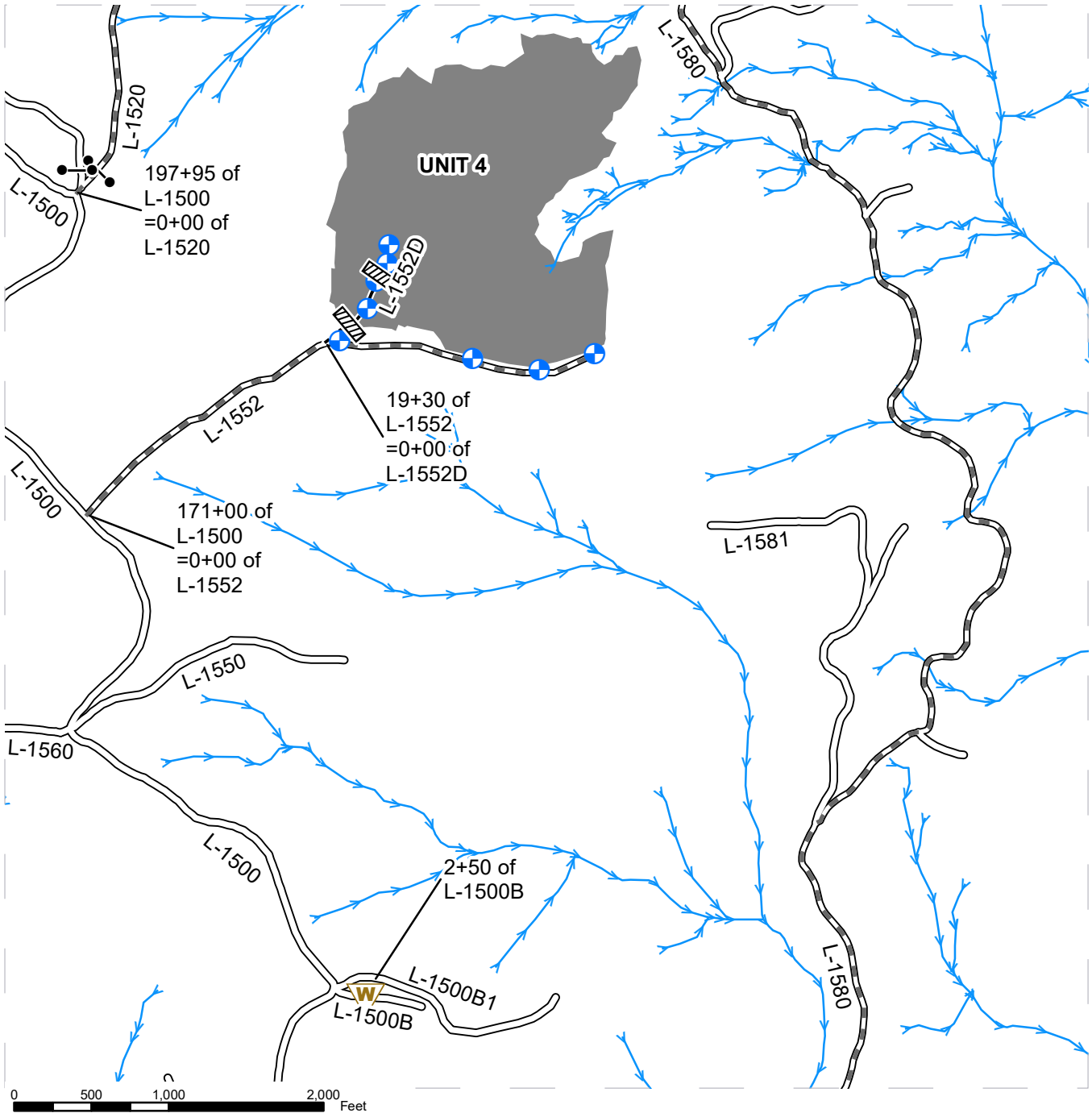
Required Pre-Haul Maintenance	Ditchout	Harvest Unit
Optional Construction	End Haul	Streams
Optional Reconstruction	Culvert	Landing - Proposed
	Waste Area	



ROAD PLAN MAP

SALE NAME: PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520

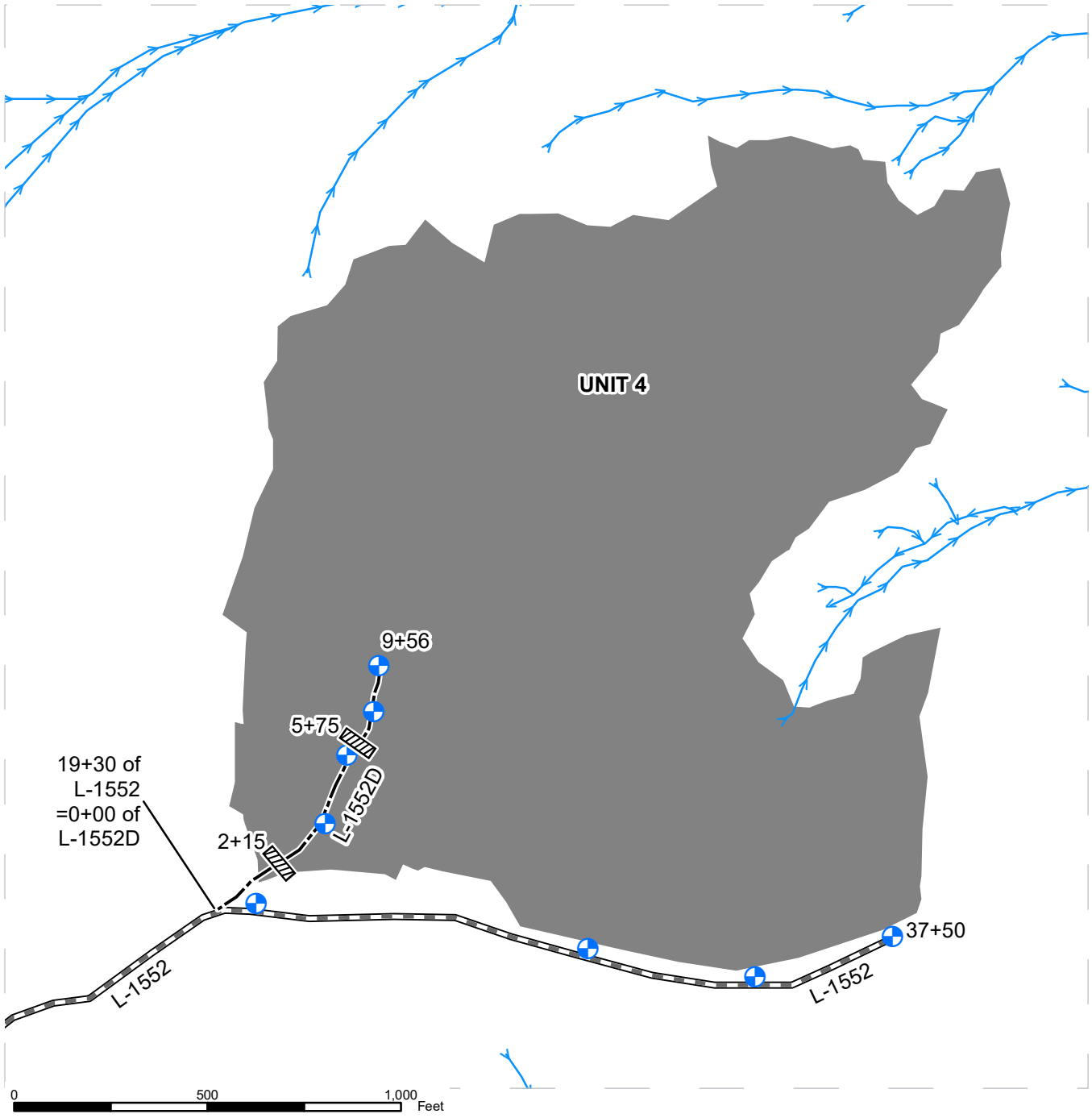


Existing Roads	Culvert	Harvest Unit
Required Pre-Haul Maintenance	Gate (PCP 1-1)	Streams
Optional Construction	Landing - Proposed	Waste Area

ROAD PLAN MAP

SALE NAME: PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



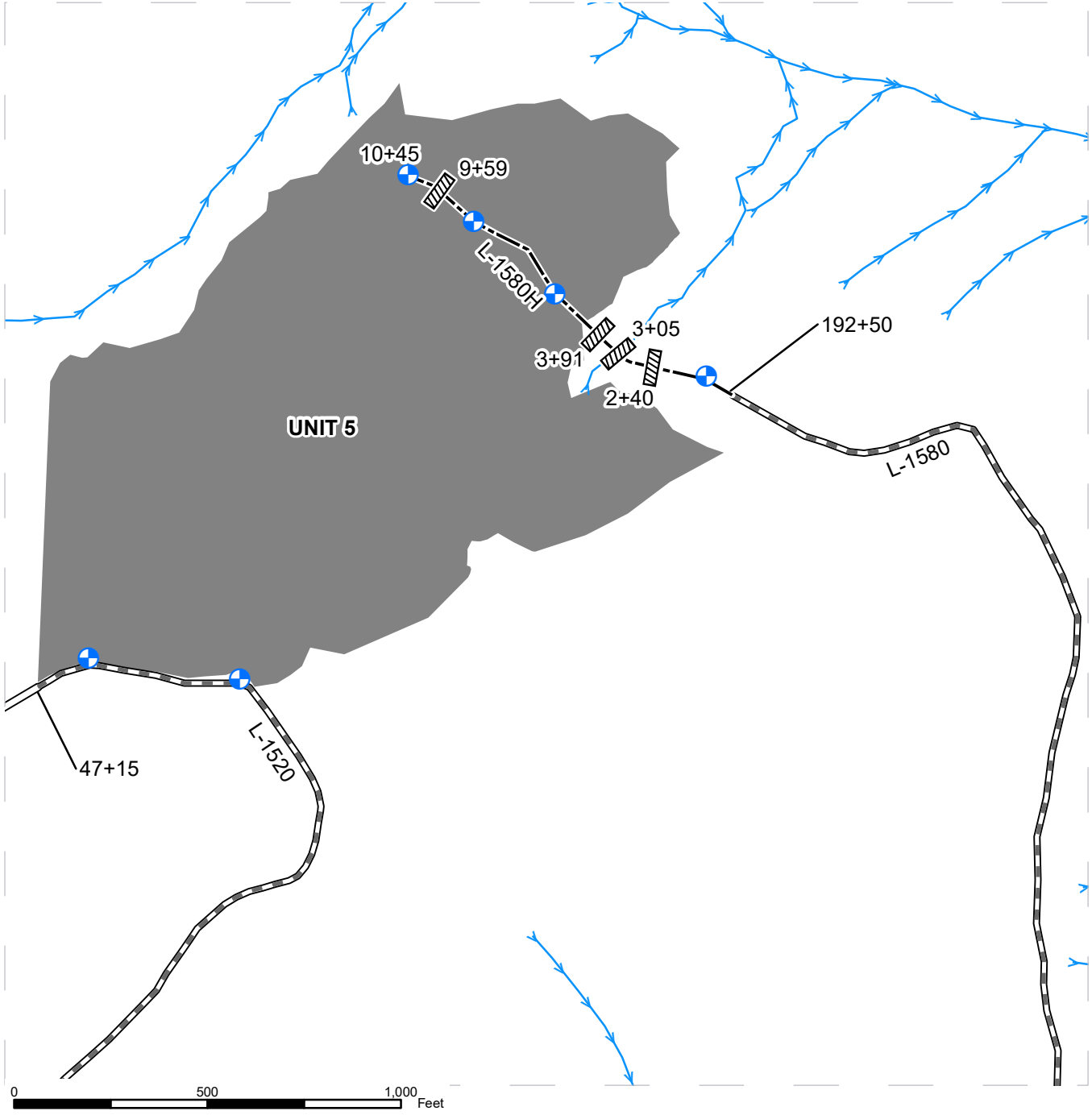
Required Pre-Haul Maintenance	Culvert	Harvest Unit
Optional Construction	Landing - Proposed	Streams



ROAD PLAN MAP

SALE NAME: PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



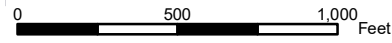
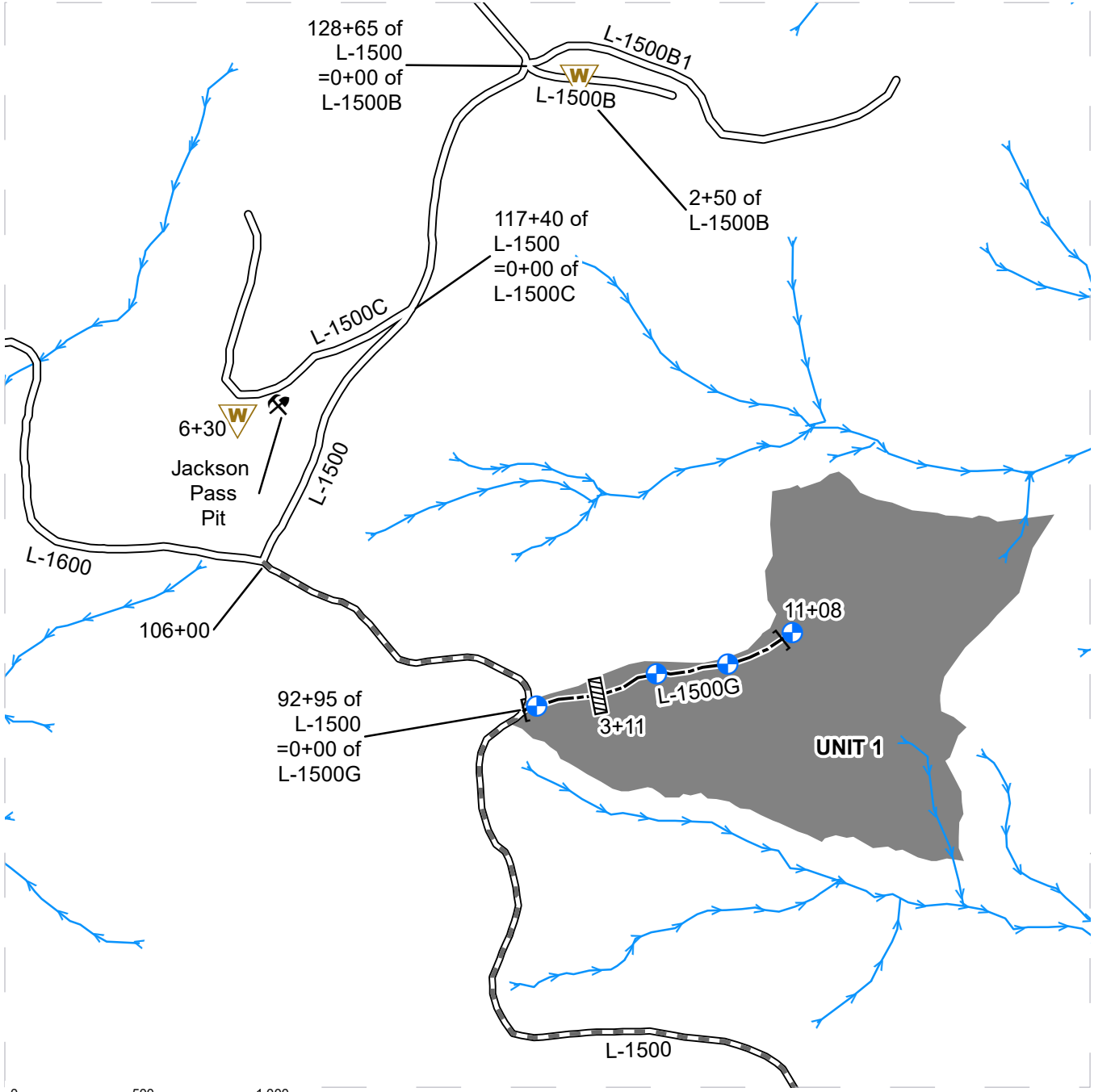
Existing Roads	Culvert	Harvest Unit
Required Pre-Haul Maintenance	Landing - Proposed	Streams
Optional Construction		



ROAD PLAN MAP

SALE NAME: PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



Existing Roads	End Haul	Harvest Unit
Required Pre-Haul Maintenance	Culvert	Streams
Optional Construction	Landing - Proposed	Rock Pit
	Waste Area	



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

PUNCH BOWL VRH THIN TIMBER SALE ROAD PLAN
CLARK COUNTY
LARCH UNIT, YACOLT DISTRICT
PACIFIC CASCADE REGION

AGREEMENT NO.: 30-104119

STAFF ENGINEER: DAVID STONE

DRAWN & COMPILED BY: ALICIA COMPTON
& DAVID STONE

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

Clauses in this road plan apply to all road related work, including landings and rock source development, unless otherwise noted.

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
L-1500	40+80 to 106+00	Pre-haul Maintenance
L-1520	0+00 to 47+15	Pre-haul Maintenance
L-1552	0+00 to 37+50	Pre-haul Maintenance
L-1586	0+00 to 3+95	Pre-haul Maintenance
L-1580	5+60 to 192+50	Pre-haul Maintenance

0-3 OPTIONAL ROADS

The specified work on the following roads is not required. Any optional roads built by the Purchaser must meet all the specifications in the road plan.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
L-1500G	0+00 to 11+08	Construction
L-1552D	0+00 to 9+56	Construction
L-1580B	0+00 to 15+95	Reconstruction
L-1580B1	0+00 to 3+42	Construction
L-1580H	0+00 to 10+45	Construction

0-4 CONSTRUCTION

Construction includes, but is not limited to: clearing; grubbing; right-of-way debris disposal; excavation and embankment to sub-grade; turnout, turnaround and landing construction; acquisition and installation of drainage structures; shaping subgrade; manufacture and application of rock; compaction of earthwork and rock; and acquisition and application of erosion control materials.

0-5 RECONSTRUCTION

This project includes, but is not limited to the following reconstruction requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
L-1580B	0+00 to 15+95	Clear, grub, widen subgrade, excavate ditchlines, grade, shape, and compact subgrade surface in accordance to TYPICAL SECTION SHEET. Right-of-way debris disposal. Compact earthwork. Reconstruct road grade according to stakes and reference points marked in the field. Acquire and install drainage structures in accordance to CULVERT LIST. Manufacture and apply rock in accordance to ROCK LIST. Grade, shape, and compact rock.

0-6 PRE-HAUL MAINTENANCE

This project includes, but is not limited to the following pre-haul maintenance requirements:

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
L-1500	40+80 to 106+00	Grade, shape, and compact existing surface in accordance to TYPICAL SECTION SHEET. Manufacture and apply rock in accordance to ROCK LIST. Grade, shape, and compact rock. Clean and widen ditchlines in accordance to TYPICAL SECTION SHEET at locations specified in Clause 2-7. Acquire and install drainage structures in accordance to CULVERT LIST.
L-1520	0+00 to 47+15	
L-1552	0+00 to 37+50	
L-1586	0+00 to 3+95	
L-1580	5+60 to 192+50	

0-9 DECOMMISSIONING

This project includes decommissioning listed in Clause 9-20 ROAD DECOMMISSIONING.

0-10 ABANDONMENT

This project includes abandonment listed in Clause 9-21 ROAD ABANDONMENT.

0-12 DEVELOP ROCK SOURCE

Purchaser may develop an existing rock source. Rock source development will involve requirements listed in the ROCK SOURCE DEVELOPMENT PLAN. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

If the Purchaser desires a change from this road plan including, but not limited to, relocation, extension, change in design, or adding roads; a revised road plan must be submitted in writing to the Contract Administrator for consideration. Before work begins, Purchaser shall obtain approval from the State for the submitted plan.

1-2 UNFORESEEN CONDITIONS

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to unforeseen conditions, or Purchaser's choice of construction season or techniques will be at the Purchaser's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

1-3 ROAD DIMENSIONS

Purchaser shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan, unless controlled by construction stakes or design data (plan, profile, and cross-sections).

1-4 ROAD TOLERANCES

Purchaser shall perform road work within the tolerances listed below. The tolerance class for each road is listed on the TYPICAL SECTION SHEET.

<u>Tolerance Class</u>	<u>A</u>	<u>B</u>	<u>C</u>
Road and Subgrade Width (feet)	+1.5	+1.5	+2.0
Subgrade Elevation (feet +/-)	0.5	1.0	2.0
Centerline alignment (feet lt./rt.)	1.0	1.5	3.0

1-6 ORDER OF PRECEDENCE

Any conflict or inconsistency in the road plan will be resolved by giving the documents precedence in the following order:

1. Addenda.
2. Designs or Plans. On designs and plans, figured dimensions shall take precedence over scaled dimensions.
3. Road Plan Clauses.
4. Typical Section Sheet.
5. Standard Lists.
6. Standard Details.
7. Road Plan maps.

In case of any ambiguity or dispute over interpreting the road plan, the Contract Administrator's or designee's decision will be final.

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

Purchaser shall repair or replace all materials, roadway infrastructure, and road components damaged during road work or operation activities. The Contract Administrator will direct repairs and replacements. Repairs to structural materials must be made in accordance with the manufacturer's recommendation, and may not begin without written approval from the Contract Administrator.

1-9 DAMAGED METALLIC COATING

Any cut ends, or damaged galvanized or aluminized coating on existing or new bridge components, culverts, downspouts, and flumes must be cleaned and treated with a minimum of two coats of zinc rich paint or cold galvanizing compound.

1-15 ROAD MARKING

Purchaser shall perform road work in accordance with the state’s marked location. All road work is marked as follows:

- Four-foot stakes with orange flagging, orange paint, and/or aluminum reference tags for all road types. Right-of-Way (ROW) boundary tags – on roads with designated ROW harvest units.

1-16 CONSTRUCTION STAKES SET BY STATE

The Purchaser shall construct the following roads in accordance with the construction stakes and reference points set in the field for grade and alignment. Prior to road construction Purchaser shall reset slope stakes after right-of-way has been cleared.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
L-1500G	0+00 to 11+08	Centerline stakes, slope stakes, and RPs

1-18 REFERENCE POINT DAMAGE

Purchaser shall reset reference points (RPs) that were moved or damaged at any time during construction to their original locations. Excavation and embankment may not proceed on road segments controlled by said RPs until Purchaser resets all moved or damaged RPs.

1-20 COMPLETE BY DATE

Purchaser shall complete road work before the start of timber haul.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan for timber hauling, rock hauling, or right-of-way hauling, without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

Purchaser shall notify the Contract Administrator a minimum of 5 calendar days before work begins.

1-23 ROAD WORK PHASE APPROVAL

Purchaser shall obtain written approval from the Contract Administrator upon completion of each of the following phases of road work:

- Subgrade construction and drainage installation
- Waste area construction
- Subgrade compaction
- Rock pit development
- Rock application and compaction
- Abandonment/Decommissioning

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure periods unless authorized in writing by the Contract Administrator. Restrictions for hauling forest products are specified in Contract Clause H-130 Hauling Schedule.

<u>Road</u>	<u>Activity</u>	<u>Closure Period</u>
All	Construction, Reconstruction, Pre-haul Maintenance, Abandonment, Decommissioning, & Rock Source Work	October 1 to April 30

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION. Purchaser shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER. If other operators are using, or desire to use these designated maintainer roads, a joint operating plan must be developed. All parties shall follow this plan.

1-29 SEDIMENT RESTRICTION

Purchaser shall not allow silt-bearing runoff to enter any streams.

1-30 CLOSURE TO PREVENT DAMAGE

In accordance with Contract Clause G-220 STATE SUSPENDS OPERATION, the Contract Administrator will suspend road work or hauling right-of-way timber, forest products, or rock under the following conditions:

- Wheel track rutting exceeds 4 inches on jaw run roads.
- Wheel track rutting exceeds 2 inches on crushed rock roads.
- Wheel track rutting exceeds 2 inches on native surface roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

Operations must stop unless authority to continue working or hauling is granted in writing by the Contract Administrator. In the event that surface or base stability problems persist, Purchaser shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan.

1-32 BRIDGE AND ASPHALT SURFACE RESTRICTION

The use of metal tracked equipment is not allowed on bridge or asphalt surfaces at any time. If Purchaser must run equipment on bridge or asphalt surfaces, then rubber tired equipment or other methods, approved in writing by Contract Administrator, must be used. Other methods must meet the following criteria: Material utilized to protect the deck surface from tracked equipment damage must be of substantial thickness, durability and width to support the machine weight and prevent grousers from touching the bridge deck and asphalt surfaces.

If tracked equipment is used on bridge or asphalt surfaces, Purchaser shall immediately cease all road construction and hauling operations. Purchaser shall remove any dirt, rock, or other material tracked or spilled on the bridge or asphalt surfaces and have surfaces evaluated by the District Engineer or their designee for any damage caused by transporting equipment. Any damage to the surfaces will be repaired, at the Purchaser's expense, as directed by the Contract Administrator.

1-33 SNOW PLOWING RESTRICTION

Snowplowing will be allowed after the execution of a SNOW PLOWING AGREEMENT, which is available from the Contract Administrator upon request. Purchaser shall request a SNOW PLOWING AGREEMENT each time plowing occurs. If damage occurs while plowing, further permission to plow may be revoked by the Contract Administrator.

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

Purchaser shall immediately remove any mud, dirt, rock, or other material tracked or spilled on to county roads and state highways.

If additional damage to the surface, signs, guardrails, etc. occurs then the damage will be repaired, at the Purchaser's expense, as directed by the Contract Administrator when authorized by the county or WSDOT.

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

Purchaser shall maintain all roads used under this contract in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS for the entire term of this contract. Maintenance is required even during periods of inactivity.

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

Purchaser shall perform maintenance on roads listed in Contract Clause C-050 PURCHASER ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

Purchaser may be required to perform maintenance on roads listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Purchaser shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

2-4 PASSAGE OF LIGHT VEHICLES

Purchaser shall maintain the following roads in a condition that will allow the passage of light administrative vehicles.

2-5 MAINTENANCE GRADING – EXISTING ROAD

Purchaser shall use a grader to shape the existing surface before applying rock.

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following roads, Purchaser shall clean ditches, headwalls, and catch basins. Pulling ditch material across the road or mixing in with the road surface is not allowed. Scatter material down slope outside of cleared right-of-way.

<u>Road</u>	<u>Stations</u>
L-1552	0+00 to 37+50

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-5 CLEARING

Purchaser shall fall all vegetative material larger than 2 inches DBH or over 5 feet high between the marked right-of-way boundaries and within waste and debris areas, or if not marked in the field, between the clearing limits specified on the TYPICAL SECTION SHEET. Clearing must be completed before starting excavation and embankment.

3-7 RIGHT-OF-WAY DECKING

Purchaser shall deck all right-of-way timber. Decks must be parallel to the road centerline and placed within the cleared right-of-way. Decks must be free of dirt, limbs, and other right-of-way debris, and removable by standard log loading equipment from the roadbed.

3-8 PROHIBITED DECKING AREAS

Purchaser shall not deck right-of-way timber in the following areas:

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 45%.
- Against standing trees.
- On slopes above a cut bank.

3-10 GRUBBING

Purchaser shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Purchaser shall also remove stumps with undercut roots outside the grubbing limits. Stumps over 22 inches diameter must be split. Stumps over 40 inches must be quartered. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the clearing limits as directed by the Contract Administrator and in compliance with all other clauses in this road plan. Stumps must be positioned upright, with root wads in contact with the forest floor on stable locations

3-14 STUMPS WITHIN DESIGNATED WASTE AREAS

Purchaser is not required to remove stumps within waste areas if they are cut flush with the ground.

3-20 ORGANIC DEBRIS DEFINITION

Organic debris is defined as all vegetative material not eligible for removal by Contract Clause G-010 PRODUCTS SOLD AND SALE AREA or G-011 RIGHT TO REMOVE FOREST PRODUCTS AND CONTRACT AREA, that is larger than one cubic foot in volume within the clearing and waste area limits.

3-21 DISPOSAL COMPLETION

Purchaser shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Purchaser shall complete all disposal of organic debris, before subgrade approval.

3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS

Waste areas for organic debris are located as listed below and at areas approved in writing by the Contract Administrator.

<u>Road</u>	<u>Disposal Location</u>
L-1500G	On the L-1500B at Station 2+50
L-1580B1	On the L-1580B1 at Station 3+42
Jackson Pass Pit	On the Left side of the L-1500C at station 6+30

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- Within the operational area for cable landings where debris may shift or roll.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.
- On slopes above a cut bank.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

Purchaser shall not bury organic debris unless otherwise stated in this plan.

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the clearing limits in natural openings downhill side of the road, unless otherwise detailed in this road plan and as directed by the Contract Administrator.

3-32 END HAULING ORGANIC DEBRIS

On the following roads and on slopes greater than 45%, Purchaser shall end haul or push organic debris to the designated waste areas specified in Clause 3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS, or to a waste area located by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
L-1500G	0+00 to 4+72
L-1580B1	0+00 to 2+20
Jackson Pass Pit	Locations on Pit Development Plan Map

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. Pioneering may not extend more than 1000 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions must be taken as pioneering progresses:

- Drainage must be provided on all uncompleted construction.
- Road pioneering operations may not undercut the final cut slope or restrict drainage.
- Culverts at live stream crossings must be installed during pioneering operations prior to embankment.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 13 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 6% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-4 SWITCHBACK STANDARDS

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees. Purchaser shall follow these standards for switchbacks:

- Maximum adverse grades for switchbacks is 10% of the curve radius.
- Maximum favorable grades for switchbacks is 12%.
- Maximum transition grades entering and leaving switchbacks is a 5% grade change.
- Transition grades required to meet switchback grade limitations must be constructed on the tangents preceding and departing from the switchbacks.

4-5 CUT SLOPE RATIO

Purchaser shall construct excavation slopes no steeper than shown on the following table, unless construction staked or designed:

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth (on side slopes up to 55%)	1:1	100
Common Earth (56% to 70% side slopes)	¾:1	133
Common Earth (on slopes over 70%)	½:1	200
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

4-6 EMBANKMENT SLOPE RATIO

Purchaser shall construct embankment slopes no steeper than shown on the following table:

<u>Material Type</u>	<u>Embankment Slope Ratio</u>	<u>Embankment Slope Percent</u>
Sandy Soils	2:1	50
Common Earth and Rounded Gravel	1½:1	67
Angular Rock	1¼:1	80

4-7 SHAPING CUT AND FILL SLOPE

Purchaser shall construct excavation and embankment slopes to a uniform line and left rough for easier revegetation.

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

- 6 feet for curves of 50 to 79 feet radius.
- 4 feet for curves of 80 to 100 feet radius.

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

- 2 feet for embankment heights at centerline of 3 to 6 feet.
- 4 feet for embankment heights at centerline of greater than 6 feet.

Purchaser shall apply embankment widening equally to both sides of the road to achieve the required width.

4-10 WIDEN THE EXISTING SUBGRADE

On the following roads, Purchaser shall widen the subgrade and fill slopes to the dimensions shown on the TYPICAL SECTION SHEET. If necessary, Purchaser shall reconstruct excavation slopes to provide sufficient width for the road surface and any ditches and turnouts.

<u>Road</u>	<u>Stations</u>
L-1580B	0+00 to 15+95

4-12 FULL BENCH CONSTRUCTION

On the following roads, and where side slopes exceed 45%, Purchaser shall use full bench construction for the entire subgrade width. Purchaser shall end haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

<u>Road</u>	<u>Full Bench Location</u>	<u>Comments</u>
L-1500G	0+00 to 4+72	End haul all material. Material that is devoid of organic debris may be used as fill embankment.
L-1580B1	0+00 to 2+20	

4-21 TURNOUTS

Purchaser shall construct non designated turnouts intervisible with a maximum distance of 1000 feet between turnouts. Locations may be adjusted to fit the final subgrade alignment and sight distances. Locations changes are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the ROCK LIST.

4-22 TURNAROUNDS

Turnarounds must be no larger than 30 feet long and 30 feet wide. Locations are subject to written approval by the Contract Administrator.

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

Purchaser shall construct and reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Ditches must be constructed concurrently with construction of the subgrade.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

Purchaser shall construct ditchouts as identified on the CULVERT LIST and as directed by the Contract Administrator. Ditchouts must be constructed in a manner that diverts ditch water onto the forest floor and must have excavation backslopes no steeper than a 1:1 ratio.

4-35 WASTE MATERIAL DEFINITION

Waste material is defined as all dirt, rock, mud, or related material that is extraneous or unsuitable for construction material. Waste material, as used in Section 4 EXCAVATION, is not organic debris.

4-36 DISPOSAL OF WASTE MATERIAL

Purchaser may sidecast waste material on side slopes up to 45% if the waste material is compacted and free of organic debris. On side slopes greater than 45%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. Additional waste areas may also be identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

<u>Road</u>	<u>Waste Area Location</u>	<u>Comments</u>
L-1500G	On the L-1500B at Station 2+50	Pile Organic material separately from all other waste
L-1580B1	On the L-1580B1 at Station 3+42	
Jackson Pass Pit	On the Left side of the L-1500C at station 6+30	

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas, except as otherwise specified in this plan:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- Within a riparian management zone.
- Within a wetland management zone.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

4-48 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 4 inches in any dimension.

4-55 ROAD SHAPING

Purchaser shall shape the subgrade and surface as shown on the TYPICAL SECTION SHEET. The subgrade and surface shape must ensure runoff in an even, un-concentrated manner, and must be uniform, firm, and rut-free.

4-56 DRY WEATHER SHAPING

The Contract Administrator may require the application of water to facilitate shaping activities. The method of water application is subject to written approval by the Contract Administrator.

4-60 FILL COMPACTION

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. A plate compactor must be used for areas specifically requiring keyed embankment construction and for embankment, waste area, and segments too narrow to accommodate equipment.

4-61 SUBGRADE COMPACTION

Purchaser shall compact constructed and reconstructed subgrades in accordance with the COMPACTION LIST by routing equipment over the entire width except ditch. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before rock application and timber haul.

4-62 DRY WEATHER COMPACTION

The Contract Administrator may require the application of water to facilitate compaction activities. The method of water application is subject to written approval by the Contract Administrator.

4-63 EXISTING SURFACE COMPACTION

Purchaser shall compact maintained road surfaces in accordance with the COMPACTION LIST by routing equipment over the entire width.

SECTION 5 – DRAINAGE

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-15 through 10-24.

5-6 CULVERT TYPE

Purchaser shall install culverts made of steel or plastic in accordance with Clauses 10-15 through 10-24.

5-10 CULVERT MARKER INSTALLATION

At road locations listed on the CULVERT LIST marked Y, Purchaser shall provide and install culvert markers at the inlet in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL.

5-12 UNUSED MATERIALS STATE PROPERTY

On required roads, any materials listed on the CULVERT LIST that are not installed will become the property of the state. Purchaser shall stockpile materials as directed by the Contract Administrator.

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL, LIVE STREAM INSTALLATION PROCEDURE DETAIL, the National Corrugated Metal Pipe Association's "Installation Manual for Corrugated Steel Drainage Structures", and the Corrugated Polyethylene Pipe Association's "Recommended Installation Practices for Corrugated Polyethylene Pipe and Fittings". Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer's recommendations.

5-17 CROSS DRAIN SKEW AND SLOPE

Cross drains, on road grades in excess of 3%, must be skewed at least 30 degrees from perpendicular to the road centerline, except where the cross drain is at the low point in the road culverts will not be skewed. Cross drain culverts must be installed at a slope steeper than the incoming ditch grade, but not less than 3% or more than 10%.

5-18 CULVERT DEPTH OF COVER

All culverts must be installed with a depth of cover of not less than 1 foot of compacted subgrade over the top of the culvert at the shallowest point, and as recommended by the culvert manufacturer for the type and size of the pipe.

5-20 ENERGY DISSIPATERS

Purchaser shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. Energy dissipater installation is subject to approval by the Contract Administrator. The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed.

5-25 CATCH BASINS

Purchaser shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 3 feet wide and 4 feet long with back slopes consistent with Clause 4-5 CUT SLOPE RATIO.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Rock must be set in place by machine. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed. Rock type must meet the specifications in Clause 6-50 LIGHT LOOSE RIP RAP.

5-27 ARMORING FOR STREAM CROSSING CULVERTS

At the following culverts, Purchaser shall place rock in conjunction with construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the CULVERT LIST and as directed by the Contract Administrator. Rock may not restrict the flow of water into culvert inlets or catch basins. Rock must be set in place by machine. Placement must be with a zero-drop-height only. No placement by end dumping or dropping of rock is allowed. Rock type must meet the specifications in Clause 6-50 LIGHT LOOSE RIP RAP.

<u>Road</u>	<u>Stations</u>	<u>Rock Type</u>
L-1580H	3+05	LIGHT LOOSE RIP RAP

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by October 1. Purchaser shall construct waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that will produce a vertical distance of no more than 10 feet between waterbars or between natural drainage paths, and with a maximum spacing of 200 feet.

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

Rock used in accordance with the quantities on the ROCK LIST may be obtained from the following source on state land at no charge to the Purchaser. Purchaser shall obtain written approval from the Contract Administrator for the use of material from any other source. If other operators are using, or desire to use the rock source, a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 5 business days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>
Jackson Pass Pit	NE¼ NE¼ Sec. 11, T02N, R04E, W.M. NW¼ NW¼ Sec. 12, T02N, R04E, W.M.

6-5 ROCK FROM COMMERCIAL SOURCE

Rock used in accordance with the quantities on the ROCK LIST may be obtained from any commercial source at the Purchaser's expense. Rock sources are subject to written approval by the Contract Administrator before their use.

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

Purchaser shall conduct rock source development and use at the following sources, in accordance with the written ROCK SOURCE DEVELOPMENT PLAN prepared by the state and included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of 5 business days before starting any operations in the rock source.

<u>Source</u>	<u>Location</u>
Jackson Pass Pit	NE¼ NE¼ Sec. 11, T02N, R04E, W.M. NW¼ NW¼ Sec. 12, T02N, R04E, W.M.

6-22 FRACTURE REQUIREMENT FOR ROCK

A minimum of 50% by visual inspection of coarse aggregate must have at least one fractured face. Coarse aggregate is the material greater than 1/4-inch in size.

6-23 ROCK GRADATION TYPES

Purchaser shall provide or manufacture rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality during manufacture and placement into a stockpile. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator. Purchaser shall provide a sieve analysis upon request from the Contract Administrator. Gradation specifications in Clause 6-28, 6-34, 6-50, and the Rock Crushing Compliance Procedure.

6-28 1 ¼-INCH MINUS CRUSHED ROCK

- % Passing 1 ¼" square sieve 100%
- % Passing 5/8" square sieve 55 - 75%
- % Passing U.S. #4 sieve 20 - 50%

Of the fraction passing the No. 4 sieve, 40% to 60% must pass the No. 10 sieve.

The portion of aggregate retained on the No. 4 sieve may not contain more than 0.2 percent organic debris and trash. All percentages are by weight.

6-34 3-INCH JAW RUN ROCK

- % Passing 3" square sieve 100%
- % Passing 1 ½" square sieve 45 - 65%

Ballast rock must be 100% equal to, or smaller than, 3 inches in at least one dimension. Rock may contain no more than 5 percent organic debris and trash. All percentages are by weight.

6-50 LIGHT LOOSE RIP RAP

Light loose rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects tending to destroy its resistance to weather. Light loose rip rap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>Quantity</u>	<u>Approximate Size Range</u>
20% to 90%	18" - 28"
15% to 80%	8" - 18"
10% to 20%	3" - 8"

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths, are defined as the compacted depths using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are loose yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction. Unless otherwise stated in Clause 6-75 OPTIONAL ROCK EXCEPTION.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of Spot Rocking, Landing, Junction, and Rip Rap Rock is on a cubic yard truck measure basis. The Contract Administrator will measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser shall maintain load tally sheets for each truck as shown in ROCK ACCOUNTABILITY DETAIL and shall give them to the Contract Administrator or mail them to the Pacific Cascade Region Office on a weekly basis during rocking operations.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for completed subgrade and drainage installation, including inlet and outlet armor and subgrade compaction, before rock application.

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

6-73 ROCK FOR WIDENED PORTIONS

Purchaser shall apply rock to turnarounds, turnouts, and areas with curve widening to the same depth and specifications as the traveled way.

6-75 OPTIONAL ROCK EXCEPTION

On the following roads, if hauling takes place from June 1 to September 30 the Purchaser may place less rock than shown on the ROCK LIST when approved in writing by the Contract Administrator.

If less rock is applied, Purchaser shall submit a written plan, for approval, describing how these roads will be constructed, used, maintained, and treated post-haul. Purchaser shall meet post-haul specifications in Section 9 POST-HAUL ROAD WORK, the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, or other conditions of the approved plan.

<u>Road</u>	<u>Stations</u>
L-1552D	0+00 to 9+56
L-1580B	0+00 to 15+95
L-1580B1	0+00 to 3+42

6-76 DRY WEATHER ROCK COMPACTION

The Contract Administrator may require the application of water to facilitate compaction of the rock surfacing. The method of water application is subject to approval by the Contract Administrator.

SECTION 8 – EROSION CONTROL

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 4-inch layer of straw to all exposed soils within 100 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

8-15 REVEGETATION

Purchaser shall spread grass seed on all exposed soils within the grubbing limits resulting from road work activities using. Other methods of covering must be approved in writing by the Contract Administrator.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>	<u>Abandonment/ Decommissioning</u>
L-1520	Landings	1.8	
L-1552	Ditchline work 0+00 to 37+50, & Landings	17.2	
L-1580	Landing	0.9	
L-1500G	0+00 to 11+08	29.2	29.6
L-1552D	0+00 to 9+56	21.2	25.6
L-1580B	0+00 to 15+95	23.8	
L-1580B1	0+00 to 3+42, & Waste Area	6.2	
L-1580H	0+00 to 10+45	22.8	32.8
Jackson Pass Pit	Pit perimeter, Access Road, Bench & Waste Area at 6+30 on L-1500C	7.9	
L-1500B	Waste Area at 2+50	0.7	

*Quantities are estimates only. Actual quantities may vary and are the responsibility of the Purchaser.

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the grass seed.

8-17 REVEGETATION TIMING

Purchaser shall revegetate during the first available opportunity after road work is completed. Soils may not be allowed to sit exposed for longer than one month without receiving revegetation treatment unless otherwise approved in writing by the Contract Administrator.

8-19 ASSURANCE FOR SEEDED AREA

Purchaser shall ensure the growth of a uniform and dense crop at least 75% coverage of 3-inch tall grass. Purchaser shall reapply the grass seed in areas that have failed to germinate or have been damaged through any cause, restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the grass seed at no additional cost to the state.

8-25 GRASS SEED

Purchaser shall evenly spread the seed mixture listed below on all exposed soil inside the grubbing limits at a rate of 40 pounds per acre of exposed soil. Grass seed must meet the following specifications:

1. Weed seed may not exceed 0.5% by weight.
2. All seed species must have a minimum 90% germination rate, unless otherwise specified.
3. Seed must be certified.
4. Seed must be furnished in standard containers showing the following information:
 - a. Common name of seed
 - b. Net weight
 - c. Percent of purity
 - d. Percentage of germination
 - e. Percentage of weed seed and inert material
5. Seed must conform to the following mixture unless a comparable mix is approved in writing by the Contract Administrator.

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>	<u>Minimum % germination</u>
Perennial Rye	25-35	90
Red Fescue	40-50	90
Highland Bent	5-15	85
Red and White Clover	10-20	90
Inert and Other Crop	0.5	

SECTION 9 – POST-HAUL ROAD WORK

9-1 EARTHEN BARRICADES

Purchaser shall construct barricades in accordance with the EARTHEN BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
L-1500G	1+00, 1+20, & 1+40
L-1552D	0+20 & 0+40
L-1580H	0+30, 0+90, & 1+90

9-2 CULVERT REMOVAL FROM LIVE STREAM

On the following road, Purchaser shall remove existing culverts from live streams and leave the resulting channel open with excavation slope and excavated channel width as specified. Excavated material shall be placed and compacted in a location that will not erode into a stream. Culvert removal from live streams must be in accordance with the LIVE STREAM CULVERT REMOVAL PROCEDURE DETAIL, FILL REMOVAL DETAIL, TYPICAL ABANDONMENT/DEACTIVATED STEAM CROSSING DETAIL, and SETTLING POND AND PUMP DETAIL.

<u>Road</u>	<u>Stations</u>	<u>Excavated Channel Width</u>	<u>Slope Ratio</u>	<u>Comments</u>
L-1580H	3+05	2.0 feet	1 ½:1	Remove fill to native channel depth

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

Culverts removed from roads become the property of the Purchaser and must be removed from state land.

9-5 POST-HAUL MAINTENANCE

Purchaser shall perform post-haul maintenance in accordance with the FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

9-11 LANDING EMBANKMENT

Purchaser shall slope landing embankments to the original construction specifications.

9-12 LANDING EMBANKMENT REMOVAL

Purchaser shall reduce or relocate the landing embankment. Place excavated material in a waste area designated by the Contract Administrator.

9-20 ROAD DECOMMISSIONING

The following roads shall be decommissioned by the Purchaser at the termination of use in accordance with Clause 9-22 LIGHT DECOMMISSIONING.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
L-1500G	0+00 to 11+08	LIGHT
L-1552D	0+00 to 9+56	LIGHT

9-21 ROAD ABANDONMENT

Purchaser shall abandon the following roads before the termination of this contract by the specified date. Work must be in accordance with the ROAD ABANDONMENT CROSS SECTIONS DETAIL and Clause 9-22 LIGHT ABANDONMENT.

<u>Road</u>	<u>Stations</u>	<u>Type</u>	<u>Date</u>
L-1580H	0+00 to 10+45	LIGHT	Before the termination of this contract

9-22 LIGHT DECOMMISSIONING AND LIGHT ABANDONMENT

LIGHT DECOMMISSIONING:

- Remove road shoulder berms except as directed.
- Outslope surface at a minimum of 6 percent and fill in ditchline.
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing which will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 200 feet, or as marked in the field.
- Place a waterbar within 20 feet of a culvert inlet to channel water away from inlet.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope. Waterbars shall be outsloped to provide positive drainage. Outlets shall be on stable locations.
- Leave all cross drain culverts in place. Prevent water from flowing into culvert inlet by filling in catch basin with local material. Culvert inlet and inlet marker should remain free of damage.
- Block roads with earthen barricades according to the attached EARTHEN BARRICADE DETAIL.
- Apply grass seed concurrently with abandonment to all exposed soil within the old roadway limits and in accordance with Section 8 EROSION CONTROL.

LIGHT ABANDONMENT:

- Remove road shoulder berms except as directed.
- Rip the surface to a minimum depth of 10 inches
- Construct non-drivable waterbars according to the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing which will produce a vertical drop of no more than 10 feet between waterbars or between natural drainage paths and with a maximum spacing of 200 feet, or as marked in the field.
- Place a waterbar within 20 feet of a culvert inlet to channel water away from inlet.
- Skew waterbars at least 30 degrees from perpendicular to the road centerline on roads in excess of 3 percent grade.
- Key waterbars into the cut-slope to intercept the ditch. Waterbars shall be outsloped to provide positive drainage. Outlets shall be on stable locations.
- Remove culverts and leave the resulting trench open. The removed fill material shall be placed and compacted in a location that will not erode into any Type 1 through 5 waters or wetlands. Slope all trench walls and approach embankments no steeper than 1.5:1.
- Remove live stream culverts in accordance with Clause 9-2 CULVERT REMOVAL FROM LIVE STREAMS.
- Scatter woody debris onto abandoned road surfaces.
- Block roads with earthen barricades according to the attached EARTHEN BARRICADE DETAIL.
- Apply grass seed concurrently with abandonment to all exposed soil within the old roadway limits and in accordance with Section 8 EROSION CONTROL.
- Provide and evenly spread a 4-inch layer of straw to all exposed soils within 100 feet of a stream.

SECTION 10 MATERIALS

10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be must be aluminized (aluminum type 2 coated meeting AASHTO M-274).

10-17 CORRUGATED PLASTIC CULVERT

Polyethylene culverts must meet AASHTO M-294 specifications, or ASTM F-2648 specifications for recycled polyethylene. Culverts must be Type S – double walled with a corrugated exterior and smooth interior.

10-21 METAL BAND

Metal coupling and end bands must meet the AASHTO specification designated for the culvert and must have matching corrugations. Culverts 24 inches and smaller must have bands with a minimum width of 12 inches. Culverts over 24 inches must have bands with a minimum width of 24 inches.

10-22 PLASTIC BAND

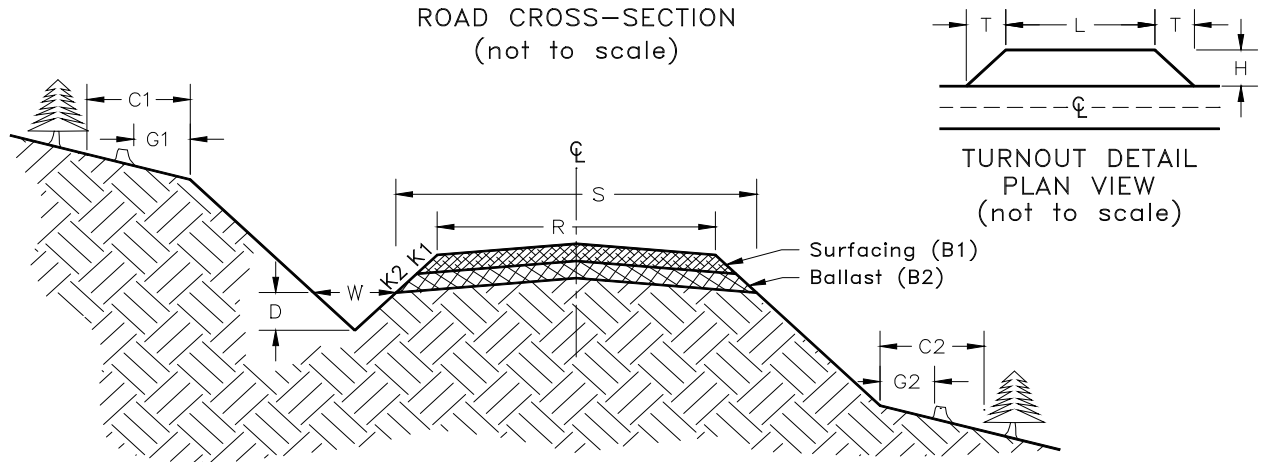
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe joint.

10-24 GAUGE AND CORRUGATION

Metal culverts must conform to the following specifications for gage and corrugation as a function of diameter.

<u>Diameter</u>	<u>Gauge</u>	<u>Corrugation</u>
18"	16 (0.064")	2 ² / ₃ " X 1 ¹ / ₂ "
24" to 48"	14 (0.079")	2 ² / ₃ " X 1 ¹ / ₂ "

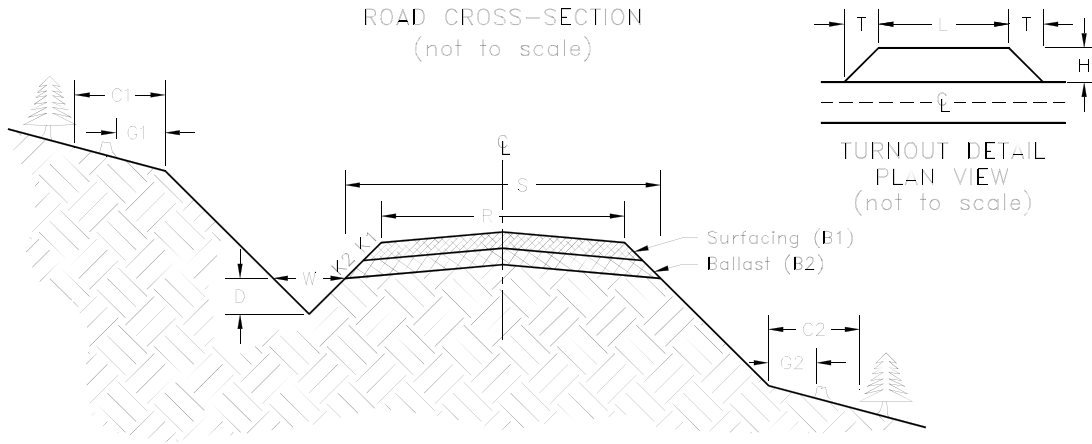
TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown at CL (%)	Grubbing Limits (feet)		Clearing Limits (feet)	
						Width (feet)	Depth (feet)		G1	G2	C1	C2
				S	R	W	D					
L-1500	40+80	106+00	A	--	12	3	1	4	NA	NA	NA	NA
L-1520	0+00	47+15	A	--	12	3	1	4	NA	NA	NA	NA
L-1552	0+00	37+50	A	--	12	3	1	4	NA	NA	NA	NA
L-1586	0+00	3+95	A	--	12	3	1	4	NA	NA	NA	NA
L-1580	5+60	192+50	A	--	12	3	1	4	NA	NA	NA	NA
* L-1500G	0+00	11+08	B	16	12	3	1	4	3	3	5	5
* L-1552D	0+00	1+27	C	16	12	3	1	4	3	3	ROW TAGS	
* L-1552D	1+27	9+56	C	16	12	3	1	4	3	3	5	5
* L-1580B	0+00	5+85	C	16	12	3	1	4	3	3	5	5
* L-1580B	5+85	15+95	C	16	12	3	1	4	3	3	ROW TAGS	
* L-1580B1	0+00	1+16	C	16	12	3	1	4	3	3	ROW TAGS	
* L-1580B1	1+16	3+42	C	16	12	3	1	4	3	3	5	5
* L-1580H	0+00	10+45	C	16	12	3	1	4	3	3	5	5

* Optional Roads

ROCK LIST
(Page 1 of 3)



BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (inches)	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length (feet)	Width (feet)	Taper (feet)
			K2	B2					L	H	T
3" JAW RUN											
L-1500G	0+00	11+08	1½:1	9	46	11.08	510	Jackson Pass Pit			
CURVE	--	--	1½:1	9	--	--	26				
WIDENING	--	--	1½:1	9	--	--	26				
TURNOUT	--	--	1½:1	9	28/TO	2 TO's	56		50	10	25
JUNCTION		0+00	--	--	--	--	24				
LANDING	--	--	--	--	41/Landing	4 Landings	164				
* L-1552D	0+00	9+56	1½:1	9	46	9.56	440				
* CURVE	--	--	1½:1	9	--	--	22				
* WIDENING	--	--	1½:1	9	--	--	22				
* TURNOUT	--	--	1½:1	9	28/TO	1 TO's	28		50	10	25
* JUNCTION		0+00	--	--	--	--	12				
* LANDING	--	--	--	--	41/Landing	4 Landings	164				
* L-1580B	0+00	15+95	1½:1	9	46	15.95	734				
* CURVE	--	--	1½:1	9	--	--	37				
* WIDENING	--	--	1½:1	9	--	--	37				
* TURNOUT	--	--	1½:1	9	28/TO	2 TO's	56	50	10	25	
* JUNCTION		0+00	--	--	--	--	20				
* LANDING	--	--	--	--	41/Landing	2 Landings	82				
* L-1580B1	0+00	3+42	1½:1	9	46	3.42	157				
* CURVE	--	--	1½:1	9	--	--	8				
* WIDENING	--	--	1½:1	9	--	--	8				
* JUNCTION		0+00	--	--	--	--	12				
* LANDING	--	--	--	--	41/Landing	1 Landing	41				

ROCK LIST
(Page 2 of 3)

BALLAST CONTINUED

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (inches)	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout			
									Length (feet)	Width (feet)	Taper (feet)	
			K2	B2					L	H	T	
3" JAW RUN												
L-1580H	0+00	10+45	1½:1	9	46	10.45	481	Jackson Pass Pit				
CURVE WIDENING	--	--	1½:1	9	--	--	20					
TURNOUT JUNCTION	--	0+00	1½:1	9	28/TO	1 TO	28		50	10	25	
LANDING	--	--	--	--	41/Landing	4 Landings	164					
L-1520 LANDING	--	--	--	--	41/Landing	2 Landings	82					
L-1552 LANDING	--	--	--	--	41/Landing	4 Landings	164					
L-1580 LANDING	--	--	--	--	41/Landing	1 Landings	41					

*Optional Rock see Clause 6-75

Required JAW RUN BALLAST TOTAL **1,772** Cubic Yards
Optional JAW RUN BALLAST TOTAL **1,813** Cubic Yards

ROCK LIST
(Page 3 of 3)

SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (inches)	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length (feet)	Width (feet)	Taper (feet)
			K1	B1					L	H	T
1 1/4-INCH MINUS											
L-1500	40+80	106+00		SPOT ROCK	--	--	250	Jackson Pass Pit			
L-1520	0+00	47+15		SPOT ROCK	--	--	180				
L-1552	0+00	37+50		SPOT ROCK	--	--	215				
L-1586	0+00	3+95	1½:1	6	30	3.95	119				
CURVE	--	--	1½:1	9	--	--	6				
WIDENING											
JUNCTION	0+00 & 3+95		--	--	8/JNCT	2 JNCTS	16				
L-1580	5+60	192+50		SPOT ROCK	--	--	355				
L-1500G	0+00	6+68	1½:1	3	14	6.68	94				
CURVE	--	--	1½:1	3	--	--	5				
WIDENING											

Required 1 1/4 -INCH MINUS CRUSHED SURFACE TOTAL **1,240** Cubic Yards

RIP-RAP

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y./ Station	# of Stations	C.Y. Total	Rock Source	
			K1	B1					
LIGHT LOOSE RIPRAP								Jackson Pass Pit, or Rock found during excavation on road Construction and Reconstruction	
Culvert headwall, energy dissipators and armor									
L-1500G Culverts	--	--	--	--	--	--	5.5		
L-1552D Culverts	--	--	--	--	--	--	6.0		
L-1580B Culverts	--	--	--	--	--	--	5.5		
L-1580B1 Culverts	--	--	--	--	--	--	5.5		
L-1580H Culverts	--	--	--	--	--	--	22.5		

LIGHT LOOSE RIPRAP TOTAL **45.0** Cubic Yards

CULVERT LIST

Road Number	Location	Culvert			Armoring (Cubic Yards)			Backfill Material	Bedding Material	Culvert Marker (Y/N)	Remarks
		Dia. (inches)	Length (feet)	Type	Inlet	Outlet	Type				
L-1500G	3+11	18	30	XX	0.5	5.0	LL	NT	NT	Y	Cross drain
L-1552D	2+15	18	30	XX	0.5	3.0	LL	NT	NT	Y	Cross drain
	5+75	18	30	XX	0.5	2.0	LL	NT	NT	Y	Cross drain
L-1580B	0+10	18	40	XX	0.5	0.5	LL	NT	NT	Y	Cross drain – install in existing ditchline
	3+25	18	30	XX	0.5	0.5	LL	NT	NT	Y	Cross drain
	9+48	18	30	XX	0.5	0.5	LL	NT	NT	Y	Cross drain
	12+26	18	30	XX	0.5	2.0	LL	NT	NT	Y	Cross drain
L-1580B1	2+20	18	30	XX	0.5	5.0	LL	NT	NT	Y	Cross drain
	3+42	--	--	--	--	--	--	--	--	--	Ditchout Right
L-1580H	2+40	18	30	XX	0.5	3.0	LL	NT	NT	N	Cross drain
	3+05	24	30	XX	2.0	10.0	LL	NT	NT	N	T5 Creek
	3+91	18	30	XX	0.5	3.0	LL	NT	NT	N	Cross drain
	9+59	18	30	XX	0.5	3.0	LL	NT	NT	N	Cross drain

Key:

- CR - Crushed Rock – 1 ¼ " minus
- NT - Native (bank run)
- SR - Shot Rock
- LL - Light Loose Riprap
- HL - Heavy Loose Riprap
- GM - Galvanized Metal
- PD - Polyethylene Pipe Dual Wall
- AM - Aluminized Metal
- XX - PD or GM

COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
All Waste Areas	All	All	Waste Area	12	Excavation	28,000	3	--
All roads	All	All	Embankment	12	Excavation	28,000	4	--
All roads	All	All	Subgrade	12	Vibratory Smooth Drum	20,000	4	5
All roads	All	All	3 " Jaw Run	12	Vibratory Smooth Drum	20,000	4	5
All roads	All	All	1 1/4" Minus	6	Vibratory Smooth Drum	20,000	4	5

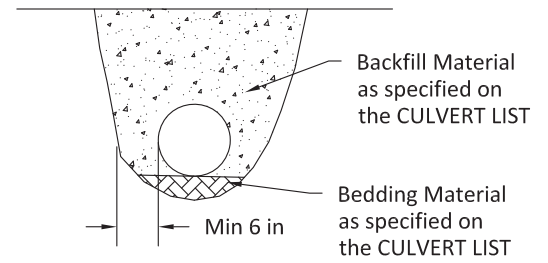
CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 1 OF 2

INSTALLATION REQUIREMENTS:

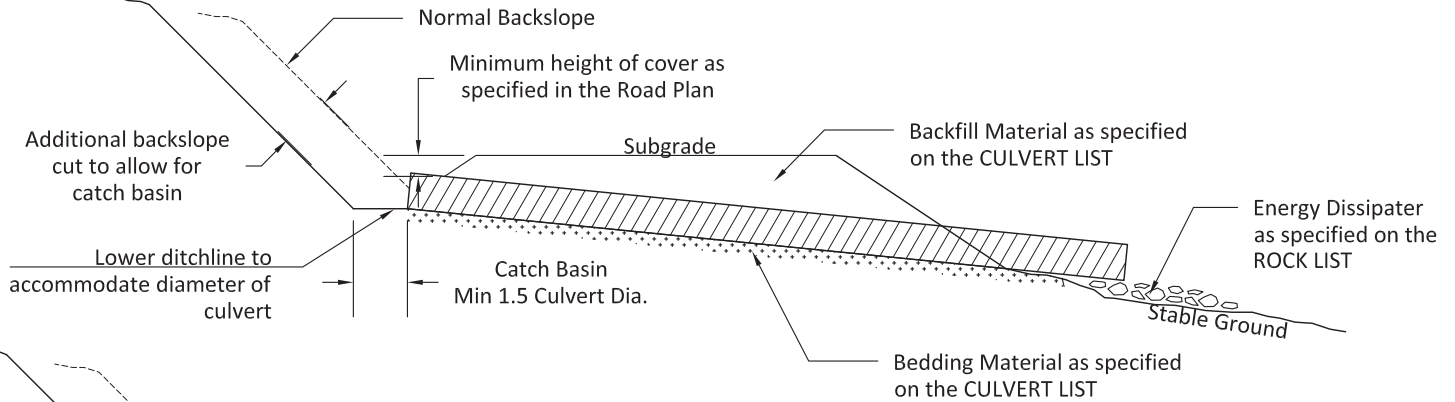
1. Proper preparation of foundation and placement of any required bedding material shall precede the installation of all culverts. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform, dense, unyielding base. The pipe must be uniformly supported along the barrel.
2. Backfill material shall be compacted under the culvert haunches, around the sides, and above the culvert in accordance with the COMPACTION LIST.

ALL DRAWINGS ARE NOT TO SCALE

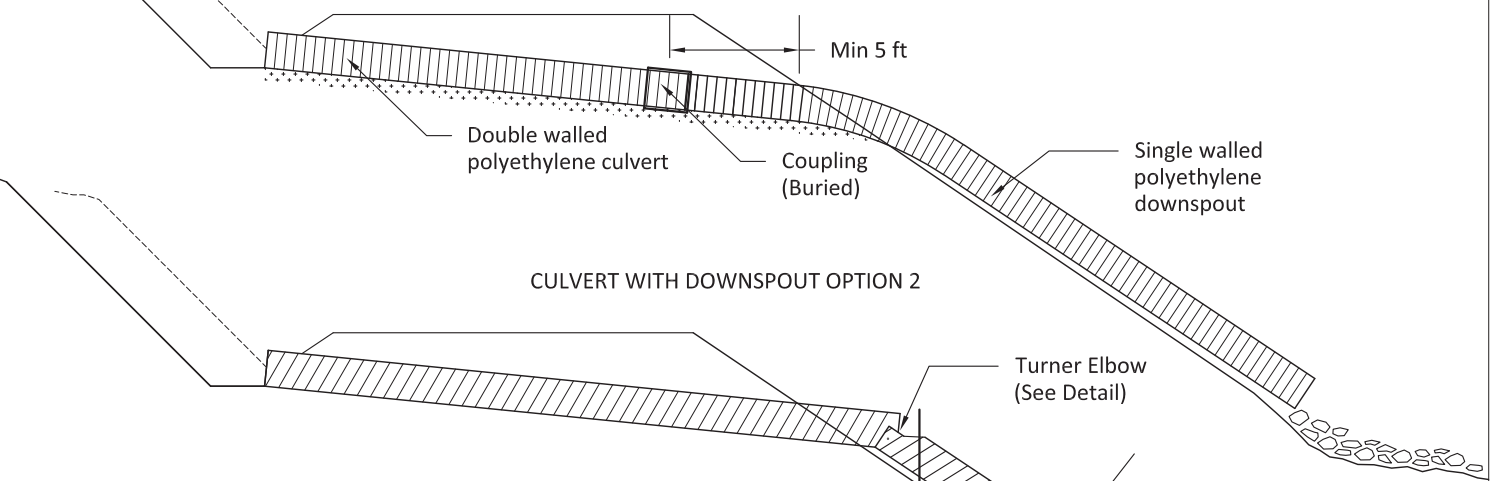
CROSS SECTION



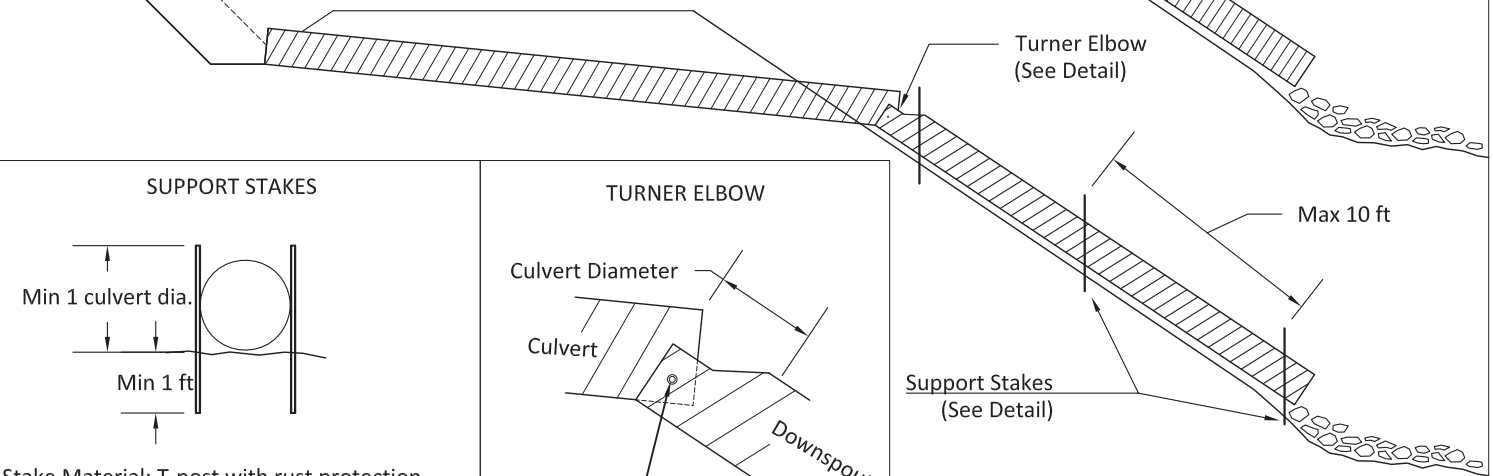
CULVERT PROFILE (TYPICAL)



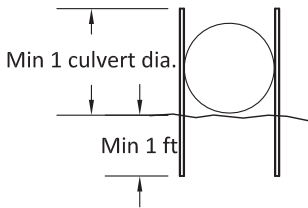
CULVERT WITH DOWNSPOUT OPTION 1



CULVERT WITH DOWNSPOUT OPTION 2

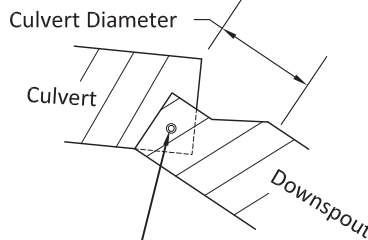


SUPPORT STAKES



Stake Material: T-post with rust protection coating.
Connections: Bolt support stakes to the culvert with $\frac{5}{8}$ " u-bolts, with washers on both the inside and outside of the culvert.
Alternative staking methods may be approved, in writing, by the Contract Administrator.

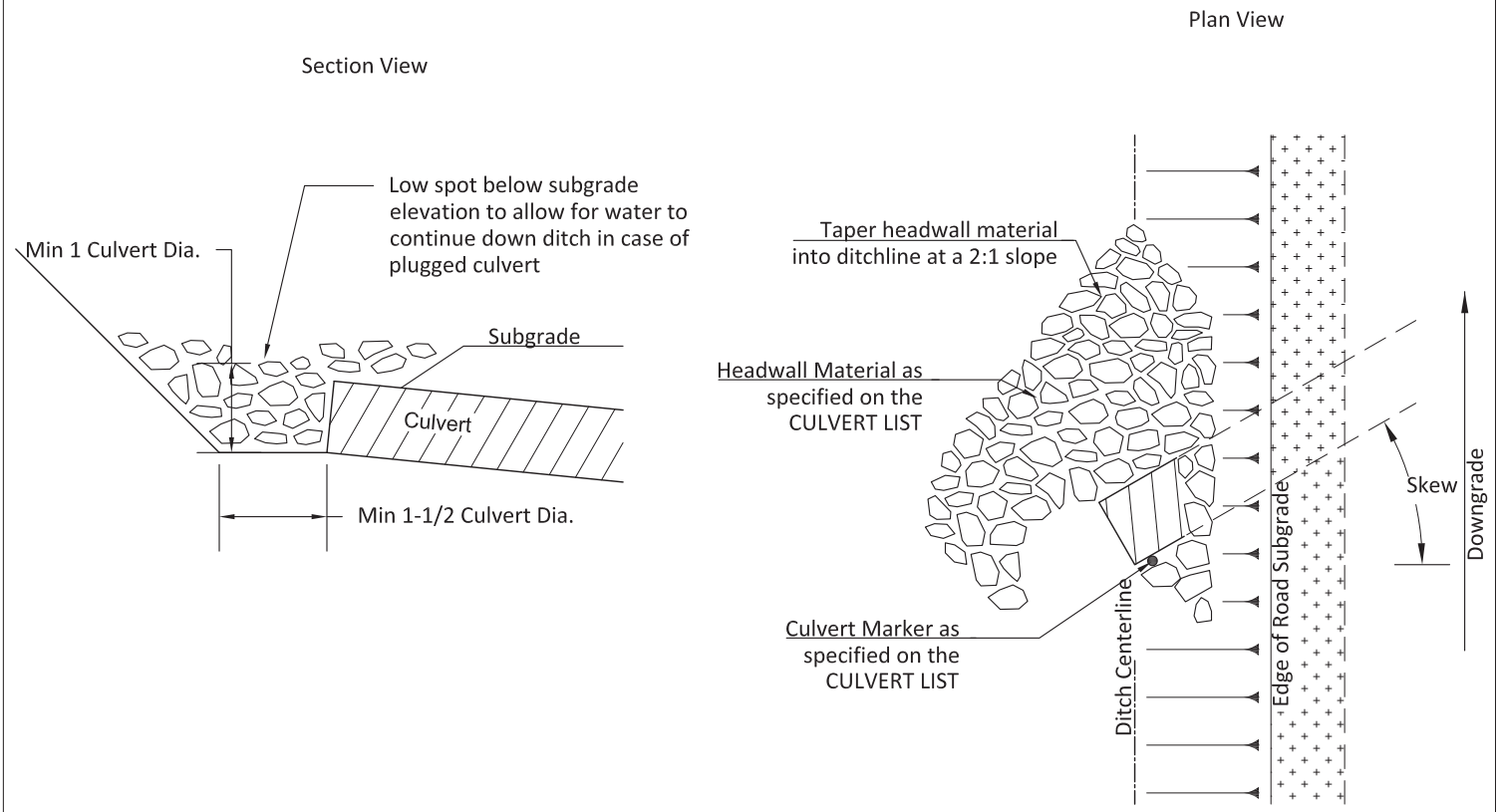
TURNER ELBOW



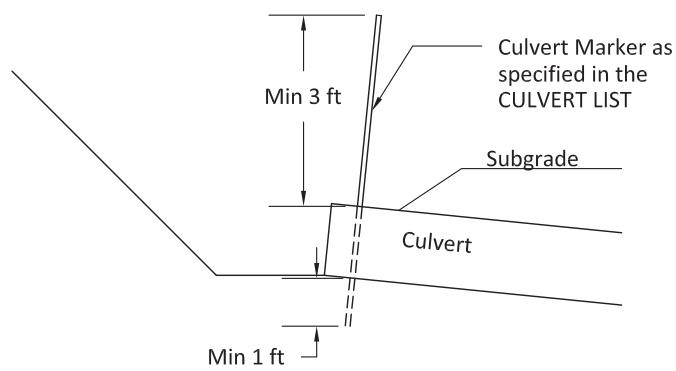
Downspout must be 6 inches larger in diameter than the culvert.

CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 2 OF 2

HEADWALLS

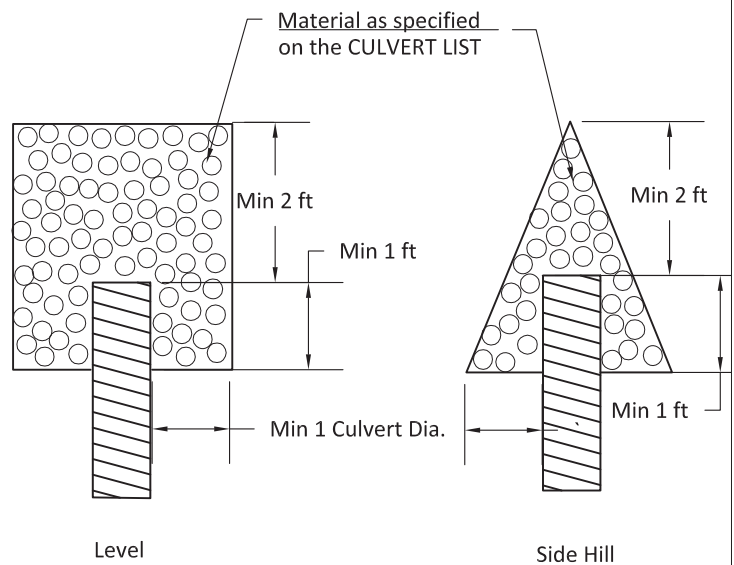


CULVERT MARKERS



Culvert Marker Material: 1 Inch I.D., Schedule 40 PVC Pipe, White. Marker must be capped on the top.
 Culvert Marker Placement: Place on uphill side of culvert, between corrugations if possible.
 Alternative culvert marker types may be approved, in writing, by the Contract Administrator.

ENERGY DISSIPATORS



Min Energy Dissipater Depth: 1 Culvert Dia.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 1 of 2

Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the cut slope/fill slope ratios. Remove slides from ditches and the roadway. Repair fill-failures, in accordance with Clause 4-6 EMBANKMENT SLOPE RATIO, with selected material or material approved by the Contract Administrator. Remove overhanging material from the top of cut slopes.
- Waste material from slides or other sources shall be placed and compacted in stable locations identified in the road plan or approved by the Contract Administrator, so that sediment will not deliver to any streams or wetlands.
- Slide material and debris shall not be mixed into the road surface materials, unless approved by the Contract Administrator.

Surface

- Grade and shape the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, unconcentrated manner.
- Blading shall not undercut the backslope or cut into geotextile fabric on the road.
- If required by the Contract Administrator, water shall be applied as necessary to control dust and retain fine surface rock.
- Surface material shall not be bladed off the roadway. Replace surface material when lost or worn away, or as directed by the Contract Administrator.
- Remove shoulder berms, created by grading, to facilitate drainage, except as marked or directed by the Contract Administrator.
- For roads with geotextile fabric: spread surface aggregate to fill in soft spots and wheel ruts (barrel spread) to prevent damage to the geotextile fabric.

Drainage

- Prevent silt bearing road surface and ditch runoff from delivering sediment to any streams or wetlands.
- Maintain rolling dips and drivable waterbars as needed to keep them functioning as intended.
- Maintain headwalls to the road shoulder level with material that will resist erosion.
- Maintain energy dissipaters at culvert outlets with non-erodible material or rock.
- Keep ditches, culverts, and other drainage structures clear of obstructions and functioning as intended.
- Inspect and clean culverts at least monthly, with additional inspections during storms and periods of high runoff. This shall be done even during periods of inactivity.

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Page 2 of 2

Preventative Maintenance

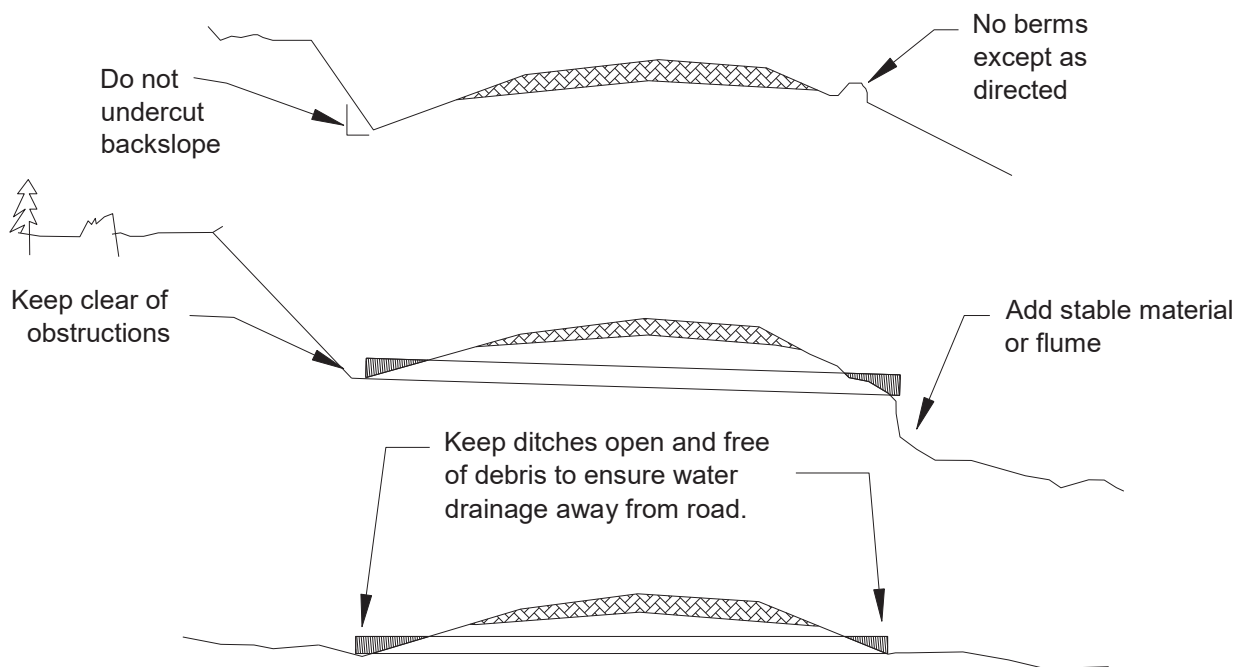
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

Termination of Use or End of Season

- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

Debris

- Remove fallen timber, limbs, and stumps from the slopes, roadway, ditchlines, and culvert inlets.



LIVE STREAM INSTALLATION PROCEDURE

Order of work is as follows, deviations shall be approved, in writing, by the Contract Administrator.

- 1) Purchaser shall notify the State of intent to start project, and a pre-work conference shall be held before move in of equipment. State will designate a representative that will remain on site at all times when work is being performed in creek channel.
- 2) Work period shall be restricted to the permitted times stated in an approved FPA. Work period on Np and Ns streams that are not covered by an FPA shall be permitted only during the dry weather seasonal low flow period between June 1 and October 1; any work outside of this timing restriction may be granted in writing by the Contract Administrator only during unseasonably low flows.
- 3) Assemble the items on the Materials List onsite before proceeding.
- 4) Set up pumps (one as backup).
- 5) Dam up stream with sandbags and line floor of dam with plastic (to prevent sub-surface water flow), place clean rock on plastic to hold in place, and key leading edge of plastic into channel bottom - see SETTLING POND AND PUMP DETAIL. Build a settling pond at culvert outlet. Fill may need to be removed before the settling pond installation due to space limitations. Pump clean water at catch basin around work site and back into stream. Dirty water shall be pumped away from site and onto forest floor a minimum of 200 feet from live streams. Silt fence shall be erected at base of fill slope and bottom edge of fence shall be keyed into slope and held in place with rocks to prevent water from flowing under the silt fence.
- 6) Remove remainder of fill and culvert.
- 7) Remove settling pond.
- 8) Cover exposed soils within 100 feet of all live streams with straw (minimum depth of 4 inches) and grass seed.

Materials List:

- 3 pumps, (one as a backup) The clean water pump (dam at culvert catch basin) shall have a minimum capacity of 1200 gallons per minute. The dirty water pump (settling pond) and the backup pump shall each have a minimum capacity of 600 gpm. Culvert removal should not start during rain or threat of rain;
- plastic sheet;
- silt fence and stakes;
- bales of straw

LIVE STREAM REMOVAL PROCEDURE

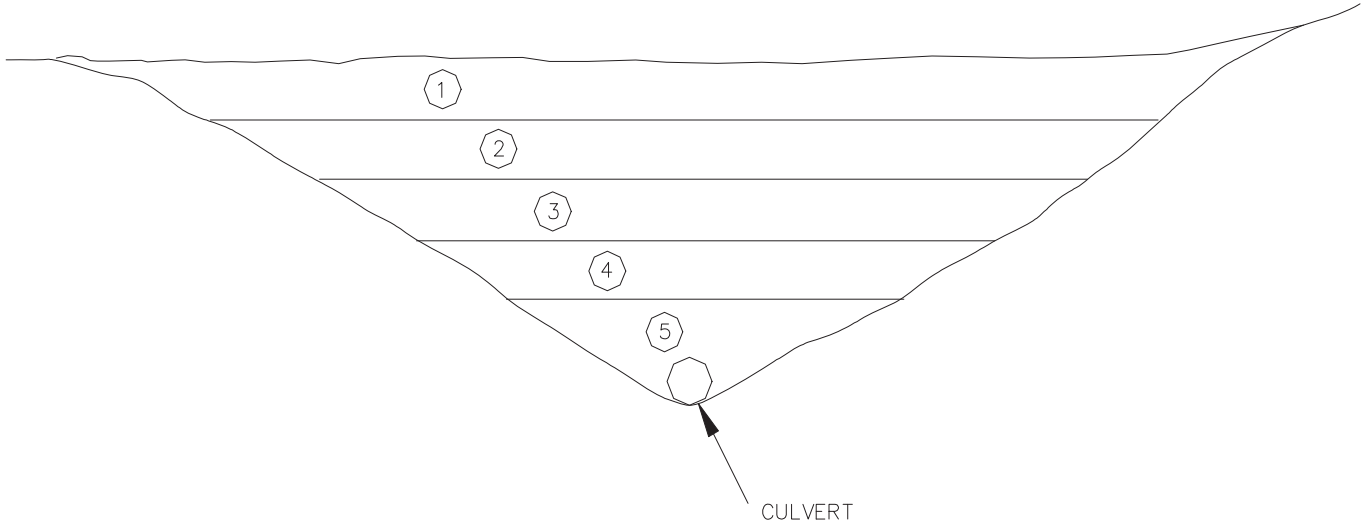
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- 3) Assemble the items on the Materials List onsite before proceeding.
- 4) Set up pumps (one as backup).
- 5) Dam up stream with sandbags and line floor of dam with plastic (to prevent sub-surface water flow), place clean rock on plastic to hold in place, and key leading edge of plastic into channel bottom - see **SETTLING POND AND PUMP DETAIL**. Build a settling pond at culvert outlet. Fill may need to be removed before the settling pond installation due to space limitations. Pump clean water at catch basin around work site and back into stream. Dirty water shall be pumped away from site and onto forest floor a minimum of 200 feet from live streams. Silt fence shall be erected at base of fill slope and bottom edge of fence shall be keyed into slope and held in place with rocks to prevent water from flowing under the silt fence.
- 6) Remove 95% of fill (see **FILL REMOVAL DETAIL**). Excavated channel slopes shall be consistent with requirements stated in Clauses 9-2, 9-22 and 9-24.
- 7) Remove remainder of fill, logs from fill, and any culverts.
- 8) Remove settling pond.
- 9) Cover exposed soils within 100 feet of all live streams with weed free straw (minimum depth of 4 inches) and grass seed.

Materials List:

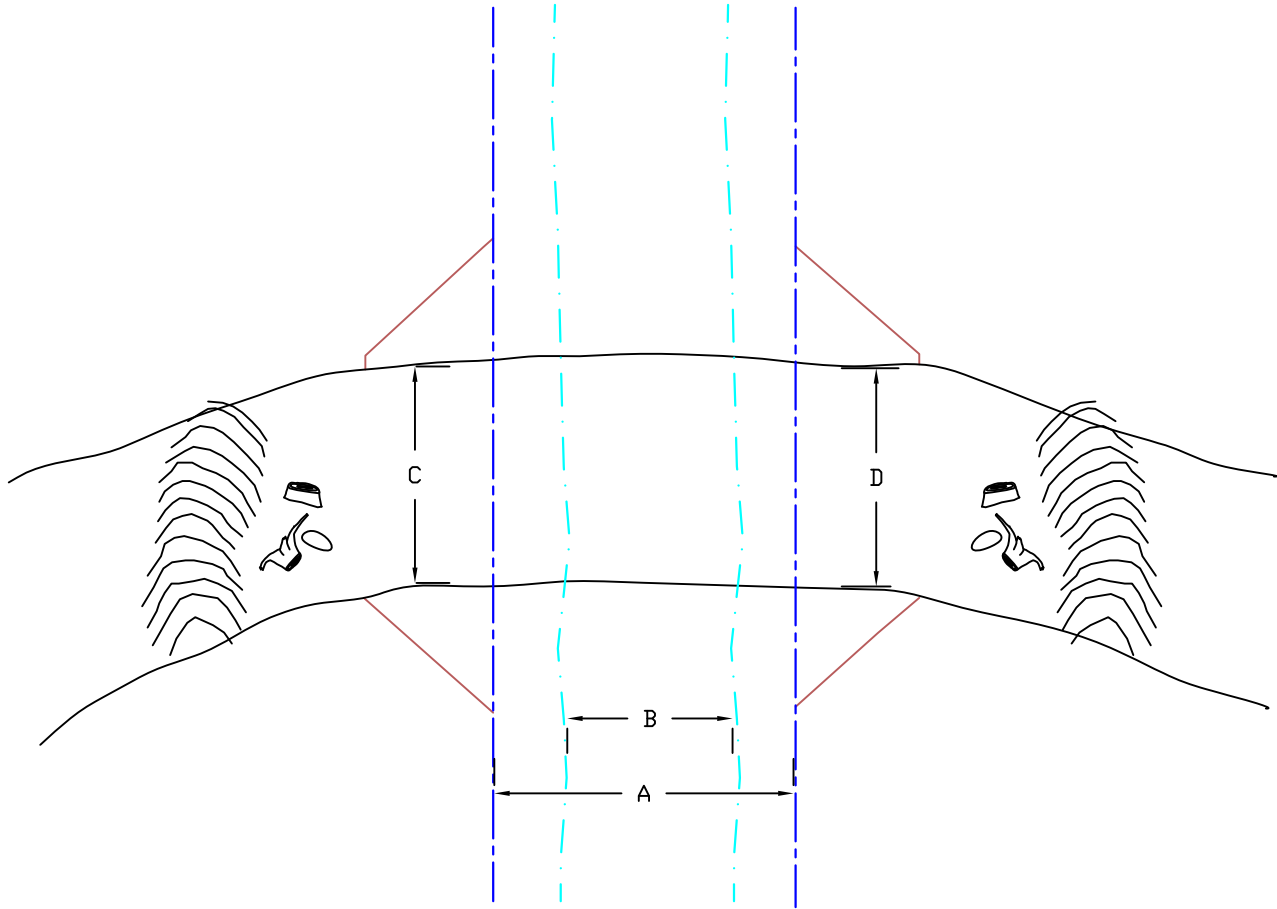
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- plastic sheet;
- silt fence and stakes;
- bales of weed free straw

FILL REMOVAL DETAIL



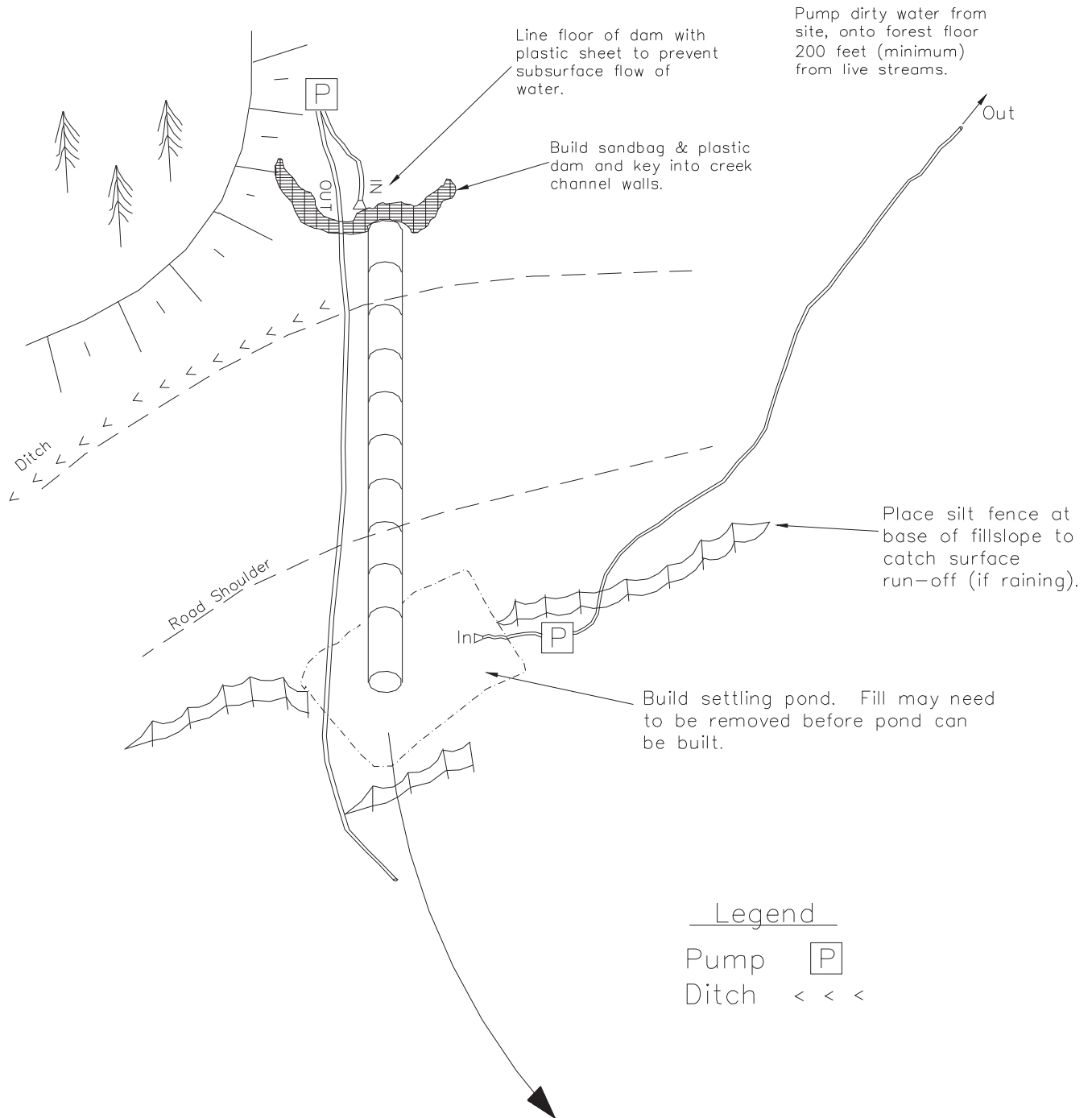
- Remove fill in layers not to exceed 3 feet.

TYPICAL ABANDONED/DEACTIVATED STREAM CROSSING PLAN VIEW

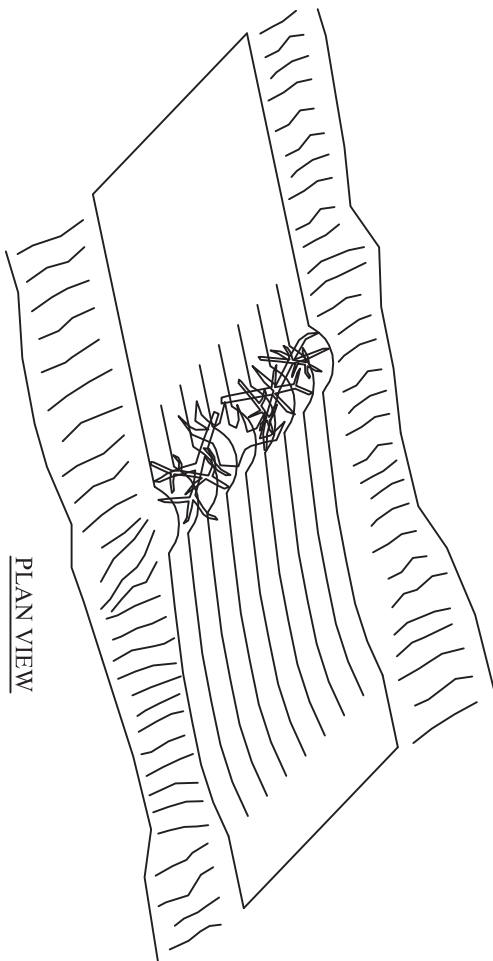


- A = Total Fill Removal Width
- B = Bank Full Width
- C = Road With
- D = Road With

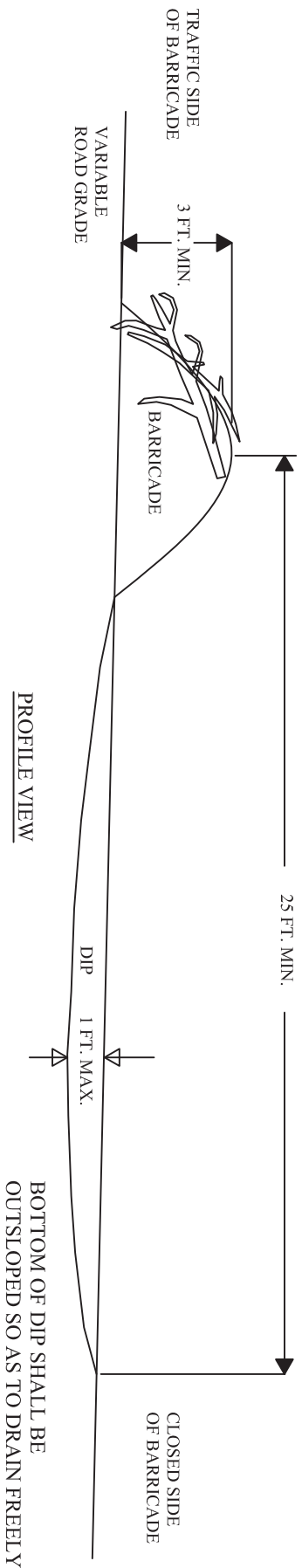
SETTLING POND AND PUMP DETAIL



EARTHEN BARRICADE DETAIL

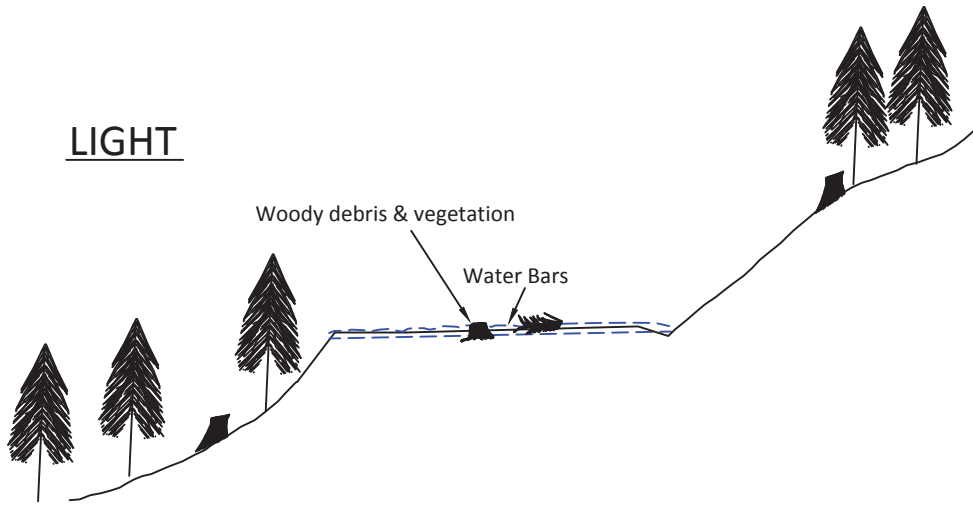


SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

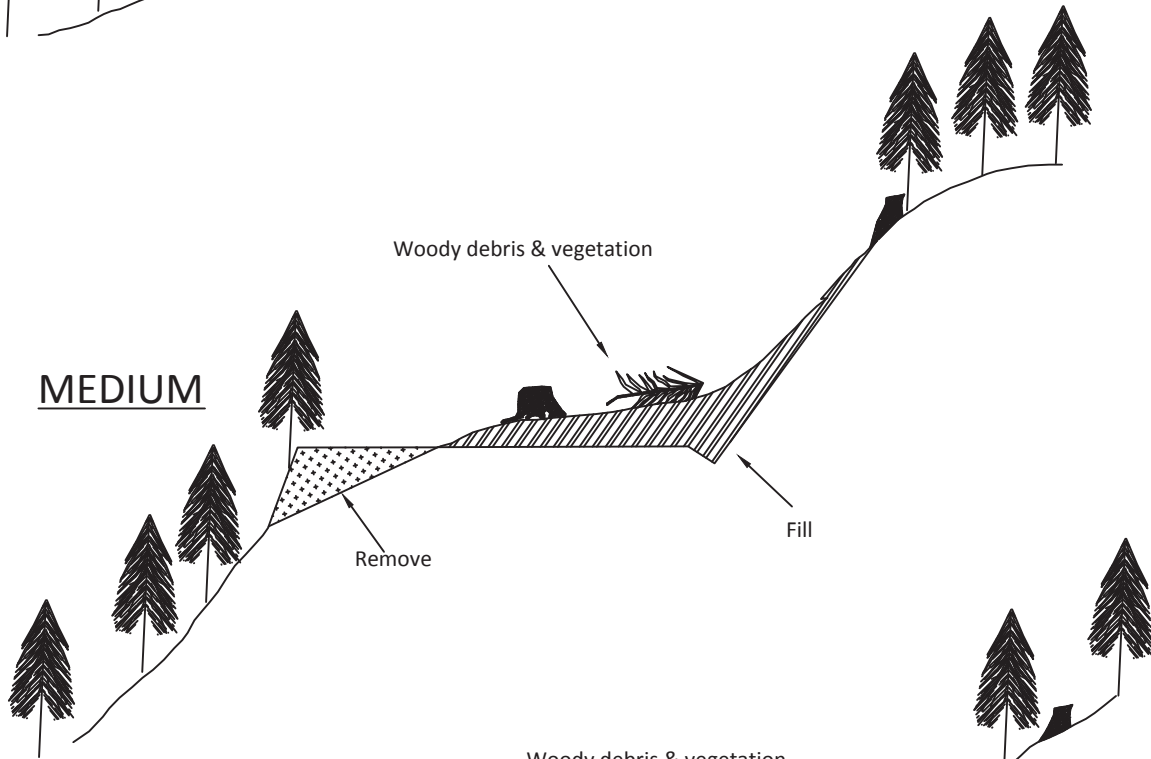


ROAD ABANDONMENT CROSS SECTIONS

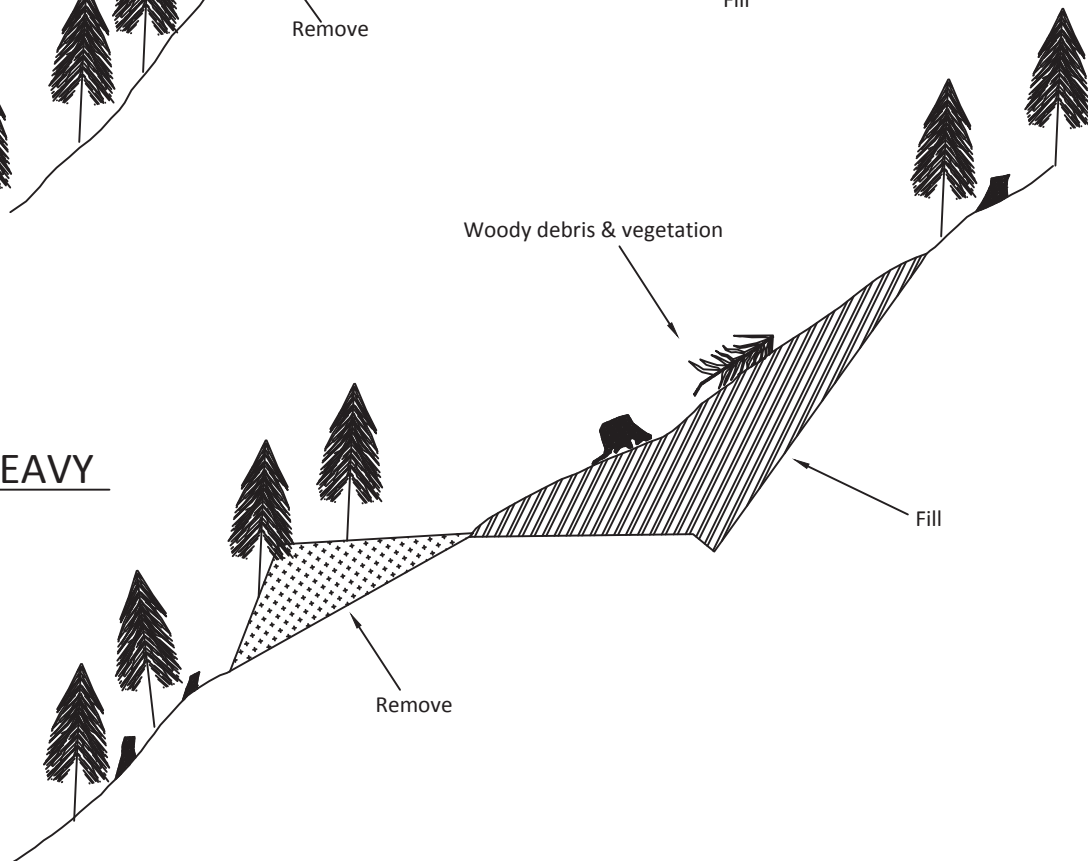
LIGHT



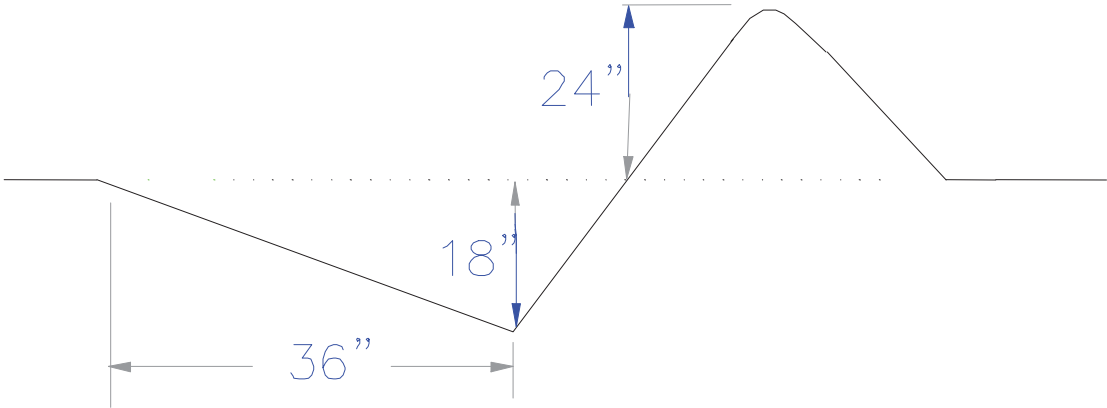
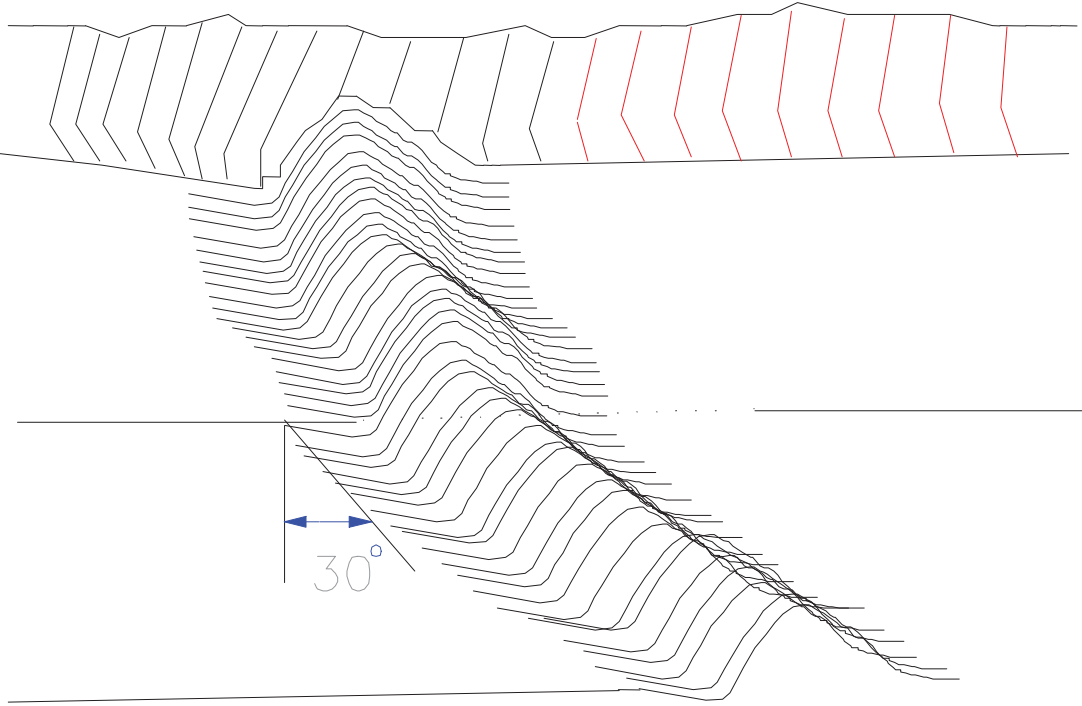
MEDIUM



HEAVY



NON-DRIVABLE WATER BAR DETAIL



ROCK ACCOUNTABILITY DETAIL

SALE NAME: _____

Purchaser: _____

Agreement #: _____

Contractor: _____

Rock Quarry/Pit: _____

Truck No: _____

DAILY ROCK LOAD RECORD

DATE	LOAD TIME	<u>ROAD NO.</u>	TYPE OF ROCK	QUANTITY	COMMENTS

Truck Driver Signature

SIGNATURE

DATE

Rock Crushing Compliance Procedure

Phase I. Equipment Adjustment

- Step 1:** At start up of crushing operations, the contractor will notify the contract administrator when the rock meets the gradation specifications in the contract. None of the rock crushed during this calibration period will be counted toward the amount required to be crushed, and this rock must be kept separate from accepted rock crushed later.
- Step 2:** The contract administrator and the contractor will test the rock. Two samples will be taken. If the rock meets specifications, crushing may begin. If the rock does not meet specifications, return to Step 1.

Phase II. Production

- Step 3:** The contract administrator and the contractor will continue periodic testing to ensure that rock stays in spec. Testing will take place according to the following schedule:
- After the first 500 yards
 - After every 1,000 yards thereafter
- a) Any time a sample is out of spec, but is within 5%*, the contractor will be notified and a second sample will be taken later in the day. If the second sample meets specifications, the rock crushed during that day will be accepted. If the second sample also fails to meet spec, none of the rock crushed since the last acceptable test will be counted toward the amount to be crushed.
- b) Any time a sample is out of spec and is more than 5% off in any category, none of the rock crushed since the last acceptable test will be accepted and that rock must be kept separate from the stockpile. Return to Step 1.
- c) Contractors are strongly encouraged to take their own samples regularly and keep their operations in spec to avoid unnecessary expenses.
- * The 5% will be applied only to sieve specs for 2" to ¼"; rock that is out of spec in larger sizes must be kept separate from the acceptable rock.

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

INFORMATIONAL BLASTING PLAN

Timber Sale/Project Name: _____ App./Project No.: _____

1. Blaster-in-Charge: Name: _____

Company: _____

Address: _____

Telephone: _____

2. Quarry Name/Location: _____

3. Total Estimated Cubic Yards in Blast (loose): _____

4. Hole Spacing: _____

5. Burden: _____

6. Hole Diameter: _____

7. Hole Depth: _____

8. Sub Drill: _____

9. Number of Holes: _____

10. Stemming Depth: _____

11. Explosive (mfg., name, density, %, V.O.D.): _____

12. Type and Size of Primer (if applicable): _____

13. Total Weight of Primers for Shot: _____

14. Calculated Powder Factor/Cubic Yard: _____

15. Number of Delays (in M.S.): _____

M-126PAC (03/04)

INFORMATIONAL BLASTING PLAN

Page 2 of 3

16. Number of Holes Fired on Each Delay: _____

17. Total Amount of Explosives Fired on Each Delay: _____

18. Type of Blasting Machine: _____

19. Date, Start Drilling: _____

20. Date and Time, Start Loading: _____

21. Date and Time of Blast (approx.): _____

INFORMATIONAL BLASTING PLAN

Page 3 of 3

22. Detail drawing of delay system (show hole pattern and delays in milliseconds). Attach additional sheets if required:

23. Typical cross-section of hole (show primer, main charge, sub drill, and stemming):

23. Submitted by: _____ Date: _____

24. Received by: _____ Date: _____

Note: Attach copies of manufacturer=s data sheet(s) for explosive and caps.

M-126PAC (03/04)

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

ROCK SOURCE DEVELOPMENT PLAN

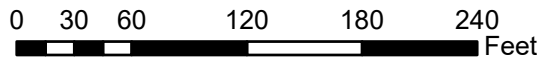
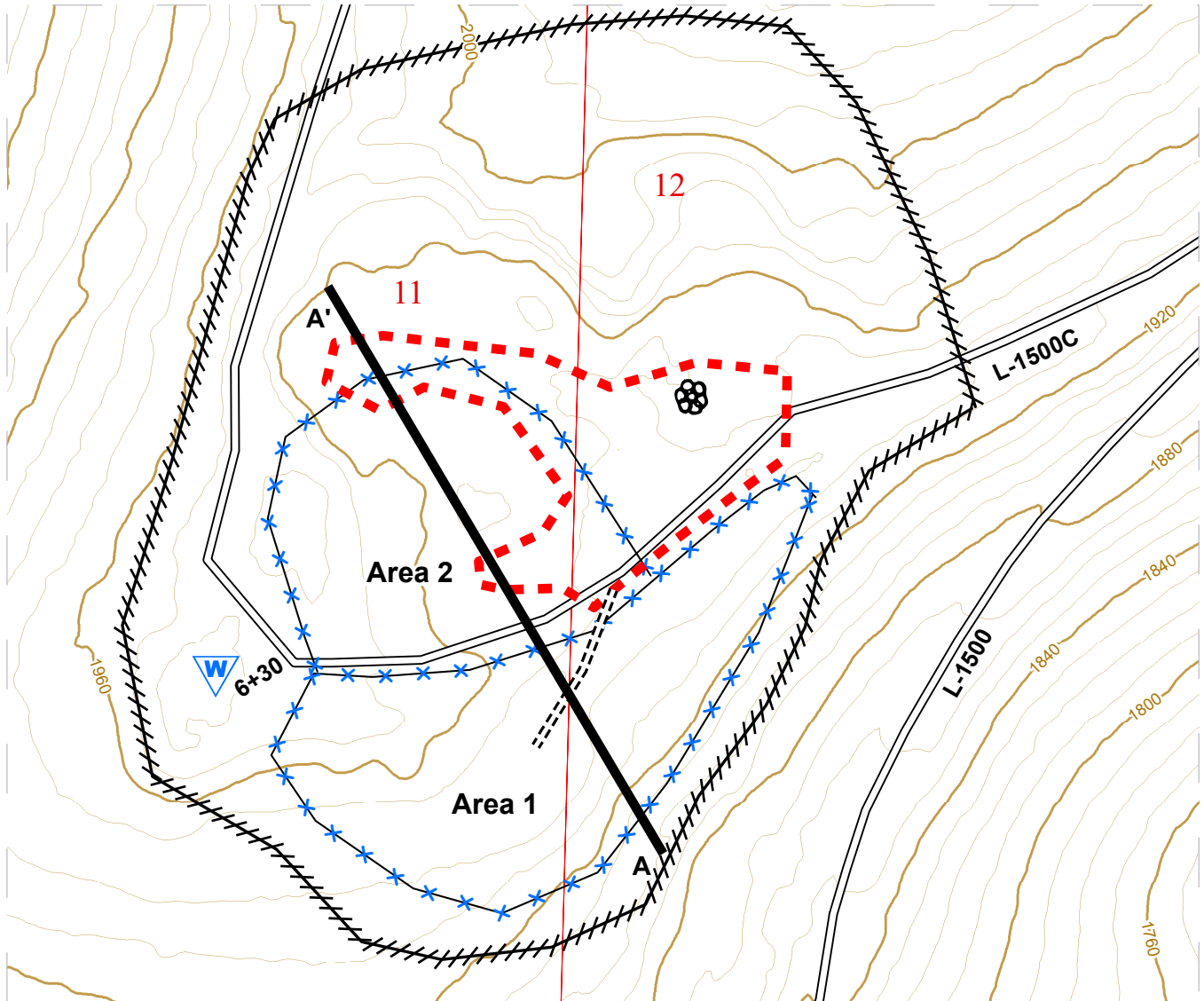
Jackson Pass Pit – NE¼ NE¼ Section 11, Township 02 North, Range 04 East, W.M.
NW¼ NW¼ Section 12, Township 02 North, Range 04 East, W.M.
(Page 1 of 2)

1. Development shall take place in mining area as indicated on the Pit Development Plan Maps for the Jackson Pass Pit. Mining shall begin in Area 1 and progress to Area 2. Mining in Area 2 shall only begin after all rock development in Area 1 has been completed and approved in writing by the Contract Administrator.
2. All vegetation including stumps shall be cleared a minimum of 25 feet beyond the top of all working faces. Trees shall be cleared to a minimum of ¾ of the height of the tallest tree adjacent to the pit. The Contractor shall maintain a minimum of 15 foot wide area stripped to rock from the pit face at all times. All Clearing shall be approved in writing by the Contract Administrator prior to overburden removal.
3. Overburden from the Jackson Pass Pit shall be end hauled to the waste area at Station 6+30 on the L-1500C road. All waste material shall be compacted. Minimal acceptable compaction is achieved by placing waste material in 1 foot or shallower lifts and routing excavation equipment over entire width of the lifts. All Overburden removal shall be approved in writing by the Contract Administrator prior to any drilling operation and or rock extraction.
4. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in the designated Waste Area.
5. The Operator shall submit an informational drilling and shooting plan to the Contract Administrator 5 working days prior to any drilling. (Form #M-126PAC)
6. Drilling may begin when the Contract Administrator has approved, in writing, all of the Clearing, Grubbing and Overburden removal. Purchaser shall block access roads and trails before blasting operations.
7. Pit faces shall not exceed 30 feet in height. All pit faces shall be sloped no steeper than ¼:1.
8. Working bench width shall be a minimum of 20 feet.
9. The pit floor shall have continuity of slope and be left in a smooth and neat condition, providing drainage at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation or drill and shoot techniques. The installation of a culvert may be necessary to drain water from the pit floor in locations where the pit floor is adjacent to a road. The location of the culvert shall be subject to approval of the Contract Administrator. No sediment shall enter live water.
10. The location and amount of material to be placed in a temporary stockpile are subject to approval of the Contract Administrator. All stock piled material shall be maintained in a neat and useable condition.
11. Oversize material remaining in the rock source at the conclusion of use shall not exceed 5 percent of the total volume mined during that operation. Oversize material is defined as rock fragments larger than two feet in any direction. At the conclusion of operations, all remaining oversize material shall be placed at the location shown on the Pit Development Plan Map and as directed by the Contract Administrator in a location outside of the future development.
12. At the end of operations, pit faces and walls shall be scaled and cleared of loose and overhanging material and shall not be undermined or over steepened; benches shall have safety berms constructed or access blocked to highway vehicles. Access roads/trails shall have Non-driveable waterbars constructed in accordance with the NON-DRIVEABLE WATER BAR DETAIL as directed by the Contract Administrator. Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to human life.
13. All exposed soil in the waste area, access roads, and exposed banks shall be grass seeded in accordance with Road Plan Clauses 8-15 and 8-25.
14. All operations shall be carried out in compliance with all regulations of:
 - a. Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations@ (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration.
 - b. "Safety Standards for Construction Work" (296-155 WAC), Washington Department of Labor and Industries.
15. The Operator shall submit an informational drilling and shooting report to the Contract Administrator after blasting has occurred. (Form #M-126PAC)
16. The pit area shall be worked and left in a condition that future operations may proceed in an orderly manner. Upon completion of operations, the site shall be cleared of all temporary structures/equipment and rubbish, access roads shall be blocked with riprap at locations as directed by the Contract Administrator, and shall be left in a neat and presentable condition. At the completion of rock source operations, Contractor shall ask Contract Administrator for written approval of final rock source condition and compliance with the terms of this plan.

Jackson Pass Pit

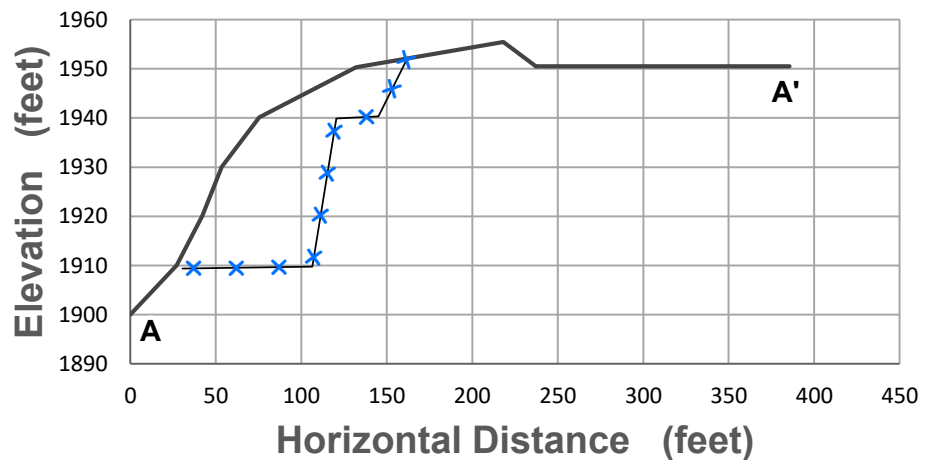
NE1/4 NE1/4 Sec. 11, T02N, R04E, W.M.
NW1/4 NW1/4 Sec. 12, T02N, R04E, W.M.

Page 2 of 2

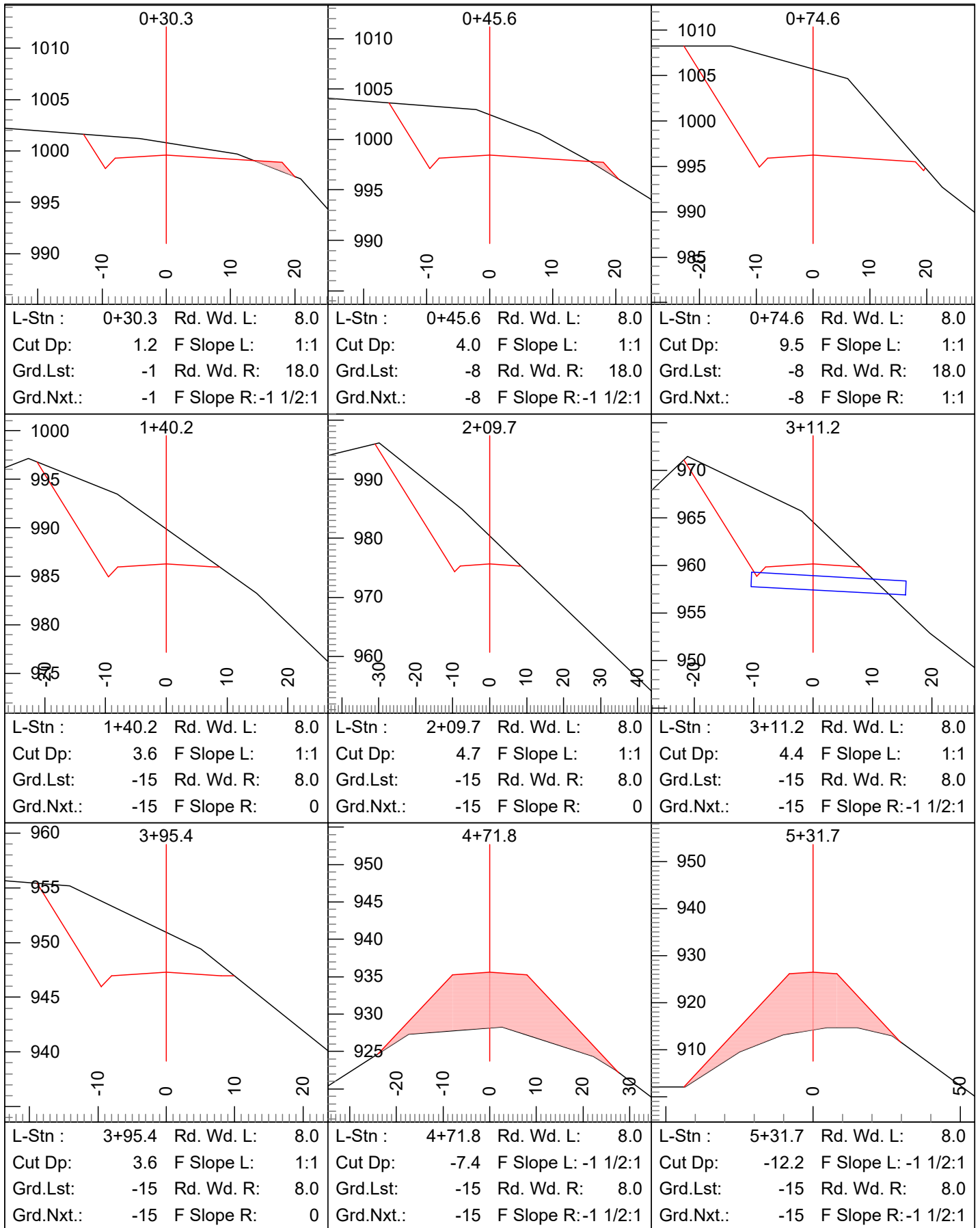


- Rock Pit Boundary
- Mining Area Boundary
- Pit Floor
- Access Road
- Public Land Survey Sections
- Contours 10 ft
- Existing Road
- Oversize Rock Storage Area
- Waste Area
- Profile Line

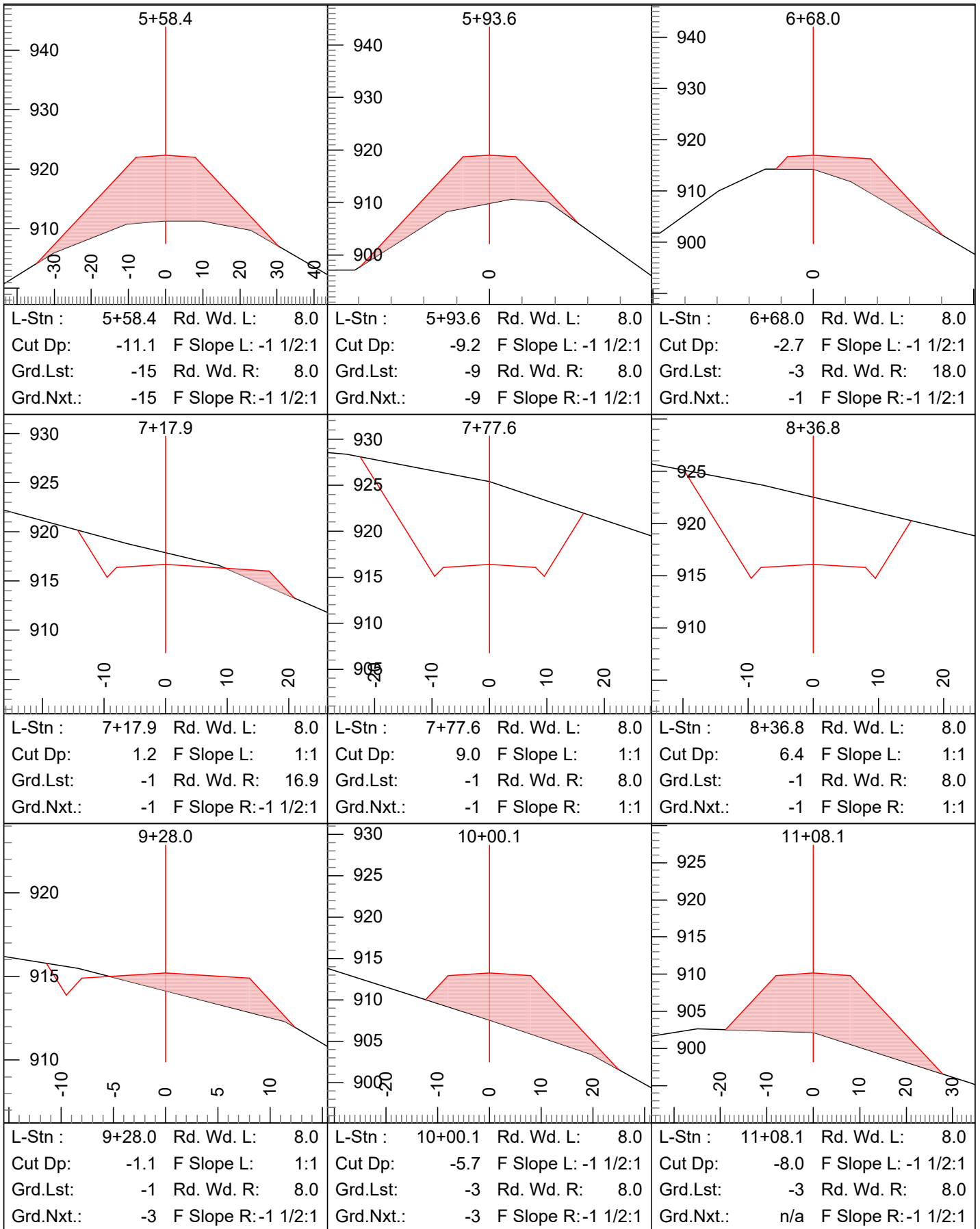
Profile "A"



CROSS SECTIONAL VIEW



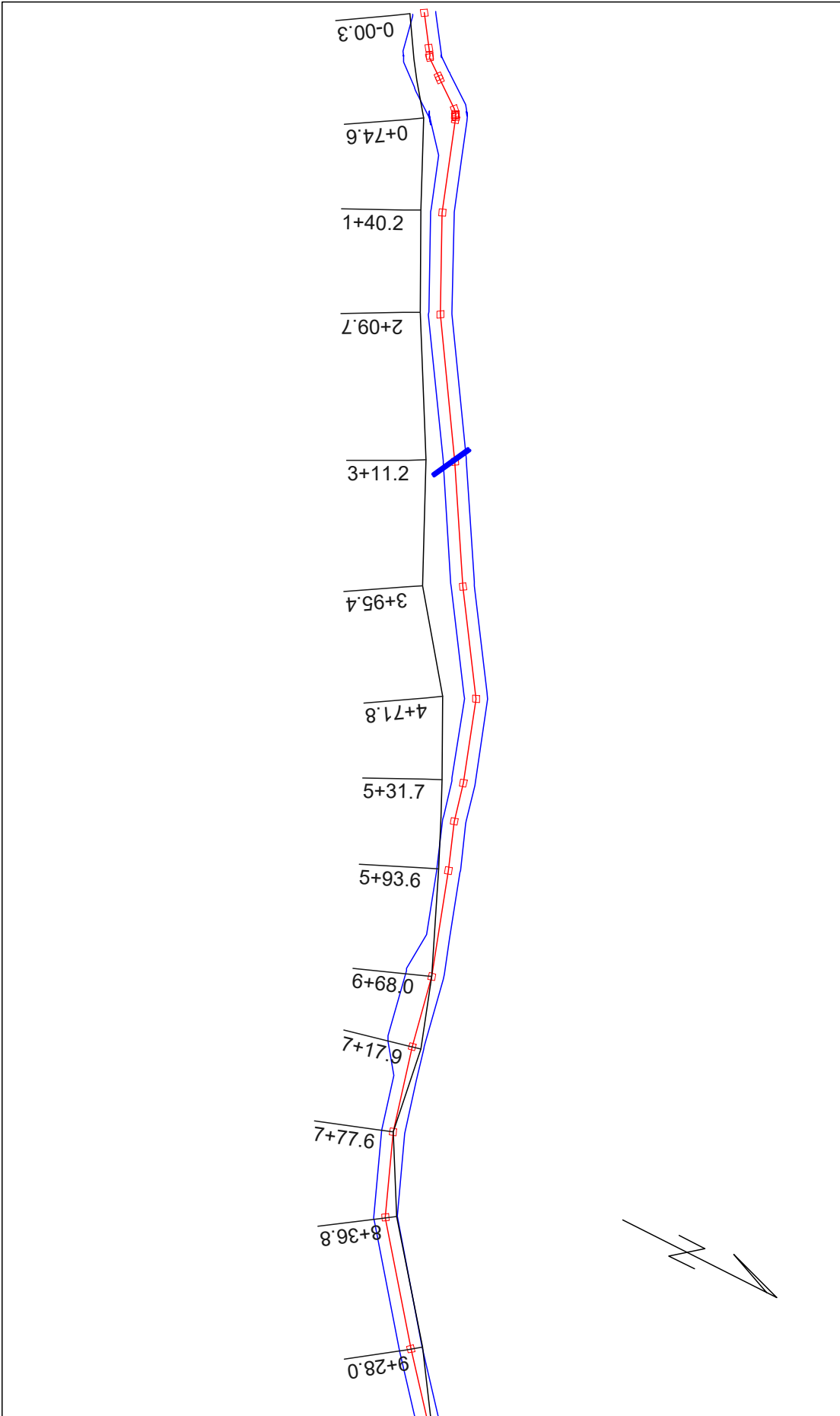
CROSS SECTIONAL VIEW



Legend

- Plan L-line Location
- Plan Road Edges
- Plan Culverts
- Plan P-Line Location

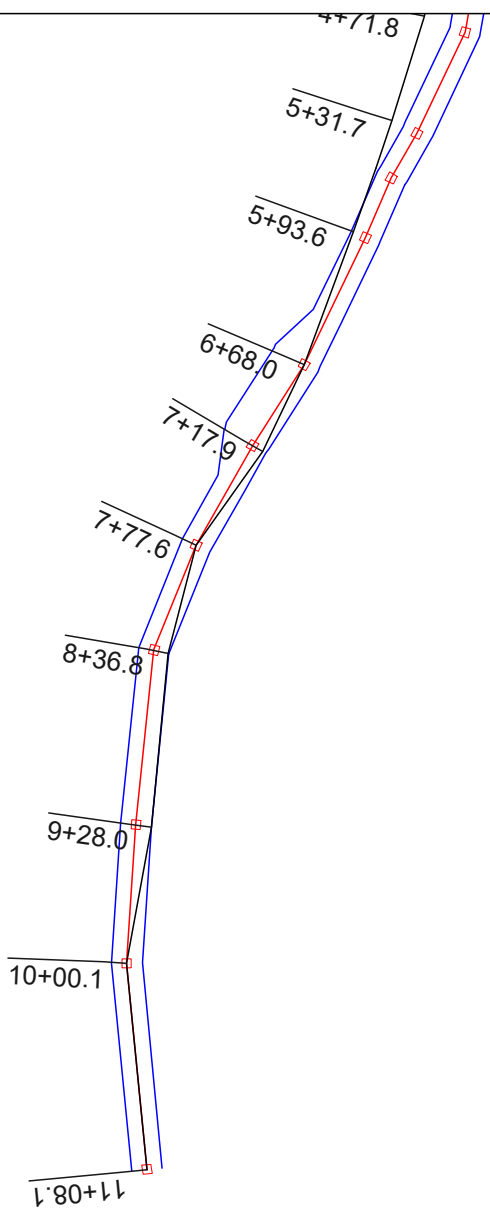
PLAN VIEW
L-1500G
Scale 1:1200



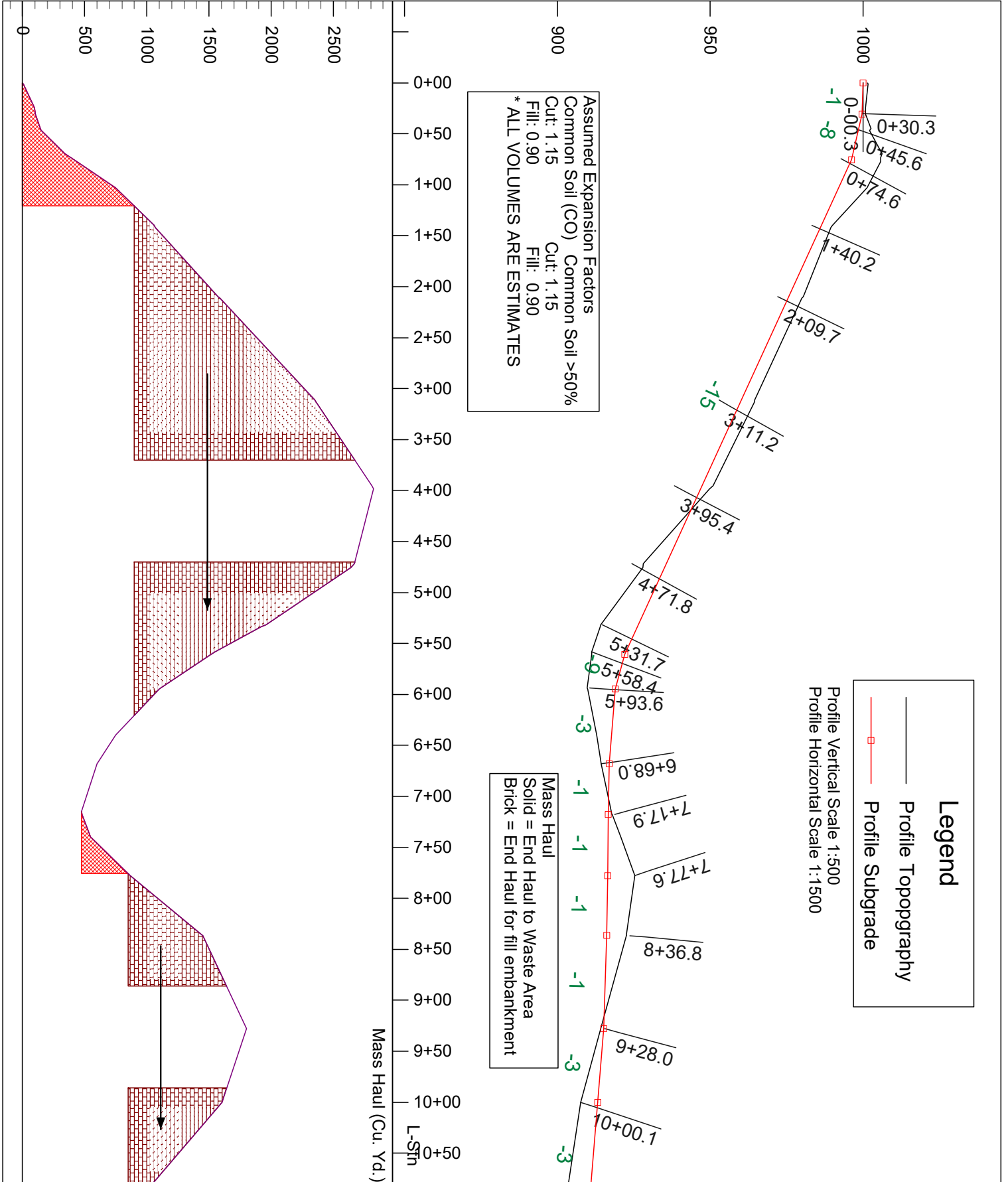
Legend

- Plan L-line Location
- Plan Road Edges
- Plan Culverts
- Plan P-Line Location

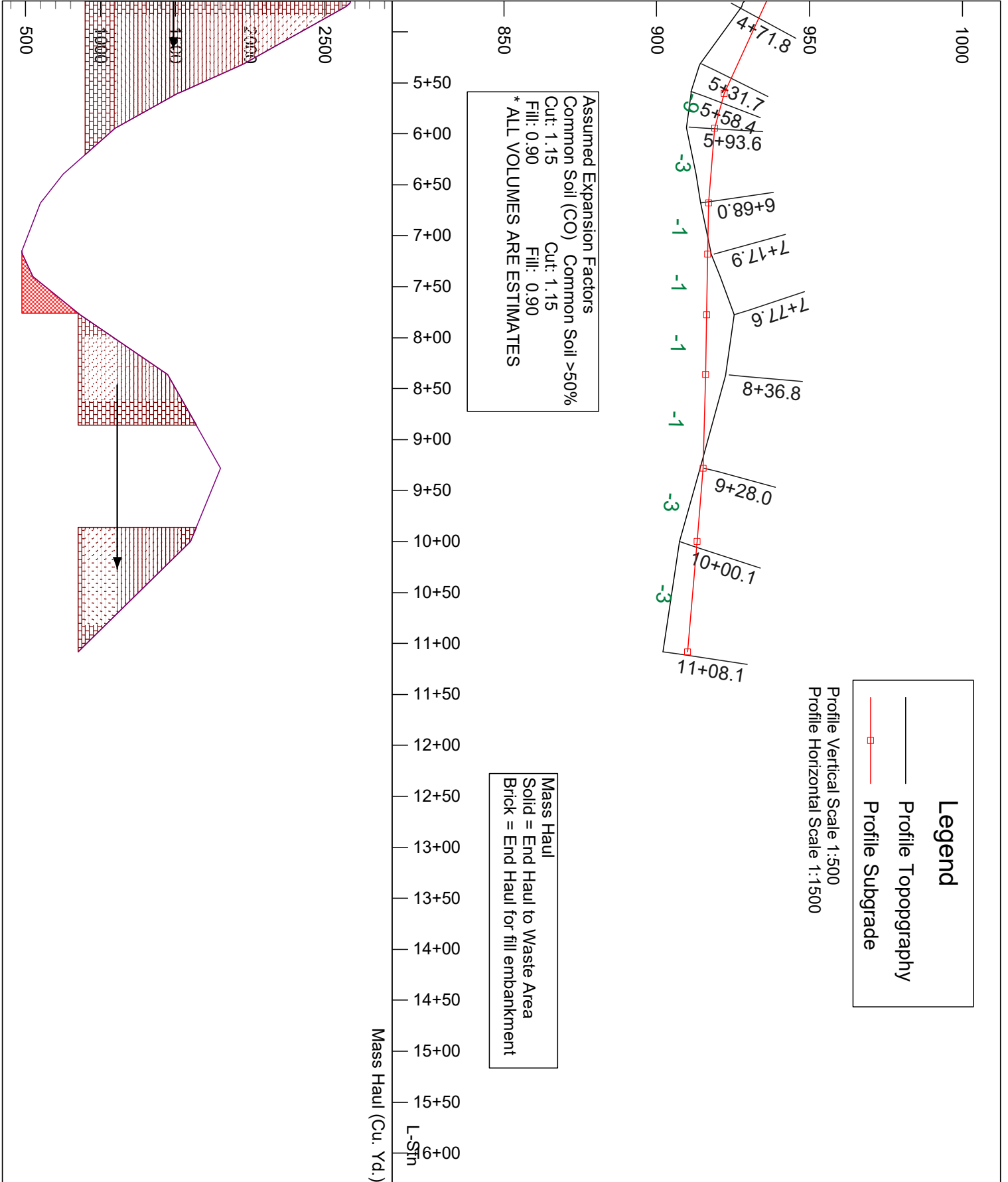
PLAN VIEW
L-1500G
Scale 1:1200



Page 5 of 6
 PROFILE VIEW
 L-1500G



Page 6 of 6
PROFILE VIEW
L-1500G



SUMMARY - Road Development Costs

REGION: Pacific Cascade

DISTRICT: Yacolt

SALE/PROJECT NAME: Punch Bowl VRH THIN

AGREEMENT #: 30-104119

ROAD NUMBERS:	L-1500G, L-1552D, L-1580B1, & L-1580H	L-1580B	L-1500, L-1520, L-1552, L-1586, & L-1580
ROAD STANDARD:	Construction	Reconstruction	Maintenance
NUMBER OF STATIONS:	34.51	15.95	340.70
CLEARING & GRUBBING, EXCAVATION AND FILL, MISC.:	\$43,053.80	\$4,003.18	\$16,863.54
ROAD ROCK:			
	Optional:	\$17,772.38	\$19,406.66
	Required:	\$34,570.12	\$0.00
	Total:	\$52,342.50	\$19,406.66
			\$29,238.85
STOCKPILE/PIT DEVELOPMENT:	\$0.00	\$0.00	\$0.00
CULVERTS AND FLUMES:	\$6,149.70	\$3,277.22	\$0.00
STRUCTURES:	\$0.00	\$0.00	\$0.00
DUST ABATEMENT	\$0.00	\$0.00	\$0.00
MOBILIZATION:	\$3,232.85	\$836.08	\$1,504.95
 TOTAL COSTS:	 \$104,778.85	 \$27,523.14	 \$47,607.34
COST PER STATION:	\$3,036	\$1,726	\$140
ROAD DEACTIVATION & ABANDONMENT COSTS:	\$5,731.05	\$0.00	\$0.00
			\$18,564.04
			TOTAL (All Roads) =
			\$204,204.42
			TOTAL (Minus Optional Rock) =
			\$167,025.38
			SALE VOLUME MBF =
			2,743
			TOTAL \$/MBF =
			\$74.45
			TOTAL \$/MBF (Minus Optional Rock) =
			\$60.89

Profit and Risk costs are accounted on an individual basis.

Compiled by: David Stone

Date: November 1, 2023

SUMMARY OF ROAD

Sale: Punch Bowl VRH THIN

Road: L-1500

Required
Pre-Haul Maintenance- 65+20 stations
1.23 miles

Required Reconstruction - 0.00 stations
0.00 miles

Required
Construction - 0.00 stations
0.00 miles

Required Abandonment- 0.00 stations
0.00 miles

Optional Reconstruction - 0.00 stations
0.00 miles

Optional
Construction - 0.00 stations
0.00 miles

PRE-HAUL MAINTENANCE

CLEARING

EXCAVATION

MISC.

Grade and shape existing road surface -	65.20	stations @	\$27.10	per station	\$1,766.92
Roll shaped road surface w/ vibratory roller prior to rocking -	65.20	stations @	\$14.40	per station	\$938.88

ENDHAUL

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$2,705.80**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts & Bands

0	LF of 18"	\$0.00	0	LF of 24"	\$0.00
0	LF of 30"	\$0.00	0	LF of 36"	\$0.00 w/bevel
0	LF of 42"	\$0.00 w/gasket-bevel	0	LF of 48"	\$0.00
0	LF of 54"	\$0.00	0	LF of 60"	\$0.00
0	LF of 66"	<u>\$0.00</u>	0	LF of 72"	<u>\$0.00</u>
		\$0.00			\$0.00

Half Rounds

0	LF of 24"	\$0.00	0	LF of 30"	\$0.00
0	LF of 36"	<u>\$0.00</u>	0	LF of 42"	<u>\$0.00</u>
		\$0.00			\$0.00

Culvert Stakes & Markers

0	stakes	\$0.00
0	markers	<u>\$0.00</u>
		\$0.00

TOTAL CULVERTS **\$0.00**

ROCK

40+80 to 106+00 Spot Rock	250	cy. of	1 1/4" Minus	@	\$18.55	per c.y. =	<u>\$4,637.50</u>
							TOTAL ROCK

\$4,637.50

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS **\$0.00**

ABANDONMENT

TOTAL ABANDONMENT **\$0.00**

Required
Pre-Haul Maintenance- \$7,343.30

Required Reconstruction - \$0.00

SUBTOTAL **\$7,343.30**

Required Abandonment- \$0.00

Optional Reconstruction - \$0.00

Required Construction - \$0.00

Optional Construction - \$0.00

TOTAL \$7,343.30

COST PER STATION \$112.63

SUMMARY OF ROAD

Sale: Punch Bowl VRH THIN

Road: L-1520

Required Pre-Haul Maintenance- 47+15 stations 0.89 miles	Required Reconstruction - 0.00 stations 0.00 miles	Required Construction - 0.00 stations 0.00 miles
Required Abandonment- 0.00 stations 0.00 miles	Optional Reconstruction - 0.00 stations 0.00 miles	Optional Construction - 0.00 stations 0.00 miles

PRE-HAUL MAINTENANCE

CLEARING

EXCAVATION

MISC.

Grade and shape existing road surface -	47.15	stations @	\$27.10	per station	\$1,277.77
Roll shaped road surface w/ vibratory roller prior to rocking -	47.15	stations @	\$14.40	per station	\$678.96
Construct landings -	2	@	\$185.50	each	\$371.00
Grass seed -	1.8	lbs @	\$9.00	per lb	\$16.20

ENDHAUL

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$2,343.93**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>						
0	LF of 18"	\$0.00		0	LF of 24"	\$0.00
0	LF of 30"	\$0.00		0	LF of 36"	\$0.00
0	LF of 42"	\$0.00		0	LF of 48"	\$0.00
0	LF of 54"	\$0.00		0	LF of 60"	\$0.00
0	LF of 66"	\$0.00		0	LF of 72"	\$0.00
		\$0.00				\$0.00
<u>Half Rounds</u>						
0	LF of 24"	\$0.00		0	LF of 30"	\$0.00
0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
		\$0.00				\$0.00
<u>Culvert Stakes & Markers</u>						
0	stakes	\$0.00				
0	markers	\$0.00				
		\$0.00				\$0.00
TOTAL CULVERTS						\$0.00

ROCK

0+00 to 47+15 Spot Rock	180	cy. of	1 1/4" Minus	@	\$20.60	per c.y.=	\$3,708.00
Landings	82	cy. of	3" Jaw Run	@	\$19.55	per c.y.=	\$1,603.10
							TOTAL ROCK
							\$5,311.10

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS **\$0.00**

ABANDONMENT

TOTAL ABANDONMENT **\$0.00**

Required Pre-Haul Maintenance- \$7,655.03	Required Reconstruction - \$0.00	
Required Abandonment- \$0.00	Optional Reconstruction - \$0.00	SUBTOTAL
Required Construction - \$0.00	Optional Construction - \$0.00	\$7,655.03
		TOTAL
		\$7,655.03
		COST PER STATION
		\$162.35

SUMMARY OF ROAD

Sale:	Punch Bowl VRH THIN		Road: L-1552
Required Pre-Haul Maintenance-	37+50 0.71	stations miles	Required Reconstruction -
			0.00
			stations miles
Required Abandonment-	0+00 0.00	stations miles	Optional Reconstruction -
			0+00 0.00
			stations miles
			Optional Construction -
			0.00
			stations miles

PRE-HAUL MAINTENANCE

CLEARING

EXCAVATION

Excavate ditchline and scatter material/ clean ditch - 37.50 stations @ \$33.25 per station \$1,246.88

MISC.

Grade and shape existing road surface - 37.50 stations @ \$27.10 per station \$1,016.25
 Roll shaped road surface w/ vibratory roller prior to rocking - 37.50 stations @ \$14.40 per station \$540.00
 Construct landings - 4 @ \$185.50 each \$742.00
 Grass seed - 17.2 lbs @ \$9.00 per lb \$154.80

ENDHAUL

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$3,699.93**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>						
0	LF of 18"	\$0.00		0	LF of 24"	\$0.00
0	LF of 30"	\$0.00		0	LF of 36"	\$0.00
0	LF of 42"	\$0.00		0	LF of 48"	\$0.00
0	LF of 54"	\$0.00		0	LF of 60"	\$0.00
0	LF of 66"	\$0.00		0	LF of 72"	\$0.00
		\$0.00				\$0.00
<u>Half Rounds</u>						
0	LF of 24"	\$0.00		0	LF of 30"	\$0.00
0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
		\$0.00				\$0.00
<u>Culvert Stakes & Markers</u>						
0	stakes	\$0.00				
0	markers	\$0.00				
		\$0.00				\$0.00
TOTAL CULVERTS						\$0.00

ROCK

0+00 to 37+50 Spot Rock	215	cy. of	1 1/4" Minus	@	\$19.34	per c.y.=	\$4,158.10	
Landings	164	cy. of	3" Jaw Run	@	\$18.02	per c.y.=	\$2,955.28	
							TOTAL ROCK	\$7,113.38

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS **\$0.00**

ABANDONMENT

TOTAL ABANDONMENT **\$0.00**

Required Pre-Haul Maintenance-	\$10,813.31	Required Reconstruction -	\$0.00		
Required Abandonment-	\$0.00	Optional Reconstruction -	\$0.00	SUBTOTAL	\$10,813.31
Required Construction -	\$0.00	Optional Construction -	\$0.00	TOTAL	\$10,813.31

COST PER STATION \$288.35

SUMMARY OF ROAD

Sale: Punch Bowl VRH THIN

Road: L-1586

Required Pre-Haul Maintenance- 3+95 stations 0.07 miles	Required Reconstruction - 0.00 stations 0.00 miles	Required Construction - 0.00 stations 0.00 miles
Required Abandonment- 0.00 stations 0.00 miles	Optional Reconstruction - 0.00 stations 0.00 miles	Optional Construction - 0.00 stations 0.00 miles

PRE-HAUL MAINTENANCE

CLEARING

EXCAVATION

Construct waste area, includes clearing grubbing & piling of organic debris - 0.0 hours @ \$402.00 per hour \$0.00

MISC.

Grade and shape existing road surface - 3.95 stations @ \$27.10 per station \$107.05
 Roll shaped road surface w/ vibratory roller prior to rocking - 3.95 stations @ \$14.40 per station \$56.88

ENDHAUL

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$163.93**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>					
0	LF of 18"	\$0.00	0	LF of 24"	\$0.00
0	LF of 30"	\$0.00	0	LF of 36"	\$0.00
0	LF of 42"	\$0.00	0	LF of 48"	\$0.00
0	LF of 54"	\$0.00	0	LF of 60"	\$0.00
0	LF of 66"	\$0.00	0	LF of 72"	\$0.00
		\$0.00			\$0.00
<u>Half Rounds</u>					
0	LF of 24"	\$0.00	0	LF of 30"	\$0.00
0	LF of 36"	\$0.00	0	LF of 42"	\$0.00
		\$0.00			\$0.00
<u>Culvert Stakes & Markers</u>					
0	stakes	\$0.00			
0	markers	\$0.00			
		\$0.00			
			TOTAL CULVERTS		\$0.00

ROCK

0+00 to 3+95 141 cy. of 1 1/4" Minus @ \$19.26 per c.y. = \$2,715.66 **\$2,715.66**
TOTAL ROCK

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS **\$0.00**

ABANDONMENT

TOTAL ABANDONMENT **\$0.00**

Required Pre-Haul Maintenance- \$2,879.59	Required Reconstruction - \$0.00	
Required Abandonment- \$0.00	Optional Reconstruction - \$0.00	SUBTOTAL \$2,879.59
Required Construction - \$0.00	Optional Construction - \$0.00	

TOTAL \$2,879.59

COST PER STATION \$729.01

SUMMARY OF ROAD

Sale: Punch Bowl VRH THIN

Road: L-1580

Required Pre-Haul Maintenance - 186+90 stations <div style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">3.54</div> miles	Required Reconstruction - 0.00 stations <div style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.00</div> miles	Required Construction - stations <div style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;"></div> miles
Required Decommissioning - 0+00 stations <div style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.00</div> miles	Optional Reconstruction - 0+00 stations <div style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.00</div> miles	Optional Construction - 0+00 stations <div style="text-align: right; border-top: 1px solid black; border-bottom: 1px solid black;">0.00</div> miles

PRE-HAUL MAINTENANCE

CLEARING

EXCAVATION

MISC.

Grade and shape existing road surface -	186.90	stations @	\$27.10	per station	\$5,064.99
Roll shaped road surface w/ vibratory roller prior to rocking -	186.90	stations @	\$14.40	per station	\$2,691.36
Construct landing -	1	@	\$185.50	each	\$185.50
Grass seed -	0.9	lbs @	\$9.00	per lb	\$8.10

ENDHAUL

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$7,949.95**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>					
0	LF of 18"	\$0.00		0	LF of 24" \$0.00
0	LF of 30"	\$0.00		0	LF of 36" \$0.00
0	LF of 42"	\$0.00		0	LF of 48" \$0.00
0	LF of 54"	\$0.00		0	LF of 60" \$0.00
0	LF of 66"	\$0.00		0	LF of 72" \$0.00
		\$0.00			\$0.00
<u>Half Rounds</u>					
0	LF of 24"	\$0.00		0	LF of 30" \$0.00
0	LF of 36"	\$0.00		0	LF of 42" \$0.00
		\$0.00			\$0.00
<u>Culvert Stakes & Markers</u>					
0	stakes	\$0.00			
0	markers	\$0.00			
		\$0.00			
					TOTAL CULVERTS \$0.00

ROCK

5+60 to 192+50 Spot Rock	355	cy. of	1 1/4" Minus	@	\$24.45	per c.y.=	\$8,679.75
Landing	41	cy. of	3" Jaw Run	@	\$19.06	per c.y.=	\$781.46
							TOTAL ROCK \$9,461.21

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS **\$0.00**

DECOMMISSIONING

TOTAL ABANDONMENT **\$0.00**

Required Pre-Haul Maintenance - \$17,411.16	Required Reconstruction - \$0.00	
Required Decommissioning - \$0.00	Optional Reconstruction - \$0.00	SUBTOTAL \$17,411.16
Required Construction - \$0.00	Optional Construction - \$0.00	TOTAL \$17,411.16
		COST PER STATION \$93.16

SUMMARY OF ROAD

Sale: Punch Bowl VRH THIN	Road: L-1500G
Optional Pre-Haul Maintenance - 0.00 stations miles	Required Reconstruction - 0.00 stations miles
Required Decommissioning - 11+08 stations miles 0.21 miles	Optional Reconstruction - 0.00 stations miles
Required Construction - 0.00 stations miles	Optional Construction - 11+08 stations miles 0.21 miles

PRE-HAUL MAINTENANCE

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris	0.88	acres @	\$1,010.00	per acre	\$888.80
Endhaul and pile Organic Debris at waste area -	0.65	acres @	\$1,300.00	per acre	\$845.00
Remove large stumps -	8	@	\$117.00	each	\$936.00
Construct waste area at L-1500B -	0.5	hours @	\$402.00	per hour	\$201.00

EXCAVATION - includes drift enhaul and turnout construction

Grade and shape subgrade -	11.08	stations @	\$22.55	per station	\$249.85
Earthwork - Common - 0+00 to 4+72	2,968	cy. @	\$2.30	per c.y.=	\$6,826.40
Earthwork - Common -4+72 to 11+08	1,396	cy. @	\$1.95	per c.y.=	\$2,722.20

FILL

Earthwork embankment - 0+00 to 11+08 - spread w/cat and compact w/roller	3,512	cy. @	\$2.10	per c.y.=	\$7,375.20
Waste Area Compaction - earthwork	852	cy. @	\$0.50	per c.y.=	\$426.00

MISC.

Roll subgrade w/ vibratory roller prior to rocking -	11.08	stations @	\$18.00	per station	\$199.44
Construct landing -	4	@	\$185.50	each	\$742.00
Grass seed - includes WA at L-1500B	29.9	lbs @	\$9.00	per lbs	\$269.10

ENDHAUL - by trucking

To Waste Area @ 2+50 on L-1500B - 0+00 to 4+72	852	cy. @	\$3.37	per c.y.=	\$2,871.24
0+00 to 11+08 for embankment between 5+58 and 11+08 on L-1500G	2,003	cy. @	\$2.76	per c.y.=	\$5,528.28
Organic Debris - To Waste Area @ 2+50 on L-1500B - 0+00 to 4+72	74	cy. @	\$4.74	per c.y.=	\$350.76

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$31,480.85**

CULVERTS - MATERIALS & INSTALLATION

Culverts

30	LF of 18"	\$747.68		0	LF of 24"	\$0.00
0	LF of 30"	\$0.00		0	LF of 36"	\$0.00
0	LF of 42"	\$0.00		0	LF of 48"	\$0.00
0	LF of 54"	\$0.00		0	LF of 60"	\$0.00
0	LF of 66"	\$0.00		0	LF of 72"	\$0.00
		\$747.68				\$0.00

Half Rounds

0	LF of 24"	\$0.00		0	LF of 30"	\$0.00
0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
		\$0.00				\$0.00

Culvert Stakes & Markers

0	stakes	\$0.00
1	markers	\$11.00
		\$11.00

TOTAL CULVERTS **\$758.88**

ROCK

0+00 to 6+68	99	cy. of	1 1/4" Minus	@	\$17.59	per c.y.=	\$1,741.41
Energy Dissipator/Headwall - culverts	5.5	cy. of	Riprap LL	@	\$18.22	per c.y.=	\$100.21
0+00 to 11+08	780	cy. of	3" Jaw Run	@	\$17.47	per c.y.=	\$13,626.60
							TOTAL ROCK

\$15,468.22

DECOMMISSIONING

Construct waterbar -	5	@	\$98.00	each	\$490.00
Construct Earthen Barricade -	3	@	\$188.00	each	\$564.00
Outslope roadway & block culvert inlets-	11.08	stations @	\$23.80	per station	\$263.70
Grass seed -	29.6	lbs @	\$9.00	per lbs	\$266.40
					TOTAL DECOMMISSIONING

\$1,584.10

SUBTOTAL **\$49,291.85**

TOTAL \$49,291.85

COST PER STATION \$4,448.72

Optional Pre-Haul Maintenance- \$0.00	Required Reconstruction - \$0.00
Required Decommissioning- \$1,584.10	Optional Reconstruction - \$0.00
Required Construction - \$0.00	Optional Construction - \$47,707.75

SUMMARY OF ROAD

Sale: Punch Bowl VRH THIN		Road: L-1552D
Required Pre-Haul Maintenance - 0.00 stations miles	Required Reconstruction - 0.00 stations miles	Required Construction - 0.00 stations miles
Required Decommissioning - 9+56 stations miles 0.18	Optional Reconstruction - 0.00 stations miles	Optional Construction - 9+56 stations miles 0.18

PRE-HAUL MAINTENANCE

ENDHAUL	TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.	\$0.00
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RECONSTRUCTION

CLEARING/GRUBBING	TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.	\$0.00
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CONSTRUCTION

CLEARING/GRUBBING

Scatter Organic Debris	1.10	acres @	\$1,010.00	per acre	\$1,111.00
Remove large stumps -	4	@	\$117.00	each	\$468.00

EXCAVATION

Road Construction Earthwork - includes embankment	9.56	sta. @	\$174.78	per sta. =	\$1,670.90
Grade and shape subgrade -	9.56	stations @	\$22.55	per station	\$215.58

FILL

MISC.

Roll subgrade w/ vibratory roller prior to rocking -	9.56	stations @	\$18.00	per station	\$172.08
Construct turnout -	1	@	\$91.00	each	\$91.00
Construct landing -	4	@	\$185.50	each	\$742.00
Grass seed -	21.2	lbs @	\$9.00	per lbs	\$190.80

ENDHAUL	TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.	\$4,661.36
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CULVERTS - MATERIALS & INSTALLATION

<u>Culverts & Bands</u>					
60	LF of 18"	\$1,495.36		0	LF of 24" \$0.00
0	LF of 30"	\$0.00		0	LF of 36" \$0.00 w/bevel
0	LF of 42"	\$0.00	w/gasket-bevel	0	LF of 48" \$0.00
0	LF of 54"	\$0.00	w/gasket-bevel	0	LF of 60" \$0.00
0	LF of 66"	\$0.00		0	LF of 72" \$0.00
		\$1,495.36			\$0.00
<u>Half Rounds</u>					
0	LF of 24"	\$0.00		0	LF of 30" \$0.00
0	LF of 36"	\$0.00		0	LF of 42" \$0.00
		\$0.00			\$0.00
<u>Culvert Stakes & Markers</u>					
0	stakes	\$0.00			
2	markers	\$22.00			
		\$22.00			
TOTAL CULVERTS					\$1,517.36

ROCK

Energy Dissipator/Headwall - culverts	6.0	cy. of	Riprap LL	@	\$20.79	per c.y.=	\$124.74
0+00 to 9+56	666	cy. of	3" Jaw Run	@	\$19.44	per c.y.=	\$12,947.04
TOTAL ROCK							\$13,071.78

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS	\$0.00
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DECOMMISSIONING

Construct waterbar -	4	@	\$98.00	each	\$392.00
Construct Earthen Barricade -	2	@	\$188.00	each	\$376.00
Outslope roadway & block culvert inlets-	9.56	stations @	\$23.80	per station	\$227.53
Grass seed -	25.6	lbs @	\$9.00	per lbs	\$230.40
TOTAL DECOMMISSIONING					\$1,225.93

Required Pre-Haul Maintenance - \$0.00	Required Reconstruction - \$0.00	
Required Decommissioning - \$1,225.93	Optional Reconstruction - \$0.00	SUBTOTAL
Required Construction - \$0.00	Optional Construction - \$19,250.50	\$20,476.43
		TOTAL
		\$20,476.43
		COST PER STATION
		\$2,141.89

SUMMARY OF ROAD

Sale:	Punch Bowl VRH THIN		Road: L-1580B
Required Pre-Haul Maintenance-	0.00	stations miles	Required Reconstruction -
	0.00		stations miles
Required Abandonment-	0.00	stations miles	Optional Reconstruction -
	0.00		15+95 stations 0.30 miles
			Required Construction -
			stations 0.00 miles
			Optional Construction -
			stations 0.00 miles

PRE-HAUL MAINTENANCE

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

RECONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris	0.33	acres @	\$1,010.00	per acre	\$333.30
Remove large stumps -	3	@	\$117.00	each	\$351.00

EXCAVATION

Reconstruct and Widen Road Prism/with ditchline - includes embankment	15.95	stations @	\$119.43	per station	\$1,904.91
Grade and shape subgrade -	15.95	stations @	\$22.55	per station	\$359.67

FILL

MISC.

Roll subgrade w/ vibratory roller prior to rocking -	15.95	stations @	\$18.00	per station	\$287.10
Construct turnouts -	2	@	\$91.00	each	\$182.00
Construct landings -	2	@	\$185.50	each	\$371.00
Grass seed -	23.8	lbs @	\$9.00	per lbs	\$214.20

ENDHAUL

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$4,003.18**

CONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CULVERTS - MATERIALS & INSTALLATION

Culverts & Bands

130	LF of 18"	\$3,233.22	0	LF of 24"	\$0.00
0	LF of 30"	\$0.00	0	LF of 36"	\$0.00
0	LF of 42"	\$0.00	0	LF of 48"	\$0.00
0	LF of 54"	\$0.00	0	LF of 60"	\$0.00
0	LF of 66"	\$0.00	0	LF of 72"	\$0.00
		\$3,233.22			\$0.00

Half Rounds

0	LF of 24"	\$0.00	0	LF of 30"	\$0.00
0	LF of 36"	\$0.00	0	LF of 42"	\$0.00
		\$0.00			\$0.00

Culvert Stakes & Markers

0	stakes	\$0.00			
4	markers	\$44.00			
		\$44.00			

TOTAL CULVERTS **\$3,277.22**

ROCK

Energy Dissipator/Headwall - culverts	5.5	cy. of	Riprap LL	@	\$21.93	per c.y.=	\$120.62
0+00 to 15+95	929	cy. of	3" Jaw Run	@	\$20.76	per c.y.=	\$19,286.04
							TOTAL ROCK

\$19,406.66

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS **\$0.00**

ABANDONMENT

TOTAL ABANDONMENT **\$0.00**

Required Pre-Haul Maintenance-	\$0.00	Required Reconstruction -	\$0.00		
				SUBTOTAL	\$26,687.06
Required Abandonment-	\$0.00	Optional Reconstruction -	\$26,687.06		
Required Construction -	\$0.00	Optional Construction -	\$0.00		
				TOTAL	\$26,687.06
				COST PER STATION	\$1,673.17

SUMMARY OF ROAD

Sale:	Punch Bowl VRH THIN		Road: L-1580B1
Required Haul Maintenance-	Pre- <input style="width: 80px;" type="text"/> 0.00 stations miles	Required Reconstruction -	<input style="width: 80px;" type="text"/> 0.00 stations miles
Required Abandonment-	<input style="width: 80px;" type="text"/> 0.00 stations miles	Optional Reconstruction -	<input style="width: 80px;" type="text"/> 0.00 stations miles
		Required Construction -	<input style="width: 80px;" type="text"/> 0.00 stations miles
		Optional Construction -	<input style="width: 80px;" type="text"/> 3+42 0.06 stations miles

PRE-HAUL MAINTENANCE

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris	0.22	acres @	\$1,010.00	per acre	\$222.20
Endhaul and pile Organic Debris at waste area - includes transporting debris to WA	0.13	acres @	\$1,600.00	per acre	\$208.00
Remove large stumps -	3	@	\$117.00	each	\$351.00
Construct waste area at 3+42 -	0.5	hours @	\$402.00	per hour	\$201.00

EXCAVATION - includes drift endhaul and compaction at waste area

Road Construction Earthwork - includes embankment work 0+00 to 2+20	2.20	sta. @	\$223.33	per sta. =	\$491.33
Road Construction Earthwork - includes embankment work 2+20 to 3+42	1.22	sta. @	\$174.78	per sta. =	\$213.23
Construct ditchout -	1	@	\$91.00	each	\$91.00
Grade and shape subgrade -	3.42	stations @	\$22.55	per station	\$77.12

FILL

MISC.

Roll subgrade w/ vibratory roller prior to rocking -	3.42	stations @	\$18.00	per station	\$61.56
Construct landing -	1	@	\$185.50	each	\$185.50
Grass seed - includes waste area	6.2	lbs @	\$9.00	per lbs	\$55.80

ENDHAUL - by trucking

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$2,157.74**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>					
30	LF of 18"	\$747.68		0	LF of 24" \$0.00
0	LF of 30"	\$0.00		0	LF of 36" \$0.00
0	LF of 42"	\$0.00		0	LF of 48" \$0.00
0	LF of 54"	\$0.00	w/gasket-bevel	0	LF of 60" \$0.00 w/gasket-bevel
0	LF of 66"	\$0.00		0	LF of 72" \$0.00
		\$747.68			\$0.00
<u>Half Rounds</u>					
0	LF of 24"	\$0.00		0	LF of 30" \$0.00
0	LF of 36"	\$0.00		0	LF of 42" \$0.00
		\$0.00			\$0.00
<u>Culvert Stakes & Markers</u>					
0	stakes	\$0.00			
1	markers	\$11.00			
		\$11.00			
				TOTAL CULVERTS	\$758.68

ROCK

Energy Dissipator/Headwall - culverts	5.5	cy. of	Riprap LL	@	\$22.29	per c.y.=	\$122.60
0+00 to 3+42	218	cy. of	3" Jaw Run	@	\$21.00	per c.y.=	\$4,578.00
						TOTAL ROCK	\$4,700.60

ADDITIONAL REQUIREMENTS

TOTAL ADDITIONAL REQUIREMENTS **\$0.00**

ABANDONMENT

TOTAL ABANDONMENT **\$0.00**

Required Pre-Haul Maintenance-	\$0.00	Required Reconstruction -	\$0.00		
Required Abandonment-	\$0.00	Optional Reconstruction -	\$0.00	SUBTOTAL	\$7,617.02
Required Construction -	\$0.00	Optional Construction -	\$7,617.02	TOTAL	\$7,617.02
				COST PER STATION	\$2,227.20

SUMMARY OF ROAD

Sale:	Punch Bowl VRH THIN		Road: L-1580H
Required Pre-Haul Maintenance-	0.00 stations miles	Required Reconstruction -	0.00 stations miles
Required Abandonment-	10+45 0.20 stations miles	Optional Reconstruction -	0+00 0.00 stations miles
		Required Construction -	0.00 stations miles
		Optional Construction -	10+45 0.20 stations miles

PRE-HAUL MAINTENANCE

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

RECONSTRUCTION

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$0.00**

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris	1.08	acres @	\$1,010.00	per acre	\$1,090.80
Remove large stumps -	6	@	\$117.00	each	\$702.00

EXCAVATION

Road Construction Earthwork - includes embankment work	10.45	sta. @	\$134.00	per sta. =	\$1,400.30
Grade and shape subgrade -	10.45	stations @	\$22.55	per station	\$235.65

FILL

MISC.

Roll subgrade w/ vibratory roller prior to rocking -	10.45	stations @	\$18.00	per station	\$188.10
Construct turnout -	1	@	\$91.00	each	\$91.00
Construct landings -	4	@	\$185.50	each	\$742.00
Grass seed -	22.8	lbs @	\$9.00	per lbs	\$205.20

ENDHAUL

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$4,655.05**

CULVERTS - MATERIALS & INSTALLATION

Culverts

90	LF of 18"	\$2,243.04		30	LF of 24"	\$871.94
0	LF of 30"	\$0.00		0	LF of 36"	\$0.00
0	LF of 42"	\$0.00		0	LF of 48"	\$0.00
0	LF of 54"	\$0.00		0	LF of 60"	\$0.00
0	LF of 66"	\$0.00		0	LF of 72"	\$0.00
		\$2,243.04				\$871.94

Half Rounds

0	LF of 24"	\$0.00		0	LF of 30"	\$0.00
0	LF of 36"	\$0.00		0	LF of 42"	\$0.00
		\$0.00				\$0.00

Culvert Stakes & Markers

0	stakes	\$0.00			
0	markers	\$0.00			
		\$0.00			

TOTAL CULVERTS **\$3,114.98**

ROCK

Energy Dissipator/Headwall - culverts	22.5	cy. of	Riprap LL	@	\$28.04	per c.y. =	\$630.90
0+00 to 10+45	705	cy. of	3" Jaw Run	@	\$26.20	per c.y. =	\$18,471.00
							TOTAL ROCK \$19,101.90

ADDITIONAL REQUIREMENTS

Live stream diversion at culvert installation sites -	1.0	hours @	\$30.00	per hour	\$30.00
Straw Mulching near streams -	0.08	acres @	\$860.00	per acre	\$68.80
					TOTAL ADDITIONAL REQUIREMENTS \$98.80

ABANDONMENT

Construct waterbar -	5	@	\$98.00	each	\$490.00
Construct Earthen Barricade -	3	@	\$188.00	each	\$564.00
Rip roadway -	10.45	stations @	\$35.60	per station	\$372.02
Grass seed -	32.8	lbs @	\$9.00	per lbs	\$295.20
Mulching -	0.08	acres @	\$860.00	per acre	\$68.80
Live stream diversion at culvert removal site -	1.0	hours @	\$30.00	per hour	\$30.00
Remove culvert -	2.5	hours @	\$178.00	per hour	\$445.00
Remove culvert from state lands -	4	@	\$75.00	total	\$300.00
Scatter woody debris -	2.0	hours @	\$178.00	per hour	\$356.00
					TOTAL ABANDONMENT \$2,921.02

Required Pre-Haul Maintenance-	\$0.00	Required Reconstruction -	\$0.00	
				SUBTOTAL \$29,891.75
Required Abandonment-	\$2,921.02	Optional Reconstruction -	\$0.00	
Required Construction -	\$0.00	Optional Construction -	\$26,970.73	
				TOTAL \$29,891.75
				COST PER STATION \$2,860.45

ROCK DEVELOPMENT COST SUMMARY

Pit:	Jackson Pass Pit	Location:	NE¼ NE¼ Sec. 11, T02N, R04E, W.M.
Sale:	Punch Bowl VRH THIN		NW¼ NW¼ Sec. 12, T02N, R04E, W.M.
Swell:	1.30	Road:	4870. CY
Shrinkage:	0.00	Stockpile:	C.Y.
Drill Pct.:	100%	Total Truck Loads:	4870. CY
		In Place Total:	3746 c.y.

Access Road Construction	1.0 Stations	\$223.33 /Station	\$223.33
Pit Development & Cleanup including Clearing and Grubbing of Waste Area, Endhaul and place overburden, grass seeding.			
in Waste Area, spread and compact.	\$5.33 /cu.yd x	899.0 cu.yds.	\$4,791.67
Drill & Shoot:	\$3.65 /cu.yd x	3746.0 cu.yds.	\$13,672.90
Rip Rock:	\$2.50 /cu.yd x	0 cu.yds.	\$0.00
Push Rock:	\$1.35 /cu.yd x	4870.0 cu.yds.	\$6,574.50
Load Crusher:	\$0.75 /cu.yd x	4825.0 cu.yds.	\$3,618.75
Crush 3" Jaw Run Rock:	\$4.05 /cu.yd x	3585 cu.yds.	\$14,519.25
Crush 1½" Minus Rock:	\$6.00 /cu.yd x	1240 cu.yds.	\$7,440.00
Load Crushed Rock in Truck:	\$0.75 /cu.yd x	4825.0 cu.yds.	\$3,618.75
Load Rip Rap Rock in Truck:	\$2.50 /cu.yd x	45.0 cu.yds.	\$112.50
	\$0.00 /ton x	0 tons =	\$0.00
	\$0.00 /ton x	0 tons =	\$0.00
	\$0.00 /ton x	0 tons =	\$0.00
	\$0.00 /cu.yd x	0 cu.yds.	\$0.00
		Subtotal	\$54,571.65

Move In/Set-up Mobile Jaw	1	@	\$868.59	=	\$868.59
Move In/Set-up Mobile 2 Stage Crusher	1	@	\$1,155.51	=	\$1,155.51
Move In/Set-up 3 Stage Crusher	0	@	\$0.00	=	\$0.00
Move In and set up Drill and Compressor	1	@	\$477.39	=	\$477.39
Move in Roller and Compactor	0	@	\$408.35	=	\$0.00
Move in Grader	0	@	\$282.03	=	\$0.00
Move in D-8	1	@	\$501.47	=	\$501.47
Move in Loader	1	@	\$474.56	=	\$474.56
Move in Excavator	2	@	\$435.31	=	\$870.62
Move in Trucks	5	@	\$148.01	=	\$740.05
Move in Water Truck	0	@	\$0.00	=	\$0.00
					Subtotal \$5,088.19

TOTAL PRODUCTION COSTS \$59,659.84

Base Cost = \$12.25 Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Proc Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	Speed (Mi/hr.)	One-Way Dist (ft)	ROCK COST
L-1500 40+80 to 106+00 Spot Rock 1 1/4" Minus	\$4.60	\$1.70	\$12.25	\$18.55	250	17	6530	\$4,637.50
L-1520 0+00 to 47+15 Spot Rock 1 1/4" Minus	\$6.65	\$1.70	\$12.25	\$20.60	180	17	12091	\$3,708.00
L-1520 Landings 3" Jaw Run	\$6.40	\$0.90	\$12.25	\$19.55	82	17	12923	\$1,603.10
L-1552 0+00 to 37+50 Spot Rock 1 1/4" Minus	\$5.39	\$1.70	\$12.25	\$19.34	215	17	8673	\$4,158.10
L-1552 Landings 3" Jaw Run	\$4.87	\$0.90	\$12.25	\$18.02	164	17	8760	\$2,955.28
L-1586 0+00 to 3+95 1 1/4" Minus	\$5.31	\$1.70	\$12.25	\$19.26	141	17	8456	\$2,715.66
L-1580 5+60 to 192+50 Spot Rock 1 1/4" Minus	\$10.50	\$1.70	\$12.25	\$24.45	355	17	22573	\$8,679.75
L-1580 Landing 3" Jaw Run	\$5.91	\$0.90	\$12.25	\$19.06	41	17	11595	\$781.46
L-1500G 0+00 to 6+68 1 1/4" Minus	\$3.64	\$1.70	\$12.25	\$17.59	99	15	3446	\$1,741.41
L-1500G LL Energy Dissipator/Headwall - culverts	\$4.17	\$1.80	\$12.25	\$18.22	5.5	12	3256	\$100.21
L-1500G 0+00 to 11+08 3" Jaw Run	\$3.77	\$1.45	\$12.25	\$17.47	780	15	3776	\$13,626.60
L-1552D LL Energy Dissipator/Headwall - culverts	\$6.74	\$1.80	\$12.25	\$20.79	6.0	12	8185	\$124.74
L-1552D 0+00 to 9+56 3" Jaw Run	\$5.74	\$1.45	\$12.25	\$19.44	666	15	8507	\$12,947.04
L-1580B LL Energy Dissipator/Headwall - culverts	\$7.88	\$1.80	\$12.25	\$21.93	5.5	15	12960	\$120.62
L-1580B 0+00 to 15+95 3" Jaw Run	\$7.06	\$1.45	\$12.25	\$20.76	929	17	13208	\$19,286.04
L-1580B1 LL Energy Dissipator/Headwall - culverts	\$8.24	\$1.80	\$12.25	\$22.29	5.5	15	13827	\$122.60
L-1580B1 0+00 to 3+42 3" Jaw Run	\$7.30	\$1.45	\$12.25	\$21.00	218	17	13864	\$4,578.00
L-1580H LL Energy Dissipator/Headwall - culverts	\$13.99	\$1.80	\$12.25	\$28.04	22.5	15	27636	\$630.90
L-1580H 0+00 to 10+45 3" Jaw Run	\$12.50	\$1.45	\$12.25	\$26.20	705	17	28029	\$18,471.00
					Total C.Y.		Sub Total	\$100,988.01

TOTAL ROCKING COSTS \$100,988.01

Road Building Move-In Calculations

Sale: **Punch Bowl VRH THIN**

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
18.9	Highway	45
6.1	County/ Mainline	17
1.6	Steep Grades	10

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	Within Area			Within		Total Cost
				Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Area Cost	
0	Brush Cutter	\$320.86		\$17.80	0.00	0.00	0	\$0.00	\$0.00
1	Graders	\$502.15		\$19.83	0.00	0.00	5	\$99.15	\$601.30
0	Loader (Small)	\$320.86		\$15.00	0.00	0.00	0	\$0.00	\$0.00
0	Loader (Med. & Large)	\$502.15		\$17.00	0.00	0.00	0	\$0.00	\$0.00
1	Rollers & Compactors	\$320.86		\$27.14	0.00	0.00	5	\$135.70	\$456.56
0	Drill & Compressor	\$320.86		\$35.60	0.00	0.00	0	\$0.00	\$0.00
1	Excavators (Small)	\$320.86		\$50.00	0.00	0.00	7	\$350.00	\$670.86
1	Excavators (Large)	\$631.64	2	\$56.00	0.00	0.00	5	\$280.00	\$981.73
0	Tired Backhoes/Skidlers	\$502.15		\$12.50	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D6)	\$502.15		\$32.43	0.00	0.00	0	\$0.00	\$0.00
0	Tractors (D7)	\$502.15		\$30.00	0.00	0.00	0	\$0.00	\$0.00
1	Tractor (D8)	\$631.64	2	\$57.43	0.00	0.00	5	\$287.15	\$988.88
5	Dump Truck (10 cy +)	\$154.91		\$11.00	0.00	0.00	4	\$220.00	\$1,874.55
0	Dump Truck (Off Hiway)	\$450.09		\$9.00	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (1500 Gal)	\$118.29		\$10.50	0.00	0.00	0	\$0.00	\$0.00
0	Water Truck (2500 Gal)	\$138.01		\$12.25	0.00	0.00	0	\$0.00	\$0.00

	TOTAL MOVE-IN COSTS: \$5,573.88
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WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region: Pacific Cascade

Timber Sale Name: Punch Bowl VRH THIN

Application Number: 30- 104119

EXCISE TAX APPLICABLE ACTIVITIES

Construction: 342 linear feet
Road to be constructed (optional and required) but not abandoned

Reconstruction: 1,595 linear feet
Road to be reconstructed (optional and required) but not abandoned

Abandonment: 0 linear feet
Abandonment of existing roads not reconstructed under the contract

Decommission: 2,064 linear feet
Road to be made undriveable but not officially abandoned.

Pre-Haul Maintenance: 34,070 linear feet
Existing road to receive maintenance work (optional and required) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Construction: 1,045 linear feet
Roads to be constructed (optional and required) and then abandoned

0 linear feet
Temporary Reconstruction:
Roads to be reconstructed (optional and required) and then abandoned

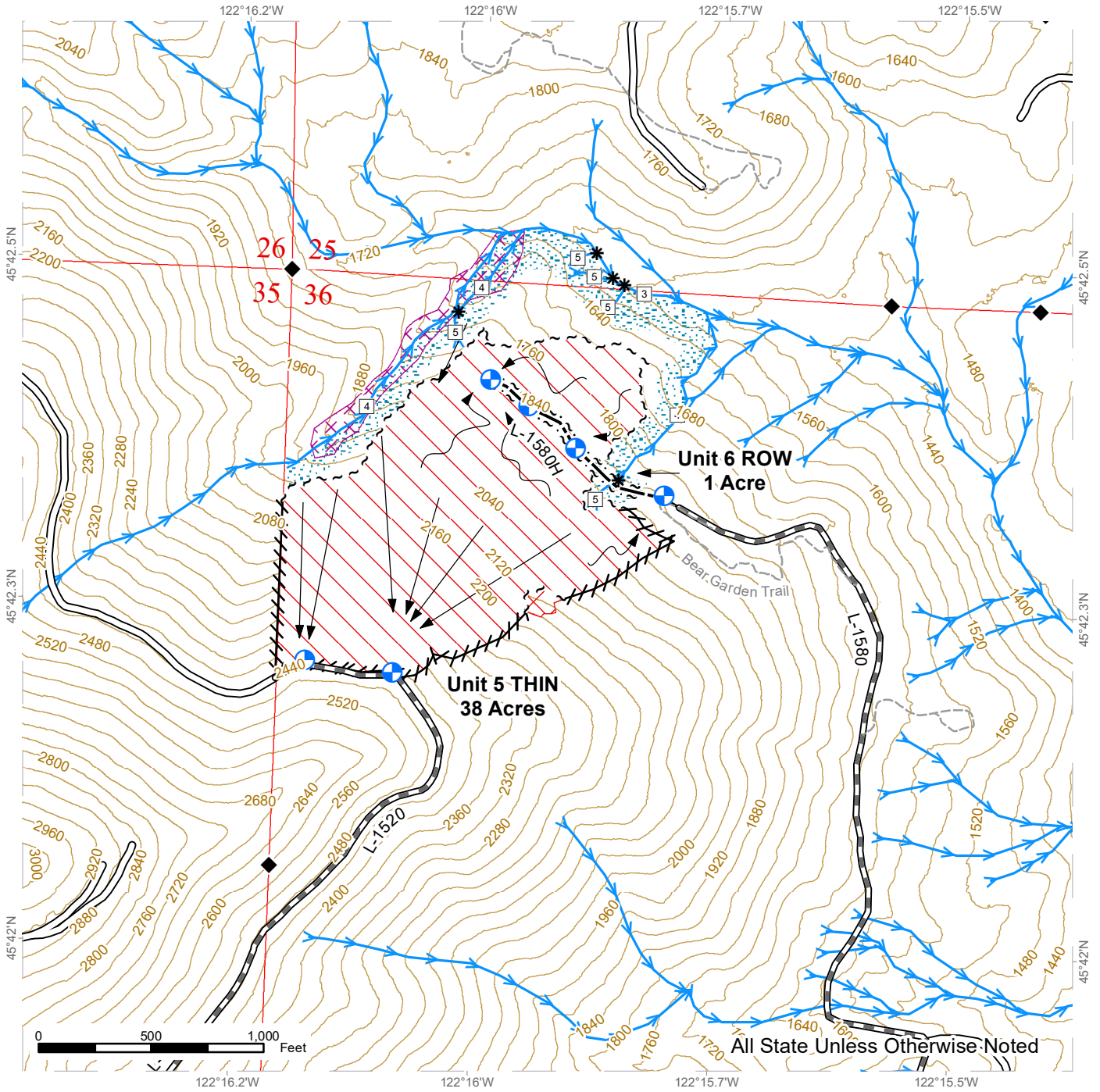
All parties must make their own assessment of the taxable or non-taxable status of any work performed under the timber sale contract. The Department of Revenue bears responsibility for determining forest road excise taxes. The Department of Natural Resources developed this form to help estimate the impact of forest excise taxes. However, the information provided may not precisely calculate the actual amount of taxes due. The Department of Revenue is available for consultation by calling 1.800.548.8829.

(Revised 9/18)

LOGGING PLAN MAP

SALE NAME: THE PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



All State Unless Otherwise Noted

	Ground Harvest		Existing Roads		Streams
	Cable Harvest		Required Pre-Haul Maintenance		Stream Type
	Special Mgt Area		Optional Construction		Stream Type Break
	Riparian Mgt Zone		Motorized		Landing - Proposed
	Potentially Unstable Slopes				Survey Monument
	Sale Boundary Tags				
	Right of Way Tags				
	Flag Line				

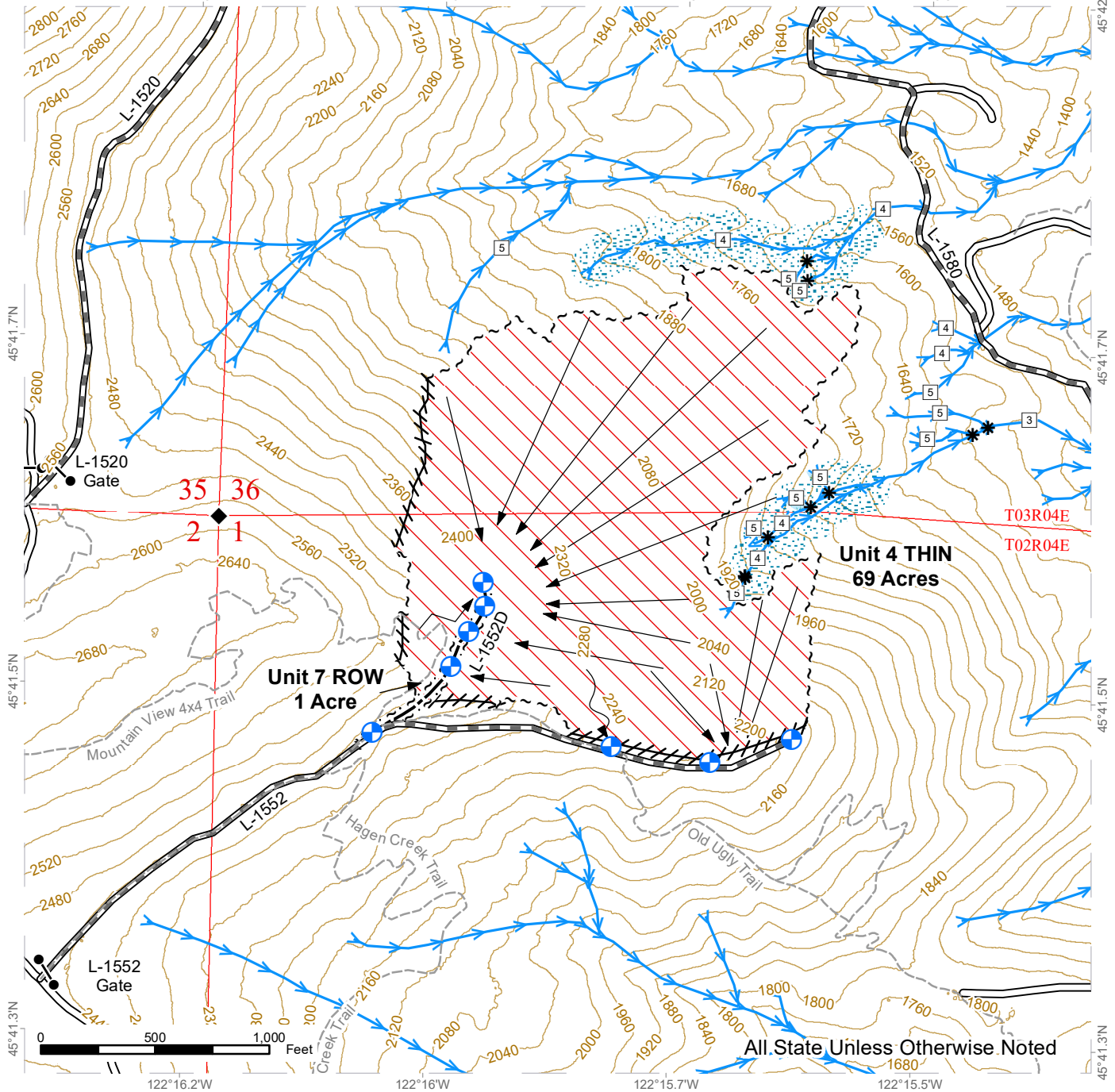


LOGGING PLAN MAP

SALE NAME: THE PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520

122°16.2'W 122°16'W 122°15.7'W 122°15.5'W

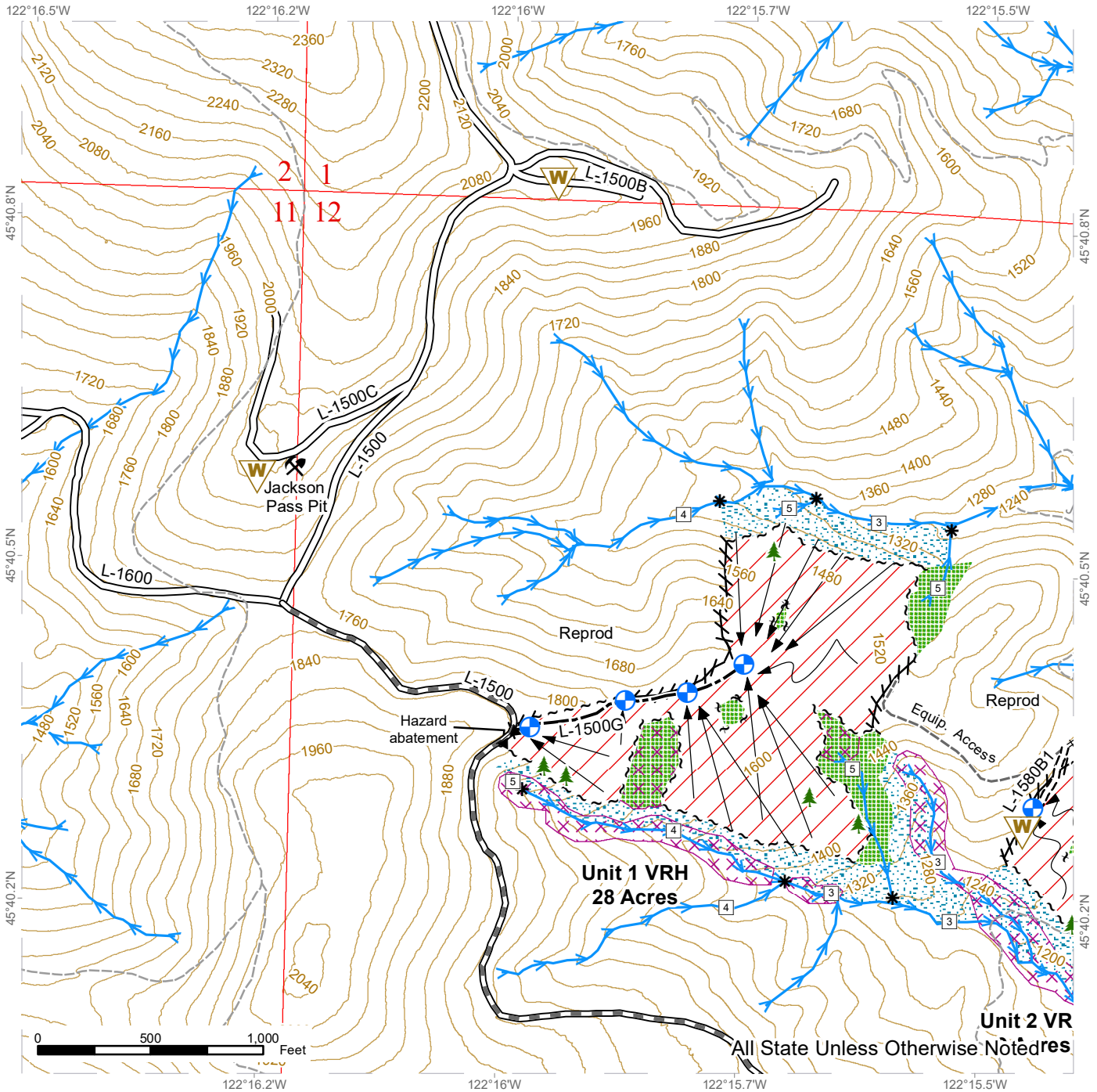


	Ground Harvest		Existing Roads		Streams
	Cable Harvest		Required Pre-Haul Maintenance		Stream Type
	Riparian Mgt Zone		Optional Construction		Stream Type Break
	Forested Wetland		Motorized		Gate
	Sale Boundary Tags				Landing - Proposed
	Right of Way Tags				Survey Monument
	Flag Line				

LOGGING PLAN MAP

SALE NAME: THE PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



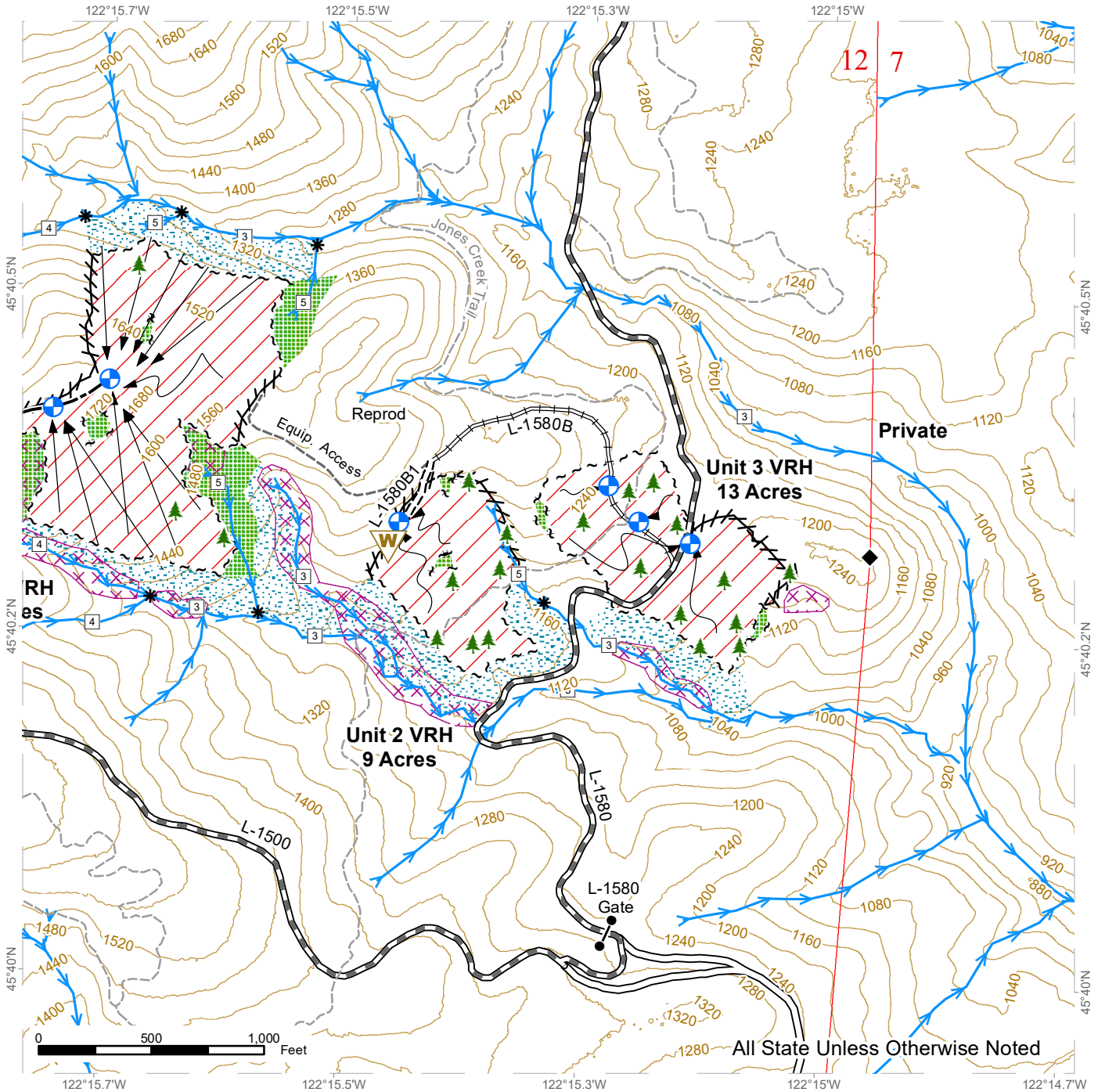
Ground Harvest	Existing Roads	Streams
Cable Harvest	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Required Construction	Stream Type Break
Riparian Mgt Zone	Required Reconstruction	Landing - Proposed
Potentially Unstable Slopes	Optional Construction	Leave Tree Area <1/4-acre
Sale Boundary Tags	Equipment Access Route	Rock Pit
Leave Tree Tags	Motorized	Waste Area
Flag Line	Hazard Abatement Area	



LOGGING PLAN MAP

SALE NAME: THE PUNCH BOWL VRH THIN
AGREEMENT#: 30-104119
TOWNSHIP(S): T2R4E, T3R4E
TRUST(S): Charitable/Educational/Penal & Reformatory Instit. (6), Common School and Indemnity (3), Scientific School (10), State Forest Transfer (1)

REGION: Pacific Cascade Region
COUNTY(S): Clark
ELEVATION RGE: 1080-2520



Ground Harvest	Existing Roads	Streams
Cable Harvest	Required Pre-Haul Maintenance	Stream Type
Leave Tree Area	Required Construction	Stream Type Break
Riparian Mgt Zone	Required Reconstruction	Gate
Potentially Unstable Slopes	Optional Construction	Landing - Proposed
Sale Boundary Tags	Equipment Access Route	Leave Tree Area <1/4-acre
Leave Tree Tags	Motorized	Waste Area
Flag Line		Survey Monument



Road Use Permit

This Road Use Permit (“**Permit**”) is made by and between **WEYERHAEUSER TIMBER HOLDINGS, INC.**, a Delaware Corporation (“**Weyerhaeuser**”), and **STATE OF WASHINGTON – DEPARTMENT OF NATURAL RESOURCES**, an agency of the State of Washington (“**Permittee**”) and is effective as of October 26th, 2023 (“**Effective Date**”). As used in this Permit, “Permittee” includes Permittee, its affiliates, and all of their officers, employees, agents, contractors and subcontractors at all tiers, invitees, and other representatives.

The parties acknowledge that this Permit is granted in connection with the sale and harvest of certain timber located on certain lands owned by Permittee in Section 1, 12, 36 of Township 3 North, Range 4 East, W.M., which project Permittee calls the Punch Bowl Timber Sale (“**Project**”).

- 1. Road Use.** Weyerhaeuser grants Permittee the non-exclusive right to enter and be upon those certain roads located on Weyerhaeuser lands in portions of Sections 35 of Township 3 North, Range 4 East, W.M, Clark County, Washington as depicted on the map attached as Exhibit A (“**Permit Roads**”), and the Weyerhaeuser owned lands underlying and surrounding such roads, 60’ wide road use permission, (“**Weyerhaeuser Property**”), for the limited purpose of ingress to and egress from Permittee’s lands described above which are also depicted on the map attached as Exhibit A (“**DNR Property**”). All access across Permit Roads shall be to conduct forestry and harvest operations related to the Project. This includes commercial vehicular ingress and egress to and from the DNR Property for purposes of forestry activities only, including: road maintenance, reconstruction, construction, hauling of forest products, and access related to the planning of forestry activities and projects, all subject to the general operational rules set forth on Exhibit C (“**Permitted Uses**”).

Permittee shall have the right to improve Permit Roads as necessary or appropriate for the Project; provided, however, that Weyerhaeuser must first approve of such work and all plans for such work in advance. All Permit Roads used hereunder must be put into serviceable condition at the end of this operation and otherwise be left in a condition that is reasonably acceptable to Weyerhaeuser.

- 2. Permit Roads and Uses.** Permittee shall provide Weyerhaeuser in advance with a schedule of its planned uses of Permit Roads, which it shall update from time to time as necessary, and provide a list of all persons and equipment that will use Permit Roads. All Permitted Uses and all compliance with this Permit shall be made at Permittee’s sole cost and expense. All Permitted Uses hereunder must be conducted solely to facilitate the Project. In no event shall this Permit be interpreted to authorize, and this Permit does not authorize, any harvesting of timber on Weyerhaeuser lands and no such timber may be removed, killed or otherwise materially damaged hereunder. Further, in all cases Permitted Uses shall be conducted so as not to unreasonably interfere with other uses of and operations on the Weyerhaeuser Property.

This Permit and all Permitted Uses are subject to all existing easements, licenses,

exceptions, and other encumbrances whether recorded, unrecorded, or evident on the ground affecting, and subject to all prior uses occurring on the Weyerhaeuser Property. The permission granted to Permittee in this Permit is limited to lands owned by Weyerhaeuser. Weyerhaeuser makes no representation or warranty as to its ownership rights in any of the Permit Roads or the interpretation by any third party of any laws, regulations, or government policies, or the existence or interpretation of any encumbrances or Indian treaties.

3. **Permit Fees:** Administrative fee consideration of \$500 and a road use fee of \$237.77 shall be paid. A total payment of \$737.77. The purchaser of the Punch Bowl Timber Sale shall pay both the fees. Payment shall be made to Weyerhaeuser Timber Holdings, Inc. Please mail check to: Land Use, P. O. Box 667, Longview, WA. 98632.
4. **Term – Date of Expiration.** The term of this Permit commences upon the Effective Date and terminates 3 years after effective date (10/31/2026), or any earlier completion of the Project and all restoration and similar requirements hereunder.
5. **Insurance.** Before commencing any activity under this Permit, Permittee shall obtain and maintain in full force and effect during the term of this Permit, at Permittee's sole expense, the following insurance coverages on Permittee's activities:
 - a) Comprehensive or Commercial General Liability (occurrence form), covering bodily injury and property damage liability, including contractual, products, completed operations, broad form property damage, and independent operator/contractors, with minimum limits of at least \$1,000,000 per occurrence and \$1,000,000 general aggregate. Weyerhaeuser, Weyerhaeuser Company and their affiliates shall be designated as Additional Insureds evidenced by copy of the Additional Insured Endorsement attached to the Certificate of Insurance and the endorsement is to include that the insurance will cover any and all operations performed by or for the Named Insured for **Weyerhaeuser Timber Holdings, Inc., Weyerhaeuser Company and their subsidiaries**. The endorsement may be specific to the Project (CG 20 10, 0704, or equivalent) or may be a Blanket Additional Insured Endorsement applicable to all contracts, again equivalent to the CG 20 10 07 04, Permittee's insurance shall be primary and Weyerhaeuser's insurance or self-insurance is excess over other available coverage.
 - b) If, under this Permit, Permittee will operate equipment which is licensed for use on public highways, the minimum auto coverages and limits will be: Comprehensive Automobile Liability covering owned, hired, and non-owned vehicles with minimum limits of: (i) For heavy vehicles, equal to or more than 12,000 pounds (gross vehicle weight): combined single limit of \$1,000,000; or (ii) For light vehicles, less than 12,000 pounds (gross vehicle weight): combined single limit of \$300,000.

- c) Workers' Compensation or Industrial Accident insurance providing benefits as required by local law, including Employer's or Stop-Gap Liability with a minimum limit of \$1,000,000 per accident. Licensee may fulfill this obligation by qualifying as a self-insurer.

Please send insurance documents to Jeremy Sapp at Jeremy.sapp@wy.com

Upon request from Weyerhaeuser, Permittee shall furnish Weyerhaeuser with a Certificate of Insurance evidencing compliance herewith. Permittee shall require Permittee's insurance carrier to give Weyerhaeuser at least thirty (30) days written notice prior to cancellation of said coverages, either in whole or in part, and the failure of Permittee's insurance carrier to give said notice as required shall be considered a default on Permittee's part. Permittee shall ensure that its contractors and subcontractors have insurance coverages and endorsements consistent with the above. Insurance companies providing coverage for Permittee and subcontractors shall have a Best's rating of no less than B+ VII. Permittee's contractor's and subcontractor's insurance companies shall waive right of subrogation against Weyerhaeuser, Weyerhaeuser Company and their affiliates. All insurance or self-insurance of Weyerhaeuser, Weyerhaeuser Company and their affiliates shall be excess of any insurance provided by Permittee, its contractors or subcontractors.

- 6. Compliance with Law.** Permittee shall comply with all applicable federal, state, and local laws, regulations, and other requirements, including all rules and regulations under the Oregon Forest Practices Act ("FPA"). All road work hereunder, and all other Permitted Uses, must also be conducted in full compliance with the FPA. Permittee shall further be responsible for obtaining at its expense all permits and other authorizations necessary to conduct the Permitted Uses.
- 7. Safety.** Permittee shall comply with the following safety rules:
- a. Maximum speed is 25 mile-per-hour on all primary roads. Individual road conditions, weather, and limited visibility will require slower speeds.
 - b. All vehicle occupants must wear seat belts on Weyerhaeuser roads.
 - c. Drive with lights "on".
 - d. Drive on the right.
 - e. Be prepared to stop in no more than half your sight distance.
 - f. Do not block roads or otherwise interfere with forestry operations.
 - g. Take all reasonable precaution to prevent unauthorized persons from using the Permit Road(s) and from entering Weyerhaeuser or other lands by means of the Permit Road(s).
 - h. Permittee must sign road to keep public from entering the area when the gate is open for your operations.
 - i. Permittee is responsible for opening the gate if members of the public became locked behind the gate.
 - j. Keep the Permit Road(s) open and not obstruct them, nor land any logs or other forest products alongside them, nor load any trucks on them without Weyerhaeuser's prior written permission.

- k. Strictly comply with all safety rules and traffic regulations promulgated by Weyerhaeuser or any public authority which safety rules of Weyerhaeuser may be changed from time to time at the sole discretion of Weyerhaeuser. Further comply with all other rules, regulations or directives issued by Weyerhaeuser from time to time.
 - l. Suspend use of the Permit Road(s) whenever the use, due to weather conditions, will cause excessive damage to the Permit Road(s).
 - m. Gate(s) must be closed and locked during times of no activity.
 - n. Notify Weyerhaeuser representative Jeremy Sapp at (360) 355-6251 with issues or concerns.
- 8. Road Maintenance.** Permittee shall maintain and leave the Permit Road(s) at a standard that allows normal use by passenger cars. Acceptable road conditions include the following:
- a. Culverts need to be open, free flowing, and in good working order. If they become obstructed or damaged, they shall be opened, repaired, or replaced. Flowing streams need to be cleaned fifty (50) feet above the culvert inlet. Outlets shall be open and free of debris so blockage will not occur. Culverts shall be staked and clearly identified.
 - b. Road surfaces shall be smoothed and shaped. Surface repair must be made if necessary, as determined by Weyerhaeuser.
- 9. Fire Protection.** Permittee shall comply with all laws and regulations pertaining to fire protection and suppression and take every possible precaution to prevent fires from igniting on or spreading onto Weyerhaeuser's Property. If Permittee learns of a fire on or near the Permit Roads or other portions of the Weyerhaeuser Property, Permittee shall immediately notify Weyerhaeuser at (360) 355-6251 and appropriate government agencies and shall make every effort to help suppress or contain the fire provided the same can be safely done. Permittee will be liable for and reimburse Weyerhaeuser for all damages allowed under Washington Law (including loss or damage of timber, and fire suppression costs) resulting from fires caused by Permittee's activities, whether negligent or not, except to the extent such fires were the result of the sole negligence of Weyerhaeuser. Permittee shall indemnify Weyerhaeuser against all third party claims brought against Weyerhaeuser as a result of any such fire, except to the extent that the fire was the result of the sole negligence of Weyerhaeuser.

- 10. Hazardous Materials.** Permittee shall:
- a. Comply strictly with all laws, rules, and regulations governing or concerning hazardous, dangerous or otherwise regulated substances and materials.
 - b. Not dispose, discard or release any dangerous, hazardous, or regulated products or materials including, but not limited to, petroleum products, anti-freeze, oil filters, grease tubes, etc., on the Weyerhaeuser Property.
 - c. Inspect, on a daily basis, all equipment used by Permittee for hydraulic and fuel leaks, and ensure that any such equipment will be repaired and properly maintained before entry upon the Weyerhaeuser Property.
 - d. Immediately clean up and properly dispose of any and all leaks, spills, and overfills of any material or substance, including any contaminated soil, other than clean water.
 - e. Report all oil sheen on waters and all spills immediately to Weyerhaeuser's designated representative and shall advise such person of the location, type of spill, and the steps being taken to contain and control the spill.
 - f. Report all oil sheen on waters and all spills within two (2) hours to the responsible local agency.
 - g. In no event shall Permittee use or allow to be used any products containing glyphosate on the Weyerhaeuser Property.
- 11. Firearms and Weapons.** Permittee shall not use or display firearms or weapons on the Weyerhaeuser Property while operating under this Permit.
- 12. Housekeeping.** Permittee shall maintain satisfactory housekeeping practices during the duration of the Permit, and upon completion of work, shall remove all equipment, materials, tools, rubbish, and other materials of Permittee of any kind, which may have accumulated on or around the Permit Roads. Permittee shall leave all Permit Roads in a good and satisfactory condition, as determined by Weyerhaeuser. On-site disposal of waste, including, but not limited to, packaging material, whether by burning, burying or otherwise, is specifically prohibited (except as expressly authorized above for the disposal of slash).
- 13. Notices.** All notices provided for in this Permit, except notices regarding fire suppression or hazardous materials spills, must be written and given by either personal hand-delivery, email, or regular U.S. mail, postage prepaid. All notices regarding fire suppression or hazardous materials must be reported in person or by telephone as soon as possible. All notices must be given to the persons whose signatures appear at the end of this Permit.
- 14. Non-Assignment.** Permittee may not assign its rights under this Permit without Weyerhaeuser's prior written consent, which consent may be withheld in Weyerhaeuser's sole discretion, and Weyerhaeuser may consider any attempted assignment without this consent to be void and may thereafter terminate this Permit.
- 15. Assumption of Risks.** Permittee acknowledges and agrees that all use of Permit Roads shall be in their current AS-IS, WHERE-IS, with all faults condition. Permittee assumes

all risks of personal injury or property damage to itself, its affiliates and all of their employees, agents, contractors, subcontractors, invitees and other representatives in connection with Permittee's activities under this Permit. Permittee acknowledges that the Permit Road(s) are used for logging, forestry, and industrial operations and are maintained, if at all, only to standards required for such use. Permittee further acknowledges and understands that Weyerhaeuser has made no representations as to the present or future condition of the Weyerhaeuser Property or the Permit Road(s), the character of traffic on the Weyerhaeuser Property or Permit Road(s), or any other factor affecting Permittee's risks. Permittee shall pay for all damage to the Weyerhaeuser Property and any of Weyerhaeuser's personal property resulting directly or indirectly from Permittee's acts or omissions under this Permit, even if not attributable to negligence by Permittee.

- 16. Indemnification.** To the extent permitted by law, Permittee shall defend, indemnify, and hold harmless Weyerhaeuser, its affiliates and all of their directors, officers, employees, contractors, and agents from and against all claims, demands, judgments, assessments, damages, penalties, fines, costs, liabilities, or losses including, without limitation, sums paid in settlement of claims, attorneys' fees, consultant fees, and expert fees (collectively "Claims") arising from any act or omission of Permittee under this Permit or otherwise in or around the Weyerhaeuser Property, except to the extent such Claims are caused solely by Weyerhaeuser's gross negligence or willful misconduct. This includes, without limitation, any Claims for injury to or death of persons; damage to property; timber trespass; nuisance; mechanics' and materialmen's liens; workers' compensation and unemployment taxes; fines and penalties; and environmental damages, cleanups, and corrective actions. If Weyerhaeuser chooses to retain its own counsel for Claims covered by Permittee's indemnity, Permittee shall reimburse Weyerhaeuser for all costs reasonably incurred to defend against such Claims through the attorneys of its choice. Permittee shall take all steps needed to keep the Weyerhaeuser Property free of liens arising from Permittee's activities, and promptly obtain or bond the release of any such liens that may be filed arising from Permittee's activity. This indemnity shall survive termination and expiration of this Permit.
- 17. Termination.** All rights under this Permit shall terminate upon thirty (30) days notice by either party. If Weyerhaeuser terminates this Permit for any reason, except default, the unearned portion of any prepaid consideration shall be returned to Permittee. All of Permittee's obligations to Weyerhaeuser survive expiration or any earlier termination of Permittee's rights under this Permit, until these obligations have been fulfilled.

- 18. Suspension and Termination for Default.** Weyerhaeuser may suspend Permittee's activities under this Permit immediately by written notice of any default. Suspension will continue until the default is remedied. Any time after ten (10) days from such a suspension notice, if Permittee is still in default, Weyerhaeuser may terminate Permittee's rights under this Permit. Weyerhaeuser's right to suspend and terminate Permittee's rights under this paragraph are in addition to all other available remedies. The following events shall constitute events of default: (a) Failure to comply with any of the terms or conditions of this Permit; and (b) Commencement of any proceeding or petition under the Bankruptcy Code or any other federal or state bankruptcy, insolvency, receivership, or similar law.
- 19. Time Is Of The Essence.** Time is of the essence for each and every provision of this Agreement.
- 20. Relationship of Parties.** This Agreement is not intended to create and shall not be construed to create any partnership or association for profit between Permittee and Weyerhaeuser.
- 21. Confidentiality.** The terms of this Permit may not be disclosed by Permittee to persons other than affiliates, parent or subsidiaries, or parties confidentially bound to Permittee without Weyerhaeuser's prior written consent, except in situations required by law or a court of competent jurisdiction.
- 22. Recording.** Permittee may not record this Permit in any public records.
- 23. Integrated Agreement; Modification.** This Permit constitutes the entire agreement and understanding of the parties with respect to the subject matter of the Permit and supersedes all prior negotiations and representations. This Permit may not be modified except in writing signed by the parties. The parties agree to execute any additional documents reasonably necessary to effectuate the provisions and purposes of this Permit.
- 24. Interpretation.** Each party acknowledges that it and its legal counsel have had the opportunity to review this Permit. The parties agree that the terms and conditions of this Permit shall not be construed against any party on the basis of such party's drafting, in whole or in part, of such terms and conditions.

- 25. Waiver.** Failure of either party to insist upon the strict performance of any of the terms and conditions of this Permit, or failure to exercise any rights or remedies provided in this Permit or by law, or to notify the other party in the event of breach, shall not release the other party of any of its obligations under this Permit, nor shall any purported oral modification or rescission of this Permit by either party operate as a waiver of any of the terms hereof. No waiver shall occur unless made in writing by the applicable party. No waiver by either party of any breach, default, or violation of any term, warranty, representation, agreement, covenant, right, condition, or provision of this Permit shall constitute waiver of any subsequent breach, default, or violation of the same or other term, warranty, representation, agreement, covenant, right, condition, or provision.
- 26. Severability.** If any provision of this Permit is held to be invalid or unenforceable, this provision shall not affect or invalidate the remainder of this Permit, and to this end the provisions of this Permit are declared to be severable. If any such invalidity becomes known or apparent to the parties, the parties agree to negotiate promptly in good faith in an attempt to amend such provision as nearly as possible to be consistent with the original intent of this Permit.
- 27. Governing Law & Venue.** The validity, construction, and performance of this Permit shall be governed by and construed in accordance with the laws of the state in which the Permit Road(s) are located, without regard to its conflict of laws rules. The parties agree to submit to the jurisdiction of any state or federal court within such state in any action or dispute resolution process arising out of the terms, enforcement, or breach of this Permit. The parties agree the courts of any Native American Tribe, whether federally recognized or otherwise, shall not be utilized to resolve or adjudicate any action or dispute arising out of the terms, enforcement, or breach of this Permit.
- 28. Attorneys' Fees.** Should any legal action or proceeding be commenced by either party to enforce all or any provision of this Permit, or in connection with any alleged dispute, breach, default, or misrepresentation in connection with this Permit, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs incurred in connection with such action or proceeding, including costs of pursuing or defending any legal action, including, without limitation, any appeal, discovery or negotiation and preparation of settlement arrangements, in addition to such other relief as may be granted.
- 29. Exhibits.** All exhibits referred to in this Permit are deemed to be incorporated by reference in this Permit in their entirety.
- 30. Headings.** The headings in this Permit are for convenience only and are not intended to, and shall not be construed to, limit, enlarge, or affect the scope or intent of this Permit nor the meaning of any of its provisions.

31. Counterparts. This Permit may be executed in one or more counterparts, each of which shall be deemed an original, and all of which counterparts together shall constitute the same instrument which may be sufficiently evidenced by one combined copy of said counterparts. Execution of this Permit by electronic means and/or at different times and places by the parties shall not affect its validity so long as all the parties execute a counterpart of this Permit.

In Witness Whereof, the parties have executed this Road Use Permit as of the Effective Date.

**State of Washington -Department of
Natural Resources**

DocuSigned by:
Eric Wisch 9/29/2022
E494FB0FE9AF450...
By: _____
Name: Eric Wisch

Its: Pacific Cascade Region Manager

Address: 601 Bond Rd
Castle Rock WA 98611

Contact: Eric Wisch
Tel: 360-577-2025
Email: eric.wisch@dnr.wa.gov

Weyerhaeuser Timber Holdings, Inc.

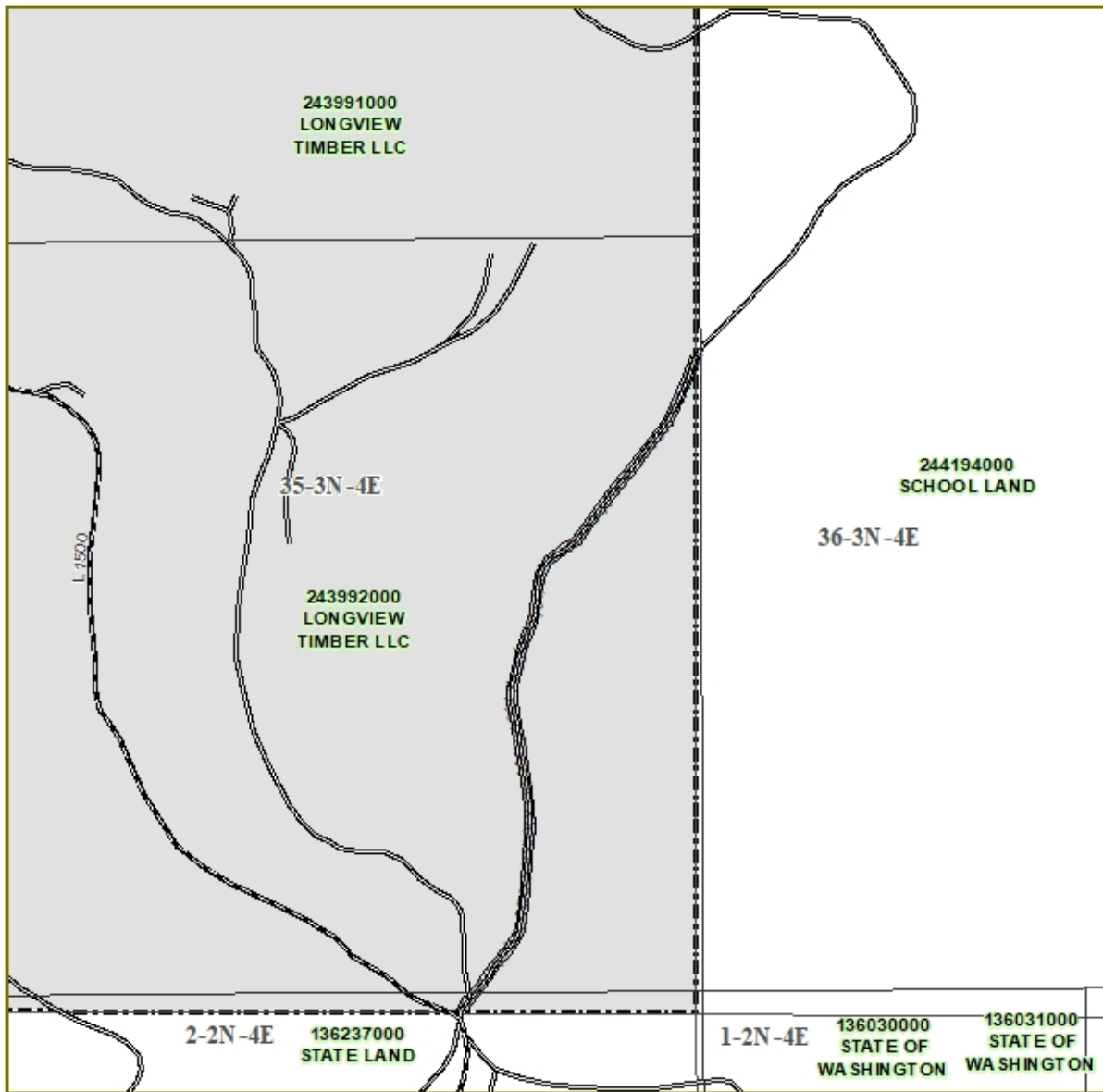
DocuSigned by:
Bill Frings 9/29/2022
B09ABE54EE24412...
By: _____
Name: Bill Frings

Its: WTL Vice President

Address: P. O. Box 667
Longview, WA. 98632

Contact: Bill Frings
Tel: (503)-899-7158
Email: Bill.Frings@wy.com

EXHIBIT A
Weyerhaeuser RUP - DNR Punch Bowl TS



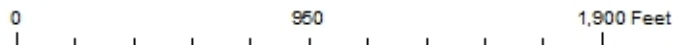
Weyerhaeuser Timber Holdings, Inc.
Clark County, Oregon
Section 35 T3N R4E

Legend

- | | | |
|-------------------|-----------------------------|-----------------------|
| Tax Parcels | Highway | Survey and Test Area |
| Road Use Permit | Major Paved Rd | Weyerhaeuser Property |
| New Construction | Major Gravel Rd | |
| Existing Easement | Minor Paved Rd | |
| Permit Road | Minor Unimproved Rd | |
| Interstate | Sections (full legal label) | |



1 inch = 600 feet



9/13/2022

EXHIBIT B
OPERATIONAL REQUIREMENTS

1. Permittee shall keep all roads open to haul forest or rock products.
2. Permittee shall be responsible for reimbursement for any damage caused to standing timber within road use permit area.

EXHIBIT C

General Safety and Operations Rules for Permittees:

(Important: This is not a permit. See your Permit for complete terms, conditions and obligations.)

DRIVING. Safe driving practices are required. Vehicle operators must drive to actual conditions and observe the following:

- **Maximum speed limit is 25 mph on all private logging roads; slower in most cases.**
- Road conditions, bad weather and limited visibility will require slower speeds.
- Always drive to the right side of the road but be aware of hazardous, soft road shoulders. Yield to heavy equipment.
- Do not enter active logging areas, unless authorized. Wait for equipment operators to clearly provide directions.
- Drive with lights on at all times.
- Safety belts must be worn by all passengers when driving on Weyerhaeuser lands.
- Do not block roadways, without prior permission of an authorized Weyerhaeuser representative.
- CB channels may be available for contact with log trucks but do not depend on CBs.
- Drive defensively - assume there is oncoming traffic around every corner and yield to loaded log trucks.

LAWS. In addition to Weyerhaeuser Company rules, Permittee must comply with all applicable state and federal laws and regulations.

PPE. High-viz. orange clothing, hard-hats and other personal protective equipment are highly recommended and **required** in active operating areas.

Drug and alcohol use on company property or jobs sites is strictly forbidden.

Weapons are not allowed in vehicles while operating under this permit for business purposes.

No off-road motorized vehicles and no driving off-road unless previously authorized in writing by Weyerhaeuser.

OPERATING AREAS. Stay clear of all logging, forestry or road construction activities, equipment, and lines (cable) until you have direct contact with the operator and are instructed that it is safe to proceed and:

- Stay at least 300 feet from feller-buncher equipment or chainsaw fallers (cutting trees). This equipment can throw limbs and chunks long distances. CB channel to contact the operator may be posted at the unit.
- Stay at least 150 feet from log processors - this equipment handles logs tree length and has a large radius that is a hazardous area.

OBEY ALL SIGNS (ex. “ROAD CLOSED” sign means you must not go beyond the sign for any reason).

- Even if a unit is not posted with signs, use common sense and follow the instructions given above.

GATES are to be closed at the end of each working day and during working days where there is no log hauling.