



TIMBER NOTICE OF SALE

SALE NAME: BROOM CLOSET

AGREEMENT NO: 30-100110

AUCTION: October 29, 2020 starting at 10:00 a.m., COUNTY: Cowlitz
Pacific Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 9 miles west of Longview

PRODUCTS SOLD AND SALE AREA:

All timber, except leave trees marked with blue paint and yellow "Leave Tree Area" tags, bounded by the following; white "Timber Sale Boundary" tags with pink flagging, reprod, and the R-120 and R-121 Roads in Unit 1; white "Timber Sale Boundary" tags with pink flagging and the R-100 Road in Unit 2; white "Timber Sale Boundary" tags with pink flagging and the R-130 Road in Unit 3; white "Timber Sale Boundary" tags with pink flagging, reprod and the R-100 Road in Unit 4; white "Timber Sale Boundary" tags with pink flagging, reprod and the R-130 Road in Unit 5; white "Timber Sale Boundary" tags with pink flagging, an unvegetated utility road, and the R-100 Road in Unit 6; white "Timber Sale Boundary" tags with pink flagging and the R-100 and R-130 Roads in Unit 7; all timber bound by the following: Orange "Right-of-Way Boundary" tags and reprod in Unit 8.

All forest products above located on part(s) of Sections 4 all in Township 8 North, Range 4 West, Sections 33 all in Township 9 North, Range 4 West, W.M., containing 146 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: PwC-SFIFM-513)

ESTIMATED SALE VOLUMES AND QUALITY:

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

MINIMUM BID: \$1,449,000.00 BID METHOD: Sealed Bids

PERFORMANCE SECURITY: \$100,000.00 SALE TYPE: Lump Sum

EXPIRATION DATE: October 31, 2022 ALLOCATION: Export Restricted

BID DEPOSIT: \$144,900.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Cable, Shovel, and Track skidder. The units will be harvested using Cable, shovel, tracked skidder and Eco-tracked 6-wheeled skidder Systems. This sale is estimated to be 89% ground based and 11% cable harvest. Ground-based harvesting equipment shall be restricted to slopes of 45% and less, Eco-tracked 6-wheeled skidders will not be permitted in Unit 5. Ground based Equipment shall only operate during dry soil



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conditions. See clause H-140 for further harvest requirements. Purchaser is responsible for all notifications, including "call before you dig", and liabilities associated with the utilities and their rights-of way.

ROADS: 7.17 stations of required construction. 41.57 stations of required reconstruction. 12.78 stations of optional construction. 174.44 stations of required prehaul maintenance. 8.69 stations of abandonment. Rock used in accordance with the quantities on the ROCK LIST may be obtained from the R-120 Pit located in Sec 04, T08N, R04W, W.M. Rock used in accordance with the quantities on the ROCK LIST may be obtained from any commercial source at the Purchaser's expense subject to written approval from Contract Administrator. Purchaser shall stockpile 1000 cubic yards of 2-INCH MINUS CRUSHED ROCK in the R-120 Pit in a location approved by the CA. Road construction will not be permitted from October 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.

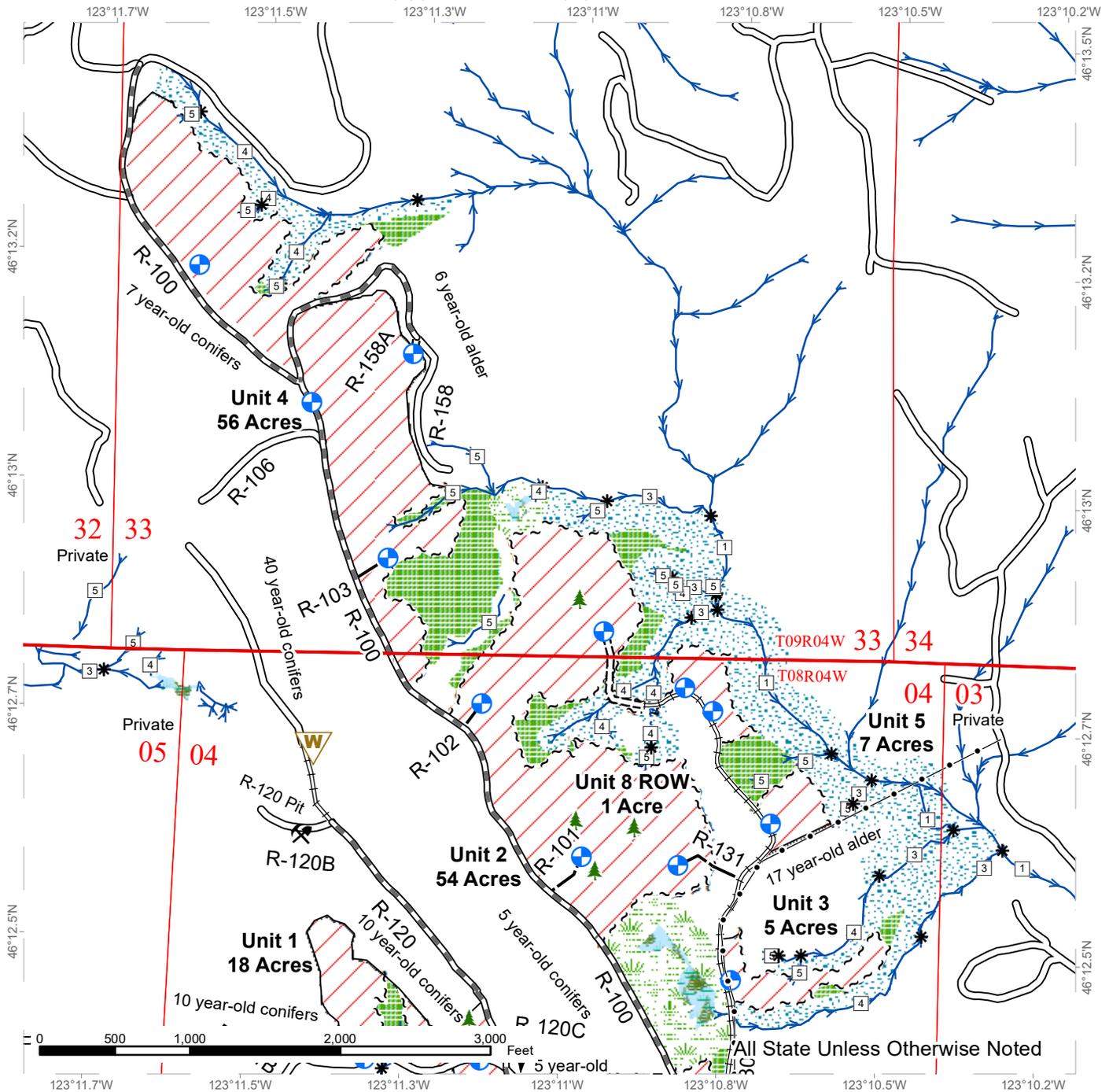
FEES: \$71,842.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: This sale contains an estimated 278mbf of higher quality DF 2 saw log, estimated 30mbf of higher quality DF 3 saw log, derived from the cruise. Vehicles using the R-130 road shall not leave the road surface. The gate located at station 1 + 16 on the R-100 road shall remain locked except during periods of haul. PCP 1-1 gate keys may be obtained from the Pacific Cascade Region office

TIMBER SALE MAP

SALE NAME: BROOM CLOSET
AGREEMENT#: 100110
TOWNSHIP(S): T8R4W, T9R4W
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Pacific Cascade Region
COUNTY(S): Cowlitz
ELEVATION RGE: 280-760

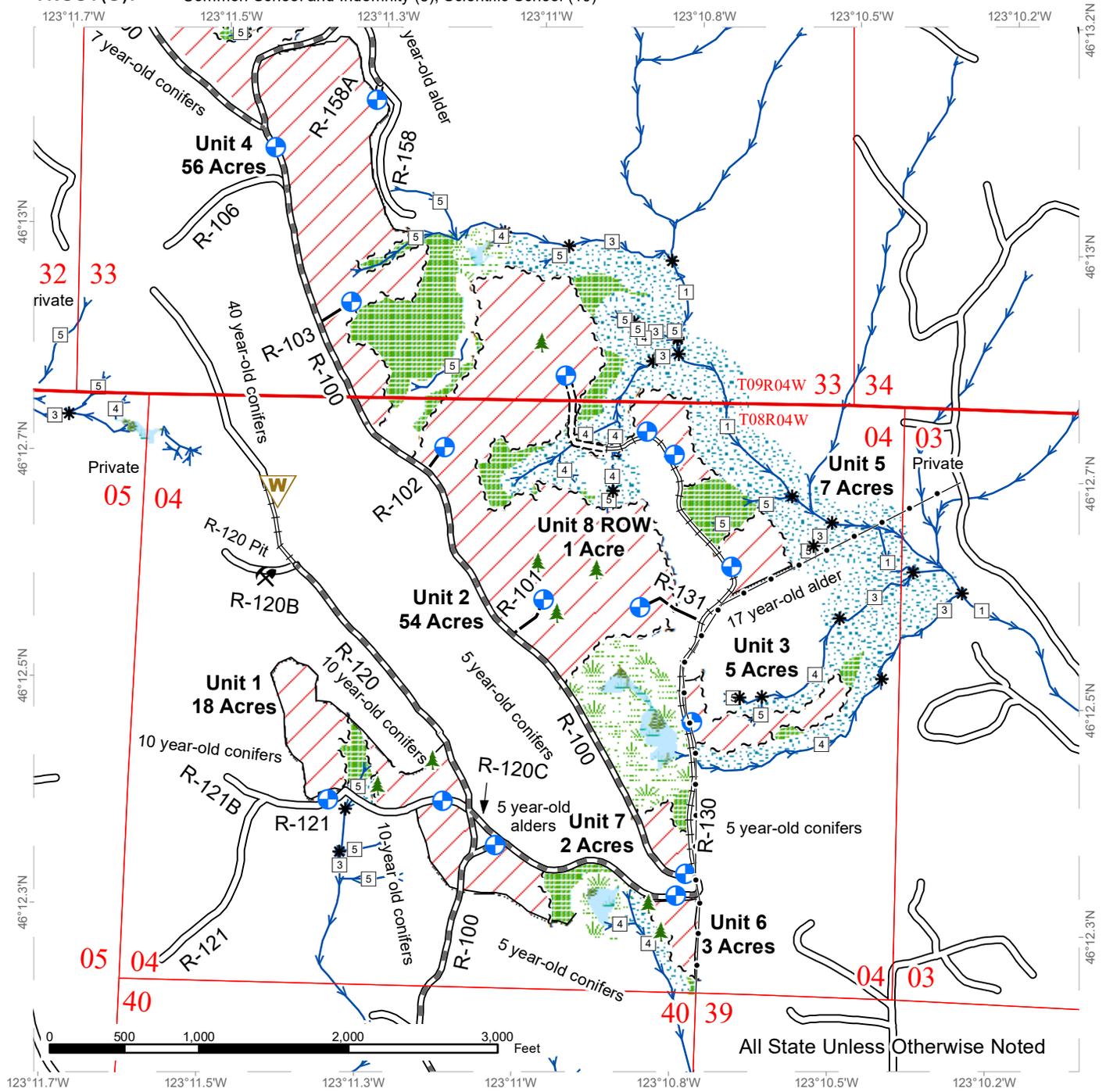


Variable Retention Harvest	Right of Way Tags	Clipped Streams
Forested Wetland	Existing Roads	Landing - Proposed
Leave Tree Area	Required Pre-Haul Maintenance	Leave Tree Area <1/4-acre
Wetland Mgt Zone	Required Construction	Rock Pit
Riparian Mgt Zone	Required Reconstruction	Waste Area
Sale Boundary Tags	Optional Construction	Public Land Survey Sections
Timber Type Change	Pipeline	

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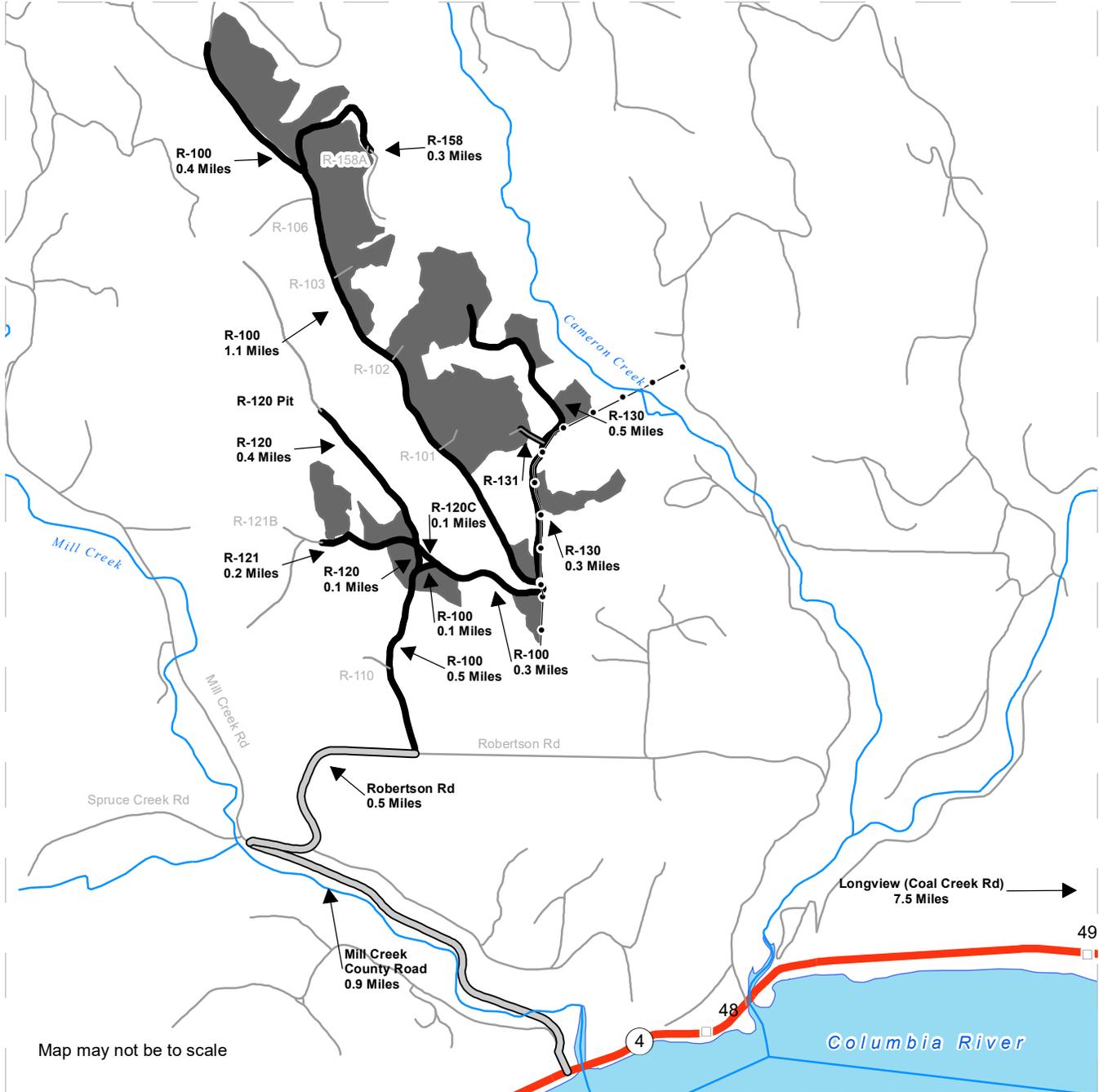
All State Unless Otherwise Noted

	Variable Retention Harvest		Right of Way Tags		Clipped Streams
	Forested Wetland		Existing Roads		Landing - Proposed
	Leave Tree Area		Required Pre-Haul Maintenance		Leave Tree Area <1/4-acre
	Wetland Mgt Zone		Required Construction		Rock Pit
	Riparian Mgt Zone		Required Reconstruction		Waste Area
	Sale Boundary Tags		Optional Construction		Public Land Survey Sections
	Timber Type Change		Pipeline		

DRIVING MAP

SALE NAME: BROOM CLOSET
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- Timber Sale Unit
- Haul Route
- Other Road
- Milepost Markers
- Pipeline

DRIVING DIRECTIONS:

Mill Creek, Unit 1, R-120 Pit Access:
 From State Route 4 (between milepost 47 and 48) turn north onto Mill Creek County Rd. Follow for 0.9 miles. Turn right onto Robertson Rd. Follow for 0.5 miles. Turn left onto R-100, through the yellow gate (PCP 1-1). Continue for 0.5 miles to **Unit 1** and road fork. Turn left at fork onto R-120 (0.1 miles), then left onto R-121 (0.2 miles), for **continued Unit 1 access**. Stay on R-120 for 0.4 miles to access **R-120 Pit**.

Units 2, 3, 4, 5, 6, 7 Access:
 Turn right at fork, continuing on R-100 for 0.3 miles to access **Unit 6**. Turn right onto R-130 to access **Unit 7, Unit 3, Unit 2, and Unit 5**. Turn left to stay on R-100 for **Unit 2 and Unit 4 access**.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-0100110

SALE NAME: BROOM CLOSET

**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-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on October 29, 2020 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees marked with blue paint and yellow "Leave Tree Area" tags, bounded by the following; white "Timber Sale Boundary" tags with pink flagging, reprod, and the R-120 and R-121 Roads in Unit 1; white "Timber Sale Boundary" tags with pink flagging and the R-100 Road in Unit 2; white "Timber Sale Boundary" tags with pink flagging and the R-130 Road in Unit 3; white "Timber Sale Boundary" tags with pink flagging, reprod and the R-100 Road in Unit 4; white "Timber Sale Boundary" tags with pink flagging, reprod and the R-130 Road in Unit 5; white "Timber Sale Boundary" tags with pink flagging, an unvegetated utility road, and the R-100 Road in Unit 6; white "Timber Sale Boundary" tags with pink flagging and the R-100 and R-130 Roads in Unit 7; all timber bound by the following: Orange "Right-of-Way Boundary" tags and reprod in Unit 8.

All forest products above located on approximately 146 acres on part(s) of Section 4 in Township 8 North, Range 4 West, Section 33 in Township 9 North, Range 4 West W.M. in Cowlitz County(s) as designated on the sale area and as shown on the attached timber sale map.

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-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2022.

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-051 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 total contract price.

For the second extension, not to exceed 1 year, payment of at least 90 percent of the total contract price.

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 total contract price.

All payments, except the initial deposit, will be deducted from the total contract price to determine the unpaid portion of the contract.

- e. Payment of \$894.00 per acre per annum for the acres on which an operating release has not been issued in all 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-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-091 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, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 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 the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

The pricing schedule has not been set for the sale.

G-111 Title and Risk of Loss

Title to the forest products under this contract passes to the Purchaser after they are removed from the sale area, if adequate advance payment or payment security has been provided to the State under this contract. Purchaser bears all risk of loss of, or damage to, and has an insurable interest in, the forest products described in this contract from the time the sale is confirmed under RCW 79.15.120. Breach of this contract shall have no effect on this provision.

G-116 Sustainable Forestry Initiative® (SFI) Certification

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: PwC-SFIFM-513.

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® program 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 Operation

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; the R-100, R-101, R-102, R-103, R-120, R-120B, R-120C, R-121, R-121B, R-130, R-131, R-158, and R-158A. 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 Robertson Road and the R-100 and R-120 Roads, unless authority is granted in writing by the Contract Administrator.

G-396 Public Hauling Permit

The hauling of forest products, rock or equipment may require a state, county, or city hauling permit. Purchaser is responsible for obtaining any necessary permit and any costs associated with extra maintenance or repair levied by the permitting agency. Purchaser must provide the Contract Administrator with a copy of the executed permit.

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:

To be added later

Section P: Payments and Securities

P-011 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 Clause P-020, 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-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$109,876.00. The total contract price consists of a \$0.00 contract bid price plus \$109,876.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

THE PURCHASE PRICE SHALL NOT BE AFFECTED BY ANY FACTORS, INCLUDING: the amount of forest products actually present within the contract area, the actual acreage covered by the contract area, the amount or volume of forest products actually cut or removed by purchaser, whether it becomes physically impossible or uneconomic to remove the forest products, and whether the subject forest products have been lost or damaged by fire or any other cause. The only situations Purchaser may not be liable for the full purchase price are governed by clause G-066, concerning governmental regulatory actions taken during the term of the contract.

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-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 H: Harvesting Operations

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 'Trespass and Unauthorized Activity' clause. Purchaser is required to leave all cut or damaged reserve trees on site.

H-016 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. A skid trail will not exceed 18 feet in width, including rub trees.
- b. Skid trails shall not cover more than 10 percent of the total acreage on one unit.
- c. Location of the skid trails must be marked by Purchaser and 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. Purchaser will not have more than two skid trails open to active skidding at any one time. All other skid trails used for skidding timber will be closed.
- h. Once a skid trail is closed, Purchaser will not reopen a skid trail unless approved in writing by the Contract Administrator.
- i. 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 12 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-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. 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-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-120 Harvesting Equipment

Forest products sold under this contract shall be harvested and removed using Cable, Shovel, Track Skidder and Eco-tracked 6-wheel skidder. 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-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

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

Ground based yarding harvesting equipment will not be permitted on slopes over 45%.

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

Eco-tracked 6-wheeled skidders will not be permitted in Unit 5.

Log butts remaining on the sale must be dispersed as directed by the Contract Administrator.

Vehicles using the R-130 Road shall not leave the road, except in designated areas as outlined by the Contract Administrator.

An onsite meeting with the Contract Administrator shall take place prior to any operations on the R-130 Road.

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:

Purchaser is responsible for all notifications, including "call before you dig", and liabilities associated with the utilities and their rights-of way.

Gas lines will only be crossed at approved areas.

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

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-250 Additional Falling Requirements

Within all units, all non-merchantable live stems greater than 2 inches DBH and/or over 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 11/20/2019 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the R-101, R-102, R-103, R-121, R-121B, R-130, R-131, R-158, and R-158A 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 other authorized 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-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 300 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 typed 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-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 (DOE). 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 (contact information below).
- National Response Center (contact information below).
- Appropriate Department of Ecology (DOE) regional office (contact information below).
- DNR Contract Administrator

DOE - Northwest Region: 1-425-649-7000
(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

DOE - Southwest Region: 1-360-407-6300
(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

DOE - Central Region: 1-509-575-2490
(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

DOE - Eastern Region: 1-509-329-3400
(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

Department of Emergency Management 24-hour Number: 1-800-258-5990

National Response Center: 1-800-424-8802

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.

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

The following clauses provide for payments by Purchaser to the State for breaches of the terms of this contract other than failure to perform. These payments are agreed to as liquidated damages and not as penalties. They are reasonable estimates of anticipated harm to the State, which will be 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.

Clause P-020 governs Purchaser's liability in the event Purchaser fails to perform any of the contract requirements other than the below liquidated damage clauses without written approval by the State. Purchaser's failure to pay for all or part of the forest products sold in this contract prior to expiration of the contract term results in substantial injury to the State. Therefore, Purchaser agrees to pay the State the full lump sum contract price in P-020 in the event of failure to perform.

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 all units.

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

Eric Wisch

Print Name

Pacific Cascade Region Manager

Date: _____

Date: _____

Address: _____

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 _____

PRE-CRUISE NARRATIVE

Sale Name: Broom Closet VRH	Region: Pacific Cascade
Agreement #: 30-0	District: St. Helens
Contact Forester: Jonah Salzman-Cohen Phone / Location: (360) 749-0675	County(s): Cowlitz, Choose a county
Alternate Contact: Becky VonDracek Phone / Location: (360) 749-6825	Other information: Click here to enter text.

Type of Sale: Lump Sum	
Harvest System: Ground based Click here to enter text.	89%
Harvest System: Uphill Cable	11%

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	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	4/T08N/R04W	10	22	1	3	<1	0	18	GPS (Garmin)
2	4/T08N/R04W	03/10	84	24	6	0	0	54	GPS (Garmin)
3	4/T08N/R04W	10	19	13	1	0	0	5	GPS (Garmin)
4	33/T09N/R04W	03/10	80	10	12	2	0	56	GPS (Garmin)
5	4/T08N/R04W	03/10	23	11	4	1	0	7	GPS (Garmin)
6	4/T08N/R04W	10	7	4	0	0	0	3	GPS (Garmin)
7	4/T08N/R04W	10	4	0	1	1	0	2	GPS (Garmin)
8 (ROW)	4/T08N/R04W	10	1	0	0	0	0	1	GPS (Garmin)
TOTAL ACRES			240	63	27	4	0	146	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Unit 1 is bound by white "Timber Sale Boundary" tags, pink flagging, the R-121 road, the R-120 road, the R-100 road, and reprod. Individual leave trees are marked with a ring of blue paint at breast height, a butt mark, and blue "LT" lettering.		216 Leave Trees
2	Unit 2 is bound by white "Timber Sale Boundary" tags, pink flagging, and the R-100 road. Individual leave trees are marked with a ring of blue paint at breast height, a butt mark, and blue "LT" lettering.		668 Leave Trees
3	Unit 3 is bound by white "Timber Sale Boundary" tags, pink flagging, and the R-130 road.		60 Leave Trees
4	Unit 4 is bound by white "Timber Sale Boundary" tags, pink flagging, the R-100 road, and reprod.		1415 Leave Trees
5	Unit 5 is bound by white "Timber Sale Boundary" tags, pink flagging, the R-130 road, and reprod.		321 Leave Trees
6	Unit 6 is bound by white "Timber Sale Boundary" tags, pink flagging, the R-100 road, and an unvegetated utility road adjacent to the unit. Individual leave trees are marked with a ring of blue paint at breast height, a butt mark, and blue "LT" lettering.		24 Leave Trees
7	Unit 7 is bound by white "Timber Sale Boundary" tags, pink flagging, the R-100 road, and the R-130 road.		33 Leave Trees
8 (ROW)	Unit 8 (ROW) is bound by orange "Right of Way Boundary" tags, pink flagging, and reprod.		

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	DF, WH / 611	Access via Robertson Rd gate (PCP-1)	See Driving Map
2	DF, RA / 1842	Access via Robertson Rd gate (PCP-1)	See Driving Map
3	DF, WH / 332	Access via Robertson Rd gate (PCP-1)	See Driving Map
4	DF, WH / 1840	Access via Robertson Rd gate (PCP-1)	See Driving Map
5	DF, RA / 177	Access via Robertson Rd gate (PCP-1)	See Driving Map
6	DF, WH / 107	Access via Robertson Rd gate (PCP-1)	See Driving Map

7	DF, WH / 58	Access via Robertson Rd gate (PCP-1)	See Driving Map
8 (ROW)	DF, RA / 20	Access via Robertson Rd gate (PCP-1)	See Driving Map
TOTAL MBF	4,987		

REMARKS:

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Prepared By: Jonah Salzman-Cohen Date: July 16 th , 2019	Title: Forester	CC: Becky VonDracek
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Timber Sale Cruise Report Broom Closet

Sale Name: BROOM CLOSET

Sale Type: LUMP SUM

Region: PACIFIC CASC

District: ST.HELENS

Lead Cruiser: Calvin Bailey

Other Cruisers:

Cruise Narrative:

Broom Closet VRH

General location:

Mill Creek. Approx. 13 miles west of Longview, WA.

Access is good off of the R-100 road system. Units 3 and 5 can be accessed off the R-130 utility road, which was drivable at the time of this cruise, conditions were dry. Gate leaving the pavement requires a PCP1-1 key for access.

Cruise Design:

All VRH units were cruised with variable radius plots, sighted in and out at 16'. Standard log lengths utilized were 36' and 40' for the conifer and 30' and 40' for the RA.

Take/Leave description:

Leave trees areas are bounded by yellow tags and pink flashers as well as scattered blue painted trees.

Timber Quality:

Mostly domestic grade with some pockets and scattered high quality.

% Cable vs. % ground-based harvesting:

89% ground. 11% cable. For the most part this sale should provide for good logging. Well roaded with some shorter steeper pitches.

Road Work:

Like stated above this sale is well roaded, with very little road work designed, mostly reconstruction and small pieces of new construct.

Species present not picked up in cruise: BM

General Remarks:

With the exception of units 1 and 3, the majority of this sale is comprised of younger 40-50 year old timber with a good mix of conifer and hardwood. All timber in these units was of domestic grade due to ring count and contained minor amounts of defect. The RA in these stands was of good quality and contained little split tops.

Units 1 and 3 were of an older age class did contain some high quality and larger timber. Defects in these stands were more consistent of older stands with some swollen butts, spike knots and conk noted.

Timber Sale Notice Volume (MBF)

Sp	QMD	Rings/In	Age	MBF Volume by Grade						
				All	Spec Mill	1 Saw	2 Saw	3 Saw	4 Saw	Utility
DF	20.6	6.3		2,602.8	70.3		1,598.2	746.6	179.1	8.6

Sp	QMD	Rings/In	Age	MBF Volume by Grade						
				All	Spec Mill	1 Saw	2 Saw	3 Saw	4 Saw	Utility
WH	16.9			892.5			474.2	322.3	84.1	11.8
RA	14.2			701.3		4.8	122.3	201.3	272.9	100.0
RC	33.7			29.4				29.2	0.2	
ALL	17.9	6.3		4,226.1	70.3	4.8	2,194.7	1,299.6	536.2	120.3

Timber Sale Notice Weight (tons)

Sp	Tons by Grade						
	All	Spec Mill	1 Saw	2 Saw	3 Saw	4 Saw	Utility
DF	18,345.5	373.3		10,356.4	5,967.5	1,590.0	58.3
WH	7,512.3			3,667.0	2,823.6	843.3	178.4
RA	5,935.5		35.3	901.0	1,547.2	2,660.7	791.3
RC	218.8				216.6	2.2	
ALL	32,012.1	373.3	35.3	14,924.5	10,554.9	5,095.9	1,028.1

Timber Sale Overall Cruise Statistics (Cut + Leave Trees)

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
190.9	3.1	150.6	1.7	28,946	3.8

Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
BROOM CLOSET U1	B1C: VR, 1 BAF (27.78) Measure/ Count Plots, Sighting Ht = 16 ft	18.0	21.3	18	9	0
BROOM CLOSET U2	B1C: VR, 1 BAF (27.78) Measure/ Count Plots, Sighting Ht = 16 ft	54.0	59.1	54	27	0
BROOM CLOSET U3	B1: VR, 1 BAF (40) Measure All, Sighting Ht = 16 ft	5.0	6.2	5	5	0
BROOM CLOSET U4	B1C: VR, 1 BAF (27.78) Measure/ Count Plots, Sighting Ht = 16 ft	56.0	69.3	55	28	0
BROOM CLOSET U5	B1C: VR, 1 BAF (27.78) Measure/ Count Plots, Sighting Ht = 16 ft	7.0	11.2	7	7	0
BROOM CLOSET U6	B1: VR, 1 BAF (27.78) Measure All, Sighting Ht = 16 ft	3.0	2.6	3	3	0
BROOM CLOSET U7	B1: VR, 1 BAF (27.78) Measure All, Sighting Ht = 16 ft	2.0	3.4	2	2	0
BROOM CLOSET U8	ST: Strip/Percent Sample (1 tree expansion)	1.0	0.7	1	1	0

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
ROW						
All		146.0	173.7	145	82	0

Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.8	38.0	9,029	2.5	8,641.3	1,318.2
DF	LIVE	2 SAW	HQ-B	17.2	39.0	1,917	0.2	1,715.2	279.9
DF	LIVE	3 SAW	Domestic	9.1	37.0	4,909	1.0	5,747.3	716.7
DF	LIVE	3 SAW	HQ-B	10.7	39.0	206	0.0	220.3	30.0
DF	LIVE	4 SAW	Domestic	5.6	29.0	1,226	0.5	1,589.9	179.1
DF	LIVE	CULL	Cull	6.3	3.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	21.4	40.0	482	0.7	373.3	70.3
DF	LIVE	UTILITY	Pulp	6.4	15.0	59	0.0	58.3	8.6
RA	LIVE	1 SAW	Domestic	16.2	40.0	33	0.0	35.3	4.8
RA	LIVE	2 SAW	Domestic	13.3	29.0	837	2.5	901.1	122.3
RA	LIVE	3 SAW	Domestic	10.7	31.0	1,379	1.7	1,547.2	201.3
RA	LIVE	4 SAW	Domestic	7.5	30.0	1,869	1.6	2,660.7	272.9
RA	LIVE	CULL	Cull	5.9	7.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.3	22.0	685	0.1	791.3	100.0
RC	LIVE	3 SAW	Domestic	15.8	33.0	200	9.1	216.6	29.2
RC	LIVE	4 SAW	Domestic	5.1	16.0	1	0.0	2.2	0.2
WH	LIVE	2 SAW	Domestic	15.0	37.0	3,248	2.6	3,667.0	474.2
WH	LIVE	3 SAW	Domestic	9.1	37.0	2,209	0.5	2,823.6	322.5
WH	LIVE	4 SAW	Domestic	5.6	27.0	576	0.7	843.3	84.1
WH	LIVE	CULL	Cull	8.0	11.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	6.5	18.0	80	9.3	178.4	11.7

Timber Sale Log Grade x Diameter Bin Summary

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	4 SAW	5.6	30.0	1,219	0.5	1,582.4	178.0
DF	5 - 11	LIVE	CULL	6.1	3.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	UTILITY	7.4	18.0	59	0.0	58.3	8.6
DF	5 - 11	LIVE	3 SAW	9.2	37.0	5,114	0.9	5,967.6	746.7
DF	12 - 19	LIVE	4 SAW	12.0	30.0	7	0.0	7.5	1.0
DF	12 - 19	LIVE	2 SAW	14.6	38.0	8,150	1.7	7,985.2	1,189.9
DF	12 - 19	LIVE	CULL	17.6	10.0	0	100.0	0.0	0.0

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	12 - 19	LIVE	SPECIAL MILL	18.9	40.0	113	0.0	92.8	16.4
DF	20+	LIVE	2 SAW	22.5	40.0	2,796	3.3	2,371.3	408.2
DF	20+	LIVE	SPECIAL MILL	22.6	40.0	369	0.9	280.5	53.9
DF	20+	LIVE	CULL	24.5	8.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	CULL	5.2	9.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	UTILITY	5.3	22.0	648	0.1	744.3	94.7
RA	5 - 9	LIVE	4 SAW	7.4	30.0	1,869	1.6	2,660.7	272.9
RA	10 - 11	LIVE	3 SAW	10.7	31.0	1,379	1.7	1,547.2	201.3
RA	10 - 11	LIVE	CULL	11.0	5.0	0	100.0	0.0	0.0
RA	12 - 15	LIVE	2 SAW	13.4	27.0	837	2.5	901.1	122.3
RA	12 - 15	LIVE	UTILITY	13.5	14.0	37	0.0	47.0	5.3
RA	12 - 15	LIVE	CULL	13.7	4.0	0	100.0	0.0	0.0
RA	16+	LIVE	1 SAW	16.2	40.0	33	0.0	35.3	4.8
RC	5 - 11	LIVE	4 SAW	5.1	16.0	1	0.0	2.2	0.2
RC	5 - 11	LIVE	3 SAW	9.3	32.0	16	0.0	23.9	2.3
RC	12 - 19	LIVE	3 SAW	16.3	34.0	89	6.8	91.8	13.0
RC	20+	LIVE	3 SAW	22.9	32.0	95	12.4	101.0	13.9
WH	5 - 11	LIVE	4 SAW	5.6	28.0	576	0.7	843.3	84.1
WH	5 - 11	LIVE	UTILITY	6.0	18.0	80	9.3	178.4	11.7
WH	5 - 11	LIVE	CULL	6.2	12.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	3 SAW	9.2	36.0	2,209	0.5	2,823.6	322.5
WH	12 - 19	LIVE	2 SAW	14.4	37.0	2,620	1.9	3,029.3	382.5
WH	12 - 19	LIVE	CULL	14.5	7.0	0	100.0	0.0	0.0
WH	20+	LIVE	2 SAW	23.1	37.0	628	5.4	637.7	91.7

Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Cull	6.1	3.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	Pulp	7.4	18.0	59	0.0	58.3	8.6
DF	5 - 11	LIVE	Domestic	7.6	34.0	6,128	0.9	7,329.7	894.7
DF	5 - 11	LIVE	HQ-B	10.6	38.0	206	0.0	220.3	30.0
DF	12 - 19	LIVE	Domestic	14.4	38.0	6,687	2.0	6,633.3	976.3
DF	12 - 19	LIVE	HQ-B	15.9	39.0	1,470	0.2	1,359.4	214.6
DF	12 - 19	LIVE	Cull	17.6	10.0	0	100.0	0.0	0.0
DF	12 - 19	LIVE	HQ-A	18.9	40.0	113	0.0	92.8	16.4
DF	20+	LIVE	HQ-B	21.5	40.0	447	0.0	355.8	65.2
DF	20+	LIVE	HQ-A	22.6	40.0	369	0.9	280.5	53.9

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	20+	LIVE	Domestic	22.8	39.0	2,349	3.9	2,015.5	342.9
DF	20+	LIVE	Cull	24.5	8.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Cull	5.2	9.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Pulp	5.3	22.0	648	0.1	744.3	94.7
RA	5 - 9	LIVE	Domestic	7.4	30.0	1,869	1.6	2,660.7	272.9
RA	10 - 11	LIVE	Domestic	10.7	31.0	1,379	1.7	1,547.2	201.3
RA	10 - 11	LIVE	Cull	11.0	5.0	0	100.0	0.0	0.0
RA	12 - 15	LIVE	Domestic	13.4	27.0	837	2.5	901.1	122.3
RA	12 - 15	LIVE	Pulp	13.5	14.0	37	0.0	47.0	5.3
RA	12 - 15	LIVE	Cull	13.7	4.0	0	100.0	0.0	0.0
RA	16+	LIVE	Domestic	16.2	40.0	33	0.0	35.3	4.8
RC	5 - 11	LIVE	Domestic	8.1	27.0	17	0.0	26.1	2.5
RC	12 - 19	LIVE	Domestic	16.3	34.0	89	6.8	91.8	13.0
RC	20+	LIVE	Domestic	22.9	32.0	95	12.4	101.0	13.9
WH	5 - 11	LIVE	Pulp	6.0	18.0	80	9.3	178.4	11.7
WH	5 - 11	LIVE	Cull	6.2	12.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Domestic	7.5	32.0	2,785	0.6	3,666.9	406.6
WH	12 - 19	LIVE	Domestic	14.4	37.0	2,620	1.9	3,029.3	382.5
WH	12 - 19	LIVE	Cull	14.5	7.0	0	100.0	0.0	0.0
WH	20+	LIVE	Domestic	23.1	37.0	628	5.4	637.7	91.7

Cruise Unit Report BROOM CLOSET U1

Unit Sale Notice Volume (MBF): BROOM CLOSET U1

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	25.4			479.0	408.6	66.1	4.4	
RA	17.1			70.0	31.7	14.9	5.4	18.0
WH	18.0			41.1	25.1	10.2	2.5	3.3
RC	33.7			29.4		29.2	0.2	
ALL	22.1			619.5	465.4	120.4	12.5	21.3

Unit Sale Notice Weight (tons): BROOM CLOSET U1

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	3,027.9	2,463.3	528.3	36.2	
RA	576.5	229.8	124.6	61.9	160.2
WH	380.6	187.6	99.0	24.4	69.6
RC	218.8		216.6	2.2	
ALL	4,203.8	2,880.7	968.5	124.7	229.8

Unit Cruise Design: BROOM CLOSET U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (27.78) Measure/Count Plots, Sighting Ht = 16 ft	18.0	21.3	18	9	0

Unit Cruise Summary: BROOM CLOSET U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	24	55	3.1	0
RA	7	20	1.1	0
WH	5	8	0.4	0
RC	3	5	0.3	0
ALL	39	88	4.9	0

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET 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	117.8	108.3	25.5	225.8	17.3	3.5	26,611	109.7	25.8
RA	47.0	113.2	26.7	82.7	33.3	12.6	3,888	118.0	29.5
WH	18.0	177.5	41.8	127.3	59.4	26.6	2,286	187.2	49.6
RC	13.7	206.8	48.8	119.0	23.4	13.5	1,633	208.2	50.6
ALL	196.5	48.1	11.3	175.1	42.0	6.7	34,418	63.9	13.2

Unit Summary: BROOM CLOSET U1

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	24	ALL	25.4	111	142	26,611	2.4	33.5	117.8	23.4	3,027.9	479.0
RA	LIVE	CUT	7	ALL	17.1	56	75	3,888	12.7	29.5	47.0	11.4	576.5	70.0
RC	LIVE	CUT	3	ALL	33.7	79	101	1,633	9.0	2.2	13.7	2.4	218.8	29.4
WH	LIVE	CUT	5	ALL	18.0	68	84	2,286	1.4	10.2	18.0	4.2	380.6	41.1
ALL	LIVE	CUT	39	ALL	21.9	83	107	34,418	3.9	75.4	196.5	41.4	4,203.8	619.5
ALL	ALL	ALL	39	ALL	21.9	83	107	34,418	3.9	75.4	196.5	41.4	4,203.8	619.5

Unit Stand Table: BROOM CLOSET U1

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	18	LIVE	CUT	1	17.0	98	125	802	0.0	2.9	4.5	1.1	106.0	14.4
DF	20	LIVE	CUT	3	19.7	99	126	2,523	0.0	6.5	13.7	3.1	316.8	45.4
DF	22	LIVE	CUT	2	21.0	100	127	1,648	0.0	3.7	8.9	1.9	208.8	29.7
DF	24	LIVE	CUT	1	23.0	106	136	921	0.0	1.6	4.5	0.9	110.2	16.6
DF	26	LIVE	CUT	4	25.5	117	150	3,875	6.0	5.1	18.0	3.6	451.5	69.8
DF	28	LIVE	CUT	5	27.5	117	150	5,996	4.8	6.6	27.2	5.2	696.7	107.9
DF	30	LIVE	CUT	3	29.3	126	163	3,625	0.4	2.9	13.4	2.5	384.0	65.2
DF	32	LIVE	CUT	1	31.0	110	141	2,042	0.0	1.7	9.0	1.6	230.4	36.8
DF	34	LIVE	CUT	1	34.0	130	167	1,298	1.0	0.7	4.5	0.8	130.3	23.4
DF	36	LIVE	CUT	1	35.0	125	161	1,242	0.0	0.7	4.6	0.8	129.4	22.4
DF	38	LIVE	CUT	1	37.0	132	170	1,362	1.4	0.6	4.6	0.8	133.6	24.5
DF	44	LIVE	CUT	1	43.0	123	158	1,275	0.0	0.5	4.7	0.7	130.1	23.0
RA	16	LIVE	CUT	3	15.5	66	81	2,206	11.7	16.6	21.6	5.5	319.4	39.7
RA	18	LIVE	CUT	2	17.5	42	67	798	13.3	6.9	11.5	2.8	126.7	14.4
RA	20	LIVE	CUT	1	20.0	60	73	540	0.0	3.6	7.9	1.8	90.5	9.7
RA	22	LIVE	CUT	1	21.0	22	63	344	20.2	2.5	6.0	1.3	39.9	6.2
RC	32	LIVE	CUT	1	31.0	72	91	464	8.5	0.9	4.7	0.8	69.1	8.4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RC	36	LIVE	CUT	2	35.5	85	108	1,169	9.2	1.3	9.0	1.5	149.7	21.0
WH	14	LIVE	CUT	1	14.0	85	107	523	0.0	3.2	3.4	0.9	86.4	9.4
WH	16	LIVE	CUT	1	15.0	40	47	133	0.0	3.1	3.9	1.0	51.7	2.4
WH	22	LIVE	CUT	1	21.0	42	50	284	0.0	1.6	3.9	0.8	47.1	5.1
WH	24	LIVE	CUT	2	24.0	102	129	1,346	2.3	2.2	6.8	1.4	195.5	24.2

Unit Log Grade Summary: BROOM CLOSET U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	16.6	39.0	22,697	0.4	2,463.3	408.6
DF	LIVE	3 SAW	9.1	35.0	3,672	0.0	528.3	66.1
DF	LIVE	4 SAW	6.0	19.0	242	0.0	36.2	4.4
DF	LIVE	CULL	13.9	6.0	0	100.0	0.0	0.0
RA	LIVE	2 SAW	13.1	20.0	1,761	1.9	229.8	31.7
RA	LIVE	3 SAW	10.3	30.0	826	9.4	124.6	14.9
RA	LIVE	4 SAW	8.0	30.0	300	2.0	61.9	5.4
RA	LIVE	CULL	7.6	11.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	7.7	27.0	1,001	0.0	160.2	18.0
RC	LIVE	3 SAW	15.8	33.0	1,622	9.1	216.6	29.2
RC	LIVE	4 SAW	5.1	16.0	11	0.0	2.2	0.2
WH	LIVE	2 SAW	15.6	32.0	1,395	1.6	187.6	25.1
WH	LIVE	3 SAW	9.1	38.0	567	0.0	99.0	10.2
WH	LIVE	4 SAW	5.0	40.0	141	0.0	24.4	2.5
WH	LIVE	CULL	7.7	6.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	5.4	33.0	182	0.0	69.6	3.3

Unit Log Sort Summary: BROOM CLOSET U1

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Cull	13.9	6.0	0	100.0	0.0	0.0
DF	LIVE	Domestic	12.3	34.0	19,207	0.5	2,147.6	345.7
DF	LIVE	HQ-B	14.1	39.0	7,404	0.0	880.3	133.3
RA	LIVE	Cull	7.6	11.0	0	100.0	0.0	0.0
RA	LIVE	Domestic	11.3	25.0	2,887	4.2	416.3	52.0
RA	LIVE	Pulp	7.7	27.0	1,001	0.0	160.2	18.0
RC	LIVE	Domestic	14.6	31.0	1,633	9.0	218.8	29.4
WH	LIVE	Cull	7.7	6.0	0	100.0	0.0	0.0
WH	LIVE	Domestic	10.5	36.0	2,104	1.1	311.0	37.9
WH	LIVE	Pulp	5.4	33.0	182	0.0	69.6	3.3

Unit Log Grade x Sort Summary: BROOM CLOSET U1

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	17.0	39.0	16,320	0.6	1,713.7	293.8
DF	LIVE	2 SAW	HQ-B	16.0	39.0	6,377	0.0	749.6	114.8
DF	LIVE	3 SAW	Domestic	8.8	34.0	2,645	0.0	397.6	47.6
DF	LIVE	3 SAW	HQ-B	9.8	38.0	1,027	0.0	130.7	18.5
DF	LIVE	4 SAW	Domestic	6.0	19.0	242	0.0	36.2	4.4
DF	LIVE	CULL	Cull	13.9	6.0	0	100.0	0.0	0.0
RA	LIVE	2 SAW	Domestic	13.1	20.0	1,761	1.9	229.8	31.7
RA	LIVE	3 SAW	Domestic	10.3	30.0	826	9.4	124.6	14.9
RA	LIVE	4 SAW	Domestic	8.0	30.0	300	2.0	61.9	5.4
RA	LIVE	CULL	Cull	7.6	11.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	7.7	27.0	1,001	0.0	160.2	18.0
RC	LIVE	3 SAW	Domestic	15.8	33.0	1,622	9.1	216.6	29.2
RC	LIVE	4 SAW	Domestic	5.1	16.0	11	0.0	2.2	0.2
WH	LIVE	2 SAW	Domestic	15.6	32.0	1,395	1.6	187.6	25.1
WH	LIVE	3 SAW	Domestic	9.1	38.0	567	0.0	99.0	10.2
WH	LIVE	4 SAW	Domestic	5.0	40.0	141	0.0	24.4	2.5
WH	LIVE	CULL	Cull	7.7	6.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	5.4	33.0	182	0.0	69.6	3.3

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U1

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	4 SAW	6.0	19.0	242	0.0	36.2	4.4
DF	5 - 11	LIVE	3 SAW	9.1	35.0	3,672	0.0	528.3	66.1
DF	5 - 11	LIVE	CULL	9.7	4.0	0	100.0	0.0	0.0
DF	12 - 19	LIVE	2 SAW	15.5	39.0	15,513	0.6	1,743.9	279.2
DF	20+	LIVE	CULL	21.9	10.0	0	100.0	0.0	0.0
DF	20+	LIVE	2 SAW	22.7	40.0	7,184	0.0	719.4	129.3
RA	5 - 9	LIVE	CULL	5.3	14.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	UTILITY	6.3	30.0	705	0.0	113.3	12.7
RA	5 - 9	LIVE	4 SAW	8.0	30.0	300	2.0	61.9	5.4
RA	10 - 11	LIVE	3 SAW	10.3	30.0	826	9.4	124.6	14.9
RA	12 - 15	LIVE	2 SAW	13.1	20.0	1,761	1.9	229.8	31.7
RA	12 - 15	LIVE	CULL	13.2	4.0	0	100.0	0.0	0.0
RA	12 - 15	LIVE	UTILITY	13.5	14.0	296	0.0	47.0	5.3
RC	5 - 11	LIVE	4 SAW	5.1	16.0	11	0.0	2.2	0.2
RC	5 - 11	LIVE	3 SAW	9.3	32.0	130	0.0	23.9	2.3

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RC	12 - 19	LIVE	3 SAW	16.3	34.0	720	6.8	91.8	13.0
RC	20+	LIVE	3 SAW	22.9	32.0	772	12.4	101.0	13.9
WH	5 - 11	LIVE	4 SAW	5.0	40.0	141	0.0	24.4	2.5
WH	5 - 11	LIVE	UTILITY	5.4	33.0	182	0.0	69.6	3.3
WH	5 - 11	LIVE	CULL	7.7	6.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	3 SAW	9.1	38.0	567	0.0	99.0	10.2
WH	12 - 19	LIVE	2 SAW	15.6	32.0	1,395	1.6	187.6	25.1

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U1

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Domestic	8.1	30.0	2,887	0.0	433.9	52.0
DF	5 - 11	LIVE	Cull	9.7	4.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	HQ-B	9.8	38.0	1,027	0.0	130.7	18.5
DF	12 - 19	LIVE	Domestic	15.5	39.0	9,828	0.9	1,065.6	176.9
DF	12 - 19	LIVE	HQ-B	15.7	38.0	5,686	0.0	678.3	102.3
DF	20+	LIVE	HQ-B	20.6	40.0	692	0.0	71.3	12.4
DF	20+	LIVE	Cull	21.9	10.0	0	100.0	0.0	0.0
DF	20+	LIVE	Domestic	22.9	40.0	6,493	0.0	648.1	116.9
RA	5 - 9	LIVE	Cull	5.3	14.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Pulp	6.3	30.0	705	0.0	113.3	12.7
RA	5 - 9	LIVE	Domestic	8.0	30.0	300	2.0	61.9	5.4
RA	10 - 11	LIVE	Domestic	10.3	30.0	826	9.4	124.6	14.9
RA	12 - 15	LIVE	Domestic	13.1	20.0	1,761	1.9	229.8	31.7
RA	12 - 15	LIVE	Cull	13.2	4.0	0	100.0	0.0	0.0
RA	12 - 15	LIVE	Pulp	13.5	14.0	296	0.0	47.0	5.3
RC	5 - 11	LIVE	Domestic	8.1	27.0	141	0.0	26.1	2.5
RC	12 - 19	LIVE	Domestic	16.3	34.0	720	6.8	91.8	13.0
RC	20+	LIVE	Domestic	22.9	32.0	772	12.4	101.0	13.9
WH	5 - 11	LIVE	Pulp	5.4	33.0	182	0.0	69.6	3.3
WH	5 - 11	LIVE	Domestic	7.6	39.0	709	0.0	123.4	12.8
WH	5 - 11	LIVE	Cull	7.7	6.0	0	100.0	0.0	0.0
WH	12 - 19	LIVE	Domestic	15.6	32.0	1,395	1.6	187.6	25.1

Cruise Unit Report BROOM CLOSET U2

Unit Sale Notice Volume (MBF): BROOM CLOSET U2

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	16.7	6.3		621.6	282.1	266.1	72.2	1.2
RA	13.9			441.9	72.9	146.1	169.5	53.5
WH	16.3			387.0	208.6	137.4	38.6	2.4
ALL	15.5	6.3		1,450.5	563.6	549.6	280.3	57.0

Unit Sale Notice Weight (tons): BROOM CLOSET U2

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	4,562.8	1,807.8	2,118.6	627.9	8.5
RA	3,621.6	541.1	1,091.1	1,575.5	413.9
WH	3,142.1	1,560.8	1,184.4	380.7	16.2
ALL	11,326.5	3,909.7	4,394.1	2,584.1	438.6

Unit Cruise Design: BROOM CLOSET U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (27.78) Measure/Count Plots, Sighting Ht = 16 ft	54.0	59.1	54	27	0

Unit Cruise Summary: BROOM CLOSET U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	50	101	1.9	8
RA	40	101	1.9	0
WH	29	63	1.2	0
ALL	119	265	4.9	8

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET 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	71.5	105.9	14.4	161.1	27.2	3.8	11,511	109.3	14.9
RA	73.2	105.6	14.4	111.8	19.5	3.1	8,184	107.4	14.7

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	44.3	163.1	22.2	161.6	28.1	5.2	7,166	165.5	22.8
ALL	189.0	34.1	4.6	142.1	31.4	2.9	26,861	46.4	5.5

Unit Summary: BROOM CLOSET U2

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	50	ALL	16.7	82	104	11,511	1.9	47.0	71.5	17.5	4,562.8	621.6
RA	LIVE	CUT	40	ALL	13.9	64	78	8,184	2.7	69.5	73.2	19.6	3,621.6	441.9
WH	LIVE	CUT	29	ALL	16.3	75	93	7,166	2.6	30.6	44.3	11.0	3,142.1	387.0
ALL	LIVE	CUT	119	ALL	15.4	72	89	26,861	2.3	147.1	189.0	48.1	11,326.5	1,450.5
ALL	ALL	ALL	119	ALL	15.4	72	89	26,861	2.3	147.1	189.0	48.1	11,326.5	1,450.5

Unit Stand Table: BROOM CLOSET U2

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.0	63	78	156	0.0	4.0	1.4	0.5	55.7	8.4
DF	10	LIVE	CUT	1	10.0	73	92	179	7.9	2.6	1.4	0.4	67.3	9.7
DF	12	LIVE	CUT	2	11.5	74	92	381	0.0	3.9	2.8	0.8	145.7	20.6
DF	14	LIVE	CUT	8	13.5	78	99	1,436	0.9	11.3	11.2	3.0	631.8	77.6
DF	16	LIVE	CUT	6	15.5	81	102	1,085	0.8	6.4	8.4	2.1	495.7	58.6
DF	18	LIVE	CUT	11	17.5	83	105	2,077	1.0	9.2	15.4	3.7	935.1	112.1
DF	20	LIVE	CUT	7	19.4	90	114	1,508	1.4	4.7	9.6	2.2	615.3	81.4
DF	22	LIVE	CUT	2	21.0	97	125	486	0.8	1.2	2.8	0.6	190.4	26.2
DF	24	LIVE	CUT	3	23.7	109	140	887	1.1	1.4	4.2	0.9	316.2	47.9
DF	28	LIVE	CUT	1	28.0	111	143	306	0.0	0.3	1.4	0.3	108.0	16.5
DF	30	LIVE	CUT	2	30.0	109	140	610	3.3	0.6	2.9	0.5	215.7	32.9
DF	32	LIVE	CUT	3	32.0	114	147	1,335	1.8	1.0	5.7	1.0	441.9	72.1
DF	34	LIVE	CUT	1	33.0	126	162	388	0.4	0.2	1.4	0.2	118.8	20.9
DF	36	LIVE	CUT	1	36.0	134	173	382	12.2	0.2	1.4	0.2	127.6	20.6
DF	46	LIVE	CUT	1	45.0	100	128	297	7.0	0.1	1.4	0.2	97.5	16.0
RA	8	LIVE	CUT	1	8.0	52	63	165	8.6	5.1	1.8	0.6	61.2	8.9
RA	10	LIVE	CUT	1	10.0	62	76	221	0.0	3.3	1.8	0.6	83.2	11.9
RA	12	LIVE	CUT	8	11.5	62	76	1,527	0.6	20.2	14.5	4.3	688.2	82.5
RA	14	LIVE	CUT	8	13.5	64	78	1,459	4.6	14.9	14.7	4.0	705.9	78.8
RA	16	LIVE	CUT	12	15.6	65	81	2,487	2.3	16.4	21.8	5.5	1,089.9	134.3
RA	18	LIVE	CUT	3	17.3	72	89	678	2.8	3.5	5.7	1.4	301.8	36.6
RA	20	LIVE	CUT	6	19.3	73	90	1,446	2.6	5.4	11.0	2.5	590.0	78.1

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
RA	22	LIVE	CUT	1	21.0	67	82	200	6.6	0.8	1.9	0.4	101.3	10.8
WH	8	LIVE	CUT	1	8.0	42	50	135	0.0	4.6	1.6	0.6	56.3	7.3
WH	10	LIVE	CUT	1	9.0	74	93	251	0.0	3.3	1.5	0.5	86.8	13.6
WH	14	LIVE	CUT	3	13.3	69	85	558	4.3	4.8	4.6	1.3	270.7	30.1
WH	16	LIVE	CUT	3	15.3	74	92	601	4.5	3.5	4.5	1.2	288.2	32.5
WH	18	LIVE	CUT	8	17.4	84	105	1,810	1.8	7.3	11.9	2.9	867.4	97.7
WH	20	LIVE	CUT	4	19.2	85	106	938	4.6	3.1	6.2	1.4	430.1	50.7
WH	22	LIVE	CUT	2	21.5	91	115	569	0.8	1.2	3.1	0.7	237.0	30.7
WH	24	LIVE	CUT	2	23.5	96	121	598	0.3	1.0	3.1	0.6	243.4	32.3
WH	26	LIVE	CUT	1	25.0	90	113	280	0.3	0.5	1.5	0.3	120.2	15.1
WH	30	LIVE	CUT	1	30.0	100	126	332	3.6	0.3	1.6	0.3	130.1	17.9
WH	32	LIVE	CUT	2	32.0	106	135	699	5.8	0.6	3.1	0.5	271.7	37.7
WH	34	LIVE	CUT	1	33.0	111	141	397	0.0	0.3	1.5	0.3	140.1	21.4

Unit Log Grade Summary: BROOM CLOSET U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	16.0	38.0	5,224	2.7	1,807.8	282.1
DF	LIVE	3 SAW	9.2	38.0	4,928	0.9	2,118.6	266.1
DF	LIVE	4 SAW	5.3	31.0	1,338	0.9	627.9	72.2
DF	LIVE	CULL	5.9	2.0	0	100.0	0.0	0.0
DF	LIVE	UTILITY	6.4	15.0	22	0.0	8.5	1.2
RA	LIVE	2 SAW	13.5	31.0	1,350	3.3	541.1	72.9
RA	LIVE	3 SAW	10.7	32.0	2,705	0.8	1,091.1	146.1
RA	LIVE	4 SAW	7.4	31.0	3,138	1.4	1,575.5	169.5
RA	LIVE	CULL	5.2	5.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	5.2	23.0	990	0.0	413.9	53.5
WH	LIVE	2 SAW	14.7	37.0	3,863	1.9	1,560.8	208.6
WH	LIVE	3 SAW	9.0	37.0	2,545	0.5	1,184.4	137.4
WH	LIVE	4 SAW	5.4	27.0	714	0.7	380.7	38.6
WH	LIVE	CULL	9.0	6.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	10.0	15.0	44	0.0	16.2	2.4

Unit Log Sort Summary: BROOM CLOSET U2

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Cull	5.9	2.0	0	100.0	0.0	0.0
DF	LIVE	Domestic	8.4	35.0	10,368	1.9	4,170.0	559.9
DF	LIVE	HQ-B	16.4	40.0	1,121	0.0	384.3	60.5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Pulp	6.4	15.0	22	0.0	8.5	1.2
RA	LIVE	Cull	5.2	5.0	0	100.0	0.0	0.0
RA	LIVE	Domestic	8.7	31.0	7,194	1.5	3,207.7	388.5
RA	LIVE	Pulp	5.2	23.0	990	0.0	413.9	53.5
WH	LIVE	Cull	9.0	6.0	0	100.0	0.0	0.0
WH	LIVE	Domestic	8.8	33.0	7,122	1.3	3,125.9	384.6
WH	LIVE	Pulp	10.0	15.0	44	0.0	16.2	2.4

Unit Log Grade x Sort Summary: BROOM CLOSET U2

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	15.7	38.0	4,244	3.3	1,484.6	229.2
DF	LIVE	2 SAW	HQ-B	18.6	40.0	979	0.0	323.2	52.9
DF	LIVE	3 SAW	Domestic	9.2	38.0	4,786	0.9	2,057.5	258.4
DF	LIVE	3 SAW	HQ-B	11.4	40.0	142	0.0	61.1	7.7
DF	LIVE	4 SAW	Domestic	5.3	31.0	1,338	0.9	627.9	72.2
DF	LIVE	CULL	Cull	5.9	2.0	0	100.0	0.0	0.0
DF	LIVE	UTILITY	Pulp	6.4	15.0	22	0.0	8.5	1.2
RA	LIVE	2 SAW	Domestic	13.5	31.0	1,350	3.3	541.1	72.9
RA	LIVE	3 SAW	Domestic	10.7	32.0	2,705	0.8	1,091.1	146.1
RA	LIVE	4 SAW	Domestic	7.4	31.0	3,138	1.4	1,575.5	169.5
RA	LIVE	CULL	Cull	5.2	5.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.2	23.0	990	0.0	413.9	53.5
WH	LIVE	2 SAW	Domestic	14.7	37.0	3,863	1.9	1,560.8	208.6
WH	LIVE	3 SAW	Domestic	9.0	37.0	2,545	0.5	1,184.4	137.4
WH	LIVE	4 SAW	Domestic	5.4	27.0	714	0.7	380.7	38.6
WH	LIVE	CULL	Cull	9.0	6.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	10.0	15.0	44	0.0	16.2	2.4

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U2

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	4 SAW	5.3	31.0	1,338	0.9	627.9	72.2
DF	5 - 11	LIVE	CULL	5.9	2.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	UTILITY	6.4	15.0	22	0.0	8.5	1.2
DF	5 - 11	LIVE	3 SAW	9.2	38.0	4,928	0.9	2,118.6	266.1
DF	12 - 19	LIVE	2 SAW	14.6	38.0	3,238	1.0	1,163.9	174.9
DF	20+	LIVE	2 SAW	22.7	39.0	1,985	5.3	643.9	107.2
RA	5 - 9	LIVE	CULL	5.2	5.0	0	100.0	0.0	0.0

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 9	LIVE	UTILITY	5.2	23.0	990	0.0	413.9	53.5
RA	5 - 9	LIVE	4 SAW	7.4	31.0	3,138	1.4	1,575.5	169.5
RA	10 - 11	LIVE	3 SAW	10.7	32.0	2,705	0.8	1,091.1	146.1
RA	12 - 15	LIVE	2 SAW	13.5	31.0	1,350	3.3	541.1	72.9
WH	5 - 11	LIVE	4 SAW	5.4	27.0	714	0.7	380.7	38.6
WH	5 - 11	LIVE	CULL	6.4	7.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	3 SAW	9.0	37.0	2,545	0.5	1,184.4	137.4
WH	5 - 11	LIVE	UTILITY	10.0	15.0	44	0.0	16.2	2.4
WH	12 - 19	LIVE	2 SAW	13.9	37.0	2,987	0.8	1,241.6	161.3
WH	12 - 19	LIVE	CULL	15.8	3.0	0	100.0	0.0	0.0
WH	20+	LIVE	2 SAW	22.8	37.0	876	5.5	319.2	47.3

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U2

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Cull	5.9	2.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	Pulp	6.4	15.0	22	0.0	8.5	1.2
DF	5 - 11	LIVE	Domestic	7.3	35.0	6,123	0.9	2,685.4	330.7
DF	5 - 11	LIVE	HQ-B	11.4	40.0	142	0.0	61.1	7.7
DF	12 - 19	LIVE	Domestic	14.2	38.0	2,676	1.2	971.3	144.5
DF	12 - 19	LIVE	HQ-B	17.1	40.0	562	0.0	192.6	30.4
DF	20+	LIVE	HQ-B	22.3	40.0	417	0.0	130.6	22.5
DF	20+	LIVE	Domestic	22.8	38.0	1,568	6.6	513.3	84.7
RA	5 - 9	LIVE	Cull	5.2	5.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Pulp	5.2	23.0	990	0.0	413.9	53.5
RA	5 - 9	LIVE	Domestic	7.4	31.0	3,138	1.4	1,575.5	169.5
RA	10 - 11	LIVE	Domestic	10.7	32.0	2,705	0.8	1,091.1	146.1
RA	12 - 15	LIVE	Domestic	13.5	31.0	1,350	3.3	541.1	72.9
WH	5 - 11	LIVE	Cull	6.4	7.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Domestic	7.2	32.0	3,259	0.5	1,565.1	176.0
WH	5 - 11	LIVE	Pulp	10.0	15.0	44	0.0	16.2	2.4
WH	12 - 19	LIVE	Domestic	13.9	37.0	2,987	0.8	1,241.6	161.3
WH	12 - 19	LIVE	Cull	15.8	3.0	0	100.0	0.0	0.0
WH	20+	LIVE	Domestic	22.8	37.0	876	5.5	319.2	47.3

Cruise Unit Report BROOM CLOSET U3

Unit Sale Notice Volume (MBF): BROOM CLOSET U3

Sp	QMD	Rings/In	Age	MBF Volume by Grade					
				All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	28.3			256.3	70.3	165.7	13.7	1.5	5.1
WH	17.5			27.3		13.7	11.9	1.6	0.0
ALL	24.5			283.6	70.3	179.4	25.6	3.1	5.1

Unit Sale Notice Weight (tons): BROOM CLOSET U3

Sp	Tons by Grade					
	All	Spec Mill	2 Saw	3 Saw	4 Saw	Utility
DF	1,479.1	373.3	948.6	114.1	10.9	32.3
WH	245.4		103.1	125.8	16.5	0.0
ALL	1,724.5	373.3	1,051.7	239.9	27.4	32.3

Unit Cruise Design: BROOM CLOSET U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (40) Measure All, Sighting Ht = 16 ft	5.0	6.2	5	5	0

Unit Cruise Summary: BROOM CLOSET U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	15	16	3.2	0
WH	2	4	0.8	0
ALL	17	20	4.0	0

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET 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	174.7	82.9	37.1	293.4	16.3	4.2	51,265	84.5	37.3
WH	45.4	136.9	61.2	120.3	65.7	46.5	5,454	151.9	76.9
ALL	220.1	48.4	21.6	257.7	29.3	7.1	56,719	56.5	22.8

Unit Summary: BROOM CLOSET U3

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	15	ALL	28.3	134	173	51,265	2.7	40.0	174.7	32.8	1,479.1	256.3
WH	LIVE	CUT	2	ALL	17.5	63	78	5,454	4.2	27.2	45.4	10.8	245.4	27.3
ALL	LIVE	CUT	17	ALL	24.5	105	135	56,719	2.9	67.2	220.1	43.6	1,724.5	283.6
ALL	ALL	ALL	17	ALL	24.5	105	135	56,719	2.9	67.2	220.1	43.6	1,724.5	283.6

Unit Stand Table: BROOM CLOSET U3

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	22	LIVE	CUT	1	21.0	112	143	2,146	15.6	4.4	10.6	2.3	69.3	10.7
DF	24	LIVE	CUT	1	24.0	125	161	2,697	0.1	3.4	10.6	2.2	84.8	13.5
DF	26	LIVE	CUT	2	25.0	131	169	8,529	0.7	9.6	32.7	6.5	270.3	42.6
DF	28	LIVE	CUT	2	27.0	135	174	6,280	0.5	5.3	20.9	4.0	181.2	31.4
DF	30	LIVE	CUT	4	29.2	138	179	12,997	1.2	9.3	43.5	8.0	374.9	65.0
DF	34	LIVE	CUT	2	33.5	140	181	6,677	4.2	3.7	22.4	3.9	181.2	33.4
DF	36	LIVE	CUT	1	36.0	149	193	3,794	3.6	1.6	11.6	1.9	103.8	19.0
DF	38	LIVE	CUT	2	38.0	158	204	8,146	3.6	2.8	22.4	3.6	213.6	40.7
WH	16	LIVE	CUT	1	15.0	51	62	1,460	14.1	18.5	22.7	5.9	88.7	7.3
WH	22	LIVE	CUT	1	22.0	88	111	3,994	0.0	8.6	22.7	4.8	156.7	20.0

Unit Log Grade Summary: BROOM CLOSET U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	16.7	40.0	33,135	2.3	948.6	165.7
DF	LIVE	3 SAW	9.1	34.0	2,742	0.0	114.1	13.7
DF	LIVE	4 SAW	10.2	21.0	298	0.0	10.9	1.5
DF	LIVE	CULL	11.1	13.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	21.4	40.0	14,067	0.7	373.3	70.3
DF	LIVE	UTILITY	10.5	25.0	1,024	0.0	32.3	5.1
WH	LIVE	2 SAW	15.4	36.0	2,749	0.0	103.1	13.7
WH	LIVE	3 SAW	9.5	33.0	2,387	0.0	125.8	11.9
WH	LIVE	4 SAW	7.0	23.0	318	0.0	16.5	1.6
WH	LIVE	UTILITY	5.1	12.0	0	100.0	0.0	0.0

Unit Log Sort Summary: BROOM CLOSET U3

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Cull	11.1	13.0	0	100.0	0.0	0.0
DF	LIVE	Domestic	12.9	37.0	18,588	3.6	588.7	92.9

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	HQ-A	21.4	40.0	14,067	0.7	373.3	70.3
DF	LIVE	HQ-B	17.5	40.0	17,586	0.5	484.9	87.9
DF	LIVE	Pulp	10.5	25.0	1,024	0.0	32.3	5.1
WH	LIVE	Domestic	10.2	32.0	5,454	0.0	245.4	27.3
WH	LIVE	Pulp	5.1	12.0	0	100.0	0.0	0.0

Unit Log Grade x Sort Summary: BROOM CLOSET U3

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	15.9	40.0	15,549	4.3	463.7	77.7
DF	LIVE	2 SAW	HQ-B	17.5	40.0	17,586	0.5	484.9	87.9
DF	LIVE	3 SAW	Domestic	9.1	34.0	2,742	0.0	114.1	13.7
DF	LIVE	4 SAW	Domestic	10.2	21.0	298	0.0	10.9	1.5
DF	LIVE	CULL	Cull	11.1	13.0	0	100.0	0.0	0.0
DF	LIVE	SPECIAL MILL	HQ-A	21.4	40.0	14,067	0.7	373.3	70.3
DF	LIVE	UTILITY	Pulp	10.5	25.0	1,024	0.0	32.3	5.1
WH	LIVE	2 SAW	Domestic	15.4	36.0	2,749	0.0	103.1	13.7
WH	LIVE	3 SAW	Domestic	9.5	33.0	2,387	0.0	125.8	11.9
WH	LIVE	4 SAW	Domestic	7.0	23.0	318	0.0	16.5	1.6
WH	LIVE	UTILITY	Pulp	5.1	12.0	0	100.0	0.0	0.0

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U3

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	CULL	7.6	15.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	3 SAW	9.1	34.0	2,742	0.0	114.1	13.7
DF	5 - 11	LIVE	4 SAW	9.2	16.0	93	0.0	3.4	0.5
DF	5 - 11	LIVE	UTILITY	10.5	25.0	1,024	0.0	32.3	5.1
DF	12 - 19	LIVE	4 SAW	12.0	30.0	205	0.0	7.5	1.0
DF	12 - 19	LIVE	2 SAW	15.5	40.0	22,166	1.9	662.0	110.8
DF	12 - 19	LIVE	SPECIAL MILL	18.9	40.0	3,287	0.0	92.8	16.4
DF	20+	LIVE	SPECIAL MILL	22.6	40.0	10,780	0.9	280.5	53.9
DF	20+	LIVE	2 SAW	22.8	40.0	10,968	3.1	286.6	54.8
DF	20+	LIVE	CULL	29.7	4.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	UTILITY	5.1	12.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	4 SAW	7.0	23.0	318	0.0	16.5	1.6
WH	5 - 11	LIVE	3 SAW	9.5	33.0	2,387	0.0	125.8	11.9
WH	12 - 19	LIVE	2 SAW	15.4	36.0	2,749	0.0	103.1	13.7

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U3

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Cull	7.6	15.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	Domestic	9.1	33.0	2,835	0.0	117.5	14.2
DF	5 - 11	LIVE	Pulp	10.5	25.0	1,024	0.0	32.3	5.1
DF	12 - 19	LIVE	Domestic	14.6	39.0	10,839	3.1	338.5	54.2
DF	12 - 19	LIVE	HQ-B	16.5	40.0	11,532	0.7	331.0	57.7
DF	12 - 19	LIVE	HQ-A	18.9	40.0	3,287	0.0	92.8	16.4
DF	20+	LIVE	HQ-B	21.4	40.0	6,054	0.0	153.9	30.3
DF	20+	LIVE	HQ-A	22.6	40.0	10,780	0.9	280.5	53.9
DF	20+	LIVE	Domestic	25.3	40.0	4,915	6.6	132.7	24.6
DF	20+	LIVE	Cull	29.7	4.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Pulp	5.1	12.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Domestic	8.9	30.0	2,705	0.0	142.3	13.5
WH	12 - 19	LIVE	Domestic	15.4	36.0	2,749	0.0	103.1	13.7

Cruise Unit Report BROOM CLOSET U4

Unit Sale Notice Volume (MBF): BROOM CLOSET U4

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	18.8			1,047.4	621.3	342.0	82.1	2.0
WH	17.4			395.1	214.9	139.7	34.4	6.1
RA	13.5			111.1	9.9	17.2	65.5	18.5
ALL	17.5			1,553.6	846.1	498.9	182.0	26.6

Unit Sale Notice Weight (tons): BROOM CLOSET U4

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	7,880.8	4,358.6	2,748.5	758.2	15.5
WH	3,378.9	1,711.5	1,222.7	352.1	92.6
RA	1,074.8	79.0	154.6	710.8	130.4
ALL	12,334.5	6,149.1	4,125.8	1,821.1	238.5

Unit Cruise Design: BROOM CLOSET U4

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (27.78) Measure/Count Plots, Sighting Ht = 16 ft	56.0	69.3	55	28	0

Unit Cruise Summary: BROOM CLOSET U4

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	80	171	3.1	0
WH	31	66	1.2	0
RA	12	32	0.6	0
ALL	123	269	4.9	0

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET 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	119.0	60.4	8.2	157.2	19.9	2.2	18,703	63.6	8.4
WH	47.5	129.4	17.4	148.5	24.2	4.4	7,056	131.6	18.0

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 (%)
RA	25.5	270.2	36.4	77.8	25.7	7.4	1,984	271.4	37.2
ALL	192.0	32.4	4.4	144.5	27.0	2.4	27,743	42.2	5.0

Unit Summary: BROOM CLOSET U4

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	80	ALL	18.8	86	109	18,703	2.3	61.7	119.0	27.4	7,880.8	1,047.3
RA	LIVE	CUT	12	ALL	13.5	56	69	1,984	7.5	25.6	25.5	6.9	1,074.8	111.1
WH	LIVE	CUT	31	ALL	17.4	78	98	7,056	4.2	28.8	47.5	11.4	3,378.9	395.1
ALL	LIVE	CUT	123	ALL	17.4	77	97	27,743	3.2	116.1	192.0	45.7	12,334.5	1,553.5
ALL	ALL	ALL	123	ALL	17.4	77	97	27,743	3.2	116.1	192.0	45.7	12,334.5	1,553.5

Unit Stand Table: BROOM CLOSET U4

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	12	LIVE	CUT	2	11.5	69	87	363	0.0	4.1	3.0	0.9	150.5	20.3
DF	14	LIVE	CUT	5	13.6	78	98	956	1.8	7.6	7.7	2.1	447.2	53.6
DF	16	LIVE	CUT	8	15.4	84	106	1,635	1.7	9.5	12.2	3.1	765.6	91.6
DF	18	LIVE	CUT	14	17.8	86	109	2,936	0.9	11.8	20.3	4.8	1,313.0	164.4
DF	20	LIVE	CUT	22	19.3	85	108	4,645	2.4	15.9	32.4	7.4	2,076.9	260.1
DF	22	LIVE	CUT	13	21.4	93	118	3,272	1.9	7.6	19.2	4.1	1,306.1	183.2
DF	24	LIVE	CUT	3	23.7	96	123	837	0.0	1.4	4.4	0.9	316.0	46.8
DF	26	LIVE	CUT	1	25.0	102	130	284	1.3	0.4	1.5	0.3	108.6	15.9
DF	28	LIVE	CUT	3	28.0	104	133	857	10.0	1.1	4.6	0.9	331.8	48.0
DF	30	LIVE	CUT	3	29.3	110	141	956	2.5	1.0	4.6	0.8	358.4	53.6
DF	32	LIVE	CUT	4	31.2	106	136	1,299	1.2	1.2	6.2	1.1	468.5	72.7
DF	36	LIVE	CUT	1	35.0	117	150	344	10.1	0.2	1.5	0.3	126.3	19.3
DF	40	LIVE	CUT	1	39.0	99	126	318	5.3	0.2	1.6	0.3	112.1	17.8
RA	10	LIVE	CUT	1	10.0	65	80	209	0.0	3.6	2.0	0.6	94.1	11.7
RA	12	LIVE	CUT	1	11.0	47	57	119	19.6	3.2	2.1	0.6	73.8	6.6
RA	14	LIVE	CUT	5	13.4	54	66	717	14.3	11.2	11.0	3.0	412.7	40.2
RA	16	LIVE	CUT	4	15.5	58	71	723	1.5	6.4	8.4	2.1	385.7	40.5
RA	18	LIVE	CUT	1	18.0	67	83	217	3.7	1.2	2.1	0.5	108.5	12.1
WH	12	LIVE	CUT	3	11.0	71	88	466	20.7	8.5	5.6	1.7	259.5	26.1
WH	14	LIVE	CUT	2	14.0	77	95	402	3.1	2.5	2.7	0.7	186.7	22.5
WH	16	LIVE	CUT	5	15.8	79	99	1,093	11.9	6.1	8.3	2.1	538.1	61.2
WH	18	LIVE	CUT	3	17.6	81	101	591	0.0	2.4	4.1	1.0	311.5	33.1

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
WH	20	LIVE	CUT	6	19.2	78	97	1,103	1.8	4.2	8.3	1.9	610.5	61.8
WH	22	LIVE	CUT	3	21.5	87	109	944	1.4	2.2	5.5	1.2	428.7	52.8
WH	24	LIVE	CUT	2	23.5	93	117	541	1.0	0.9	2.8	0.6	228.8	30.3
WH	28	LIVE	CUT	3	27.0	85	108	737	4.7	1.1	4.2	0.8	327.0	41.3
WH	32	LIVE	CUT	1	31.0	93	117	274	7.0	0.3	1.5	0.3	123.4	15.3
WH	34	LIVE	CUT	1	34.0	101	128	309	4.8	0.2	1.4	0.2	127.2	17.3
WH	36	LIVE	CUT	2	36.0	92	115	596	3.2	0.4	3.0	0.5	237.6	33.4

Unit Log Grade Summary: BROOM CLOSET U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	14.3	38.0	11,095	2.6	4,358.6	621.3
DF	LIVE	3 SAW	9.1	36.0	6,106	1.2	2,748.5	342.0
DF	LIVE	4 SAW	5.8	28.0	1,466	0.2	758.2	82.1
DF	LIVE	CULL	6.0	3.0	0	100.0	0.0	0.0
DF	LIVE	UTILITY	6.0	14.0	36	0.0	15.5	2.0
RA	LIVE	2 SAW	12.1	30.0	176	0.0	79.0	9.9
RA	LIVE	3 SAW	10.7	30.0	307	3.5	154.6	17.2
RA	LIVE	4 SAW	7.9	29.0	1,170	0.3	710.8	65.5
RA	LIVE	CULL	6.7	11.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	5.1	20.0	331	0.0	130.4	18.5
WH	LIVE	2 SAW	15.2	38.0	3,837	3.2	1,711.5	214.9
WH	LIVE	3 SAW	9.1	37.0	2,495	0.7	1,222.7	139.7
WH	LIVE	4 SAW	5.8	28.0	615	1.0	352.1	34.4
WH	LIVE	CULL	7.5	14.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	6.2	17.0	109	0.0	92.6	6.1

Unit Log Sort Summary: BROOM CLOSET U4

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Cull	6.0	3.0	0	100.0	0.0	0.0
DF	LIVE	Domestic	9.5	34.0	18,667	2.0	7,865.3	1,045.4
DF	LIVE	Pulp	6.0	14.0	36	0.0	15.5	2.0
RA	LIVE	Cull	6.7	11.0	0	100.0	0.0	0.0
RA	LIVE	Domestic	8.3	29.0	1,653	0.9	944.4	92.6
RA	LIVE	Pulp	5.1	20.0	331	0.0	130.4	18.5
WH	LIVE	Cull	7.5	14.0	0	100.0	0.0	0.0
WH	LIVE	Domestic	9.3	34.0	6,947	2.1	3,286.3	389.0
WH	LIVE	Pulp	6.2	17.0	109	0.0	92.6	6.1

Unit Log Grade x Sort Summary: BROOM CLOSET U4

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	14.3	38.0	11,095	2.6	4,358.6	621.3
DF	LIVE	3 SAW	Domestic	9.1	36.0	6,106	1.2	2,748.5	342.0
DF	LIVE	4 SAW	Domestic	5.8	28.0	1,466	0.2	758.2	82.1
DF	LIVE	CULL	Cull	6.0	3.0	0	100.0	0.0	0.0
DF	LIVE	UTILITY	Pulp	6.0	14.0	36	0.0	15.5	2.0
RA	LIVE	2 SAW	Domestic	12.1	30.0	176	0.0	79.0	9.9
RA	LIVE	3 SAW	Domestic	10.7	30.0	307	3.5	154.6	17.2
RA	LIVE	4 SAW	Domestic	7.9	29.0	1,170	0.3	710.8	65.5
RA	LIVE	CULL	Cull	6.7	11.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.1	20.0	331	0.0	130.4	18.5
WH	LIVE	2 SAW	Domestic	15.2	38.0	3,837	3.2	1,711.5	214.9
WH	LIVE	3 SAW	Domestic	9.1	37.0	2,495	0.7	1,222.7	139.7
WH	LIVE	4 SAW	Domestic	5.8	28.0	615	1.0	352.1	34.4
WH	LIVE	CULL	Cull	7.5	14.0	0	100.0	0.0	0.0
WH	LIVE	UTILITY	Pulp	6.2	17.0	109	0.0	92.6	6.1

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U4

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	CULL	5.7	2.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	4 SAW	5.8	28.0	1,466	0.2	758.2	82.1
DF	5 - 11	LIVE	UTILITY	6.0	14.0	36	0.0	15.5	2.0
DF	5 - 11	LIVE	3 SAW	9.1	36.0	6,106	1.2	2,748.5	342.0
DF	12 - 19	LIVE	2 SAW	13.9	38.0	9,366	2.6	3,776.4	524.5
DF	12 - 19	LIVE	CULL	17.6	10.0	0	100.0	0.0	0.0
DF	20+	LIVE	2 SAW	21.8	39.0	1,729	2.3	582.2	96.8
RA	5 - 9	LIVE	CULL	5.1	14.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	UTILITY	5.1	20.0	331	0.0	130.4	18.5
RA	5 - 9	LIVE	4 SAW	7.9	29.0	1,170	0.3	710.8	65.5
RA	10 - 11	LIVE	3 SAW	10.7	30.0	307	3.5	154.6	17.2
RA	12 - 15	LIVE	2 SAW	12.1	30.0	176	0.0	79.0	9.9
RA	12 - 15	LIVE	CULL	13.7	2.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	4 SAW	5.8	28.0	615	1.0	352.1	34.4
WH	5 - 11	LIVE	CULL	5.9	15.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	UTILITY	6.2	17.0	109	0.0	92.6	6.1
WH	5 - 11	LIVE	3 SAW	9.1	37.0	2,495	0.7	1,222.7	139.7
WH	12 - 19	LIVE	CULL	13.4	10.0	0	100.0	0.0	0.0

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
WH	12 - 19	LIVE	2 SAW	14.5	38.0	3,044	2.6	1,392.9	170.4
WH	20+	LIVE	2 SAW	23.4	37.0	794	5.2	318.5	44.4

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U4

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Cull	5.7	2.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	Pulp	6.0	14.0	36	0.0	15.5	2.0
DF	5 - 11	LIVE	Domestic	7.7	33.0	7,572	1.1	3,506.7	424.0
DF	12 - 19	LIVE	Domestic	13.9	38.0	9,366	2.6	3,776.4	524.5
DF	12 - 19	LIVE	Cull	17.6	10.0	0	100.0	0.0	0.0
DF	20+	LIVE	Domestic	21.8	39.0	1,729	2.3	582.2	96.8
RA	5 - 9	LIVE	Cull	5.1	14.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Pulp	5.1	20.0	331	0.0	130.4	18.5
RA	5 - 9	LIVE	Domestic	7.9	29.0	1,170	0.3	710.8	65.5
RA	10 - 11	LIVE	Domestic	10.7	30.0	307	3.5	154.6	17.2
RA	12 - 15	LIVE	Domestic	12.1	30.0	176	0.0	79.0	9.9
RA	12 - 15	LIVE	Cull	13.7	2.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Cull	5.9	15.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Pulp	6.2	17.0	109	0.0	92.6	6.1
WH	5 - 11	LIVE	Domestic	7.6	33.0	3,110	0.8	1,574.8	174.2
WH	12 - 19	LIVE	Cull	13.4	10.0	0	100.0	0.0	0.0
WH	12 - 19	LIVE	Domestic	14.5	38.0	3,044	2.6	1,392.9	170.4
WH	20+	LIVE	Domestic	23.4	37.0	794	5.2	318.5	44.4

Cruise Unit Report BROOM CLOSET U5

Unit Sale Notice Volume (MBF): BROOM CLOSET U5

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	13.4			51.9	4.0	33.1	14.8	
RA	12.2			43.6		13.1	24.4	6.1
WH	16.0			41.1	11.9	22.4	6.8	
ALL	13.2			136.7	15.9	68.7	46.0	6.1

Unit Sale Notice Weight (tons): BROOM CLOSET U5

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	393.1	29.2	243.9	120.0	
RA	392.5		102.9	234.8	54.8
WH	356.5	104.0	184.5	68.0	
ALL	1,142.1	133.2	531.3	422.8	54.8

Unit Cruise Design: BROOM CLOSET U5

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (27.78) Measure/Count Plots, Sighting Ht = 16 ft	7.0	11.2	7	7	0

Unit Cruise Summary: BROOM CLOSET U5

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	10	10	1.4	0
RA	14	14	2.0	0
WH	7	7	1.0	0
ALL	31	31	4.4	0

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET 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	54.9	97.6	36.9	135.0	10.5	3.3	7,418	98.2	37.0
RA	80.2	71.4	27.0	77.7	29.8	8.0	6,229	77.4	28.2

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	38.7	100.5	38.0	151.8	13.7	5.2	5,878	101.4	38.3
ALL	173.8	45.0	17.0	112.3	34.2	6.1	19,525	56.5	18.1

Unit Summary: BROOM CLOSET U5

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	10	ALL	13.4	77	101	7,418	1.5	56.1	54.9	15.0	393.1	51.9
RA	LIVE	CUT	14	ALL	12.2	52	63	6,229	14.8	98.8	80.2	23.0	392.5	43.6
WH	LIVE	CUT	7	ALL	16.0	81	102	5,878	2.8	27.7	38.7	9.7	356.5	41.1
ALL	LIVE	CUT	31	ALL	13.2	64	81	19,525	6.5	182.6	173.8	47.7	1,142.1	136.6
ALL	ALL	ALL	31	ALL	13.2	64	81	19,525	6.5	182.6	173.8	47.7	1,142.1	136.6

Unit Stand Table: BROOM CLOSET U5

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	8	LIVE	CUT	1	8.0	79	100	677	4.4	15.7	5.5	1.9	31.4	4.7
DF	12	LIVE	CUT	1	12.0	74	94	658	0.0	7.0	5.5	1.6	37.7	4.6
DF	14	LIVE	CUT	2	14.0	77	97	1,505	0.0	10.4	11.1	3.0	80.0	10.5
DF	16	LIVE	CUT	3	15.6	75	95	2,107	1.3	12.3	16.5	4.2	115.8	14.8
DF	18	LIVE	CUT	3	17.0	78	117	2,471	2.2	10.4	16.3	4.0	128.3	17.3
RA	10	LIVE	CUT	3	9.6	48	57	1,375	4.6	34.9	17.6	5.7	80.5	9.6
RA	12	LIVE	CUT	3	11.3	50	60	1,169	22.0	24.4	17.0	5.1	70.9	8.2
RA	14	LIVE	CUT	4	13.5	53	64	1,402	28.0	23.2	22.9	6.2	106.9	9.8
RA	16	LIVE	CUT	2	15.0	62	76	1,148	9.6	9.2	11.3	2.9	63.1	8.0
RA	18	LIVE	CUT	2	17.0	62	75	1,136	0.0	7.2	11.4	2.8	71.0	8.0
WH	12	LIVE	CUT	1	12.0	79	99	830	0.0	7.3	5.8	1.7	49.3	5.8
WH	16	LIVE	CUT	3	15.3	77	96	2,363	0.0	13.0	16.6	4.2	145.1	16.5
WH	18	LIVE	CUT	1	18.0	89	112	735	10.9	3.1	5.5	1.3	53.7	5.1
WH	20	LIVE	CUT	1	20.0	90	113	976	0.0	2.5	5.4	1.2	52.9	6.8
WH	24	LIVE	CUT	1	23.0	93	117	975	7.3	1.9	5.5	1.1	55.5	6.8

Unit Log Grade Summary: BROOM CLOSET U5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	12.2	36.0	569	5.1	29.2	4.0
DF	LIVE	3 SAW	9.8	36.0	4,730	0.5	243.9	33.1
DF	LIVE	4 SAW	5.4	34.0	2,119	0.0	120.0	14.8
DF	LIVE	CULL	6.1	2.0	0	100.0	0.0	0.0

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	LIVE	3 SAW	11.0	30.0	1,878	0.0	102.9	13.1
RA	LIVE	4 SAW	6.9	31.0	3,482	6.6	234.8	24.4
RA	LIVE	CULL	6.6	10.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	5.1	19.0	869	0.0	54.8	6.1
WH	LIVE	2 SAW	14.2	36.0	1,701	8.9	104.0	11.9
WH	LIVE	3 SAW	9.8	35.0	3,204	0.0	184.5	22.4
WH	LIVE	4 SAW	5.4	32.0	973	0.0	68.0	6.8

Unit Log Sort Summary: BROOM CLOSET U5

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Cull	6.1	2.0	0	100.0	0.0	0.0
DF	LIVE	Domestic	7.4	35.0	7,418	0.7	393.1	51.9
RA	LIVE	Cull	6.6	10.0	0	100.0	0.0	0.0
RA	LIVE	Domestic	7.6	31.0	5,360	4.4	337.7	37.5
RA	LIVE	Pulp	5.1	19.0	869	0.0	54.8	6.1
WH	LIVE	Domestic	8.4	33.0	5,878	2.8	356.5	41.1

Unit Log Grade x Sort Summary: BROOM CLOSET U5

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	12.2	36.0	569	5.1	29.2	4.0
DF	LIVE	3 SAW	Domestic	9.8	36.0	4,730	0.5	243.9	33.1
DF	LIVE	4 SAW	Domestic	5.4	34.0	2,119	0.0	120.0	14.8
DF	LIVE	CULL	Cull	6.1	2.0	0	100.0	0.0	0.0
RA	LIVE	3 SAW	Domestic	11.0	30.0	1,878	0.0	102.9	13.1
RA	LIVE	4 SAW	Domestic	6.9	31.0	3,482	6.6	234.8	24.4
RA	LIVE	CULL	Cull	6.6	10.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.1	19.0	869	0.0	54.8	6.1
WH	LIVE	2 SAW	Domestic	14.2	36.0	1,701	8.9	104.0	11.9
WH	LIVE	3 SAW	Domestic	9.8	35.0	3,204	0.0	184.5	22.4
WH	LIVE	4 SAW	Domestic	5.4	32.0	973	0.0	68.0	6.8

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U5

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	4 SAW	5.4	34.0	2,119	0.0	120.0	14.8
DF	5 - 11	LIVE	CULL	6.1	2.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	3 SAW	9.8	36.0	4,730	0.5	243.9	33.1

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	12 - 19	LIVE	2 SAW	12.2	36.0	569	5.1	29.2	4.0
RA	5 - 9	LIVE	CULL	5.1	12.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	UTILITY	5.1	19.0	869	0.0	54.8	6.1
RA	5 - 9	LIVE	4 SAW	6.9	31.0	3,482	6.6	234.8	24.4
RA	10 - 11	LIVE	3 SAW	11.0	30.0	1,878	0.0	102.9	13.1
RA	10 - 11	LIVE	CULL	11.0	5.0	0	100.0	0.0	0.0
RA	12 - 15	LIVE	CULL	12.9	5.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	4 SAW	5.4	32.0	973	0.0	68.0	6.8
WH	5 - 11	LIVE	3 SAW	9.8	35.0	3,204	0.0	184.5	22.4
WH	12 - 19	LIVE	2 SAW	14.2	36.0	1,701	8.9	104.0	11.9

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U5

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Cull	6.1	2.0	0	100.0	0.0	0.0
DF	5 - 11	LIVE	Domestic	7.2	35.0	6,849	0.3	363.9	47.9
DF	12 - 19	LIVE	Domestic	12.2	36.0	569	5.1	29.2	4.0
RA	5 - 9	LIVE	Cull	5.1	12.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Pulp	5.1	19.0	869	0.0	54.8	6.1
RA	5 - 9	LIVE	Domestic	6.9	31.0	3,482	6.6	234.8	24.4
RA	10 - 11	LIVE	Cull	11.0	5.0	0	100.0	0.0	0.0
RA	10 - 11	LIVE	Domestic	11.0	30.0	1,878	0.0	102.9	13.1
RA	12 - 15	LIVE	Cull	12.9	5.0	0	100.0	0.0	0.0
WH	5 - 11	LIVE	Domestic	7.6	33.0	4,177	0.0	252.5	29.2
WH	12 - 19	LIVE	Domestic	14.2	36.0	1,701	8.9	104.0	11.9

Cruise Unit Report BROOM CLOSET U6

Unit Sale Notice Volume (MBF): BROOM CLOSET U6

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
DF	22.9			122.2	96.8	22.0	3.1	0.3
RA	11.0			3.8			2.9	0.9
ALL	20.9			126.0	96.8	22.0	5.9	1.2

Unit Sale Notice Weight (tons): BROOM CLOSET U6

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
DF	839.9	625.2	185.1	27.6	2.0
RA	29.5			24.6	4.9
ALL	869.4	625.2	185.1	52.1	7.0

Unit Cruise Design: BROOM CLOSET U6

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (27.78) Measure All, Sighting Ht = 16 ft	3.0	2.5	3	3	0

Unit Cruise Summary: BROOM CLOSET U6

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	16	16	5.3	0
RA	1	1	0.3	0
ALL	17	17	5.7	0

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET U6

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	205.9	44.3	25.6	197.9	15.5	3.9	40,747	46.9	25.8
RA	13.1	173.2	100.0	95.5	0.0	0.0	1,253	173.2	100.0
ALL	219.0	41.7	24.1	191.8	20.2	4.9	41,999	46.4	24.6

Unit Summary: BROOM CLOSET U6

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	16	ALL	22.9	101	129	40,747	3.1	72.0	205.9	43.0	839.9	122.2
RA	LIVE	CUT	1	ALL	11.0	53	64	1,253	0.0	19.9	13.1	4.0	29.5	3.8
ALL	LIVE	CUT	17	ALL	20.9	91	115	42,000	3.0	91.9	219.0	47.0	869.4	126.0
ALL	ALL	ALL	17	ALL	20.9	91	115	42,000	3.0	91.9	219.0	47.0	869.4	126.0

Unit Stand Table: BROOM CLOSET U6

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	16	LIVE	CUT	1	15.0	80	101	1,620	0.0	10.4	12.8	3.3	41.9	4.9
DF	18	LIVE	CUT	2	17.0	94	120	4,154	0.0	15.7	24.8	6.0	92.5	12.5
DF	20	LIVE	CUT	1	19.0	102	130	2,280	0.0	6.5	12.8	2.9	51.2	6.8
DF	22	LIVE	CUT	1	22.0	104	133	2,595	0.0	4.9	12.8	2.7	51.9	7.8
DF	24	LIVE	CUT	1	24.0	107	137	2,650	0.0	4.1	12.8	2.6	52.3	7.9
DF	26	LIVE	CUT	4	25.5	108	138	10,776	0.9	14.3	50.7	10.0	210.8	32.3
DF	28	LIVE	CUT	3	27.0	111	142	8,304	0.5	9.7	38.5	7.4	164.0	24.9
DF	30	LIVE	CUT	1	29.0	115	148	2,994	4.7	2.8	12.8	2.4	56.6	9.0
DF	36	LIVE	CUT	1	36.0	116	149	3,120	3.0	1.9	13.4	2.2	58.9	9.4
DF	38	LIVE	CUT	1	38.0	112	144	2,255	31.8	1.8	14.5	2.3	59.9	6.8
RA	12	LIVE	CUT	1	11.0	53	64	1,253	0.0	19.9	13.1	3.9	29.5	3.8

Unit Log Grade Summary: BROOM CLOSET U6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	15.9	38.0	32,266	4.3	625.2	96.8
DF	LIVE	3 SAW	9.1	36.0	7,341	0.0	185.1	22.0
DF	LIVE	4 SAW	5.9	27.0	1,028	0.0	27.6	3.1
DF	LIVE	UTILITY	5.0	13.0	111	0.0	2.0	0.3
RA	LIVE	4 SAW	7.3	30.0	955	0.0	24.6	2.9
RA	LIVE	UTILITY	5.0	14.0	298	0.0	4.9	0.9

Unit Log Sort Summary: BROOM CLOSET U6

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	11.1	35.0	31,260	4.4	651.9	93.8
DF	LIVE	HQ-B	14.1	38.0	9,376	0.0	185.9	28.1
DF	LIVE	Pulp	5.0	13.0	111	0.0	2.0	0.3
RA	LIVE	Domestic	7.3	30.0	955	0.0	24.6	2.9
RA	LIVE	Pulp	5.0	14.0	298	0.0	4.9	0.9

Unit Log Grade x Sort Summary: BROOM CLOSET U6

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.4	38.0	24,178	5.6	467.8	72.5
DF	LIVE	2 SAW	HQ-B	14.8	38.0	8,088	0.0	157.4	24.3
DF	LIVE	3 SAW	Domestic	8.8	36.0	6,054	0.0	156.6	18.2
DF	LIVE	3 SAW	HQ-B	11.9	36.0	1,288	0.0	28.5	3.9
DF	LIVE	4 SAW	Domestic	5.9	27.0	1,028	0.0	27.6	3.1
DF	LIVE	UTILITY	Pulp	5.0	13.0	111	0.0	2.0	0.3
RA	LIVE	4 SAW	Domestic	7.3	30.0	955	0.0	24.6	2.9
RA	LIVE	UTILITY	Pulp	5.0	14.0	298	0.0	4.9	0.9

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U6

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	UTILITY	5.0	13.0	111	0.0	2.0	0.3
DF	5 - 11	LIVE	4 SAW	5.9	27.0	1,028	0.0	27.6	3.1
DF	5 - 11	LIVE	3 SAW	9.1	36.0	7,341	0.0	185.1	22.0
DF	12 - 19	LIVE	2 SAW	15.4	38.0	27,578	0.5	519.1	82.7
DF	20+	LIVE	2 SAW	22.9	40.0	4,688	21.7	106.1	14.1
RA	5 - 9	LIVE	UTILITY	5.0	14.0	298	0.0	4.9	0.9
RA	5 - 9	LIVE	4 SAW	7.3	30.0	955	0.0	24.6	2.9

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U6

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Pulp	5.0	13.0	111	0.0	2.0	0.3
DF	5 - 11	LIVE	Domestic	7.8	33.0	7,082	0.0	184.2	21.2
DF	5 - 11	LIVE	HQ-B	11.9	36.0	1,288	0.0	28.5	3.9
DF	12 - 19	LIVE	HQ-B	14.8	38.0	8,088	0.0	157.4	24.3
DF	12 - 19	LIVE	Domestic	15.7	38.0	19,490	0.7	361.7	58.5
DF	20+	LIVE	Domestic	22.9	40.0	4,688	21.7	106.1	14.1
RA	5 - 9	LIVE	Pulp	5.0	14.0	298	0.0	4.9	0.9
RA	5 - 9	LIVE	Domestic	7.3	30.0	955	0.0	24.6	2.9

Cruise Unit Report BROOM CLOSET U7

Unit Sale Notice Volume (MBF): BROOM CLOSET U7

Sp	QMD	Rings/In	Age	MBF Volume by Grade					Utility
				All	1 Saw	2 Saw	3 Saw	4 Saw	
RA	17.6			27.4	4.8	6.9	8.8	4.2	2.6
DF	25.6			23.1		19.7	2.5	0.9	
ALL	19.4			50.5	4.8	26.6	11.3	5.1	2.6

Unit Sale Notice Weight (tons): BROOM CLOSET U7

Sp	Tons by Grade					Utility
	All	1 Saw	2 Saw	3 Saw	4 Saw	
RA	213.2	35.3	45.0	65.1	43.9	23.9
DF	152.9		123.7	20.8	8.4	
ALL	366.1	35.3	168.8	85.9	52.2	23.9

Unit Cruise Design: BROOM CLOSET U7

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1: VR, 1 BAF (27.78) Measure All, Sighting Ht = 16 ft	2.0	3.4	2	2	0

Unit Cruise Summary: BROOM CLOSET U7

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA	6	6	3.0	0
DF	3	3	1.5	0
ALL	9	9	4.5	0

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET U7

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 (%)
RA	119.1	43.3	30.6	114.9	12.3	5.0	13,692	45.1	31.1
DF	57.7	47.1	33.3	200.3	17.8	10.3	11,550	50.4	34.9
ALL	176.8	44.6	31.5	142.8	33.3	11.1	25,242	55.7	33.4

Unit Summary: BROOM CLOSET U7

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	3	ALL	25.6	101	129	11,550	0.8	16.1	57.7	11.4	152.9	23.1
RA	LIVE	CUT	6	ALL	17.6	66	81	13,692	7.3	70.5	119.1	28.4	213.2	27.4
ALL	LIVE	CUT	9	ALL	19.3	73	90	25,242	4.4	86.6	176.8	39.8	366.1	50.5
ALL	ALL	ALL	9	ALL	19.3	73	90	25,242	4.4	86.6	176.8	39.8	366.1	50.5

Unit Stand Table: BROOM CLOSET U7

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	24	LIVE	CUT	2	24.0	97	124	6,910	0.0	12.2	38.5	7.9	96.7	13.8
DF	30	LIVE	CUT	1	30.0	115	148	4,640	1.9	3.9	19.2	3.5	56.2	9.3
RA	14	LIVE	CUT	1	14.0	62	76	1,833	0.0	18.0	19.2	5.1	33.6	3.7
RA	16	LIVE	CUT	2	15.5	62	76	4,430	0.9	30.1	39.4	10.0	69.9	8.9
RA	20	LIVE	CUT	1	20.0	75	93	2,500	14.7	8.8	19.2	4.3	31.9	5.0
RA	24	LIVE	CUT	1	23.0	66	81	2,204	14.0	7.2	20.6	4.3	34.2	4.4
RA	26	LIVE	CUT	1	25.0	78	97	2,725	8.5	6.1	20.6	4.1	43.6	5.4

Unit Log Grade Summary: BROOM CLOSET U7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	16.1	37.0	9,850	0.0	123.7	19.7
DF	LIVE	3 SAW	10.9	34.0	1,266	6.6	20.8	2.5
DF	LIVE	4 SAW	7.5	22.0	435	0.0	8.4	0.9
RA	LIVE	1 SAW	16.2	40.0	2,422	0.0	35.3	4.8
RA	LIVE	2 SAW	15.7	24.0	3,470	0.0	45.0	6.9
RA	LIVE	3 SAW	10.8	30.0	4,393	0.0	65.1	8.8
RA	LIVE	4 SAW	8.2	30.0	2,118	1.7	43.9	4.2
RA	LIVE	CULL	10.2	7.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	5.4	27.0	1,288	0.0	23.9	2.6

Unit Log Sort Summary: BROOM CLOSET U7

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	12.9	33.0	11,550	0.8	152.9	23.1
RA	LIVE	Cull	10.2	7.0	0	100.0	0.0	0.0
RA	LIVE	Domestic	10.9	30.0	12,404	0.3	189.3	24.8
RA	LIVE	Pulp	5.4	27.0	1,288	0.0	23.9	2.6

Unit Log Grade x Sort Summary: BROOM CLOSET U7

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	2 SAW	Domestic	16.1	37.0	9,850	0.0	123.7	19.7
DF	LIVE	3 SAW	Domestic	10.9	34.0	1,266	6.6	20.8	2.5
DF	LIVE	4 SAW	Domestic	7.5	22.0	435	0.0	8.4	0.9
RA	LIVE	1 SAW	Domestic	16.2	40.0	2,422	0.0	35.3	4.8
RA	LIVE	2 SAW	Domestic	15.7	24.0	3,470	0.0	45.0	6.9
RA	LIVE	3 SAW	Domestic	10.8	30.0	4,393	0.0	65.1	8.8
RA	LIVE	4 SAW	Domestic	8.2	30.0	2,118	1.7	43.9	4.2
RA	LIVE	CULL	Cull	10.2	7.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.4	27.0	1,288	0.0	23.9	2.6

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U7

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	4 SAW	7.5	22.0	435	0.0	8.4	0.9
DF	5 - 11	LIVE	3 SAW	10.9	34.0	1,266	6.6	20.8	2.5
DF	12 - 19	LIVE	2 SAW	15.3	37.0	6,874	0.0	90.7	13.7
DF	20+	LIVE	2 SAW	21.0	40.0	2,976	0.0	33.0	6.0
RA	5 - 9	LIVE	UTILITY	5.4	27.0	1,288	0.0	23.9	2.6
RA	5 - 9	LIVE	CULL	5.6	9.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	4 SAW	8.2	30.0	2,118	1.7	43.9	4.2
RA	10 - 11	LIVE	3 SAW	10.8	30.0	4,393	0.0	65.1	8.8
RA	12 - 15	LIVE	CULL	15.0	5.0	0	100.0	0.0	0.0
RA	12 - 15	LIVE	2 SAW	15.7	24.0	3,470	0.0	45.0	6.9
RA	16+	LIVE	1 SAW	16.2	40.0	2,422	0.0	35.3	4.8

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U7

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Domestic	9.0	28.0	1,700	5.0	29.2	3.4
DF	12 - 19	LIVE	Domestic	15.3	37.0	6,874	0.0	90.7	13.7
DF	20+	LIVE	Domestic	21.0	40.0	2,976	0.0	33.0	6.0
RA	5 - 9	LIVE	Pulp	5.4	27.0	1,288	0.0	23.9	2.6
RA	5 - 9	LIVE	Cull	5.6	9.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Domestic	8.2	30.0	2,118	1.7	43.9	4.2
RA	10 - 11	LIVE	Domestic	10.8	30.0	4,393	0.0	65.1	8.8
RA	12 - 15	LIVE	Cull	15.0	5.0	0	100.0	0.0	0.0
RA	12 - 15	LIVE	Domestic	15.7	24.0	3,470	0.0	45.0	6.9
RA	16+	LIVE	Domestic	16.2	40.0	2,422	0.0	35.3	4.8

Cruise Unit Report BROOM CLOSET U8 ROW

Unit Sale Notice Volume (MBF): BROOM CLOSET U8 ROW

Sp	QMD	Rings/In	Age	MBF Volume by Grade				
				All	2 Saw	3 Saw	4 Saw	Utility
RA	13.9			3.5	0.9	1.2	1.0	0.4
DF	16.2			1.3		1.1	0.1	
WH	14.4			0.9		0.7	0.2	
ALL	14.3			5.7	0.9	3.1	1.3	0.4

Unit Sale Notice Weight (tons): BROOM CLOSET U8 ROW

Sp	Tons by Grade				
	All	2 Saw	3 Saw	4 Saw	Utility
RA	27.4	6.1	8.9	9.2	3.2
DF	9.0		8.2	0.8	
WH	8.8		7.2	1.6	
ALL	45.2	6.1	24.3	11.5	3.2

Unit Cruise Design: BROOM CLOSET U8 ROW

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
ST: Strip/Percent Sample (1 tree expansion)	1.0	0.7	1	1	0

Unit Cruise Summary: BROOM CLOSET U8 ROW

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RA	5	29	29.0	0
DF	2	5	5.0	0
WH	3	6	6.0	0
ALL	10	40	40.0	0

Unit Cruise Statistics (Cut + Leave Trees): BROOM CLOSET U8 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 (%)
RA	30.5	0.0	0.0	114.9	14.3	6.4	3,509	14.3	6.4
DF	7.2	0.0	0.0	174.2	3.4	2.4	1,255	3.4	2.4

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	6.8	0.0	0.0	137.6	14.9	8.6	933	14.9	8.6
ALL	44.5	0.0	0.0	128.0	21.9	6.9	5,696	21.9	6.9

Unit Summary: BROOM CLOSET U8 ROW

Sp	Status	Rx	N	D	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	LIVE	CUT	2	ALL	16.2	97	124	1,255	0.0	5.0	7.2	1.8	9.0	1.3
RA	LIVE	CUT	5	ALL	13.9	66	81	3,509	2.1	29.0	30.5	8.2	27.4	3.5
WH	LIVE	CUT	3	ALL	14.4	83	103	933	5.0	6.0	6.8	1.8	8.8	0.9
ALL	LIVE	CUT	10	ALL	14.3	72	90	5,697	2.2	40.0	44.5	11.8	45.2	5.7
ALL	ALL	ALL	10	ALL	14.3	72	90	5,697	2.2	40.0	44.5	11.8	45.2	5.7

Unit Stand Table: BROOM CLOSET U8 ROW

Sp	D	Status	Rx	N	QMD	BL	THT	BF Net	Defect %	TPA	BA	RD	Tons	MBF Net
DF	16	LIVE	CUT	1	15.0	93	118	443	0.0	2.0	2.5	0.6	3.0	0.4
DF	18	LIVE	CUT	1	17.0	100	128	812	0.0	3.0	4.7	1.1	6.0	0.8
RA	10	LIVE	CUT	1	10.0	55	67	296	0.0	6.0	3.3	1.0	2.4	0.3
RA	12	LIVE	CUT	1	12.0	65	80	407	0.0	5.0	3.9	1.1	3.5	0.4
RA	14	LIVE	CUT	1	14.0	70	86	831	2.7	6.0	6.4	1.7	6.0	0.8
RA	16	LIVE	CUT	1	15.0	62	76	796	0.0	6.0	7.4	1.9	6.5	0.8
RA	18	LIVE	CUT	1	17.0	76	94	1,179	6.5	6.0	9.5	2.3	9.0	1.2
WH	14	LIVE	CUT	2	13.5	77	96	496	1.6	4.0	4.0	1.1	4.7	0.5
WH	16	LIVE	CUT	1	16.0	94	118	437	9.7	2.0	2.8	0.7	4.1	0.4

Unit Log Grade Summary: BROOM CLOSET U8 ROW

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	9.7	36.0	1,139	0.0	8.2	1.1
DF	LIVE	4 SAW	5.2	21.0	116	0.0	0.8	0.1
RA	LIVE	2 SAW	12.4	30.0	854	0.0	6.1	0.9
RA	LIVE	3 SAW	10.2	30.0	1,232	0.0	8.9	1.2
RA	LIVE	4 SAW	7.3	30.0	1,026	0.0	9.2	1.0
RA	LIVE	CULL	5.1	4.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	5.2	20.0	397	17.0	3.2	0.4
WH	LIVE	3 SAW	9.5	36.0	749	6.8	7.2	0.7
WH	LIVE	4 SAW	5.1	29.0	184	0.0	1.6	0.2

Unit Log Sort Summary: BROOM CLOSET U8 ROW

Sp	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	Domestic	8.2	31.0	1,255	0.0	9.0	1.3
RA	LIVE	Cull	5.1	4.0	0	100.0	0.0	0.0
RA	LIVE	Domestic	8.9	30.0	3,112	0.0	24.2	3.1
RA	LIVE	Pulp	5.2	20.0	397	17.0	3.2	0.4
WH	LIVE	Domestic	7.6	33.0	933	5.6	8.8	0.9

Unit Log Grade x Sort Summary: BROOM CLOSET U8 ROW

Sp	Status	Grade	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	LIVE	3 SAW	Domestic	9.7	36.0	1,139	0.0	8.2	1.1
DF	LIVE	4 SAW	Domestic	5.2	21.0	116	0.0	0.8	0.1
RA	LIVE	2 SAW	Domestic	12.4	30.0	854	0.0	6.1	0.9
RA	LIVE	3 SAW	Domestic	10.2	30.0	1,232	0.0	8.9	1.2
RA	LIVE	4 SAW	Domestic	7.3	30.0	1,026	0.0	9.2	1.0
RA	LIVE	CULL	Cull	5.1	4.0	0	100.0	0.0	0.0
RA	LIVE	UTILITY	Pulp	5.2	20.0	397	17.0	3.2	0.4
WH	LIVE	3 SAW	Domestic	9.5	36.0	749	6.8	7.2	0.7
WH	LIVE	4 SAW	Domestic	5.1	29.0	184	0.0	1.6	0.2

Unit Log Grade x Diameter Bin Summary: BROOM CLOSET U8 ROW

Sp	Bin	Status	Grade	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	4 SAW	5.2	21.0	116	0.0	0.8	0.1
DF	5 - 11	LIVE	3 SAW	9.7	36.0	1,139	0.0	8.2	1.1
RA	5 - 9	LIVE	CULL	5.1	4.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	UTILITY	5.2	20.0	397	17.0	3.2	0.4
RA	5 - 9	LIVE	4 SAW	7.3	30.0	1,026	0.0	9.2	1.0
RA	10 - 11	LIVE	3 SAW	10.2	30.0	1,232	0.0	8.9	1.2
RA	12 - 15	LIVE	2 SAW	12.4	30.0	854	0.0	6.1	0.9
WH	5 - 11	LIVE	4 SAW	5.1	29.0	184	0.0	1.6	0.2
WH	5 - 11	LIVE	3 SAW	9.5	36.0	749	6.8	7.2	0.7

Unit Log Sort x Diameter Bin Summary: BROOM CLOSET U8 ROW

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
DF	5 - 11	LIVE	Domestic	8.2	31.0	1,255	0.0	9.0	1.3
RA	5 - 9	LIVE	Cull	5.1	4.0	0	100.0	0.0	0.0
RA	5 - 9	LIVE	Pulp	5.2	20.0	397	17.0	3.2	0.4

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
RA	5 - 9	LIVE	Domestic	7.3	30.0	1,026	0.0	9.2	1.0
RA	10 - 11	LIVE	Domestic	10.2	30.0	1,232	0.0	8.9	1.2
RA	12 - 15	LIVE	Domestic	12.4	30.0	854	0.0	6.1	0.9
WH	5 - 11	LIVE	Domestic	7.6	33.0	933	5.6	8.8	0.9



Forest Practices Application/Notification
Notice of Decision

FPA/N No: 2937723

Effective Date: 6/15/2020

Expiration Date: 6/15/2023

Shut Down Zone 651 S

EARR Tax Credit: Eligible Non-eligible
04-08-04W; 33-09-04W

Reference: Broom Closet VRH 30-100110

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.
- Closed Applicant has withdrawn the FPA/N.

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: Brian Wesemann

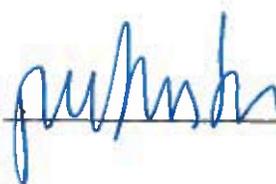
Region: Pacific Cascade Region

Title: Forest Practices Forester

Date: 6/15/2020

Copies to: Landowner, Timber Owner and Operator

Issued in person: Landowner Timber Owner Operator

By: 

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> PO Box 40903 Olympia, WA 98504-0903	<u>Mailing Address</u> PO Box 40100 Olympia, WA 98504-0100	<u>Mailing Address</u> PO Box 280 Castle Rock WA 98611

Information regarding the Pollution Control Hearings Board can be found at: <http://www.eluho.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: <http://www.dnr.wa.gov/businesspermits/forestpractices>. 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 affidavit of mailing:

On this day Click here to enter a date., I placed in the United States mail at Castle Rock, WA, postage paid, a true and accurate copy of this document. Notice of Decision FPA # Click or tap here to enter text.

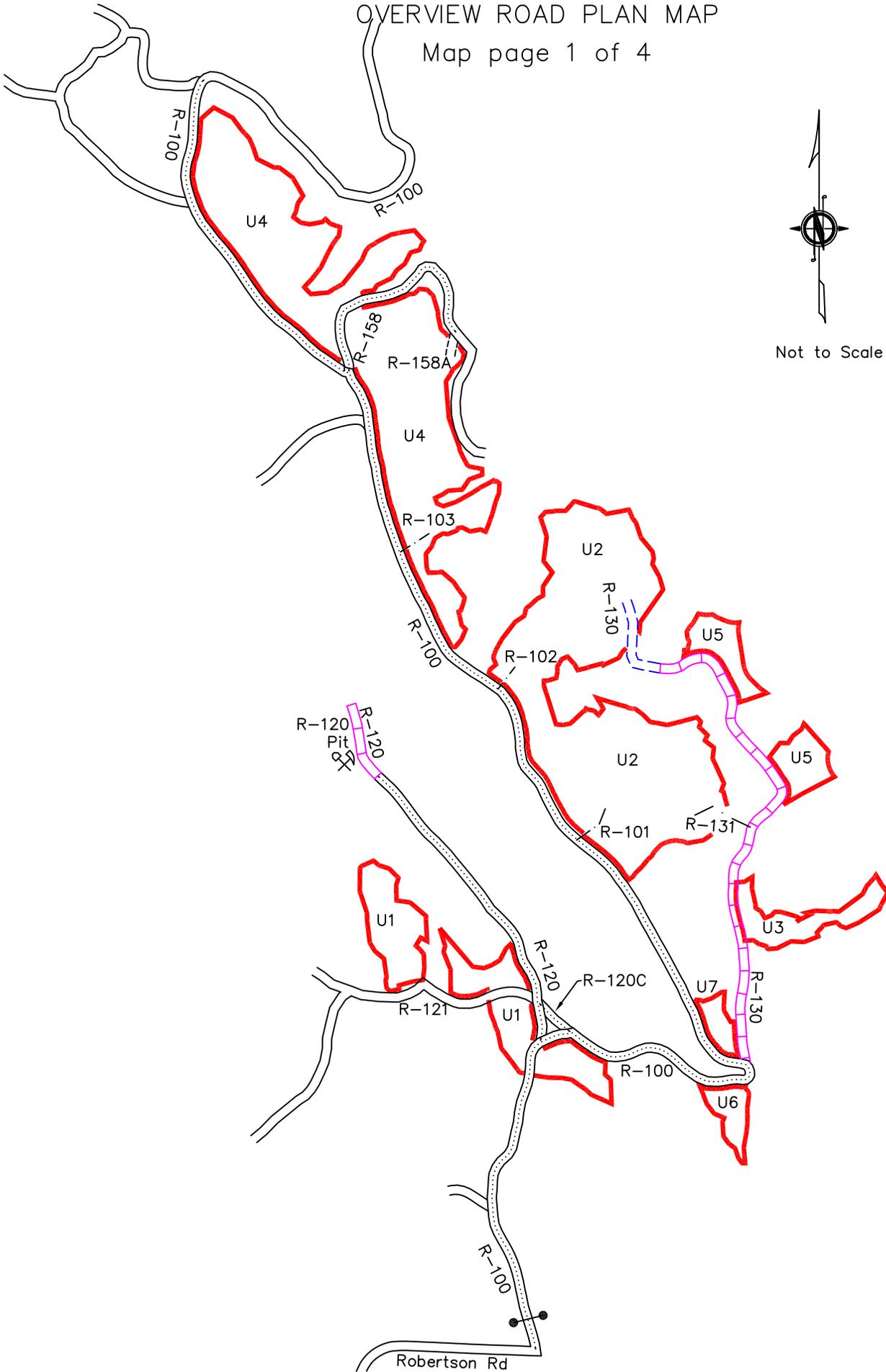
(Printed Name)

(Signature)

BROOM CLOSET

OVERVIEW ROAD PLAN MAP

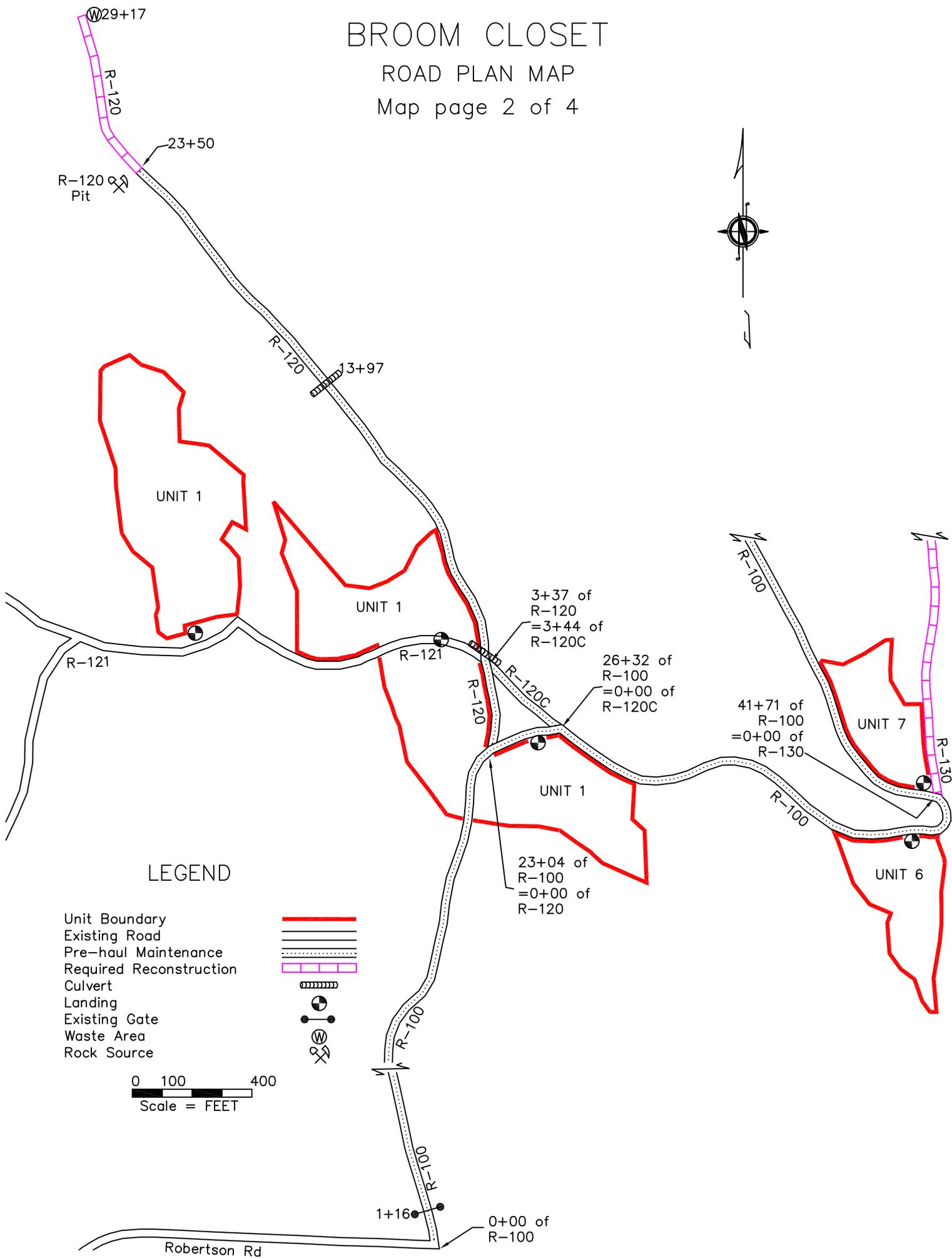
Map page 1 of 4



BROOM CLOSET

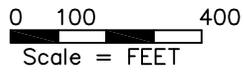
ROAD PLAN MAP

Map page 2 of 4



LEGEND

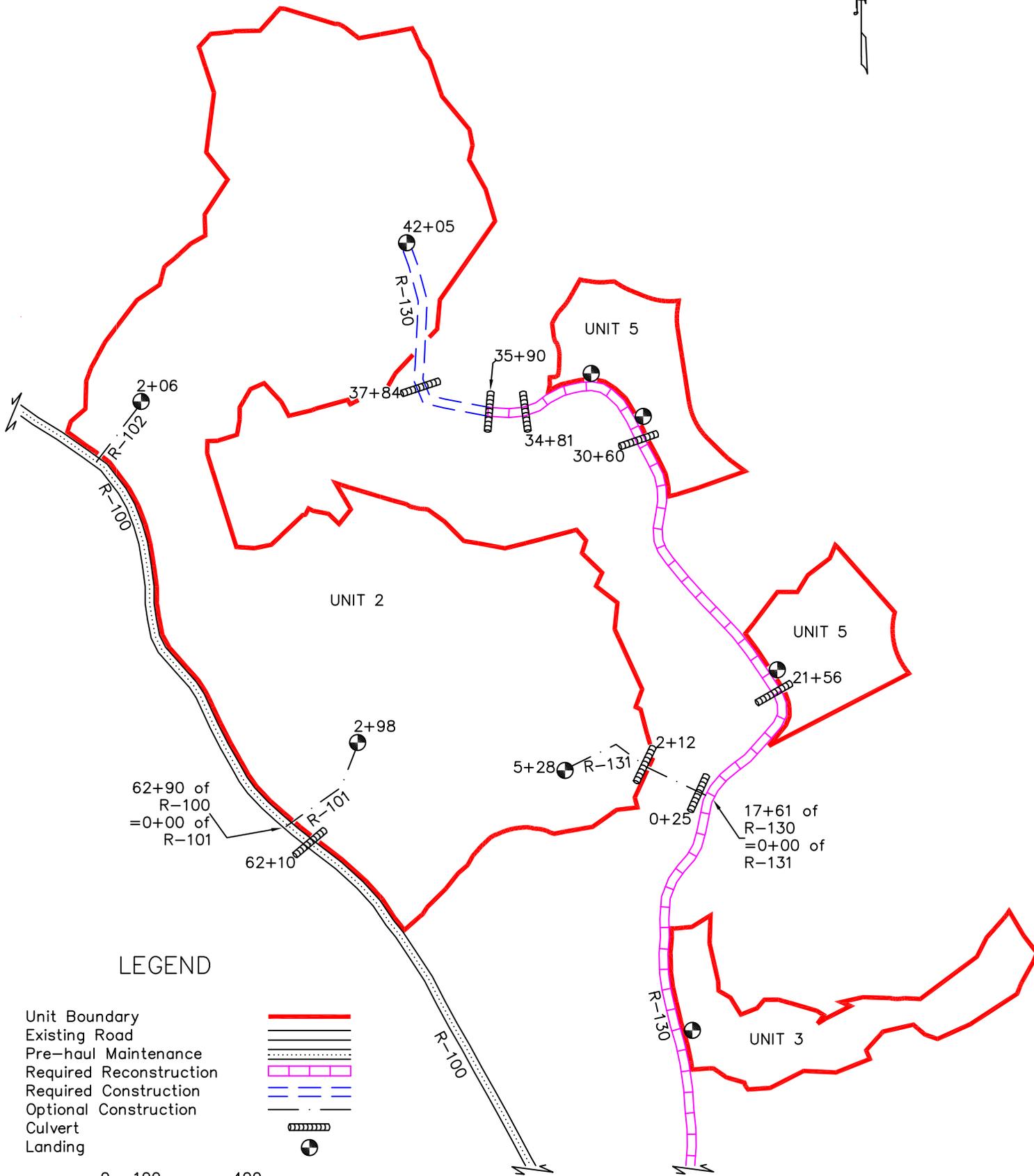
- Unit Boundary
- Existing Road
- Pre-haul Maintenance
- Required Reconstruction
- Culvert
- Landing
- Existing Gate
- Waste Area
- Rock Source



BROOM CLOSET

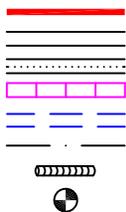
ROAD PLAN MAP

Map page 3 of 4



LEGEND

- Unit Boundary
- Existing Road
- Pre-haul Maintenance
- Required Reconstruction
- Required Construction
- Optional Construction
- Culvert
- Landing

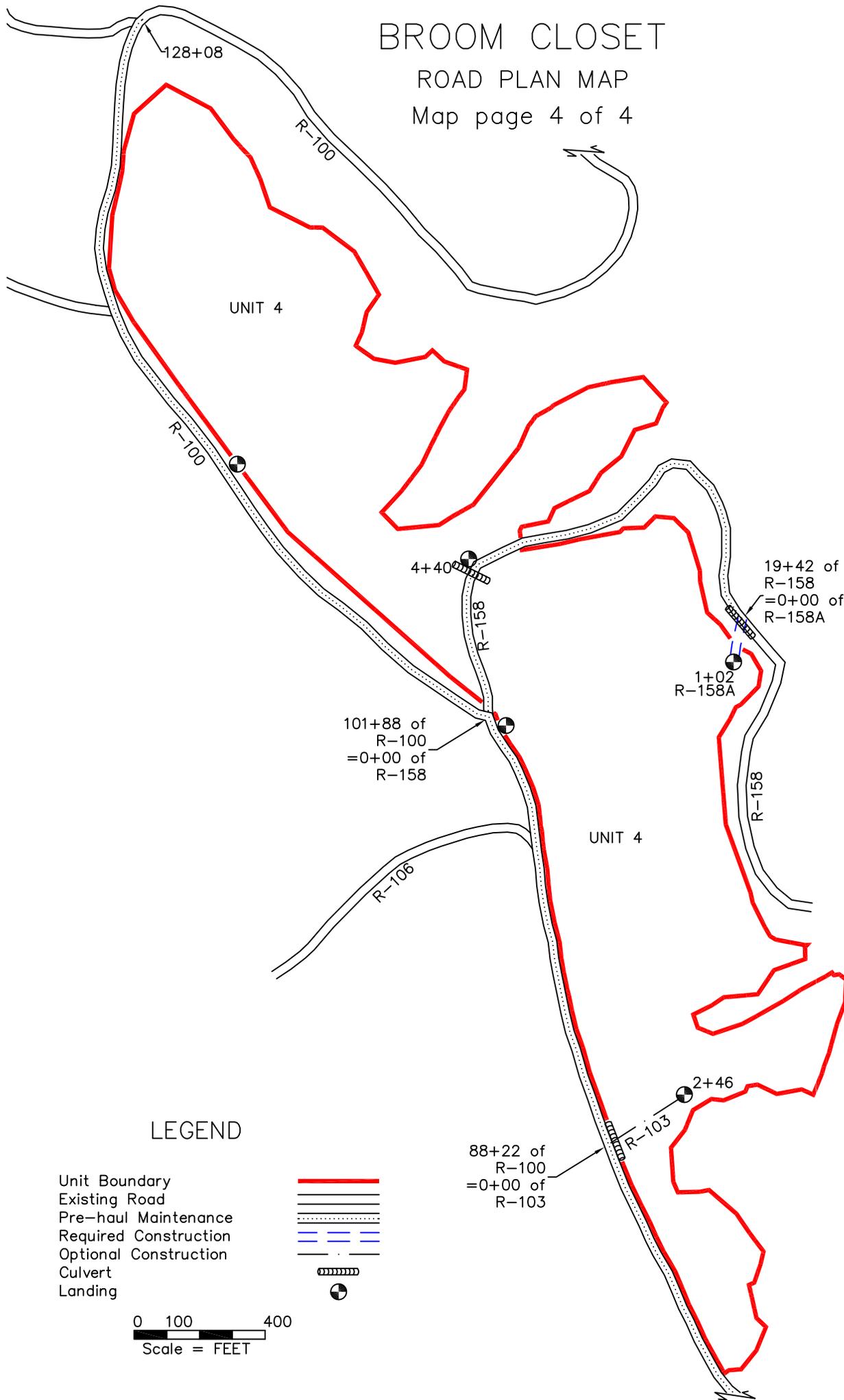


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Scale = FEET

BROOM CLOSET

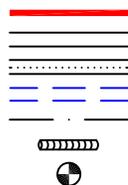
ROAD PLAN MAP

Map page 4 of 4



LEGEND

- Unit Boundary
- Existing Road
- Pre-haul Maintenance
- Required Construction
- Optional Construction
- Culvert
- Landing



0 100 400
Scale = FEET

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

BROOM CLOSET TIMBER SALE ROAD PLAN
COWLITZ COUNTY
ST HELENS DISTRICT
PACIFIC CASCADE REGION

AGREEMENT NO.: 30-100110

STAFF ENGINEER: LAURA CUMMINGS

DRAWN & COMPILED BY: ALICIA COMPTON

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>
R-100	0+00 to 128+08	Pre-haul Maintenance
R-120	0+00 to 23+50	Pre-haul Maintenance
R-120	23+50 to 29+17	Reconstruction
R-120C	0+00 to 3+44	Pre-haul Maintenance
R-130	0+00 to 35+90	Reconstruction
	35+90 to 42+05	Construction
R-158	0+00 to 19+42	Pre-haul Maintenance
R-158A	0+00 to 1+02	Construction

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>
R-101	0+00 to 2+98	Construction
R-102	0+00 to 2+06	Construction
R-103	0+00 to 2+46	Construction
R-131	0+00 to 5+28	Construction

0-4 CONSTRUCTION

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

0-5 RECONSTRUCTION

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
R-120	23+50 to 29+17	Construct ditches. Apply rock according to the ROCK LIST.
R-130	0+00 to 35+90	Clear and grub. Clean culverts. Desod and reshape subgrade and reconstruct ditches in accordance with the TYPICAL SECTION SHEET. Apply rock according to the ROCK LIST. Install culverts according to the CULVERT LIST.

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>
R-100	0+00 to 128+08	Brush. Grade and shape. Install culvert according to the CULVERT LIST. Apply rock according to the ROCK LIST.
R-120	0+00 to 23+50	Install culverts according to the CULVERT LIST. Apply rock according to the ROCK LIST. Clean ditches and culverts. Remove shoulder berms.
R-120C	0+00 to 3+44	Apply rock according to the ROCK LIST.
R-158	0+00 to 19+42	Brush. Clean culverts. Apply rock according to the ROCK LIST. Install culverts according to the CULVERT LIST.
	0+00 to 4+40	Clean ditches

0-7 POST-HAUL MAINTENANCE

This project includes post-haul road maintenance listed in Clause 9-5 POST-HAUL MAINTENANCE.

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 clearing, stripping, waste disposal, digging, and processing rock. 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.

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:

- Orange paint and stakes for pre-haul maintenance and reconstruction
- Orange paint, centerline stakes and reference points for construction
- Reference points for stream crossing work

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work in accordance with the construction stakes and reference points set in the field for grade and alignment. Reconstruction of existing road grades must conform to the original location except where construction staked or designed.

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.

1-21 HAUL APPROVAL

Purchaser shall not use roads under this road plan for any hauling other than timber cut on the right-of-way, without written approval from the Contract Administrator.

1-22 WORK NOTIFICATIONS

Purchaser shall notify the Contract Administrator a minimum of 3 business 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 compaction and drainage installation
- Rock compaction
- Abandonment

1-25 ACTIVITY TIMING RESTRICTION

On the following road(s), the operation of road construction equipment is not allowed on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Stations</u>
R-130	Abandonment

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator.

<u>Road</u>	<u>Activity</u>	<u>Closure Period</u>
All	Road 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 or Contract Clause H-130 HAULING SCHEDULE, 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 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 6 inches on pit run roads.
- Wheel track rutting exceeds 4 inches on crushed rock or native surface roads.
- 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. Before and during any suspension, Purchaser shall protect the work from damage or deterioration.

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. 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.

1-43 ROAD WORK AROUND UTILITIES

Road work is in close proximity to a utility. Known utilities are listed, but it is the Purchaser’s responsibility to identify any utilities not listed. Purchaser shall work in accordance with all applicable laws or rules concerning utilities. Purchaser is responsible for all notification, including “call before you dig”, and liabilities associated with the utilities and their rights-of-way.

<u>Road</u>	<u>Stations</u>	<u>Utility</u>	<u>Utility Contact</u>
R-100	39+98 to 41+98	Buried gas pipeline	KB Pipeline
R-130	0+00 to 20+07	Buried gas pipeline	KB Pipeline

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 road(s) in a condition that will allow the passage of light administrative vehicles.

2-5 MAINTENANCE GRADING – EXISTING ROAD

On the following road(s), Purchaser shall use a grader to shape the existing surface before timber haul.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
R-100	0+00 to 128+08	Grade and shape

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts before timber haul.

<u>Road</u>	<u>Stations</u>
R-130	18+15, 25+90
R-158	9+45, 19+42

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before timber haul or rock placement and must be done in accordance with the TYPICAL SECTION SHEET.

<u>Road</u>	<u>Stations</u>
R-120	0+00 to 23+50
R-158	0+00 to 4+40

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 4 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
R-100	0+00 to 128+08
R-158	0+00 to 19+42

3-2 BRUSHING RESTRICTION

Pulling, digging, pushing over, and other non-cutting methods used for vegetation removal may not be used for brushing.

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.

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. Grubbing must be completed before starting excavation and embankment.

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the grubbing limits and in compliance with all other clauses in this road plan. Stumps must be positioned upright 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 limits as shown on the TYPICAL SECTION SHEET.

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 timber haul.

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 25 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.

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 grubbing limits. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of the Contract Administrator.

3-30 EXCLUSION OF DOZER BLADES

Purchaser shall not use dozer blades for the piling of organic debris.

SECTION 4 – EXCAVATION

4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. 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 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 8% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-5 CUT SLOPE RATIO

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

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth	1:1	100
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.

4-21 TURNOUTS

Purchaser shall construct turnouts as designated on the ROCK LIST. Locations changes are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

4-22 TURNAROUNDS

Purchaser shall construct turnarounds as designated on the ROCK LIST. 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 needed. 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 LOCATOIN.

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in the listed designated areas. 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>
R-120	29+17	Right
R-130 Abandonment	33+36 to 42+05	In accordance with the ROAD PRISM WASTE DETAIL

4-38 PROHIBITED WASTE DISPOSAL AREAS

Purchaser shall not deposit waste material in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- On side slopes steeper than 45%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- 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 3 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.

4-60 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 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. Purchaser shall obtain written approval from the Contract Administrator for subgrade compaction before timber haul or rock placement.

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.

SECTION 5 – DRAINAGE

5-1 REMOVAL OF SHOULDER BERMS

On the following road(s), Purchaser shall remove berms from road shoulders. The construction of ditchouts is required where ponding could result from the effects of sidecast debris.

<u>Road</u>	<u>Stations</u>
R-120	0+00 to 23+50

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 may be new or used material and must meet the specifications in Clauses 10-17 through 10-22.

5-7 USED CULVERT MATERIAL

On temporary roads, Purchaser may install used culverts. All other roads must have new culverts installed. Purchaser shall obtain approval from the Contract Administrator for the quality of the used culverts before installation.

5-8 TEMPORARY STREAM CULVERT INSTALLATION

Purchaser shall install temporary culverts as shown in the CULVERT LIST. Temporary stream culverts must be located in the natural channel of the stream. Temporary culverts must be removed as indicated in Clause 9-21 ROAD ABANDONMENT.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
R-130	37+84	Outfall drop may not exceed 2 ft

5-10 CULVERT MARKER INSTALLATION

At locations specified on the CULVERT LIST, 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. Corrugated Polyethylene pipe must be installed in a manner consistent with the manufacturer’s recommendations. Culverts shall be banded using lengths of no less than 10 feet, and no more than one length less than 15 feet.

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.

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.

The type of energy dissipater and the amount of material must be consistent with the specifications listed on the CULVERT LIST. 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 2 feet wide and 4 feet long.

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all culverts on the CULVERT LIST that specify the placement of rock. 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. No placement by end dumping or dropping of rock is allowed.

5-33 NATIVE SURFACE ROADS

If overwintered, native surface roads must be waterbarred by November 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(s) 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(s), a joint operating plan must be developed. All parties shall follow this plan. Purchaser shall notify the Contract Administrator a minimum of 3 business days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>
R-120 Pit	NW ¼ S4 T8N R4W

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.

<u>Source</u>
R-120 Pit

6-20 ROCK CRUSHING OPERATIONS

Rock crushing operations must conform to the following specifications:

- Pre-screening and disposal of all material passing the U.S. #4 sieve is required prior to crushing.
- Contractor shall produce sieve analysis for crushing operations every day for 2-INCH CRUSHED ROCK.
- Contractor may use a commercial testing lab to produce sieve analyses.

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. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

6-30 2-INCH MINUS CRUSHED ROCK

% Passing 2" square sieve	100%
% Passing 1" square sieve	50 - 85%
% Passing U.S. #4 sieve	30 - 50%
% Passing U.S. #40 sieve	16% maximum
% Passing U.S. #200 sieve	5% maximum

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.

6-41 SELECT PIT RUN ROCK

No more than 50 percent of the rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension. Select Pit Run rock may not contain organic debris, dirt, or trash. Rock may require processing to meet this specification.

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths, are defined as the compacted depth(s) 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.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of landing rock and spot rock is on a cubic yard truck measure basis. Purchaser shall 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 and shall give them to the Contract Administrator on a weekly basis during rocking operations.

6-57 ROCK MEASUREMENT BY TRUCK SCALE

Measurement of commercial rock is on scaled truck weight. Purchaser shall provide scaled weight using a commercial scale. Purchaser shall provide the Contract Administrator with all scale sheets.

6-59 WEIGHT PER CUBIC YARD MEASUREMENT

At the start of operations, a weight per cubic yard will be calculated as follows:

- a) Measure the box of a truck to be used for rock haul.
- b) Weigh the truck for tare weight at a state certified platform scale.
- c) Flatten off a load of rock in the truck and calculate its exact volume in cubic yards.
- d) Weigh the truck for gross weight at a state certified platform scale.
- e) Divide the net weight of the load by the volume calculated in step c.

Calculated conversion factors will be valid for no more than 30 days or until rock density or moisture changes significantly, as determined by the Contract Administrator.

6-65 ROCK STOCKPILE LOCATION

Purchaser shall stockpile rock at the R-120 Pit in accordance with the ROCK SOURCE DEVELOPMENT PLAN. Rock stockpiles must be in accordance with Clause 6-67 ROCK STOCKPILE SPECIFICATIONS.

6-66 STOCKPILE BY SCREENING

Purchaser shall screen 1000 cubic yards of 2-INCH MINUS CRUSHED ROCK in accordance with the specifications in Clause 6-30 2-INCH MINUS CRUSHED ROCK.

6-67 ROCK STOCKPILE SPECIFICATIONS

Rock stockpiles listed in Clause 6-65 ROCK STOCKPILE LOCATION must meet the following specifications:

Before placing aggregates upon the stockpile site, the site must be cleared of vegetation, trees, stumps, brush, rocks, or other debris and the ground leveled to a smooth, firm, uniform surface.

When completed, the stockpile must be neat and regular in shape. The stockpile height is limited to a maximum of 12 feet. Stockpiles in excess of 200 cubic yards must be built up in layers of not more than 5 feet deep. Stockpile layers must be constructed by trucks, clamshells, or other methods approved in writing by the Contract Administrator. Each layer must be completed over the entire area of the pile before depositing aggregates in the next layer. The aggregates may not be dumped so that they run down and over the lower layers in the stockpile.

Stockpiles of different types or sizes of aggregate must be spaced far enough apart, or separated by suitable walls or partitions, to prevent the mixing of the aggregates.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for drainage installation 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, Purchaser may provide and 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>
R-101	0+00 to 2+98
R-102	0+00 to 2+06
R-103	0+00 to 2+46
R-130	33+36 to 42+05
R-131	0+00 to 5+28
R-158A	0+00 to 1+02

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 7 – STRUCTURES

7-5 STRUCTURE DEBRIS

Purchaser shall not allow debris from the installation or removal of structures to enter any stream. Purchaser shall maintain a clean jobsite, with all materials stored away from the high water mark or other area presenting a risk of the materials entering a stream. Debris entering any stream must be removed immediately, and placed in the site(s) designated for stockpiling or disposal. Purchaser shall retrieve all material carried downstream from the jobsite.

7-6 STREAM CROSSING INSTALLATION

Purchaser shall install stream crossing structures in accordance with the manufacturer's requirements, STREAM DIVERSION PROCEDURE, FPA and Reference points.

7-70 GATE CLOSURE

On the following road(s), Purchaser shall keep gates closed and locked except during periods of haul. All gates that remain open during haul must be locked or securely fastened in the open position. All gates must be closed at termination of use.

<u>Road</u>	<u>Station</u>
R-100	1+16

SECTION 8 – EROSION CONTROL

8-1 SEDIMENT CONTROL STRUCTURES

On the following road(s), Purchaser shall install sediment traps in accordance with the SEDIMENT TRAP DETAIL.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
R-130	37+84	Install two sediment traps on woodside of culvert.

8-2 PROTECTION FOR EXPOSED SOIL

Purchaser shall provide and evenly spread a 4-inch layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils may not sit exposed during any rain event.

8-15 REVEGETATION

On the following road(s), Purchaser shall spread grass seed on all exposed soils resulting from road work activities using manual dispersion. Other methods of covering must be approved in writing by the Contract Administrator. Required seed not spread by the termination of this contract will become the property of the state.

<u>Road</u>	<u>Location</u>	<u>Qty (lbs)*</u>
R-101	0+00 to 2+98	8
R-102	0+00 to 2+06	5
R-103	0+00 to 2+46	6
R-130	0+00 to 42+05	50
R-131	0+00 to 5+28	14
R-120 & R-158	Ditch Cleaning	10
R-158A	0+00 to 1+02	3
Waste Area		10

*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 50% 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 at a rate of 50 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.

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Ryegrass	35-45
Fescue	30-45
Highland Bent	5-15
White Clover	8-20
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>
R-130	33+36

9-2 CULVERT REMOVAL FROM LIVE STREAM

On the following road(s), Purchaser shall remove existing culverts from live streams and leave the resulting channel open with excavation slope and excavated channel width as specified. Place excavated material in a waste area designated in Clause 4-37 WASTE AREA LOCATION. Culvert removals from live streams must be in accordance with the Reference Points, FILL REMOVAL TABLE AND DETAIL and the FPA.

<u>Road</u>	<u>Stations</u>	<u>Excavated Channel Width</u>	<u>Comments</u>
R-130	35+30	3'	Abandon in accordance with the inlet and outlet RP's.
	37+84	3'	

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.

9-21 ROAD ABANDONMENT

Purchaser shall abandon the following roads before the termination of this contract.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
R-130	33+36 to 42+05	Medium

9-23 MEDIUM DECOMMISSIONING AND ABANDONMENT

- Rip the surface to a minimum depth of 12 inches.
- Construct non-drivable waterbars in accordance with the attached NON-DRIVABLE WATERBAR DETAIL at a maximum spacing that 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.
- 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 must be outsloped to provide positive drainage. Outlets must be on stable locations.
- Remove cross drain culverts in accordance with the CROSS DRAIN CULVERT REMOVAL DETAIL.
- Apply grass seed concurrently with abandonment and in accordance with Section 8 EROSION CONTROL.
- Cover, concurrently with abandonment, all exposed soils within 50 feet of any live stream, with a 4-inch deep layer of straw.

SECTION 10 MATERIALS

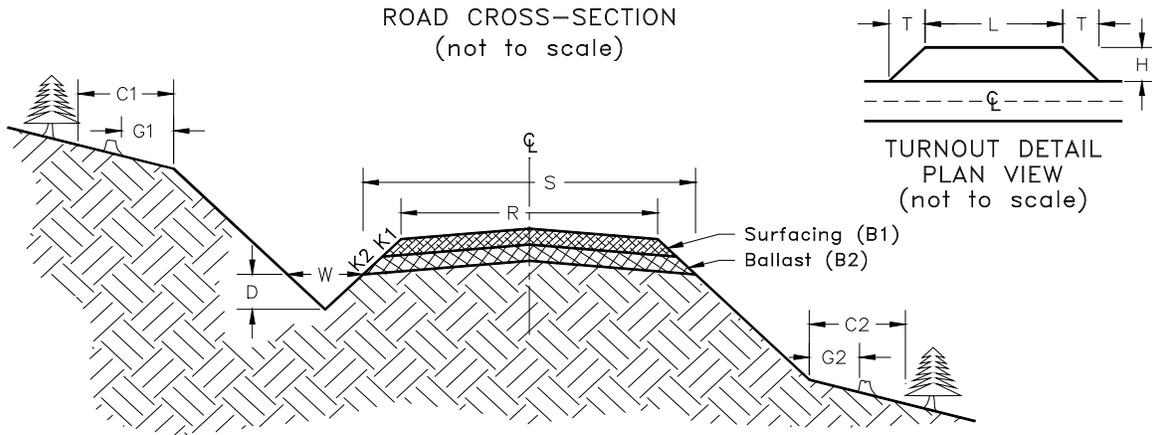
10-17 CORRUGATED PLASTIC CULVERT

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.

10-22 PLASTIC BAND

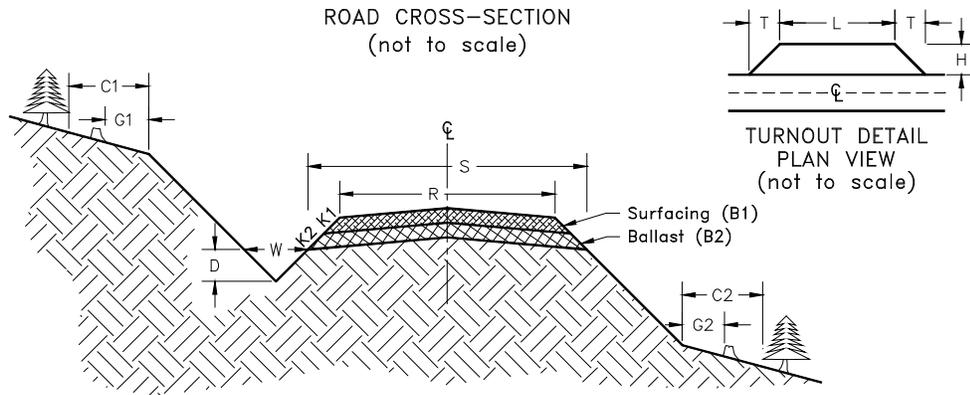
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe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

TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade Width ft	Road Width ft	Ditch Width ft	Ditch Depth ft	Crown @ CL in	Grubbing Limits ft		Clearing Limits ft	
									G1	G2	C1	C2
R-100	0+00	128+08	A	-	12	-	-	4	-	-	-	-
R-101	0+00	2+98	C	16	12	3	1	4	2	2	10	10
R-102	0+00	2+06	C	16	12	3	1	4	2	2	10	10
R-103	0+00	2+46	C	16	12	3	1	4	2	2	10	10
R-120	0+00	29+17	C	-	12	3	1	4	-	-	-	-
R-120C	0+00	3+44	C	-	12	3	1	4	-	-	-	-
R-130	0+00	35+90	A	14	12	3	1	4	2	2	10	10
R-130	35+90	42+05	C	16	12	3	1	4	2	2	10	10
R-131	0+00	5+28	C	16	12	3	1	4	2	2	10	10
R-158	0+00	19+42	C	-	12	-	-	4	-	-	-	-
R-158A	0+00	1+02	C	16	12	3	1	4	2	2	10	10

ROCK LIST



SELECT PIT RUN

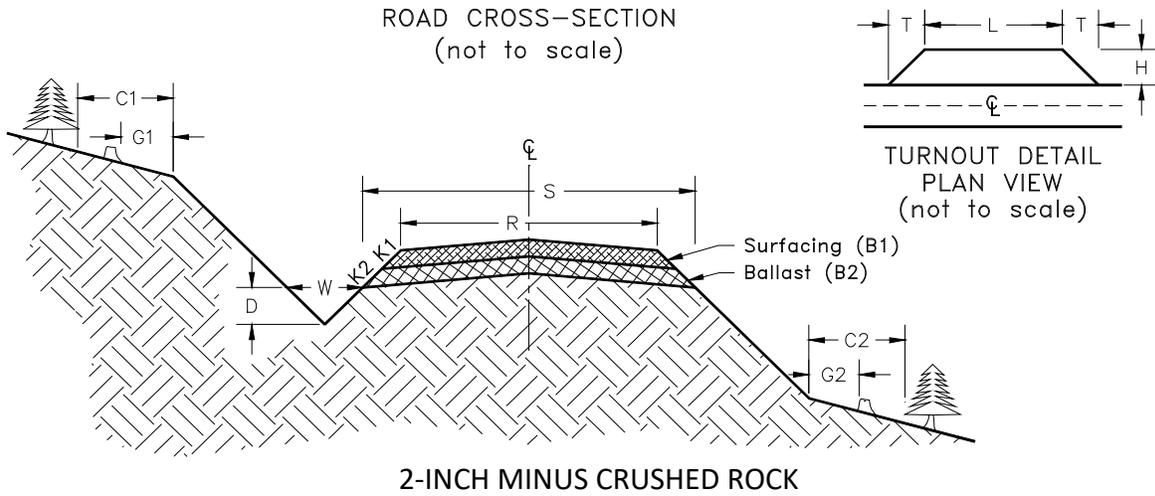
Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K2	B2				R-120 Pit	L	H	T
R-100		Energy Dissipater					1				
R-101	* 0+00	2+98	1 1/2:1	12	63	2.98	188				
		Junctions			20	1	20				
	* Landings				54	1	54				
R-102	* 0+00	2+06	1 1/2:1	12	63	2.06	130				
		Junctions			20	1	20				
	* Landings				54	1	54				
R-103	* 0+00	2+46	1 1/2:1	12	63	2.46	155				
		Junctions			20	1	20				
	* Landings				54	1	54				
R-120		Energy Dissipater					2				
R-130		Turnouts (20+80, 32+90)			20	2	40		40	10	25
	* 35+90	42+05	1 1/2:1	12	63	6.15	387				
	* Turnarounds				34	2	68				
	* Energy Dissipater						5				
	* Landings				54	1	54				
R-131	* 0+00	5+28	1 1/2:1	12	63	5.28	333				
	* Turnarounds				34	1	34				
	* Energy Dissipater						2				
	* Curve Widening						12				
	* Junctions				12	1	12				
	* Landings				54	1	54				
R-158		Turnouts			20	2	40		40	10	25
		Energy Dissipater					1				
R-158A	* 0+00	1+02	1 1/2:1	12	63	1.02	64				
	* Landings				54	1	54				

*Optional Rock in accordance with 6-75

REQUIRED SELECT PIT RUN: 163 CY

OPTIONAL SELECT PIT RUN: 1695 CY

ROCK LIST



Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (in)	C.Y. per Station or Unit	# of Stations or Units	C.Y. Subtotal	Rock Source	Turnout		
									Length	Width	Taper
			K1	B1				R-120 Pit	L	H	T
R-100	0+00	40+98	1 1/2:1	6	30	40.98	1229				
	Spot Rock						50				
	Turnouts				10	2	20		40	10	25
	Curve Widening						37				
R-120	0+00	23+50	1 1/2:1	4	20	23.50	470				
	23+50	29+17	1 1/2:1	9	46	5.67	261				
	Turnouts				10	2	20		40	10	25
	Culvert Backfill						60				
R-120C	0+00	3+44	1 1/2:1	4	20	3.44	69				
R-130	0+00	35+90	1 1/2:1	6	30	35.90	1077				
	Turnouts (20+80, 32+90)				10	2	20		40	10	25
R-158	0+00	19+42	1 1/2:1	4	20	19.42	388				
	Curve Widening						12				
Stockpile							1000				

REQUIRED 2-INCH MINUS CRUSHED ROCK: 4713 CY

CULVERT LIST

Road Number	Location	Culvert			Armoring (C.Y.)			Backfill	Bedding	Inlet	Remarks
		Dia (In)	Length	Type	Inlet	Outlet	Type	Material	Material	Marker	
R-100	62+10	18	30	PD	0.5	0.5	SP	CR	NT	-	
R-103	0+00	18	40	PD	-	-	-	NT	NT	-	
R-120	3+37	18	60	PD	0.5	0.5	SP	CR	NT	Y	
R-120	13+97	18	30	PD	0.5	0.5	SP	CR	NT	Y	
R-130	21+56	18	40	PD	0.5	0.5	SP	NT	NT	Y	
R-130	30+60	18	30	PD	0.5	0.5	SP	NT	NT	Y	
R-130	34+81	18	30	PD	0.5	0.5	SP	NT	NT	-	
R-130	35+90	18	30	PD	0.5	0.5	SP	NT	NT	-	
R-130	37+84	24	50	PD	0.5	0.5	SP	NT	NT	-	
R-131	0+25	18	40	PD	0.5	0.5	SP	NT	NT	Y	
R-131	2+12	18	50	PD	0.5	0.5	SP	NT	NT	Y	
R-158	4+40	18	30	PD	0.5	0.5	SP	CR	NT	Y	
R-158A	0+00	18	40	PD	-	-	-	NT	NT	-	

Key:

- SP - Select Pit Run
- NT - Native (bank run)
- CR - 2 Inch Minus Crushed
- LL - Light Loose Riprap
- PD - Polyethylene Pipe Double Wall
- PSDS - Polyethylene Downspout Single Wall

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)	Maximum Amount of Deflection (inches)
All Roads			Subgrade	12	Vibratory Smooth Drum	14,000	4	3	2
All Roads			Fill	12	Vibratory Smooth Drum	14,000	4	3	2
All Roads			Waste Area	24	Excavation	28,000	-	-	4
All Roads			Rock	12	Vibratory Smooth Drum	14,000	3	3	1

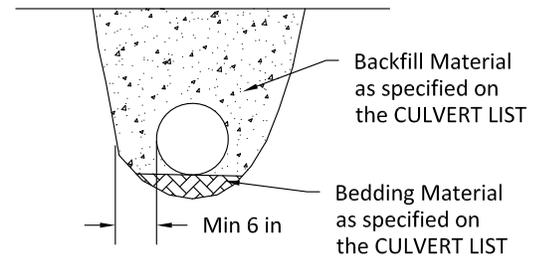
CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 1 OF 2

INSTALLATION REQUIREMENTS:

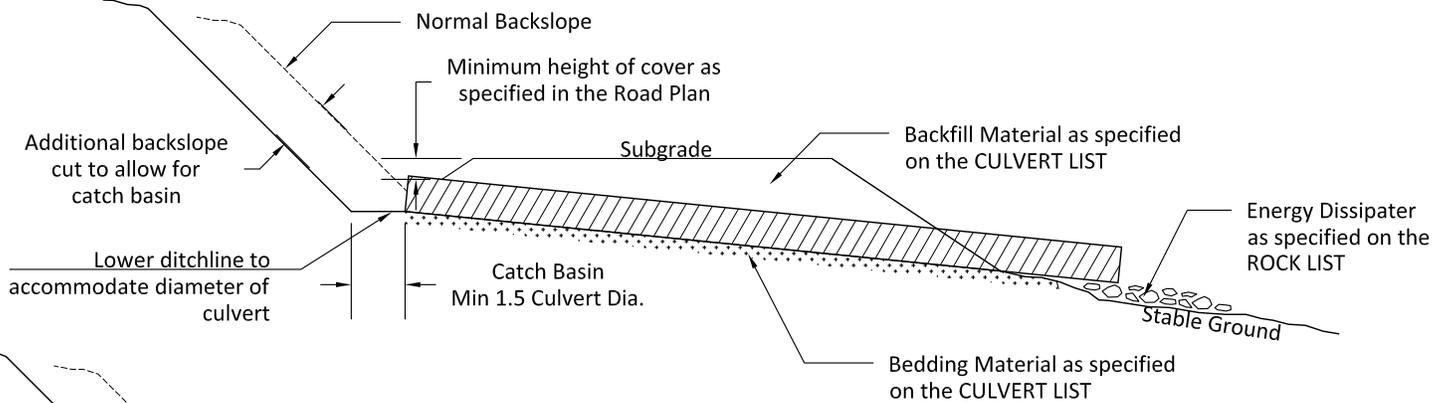
1. Proper preparation of foundation and placement of any required bedding material shall precede the installation of all culverts. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform, dense, unyielding base. The pipe must be uniformly 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

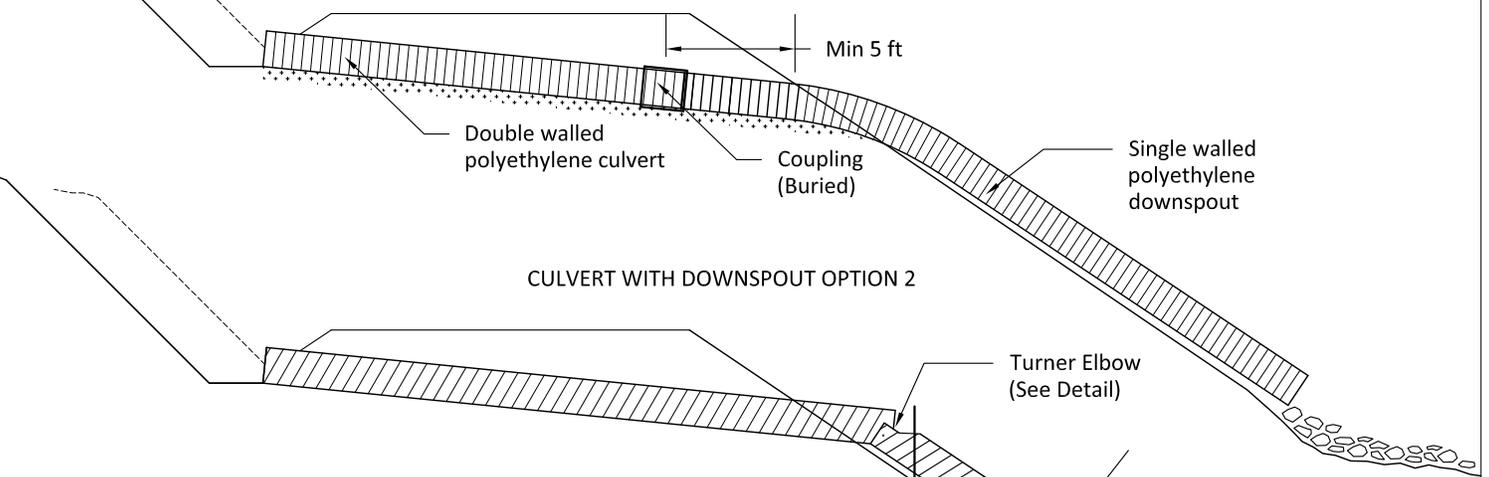
CROSS SECTION



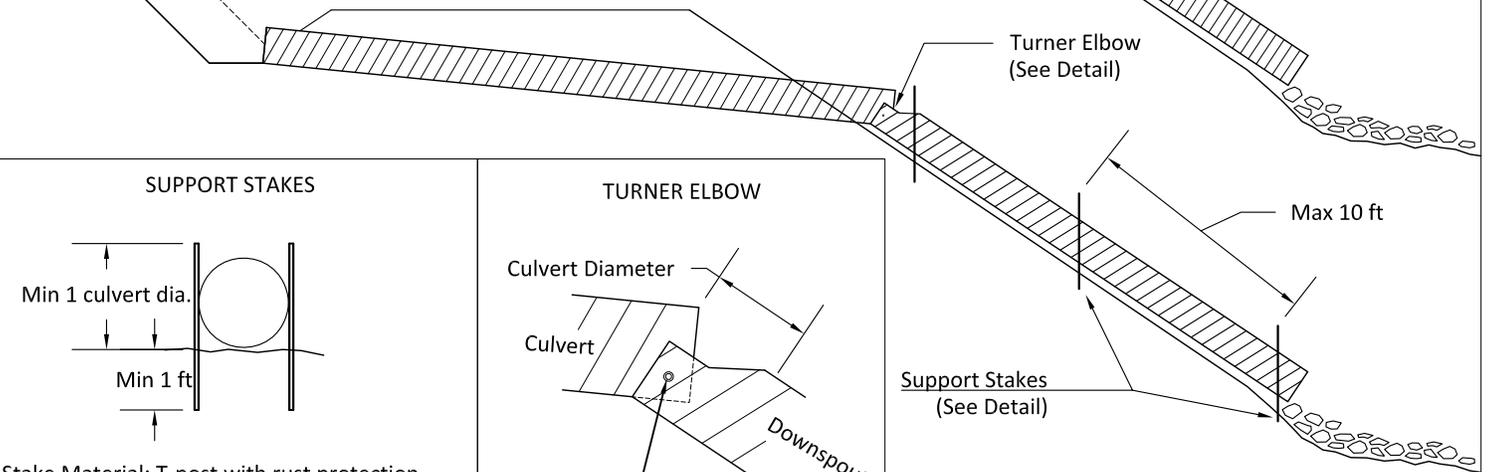
CULVERT PROFILE (TYPICAL)



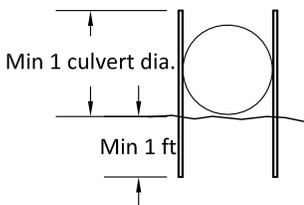
CULVERT WITH DOWNSPOUT OPTION 1



CULVERT WITH DOWNSPOUT OPTION 2

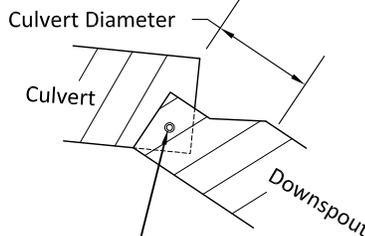


SUPPORT STAKES



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.

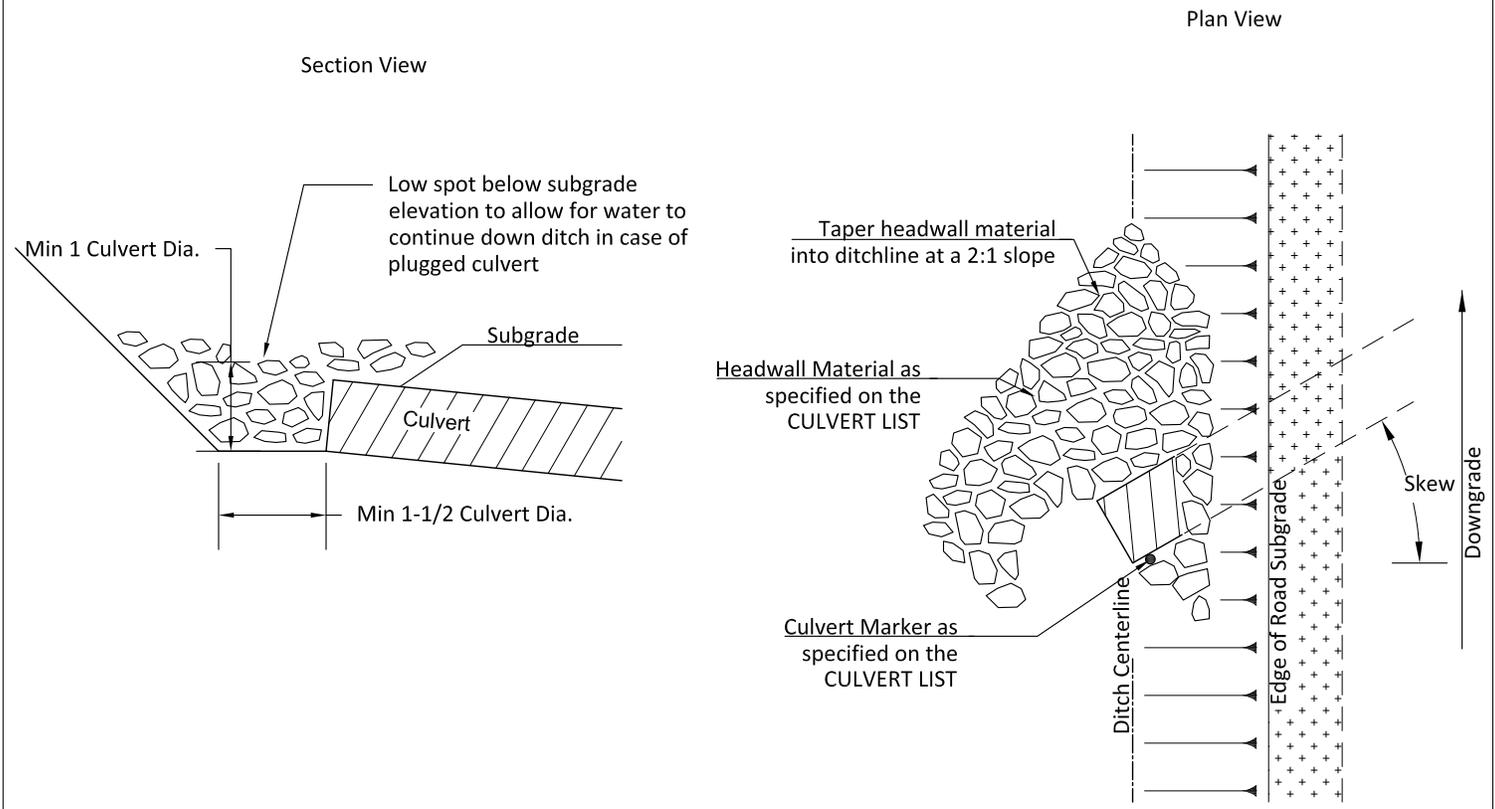
TURNER ELBOW



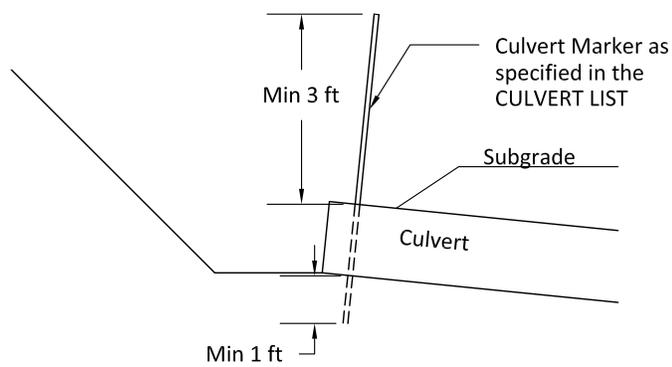
Downspout must be 6 inches larger in diameter than the culvert.

CULVERT AND DRAINAGE SPECIFICATION DETAIL
PAGE 2 OF 2

HEADWALLS

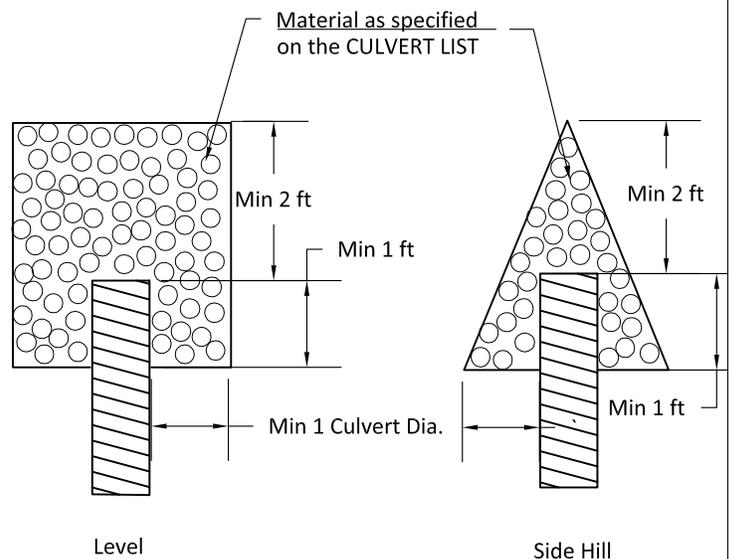


CULVERT MARKERS



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, shape and compact 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

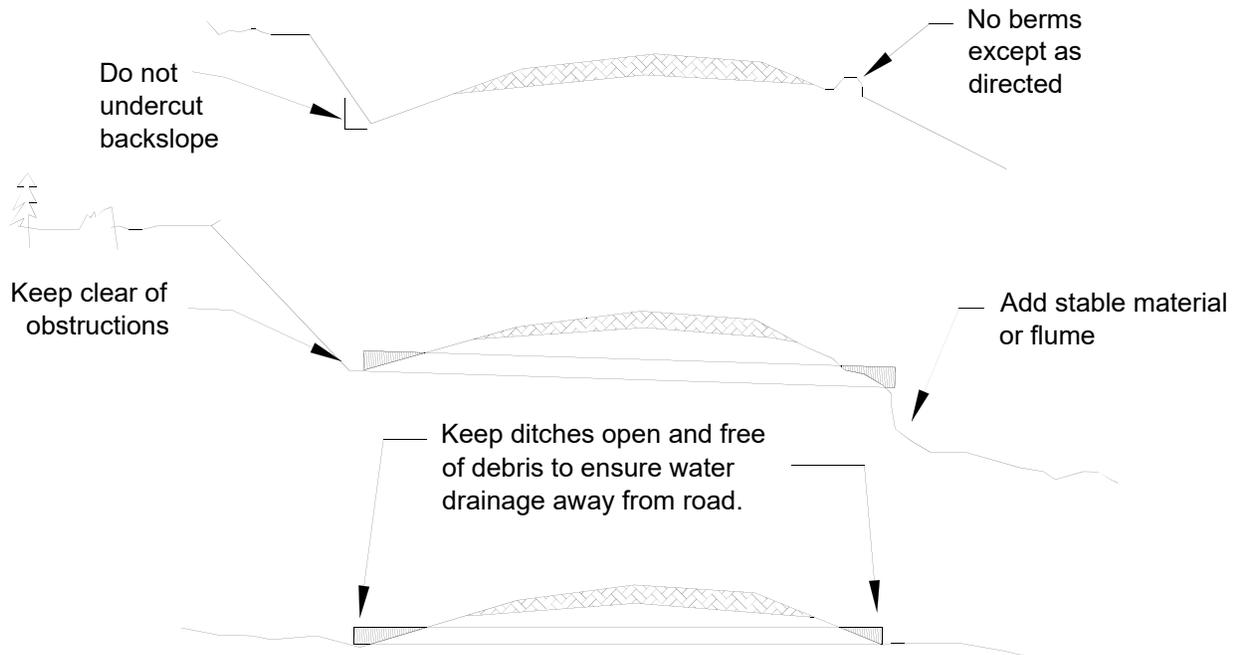
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

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.



STREAM DIVERSION PROCEDURE

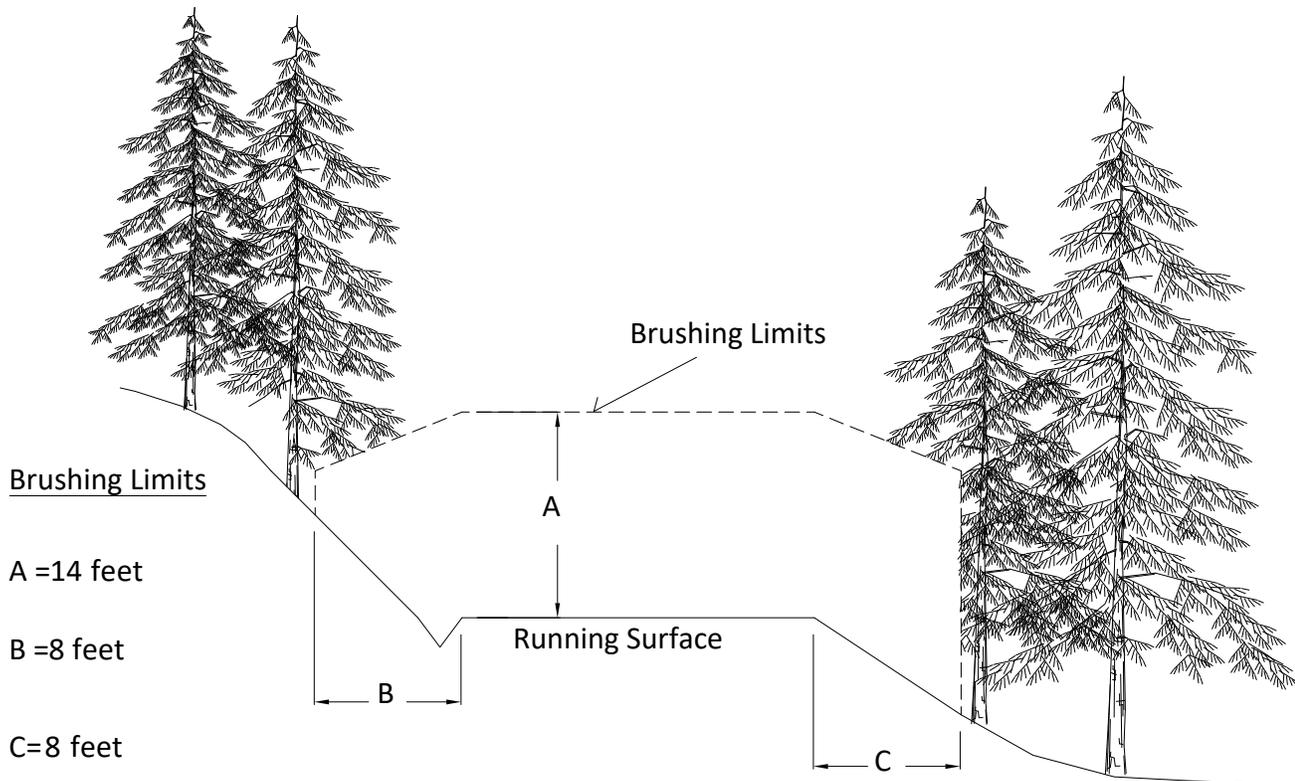
For culvert installation or removal in live waters, sites must be dewatered within the area of direct influence of the stream.

Once the stream has been pumped and/or diverted, stream flow shall not be allowed through the work area until all work below the ordinary high water line has been completed.

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

- 1) A minimum of 3 business days prior to any work within the high water line, Purchaser shall submit for approval to the Contract Administrator a plan for pumping or diverting stream flow around the work area.
- 2) Install diversion culvert or set up pumps (3 required, with one as backup).
- 3) Dam up stream. Build a settling pond at culvert outlet.
- 4) Pump or divert clean water upstream of inlet around work site and back into stream. Pump dirty water away from site and onto forest floor a minimum of 200 feet from live streams.
- 5) Install/remove stream crossing structure.
- 6) Backfill any settling ponds.
- 7) Cover exposed soils in accordance with Section 8 EROSION CONTROL.

ROADSIDE BRUSHING DETAIL

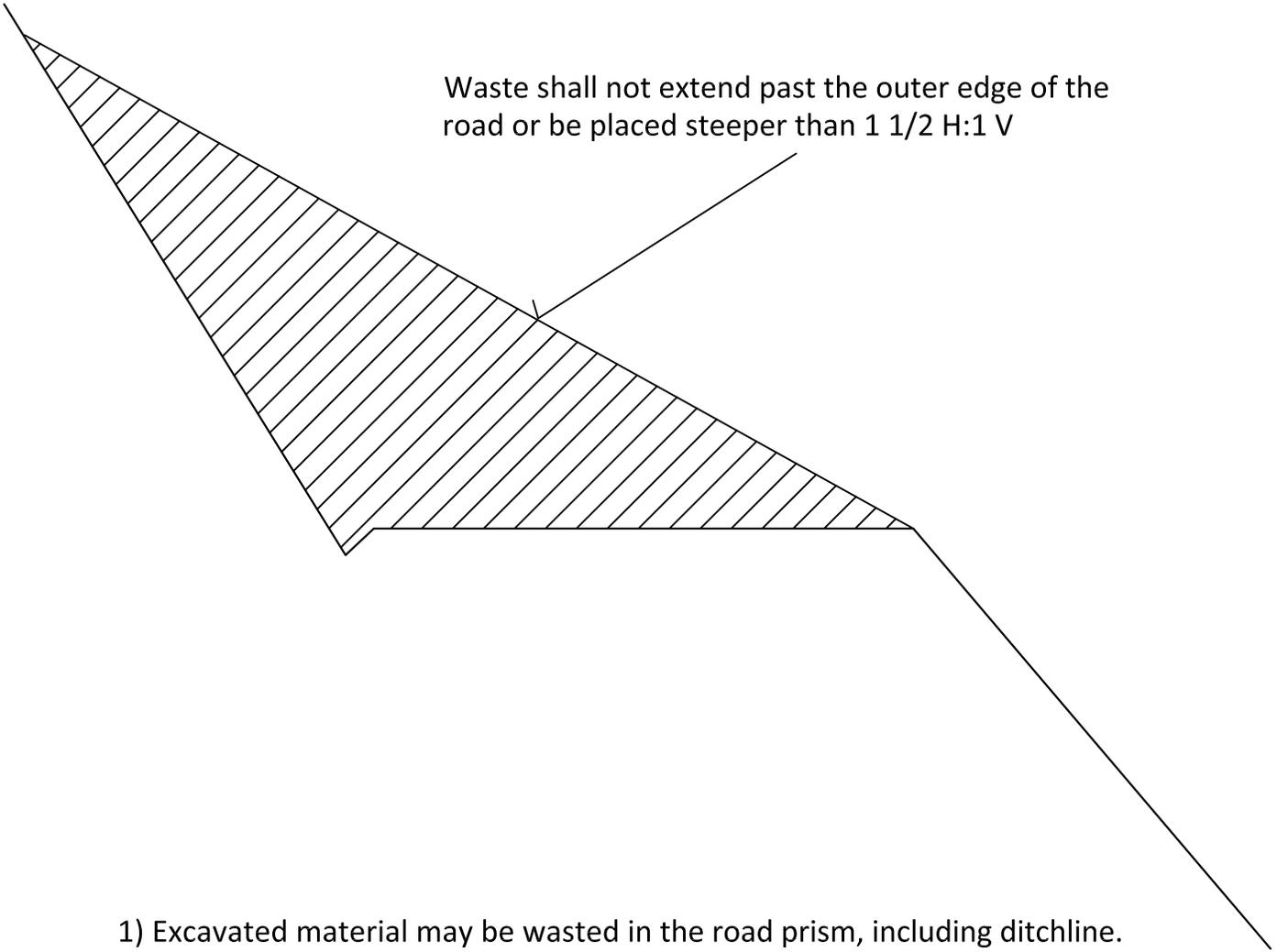


GENERAL NOTES

- 1) Vegetative material, including limbs, up to 4 inches in diameter shall be cut within the brushing limits shown on the drawing above. This includes vegetative material growing on the running surface.
- 2) Vegetative material shall be cut as near flush with the ground as possible, but shall not extend more than 6 inches above the ground.
- 3) Brushing Limit C shall be increased to 16 feet on the inside of switchbacks and tight curves.
- 4) On truck turnouts or turnarounds, brush shall be cut 8 feet back from outside edge of running surface.

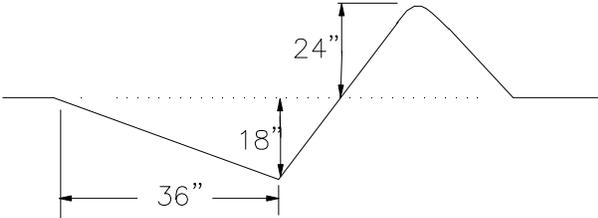
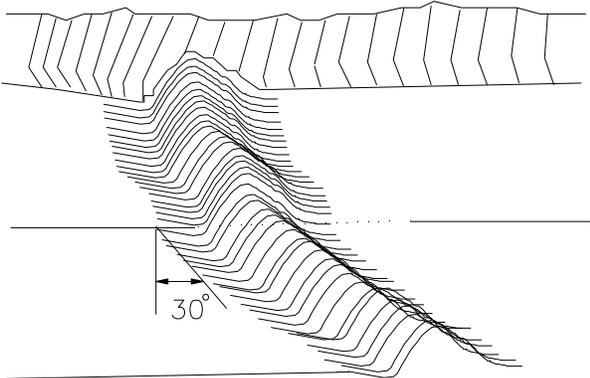
ROAD PRISM WASTE DETAIL

Waste shall not extend past the outer edge of the road or be placed steeper than 1 1/2 H:1 V



- 1) Excavated material may be wasted in the road prism, including ditchline.
- 2) Waste shall be sloped no steeper than 1 1/2 H : 1 V and placed a minimum of 10 feet from the edge of excavation limits.
- 3) Waste material shall not impede the natural drainage of water.
- 4) Waste shall be placed in 2 foot lifts and compacted by routing tracked excavation equipment over it.
- 5) A water bar shall be constructed immediately above the waste area.
- 6) Woody debris shall not be buried in waste areas. Available woody debris shall be scattered across the top of the waste area.

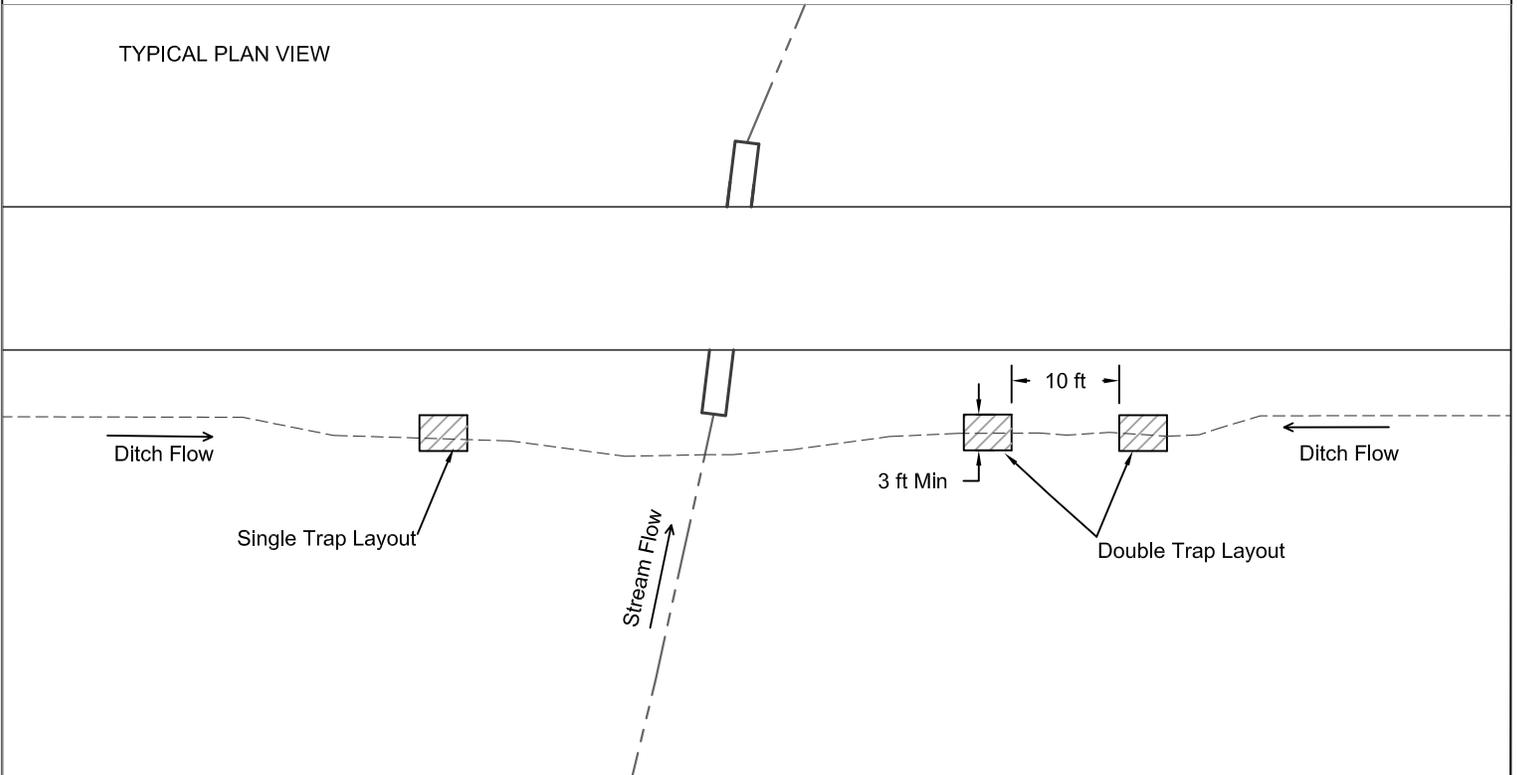
NON-DRIVABLE WATER BAR DETAIL



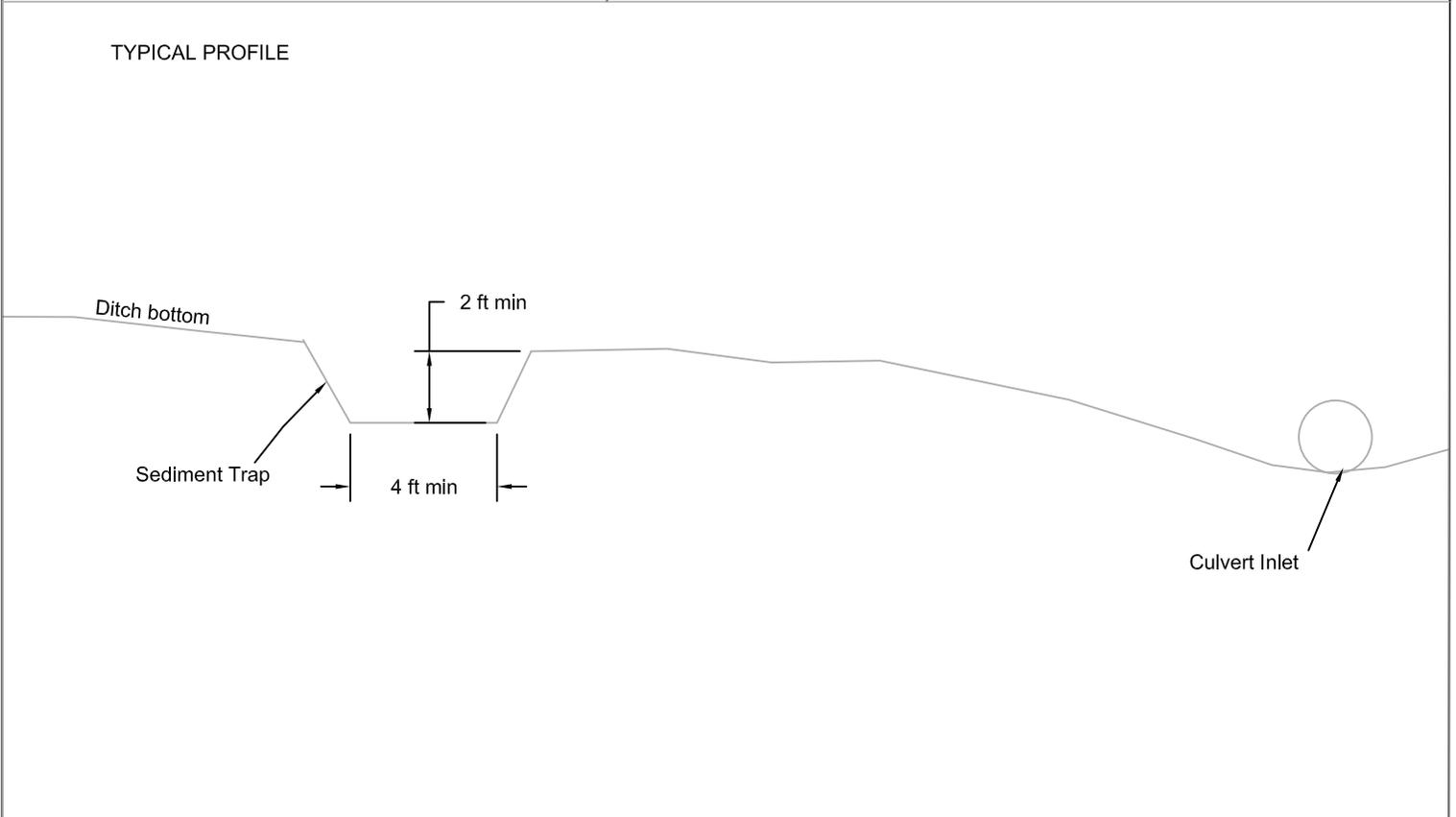
SEDIMENT TRAP DETAIL

No Scale

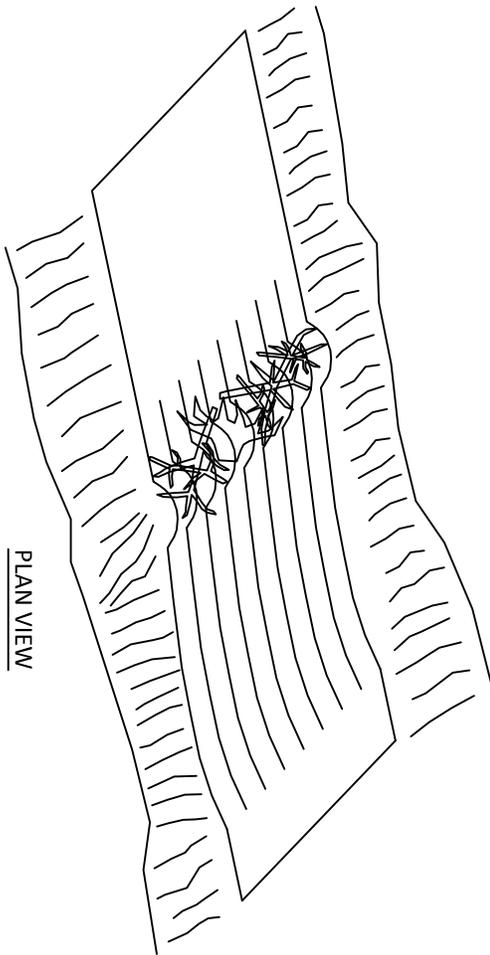
TYPICAL PLAN VIEW



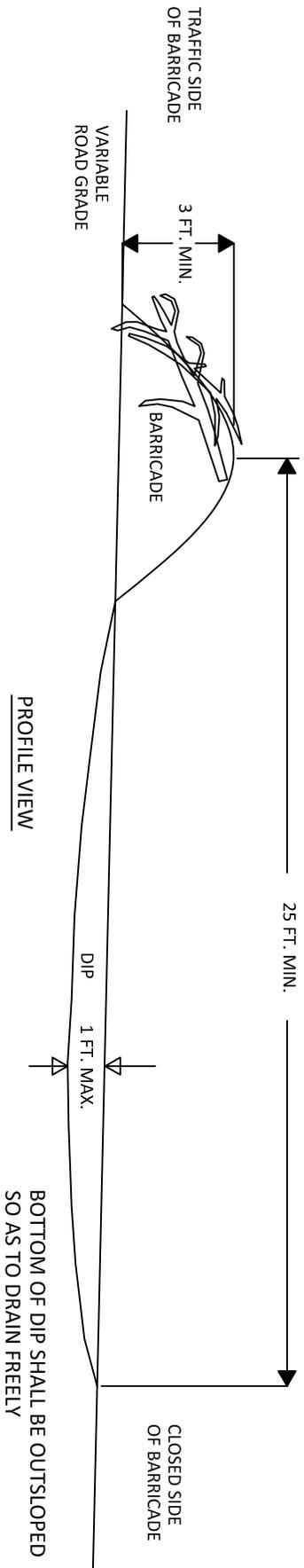
TYPICAL PROFILE



EARTHEN BARRICADE DETAIL



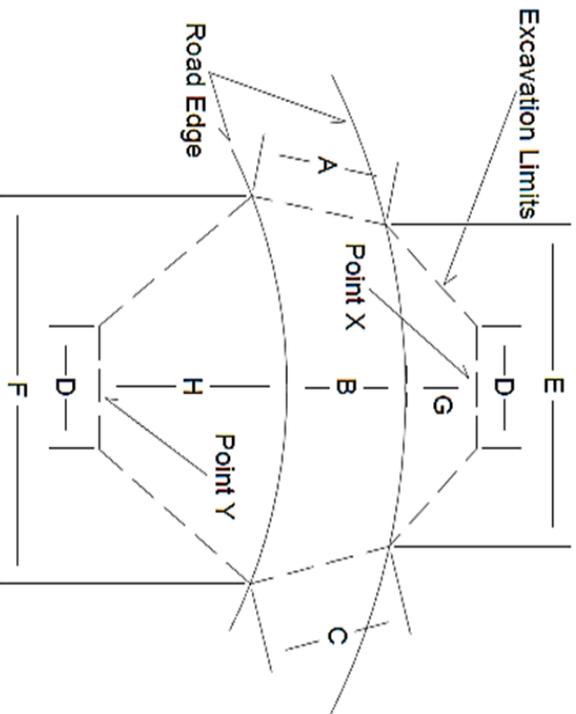
SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.



FILL REMOVAL TABLE

Road Station	A	B	C	D	E	F	G	H
R-130 35+30	20	21	21	3	28	30	4.6	10.5
37+84	34	~20	22	3	25	42	~4	~13

FILL REMOVAL DETAIL



A, B, C=Road widths, ft

D=Excavated stream width, ft

E=Horizontal distance of upstream road edge excavation, ft

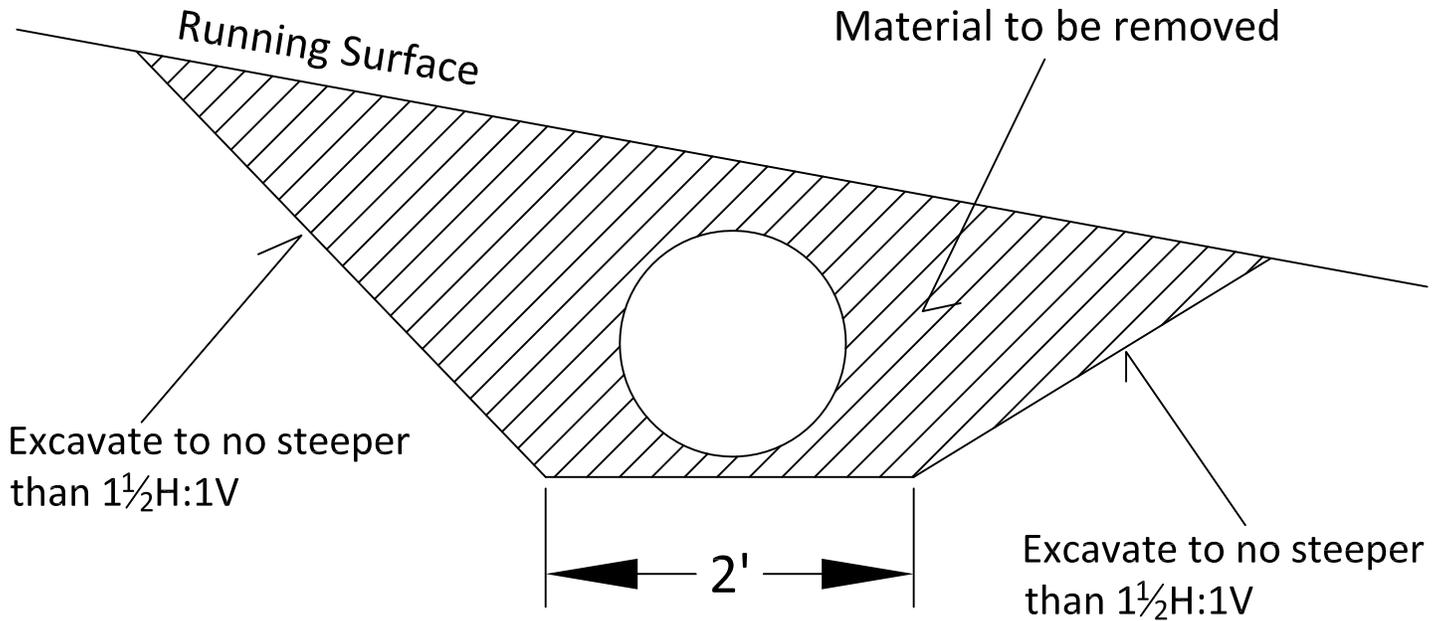
F=Horizontal distance of downstream road edge excavation, ft

G=Vertical distance from road edge to bottom of excavation at inlet, ft

H=Vertical distance from road edge to bottom of excavation at outlet, ft

- 1) The stream channel shall be excavated to the width D and shall be a consistent grade between Points X and Y.
- 2) All excavated slopes shall be constructed to a consistent grade between the excavated stream channel and the excavation limits shown on the drawing.
- 3) Excavation slopes shall match natural conditions and be no steeper than 1¹/₂:1

CROSSDRAIN REMOVAL DETAIL



- 1) Excavated material may be wasted on the road surface on the downhill side of the excavation. Waste material shall be sloped at no steeper than $\frac{1}{2}$ H:1V.
- 2) Resulting trench shall be keyed into the ditchline and sloped towards the outside edge of the road with a drop of at least 1 foot in 10 feet.

ROCK SOURCE DEVELOPMENT PLAN

R-120 Pit

NW ¼ Sec 4 T8N R4W W.M.

(Page 1 of 2)

1. All operations shall be carried out in compliance with all the 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.
2. Mining shall begin in A. Development in any other area, including the pit floor, must be approved in writing by the Contract Administrator.
3. All vegetation including stumps shall be cleared a minimum of 15 feet beyond the top of all working faces. Trees shall be cleared to a minimum of $\frac{3}{4}$ of the height of the tallest tree adjacent to the pit.
4. All overburden and soil shall be stripped a minimum of 10 feet beyond the top of all working faces.
5. Overburden shall be end hauled or pushed to the designated waste areas and compacted in accordance with the COMPACTION LIST.
6. Rock extraction may begin when the Contract Administrator has approved the clearing and grubbing, and overburden removal.
7. Oversize material remaining in the pit 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 located as directed by the Contract Administrator.
8. Pit faces created or modified by this sale shall not exceed 30 feet in height and shall be sloped no steeper than $\frac{1}{4}$:1.
9. Working bench width shall be a minimum of 30 feet.
10. Upon completion of pit operations:
 - a. The pit floor shall be left in a smooth and neat condition. The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
 - b. All exposed soil in the waste area shall be grass seeded in accordance with Road Plan Clauses 8-15 REVEGETATION and 8-25 GRASS SEED.
 - c. Pit faces and walls shall be scaled and cleared of loose and overhanging material.
 - d. Benches and faces shall have safety berms constructed or access blocked to highway vehicles.
 - e. The area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life. The site shall be cleared of all temporary structures, equipment and rubbish, and shall be left in a neat and presentable condition.
 - f. Purchaser shall ask Contract Administrator for written approval of final rock source condition and compliance with the terms of this plan.

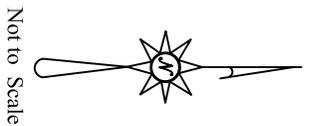
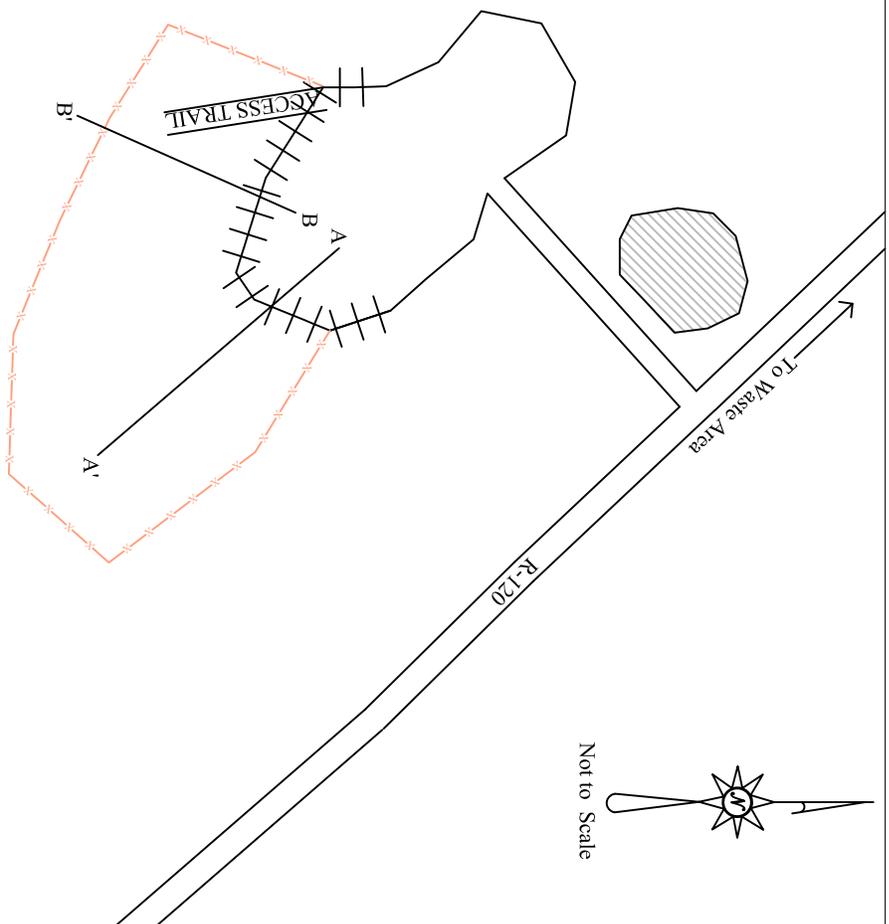
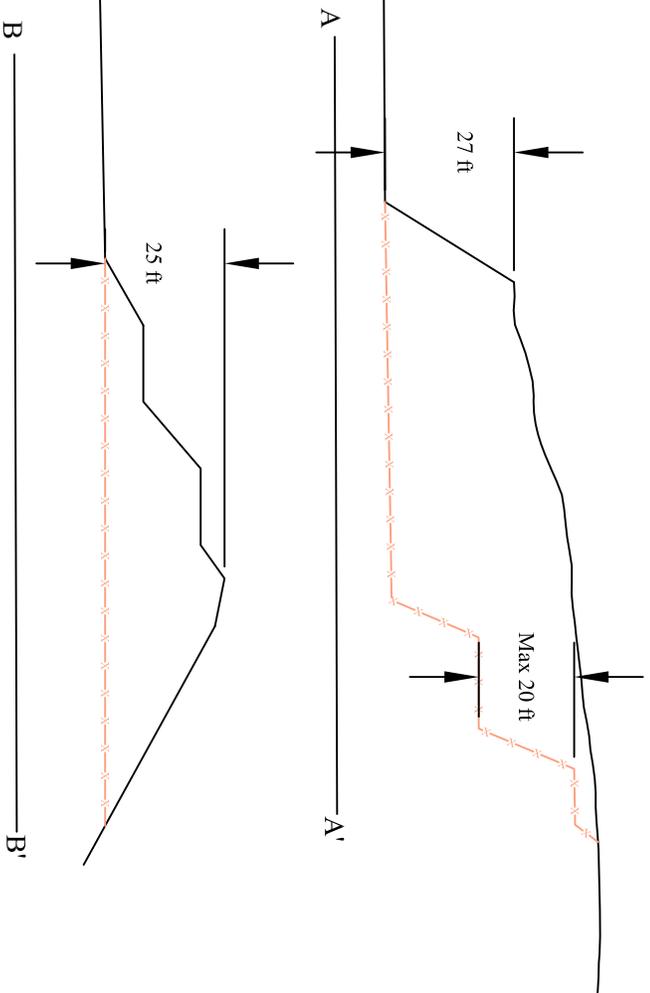
ROCK SOURCE DEVELOPMENT PLAN

R-120 Pit

NW 1/4, Sec 4, T08N, R04W, W.M.

Page 2 of 2

Typical Cross Section Profiles



	EXISTING PIT FACE
	AREA A
	STOCKPILE

SUMMARY - Road Development Costs

REGION: Pacific Cascade

DISTRICT: St. Helens

SALE/PROJECT NAME: Broom Closet

AGREEMENT #: 30-100110

ROAD NUMBERS:	Optional: R-101, R-102, R-103, R-131			
	Required: R-100, R-120, 120C, R-130, R-158, R-158A			
ROAD STANDARD:	Construction	Reconstruction	Maintenance	
NUMBER OF STATIONS:	19.95	41.57	174.44	
CLEARING & GRUBBING, EXCAVATION AND FILL, MISC.:	\$9,365.46	\$7,487.29	\$7,156.35	
ROAD ROCK:				
	Optional:	\$15,561.30	\$0.00	\$0.00
	Required:	\$0.00	\$20,067.86	\$35,008.42
	Total:	\$15,561.30	\$20,067.86	\$35,008.42
STOCKPILE:	-	-	\$12,220.00	
CULVERTS AND FLUMES:	\$5,931.00	\$2,260.00	\$3,390.00	
STRUCTURES:	-	-	-	
MOBILIZATION:	\$1,312.98	\$1,049.67	\$1,003.27	
TOTAL COSTS:	\$32,170.74	\$30,864.82	\$58,778.04	
COST PER STATION:	\$1,613	\$742	\$337	
ROAD DEACTIVATION & ABANDONMENT COSTS:	\$4,677.15	\$0.00	\$0	
	10% OVERHEAD AND GENERAL EXPENSE =		\$12,181.36	
	TOTAL (All Roads) =		\$138,672.11	
	TOTAL (Minus Optional Rock) =		\$123,110.81	
	SALE VOLUME MBF =		4,226	
	TOTAL \$/MBF =		\$32.81	
	TOTAL \$/MBF (Minus Optional Rock) =		\$29.13	

Profit and Risk costs are accounted on an individual basis.

SUMMARY OF ROAD

Sale: **Broom Closet**

Road: **R-100**

Required
Pre-Haul Maintenance- 128+08 stations
2.43 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

Roadside Brushing 2.43 miles @ \$855.00 per mile = \$2,077.65

MISC.

Grade and shape existing road surface - 128.08 stations @ \$13.75 per station \$1,761.10
Roll shaped road surface w/ vibratory roller prior to rocking - 128.08 stations @ \$7.27 per station \$931.14

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$4,769.89**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30 LF of 18"	\$673.20	0 LF of 24"	\$0.00
<u>Culvert Stakes & Markers</u>	1 markers	<u>\$8.00</u>		
<u>TOTAL CULVERTS</u>				\$673.20

ROCK

0+00 to	40+98	1,286	cy. of	Crushed	@	\$14.82	per c.y.=	\$19,058.52
Spot Rock	0+00	50	cy. of	Crushed	@	\$14.82	per c.y.=	\$741.00
Energy Dissipator	0+00	1	cy. of	Riprap	@	\$13.32	per c.y.=	<u>\$13.32</u>
<u>TOTAL ROCK</u>								\$19,812.84

SUBTOTAL **\$25,255.93**

Optional Rock? NO

TOTAL \$25,255.93
COST PER STATION \$197.19

SUMMARY OF ROAD

Sale: Broom Closet

Road: R-120

Required
Pre-Haul Maintenance- 23+50 stations
0.45 miles

Required
Reconstruction - 5+67 stations
0.11 miles

Required
Construction - stations
 miles

Required Abandonment- stations
0.00 miles

Optional
Reconstruction - stations
0.00 miles

Optional
Construction - stations
0.00 miles

PRE-HAUL MAINTENANCE

EXCAVATION

Pull and clean ditch- 23.50 stations @ \$53.75 per station \$1,263.13

MISC.

Grade out shoulder berms 23.50 stations @ \$13.75 per station \$323.13
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.

\$1,586.26

RECONSTRUCTION

EXCAVATION

Construct ditches- 5.67 stations @ \$86.00 per station \$487.62
Grade and shape subgrade - 5.67 stations @ \$11.00 per station \$62.37

MISC.

Roll subgrade w/ vibratory roller prior to rocking - 5.67 stations @ \$9.09 per station \$51.54
Grass seed and fertilize - 5.20 lbs @ \$2.80 per lbs \$14.56
TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC.

\$616.09

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>					
90	LF of 18"	\$2,019.60	0	LF of 24"	\$0.00
<u>Culvert Stakes & Markers</u>					
2	markers	<u>\$16.00</u>			
		\$16.00			
			TOTAL CULVERTS		\$2,035.60

ROCK

0+00 to	23+50	490	cy. of	Crushed	@	\$13.02	per c.y.=	\$6,379.80
Culvert Backfill	0+00	60	cy. of	Crushed	@	\$13.02	per c.y.=	\$781.20
23+50 to	29+17	261	cy. of	Crushed	@	\$13.90	per c.y.=	\$3,627.90
Energy Dissipator	0+00	2	cy. of	Pit-Run	@	\$11.52	per c.y.=	<u>\$23.04</u>
								TOTAL ROCK

\$10,811.94

SUBTOTAL **\$15,049.89**

TOTAL \$15,049.89

Optional Rock? NO

COST PER STATION \$515.94

SUMMARY OF ROAD

Sale: Broom Closet

Road: R-120C

Required
Pre-Haul Maintenance- 3+44 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

ROCK

0+00 to 3+44 69 cy. of Crushed @ \$13.42 per c.y. = \$925.98

TOTAL ROCK **\$925.98**

SUBTOTAL **\$925.98**

Optional Rock? NO

TOTAL \$925.98
COST PER STATION \$269.18

SUMMARY OF ROAD

Sale:	Broom Closet		Road:	R-130	
Required Pre-Haul Maintenance-	0.00	stations miles	Required Reconstruction -	35+90 0.68	stations miles
Required Abandonment-	8+69 0.16	stations miles	Optional Reconstruction -	0.00	stations miles
			Required Construction -	6+15 0.12	stations miles
			Optional Construction -	0.00	stations miles

RECONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris 35.90 sta @ \$115.00 per sta \$4,128.50

EXCAVATION

Pull and clean ditch- 35.90 stations @ \$53.75 per station \$1,929.63
 Grade and shape subgrade - 35.90 stations @ \$11.00 per station \$394.90

FILL

Fill roadway @ area of 0+00 - 0.00 hours @ \$230.00 per hour \$0.00
 Fill ditch/emb from 0+00 to 0+00 - 0.00 hours @ \$230.00 per hour \$0.00

MISC.

Roll subgrade w/ vibratory roller prior to rocking - 35.90 stations @ \$9.09 per station \$326.33
 Grass seed and fertilize - 32.80 lbs @ \$2.80 per lbs \$91.84

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$6,871.20**

CONSTRUCTION

CLEARING/GRUBBING

Scattering Organic Debris 6.15 sta @ \$230.00 per sta \$1,414.50

EXCAVATION

Road Construction Earthwork 6.15 sta. @ \$109.57 per sta. = \$673.86
 Construct settling ponds at station 37+84 1.00 @ \$43.00 each \$43.00
 Grade and shape subgrade - 6.15 stations @ \$11.00 per station \$67.65

FILL

Fill roadway @ area of 37+84 - 8.00 hours @ \$230.00 per hour \$1,840.00
 Fill ditch/emb from 0+00 to 0+00 - 0.00 hours @ \$230.00 per hour \$0.00

MISC.

Roll subgrade w/ vibratory roller prior to rocking - 6.15 stations @ \$9.09 per station \$55.90
 Construct turnaround @ sta. - 1.00 @ \$96.93 each \$96.93
 Grass seed and fertilize - 16.00 lbs @ \$2.80 per lbs \$44.80

TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$4,236.64**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>				
130	LF of 18"	\$2,917.20	50	LF of 24" \$1,427.00
<u>Culvert Stakes & Markers</u>				
2	markers	\$16.00		
		\$16.00		TOTAL CULVERTS

\$4,360.20

ROCK

0+00	to	35+90	1,097	cy. of	Crushed	@	\$14.63	per c.y.=	\$16,049.11
0+00	to	35+90	40	cy. of	Ballast	@	\$8.13	per c.y.=	\$325.20
Energy Dissipator		1+30	5	cy. of	Riprap	@	\$13.13	per c.y.=	\$65.65
35+90	to	42+05	509	cy. of	Ballast	@	\$8.94	per c.y.=	\$4,550.46
								TOTAL ROCK	\$20,990.42

ABANDONMENT

Rip road-	8.69	sta @	\$21.78	per sta	\$189.27
Remove Fills -	12.00	hours @	\$230.00	per hour	\$2,760.00
Stream diversion installation-	2.00	hrs @	\$204.00	per hr	\$408.00
Stream pumping	2.00	days @	\$164.00	per day	\$328.00
Construct waterbar -	6.00	@	\$57.33	each	\$343.98
Grass seed and fertilize -	32.00	lbs @	\$2.80	per lbs	\$89.60
Mulching -	15.00	bales	\$10.00	per bale	\$150.00
Remove culverts from state lands -	4.00	@	\$408.30	total	\$408.30
				TOTAL ADDITIONAL REQUIREMENTS	\$4,677.15

SUBTOTAL **\$41,135.61**

TOTAL \$41,135.61

Optional Rock? NO

COST PER STATION \$978.25

SUMMARY OF ROAD

Sale: Broom Closet

Road: R-158

Required Pre-Haul Maintenance- 19+42 stations 0.37 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
Roadside Brushing 0.37 miles @ \$1,140.00 per mile = \$421.80

EXCAVATION
Pull and clean ditch- 4.40 stations @ \$86.00 per station = \$378.40
 TOTAL CLEARING, GRUBBING, EXCAVATION, FILL, and MISC. **\$800.20**

CULVERTS - MATERIALS & INSTALLATION

<u>Culverts</u>	30	LF of 18"	\$673.20	0	LF of 24"	\$0.00
<u>Culvert Stakes & Markers</u>	1	markers	\$8.00			
			\$8.00			TOTAL CULVERTS
						\$681.20

ROCK

0+00	to	19+42	400	cy. of	Crushed	@	\$16.66	per c.y.=	\$6,664.00
0+00	to	0+00	1	cy. of	Riprap	@	\$15.16	per c.y.=	\$15.16
0+00	to	19+42	40	cy. of	Ballast	@	\$10.16	per c.y.=	\$406.40
									TOTAL ROCK
									\$7,085.56

SUBTOTAL **\$8,566.96**

TOTAL \$8,566.96

Optional Rock? NO

COST PER STATION \$441.14

ROCK DEVELOPMENT COST SUMMARY

Pit:	R-120 Pit	Location:	NW 1/4 S4 T8N R4W
Sale:	Broom Closet	Road:	5571 c.y.
Swell:	1.30	Stockpile:	1000 c.y.
Shrinkage	1.16	Total Truck Loads:	6571 c.y.
Drill Pct.:	0%	In Place Total:	5055 c.y.

Pit Development & Cleanup including Clearing and grubbing of Waste Area @ adjacent to pit, place overburden

in Waste Area, spread and compact.	\$4.60	/cu.yd x	711 cu.yds.		\$3,270.60
Rip Rock:	\$2.50	/cu.yd x	5055 cu.yds.		\$12,637.50
Push Rock:	\$0.67	/cu.yd x	6571 cu.yds.		\$4,402.57
Load Crusher:	\$0.50	/cu.yd x	4713 cu.yds.		\$2,356.50
Pre-screen Rock:	\$2.00	/cu.yd x	4713 cu.yds.		\$9,426.00
Crush 2" Rock:	\$6.00	/cu.yd x	4713 cu.yds.		\$28,278.00
Load Dump Truck:	\$0.56	/cu.yd x	5571 cu.yds.		\$3,119.76
			Subtotal		\$63,490.93

Move In/Set-up 3 Stage Crusher	1	@	\$5,777.82	=	\$5,777.82
Move in Loader	1	@	\$617.50	=	\$617.50
Move in Excavator	1	@	\$858.14	=	\$858.14
Move in Trucks	1	@	\$191.09	=	\$191.09
			Subtotal		\$7,444.55

TOTAL PRODUCTION COSTS \$70,935.48

Pit Run Base Cost=	\$3.82	Per Cu.Yd.
Crushed Base Cost=	\$10.32	Per Cu.Yd.

Road Segment	Haul Cost /cu.yd.	Application Cost /cu.yd.	Base Cst. /cu.yd.	Cost /cu.yd.	Number Cu. Yds	Speed (Mi/hr.)	One-Way Dist (ft)	ROCK COST
R-100	\$3.50	\$1.00	\$10.32	\$14.82	1286	10	6000	\$19,058.52
R-100 Spot Rock	\$3.50	\$1.00	\$10.32	\$14.82	50	10	6000	\$741.00
R-100 Energy Dissipator	\$3.50	\$6.00	\$3.82	\$13.32	1	10	6000	\$13.32
R-101	\$3.50	\$1.00	\$3.82	\$8.32	262	10	6000	\$2,179.84
R-102	\$3.98	\$1.00	\$3.82	\$8.80	204	10	7300	\$1,795.20
R-103	\$4.45	\$1.00	\$3.82	\$9.27	229	10	8600	\$2,122.83
R-120	\$1.70	\$1.00	\$10.32	\$13.02	490	10	1100	\$6,379.80
R-120 Culvert Backfill	\$1.70	\$1.00	\$10.32	\$13.02	60	10	1100	\$781.20
R-120 Energy Dissipator	\$1.70	\$6.00	\$3.82	\$11.52	2	10	1100	\$23.04
R-120	\$2.58	\$1.00	\$10.32	\$13.90	261	10	3500	\$3,627.90
R-130	\$3.31	\$1.00	\$10.32	\$14.63	1097	10	5500	\$16,049.11
R-130 Energy Dissipator	\$3.31	\$6.00	\$3.82	\$13.13	5	10	5500	\$65.65
R-130	\$3.31	\$1.00	\$3.82	\$8.13	40	10	5500	\$325.20
R-130	\$4.12	\$1.00	\$3.82	\$8.94	509	10	7700	\$4,550.46
R-131 Energy Dissipator	\$3.39	\$6.00	\$3.82	\$13.21	2	10	5700	\$26.42
R-131	\$3.39	\$1.00	\$3.82	\$8.21	445	10	5700	\$3,653.45
R-158	\$5.34	\$1.00	\$10.32	\$16.66	400	10	11000	\$6,664.00
R-158 Energy Dissipator	\$5.34	\$6.00	\$3.82	\$15.16	1	10	11000	\$15.16
R-158	\$5.34	\$1.00	\$3.82	\$10.16	40	10	11000	\$406.40
R-158A	\$5.63	\$1.00	\$3.82	\$10.45	118	10	11800	\$1,233.10
R-120C	\$2.10	\$1.00	\$10.32	\$13.42	69	10	2200	\$925.98
Stock Pile	\$1.40	\$0.50	\$10.32	\$12.22	1000	10	300	\$12,220.00
				Total C.Y.	6571		Sub Total	\$82,857.58

TOTAL ROCKING COSTS \$82,857.58

Road Building Move-In Calculations

Sale: Broom Closet

LOWBOY HAUL (Round Trip)		
DIST. (mi)	ROADWAY	AVE SPEED (mph)
55.0	Highway	50
1.6	County/ Mainline	20
1.4	Steep Grades	10

No.	EQUIPMENT DESCRIPTION	Move in Cost	Pilot Cars	within Area			Within		
				Move (\$/mile)	Begin Mileage	End Mileage	Total Miles	Area Cost	Total Cost
1	Brush Cutter	\$396.76		\$10.90	0.00	0.00	0	\$0.00	\$396.76
1	Graders	\$491.40		\$13.50	0.00	0.00	0	\$0.00	\$491.40
1	Rollers & Compactors	\$491.40		\$13.50	0.00	0.00	0	\$0.00	\$491.40
2	Excavators (Med.)	\$491.40		\$13.50	0.00	0.00	0	\$0.00	\$982.80
1	Tractor (D8)	\$491.40	0	\$13.50	0.00	0.00	0	\$0.00	\$491.40
2	Dump Truck (10 cy +)	\$256.08		\$9.70	0.00	0.00	0	\$0.00	\$512.16
TOTAL MOVE-IN COSTS:								\$3,365.92	



WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

FOREST EXCISE TAX ROAD SUMMARY SHEET

Region:

Timber Sale Name:

Application Number:

EXCISE TAX APPLICABLE ACTIVITIES

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

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

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

Decommission: **linear feet**
Road to be made undriveable but not officially abandoned.

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

EXCISE TAX EXEMPT ACTIVITIES

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

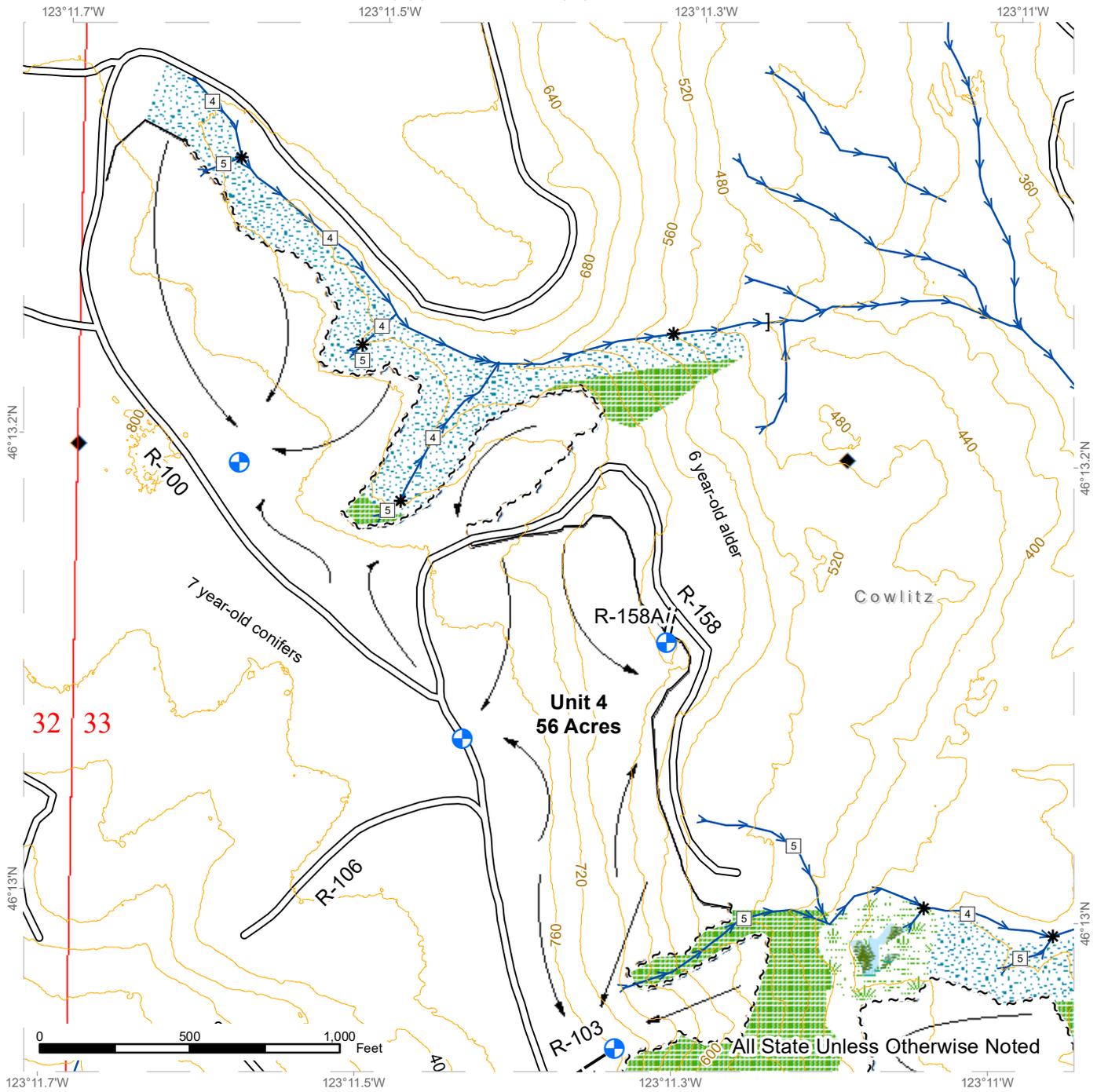
Temporary Reconstruction: **linear feet**
Roads to be reconstructed (optional and required) and then abandoned

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: BROOM CLOSET
AGREEMENT#: 100110
TOWNSHIP(S): T8R4W, T9R4W
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Pacific Cascade Region
COUNTY(S): Cowlitz
ELEVATION RGE: 280-760



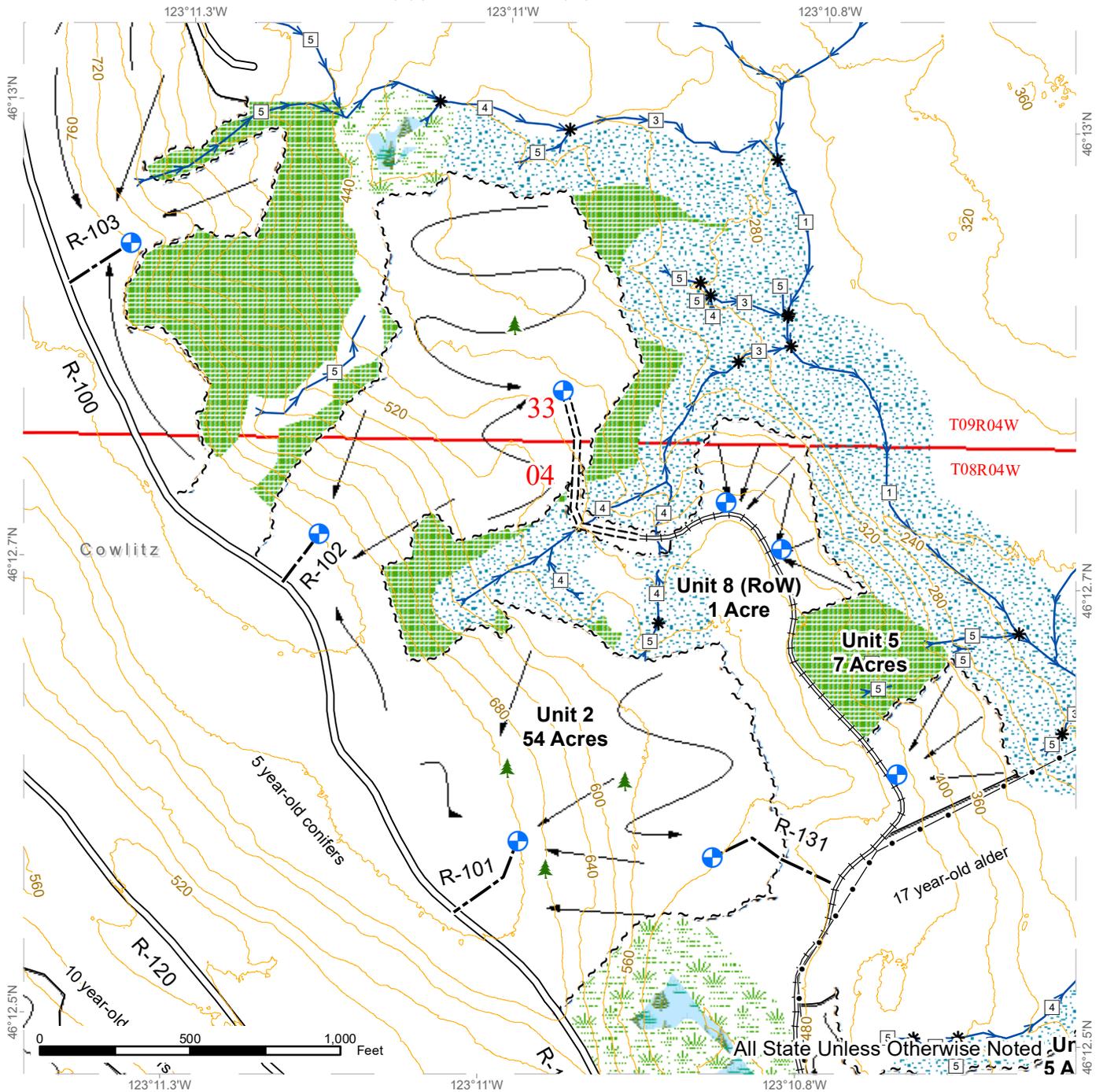
	Forested Wetland		Existing Roads		Landing - Proposed
	Leave Tree Area		Required Construction		
	Wetland Mgt Zone		Optional Construction		Survey Monument
	Riparian Mgt Zone		Ground Harvest		Sale Boundary Tags
	Cable Harvest		Timber Type Change		



LOGGING PLAN MAP

SALE NAME: BROOM CLOSET
AGREEMENT#: 100110
TOWNSHIP(S): T8R4W, T9R4W
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Pacific Cascade Region
COUNTY(S): Cowlitz
ELEVATION RGE: 280-760



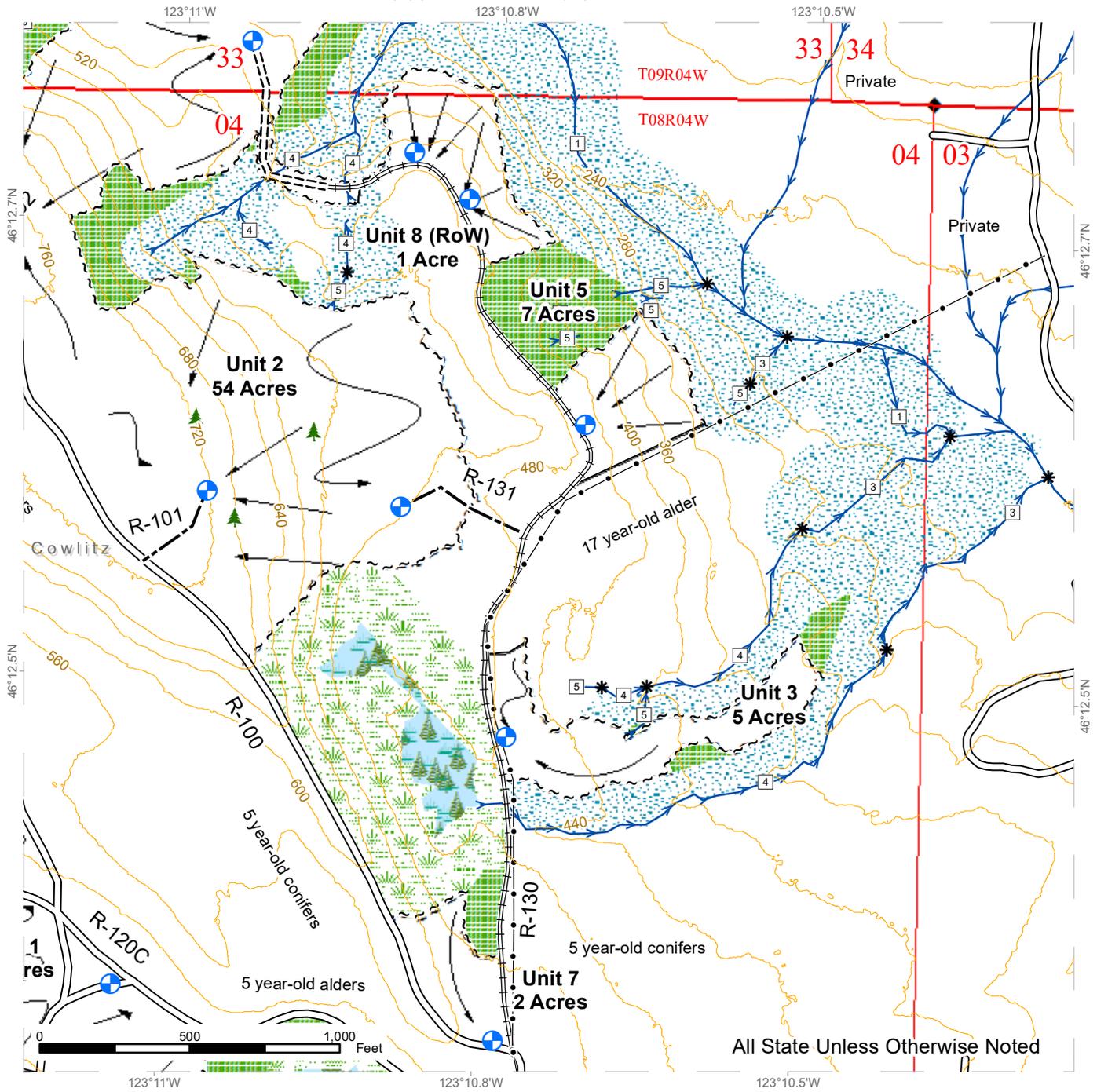
	Forested Wetland		Existing Roads		Right of Way Tags
	Leave Tree Area		Required Construction		Pipeline
	Wetland Mgt Zone		Required Reconstruction		Landing - Proposed
	Riparian Mgt Zone		Optional Construction		Leave Tree Area <1/4-acre
	Ground Harvest		Sale Boundary Tags		Timber Type Change
	Cable Harvest				



LOGGING PLAN MAP

SALE NAME: BROOM CLOSET
AGREEMENT#: 100110
TOWNSHIP(S): T8R4W, T9R4W
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Pacific Cascade Region
COUNTY(S): Cowlitz
ELEVATION RGE: 280-760



All State Unless Otherwise Noted

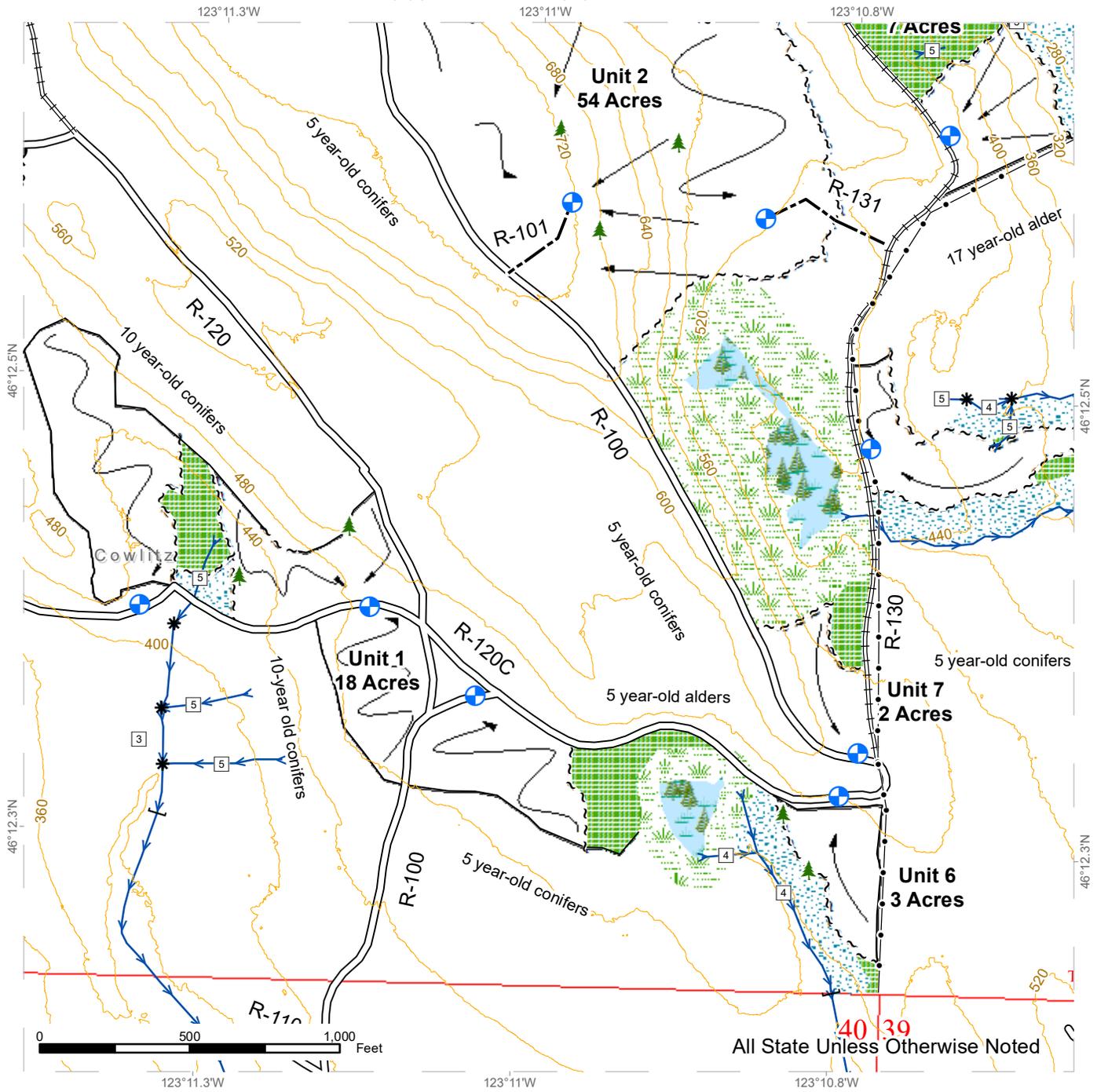
Forested Wetland	Existing Roads	Timber Type Change
Leave Tree Area	Required Construction	Right of Way Tags
Wetland Mgt Zone	Required Reconstruction	Pipeline
Riparian Mgt Zone	Optional Construction	Landing - Proposed
Ground Harvest	Survey Monument	Leave Tree Area <1/4-acre
Cable Harvest	Sale Boundary Tags	



LOGGING PLAN MAP

SALE NAME: BROOM CLOSET
AGREEMENT#: 100110
TOWNSHIP(S): T8R4W, T9R4W
TRUST(S): Common School and Indemnity (3), Scientific School (10)

REGION: Pacific Cascade Region
COUNTY(S): Cowlitz
ELEVATION RGE: 280-760



40 39
All State Unless Otherwise Noted

Forested Wetland	Existing Roads	Landing - Proposed
Leave Tree Area	Required Reconstruction	Leave Tree Area <1/4-acre
Wetland Mgt Zone	Optional Construction	Rock Pit
Riparian Mgt Zone	Sale Boundary Tags	
Ground Harvest	Timber Type Change	
Cable Harvest	Pipeline	

