

Washington DNR Timber Sales Program

**Updated information is being provided for Ham Hock Timber Sale #30-103631 documents as follows:**

**Documents amended:**

<b>Brief Description</b>	<b>DATE</b>	<b>Initials</b>
<p data-bbox="203 590 1027 625"><b>The following clause has been added to the Timber Sale Contract:</b></p> <p data-bbox="240 657 899 690"><b>G-061 Inadvertent Discovery of Cultural Resources</b></p> <p data-bbox="337 695 1133 1272">Purchaser acknowledges that cultural resources as defined in WAC 222-16-010 may exist within the timber sale area and that the existence and location of such resources may be unknown at the time this contract is executed. Purchaser has a duty to exercise due care in its operations and in the event any human skeletal remains are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify local law enforcement in the most expeditious manner possible then notifying the Contract Administrator. In the event cultural resources are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify the Contract Administrator. Any potential resources shall not be removed or disturbed. Purchaser shall resume operations as directed in writing by the Contract Administrator.</p>	9/13/2023	DB



**TIMBER NOTICE OF SALE**

**SALE NAME:** HAM HOCK

**AGREEMENT NO:** 30-103631

**AUCTION:** October 24, 2023 starting at 10:00 a.m., **COUNTY:** Pierce, Lewis  
South Puget Sound Region Office, Enumclaw, WA

**SALE LOCATION:** Sale located approximately 10 miles southeast of Elbe, WA.

**PRODUCTS SOLD  
AND SALE AREA:**

All timber, except trees marked with yellow paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and the 1 and 2 roads in Unit #1; white timber sale boundary tags, VRH boundary tags, and the 1 Road in Unit #2;

All timber as described in Schedule A bounded by the following: blue special management unit boundary tags, and white timber sale boundary tags in Unit #3;

All forest products above located on part(s) of Sections 2, 3, 10 and 11 all in Township 14 North, Range 6 East, W.M., containing 86 acres, more or less.

**CERTIFICATION:** This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BVC-SFIFM-018227) and FSC 100% raw materials under the Forest Stewardship Council® Standard (cert no: BV-FM/COC-080501).

**ESTIMATED SALE VOLUMES AND QUALITY:**

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	24.8	8	2,455				94		1,983	345	33	
Hemlock	17.3		616						437	139	40	
Noble fir	30.7		124						117	7		
Redcedar	25.5		108							94	14	
Cottonwood	30.5		61						61			
Red alder	15.4		17						5		12	
Sale Total			3,381									

**MINIMUM BID:** \$997,000.00 **BID METHOD:** Sealed Bids

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

**EXPIRATION DATE:** October 31, 2025 **ALLOCATION:** Export Restricted

**BID DEPOSIT:** \$99,700.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

**HARVEST METHOD:** This sale contains downhill cable yarding. Harvest activities are estimated to be 48 percent ground based harvest and 52 percent downhill cable. Cable and ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes 65 percent or less, and all other ground based equipment limited to sustained slopes 45 percent or less. Yarding may be restricted during wet weather if rutting becomes excessive, per clause H-017.



## TIMBER NOTICE OF SALE

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Falling, and yarding will not be permitted on weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

### **ROADS:**

6.30 stations of optional construction. 243.19 stations of required prehaul maintenance. 24.79 stations of abandonment. 19.94 stations of required post-haul maintenance. 6.30 stations of abandonment, if constructed. Purchaser maintenance on the section of the 2 Road immediately adjacent to or within Unit #1, the 21, and 211 roads and Spurs 1, and 2. Designated maintenance on all other roads used and the section of the 2 Road outside and not adjacent to Unit #1.

Rock for this proposal may be obtained from the State owned Zig Zag Pit at no cost to the Purchaser. Rock source development is to be completed per Section 6 in the Road Plan for Zig Zag Pit, if used. A 10,000 cubic yard stockpile of 2-inch minus crushed rock is required to be manufactured, per Road Plan clause 6-65.

The operation of road construction equipment and rock haul will not be permitted from November 1 to May 15, nor on weekends or State recognized holidays, unless authority to do so is granted, in writing, by the Contract Administrator. If permission is granted to operate from November 1 to May 15, the Purchaser shall comply with a maintenance plan per Road Plan clause 1-26.

The hauling of forest products will not be permitted from November 1 to May 15, nor on weekends or State recognized holidays, unless authorized in writing by the Contract Administrator. If permission is granted to operate from November 1 to May 15, preventative measures may be required to protect water, soil, roads and other forest assets.

### **ACREAGE DETERMINATION**

#### **CRUISE METHOD:**

Units #1, and #2 acreage was determined by traversing boundaries by GPS and length times width. Units #3 acreage was determined by traversing boundaries by GPS. GPS data files are available at DNR's website for timber sale packets. See cruise narrative for cruise method.

#### **FEES:**

\$57,477.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

#### **SPECIAL REMARKS:**

Units #1 and #2 are variable retention harvest units and Unit #3 is a RMZ thinning unit. Down wood and snag recruitment requirements exist as part of the riparian thinning prescription in Unit #3. See contract Schedule A for requirements.

All units contain pole-quality logs.

Trees marked with yellow paint are leave trees within Units #1 and #2. Within Units #1 and #2, there are remnant painted trees from past operations. Trees with paint in these units are take trees unless they are located within tagged leave tree area clumps or marked with YELLOW paint.

Landings must be constructed 50 feet off the 1 Road.

Trees marked with a double band of orange paint in Unit #2 are to be high-stumped per clause H-140.



## TIMBER NOTICE OF SALE

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Purchaser shall cut all vine maple within the harvest unit(s), leaving a stump no more than 12 inches in height.

Purchaser is required to acquire and install a 14-foot steel gate, see Road Plan for additional details.

Bridge maintenance is required per Road Plan clause 7-30.

The Mount Tahoma Trail Association plows the 1 Road between December and March for access to the snow parks.

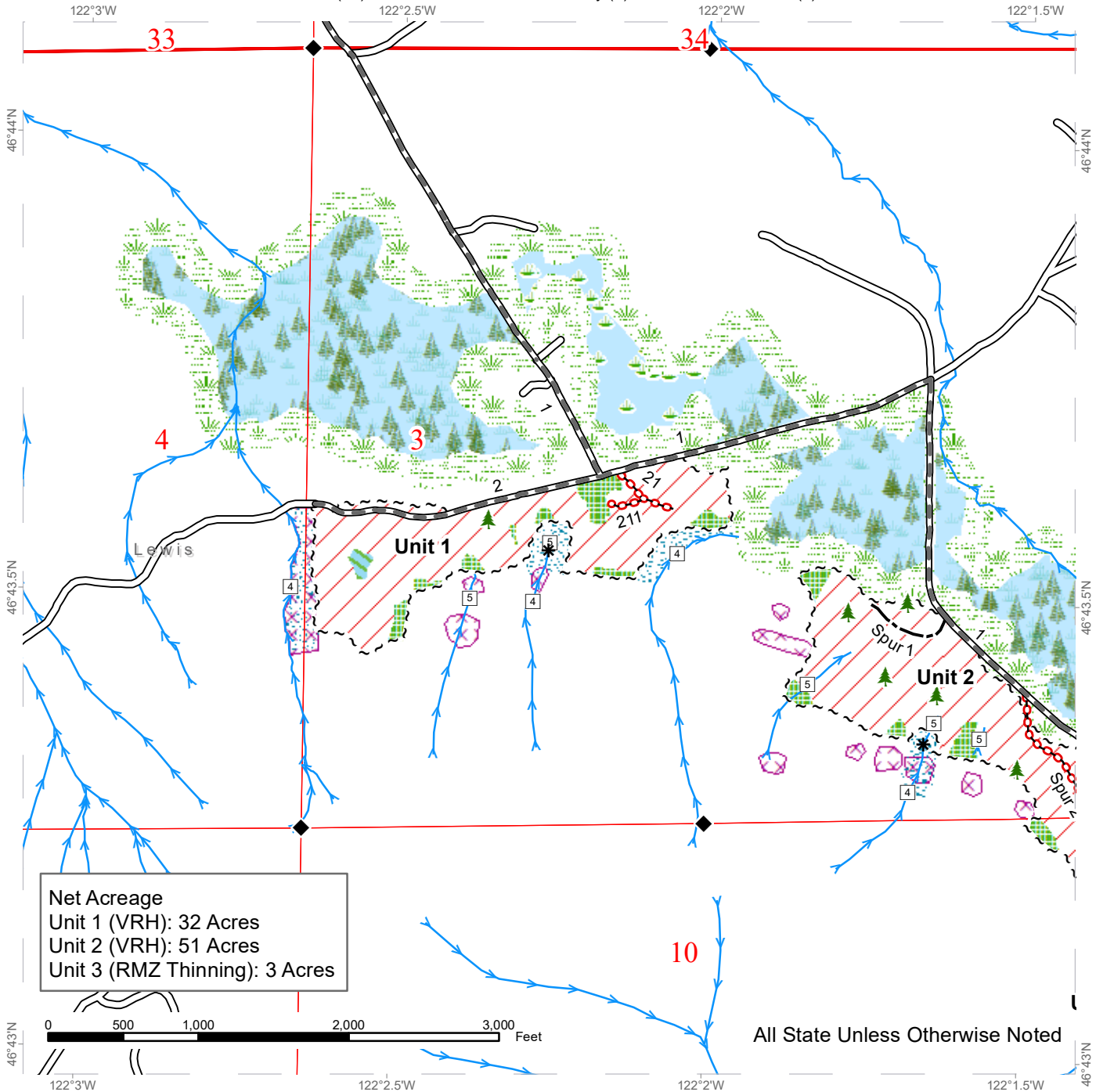
Note to cruisers and appraisers: Please refrain from leaving pink, orange or blue flagging from your cruises in or around the sale area to avoid confusion with DNR's marking. Additionally, for the safety of the public, please remove from roads all string from string boxes used during appraising or cruising this sale.



# TIMBER SALE MAP

**SALE NAME:** HAM HOCK  
**AGREEMENT #:** 30-103631  
**TOWNSHIP(S):** T14R6E  
**TRUST(S):** Administrative Site (13), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** Lewis  
**ELEVATION RGE:** 1760-2360



**Net Acreage**  
 Unit 1 (VRH): 32 Acres  
 Unit 2 (VRH): 51 Acres  
 Unit 3 (RMZ Thinning): 3 Acres

All State Unless Otherwise Noted

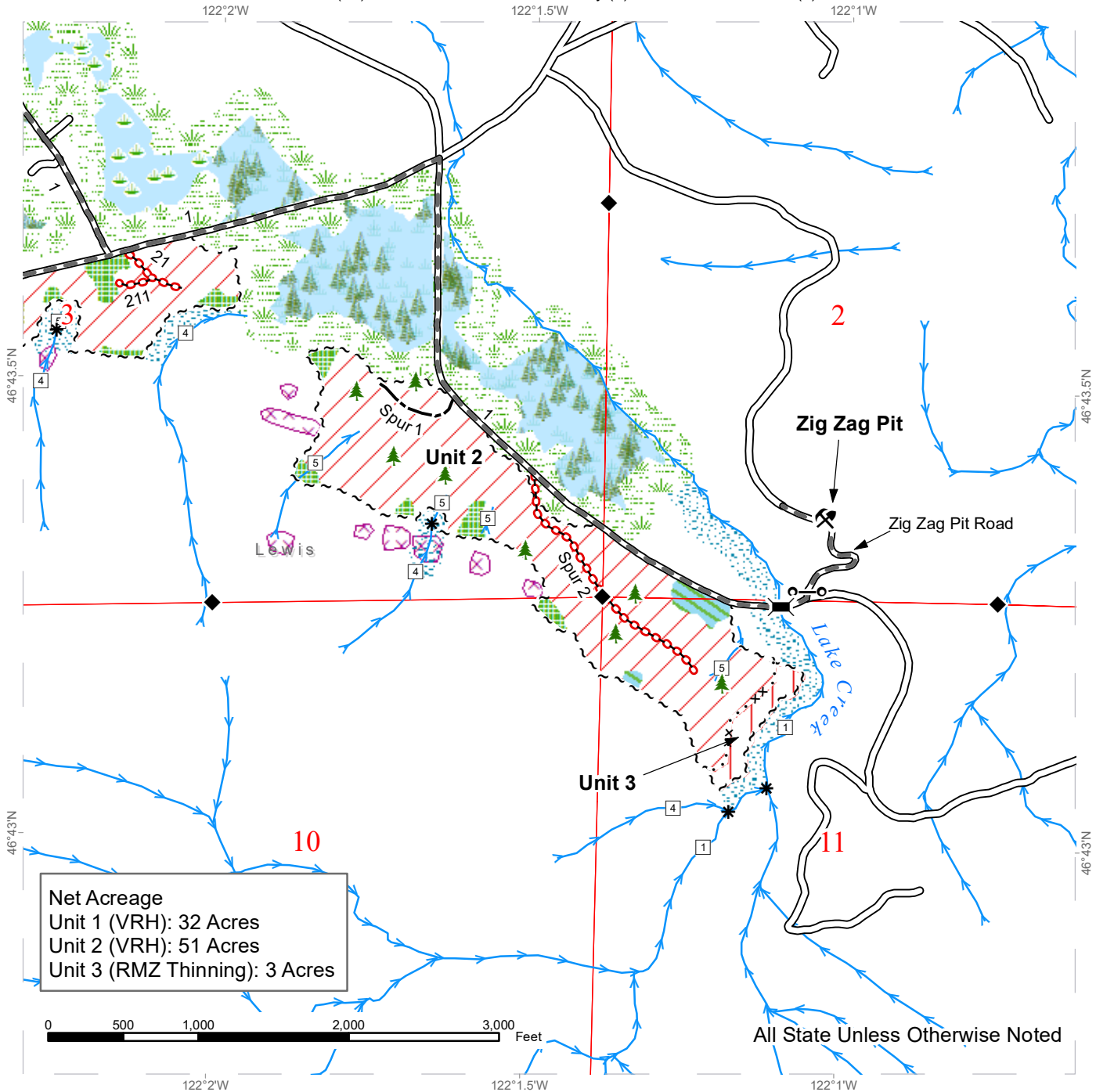
Variable Retention Harvest	Wetland Mgt Zone	Streams
Sale Boundary Tags	Tailhold Restriction Area	Stream Type
Wetlands - Non-forested	Leave Tree Area <1/4-acre	Stream Type Break
Non-Tradeable Leave Clump	Existing Roads	Survey Monument
Leave Tree Area	Required Pre-Haul Maintenance	
Riparian Mgt Zone	Optional Construction	
Forested Wetland	Required Abandonment	



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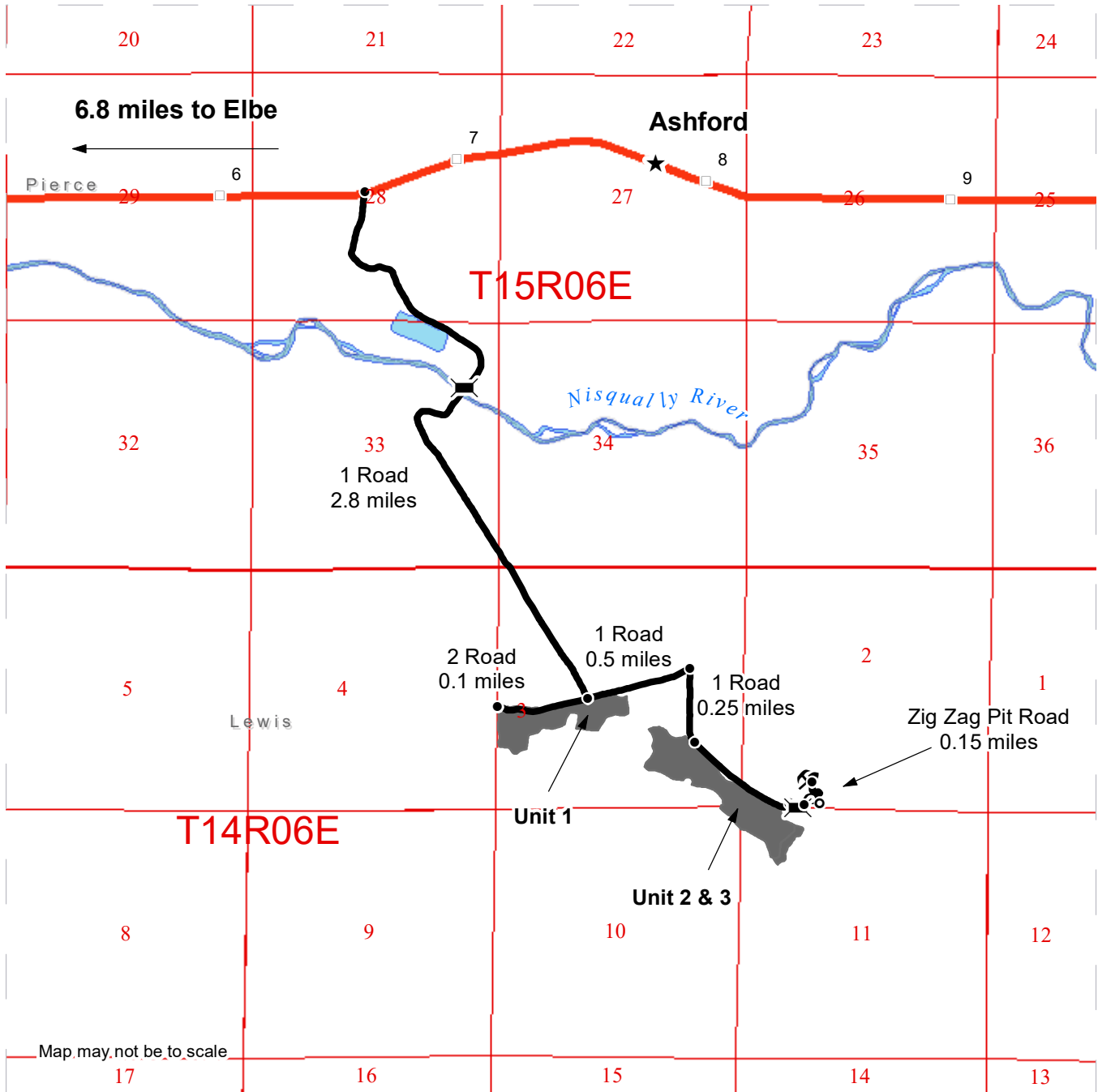
Variable Retention Harvest	Wetland Mgt Zone	Required Abandonment
RMZ Thinning	Tailhold Restriction Area	Streams
Sale Boundary Tags	Bridge	Stream Type
Special Management Unit Boundary/VRH Boundary Tags	Gate Installation	Stream Type Break
Wetlands - Non-forested	Leave Tree Area <1/4-acre	Survey Monument
Non-Tradeable Leave Clump	Rock Pit	
Leave Tree Area	Existing Roads	
Riparian Mgt Zone	Required Pre-Haul Maintenance	
Forested Wetland	Optional Construction	



# DRIVING MAP

SALE NAME: HAM HOCK  
 AGREEMENT#: 30-103631  
 TOWNSHIP(S): T14R6E  
 TRUST(S): Administrative Site (13), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region  
 COUNTY(S): Lewis, Pierce  
 ELEVATION RGE: 1760-2360



Map may not be to scale

	Timber Sale Unit
	Bridge
	Distance Indicator
	Gate Installation
	Rock Pit
	Town
	Milepost Markers
	Haul Route
	Highway
	County Boundaries

**DRIVING DIRECTIONS:**

From Elbe, drive east on SR-706 for 6.8 miles. Turn right (south) onto the 1 Road. Continue on the 1 Road for 2.8 miles to reach Unit 1. Turn left at the 1 Road/ 2 Road intersection to continue on the 1 Road for 0.5 miles. Turn right to continue on the 1 Road for 0.25 miles to reach Unit 2. To reach Zig Zag Pit, continue on the 1 road for 0.5 miles and turn left onto Zig Zag Pit Rd. Continue on Zig Zag Pit Rd for 0.15 miles.



**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

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

**Export Restricted Lump Sum AGREEMENT NO. 30-0103631**

**SALE NAME: HAM HOCK**

**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 24, 2023 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 trees marked with yellow paint or bounded out by yellow leave tree area tags, snags, and down timber existing more than 5 years from the day of sale, bounded by the following: white timber sale boundary tags, and the 1 and 2 roads in Unit #1; white timber sale boundary tags, VRH boundary tags, and the 1 Road in Unit #2;

All timber as described in Schedule A bounded by the following: blue special management unit boundary tags, and white timber sale boundary tags in Unit #3;

All forest products above located on approximately 86 acres on part(s) of Sections 2, 3, 10, and 11 all in Township 14 North, Range 6 East W.M. in Pierce, and Lewis 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-025 Schedules

The following attached schedules are hereby incorporated by reference:

Schedule	Title
A	RMZ Thinning Prescription for Unit #3

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2025.

G-040 Contract Term Adjustment - No Payment

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

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

G-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 \$1,099.00 per acre per annum for the acres on which an operating release has not been issued within Units #1, and #2. Payment of \$158.00 per acre per annum for the acres on which an operating release has not been issued within Unit #3.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

#### G-053 Surveys - Sensitive, Threatened, Endangered Species

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

#### G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.

- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any threatened or endangered species, or the presence of their habitat, within the sale area.
- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-061 Inadvertent Discovery of Cultural Resources

Purchaser acknowledges that cultural resources as defined in WAC 222-16-010 may exist within the timber sale area and that the existence and location of such resources may be unknown at the time this contract is executed. Purchaser has a duty to exercise due care in its operations and in the event any human skeletal remains are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify local law enforcement in the most expeditious manner possible then notifying the Contract Administrator. In the event cultural resources are discovered by the Purchaser or the State during the course of operations Purchaser shall immediately halt operations and notify the Contract Administrator. Any potential resources shall not be removed or disturbed. Purchaser shall resume operations as directed in writing by the Contract Administrator.

G-062 Habitat Conservation Plan

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



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

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

**G-063 Incidental Take Permit Notification Requirements**

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.
- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, ITP TE812521-1 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP

and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

b. Sale Area

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

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

c. Adjustment of Price

The State shall adjust the total contract price by subtracting from the total contract price an amount determined in the following manner: The State shall cause the timber sale area subject to governmental regulation or order to be measured. The State shall calculate the percentage of the total sale area subject to the governmental regulation or order. The State shall reduce the total contract price by that calculated percentage. However, variations in species, value, costs, or other items pertaining to the affected sale area will be analyzed and included in the adjustment if deemed appropriate by the State. The State will further reduce the total contract price by the reasonable cost of

unamortized roads Purchaser constructed but was unable to fully use for removing timber. A reduction in total contract price terminates all of the Purchaser's rights to purchase and remove the timber and all other interest in the affected sale area.

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-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-115 Forest Stewardship Council® (FSC® C012959) Certification

Forest products purchased under this contract are FSC 100% certified as being in conformance with the Forest Stewardship Council Forest Management Standard under certificate number: BV-FM/COC-080501.

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

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

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

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

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and

3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

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

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

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

#### G-140 Indemnity

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

#### G-150 Insurance

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

All insurance and surety bonds should be issued by companies admitted to do business within the State of Washington and have a rating of A-, Class VII or better in the most recently published edition of Best's Reports. If an insurer is not admitted, all insurance

policies and procedures for issuing the insurance policies must comply with Chapter 48.15 RCW and 284-15 WAC.

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

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

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

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

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

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

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

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

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

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

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

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

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

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or

expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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



## G-210 Violation of Contract

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

## G-220 State Suspends Operations

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

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

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

If it reasonably appears that the damage that the State is suffering, or can reasonably be expected to suffer if the operation is allowed to continue, will prevent harvest for a period that will exceed 6 months, and Purchaser has complied with this contract, the provisions of clause G-066 shall govern just as if the harvest was prevented by an applicable foreign or domestic governmental regulation or order.

**G-230** Unauthorized Activity

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

**G-240** Dispute Resolution

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

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

**G-250** Compliance with All Laws

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

**G-260** Venue

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

**G-270** Equipment Left on State Land

All equipment owned or in the possession of Purchaser, its employees, agents, or invitees, including independent contractors, shall be removed from the sale area and other State land by the termination date of this contract. Equipment remaining unclaimed on State land 60 days after the expiration of the contract period is subject to disposition as provided by law. Purchaser shall pay to the State all costs of moving, storing, and disposing of such equipment. The State shall not be responsible for any

damages to or loss of the equipment or damage caused by the moving, storing or disposal of the equipment.

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; on Zig Zag Pit Road, the 1, 2, 21, and 211 roads and Spurs 1, and 2. 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 1, and 2 roads, unless authority is granted in writing by the Contract Administrator.

G-380 Road Easement and Road Use Permit Requirements

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

Easement #55-001037 between Burlington Northern, Inc. and the State of Washington, Department of Natural Resources, dated February 4, 1974.

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:

Easement, including the terms and provisions thereof,  
For: Road  
In Favor of: Plum Creek Timber Company L.P.  
Disclosed by Application No.: 50-036162  
Granted: 2/4/1974  
Expires: Indefinite

Region Encumbrances

Lease, including the terms and provisions thereof,  
For: Land Use License  
In Favor of: The Mountaineers  
Disclosed by Application No.: 60-WS1023  
Granted: 2/15/2019  
Expires: 12/31/2028

Special Notations

Located within the Medicine Creek Treaty area. Intergovernmental agreements for vehicle access with Squaxin Island Tribe, Puyallup Tribe, Muckleshoot Tribe, and Nisqually Indian Tribe.

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 \$87,906.00. The total contract price consists of a \$0.00 contract bid price plus \$87,906.00 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-011 Certification of Fallers and Yarder Operators

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

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

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

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

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

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

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

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

H-012 Leave Tree Damage Definition

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

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

- a. A leave tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 144 square inches.
- b. A leave tree top is broken or the live crown ratio is reduced below 30 percent.

- c. A leave tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

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

H-013 Reserve Tree Damage Definition

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

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

- a. A reserve tree has one or more scars on its trunk exposing the cambium layer, which in total exceeds 144 square inches.
- b. A reserve tree top is broken or the live crown ratio is reduced below 30 percent.
- c. A reserve tree has more than 1/3 of the circumference of its root system injured such that the cambium layer is exposed.

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

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

H-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 12 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-035 Fall Trees Into Sale Area

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

#### H-040 Purchaser Harvest Plan

Purchaser shall, as part of the plan of operations, prepare an acceptable harvest plan for Units #1, #2, and #3. The plan shall address the tailhold locations, landing locations, Unit #3 prescription, including structure creation and protection of leave trees, which are part(s) of this contract. The harvest plan shall be approved by the Contract Administrator prior to beginning the harvest operation. Purchaser shall not deviate from the harvest plan without prior written approval by the Contract Administrator.

#### H-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 and ground based equipment, with cable-tethered equipment limited to sustained slopes 75 percent or less, self-leveling equipment limited to sustained slopes 65 percent or less, and all other ground based equipment limited to sustained slopes 45 percent or less. 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-130 Hauling Schedule

The hauling of forest products will not be permitted from November 1 to May 15, nor on weekends or State recognized holidays, unless authorized in writing by the Contract Administrator.

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Signs must be installed and maintained on roads approaching the sale area warning of active forestry operations.

B. Existing downed trees or logs dead for more than 5 years yarded to the landing shall be returned to their original locations.

C. Equipment limitation zones are required within 30 feet of Type 5 streams.

D. Crossings of Type 5 streams may be allowed at locations approved in writing by the Contract Administrator. Purchaser shall place a culvert or log puncheon at crossing locations (when water is present) to protect the stream bank and prevent sedimentation. All materials placed in and/or over the stream at these crossings shall be removed immediately upon completion of yarding on that skid trail.

E. Fell all snags inside the sale area within 200 feet of the 1 and 2 roads as directed by the Contract Administrator.

F. Any and all operations associated with this sale may be temporarily suspended when, in the opinion of the Contract Administrator, there is the potential for delivery to typed water.

G. Trees marked with a double band of orange paint within Unit #2 shall be high stumped approximately 8 feet above ground level.

H. No equipment shall operate, or trees felled or damaged, outside the timber sale boundary.

I. Cut all vine maple within the harvest unit(s), leaving a stump no more than 12 inches in height.

J. Falling, and yarding will not be permitted on weekends or State recognized holidays, unless approved in writing by the Contract Administrator.

K. Notify all employees and contractors working on this sale that any danger tree marked or unmarked may be felled. Any marked danger tree will be replaced with a suitable tree of similar size and species as approved by the Contract Administrator.

L. Within shovel logging areas, and when yarding and loading operations are occurring simultaneously, an additional shovel will be required for loading to avoid extra trips to the landing. No more than one round trip per shovel road is allowed.

M. Take measures throughout operations to control soil erosion, water channelization, and prevent sediment delivery to streams or wetlands. Methods may include construction of water bars, "sweeping" with logs, silt traps, or other measures on skid trails, yarding corridors and haul roads.

N. Skid trail closure shall occur immediately upon completion of yarding all tributary timber. Closure shall consist of creating plantable spots at approximately 11.5 foot by 11.5 foot spacing in Units #1, and #2 to facilitate reforestation and creating water bars or other methods as directed by the Contract Administrator to prevent water accumulation and sediment movement.

O. To facilitate proper reforestation in Units #1, and #2 in areas of high slash concentrations, Purchaser shall clear plantable spots at approximately 11.5 foot by 11.5 foot spacing in concurrence with ground based yarding.

P. In the event operations become inactive for long periods of time, skid trails shall be water barred prior to completion of yarding tributary timber to prevent water accumulation and sediment movement, if required by the Contract Administrator.

Q. Once a skid trail is closed, the Purchaser shall not reopen a skid trail unless approved in writing by the Contract Administrator.

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

H-141 Additional Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

A. Leave 2 down logs per acre. A log is defined as having a minimum diameter of 12 inches on the small end of the log and a minimum length of 20 feet or at least 100 board feet in Units #1, and #2

B. Areas restricting operations are located within and outside the sale boundary.

- Locations inside the sale boundary are identified as Non-Tradeable Leave Trees marked with yellow Leave Tree Area tags as shown on the Timber Sale and Logging Plan Maps inside which no trees may be used as tailholds and no equipment may operate within, nor logs felled into or yarded through or over.
- Locations outside the sale boundary are identified as Tailhold Restriction Areas on the Logging Plan and Timber Sale Maps. Trees within these areas shall not be used as tailholds.

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-230 Tops and Limbs Outside the Sale Boundary

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

Section C: Construction and Maintenance

C-040 Road Plan

Road construction and associated work provisions of the Road Plan for this sale, dated 3/3/2023 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the section of the 2 Road immediately adjacent to or within Unit #1, the 21, and 211 roads and Spurs 1, and 2. 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 roads used not covered in Clause C-050 and the section of the 2 Road outside and not adjacent to Unit #1. 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-090 Landing Location

Landings shall be built 50 feet off the 1 road(s).

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-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-100 Stream Cleanout

Slash or debris which enters Type 5 streams 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-110 Resource Protection

No yarding equipment may operate within the Riparian or Wetland Management Zones unless authority is granted in writing by the Contract Administrator.

S-130 Hazardous Materials

a. Hazardous Materials and Waste - Regulatory Compliance

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

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

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

d. Hazardous Material Release Reporting

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

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

S-131 Refuse Disposal

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

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-040 Leave Tree Excessive Damage**

When Purchaser's operations exceed the damage limits set forth in clause H-012, Leave Tree Damage Definition, the trees damaged result in substantial injury to the State. The value of the damaged leave trees at the time of the breach is not readily ascertainable. Therefore, Purchaser agrees to pay the State as liquidated damages at the rate of \$1,000.00 per tree for all damaged trees in Unit #3.

**D-041 Reserve Tree Excessive Damage**

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

**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

\_\_\_\_\_  
Don Melton, Acting

\_\_\_\_\_  
Print Name

South Puget Sound 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 \_\_\_\_\_

**Schedule A**  
**RMZ Thinning Prescription for Unit #3**

Harvest Prescription:

The harvest is a Riparian Management Zone (RMZ) Thinning of the existing stand to achieve the residual target below for Relative Density (RD).

Unit #	Resulting RD	Minimum TPA
3	48	85

- The relative density (RD) target is required; the Purchaser shall remove trees to achieve this target while maintaining minimum trees per acre (TPA).
- Only live trees six (6) inches and greater in DBH shall count towards the target.
- No trees over 35 inches in DBH shall be harvested.
- The residual RD target is an average at the unit level.
- In any given area, the residual RD shall not vary more than 5 points.
- Trees designated for cutting along skid trails shall be left standing as rub trees until all timber that is tributary to the skid trail has been removed.
- Trees identified for structure creation shall not count towards residual RD target or the minimum TPA.

Leave Tree Selection Criteria:

Purchaser shall select leave trees from the dominant and co-dominant canopy by comparing each tree with other trees in the stand, first by using species preference, then by form preference listed below.

Species preference (in descending order of priority)

- 1) western red cedar
- 2) Douglas-fir
- 3) western hemlock
- 4) red alder
- 5) noble fir
- 6) Pacific silver fir

Form preference (in descending order of priority)

- 1) Free of disease & major damage
- 2) Structurally unique trees (fork tops, butt swell, spike knots, etc.)
- 3) Largest diameter
- 4) Fullest and most vigorous crown
- 5) Tallest height

Certification:

The Contract Administrator will approve and certify in writing all persons engaged in selection of leave trees or felling of timber prior to cutting operations, per clause H-011.

**Equipment Restriction:**

No equipment shall operate within 25 feet of the white “Timber Sale Boundary” tags.

**Structure Creation:**

In Unit #3, Purchaser shall enhance habitat by creating structure trees as part of the DNR’s Riparian Forest Restoration Strategy (RFRS). Trees are marked for down woody debris and snag creation.

**Down Woody Debris (DWD) creation**

Trees designated for DWD creation are marked with 2 bands of pink paint and a “D” at a rate of three (3) trees per thinned RMZ acre. Some of these trees are to be felled towards the stream, and into the stream where feasible. Others should not be felled toward the stream due to potentially unstable slopes. The Contract Administrator shall be present during DWD creation to ensure trees are not felled into potentially unstable slopes.

For any tree that is marked for creation of DWD, the cutter has the authority to make the below modifications for safety. If any modifications for safety are made, the Purchaser shall notify the Contract Administrator.

- If unsafe to fall the tree, the tree may be traded for another nearby tree of similar species and size for falling as DWD towards stream. Alternate trees must be reviewed and approved by the Contract Administrator.
- If unsafe to fall the tree towards the stream, the tree may be felled in another safer direction.

**Snag creation**

Trees designated for snag creation are marked with 2 bands of pink paint and an “S” at a rate of two (2) trees per thinned RMZ acre. Snags may be created by either girdling or topping. If the Purchaser elects to girdle the trees, girdling shall be exposing the cambium completely around the bole of the tree in a manner approved by the Contract Administrator. If the Purchaser elects to top the tree, the topping shall occur above 20 feet.



## 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)

## PRE-CRUISE NARRATIVE

Sale Name: <b>HAM HOCK</b>	Region: <b>South Puget Sound</b>
Agreement #: <b>30-103631</b>	District: <b>Rainier</b>
Contact Forester: <b>Michael Fowler</b>	Phone/ Location: <b>(360)-819-3406</b> Ext: <b>/</b>
Alternate Contact: <b>Nick Meboe</b>	Phone/ Location: <b>(564) 669-1724</b> Ext: <b>/</b>

Type of Sale (lump sum, mbf scale, tonnage scale or contract harvest): lump sum  
 Required or Optional removal of utility as pulp (*for scale sales only*): Optional  
 Evaluated for RFRS Implementation?: Yes RFRS Unit 3

Percentage cable-uphill: 0  
 Percentage cable-downhill: 52%  
 Percentage ground based: 48%

Species Onsite: RC, DF, WH, RA, BC, BLM, NF, SF, SS,  Other:(Please List) Pacific Yew

### UNIT ACREAGES\* AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description Sec/Twp/Rng	Grant	Gross Traversed Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination  (List method, dimensions and error of closure if applicable)
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	Sec 3/ T 14N/ R 06 E		37.1	0	4.3	1		31.8	Garmin Length x Width
2	Sec 2,3,10,11/ T 14N/ R 06E		57.3	0	4.6	1.6		51.1	Garmin Length x Width
3	Sec 11 / T14N/ R06E		3.3	0				3.3	Garmin
<b>TOTAL ACRES</b>			97.7		8.9	2.6		86.2	

### HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Mark leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.) *For all marked thinnings, include a tree count by species.
1	Variable Retention Harvest- Boundary marked by white "Timber Sale Boundary" tags and pink flashers		8 leave trees per acre. 297 leave trees Individual leave trees are marked with a single band of yellow paint.
2	Variable Retention Harvest- Boundary marked by white "Timber Sale Boundary" and "VRH Boundary" tags with pink flashers along the boundary shared with Unit 3.		8 leave trees per acre. 459 leave trees Individual leave trees are marked with a single band of yellow paint.
3	Riparian Forest Restoration Strategy Harvest	RFRS Unit, 3 "downed wood	Thin to RD 48. No trees over

	Unit- Boundary marked by white "Timber Sale Boundary" tags with pink flashers and blue "Special Management Unit Boundary" tags with pink flashers."	creation trees" per RFRS treated acre marked with 1 band of yellow paint and 2 "snag creation trees" per RFRS treated acre marked with 2 bands of pink paint with an "S" for snag creation and "D" for down wood creation. Trees are not to be included in cruise. 17 trees total.	35" DBH to be cut.
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**OTHER PRE-CRUISE INFORMATION:**

Unit #	Estimated Volume	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	See Cruise	Access off of the 1 and 2 road	
2		Access off of the 1 road	
3		Access off of the 1 road	

**REMARKS:**

Both Units 1 and 2 overlap recent thinning harvest units. Unit 1 was harvested down to a RD 25. 2/3 of Unit 2 was harvested down to a RD 40. A small portion of Unit 3 was thinned with Unit 2, but the vast majority of the unit is fully stocked. There are multiple paint colors on trees found within them, including blue. Yellow paint will be used as an alternative to mark individual leave trees for the Ham Hock Timber sale.

<b>Prepared By:</b> Nicole Vonberckefeldt <b>Date:</b> 4/12/23	<b>Title:</b> Forester	<b>CC:</b> Mike Fowler, Audrey Mainwaring
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*Revised 2/23/2007 (PSLD), Revised 1/22/20 (SPS)*

## Timber Sale Cruise Report Ham Hock

**Sale Name:** HAM HOCK

**Sale Type:** LUMP SUM

**Region:** SO PUGET

**District:** RAINIER

**Lead Cruiser:** Aaron Coleman

**Other Cruisers:**n/a

**Cruise Narrative:**

This sale consists of 2 variable retention harvest (VRH) units and 1 variable density thinning (VDT) unit located off the 1 & 2 road in the Tahoma State Forest. No keys were need for access and all roads are in good condition.

The primary species for this sale is as follows:

Douglas-fir (72%) with an average diameter of 24 inches.

Western hemlock (18%) with an average diameter of 17 inches.

Noble fir (3%) with an average diameter of 30 inches.

Western red cedar (3%) with an average diameter of 25 inches.

All units contain pole-quality trees, which were captured on VP plots. Only "natural" poles were sampled. All units have also had previous harvest activity. Units 2 & 3 were previously thinned to an RD of 25 and 40, respectively. This has created openings within both units that has affected stocking levels and log quality. There are multiple paint colors on trees leftover from the thinning. Yellow bands were used on the leave trees in units 2 & 3.

Unit 3 is to be thinned down to a RD 48, as outlined in Schedule A.

Most commonly observed defect was logging/mechanical damage, cat-face. Trees adjacent to the end of the interior roads in units 2 & 3 have "lead poisoning." To account for the bullet damage, a 20 foot segment of every tree sampled there was culled.

### Timber Sale Notice Volume (MBF)

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	24.8	8		2,455	94	1,983	345	33
WH	17.3			616		437	139	40
NF	30.7			124		117	7	0
RC	25.5			108			94	14
BC	30.5			61		61		
RA	15.4			17		5		12
ALL	21.6			3,381	94	2,603	584	100

## Timber Sale Notice Weight (tons)

Sp	Tons by Grade				
	All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	15,624	508	12,056	2,786	275
WH	5,290		3,636	1,247	407
RC	1,009			872	137
NF	776		717	57	2
BC	402		402		
RA	170		48		122
ALL	23,271	508	16,860	4,962	943

## Timber Sale Overall Cruise Statistics

BA (sq ft/acre)	BA SE (%)	V-BAR (bf/sq ft)	V-BAR SE (%)	Net Vol (bf/acre)	Vol SE (%)
194.8	4.4	211.0	2.5	41,114	5.1

## Timber Sale Unit Cruise Design

Unit	Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
HAM HOCK U1	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	31.8	37.1	31	18	2
HAM HOCK U2	B1C: VR, 1 BAF (54.44) Measure/ Count Plots, Sighting Ht = 4.5 ft	51.1	57.3	50	29	2
HAM HOCK U3	B1C: VR, 1 BAF (46.94) Measure/ Count Plots, Sighting Ht = 4.5 ft	3.3	3.3	10	7	0
All		86.2	97.6	91	54	4

## Timber Sale Log Grade x Sort Summary

Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
BC	LIVE	2 SAW	Domestic	18.1	40	897	710	20.9	401.8	61.2
DF	LIVE	2 SAW	Domestic	17.6	39	11,535	10,713	7.1	5,635.7	923.5
DF	LIVE	2 SAW	HQ-B	17.0	40	7,813	7,368	5.7	3,881.5	635.1
DF	LIVE	2 SAW	Pole	16.3	40	5,009	4,922	1.7	2,538.9	424.3
DF	LIVE	3 SAW	Domestic	8.8	37	2,615	2,570	1.7	1,877.5	221.5
DF	LIVE	3 SAW	HQ-B	9.9	40	978	966	1.2	639.7	83.3
DF	LIVE	3 SAW	Pole	10.9	40	460	460	0.0	268.5	39.7
DF	LIVE	4 SAW	Domestic	5.9	25	386	386	0.0	274.7	33.3
DF	LIVE	CULL	Cull	19.0	18	453	0	100.0	0.0	0.0



Sp	Status	Grade	Sort	Dia	Len	BF Gross	BF Net	Defect %	Tons	MBF Net
DF	LIVE	SPECIAL MILL	HQ-A	24.1	40	932	903	3.2	415.5	77.8
DF	LIVE	SPECIAL MILL	Pole	22.0	40	208	193	7.4	92.5	16.6
NF	LIVE	2 SAW	Domestic	18.5	40	1,494	1,361	8.9	717.5	117.3
NF	LIVE	3 SAW	Domestic	9.0	35	75	75	0.0	56.9	6.5
NF	LIVE	4 SAW	Domestic	5.1	26	3	3	0.0	2.0	0.2
RA	LIVE	2 SAW	Domestic	12.0	40	64	60	7.7	48.4	5.1
RA	LIVE	4 SAW	Domestic	7.1	29	145	137	5.3	121.9	11.9
RC	LIVE	3 SAW	Domestic	13.1	35	1,318	1,093	17.1	872.1	94.2
RC	LIVE	4 SAW	Domestic	5.8	32	162	161	1.0	136.6	13.8
WH	LIVE	2 SAW	Domestic	15.0	40	5,835	5,065	13.2	3,635.9	436.6
WH	LIVE	3 SAW	Domestic	8.9	37	1,627	1,614	0.8	1,246.8	139.1
WH	LIVE	4 SAW	Domestic	6.0	24	468	468	0.0	407.2	40.3
WH	LIVE	CULL	Cull	14.3	20	75	0	100.0	0.0	0.0

### Timber Sale Log Sort x Diameter Bin Summary

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
BC	8 - 11	LIVE	Domestic	9.9	40	27	25.0	23.3	2.3
BC	12 - 15	LIVE	Domestic	15.1	40	125	25.1	79.2	10.8
BC	16 - 19	LIVE	Domestic	17.6	40	141	0.0	58.6	12.2
BC	20+	LIVE	Domestic	23.0	40	416	24.8	240.6	35.9
DF	5 - 7	LIVE	Domestic	6.3	30	895	0.3	664.9	77.2
DF	8 - 11	LIVE	Domestic	9.8	37	2,014	1.9	1,457.0	173.6
DF	8 - 11	LIVE	HQ-B	9.9	40	966	1.2	639.7	83.3
DF	8 - 11	LIVE	Pole	10.9	40	460	0.0	268.5	39.7
DF	12 - 15	LIVE	HQ-B	13.9	40	1,921	4.4	1,127.9	165.6
DF	12 - 15	LIVE	Domestic	14.1	38	2,767	3.3	1,580.8	238.5
DF	12 - 15	LIVE	Pole	14.4	40	1,903	3.4	1,054.1	164.0
DF	12 - 15	LIVE	Cull	15.5	20	0	100.0	0.0	0.0
DF	16 - 19	LIVE	HQ-B	17.7	40	2,594	6.8	1,374.5	223.6
DF	16 - 19	LIVE	Domestic	18.2	38	2,633	10.2	1,413.4	226.9
DF	16 - 19	LIVE	Pole	18.2	40	2,258	0.0	1,122.4	194.7
DF	16 - 19	LIVE	Cull	18.6	15	0	100.0	0.0	0.0
DF	20+	LIVE	Pole	21.5	40	953	3.6	454.9	82.2
DF	20+	LIVE	HQ-B	22.0	40	2,852	5.5	1,379.0	245.9
DF	20+	LIVE	Domestic	22.7	39	5,360	7.4	2,671.9	462.0
DF	20+	LIVE	Cull	23.7	20	0	100.0	0.0	0.0
DF	20+	LIVE	HQ-A	24.1	40	903	3.2	415.5	77.8

Sp	Bin	Status	Sort	Dia	Len	BF Net	Defect %	Tons	MBF Net
NF	5 - 7	LIVE	Domestic	5.1	26	3	0.0	2.0	0.2
NF	8 - 11	LIVE	Domestic	9.2	37	75	0.0	56.9	6.5
NF	12 - 15	LIVE	Domestic	14.2	40	252	0.0	138.1	21.7
NF	16 - 19	LIVE	Domestic	18.8	40	461	10.6	253.8	39.7
NF	20+	LIVE	Domestic	24.4	40	648	10.8	325.6	55.9
RA	5 - 7	LIVE	Domestic	6.6	27	88	3.8	73.5	7.6
RA	8 - 11	LIVE	Domestic	9.5	40	50	7.8	48.4	4.3
RA	12 - 15	LIVE	Domestic	12.0	40	60	7.7	48.4	5.1
RC	5 - 7	LIVE	Domestic	5.7	32	150	1.1	129.8	13.0
RC	8 - 11	LIVE	Domestic	9.9	32	285	4.9	196.1	24.6
RC	12 - 15	LIVE	Domestic	14.0	36	282	12.4	223.0	24.3
RC	16 - 19	LIVE	Domestic	17.6	36	360	22.5	298.5	31.0
RC	20+	LIVE	Domestic	22.3	36	176	27.3	161.5	15.2
WH	5 - 7	LIVE	Domestic	6.3	27	773	0.0	685.5	66.6
WH	8 - 11	LIVE	Domestic	9.5	38	1,309	1.0	968.5	112.9
WH	12 - 15	LIVE	Domestic	13.6	40	2,743	7.4	1,980.5	236.4
WH	12 - 15	LIVE	Cull	14.3	20	0	100.0	0.0	0.0
WH	16 - 19	LIVE	Domestic	17.5	40	1,834	16.2	1,291.6	158.1
WH	20+	LIVE	Domestic	21.8	40	488	28.8	363.8	42.1

## Cruise Unit Report HAM HOCK U1

### Unit Sale Notice Volume (MBF): HAM HOCK U1

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	25.3			745	29	619	90	8
WH	19.0			239		193	35	11
RC	27.6			93			90	3
NF	32.5			61		59	3	
BC	28.8			48		48		
RA	15.4			17		5		12
ALL	23.4			1,204	29	923	218	34

### Unit Cruise Design: HAM HOCK U1

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	31.8	37.1	31	18	2

### Unit Cruise Summary: HAM HOCK U1

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	32	56	1.8	0
WH	14	24	0.8	0
RC	12	16	0.5	0
NF	4	4	0.1	0
BC	4	5	0.2	0
RA	3	3	0.1	0
ALL	69	108	3.5	0

### Unit Cruise Statistics: HAM HOCK 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	98.3	76.2	13.7	238.3	30.7	5.4	23,439	82.1	14.7
WH	42.1	132.2	23.7	178.5	30.9	8.3	7,522	135.7	25.1
RC	28.1	157.2	28.2	104.1	16.6	4.8	2,924	158.0	28.6
NF	7.0	331.3	59.5	274.7	16.5	8.3	1,929	331.8	60.1
BC	8.8	324.0	58.2	171.5	18.3	9.1	1,506	324.5	58.9

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	5.3	310.6	55.8	101.4	11.1	6.4	534	310.8	56.1
ALL	189.7	43.1	7.7	199.6	40.1	4.8	37,856	58.9	9.1

## Unit Summary: HAM HOCK U1

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	4	ALL	28.8	106	134	1,893	1,506	20.4	1.9	8.8	1.6	47.9
DF	LIVE	CUT	32	ALL	25.3	108	138	24,616	23,439	4.8	28.2	98.3	19.6	745.4
NF	LIVE	CUT	4	ALL	32.5	132	172	2,092	1,929	7.8	1.2	7.0	1.2	61.4
RA	LIVE	CUT	3	ALL	15.4	68	87	568	534	6.0	4.1	5.3	1.3	17.0
RC	LIVE	CUT	12	ALL	27.6	88	112	3,539	2,924	17.4	6.8	28.1	5.3	93.0
WH	LIVE	CUT	14	ALL	19.0	88	111	8,711	7,522	13.6	21.4	42.1	9.7	239.2
ALL	LIVE	CUT	69	ALL	23.4	97	123	41,419	37,856	8.6	63.6	189.7	38.8	1,203.8
ALL	ALL	ALL	69	ALL	23.4	97	123	41,419	37,856	8.6	63.6	189.7	38.8	1,203.8

## Unit Stand Table: HAM HOCK U1

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	22	LIVE	CUT	1	22.0	98	123	294	25.1	0.8	2.2	0.5	9.3
BC	30	LIVE	CUT	1	30.0	109	138	354	25.0	0.4	2.2	0.4	11.2
BC	34	LIVE	CUT	1	34.0	114	144	406	16.8	0.3	2.2	0.4	12.9
BC	36	LIVE	CUT	1	36.0	116	146	453	16.4	0.3	2.2	0.4	14.4
DF	16	LIVE	CUT	2	15.5	75	94	754	4.1	4.7	6.1	1.6	24.0
DF	18	LIVE	CUT	1	18.0	83	105	266	15.0	1.7	3.1	0.7	8.5
DF	20	LIVE	CUT	1	20.0	89	113	442	0.0	1.4	3.1	0.7	14.1
DF	22	LIVE	CUT	3	21.0	92	117	1,499	0.0	3.8	9.2	2.0	47.7
DF	24	LIVE	CUT	6	23.8	116	148	3,808	9.4	6.0	18.4	3.8	121.1
DF	26	LIVE	CUT	2	26.0	121	155	1,466	2.3	1.7	6.1	1.2	46.6
DF	28	LIVE	CUT	2	28.0	125	161	1,607	0.0	1.4	6.1	1.2	51.1
DF	30	LIVE	CUT	5	29.6	127	163	4,071	6.1	3.2	15.4	2.8	129.5
DF	32	LIVE	CUT	1	31.0	130	168	828	4.4	0.6	3.1	0.6	26.3
DF	36	LIVE	CUT	7	35.9	141	183	6,813	3.2	3.1	21.5	3.6	216.6
DF	38	LIVE	CUT	1	38.0	140	181	923	0.0	0.4	3.1	0.5	29.3
DF	46	LIVE	CUT	1	46.0	155	201	964	12.3	0.3	3.1	0.5	30.6
NF	28	LIVE	CUT	1	28.0	124	161	416	2.9	0.4	1.8	0.3	13.2
NF	30	LIVE	CUT	1	30.0	128	166	443	5.8	0.4	1.8	0.3	14.1
NF	34	LIVE	CUT	1	34.0	133	173	474	5.6	0.3	1.8	0.3	15.1

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
NF	44	LIVE	CUT	1	43.0	160	209	597	13.7	0.2	1.8	0.3	19.0
RA	14	LIVE	CUT	1	13.0	61	82	173	0.0	1.9	1.8	0.5	5.5
RA	16	LIVE	CUT	1	16.0	73	90	161	9.2	1.3	1.8	0.4	5.1
RA	20	LIVE	CUT	1	19.0	77	95	200	8.2	0.9	1.8	0.4	6.4
RC	18	LIVE	CUT	1	18.0	65	81	160	8.3	1.3	2.3	0.6	5.1
RC	24	LIVE	CUT	2	23.5	90	115	456	17.7	1.6	4.7	1.0	14.5
RC	26	LIVE	CUT	1	26.0	88	112	193	15.8	0.6	2.3	0.5	6.1
RC	28	LIVE	CUT	1	27.0	95	122	273	16.2	0.6	2.3	0.5	8.7
RC	30	LIVE	CUT	1	29.0	90	115	236	19.9	0.5	2.3	0.4	7.5
RC	32	LIVE	CUT	3	32.0	96	123	786	16.0	1.3	7.0	1.2	25.0
RC	36	LIVE	CUT	1	36.0	95	122	282	15.1	0.3	2.3	0.4	9.0
RC	38	LIVE	CUT	1	38.0	104	134	287	20.3	0.3	2.3	0.4	9.1
RC	42	LIVE	CUT	1	42.0	105	135	251	24.7	0.2	2.3	0.4	8.0
WH	10	LIVE	CUT	1	10.0	55	67	237	0.0	5.5	3.0	1.0	7.5
WH	12	LIVE	CUT	1	12.0	63	78	242	0.0	3.8	3.0	0.9	7.7
WH	18	LIVE	CUT	1	18.0	100	126	492	4.9	1.7	3.0	0.7	15.7
WH	20	LIVE	CUT	1	20.0	108	137	647	0.0	1.4	3.0	0.7	20.6
WH	22	LIVE	CUT	2	22.0	106	134	1,114	5.6	2.3	6.0	1.3	35.4
WH	24	LIVE	CUT	3	23.3	116	147	1,748	13.3	3.0	9.0	1.9	55.6
WH	26	LIVE	CUT	3	25.3	115	146	1,687	22.0	2.6	9.0	1.8	53.6
WH	28	LIVE	CUT	1	28.0	124	158	596	30.4	0.7	3.0	0.6	18.9
WH	36	LIVE	CUT	1	36.0	118	150	760	10.9	0.4	3.0	0.5	24.2

## Cruise Unit Report HAM HOCK U2

### Unit Sale Notice Volume (MBF): HAM HOCK U2

Sp	DBH	Rings/In	Age	MBF Volume by Grade				
				All	Spec Mill	2 Saw	3 Saw	4 Saw
DF	24.6			1,673	66	1,338	245	24
WH	16.2			368		238	101	29
NF	29.4			54		51	2	
RC	12.6			15			4	11
BC	38.0			10		10		
ALL	20.5			2,120	66	1,638	353	64

### Unit Cruise Design: HAM HOCK U2

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (54.44) Measure/Count Plots, Sighting Ht = 4.5 ft	51.1	57.3	50	29	2

### Unit Cruise Summary: HAM HOCK U2

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
DF	67	127	2.5	0
WH	27	39	0.8	0
NF	4	4	0.1	0
RC	4	4	0.1	0
BC	1	1	0.0	0
ALL	103	175	3.5	0

### Unit Cruise Statistics: HAM HOCK 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	138.3	56.4	8.0	236.7	21.4	2.6	32,729	60.3	8.4
WH	42.5	122.3	17.3	169.6	38.0	7.3	7,203	128.0	18.8
NF	4.4	425.6	60.2	241.0	20.3	10.1	1,050	426.1	61.0
RC	4.4	342.6	48.4	67.6	35.6	17.8	294	344.4	51.6
BC	1.1	707.1	100.0	185.6	0.0	0.0	202	707.1	100.0
ALL	190.5	41.7	5.9	217.7	30.9	3.0	41,478	51.9	6.6

## Unit Summary: HAM HOCK U2

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	1	ALL	38.0	118	149	269	202	25.0	0.1	1.1	0.2	10.3
DF	LIVE	CUT	67	ALL	24.6	119	149	35,202	32,729	7.0	41.9	138.3	27.9	1,672.5
NF	LIVE	CUT	4	ALL	29.4	124	160	1,174	1,050	10.6	0.9	4.4	0.8	53.6
RC	LIVE	CUT	4	ALL	12.6	61	68	294	294	0.0	5.0	4.4	1.2	15.0
WH	LIVE	CUT	27	ALL	16.2	80	98	7,906	7,203	8.9	29.7	42.5	10.6	368.1
ALL	LIVE	CUT	103	ALL	21.2	100	125	44,845	41,478	7.5	77.6	190.5	40.6	2,119.5
ALL	ALL	ALL	103	ALL	21.2	100	125	44,845	41,478	7.5	77.6	190.5	40.6	2,119.5

## Unit Stand Table: HAM HOCK U2

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	38	LIVE	CUT	1	38.0	118	149	202	25.0	0.1	1.1	0.2	10.3
DF	12	LIVE	CUT	1	11.0	90	90	250	0.0	3.1	2.1	0.6	12.8
DF	16	LIVE	CUT	2	15.5	107	119	600	3.3	3.2	4.1	1.0	30.7
DF	18	LIVE	CUT	4	17.7	100	128	1,243	11.0	4.8	8.3	2.0	63.5
DF	20	LIVE	CUT	5	19.8	114	146	1,943	12.4	4.8	10.3	2.3	99.3
DF	22	LIVE	CUT	3	21.7	115	148	1,348	5.2	2.4	6.2	1.3	68.9
DF	24	LIVE	CUT	4	23.5	119	153	1,582	18.5	2.7	8.3	1.7	80.9
DF	26	LIVE	CUT	12	25.7	124	160	5,970	4.6	6.9	24.8	4.9	305.1
DF	28	LIVE	CUT	8	27.6	127	164	4,270	2.1	4.0	16.5	3.1	218.2
DF	30	LIVE	CUT	9	29.7	134	173	4,887	6.9	3.9	18.6	3.4	249.7
DF	32	LIVE	CUT	7	31.9	134	173	3,969	5.0	2.6	14.4	2.6	202.8
DF	34	LIVE	CUT	3	34.0	134	173	1,458	17.2	1.0	6.2	1.1	74.5
DF	36	LIVE	CUT	7	35.4	143	185	3,982	7.8	2.1	14.4	2.4	203.5
DF	38	LIVE	CUT	2	38.0	138	179	1,227	0.0	0.5	4.1	0.7	62.7
NF	26	LIVE	CUT	2	25.5	119	154	450	15.9	0.6	2.2	0.4	23.0
NF	34	LIVE	CUT	1	34.0	130	168	294	5.6	0.2	1.1	0.2	15.0
NF	38	LIVE	CUT	1	38.0	140	182	305	6.6	0.1	1.1	0.2	15.6
RC	12	LIVE	CUT	3	11.6	56	64	186	0.0	4.4	3.3	1.0	9.5
RC	18	LIVE	CUT	1	18.0	97	97	108	0.0	0.6	1.1	0.3	5.5
WH	8	LIVE	CUT	1	8.0	46	55	86	0.0	4.5	1.6	0.6	4.4
WH	10	LIVE	CUT	2	9.5	52	64	195	0.0	6.4	3.1	1.0	10.0
WH	12	LIVE	CUT	1	11.0	60	73	114	0.0	2.4	1.6	0.5	5.8
WH	14	LIVE	CUT	1	13.0	67	83	164	11.9	1.7	1.6	0.4	8.4
WH	18	LIVE	CUT	6	17.8	103	124	1,355	15.3	5.4	9.4	2.2	69.2
WH	20	LIVE	CUT	6	19.6	108	130	1,809	5.6	4.5	9.4	2.1	92.4
WH	22	LIVE	CUT	4	21.5	111	141	1,374	6.1	2.5	6.3	1.4	70.2

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	26	LIVE	CUT	3	26.0	115	146	1,050	5.6	1.3	4.7	0.9	53.7
WH	28	LIVE	CUT	2	28.0	117	149	697	12.5	0.7	3.1	0.6	35.6
WH	30	LIVE	CUT	1	29.0	125	159	359	17.9	0.3	1.6	0.3	18.4



## Cruise Unit Report HAM HOCK U3

### Unit Sale Notice Volume (MBF): HAM HOCK U3

Sp	DBH	Rings/In	Age	MBF Volume by Grade			
				All	2 Saw	3 Saw	4 Saw
DF	21.5			37	26	10	1
NF	26.8			9	8	1	0
WH	18.7			9	5	3	1
BC	31.2			3	3		
ALL	21.9			58	42	14	2

### Unit Cruise Design: HAM HOCK U3

Design	Cruise Acres	FMA Acres	N Plots	N Cruise Plots	N Void Plots
B1C: VR, 1 BAF (46.94) Measure/Count Plots, Sighting Ht = 4.5 ft	3.3	3.3	10	7	0

### Unit Cruise Summary: HAM HOCK U3

Sp	Cruised Trees	All Trees	Trees/Plot	Ring-Count Trees
RC		1	0.1	0
DF	3	50	5.0	0
WH	2	11	1.1	0
NF	1	3	0.3	0
BC	1	1	0.1	0
ALL	7	66	6.6	0

### Unit Cruise Statistics: HAM HOCK 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 (%)
RC	4.7	316.2	100.0						
DF	234.7	50.8	16.1	218.0	14.7	8.5	51,161	52.8	18.1
WH	51.6	108.8	34.4	188.3	8.7	6.1	9,723	109.2	35.0
NF	14.1	161.0	50.9	289.9	0.0	0.0	4,083	161.0	50.9
BC	4.7	316.2	100.0	189.8	0.0	0.0	891	316.2	100.0
ALL	309.8	32.9	10.4	215.9	18.9	7.2	66,871	37.9	12.6

## Unit Summary: HAM HOCK U3

Sp	Status	Rx	N	D	DBH	BL	THT	BF Gross	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	LIVE	CUT	1	ALL	31.2	111	140	1,025	891	13.1	0.9	4.7	0.8	2.9
DF	LIVE	CUT	3	ALL	19.7	113	145	11,475	11,255	1.9	24.4	51.6	11.6	37.1
DF	LIVE	LEA	15	ALL	25.1	125	161	40,685	39,906	1.9	53.3	183.1	36.5	131.7
NF	LIVE	CUT	1	ALL	16.8	132	171	2,722	2,722	0.0	6.1	9.4	2.3	9.0
NF	LIVE	LEA	1	ALL	34.0	140	182	1,361	1,361	0.0	0.7	4.7	0.8	4.5
RC	LIVE	LEA	1	ALL	10.5	87	87				7.8	4.7	1.4	
WH	LIVE	CUT	2	ALL	17.8	102	128	2,745	2,652	3.4	8.1	14.1	3.3	8.8
WH	LIVE	LEA	7	ALL	17.6	129	148	7,321	7,071	3.4	22.2	37.6	9.0	23.3
ALL	LIVE	CUT	7	ALL	19.2	113	145	17,968	17,520	2.5	39.5	79.8	18.1	57.8
ALL	LIVE	LEA	24	ALL	22.4	123	151	49,367	48,338	2.1	84.0	230.0	47.7	159.5
ALL	ALL	ALL	31	ALL	21.4	120	149	67,335	65,858	2.2	123.5	309.8	65.8	217.3

## Unit Stand Table: HAM HOCK U3

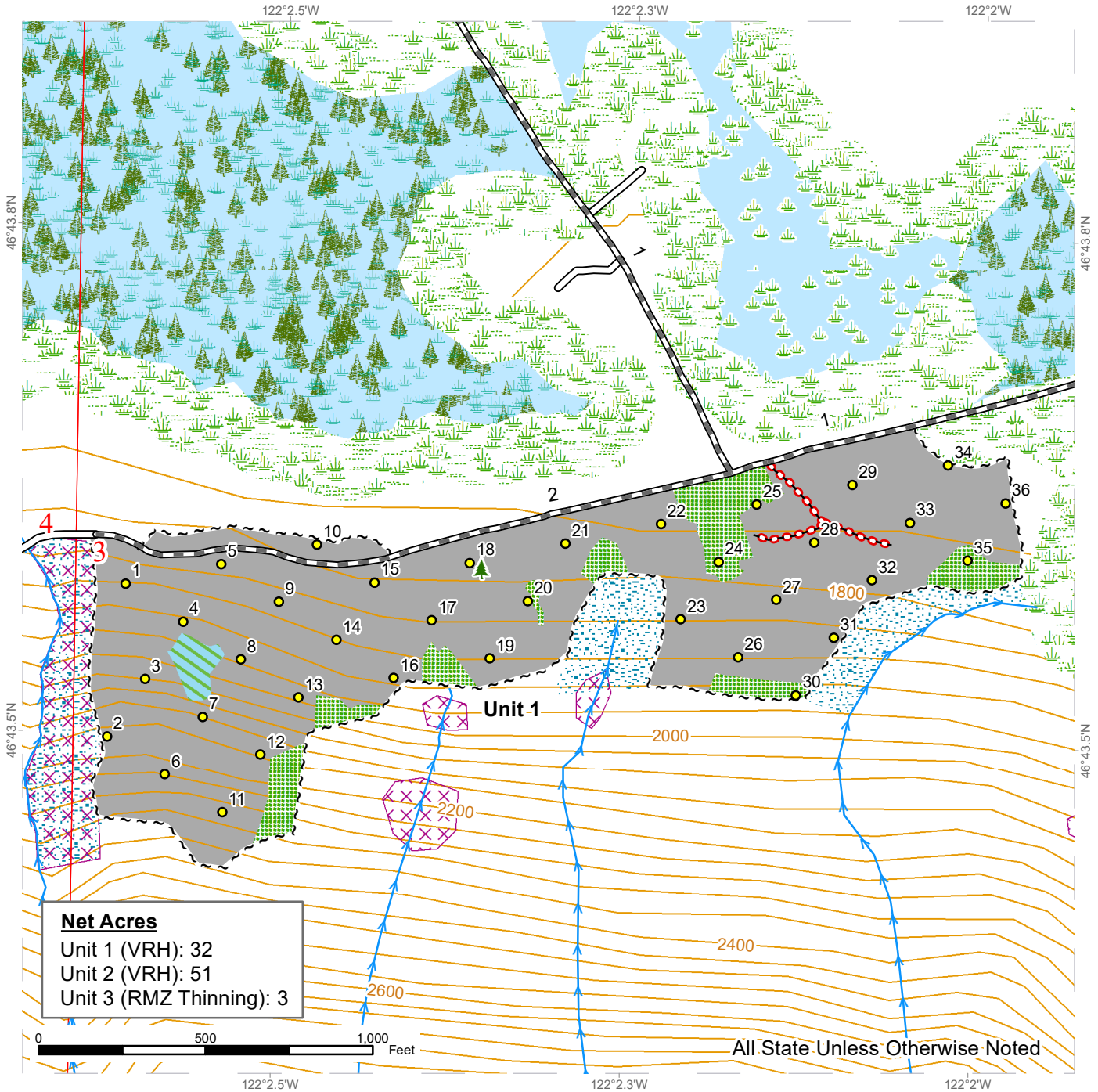
Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
BC	32	LIVE	CUT	1	31.2	111	140	891	13.1	0.9	4.7	0.8	2.9
DF	12	LIVE	CUT	1	12.6			1,023	1.9	5.4	4.7	1.3	3.4
DF	18	LIVE	CUT	3	18.5	103	132	2,969	1.3	7.6	14.1	3.3	9.8
DF	20	LIVE	CUT	3	20.3	115	148	2,998	3.2	6.3	14.1	3.1	9.9
DF	22	LIVE	CUT	1	21.9			1,023	1.9	1.8	4.7	1.0	3.4
DF	24	LIVE	CUT	1	24.8			1,023	1.9	1.4	4.7	0.9	3.4
DF	28	LIVE	CUT	1	28.1	130	168	1,196	0.0	1.1	4.7	0.9	3.9
DF	30	LIVE	CUT	1	29.7			1,024	1.9	1.0	4.7	0.9	3.4
DF	16	LIVE	LEA	3	16.8	113	145	2,759	1.3	9.2	14.1	3.4	9.1
DF	18	LIVE	LEA	1	17.9			950	1.9	2.7	4.7	1.1	3.1
DF	20	LIVE	LEA	2	19.2	118	151	2,030	0.0	4.6	9.4	2.1	6.7
DF	24	LIVE	LEA	6	23.8	118	152	5,737	1.6	9.1	28.2	5.8	18.9
DF	26	LIVE	LEA	5	25.9	127	164	5,445	0.7	6.4	23.5	4.6	18.0
DF	28	LIVE	LEA	8	27.8	127	163	8,100	1.1	8.9	37.6	7.1	26.7
DF	30	LIVE	LEA	9	30.1	139	179	9,882	1.9	8.5	42.2	7.7	32.6
DF	32	LIVE	LEA	2	31.7	145	188	2,151	3.7	1.7	9.4	1.7	7.1
DF	34	LIVE	LEA	2	33.3			1,900	1.9	1.5	9.4	1.6	6.3
DF	38	LIVE	LEA	1	37.7			951	1.9	0.6	4.7	0.8	3.1
NF	14	LIVE	CUT	1	13.3			1,361	0.0	4.9	4.7	1.3	4.5
NF	26	LIVE	CUT	1	26.8	132	171	1,361	0.0	1.2	4.7	0.9	4.5
NF	34	LIVE	LEA	1	34.0	140	182	1,361	0.0	0.7	4.7	0.8	4.5
RC	10	LIVE	LEA	1	10.5	87	87			7.8	4.7	1.4	

Sp	D	Status	Rx	N	DBH	BL	THT	BF Net	Defect %	TPA	BA	RD	MBF Net
WH	16	LIVE	CUT	1	16.2			884	3.4	3.3	4.7	1.2	2.9
WH	18	LIVE	CUT	1	17.7	100	126	830	0.0	2.7	4.7	1.1	2.7
WH	20	LIVE	CUT	1	20.0	104	131	938	6.2	2.2	4.7	1.0	3.1
WH	14	LIVE	LEA	1	13.8	135	135	873	0.0	4.5	4.7	1.3	2.9
WH	16	LIVE	LEA	3	16.1	126	147	2,645	0.0	9.9	14.1	3.5	8.7
WH	18	LIVE	LEA	1	18.9	116	147	849	0.0	2.4	4.7	1.1	2.8
WH	20	LIVE	LEA	1	19.0	152	182	1,128	0.0	2.4	4.7	1.1	3.7
WH	24	LIVE	LEA	2	24.2	114	145	1,575	7.0	2.9	9.4	1.9	5.2

# LOGGING PLAN MAP

**SALE NAME:** HAM HOCK  
**AGREEMENT#:** 30-103631  
**TOWNSHIP(S):** T14R6E  
**TRUST(S):** Administrative Site (13), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** Lewis  
**ELEVATION RGE:** 1760-2360



**Net Acres**  
 Unit 1 (VRH): 32  
 Unit 2 (VRH): 51  
 Unit 3 (RMZ Thinning): 3

All State Unless Otherwise Noted

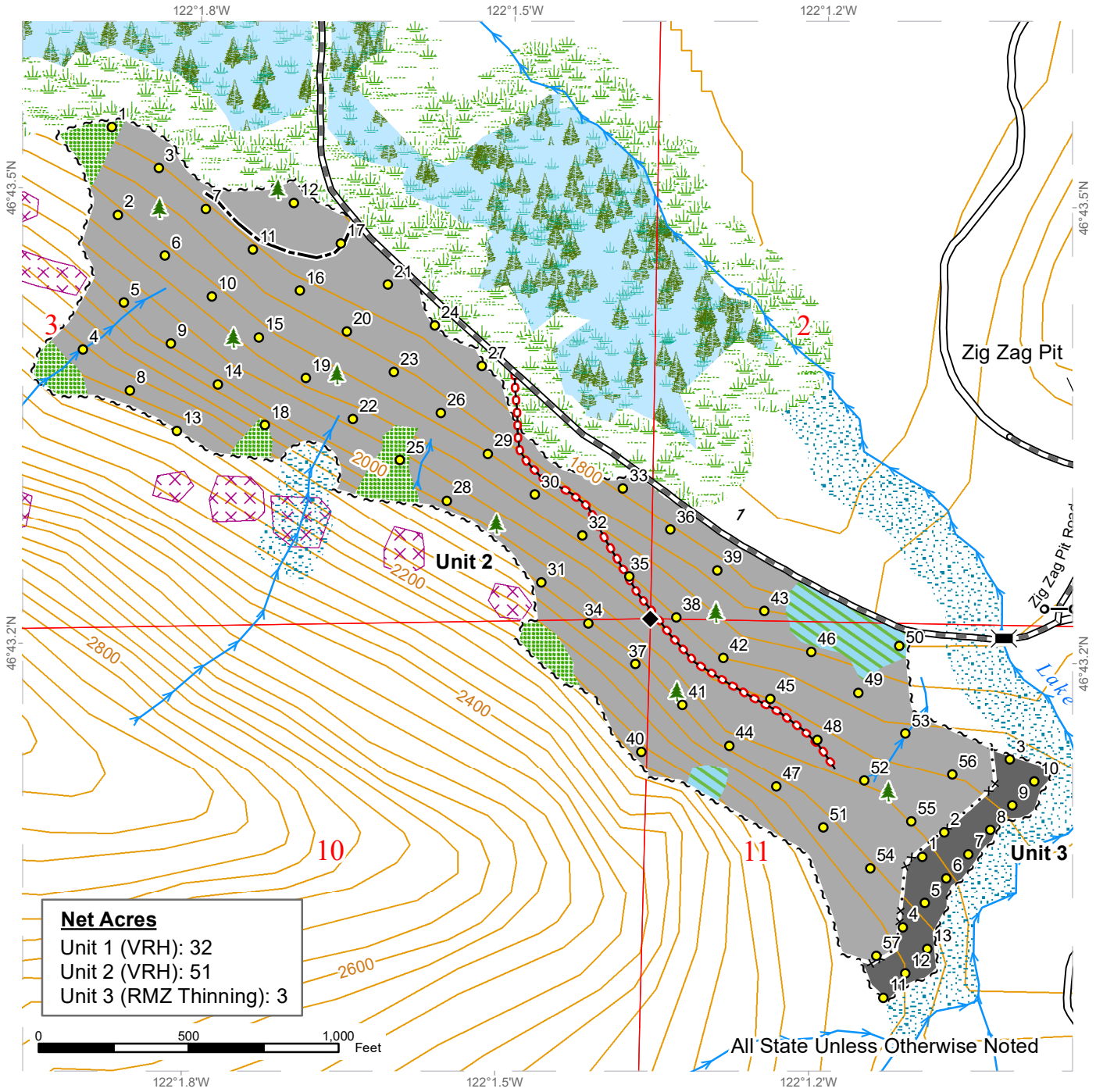
Variable Retention Harvest	Wetland Mgt Zone	Stream Type Break
Sale Boundary Tags	Wetlands - Non-forested	Leave Tree Area <1/4-acre
Existing Roads	Riparian Mgt Zone	Contours 40-foot
Required Pre-Haul Maintenance	Forested Wetland	Public Land Survey Sections
Required Abandonment	Tailhold Restriction Area	Streams
Non-Tradeable Leave Clump	Streams	Stream Type
Leave Tree Area		



# LOGGING PLAN MAP

**SALE NAME:** HAM HOCK  
**AGREEMENT#:** 30-103631  
**TOWNSHIP(S):** T14R6E  
**TRUST(S):** Administrative Site (13), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
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All State Unless Otherwise Noted

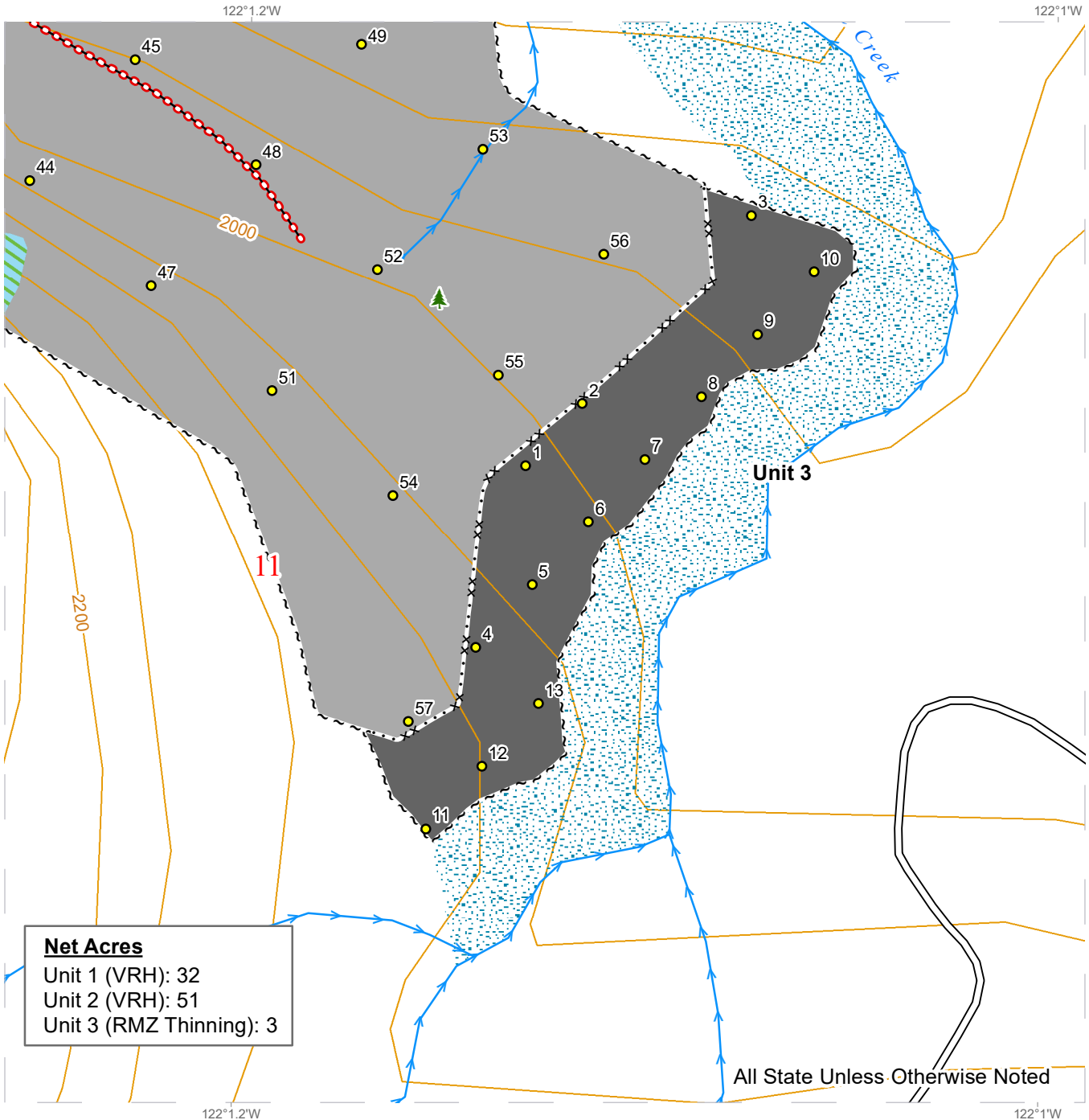
Variable Retention Harvest	Leave Tree Area	Gate Installation
Riparian Restoration	Wetland Mgt Zone	Leave Tree Area <1/4-acre
Sale Boundary Tags	Riparian Mgt Zone	Contours 40-foot
Special Management Unit Boundary/VRH Boundary Tags	Forested Wetland	Survey Monument
Existing Roads	Tailhold Restriction Area	Public Land Survey Sections
Required Pre-Haul Maintenance	Streams	Stream Type
Optional Construction	Stream Type Break	Bridge
Required Abandonment	Non-Tradeable Leave Clump	



# LOGGING PLAN MAP

SALE NAME: HAM HOCK  
 AGREEMENT#: 30-103631  
 TOWNSHIP(S): T14R6E  
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**Net Acres**  
 Unit 1 (VRH): 32  
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All State Unless Otherwise Noted

Variable Retention Harvest	Riparian Mgt Zone
Riparian Restoration	Streams
Sale Boundary Tags	Stream Type
Special Management Unit Boundary/VRH Boundary Tags	Stream Type Break
Existing Roads	Leave Tree Area <1/4-acre
Required Abandonment	Contours 40-foot
Non-Tradeable Leave Clump	Public Land Survey Sections







# Forest Practices Application/Notification Notice of Decision

FPA/N No: 2423527

Effective Date: 7/17/2023

Expiration Date: 7/17/2026

Shut Down Zone: 657 | 659 S

EARR Tax Credit:  Eligible  Non-eligible

Reference: Ham Hock #30-103631

### Decision

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

### FPA/N Classification

- Class II
- Class III
- Class IVG
- Class IVS

### Number of Years Granted on Multi-Year Request

- 4 years
- 5 years

### Conditions on Approval/Reasons for Disapproval

Issued By: Erica Christie-Jones

Region: South Puget Sound Region

Title: Resource Protection Forester

Date: 7/17/2023

Copies to:  Landowner, Timber Owner and Operator

Issued in person:  LO  TO  OP By: *mi Jensen*

Date: 7/17/2023

**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](http://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:**

<b>Pollution Control Hearings Board</b>	<b>Office of the Attorney General Natural Resources Division</b>	<b>Department Of Natural Resources South Puget Sound Region</b>
<u>Physical Address</u> 1111 Israel Road SW Suite 301 Tumwater, WA 98501  <u>Mailing address</u> Post Office Box 40903 Olympia, WA 98504-0903	<u>Physical Address</u> 1125 Washington Street, SE Olympia, WA 98504  <u>Mailing Address</u> Post Office Box 40100 Olympia, WA 98504-0100	<u>Physical Address</u> 950 Farman Ave N Enumclaw, WA 98022  <u>Mailing Address</u> 950 Farman Ave N Enumclaw, WA 98022

Information regarding the Pollution Control Hearings Board can be found at: <https://eluho.wa.gov/content/11>

**Other Applicable Laws**

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

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

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

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

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

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

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

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

**DNR Declaration of Mailing**

I, **Meredith Dessens**, caused the Notice of Decision for FPA/N No. **2423527** to be placed in the United States mail at **Olympia, WA**; postage paid. I declare under penalty of perjury of the laws of the State of Washington, that the foregoing is true and correct.

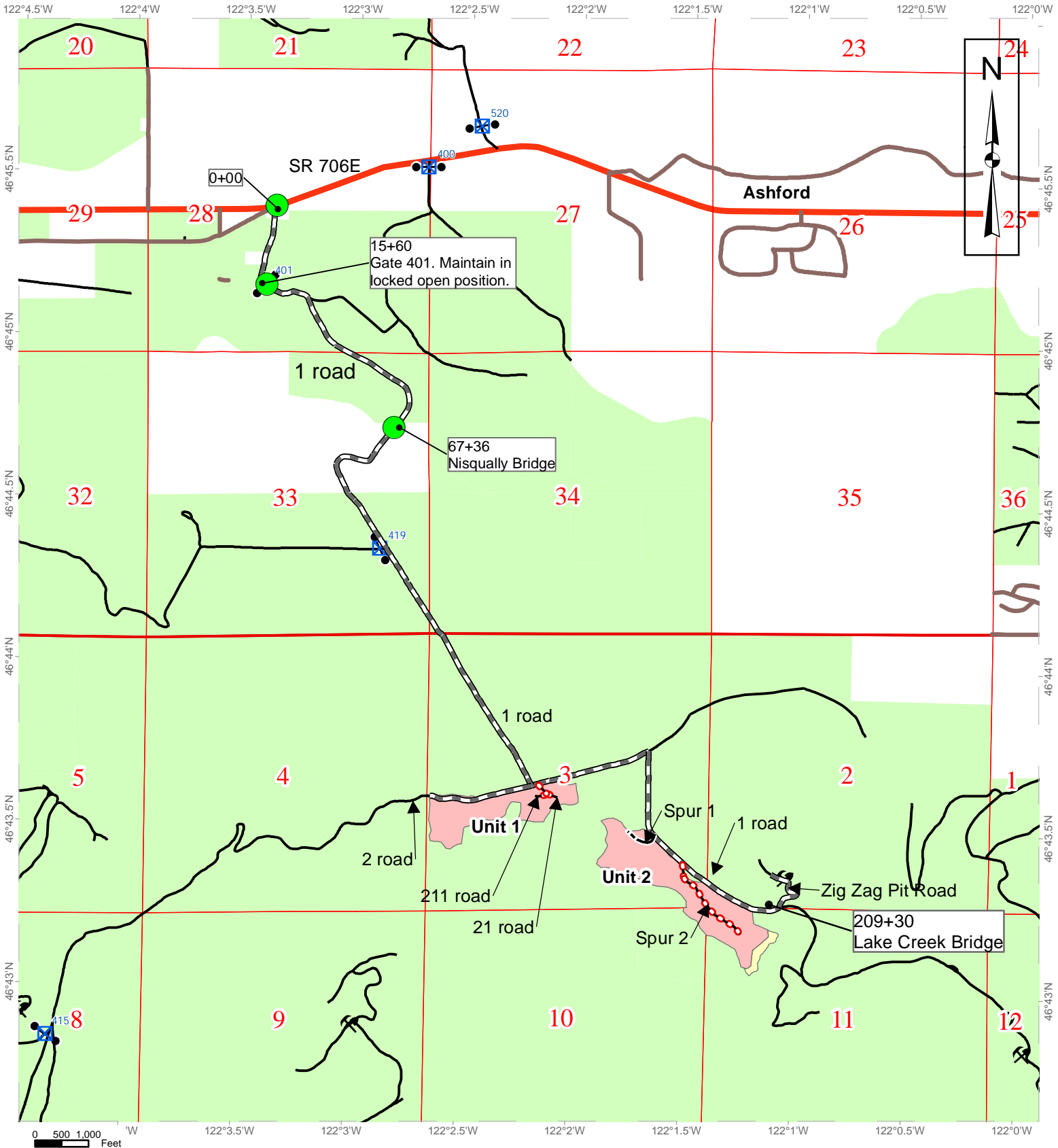
7/17/2023  
(Date)

Enumclaw, WA  
(City & State where signed)

\_\_\_\_\_  
(Signature)

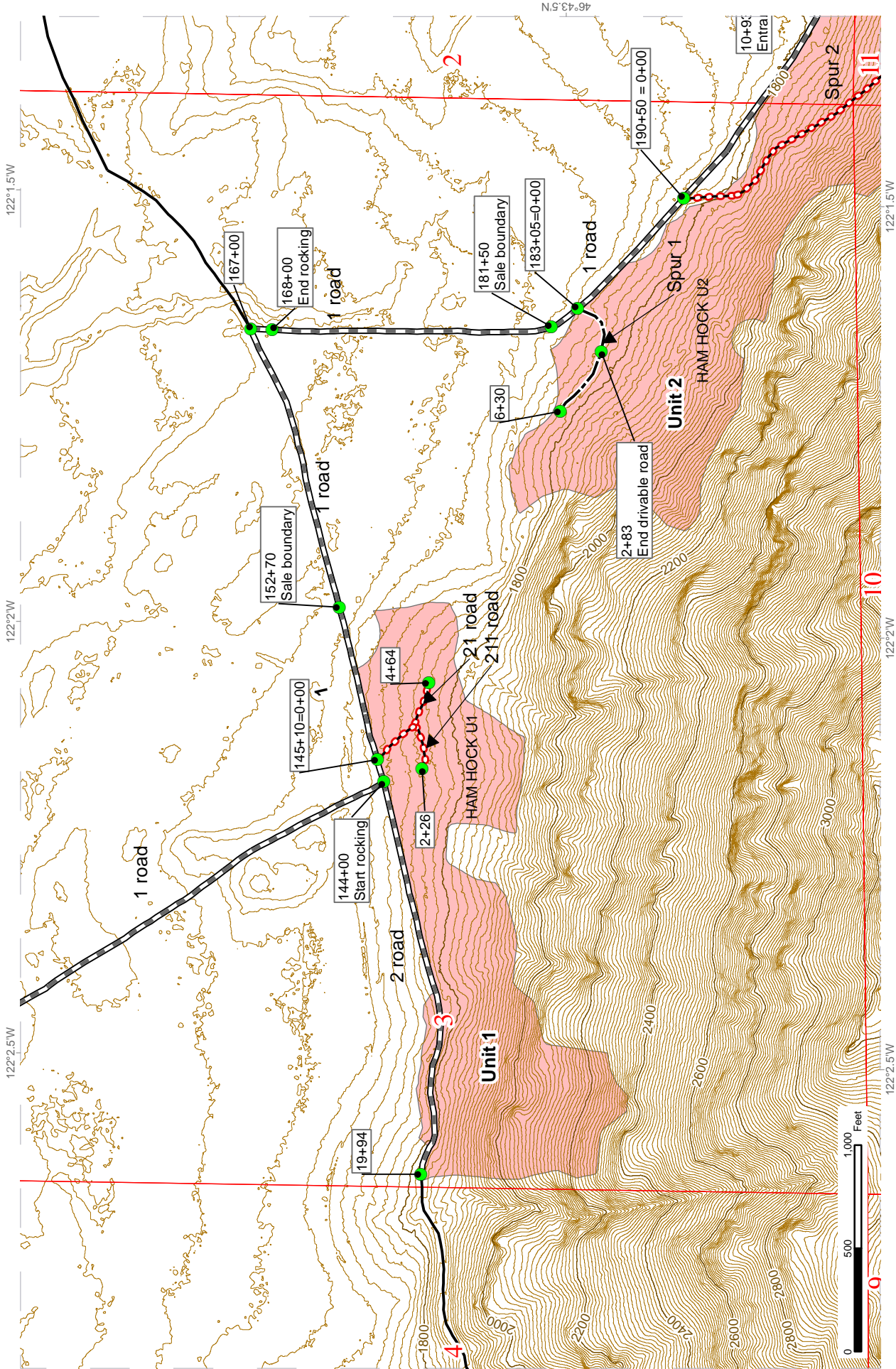


# Ham Hock Timber Sale Road Work Map, pg 1 of 3



- Optional Construction
- Pre-haul Maintenance
- Required Abandonment
- Active/driveable Rd
- Public Land Survey Townships
- Public Land Survey Sections
- DNR Managed Land

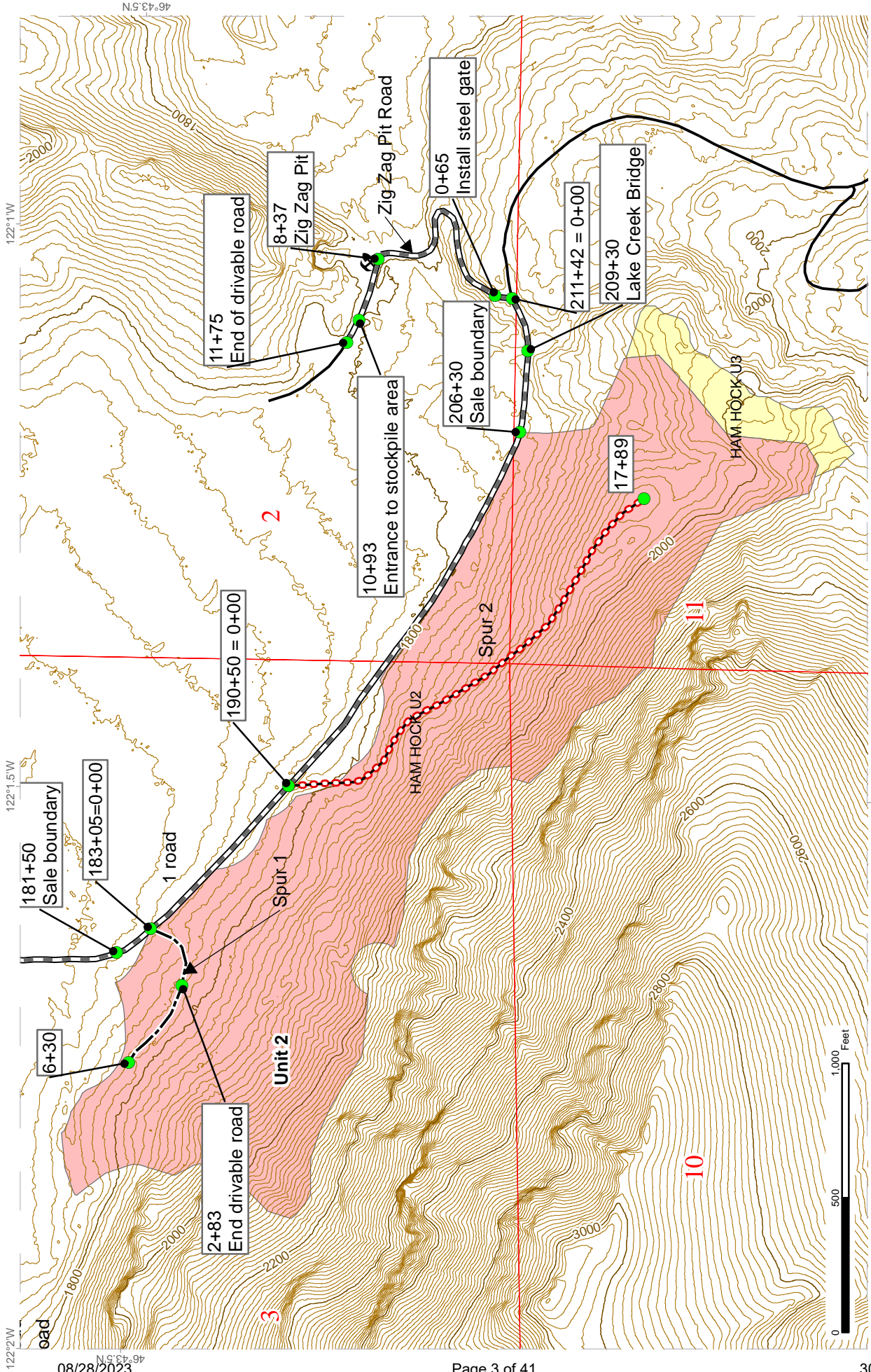
# Ham Hock Timber Sale Road Work Map, pg 2 of 3



- Rd Stationing
- Optional Construction
- Pre-haul Maintenance
- Active/drivable Rd
- Public Land Survey Townships
- Public Land Survey Sections
- Contours 10 ft



# Ham Hock Timber Sale Road Work Map, pg 3 of 3



- Rd Stationing
- Optional Construction
- Pre-haul Maintenance
- Required Abandonment
- Active/drivable Rd
- Public Land Survey Townships
- Public Land Survey Sections
- Contours 10 ft

All State Unless Otherwise Noted  
 Prepared By: hadm490 Modification Date: hadm490 6/6/2023

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

HAM HOCK TIMBER SALE ROAD PLAN  
LEWIS COUNTY  
RAINIER DISTRICT  
SPS REGION

AGREEMENT NO.: 30-103631

STAFF ENGINEER: M. BELL

DATE: 3/3/2023

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>
1	0+00 to 211+50	Pre-haul maintenance
Zig Zag Pit	0+00 to 11+75	Pre-haul maintenance
2	0+00 to 19+94	Pre-haul maintenance
21	0+00 to 4+64	Abandon
211	0+00 to 2+26	Abandon
Spur 1	0+00 to 6+30	Abandon, if built
Spur 2	0+00 to 17+89	Abandon
2	0+00 to 19+94	Post-haul maintenance

**0-3 OPTIONAL ROADS**

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
Spur 1	0+00 to 6+30	Construction

**0-4 CONSTRUCTION**

Construction includes, but is not limited to:

- Clearing.
- Grubbing.
- Right of way debris disposal.
- Excavation and/or embankment to subgrade.
- Landing construction.
- Manufacture or acquisition and application of optional rock.
- Road abandonment.

**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>
1	0+00 to 211+50	<ul style="list-style-type: none"><li>• Grading, shaping, and compaction of road surface.</li><li>• Manufacture or acquisition and application of rock.</li></ul>
1	181+50 to 211+50	<ul style="list-style-type: none"><li>• Brushing right-of-way.</li></ul>
2	0+00 to 19+94	<ul style="list-style-type: none"><li>• Grading, shaping, and compaction of road surface.</li><li>• Manufacture or acquisition and application of rock.</li></ul>
Zig Zag Pit	0+00 to 11+75	<ul style="list-style-type: none"><li>• Grading, shaping, and compaction of road surface.</li><li>• Culvert cleaning and headwall reconstruction.</li><li>• Ditch cleaning and reconstruction.</li><li>• Brushing right-of-way.</li><li>• Acquisition and installation of one steel gate.</li><li>• Manufacture or acquisition and application of rock.</li></ul>

**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 may involve Clearing, Stripping, Drilling, Blasting and Crushing, and manufacture of 10,000 cubic yard crushed rock stockpile in Zig Zag Pit. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

**0-13 STRUCTURES**

Purchaser shall provide and install a steel gate. Requirements for these structures are listed in Section 7 STRUCTURES.

**SECTION 1 – GENERAL**

**1-1 ROAD PLAN CHANGES**

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

**1-2 UNFORESEEN CONDITIONS**

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

**1-3 ROAD DIMENSIONS**

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

**1-4 ROAD TOLERANCES**

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

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

**1-6 ORDER OF PRECEDENCE**

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

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

SUBSECTION ROAD MARKING

**1-15 ROAD MARKING**

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

- Centerline is marked with orange flagging for new construction on Spur 1.

**1-16 CONSTRUCTION STAKES SET BY STATE**

Purchaser shall perform work in accordance with the designs and reference points set in the field for grade and alignment.

**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.

SUBSECTION TIMING

**1-20 COMPLETE BY DATE**

Purchaser shall complete pre-haul maintenance road work before the start of timber haul, unless approved in writing by the Contract Administrator.

**1-21 HAUL APPROVAL**

The Purchaser shall not use roads under this road plan for timber 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 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
- Rock compaction

SUBSECTION RESTRICTIONS

**1-25 ACTIVITY TIMING RESTRICTION**

No operation of road construction equipment or rock haul will be allowed on weekends or state recognized holidays, unless authorized in writing by the Contract Administrator.

The specified activities are not permitted during the listed closure periods unless authorized in writing by the Contract Administrator.

<u>Activity</u>	<u>Closure Period</u>
Operation of road construction equipment or rock haul	November 1 to May 15

**1-26 OPERATING DURING CLOSURE PERIOD**

If permission is granted to operate during a seasonal closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION, Purchaser shall comply with a maintenance plan, when a maintenance plan is determined necessary by the Contract Administrator 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 new construction rocked roads.
- Wheel track rutting exceeds 4 inches on crushed rock roads.
- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator, excessive road damage or rutting may occur.

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

**1-32 BRIDGE SURFACE RESTRICTION**

Metal tracked equipment shall not be used on bridge surfaces at any time. If equipment must be run on bridge surfaces, then rubber tired equipment or other methods, as approved in writing by Contract Administrator, shall be used.

Any dirt, rock, or other material tracked or spilled on the bridge surface shall be removed immediately. Any damage to the surface(s) shall be repaired at the Purchaser's expense as directed by the Contract Administrator.

**1-33 SNOW PLOWING RESTRICTION**

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

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.

**2-5 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>
1	0+00 to 211+50
2	0+00 to 19+94
Zig Zag Pit	0+00 to 11+75

**2-6 CLEANING CULVERTS**

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

<u>Road</u>	<u>Stations</u>
Zig Zag Pit	0+00 to 11+75

**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 grading, rock application and/or timber haul and must be done in accordance with the TYPICAL SECTION SHEET. Pulling ditch material across the road or mixing in with the road surface is not allowed. Excavated material must be scattered outside the clearing limits.

<u>Road</u>	<u>Stations</u>
Zig Zag Pit	0+00 to 11+75

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 LIST. Brushing must be achieved by manual or mechanical 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>
Zig Zag Pit	0+00 to 11+75
1	181+50 to 211+50

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, 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.

3-8 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.
- Against standing trees unless approved by the Contract Administrator.

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.

3-20 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 subgrade compaction, application of rock and/or timber haul.

**3-23 PROHIBITED DISPOSAL AREAS**

Purchaser shall not place organic debris in the following areas:

- Within 20 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 55%.
- 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.
- In location that would impede drainage.

**3-24 BURYING ORGANIC DEBRIS RESTRICTED**

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

**3-25 SCATTERING ORGANIC DEBRIS**

Purchaser shall scatter organic debris outside of the clearing limits.

**SECTION 4 – EXCAVATION**

**4-2 PIONEERING**

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.

**4-3 ROAD GRADE AND ALIGNMENT STANDARDS**

Purchaser shall follow these standards for road grade and alignment except as designed:

- 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.

**4-5 CUT SLOPE RATIO**

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

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

**4-6 EMBANKMENT SLOPE RATIO**

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

<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 2 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.

**SUBSECTION DITCH CONSTRUCTION**

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

The Purchaser shall construct and reconstruct ditches into the subgrade as specified on the TYPICAL SECTION SHEET. Excavated slopes shall be consistent with Clause 4-5 CUT SLOPE RATIO. Ditches shall 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.

## SUBSECTION WASTE MATERIAL (DIRT)

### **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 55% if the waste material is compacted and free of organic debris.

### **4-38 PROHIBITED WASTE DISPOSAL AREAS**

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

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream or wetland.
- On side slopes steeper than 55%.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- Within the operational area for cable landings.
- Against standing timber.

## SUBSECTION SHAPING

### **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.

## SUBSECTION COMPACTION

### **4-60 FILL COMPACTION**

Purchaser shall compact all embankment and waste material in accordance with the COMPACTION LIST by routing equipment over the entire width of each lift. A plate compactor must be used for areas specifically requiring keyed embankment construction and for embankment and waste area segments too narrow to accommodate equipment. Waste material may be placed by end-dumping or sidecasting until sufficiently wide enough to support the equipment.

### **4-63 EXISTING SURFACE COMPACTION**

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

SECTION 5 – DRAINAGE

**5-25 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 CULVERTS**

Purchaser shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, except temporary culverts. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Minimum specifications require that rock be placed at a width of one culvert diameter on each side of the culvert opening, and to a height of one culvert diameter above the top of the culvert. Rock may not restrict the flow of water into culvert inlets or catch basins. Placement must be by zero-drop-height method only. 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 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 300 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 five (5) calendar days before starting any operations in the listed locations.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Zig Zag Pit	NE1/4 SE1/4 SW1/4 SW1/4 Section 2 T14N R6E W.M.	4 Inch In Place 2 Inch Minus Crushed Quarry Spalls

**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 included in this road plan. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator. Purchaser shall notify the Contract Administrator a minimum of five (5) calendar days before starting any operations in the rock source.

<u>Source</u>
Zig Zag Pit

**SUBSECTION ROCK SOURCE DEVELOPMENT**

**6-12 ROCK SOURCE SPECIFICATIONS**

Rock sources must be in accordance with the following specifications, unless otherwise specified in the ROCK SOURCE DEVELOPMENT PLAN:

- Pit walls may not be undermined or over steepened. The maximum slope of the walls must be consistent with recognized engineering standards for the type of material being excavated in accordance with the following table:

Material	Maximum Slope Ratio (Horiz. :Vert.)	Maximum Slope Percent
Sand	2:1	50
Gravel	1.5:1	67
Common Earth	1:1	100
Fractured Rock	0.5:1	200
Solid Rock	0:1	vertical

- Pit walls must be maintained in a condition to minimize the possibility of the walls sliding or failing.
- The width of pit benches must be a minimum of 25 feet.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient except as approved by the Contract Administrator.
- All operations must be carried out in compliance with all regulations of the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- All vehicle access to the top of the pit faces must be blocked.



## **6-14 DRILL AND SHOOT**

Rock drilling and shooting must meet the following specifications:

- Additional oversize material remaining in the rock source at the conclusion of the timber sale may not exceed 5% of the total volume mined in that source.
- Oversize material is defined as rock fragments larger than 1.5 feet in any dimension.
- Oversized rock that exceeds the maximum allowable amount must be reduced to a smaller size within the rock source.
- Purchaser shall notify the Contract Administrator a minimum of five (5) calendar days before blasting operations.
- Purchaser shall submit an informational drilling and shooting plan to the Contract Administrator within five (5) calendar days after drilling.
- All operations must be carried out in compliance with the Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration and the Safety Standards for Construction Work (296-155 WAC), Washington Department of Labor and Industries.
- Purchaser shall block access roads before blasting operations.

### **SUBSECTION ROCK MANUFACTURE**

## **6-20 ROCK CRUSHING OPERATIONS**

Rock crushing operations must conform to the following specifications:

- Operations and placement of oversize material must be conducted in or near the rock source site, as approved in writing by the Contract Administrator.
- If a smooth roll crusher is used, the maximum size of material fed into it shall be equal to the largest size of the material coming out of it plus 8.5 percent of the roll radius.
- The crushing operation per pit must be concluded within 45 working days from the time it begins in that pit unless approved in writing by the Contract Administrator.
- Purchaser is required to produce sieve analysis for crushing operations every 1000 yards for each rock gradation type.
- Purchaser may use a commercial testing lab to produce sieve analyses.

## **6-23 ROCK GRADATION TYPES**

Purchaser shall 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 when placed in hauling vehicles or during manufacture and placement into a stockpile. Purchaser shall provide a sieve analysis upon request from the Contract Administrator.

### **SUBSECTION ROCK GRADATIONS**

**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.

**6-38 4-INCH IN-PLACE ROCK**

Purchaser shall manufacture 4-inch in-place rock. In-place processing such as grid rolling, jaw crushing, or other such method as demonstrated by the Purchaser to be effective, shall be required if necessary to achieve the following requirements:

4-inch in-place rock must have a minimum of 90 percent of the top 4 inches of the running surface pass a 4-inch square opening.

In-place rock may not contain more than 5 percent by weight of clay, organic debris or trash by volume. No more than 50 percent of rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension.

**6-43 QUARRY SPALLS**

% Passing 8" square sieve	100%
% Passing 3" square sieve	40% maximum
% Passing 3/4" square sieve	10% maximum

Rock may not contain more than 5 percent vegetative debris or trash. All percentages are by weight.

**SUBSECTION ROCK MEASUREMENT**

**6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH**

Measurement of 4 INCH IN PLACE is defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are compacted 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 2 INCH MINUS CRUSHED rock for road application 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 as shown in ROCK ACCOUNTABILITY DETAIL and shall give them to the Contract Administrator on a weekly basis during rocking operations.

**6-65 ROCK STOCKPILE LOCATION**

Purchaser shall stockpile rock as listed below. Rock stockpiles must be in accordance with Clause 6-67 ROCK STOCKPILE SPECIFICATIONS.

<u>Rock Source</u>	<u>Rock Type</u>	<u>Quantity (c.y.)</u>	<u>Stockpile Location</u>
Zig Zag Pit	2 Inch Minus Crushed	10,000	Zig Zag Pit Stockpile Site

**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 24 feet. Stockpiles in excess of 200 cubic yards must be built up in layers of not more than 4 feet deep. Stockpile layers must be constructed by trucks, clamshells, or other methods approved in writing by the Contract Administrator. Pushing aggregates into piles with a bulldozer shall not be permitted. 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. The method of dropping from a bucket or spout in one location to form a cone shaped pile is not allowed.

No equipment other than pneumatic tired equipment may be used on stockpiles. 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.

**SUBSECTION ROCK APPLICATION**

**6-70 APPROVAL BEFORE ROCK APPLICATION**

Purchaser shall obtain written approval from the Contract Administrator for subgrade including: ditches, headwalls, catch basins, culverts, energy dissipaters, ditch-outs, subgrade shaping and compacting 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. The Contract Administrator will direct locations for rock that is to be applied as spot patching. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

**6-72 ROCK APPLICATION AFTER HAULING**

On the following road(s), upon completion of all hauling operations, Purchaser shall apply rock in accordance with the quantities shown on the ROCK LIST.

<u>Road</u>	<u>Stations</u>
2	0+00 to 19+94

**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 road(s), Purchaser may place less rock than shown on the ROCK LIST, when approved in writing by the Contract Administrator.

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

<u>Road</u>	<u>Stations</u>
Spur 1	3+30 to 6+30

**SECTION 7 – STRUCTURES**

**SUBSECTION SIGNS**

**7-1 SIGN INSTALLATION**

Purchaser shall acquire, install, and maintain the following road signs prior to road closure. Purchase shall remove signs from State Land at end of road closures and prior to the termination of this contract. Signs must comply with the Federal Highway Administration’s Manual on Uniform Traffic Control Devices.

<u>Road</u>	<u>Station</u>	<u>Sign</u>	<u>Comments</u>
2	0+00	Road Closed. Active logging.	

**7-30 BRIDGE MAINTENANCE**

Purchaser shall conduct bridge maintenance as listed.

<u>Road</u>	<u>Station</u>	<u>Requirements</u>
1	64+60 to 70+60	Clean deck prior to haul. Maintain clean bridge deck during haul. Clean bridge deck after haul is complete.
1	209+30	Clean deck prior to haul. Maintain clean bridge deck during haul. Clean bridge deck after haul is complete.

**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>	<u>Gate No.</u>	<u>Comment</u>
Zig Zag Pit	0+60	-	New gate installed per Clause 7-76 Gate Installation

**7-76 GATE INSTALLATION**

Purchaser shall install the listed gate(s).

<u>Road</u>	<u>Station</u>	<u>Type*</u>	<u>Provided by</u>
Zig Zag Pit	0+60	Min. 14-foot Steel Gate	Purchaser

\* Steel gate installation(s) must be in accordance with the STEEL GATE DETAIL.

The gate and lock box must be installed plumb and aligned to ensure all mating components match with precision. Each post must be capped and set in a minimum of 2.5 cubic yards of poured-in-place concrete or pre-cast concrete. The gate must be installed with a post and locking device to allow the gate to be locked in an open position. The Contract Administrator will provide Purchaser with padlocks.

If Purchaser wishes to install an alternate design, detailed plans for the construction of the gate must be submitted to the Contract Administrator. Purchaser shall obtain written approval for the plans from the Contract Administrator or their designee before gate installation begins.

The gate must be primed and painted Rodda Safety yellow.

If needed, rip rap may be used to prevent vehicles from driving around the gate. Gate shall not interfere with the traffic flow.

**7-78 GATE SUPPLIED BY PURCHASER**

Purchaser shall provide all gates specified for installation in Clause 7-76 GATE INSTALALTION. Purchaser shall obtain written approval for the gates from the Contract Administrator before installation.

**SECTION 9 – POST-HAUL ROAD WORK**

**9-1 EARTHEN BARRICADES**

Purchaser shall construct barricades in accordance with the BARRICADE DETAIL.

<u>Road</u>	<u>Stations</u>
21	0+00
211	0+00
Spur 1	0+00
Spur 2	0+00

**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.

<u>Road</u>	<u>Stations</u>	<u>Additional Requirements</u>
1	67+36	Clean Nisqually Bridge Deck
1	209+30	Clean Lake Creek Bridge Deck
2	0+00 to 19+94	Clean road. Grade, shape, and rock.

**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>
21	0+00 to 4+64
211	0+00 to 2+26
Spur 1	0+00 to 6+30
Spur 2	0+00 to 17+89

**9-22 ABANDONMENT**

- Remove road shoulder berms.
- Construct non-drivable waterbars according to 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 100 feet.
- 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.
- Block roads with earthen barricades in accordance with the attached BARRICADE DETAIL.
- Remove culverts.
- Remove ditch cross drain culverts and leave the resulting trench open.
- Slope all trench walls and approach embankments no steeper than 1.5:1.

SECTION 11 SPECIAL NOTES

**11-1 STOCKPILE ROCK MEASUREMENT**

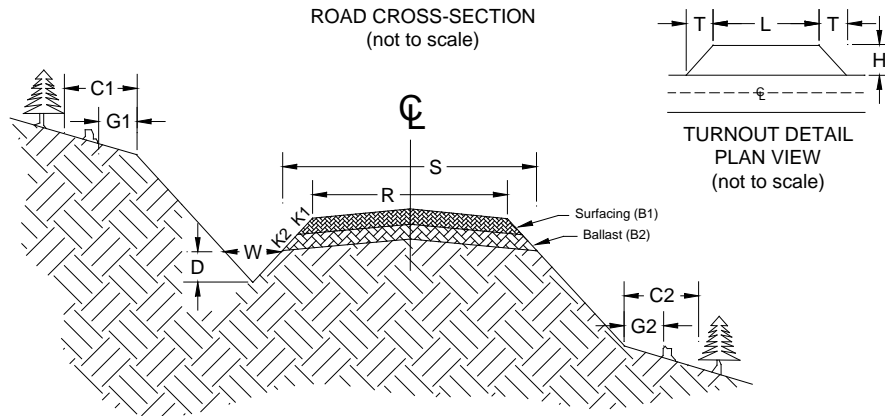
Measurement of the 2 INCH MINUS CRUSHED Stockpile is on an in-pile basis. The Contract Administrator, or their designee, will measure the stockpile to determine if it meets the quantity listed in the ROCK LIST.

**11-2 EXISTING ROAD CLEAN-UP**

If Purchaser is allowed to use the following roads as a landing or loading location the road shall be cleaned of all organic debris, all lost or worn away surface material will be replaced, and all ditches and drainage channels at culvert outlet and inlets shall be cleaned and cleared of obstructions.

<u>Road</u>
2

# TYPICAL SECTION SHEET



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch* (feet)		Crown in. @ CL	Grubbing Limits (feet)		Clearing Limits (feet)	
				S	R	Width (W)	Depth (D)		G1	G2	C1	C2
1	0+00	211+50	A	-	14	2	1	4	-	-	5	5
2	0+00	19+94	A	-	14	2	1	4	-	-	5	5
Zig Zag Pit	0+00	11+75	A	-	12	2	1	4	-	-	5	5
21	0+00	4+64	C	15	12	2	1	4	-	-	0	0
211	0+00	2+26	C	15	12	2	1	4	-	-	0	0
Spur 1	0+00	6+30	C	15	12	2	1	4	0	0	0	0
Spur 2	0+00	17+89	C	15	12	2	1	4	-	-	0	0



## ROCK LIST

### BALLAST

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	C.Y. Station	# of Stations	C.Y. Sub-total	Rock Source
			K2	B2	4 Inch In place			
Spur 1*	3+30	6+30	1.5:1	12"	50	3	150	Zig Zag

BALLAST TOTAL: 150 Cubic yards

### SURFACE

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth	Truck C.Y. per Station	# of Stations	C.Y. Subtotal	Comments Rock Source
			K2	B2	2 Inch Minus Crushed			Zig Zag
1	144+00	168+00	1.5:1	4"	24	24	576	Existing road surface
Zig Zag Pit	0+00	11+75	1.5:1	6"	33	11.75	380	
2	0+00	19+94	1.5:1	6"	33	19.94	658	Post-haul
Stockpile							10,000 C.Y.	

SURFACE TOTAL: 11,614 Cubic yards

\*Optional Rock: Purchaser is allowed the following rock depths from State owned rock sources, but application of rock is not required.

NOTE: 4 Inch In Place yardages are estimated on a compacted (In-Place) basis. Compliance of required rock will be based on compacted depth measurement. **Apply appropriate factors to determine loose amounts for estimating purposes.**

## COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
All pre-haul and post haul			After grading existing road surface and prior to rocking	6"	Smooth Drum Vibratory Roller	14,000	4 low freq. with Vibe on	3
			Rock	9"				

## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, page 1 of 2

### Cuts and Fills

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

### Surface

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

### Drainage

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

### 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.

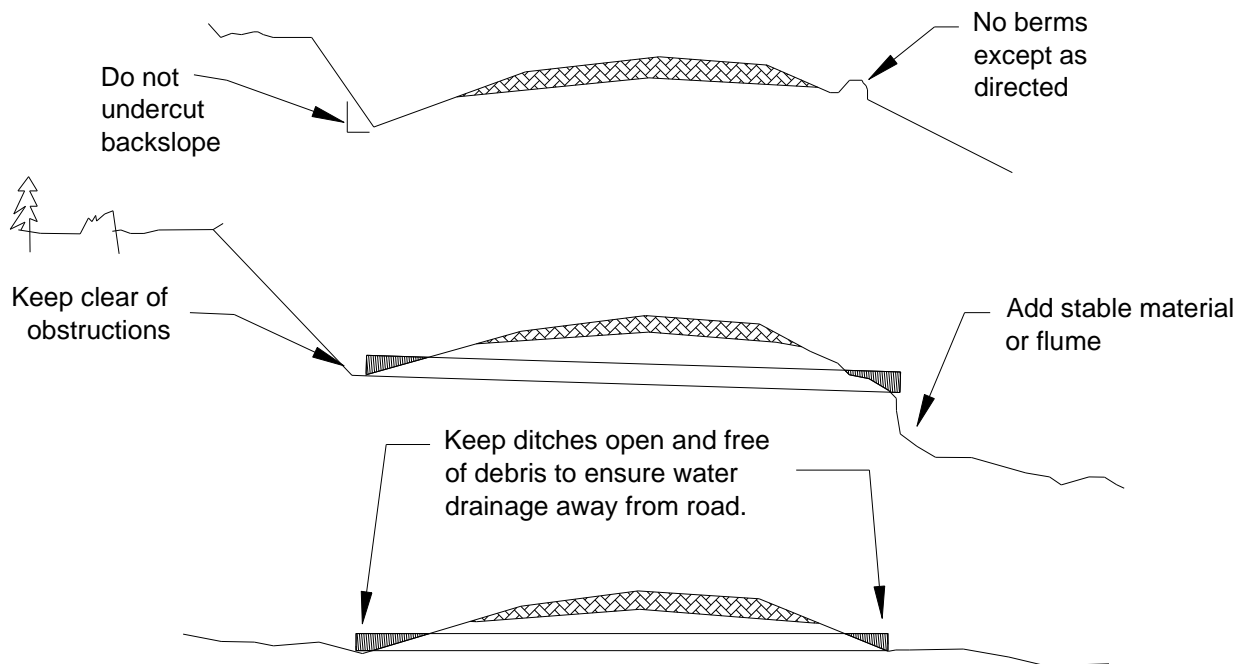
## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS, page 2 of 2

### Termination of Use or End of Season

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

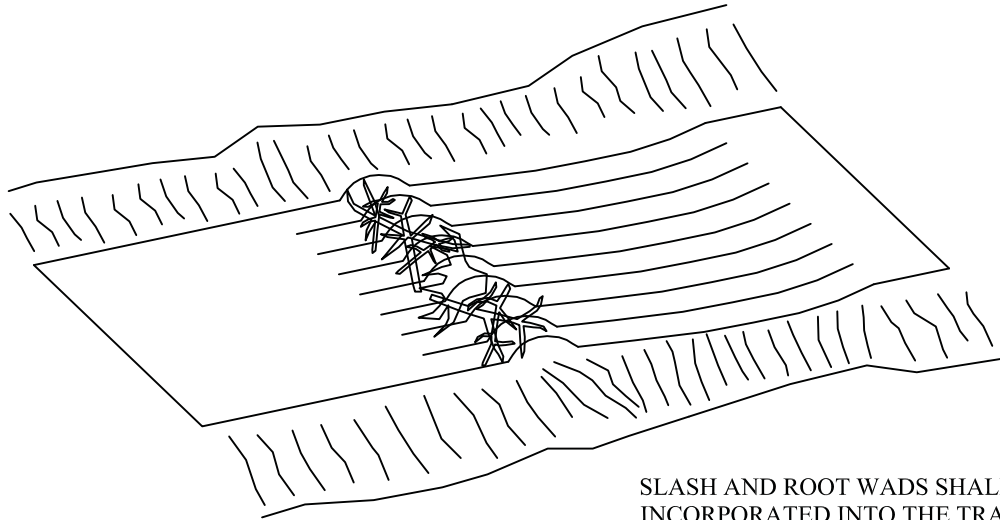
### Debris

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



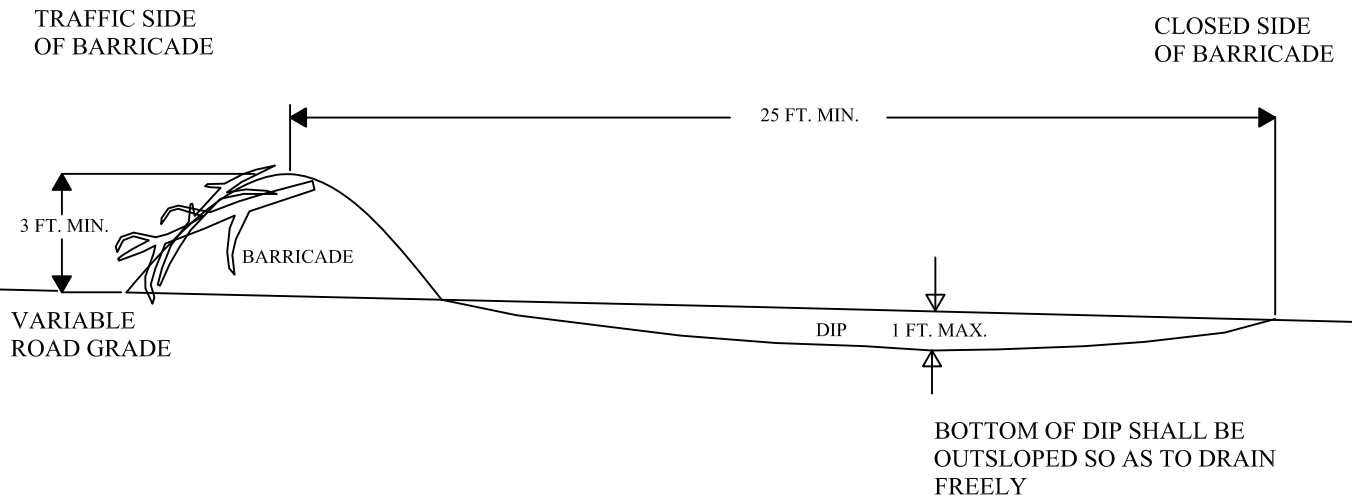


# BARRICADE DETAIL



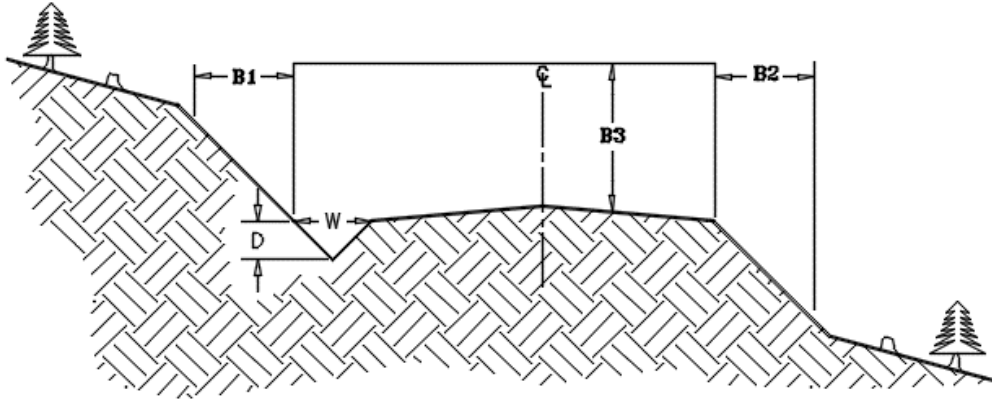
SLASH AND ROOT WADS SHALL BE INCORPORATED INTO THE TRAFFIC SIDE OF THE BARRICADE.

PLAN VIEW



PROFILE VIEW

## BRUSHING DETAIL (not to scale)



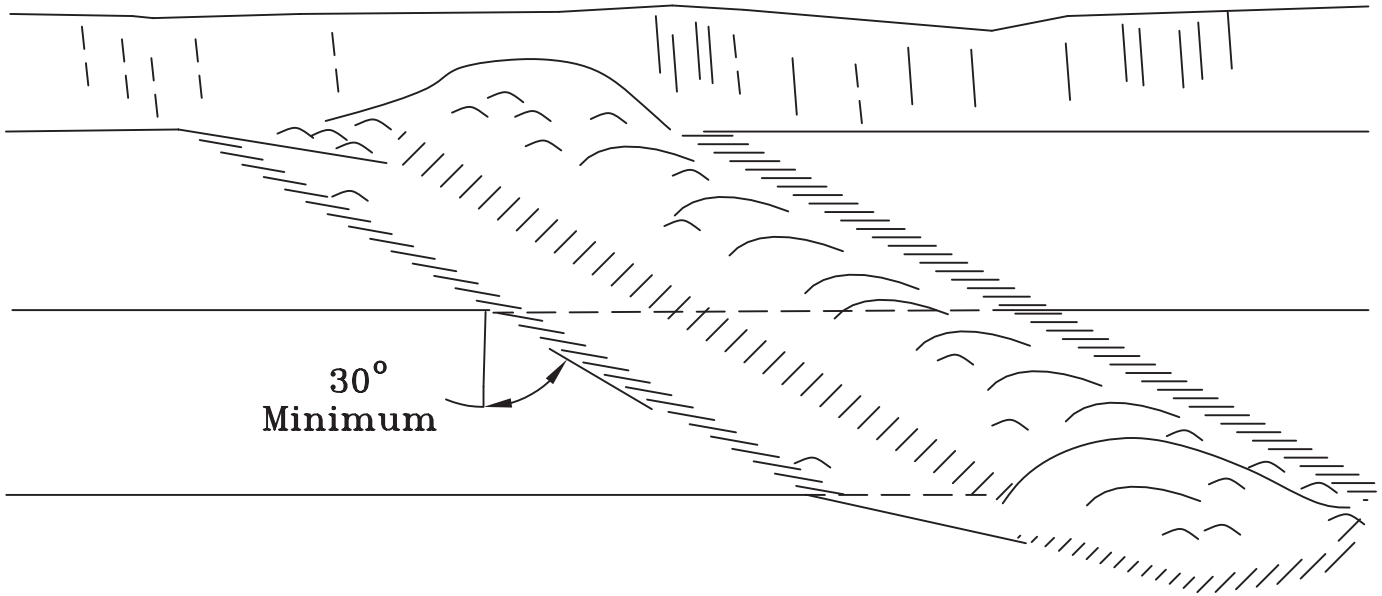
### BRUSHING LIST

Road Number	Road Width (feet)	Ditch		Brushing Limits (feet)			Remarks  <u>In addition to brushing...</u>
		Width (feet)	Depth (feet)	B1	B2	B3	
		W	D				
Zig Zag Pit	12	2	1	5	5	14	Cut brush an extra 5 feet on the inside of curves to provide extra visibility on switchbacks and curves
1	14	2	1	5	5	14	

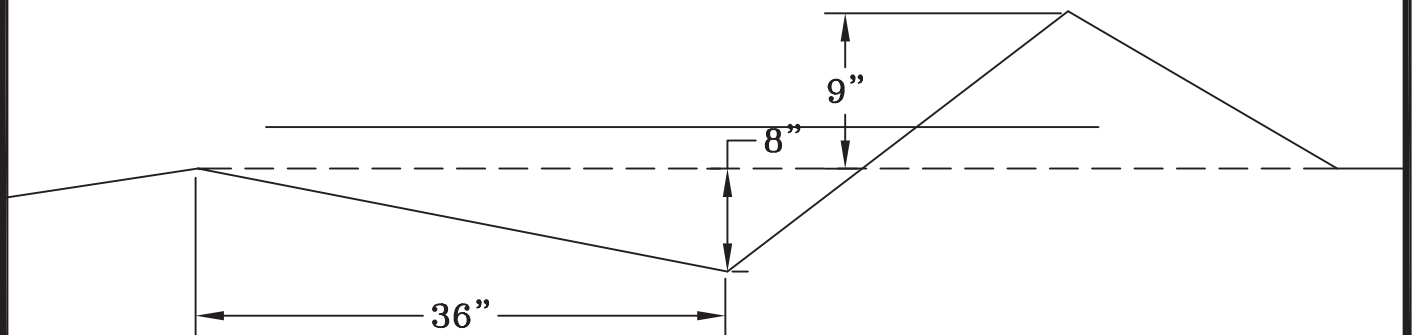
B1 extends horizontally the specified distance in feet from the back of the ditch. B2 extends horizontally the specified distance in feet from the outside edge of the running surface. Brush is defined as all non-merchantable vegetative material found within the specified limits. Brush that is cut shall be removed to the downhill side of the road and placed such that it will not block ditches, ditch-outs, or drainage structures. Signs, culvert location markers, culverts or any other identification features damaged by brushing shall be replaced at the Purchasers expense. Stumps shall not be greater than 3 inches tall after brushing.

# Drivable Water Bar Detail

## Cross Ditch



## Cross Section at Centerline



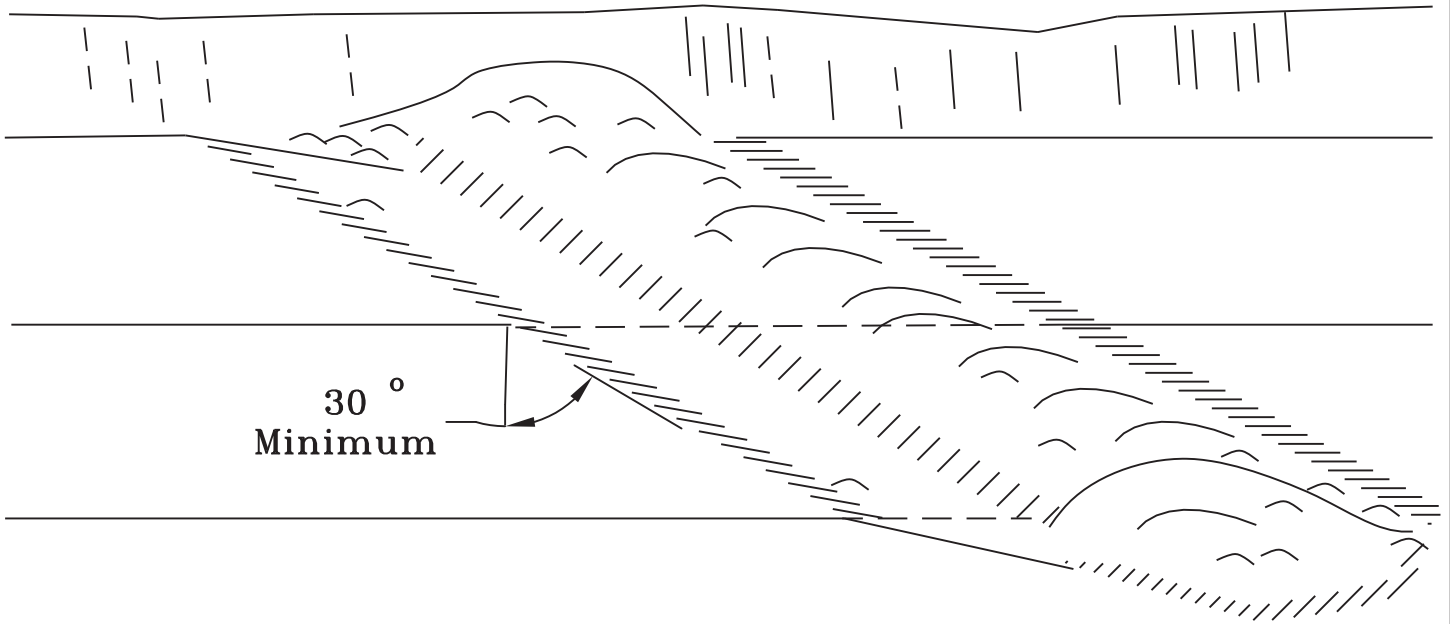
Drivable Water Bar Detail

Scale : None  
Drawn by: M.A.D.

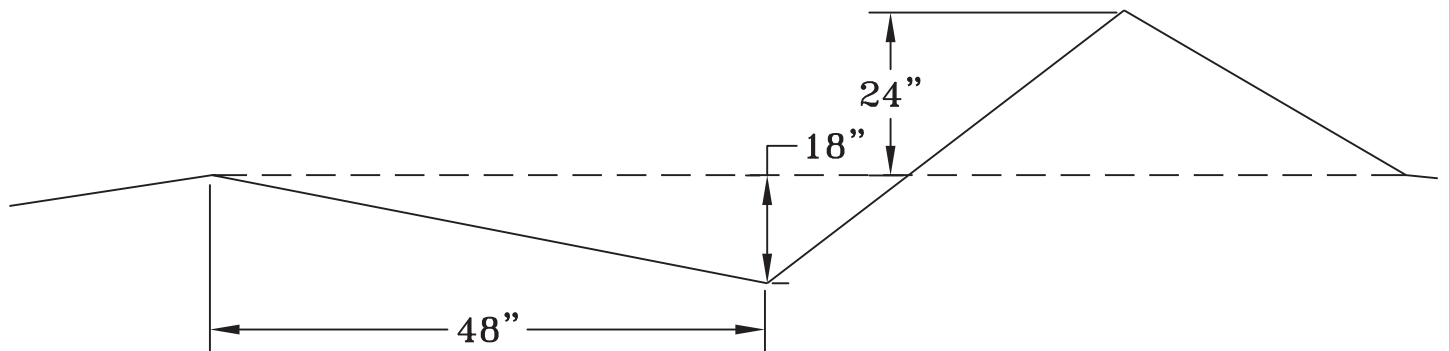


# Non-Drivable Water Bar Detail

## Cross Ditch



## Cross Section at Centerline



Non-Drivable Water Bar Detail

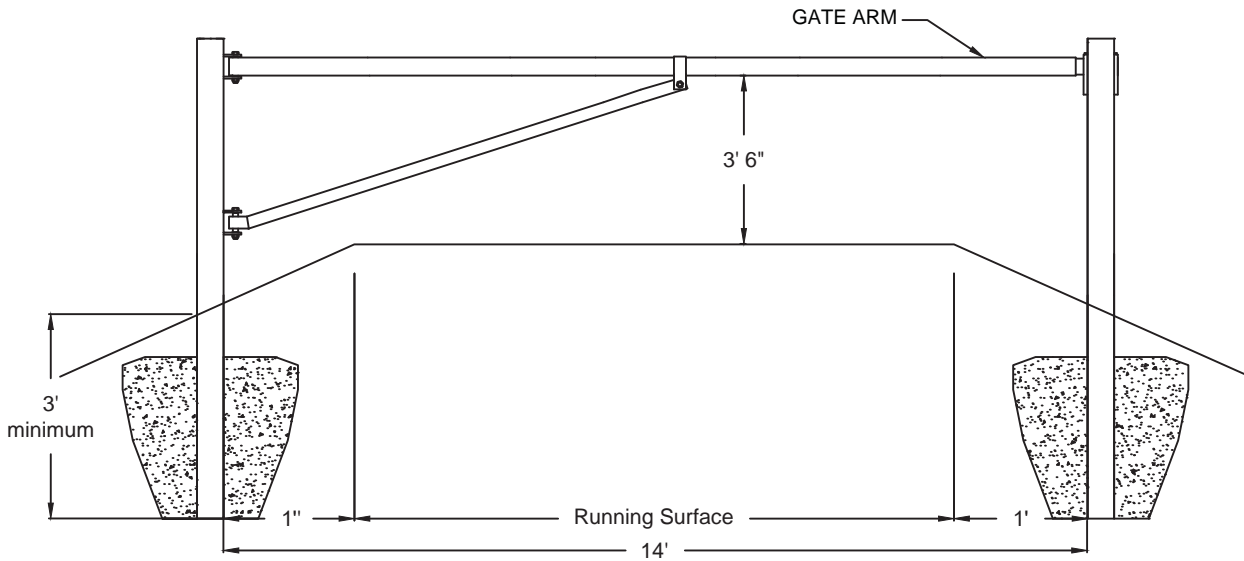
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Drawn by: M.A.D.

# GATE INSTALLATION DETAIL, pg 1 of 3

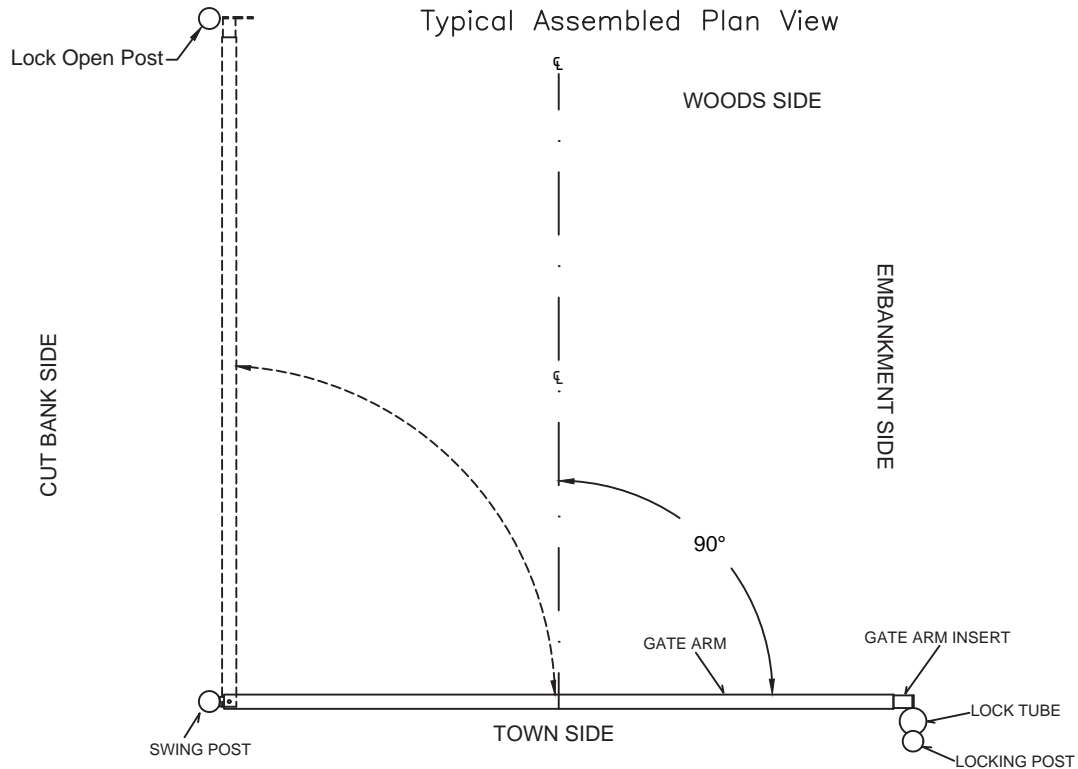
Not to Scale

- 1) Gate shall be installed perpendicular to the road centerline.
- 2) All gate posts, including lock-open post shall be installed plumb and at the same elevation.
- 3) Each gate post including lock-open post, shall be set in at least 2 cubic yards of 3000psi concrete. Pre-cast insta-gate footings may be used as an alternative. Minimum footing size is 2ft x 2ft x 4ft.
- 4) Each gate post, including lock open post, shall be filled with concrete.
- 5) Lock-open post shall be set so that the chain may be locked to the lock plate.
- 6) Site specific gate installation requirements shall be as directed by the Contract Administrator.

Typical Assembled Profile View

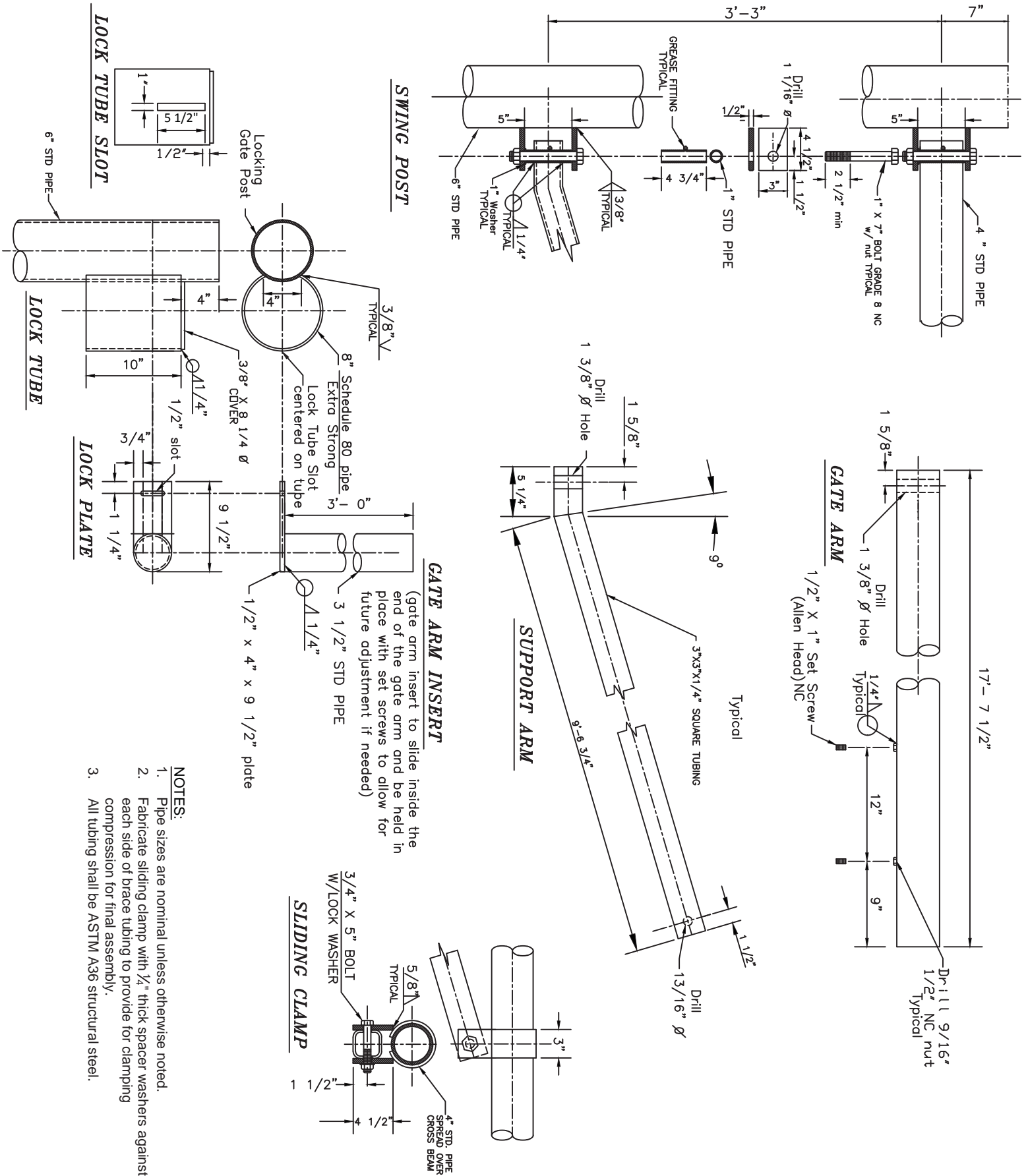


Typical Assembled Plan View



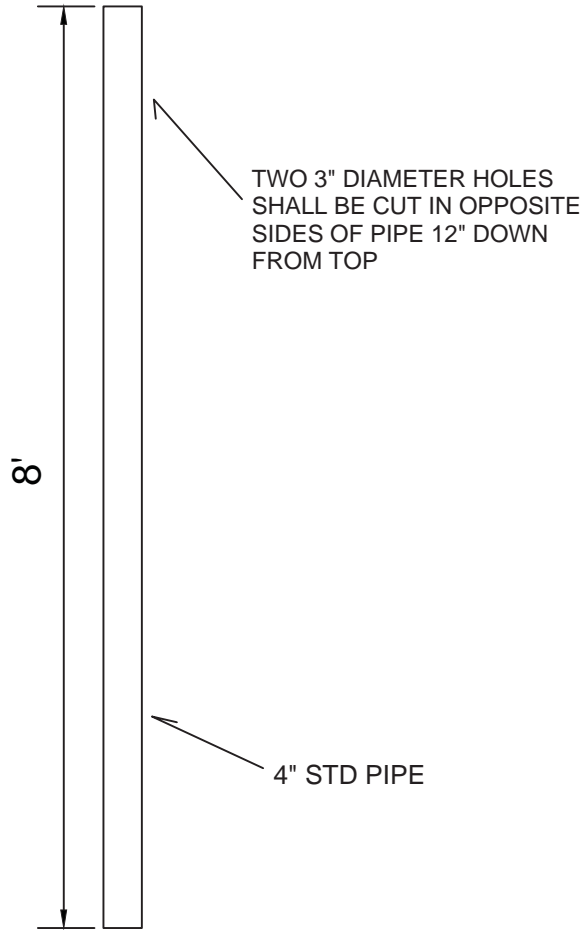
# GATE FABRICATION DETAIL

Page 2 of 3  
Not to Scale



# GATE FABRICATION DETAIL

Page 3 of 3  
Not to Scale



## LOCK OPEN POST

### NOTES:

1. After fabrication, all gate components including lock open posts shall be sanded to remove all rust, scale and oily substances and painted with a coat of brown primer. Then painted with Rodda Safety yellow paint or an equivalent.
2. Primer shall be Sherwin Williams Pro-cryl Universal Primer or an equivalent approved by the Contract Administrator.

**Legal Description: SE ¼ SW ¼ Section 2 Township 14 North Range 6 East, W.M.**

**Rock Pit Name: Zig Zag Pit**

**PIT DEVELOPMENT PLAN, pg 1of 2**

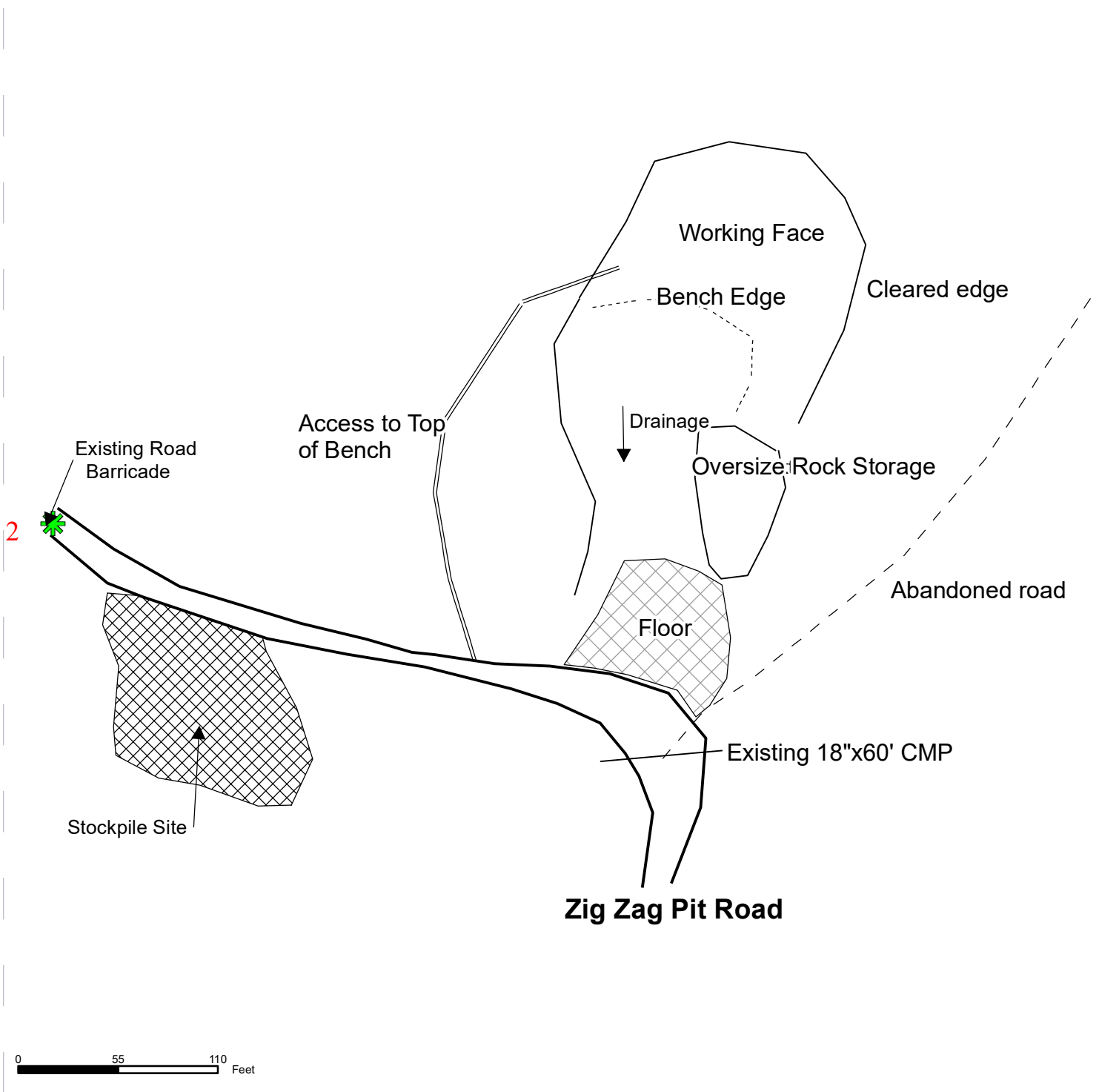
- 1) Pile debris in clean, burnable piles as directed by the Contract Administrator.
- 2) A minimum stripping width of 20 feet must be maintained from all pit faces and at the termination of operations pit shall be left in said condition. No undercutting shall be permitted.
- 3) Pile all reject rock and overburden away from pit working area as shown on pit drawing. Oversize material shall not exceed 10% of the total mined for the sale. Oversize material is defined as rock fragments larger than 1.5 feet in any dimension.
- 4) Maximum face height shall be 20 feet.
- 5) The minimum width of benches shall be 15 feet, unless specified otherwise, in writing by the Contract Administrator.
- 6) Pit walls shall be maintained in a condition to minimize the possibility of the walls sliding or failing.
- 7) Pit walls shall not be undermined or over-steepened. The maximum slope of the walls shall be consistent with recognized engineering standards for the type of material being excavated in accordance with the following table.

Pit Material	Maximum Slope Ratio (Horiz. :Vert.)	Maximum Slope Angle (Vert. Degrees)
Sand	2:1	27
Gravel	1.5:1	34
Common Earth	1:1	45
Fractured Rock	0.5:1	63
Solid Rock	0:1	90

- 8) Pit floor shall be sloped to allow drainage as shown. No ponding will be allowed.
- 9) Required stockpile shall be placed in the rock stockpile sight as shown on pit drawing.
- 10) At the completion of operations, Purchaser shall request written approval from the Contract Administrator for final rock source condition and compliance with the terms of this plan.
- 11) Quantity and quality of ballast pit are not guaranteed by the State.
- 12) See "Zig Zag Pit Plan View, pg 2 of 2" drawing for additional information.

# Zig Zag Pit Plan, pg 2 of 2

122°1'W



122°1'W

- Public Land Survey Townships
- Public Land Survey Sections

\*Map drawn from aerial photo.  
All locations are approximate.



All State Unless Otherwise Noted  
Prepared By: hadm490 4/12/2023  
30-103631

DEPARTMENT OF NATURAL RESOURCES - SOUTH PUGET SOUND REGION

SUMMARY - ROAD DEVELOPMENT COSTS

(COSTS ARE ESTIMATES ONLY & ARE NOT GUARANTEED BY THE STATE OR PART OF THE ROAD PLAN.)

SALE/PROJECT NAME: **Ham Hock**

CONTRACT NUMBER: **30-103631**

TYPE:	Construction	Reconstruction	Pre-Haul Maintenance
NUMBER OF STATIONS:	9.30	0.00	243.19
AVG. SIDESLOPE:	8	0	
CLEARING AND GRUBBING:	\$450	\$0	
EXCAVATION AND FILL:	\$2,013	\$0	
MISC. MAINTENANCE:			\$2,784
ROCK TOTALS:			
Ballast:	\$2,766	\$0	\$21,481
Surfacing:	\$1,054	\$0	\$0
Riprap/Quarry Spalls:	\$0	0	\$0
Stockpiles:			\$95,000
CULVERTS AND FLUMES:	\$0	\$0	\$0
STRUCTURES:	\$0	\$0	\$0
GENERAL EXPENSES:	\$691	\$0	\$9,541
MOBILIZATION:	\$3,725	\$0	\$3,725
<b>TOTAL COSTS:</b>	<b>\$10,699</b>	<b>\$0</b>	<b>\$132,531</b>
COST PER STATION:	\$1,150	#DIV/0!	\$545
<b>POST HAUL COSTS:</b>	<b>\$14,248</b>		

NOTE1: This appraisal has no allowance for profit and risk.  
 NOTE2: This appraisal does not account for optional rock.

TOTAL (All Roads) =	\$157,478
SALE VOLUME MBF =	3,381
TOTAL COST PER MBF =	\$46.58

Plans to be furnished by:

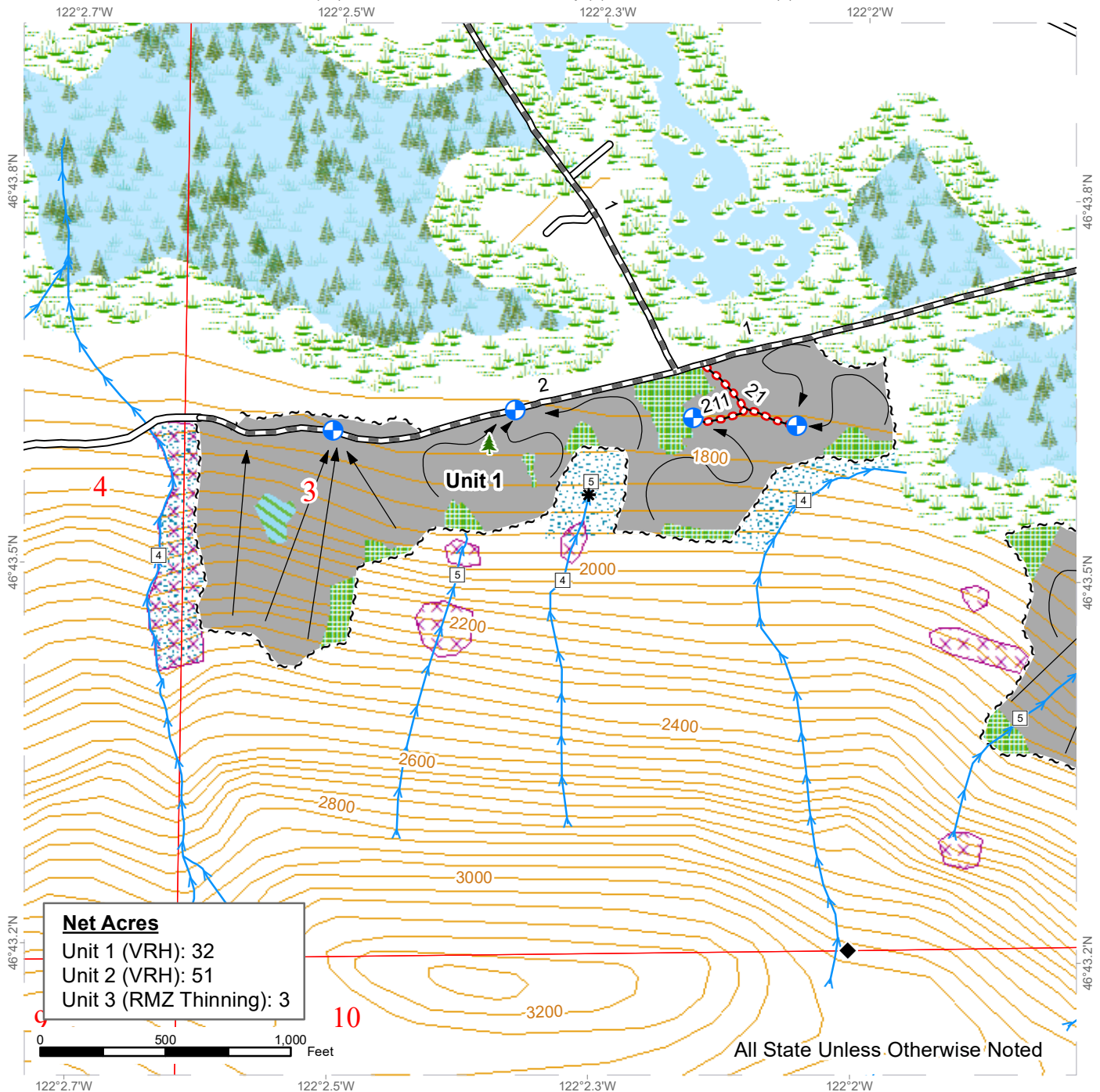
Compiled by:     M. Bell    

Date:     03/10/23

# LOGGING PLAN MAP

**SALE NAME:** HAM HOCK  
**AGREEMENT#:** 30-103631  
**TOWNSHIP(S):** T14R6E  
**TRUST(S):** Administrative Site (13), Common School and Indemnity (3), State Forest Transfer (1)

**REGION:** South Puget Sound Region  
**COUNTY(S):** Lewis  
**ELEVATION RGE:** 1760-2360



**Net Acres**  
 Unit 1 (VRH): 32  
 Unit 2 (VRH): 51  
 Unit 3 (RMZ Thinning): 3

All State Unless Otherwise Noted

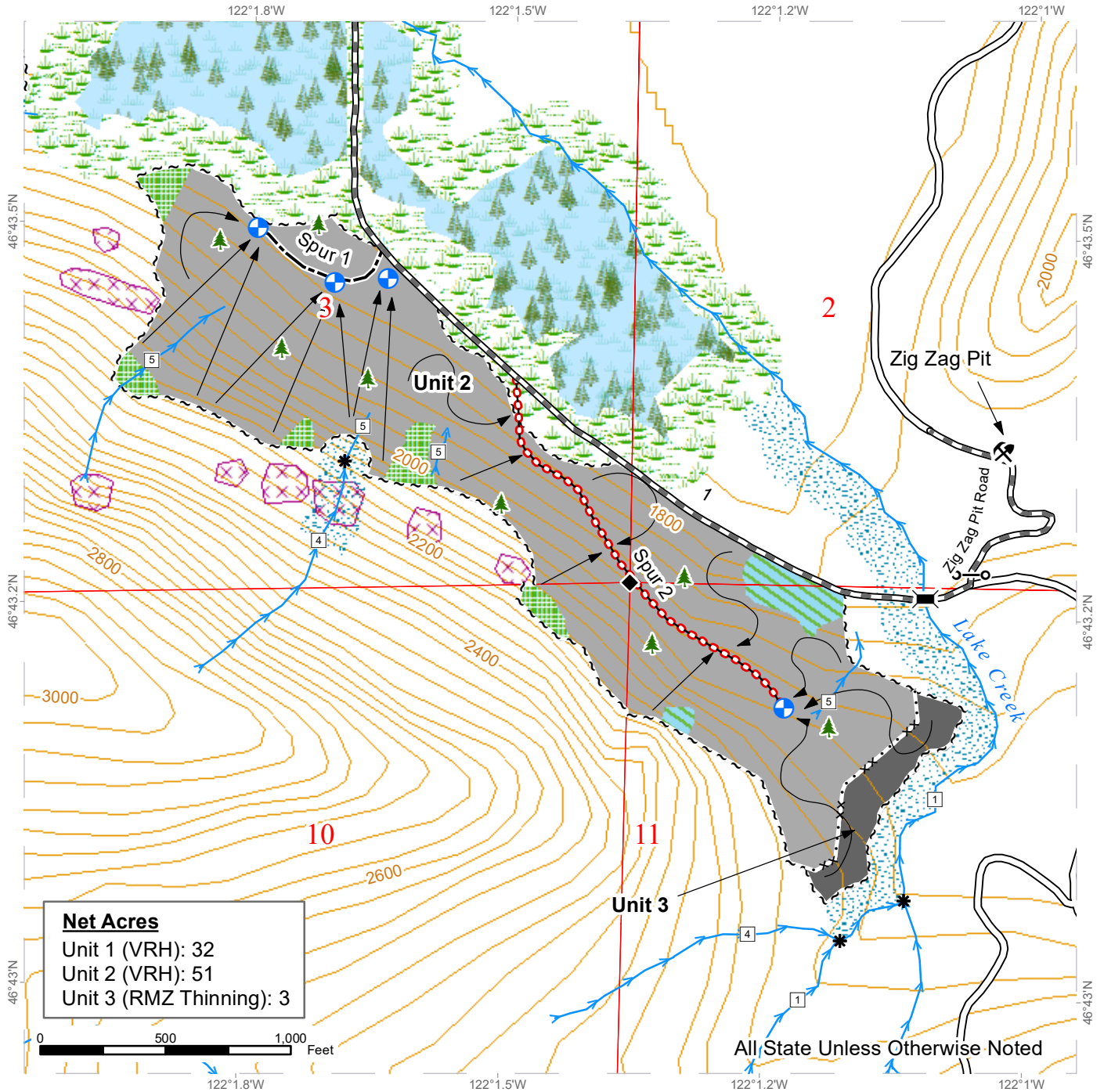
Variable Retention Harvest	Leave Tree Area	Stream Type Break
Ground Harvest	Wetland Mgt Zone	Landing - Proposed
Cable Harvest	Wetlands - Non-forested	Leave Tree Area <1/4-acre
Sale Boundary Tags	Riparian Mgt Zone	Contours 40-foot
Existing Roads	Forested Wetland	Survey Monument
Required Pre-Haul Maintenance	Tailhold Restriction Area	Public Land Survey Sections
Required Abandonment	Streams	
Non-Tradeable Leave Clump	Stream Type	



# LOGGING PLAN MAP

SALE NAME: HAM HOCK  
 AGREEMENT#: 30-103631  
 TOWNSHIP(S): T14R6E  
 TRUST(S): Administrative Site (13), Common School and Indemnity (3), State Forest Transfer (1)

REGION: South Puget Sound Region  
 COUNTY(S): Lewis  
 ELEVATION RGE: 1760-2360



**Net Acres**  
 Unit 1 (VRH): 32  
 Unit 2 (VRH): 51  
 Unit 3 (RMZ Thinning): 3

All State Unless Otherwise Noted

Variable Retention Harvest	Required Abandonment	Stream Type Break
RMZ Thinning	Non-Tradeable Leave Clump	Bridge
Ground Harvest	Leave Tree Area	Gate Installation
Cable Harvest	Wetland Mgt Zone	Landing - Proposed
Sale Boundary Tags	Riparian Mgt Zone	Leave Tree Area <1/4-acre
Special Management Unit Boundary/VRH Boundary Tags	Forested Wetland	Rock Pit
Existing Roads	Tailhold Restriction Area	Contours 40-foot
Required Pre-Haul Maintenance	Streams	Survey Monument
Optional Construction	Stream Type	Public Land Survey Sections



2672155  
787068

1-5  
+MAP  
RC 7/11/2011

Auditor's Note: Copy of  
map filed in vault in  
Map File Folder.

EASEMENT

THIS AGREEMENT, made and entered into this 4<sup>th</sup> day of February, 19 74, by and between BURLINGTON NORTHERN, INC., a Delaware corporation, herein called "Burlington," and STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called "State," WITNESSETH:

I

A. Burlington for and in consideration of the grant hereinafter made by State, hereby grants and conveys to State, its successors and assigns, a permanent easement assignable in whole or in part upon, over, and along rights of way sixty (60) feet in width, over and across the lands in Lewis County, Washington, described on the attached "Exhibit A," being thirty (30) feet on each side of the center line(s) of a road or roads located approximately as shown in red on the attached "Exhibit B."

Subject as to said lands to all matters of public record.

B. State, for and in consideration of Eleven Thousand Six Hundred Thirty and No/100 Dollars (\$11,630.00) for cost shared roads and the grant hereinabove made, hereby grants and conveys to Burlington, its successors and assigns, a permanent easement assignable in whole or in part upon, over, and along rights of way sixty (60) feet in width over and across the lands in Lewis County, Washington, described on the attached "Exhibit A," being thirty (30) feet on each side of the center line(s) of a road or roads located approximately as shown in green on the attached "Exhibit B."

Subject as to said lands to all matters of public record.

II

The parties hereto hereby agree that the rights hereinabove granted by one party hereto to the other shall be subject to the following terms and conditions:

1. The easements are conveyed for the purposes of construction, reconstruction, use and maintenance of a road or roads for the purpose of providing access to and from lands now owned or hereafter acquired by the parties hereto.

2. Each party hereto reserves for itself, its successors and assigns, the right at all times for any purpose, to cross and recross at any place on grade or otherwise, and to use said rights of way in a manner that will not unreasonably interfere with the rights granted herein.

3. Each party hereto may grant to third parties, upon such terms as it chooses, any or all of the rights reserved by it herein; provided, that use by such party shall be subject to the terms and conditions of this agreement and shall not unreasonably interfere with the rights granted to the other party herein.

4. Each party hereto may permit its respective agents, contractors, licensees, lessees, purchasers of timber or other valuable materials, and their agents, hereinafter individually referred to as "Permittee" and collectively referred to as "Permittees," to exercise the rights granted to it herein; provided, that when a party hereto or one of its Permittees plans to use any portion of said roads for the purpose of hauling timber or other valuable materials, such party shall notify the other thereof at least fifteen (15) days prior to the commencement of use of said rights, advising of the portion of road to be used, the approximate dates when such use will begin and end, and of the approximate volumes of forest products or valuable materials to be hauled and forthwith upon the completion of such use notify the other party thereof.

App. No. 36162

5. The cost of road maintenance and resurfacing shall be allocated on the basis of respective uses of said roads. When any party uses a road, that party shall perform or cause to be performed, or contribute or cause to be contributed, that share of maintenance and resurfacing occasioned by such use as hereinafter provided. During periods when a road is being used solely by one party, such party shall maintain that portion of said road so used to the standards existing at the time use is commenced. During periods when more than one party is using the same road, or any portion thereof, the parties hereto shall meet and establish necessary maintenance provisions. Such provisions shall include, but shall not be limited to:

(a) the appointment of a maintainer, which may be one of the parties hereto or any third party, who will perform or cause to be performed at a reasonable and agreed upon rate the maintenance and resurfacing of the road or the portion thereof being used; and

(b) a method of payment by which each party using said road or a portion thereof, shall pay its pro rata share of the cost incurred by said maintainer in maintaining or resurfacing said road or portion thereof.

For purposes of this agreement, maintenance is defined as the work normally necessary to preserve and keep the roadway, road structure and road facilities as nearly as possible in their present condition or as hereafter improved.

6. Each party using any portion of a road shall repair, or cause to be repaired, at its sole cost and expense, that damage to said road occasioned by it which is in excess of that which it would cause through normal and prudent usage of said road. Should inordinate damage to a road occur which is not caused by an authorized user of said road, the parties hereto shall meet to agree upon the cost of replacement, the party to undertake the replacement, and the shares of replacement cost to be borne by each user of said road.

7. Unless the parties hereto agree in writing to share the costs of improvements in advance of such improvements being made, such improvements shall be solely for the account of the improver.

8. Each party hereto reserves to itself all timber now on or hereafter growing within the rights of way on its said lands.

9. Each party hereto shall require each of its Permittees, before using any of said roads on the lands of the other party hereto, to:

(a) obtain and during the term of such use, maintain a policy of liability insurance in a form generally acceptable in the trade and customary in the area of said rights of way, insuring said Permittee against liability arising out of its operations, including use of vehicles. Minimum amounts of insurance shall be:

(1) For log haulers, and other miscellaneous users operating heavy trucks (over one (1) ton), One Hundred Thousand Dollars (\$100,000.00) for injury to one person, Three Hundred Thousand Dollars (\$300,000.00) for any one occurrence, and One Hundred Thousand Dollars (\$100,000.00) property damage for any one occurrence;

(2) For fern cutters, bough cutters, shake cutters, or other miscellaneous users operating pickup trucks, light trucks (under one (1) ton) or passenger cars for the purpose of transporting miscellaneous forest products, Twenty-five Thousand Dollars (\$25,000.00) for injury to one person, Fifty Thousand Dollars (\$50,000.00) for any one occurrence, and Five Thousand Dollars (\$5,000.00) property damage for any one occurrence; or

(3) Such other limits as the parties hereto may agree upon in writing from time to time.

(b) deliver to each party hereto a certificate from the insurer of said Permittee certifying that coverage is not less than the above named amounts is in force and that, in the event of cancellation or modification of such coverage, the insurer will give each party hereto ten (10) days written notice prior to any cancellation or modification.

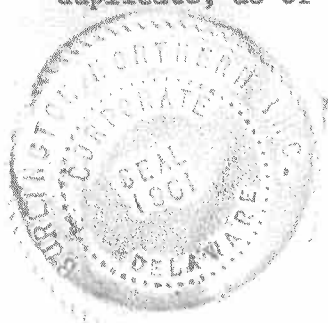
NOW THEREFORE:

1. Burlington shall make arrangements to pay to State the sum of Eleven Thousand Six Hundred Thirty Dollars (\$11,630.00) for the rights granted to Burlington by State in the easement. It is the intention of Burlington, in the management of Burlington's lands in the easement area, to make available for purchase as soon as is practical, that timber which is mature and ready for harvest so that the obligation incurred by Burlington hereunder may be extinguished within a period of five (5) years from the date hereof.

2. Burlington may accelerate the payment of the unpaid balance of the total sum set forth in Paragraph I with other funds as such becomes available.

3. When State has received the sum of \$11,630.00, no further payment shall be required of purchasers of Burlington timber, or other valuable materials, pursuant to this Agreement and Burlington shall thereafter have free use of said road system, except for pro rata share of maintenance, replacement and improvement as set forth in Part II.

IN WITNESS WHEREOF, the parties hereto have executed this instrument, in duplicate, as of the day and year first above written.



BURLINGTON NORTHERN, INC.

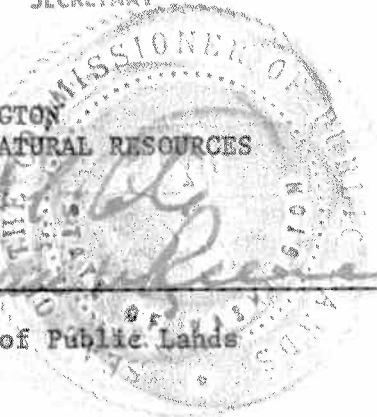
By C.R. Binger President Resources Division Title

Attest [Signature] SECRETARY Title

Affix Seal of Corporation

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

By Bert L. Cole Commissioner of Public Lands



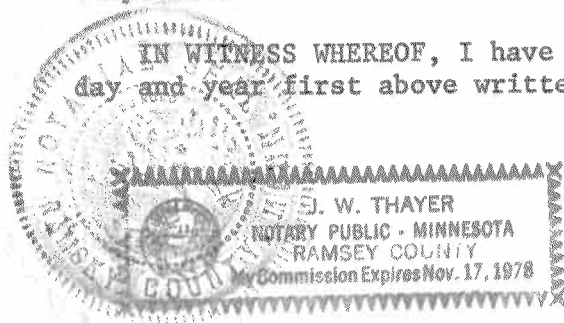
Affix Seal of Commissioner of Public Lands

App. No. 36162  
db

STATE OF Minnesota )  
County of Ramsey ) ss

On this 4th day of February, 1974, before me personally appeared C.R. BINGER and R.M.O'KELLY, to me known to be the PRESIDENT RESOURCES DIVISION and SECRETARY, respectively, of BURLINGTON NORTHERN INC., the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.

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



[Signature]  
Notary Public in and for the State of Minnesota, residing at St. Paul.

2672155

4

STATE OF WASHINGTON )  
 ) ss  
COUNTY OF THURSTON )

On this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me personally appeared BERT L. COLE, to me known to be the Commissioner of Public Lands, and ex officio administrator of the Department of Natural Resources of the State of Washington, the Department that executed the within and foregoing instrument on behalf of the State of Washington, and acknowledged said instrument to be the free and voluntary act and deed of the State of Washington for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the official seal of the Commissioner of Public Lands for the State of Washington.

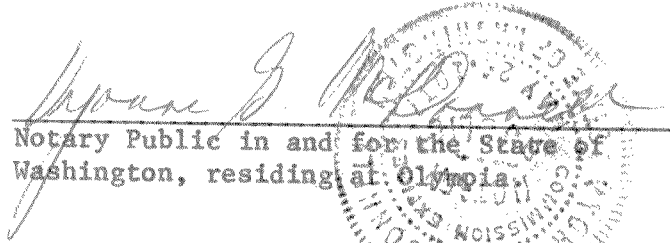
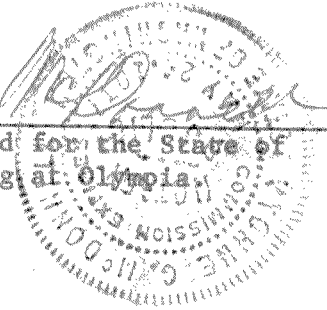
IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year set forth above.

\_\_\_\_\_  
Notary Public in and for the State of Washington, residing at Olympia.

STATE OF WASHINGTON )  
 ) ss  
COUNTY OF THURSTON )

On this 19<sup>th</sup> day of February, 19 74, before me personally appeared BRUCE W. REEVES, to me known to have signature authorization delegated to him to sign for BERT L. COLE, the Commissioner of Public Lands, and ex officio administrator of the Department of Natural Resources of the State of Washington, the Department that executed the within and foregoing instrument on behalf of the State of Washington, and acknowledged said instrument to be the free and voluntary act and deed of the State of Washington for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the official seal of the Commissioner of Public Lands for the State of Washington.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year set forth above.

  
\_\_\_\_\_  
Notary Public in and for the State of Washington, residing at Olympia.  




2672155

State to Burlington Northern

<u>Description</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>
NE $\frac{1}{4}$ SE $\frac{1}{4}$ , S $\frac{1}{2}$ SE $\frac{1}{4}$	34	15 North	6 East, W.M.
NW $\frac{1}{4}$ SW $\frac{1}{4}$	1	14 North	6 East, W.M.
SW $\frac{1}{4}$ NE $\frac{1}{4}$ , N $\frac{1}{2}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$	2	14 North	6 East, W.M.
NE $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$	3	14 North	6 East, W.M.
N $\frac{1}{2}$ SE $\frac{1}{4}$ , SW $\frac{1}{4}$ SE $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$ , SW $\frac{1}{4}$ SW $\frac{1}{4}$	4	14 North	6 East, W.M.
N $\frac{1}{2}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$	8	14 North	6 East, W.M.
NW $\frac{1}{4}$ NW $\frac{1}{4}$	9	14 North	6 East, W.M.
SW $\frac{1}{4}$ NE $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$ , NW $\frac{1}{4}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$	16	14 North	6 East, W.M.
W $\frac{1}{2}$ NE $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SE $\frac{1}{4}$	17	14 North	6 East, W.M.
W $\frac{1}{2}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$	20	14 North	6 East, W.M.
SW $\frac{1}{4}$ NE $\frac{1}{4}$ , E $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , N $\frac{1}{2}$ SW $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$	28	14 North	6 East, W.M.

Burlington Northern to State

<u>Description</u>	<u>Section</u>	<u>Township</u>	<u>Range</u>
NE $\frac{1}{4}$ NE $\frac{1}{4}$	21	14 North	6 East, W.M.

RECORDED FILED VOL PAGE  
 74 FEB 26 AM 8:43  
 ROBERT L. VERENON, AUDITOR  
 LEWIS COUNTY

EXHIBIT A

Recorded JUN 21 1976 Time 1:34 pm  
 At the Pierce County Auditor's Office  
 Richard A. Greco, Auditor  
 By Dr. Balcom  
 Deputy Auditor

VOL. 85 PAGE 584

2672155

AI FA

FIRST SUPPLEMENT EASEMENT

THIS SUPPLEMENTAL AGREEMENT, made and entered into this 18<sup>TH</sup> day of OCTOBER, 1976, by and between BURLINGTON NORTHERN, INC., a Delaware corporation, herein called "Burlington," and STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called "State," WITNESSETH:

Whereas, on the 4th day of February, 1974, Burlington and the State entered into an easement exchange hereinafter called Original Easement, which was recorded in the records of Lewis County, Washington, on the 26th day of February, 1974, in Volume 85 of Deeds, pages 580 through 585 under Auditor's File No. 787068, and in the records of Pierce County, Washington, on the 21st day of June, 1976, under Auditor's File No. 2672155. Said Original Easement is hereby supplemented as follows:

GCZ

I

A. Burlington for and in consideration of the grant hereinafter made by the State, hereby grants and conveys to State, its successors and assigns, a permanent easement assignable in whole or in part upon, over, and along rights of way sixty (60) feet in width, over and across the N $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$ , S $\frac{1}{2}$ NE $\frac{1}{4}$  of Section 33, Township 15 North, Range 6 East, W.M., in Lewis and Pierce Counties, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in red on the attached "Exhibit A."

Subject as to said lands to all matters of public record.

B. State, for and in consideration of Ten Thousand Sixty-Six and No/100 Dollars (\$10,066.00) and the grant hereinabove made, hereby grants and conveys to Burlington, its successors and assigns, a permanent easement assignable in whole or in part upon, over, and along rights of way sixty (60) feet in width over and across the W $\frac{1}{2}$ NW $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 3, Township 14 North, Range 6 East, W.M., and the SW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 34, Township 15 North, Range 6 East, W.M., in Lewis County, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in green on the attached "Exhibits B and C."

Subject as to said lands to all matters of public record.

EXCISE TAXE EXMPT DATE 12-28-76  
MAURICE RAYMOND, Pierce Co. Treasurer

II

NOW THEREFORE:

Virginia Kennedy DEPUTY

1. Burlington shall make arrangements to pay to State the sum of Ten Thousand Sixty-Six and No/100 Dollars (\$10,066.00) for the rights granted to Burlington by State in the easement. It is the intention of Burlington, in the management of its lands in the easement area, to make available for purchase as soon as is practical, that timber which is mature and ready for harvest so that the obligation incurred by Burlington hereunder may be extinguished within a period of five (5) years from the date hereof.

2. Burlington may accelerate the payment of the unpaid balance of the total sum set forth in Paragraph I with other funds as such becomes available.

3. When State has received the sum of \$10,066.00, no further payment shall be required of purchasers of Burlington timber, or other valuable materials, pursuant to this Agreement and Burlington shall thereafter have free use of said road system, except for pro rata share of maintenance, replacement, and improvement as set forth in Part II of the Original Easement.

Except as herein supplemented all of the terms, conditions and reservations of the Original Easement shall remain in full force and effect.



IN WITNESS WHEREOF, the parties hereto have executed this instrument, in duplicate, as of the day and year first above written.

BURLINGTON NORTHERN, INC.

By *Ch. Brady*  
President Resources Division Title

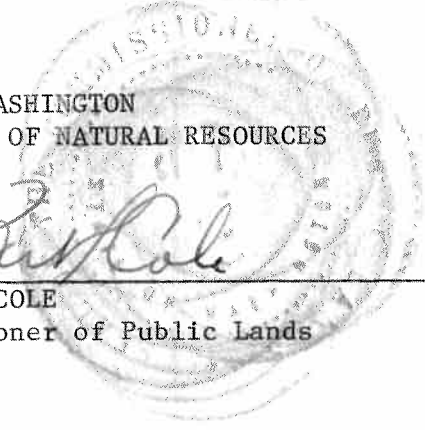
Attest *L.A. Downing*  
Asst. Secretary Title



Affix Seal of Corporation

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

By *Bert L. Cole*  
BERT L. COLE  
Commissioner of Public Lands



Affix Seal of Commissioner  
of Public Lands

Easement No. 1037  
App. No. 36162  
saa

APPROVED  
R/W SECTION *Plm*  
DATE *11-17-76*  
*W. Van L...*

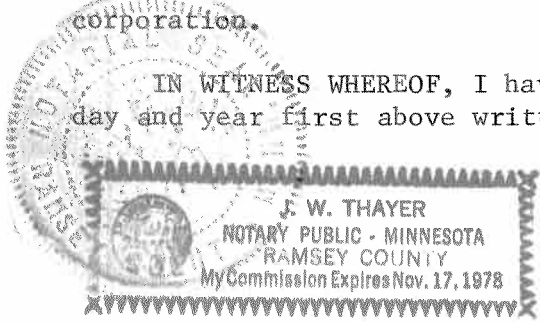
2708960

3

STATE OF Minnesota )  
County of Ramsey ) ss

On this 18th day of October, 19 76, before me personally appeared C. R. Binger and F. A. Deming, to me known to be the President Resources Division and Asst. Secretary, respectively, of BURLINGTON NORTHERN INC., the corporation that executed the within and foregoing instrument, and acknowledged said instrument to be the free and voluntary act and deed of said corporation, for the uses and purposes therein mentioned, and on oath stated that they were authorized to execute said instrument and that the seal affixed is the corporate seal of said corporation.

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

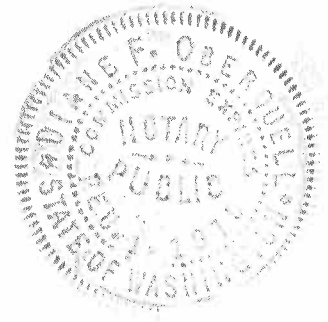


J. W. Thayer  
Notary Public in and for the State of Minnesota, residing at St. Paul.

STATE OF WASHINGTON )  
COUNTY OF THURSTON ) ss

On this 29th day of November, 19 76, before me personally appeared BERT L. COLE, to me known to be the Commissioner of Public Lands, and ex officio administrator of the Department of Natural Resources of the State of Washington, the Department that executed the within and foregoing instrument on behalf of the State of Washington, and acknowledged said instrument to be the free and voluntary act and deed of the State of Washington for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument and that the seal affixed is the official seal of the Commissioner of Public Lands for the State of Washington.

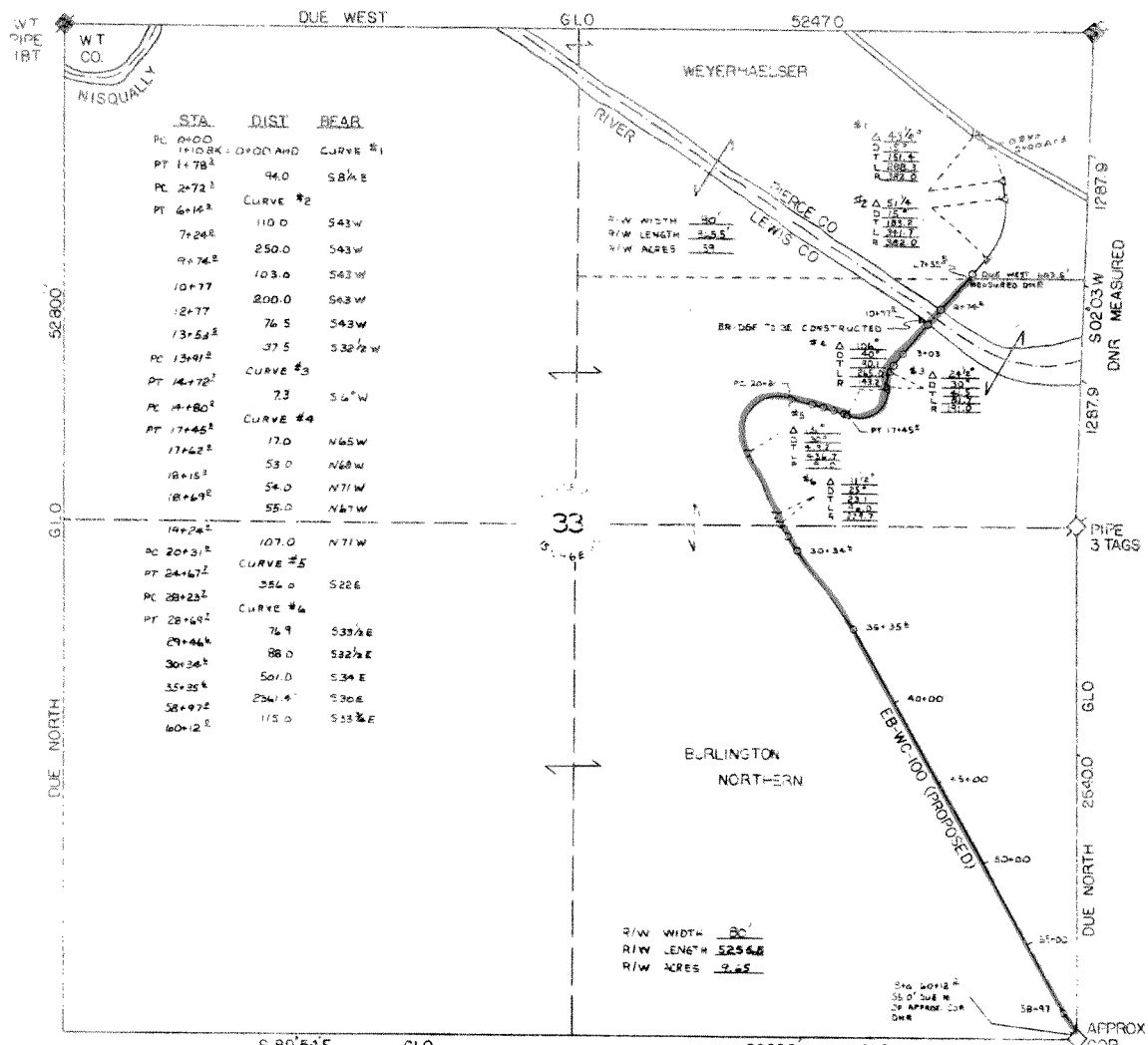
IN WITNESS WHEREOF, I have hereunto set my hand and seal the day and year set forth above.



Marian F. Ober  
Notary Public in and for the State of Washington, residing at Olympia.

(4)

STATE OF WASHINGTON  
 DEPARTMENT OF NATURAL RESOURCES  
 RIGHT OF WAY PLAT  
 EB-WC-100 ROAD  
 SEC. 33 T.15 N. R.6E WM  
 PIERCE, LEWIS COUNTY, WASH  
 SCALE: 1 INCH = 400 FEET



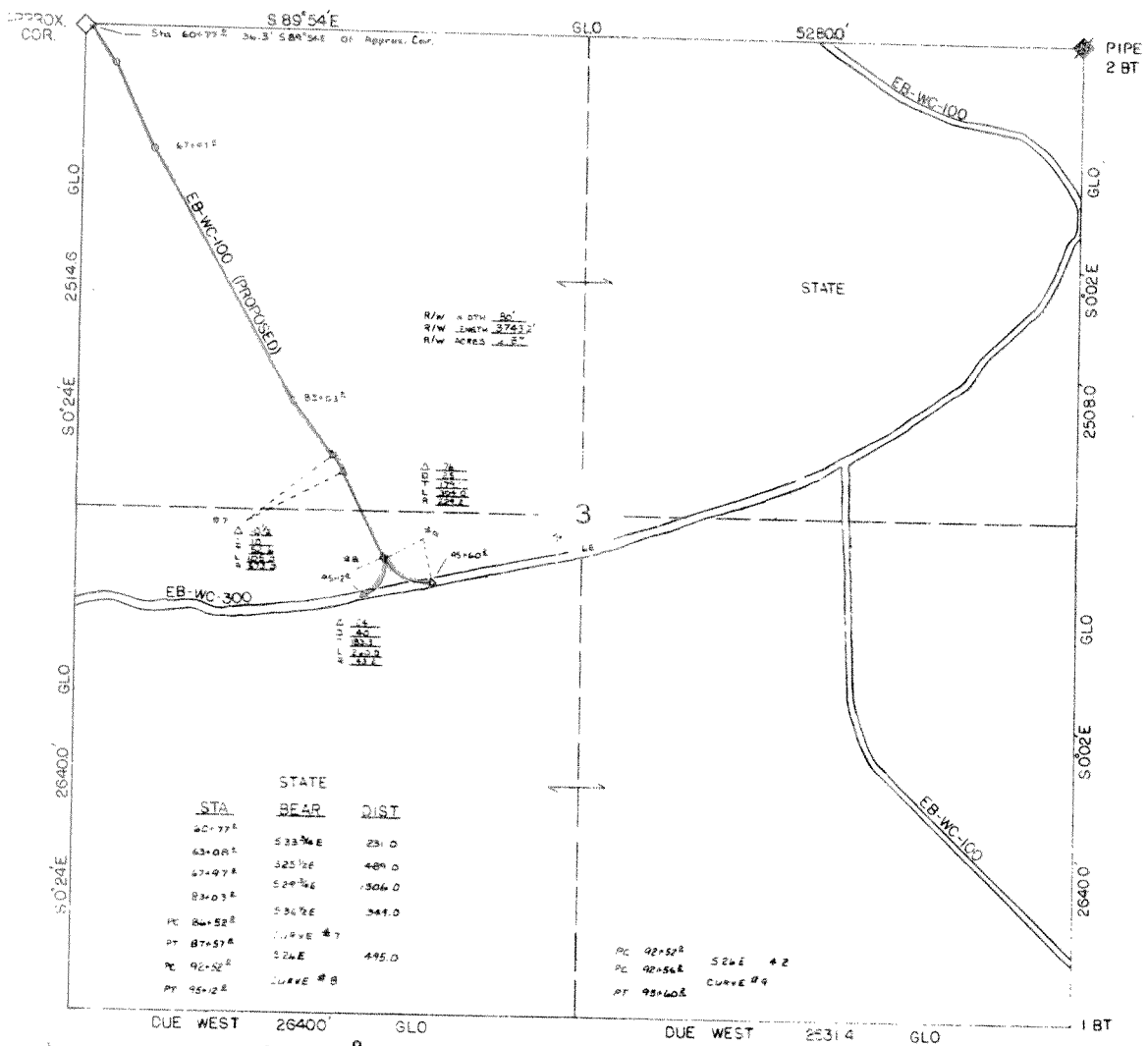
SCALE: 1 INCH = 400 FEET  
 S 89° 54' E GLO 52800 GLO  
 22 1/2°  
 SMackie, T. Smith  
 T. Smith  
 2-15-74  
 27943, 36162, 20, 1037  
 APPROVED:  
 AREA ENGINEER [Signature]  
 DIVISION, OLYMPIA

R/W WIDTH 80  
 R/W LENGTH 5254.6  
 R/W ACRES 9.65

5

2708960

STATE OF WASHINGTON  
 DEPARTMENT OF NATURAL RESOURCES  
 RIGHT OF WAY PLAT  
 EB-WC-100 ROAD  
 3 114 N R 6E WA  
 LEWIS COUNTY WASH



22 1/2°  
 S. Mackie, T. Smith  
 T. Smith  
 2-20-74  
 27943, 36162, 20, 1037

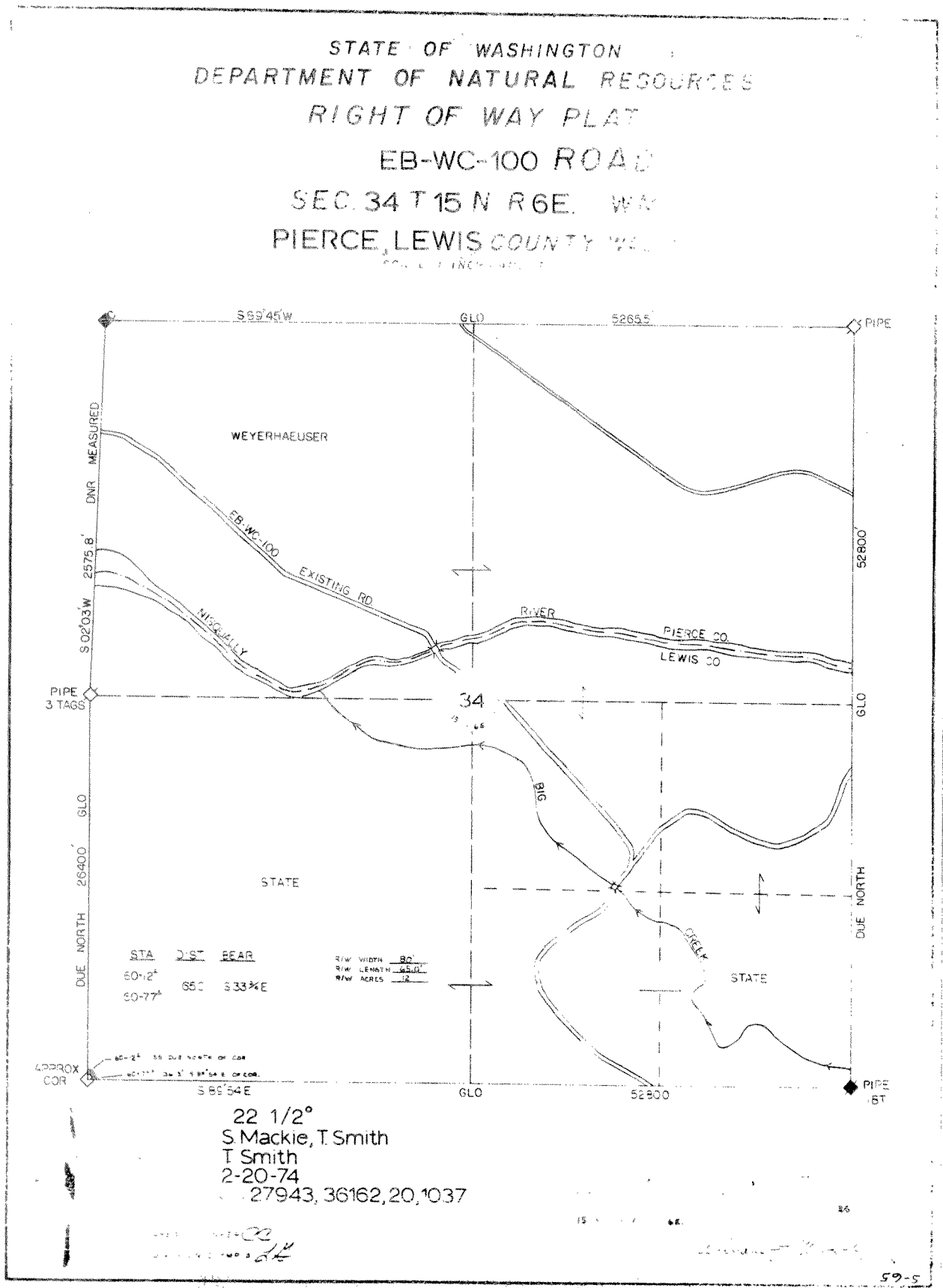
*Signature*

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STATE OF WASHINGTON  
 DEPARTMENT OF NATURAL RESOURCES  
 RIGHT OF WAY PLAT  
 EB-WC-100 ROAD  
 SEC. 34 T15 N R6E. W.W.  
 PIERCE, LEWIS COUNTY WASH.



Attn: Roger Huestis

State of Wash  
 Dept of Natural Resources  
 Olympia 98504  
 76 DEC 3 PM 2:55  
 RICHARD A. GRECO, AUDITOR

Recorded DEC 29 1976 Time 12:34 PM  
 At the Pierce County Auditor's Office  
 Richard A. Greco, Auditor  
 By Deputy Auditor M. Balcom

EXHIBIT C