



**TIMBER NOTICE OF SALE**

**SALE NAME:** CICADA EGG ROLL RMZ Sorts

**AGREEMENT NO:** 30-99613 - 30-99626

**AUCTION:** March 25, 2020 starting at 10:00 a.m.

**COUNTY:** Skagit, Whatcom

Northwest Region Office, Sedro Woolley, WA

**SALE LOCATION:** Sale located approximately 10 miles northwest of Burlington (Cicada) and 3 miles southwest of Acme (Egg Roll), WA.

**PRODUCTS SOLD AND SALE AREA:**

All delivered forest products, except trees marked with blue paint on the bole and root collar and forest products tagged out by yellow leave tree area tags, from an area bounded by white timber sale boundary tags, and the BX-ML and BL-ML, and all delivered forest products bound by orange right-of-way tags, meeting the specifications described below meeting the specifications described below; on parts of Section 2 in Township 36 North, Range 3 East, Sections 24, and 25 all in Township 37 North, Range 4 East W.M., containing 91 acres, more or less.

**MINIMUM BID AND ESTIMATED LOG VOLUMES:**

Agreement #	Sort #	Species and Sort Specifications	Average Log Length	Estimated Volume		Tons Per MBF	Minimum Bid Delivered Prices		Total Appraised Value	Bid Deposit
				Mbf	Tons		\$/mbf	\$/Ton		
99623	11	BM Sawlog 8"+	24	178	1282	7.2	\$295.00		\$52,510.00	\$0.00
99624	12	CW Sawlog 8"+	N/A	28	202	7.2	\$175.00		\$4,900.00	\$0.00

**Totals:** **206 1484**

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

**BID METHOD:** Sealed Bids **UNIT OF MEASURE:** MBF Scale/Tonnage Scale

**EXPIRATION DATE:** November 18, 2020 **ALLOCATION:** Export Restricted

**PAYMENT SECURITY:** To be determined by the State as described in Clause P-045.2 of the Purchaser’s Contract.

**BIDDING PROCEDURES:** A separate sealed bid and envelope must be submitted for each log sort. Prospective Purchasers may bid on any or all log sorts. On the day of sale the Purchaser must bring their bid deposit up to 10% of their total bid price. Complete bidding procedures and auction information may be obtained from the Northwest Region Office in Sedro Woolley WA. Phone number (360)856-3500.

**TIMBER EXCISE TAX:** Purchaser must pay the forest excise taxes associated with the log sorts delivered to them. The tax rate for this sale is 4.2 %. Taxable Stumpage = Total Delivered Value – (Harvest



## TIMBER NOTICE OF SALE

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Cost + Estimated Haul Cost + ARRF). For more information contact the Department of Revenue, Forest Tax Section at 1-800-548-8829.

Use the following rates for estimating taxable stumpage:

Harvest Cost = \$82.50 per MBF for sorts 01, 02, 03, 04, 05, 06, 07 and 10, \$112.50 per MBF for sorts 08 and 09, \$0.00 per MBF for sorts and \$12.00 per Ton for sorts 13 and 14.

Hauling Services Payment Rate per Ton  
= (Base Rate + Mileage Rate) x (Contractor's hauling bid factor)

Base Rate = \$2.35 per ton

Mileage Rate = ((\$0.16 x C miles) + (\$0.11 x A miles)) x Fuel Index Factor

ARRF = \$0.00 per MBF for sorts 13 and 14 and \$26.00 per MBF for sorts 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11 and 12.

Note: To calculate ARRF rates per ton use the tons\mbf conversion factor in the table above.

**CONFIRMATION:** Each sort is subject to confirmation following auction. Sorts will not be confirmed until at least 10 days after auction. Final contract award is contingent upon the State's haul cost analysis. Actual haul route may vary and is subject to change at the State's discretion.

**SPECIAL REMARKS:** The successful Purchaser(s) will be required to purchase logs from the sale area upon delivery to their location specified in the bid submitted. Logs will be delivered to the Purchaser's delivery location by the State's contract harvester. Purchaser is responsible for weighing and scaling costs. All tonnage loads will be weighed and all mbf loads will be scaled at State approved locations. The State reserves the right to determine where logs are authorized to be scaled and weighed.

\*Note: Harvesting services bid opening is tentatively scheduled for 01/08/2020, which will establish the Contractor's harvest rate and the Contractor's hauling bid factor. Fuel Index Factor is indexed quarterly by the State.

Weighted average C-miles = 3.0.

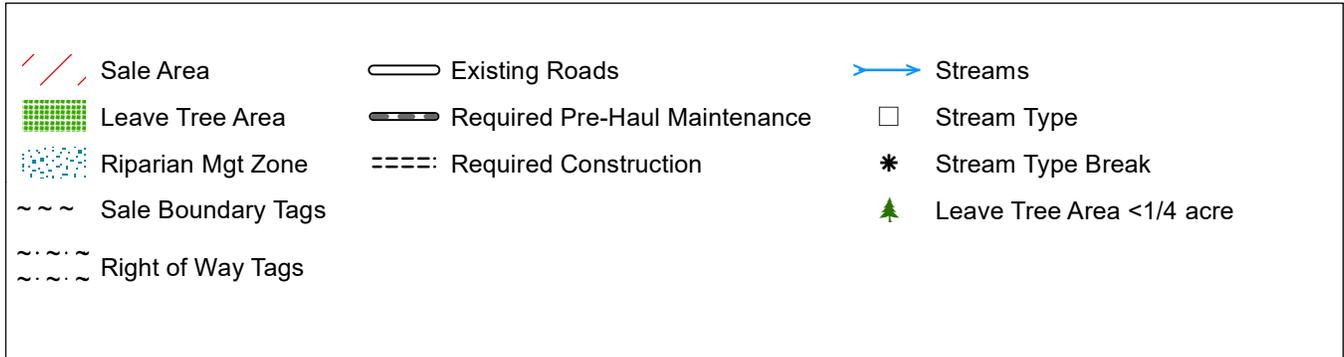
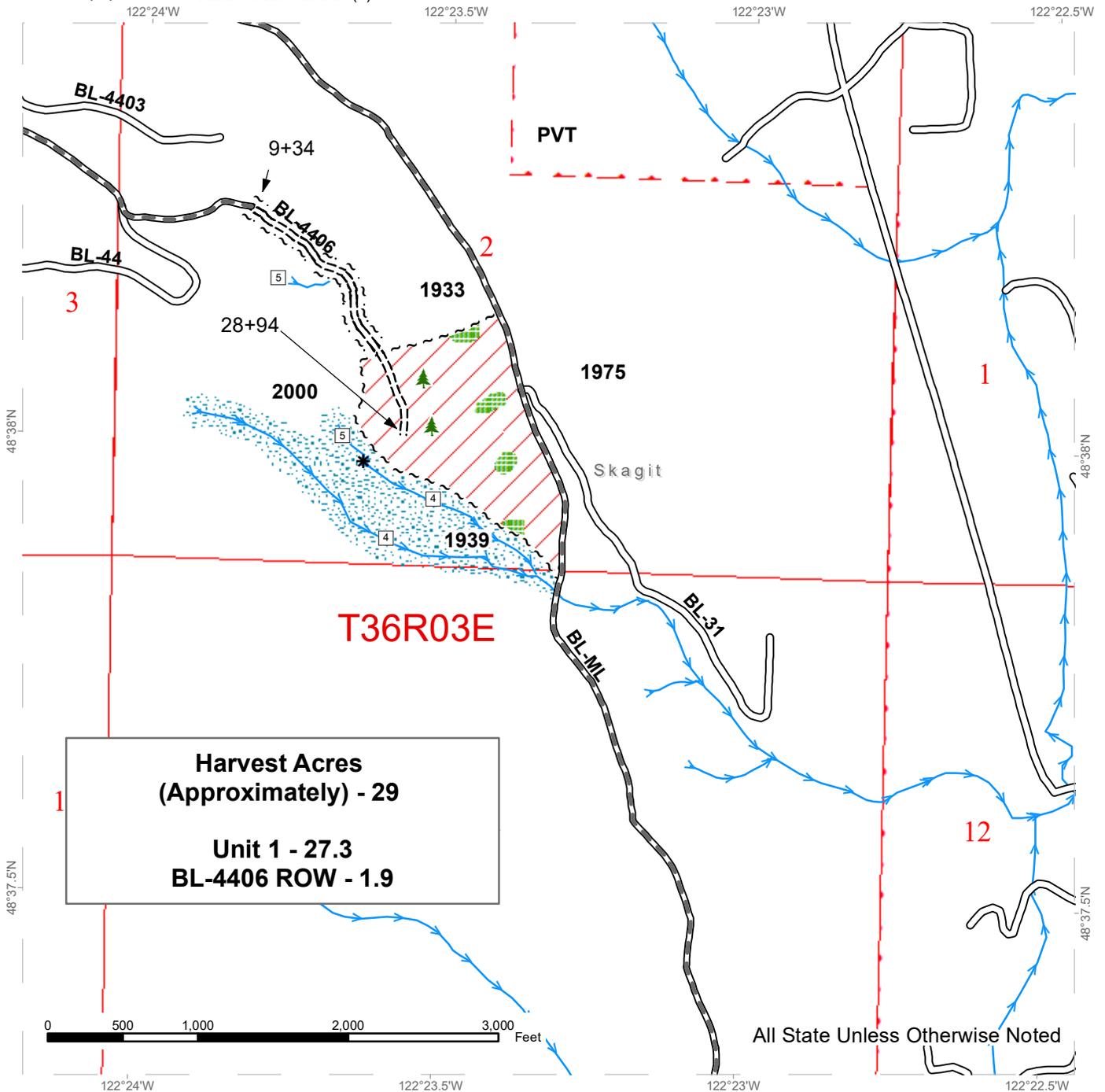
Log deliveries are anticipated to be no later than April 22, 2020 through October 28, 2020, but can commence as early as the contract effective date as well as later depending on weather and production of operations. There is a potential for a gap in deliveries spanning several weeks between June and July.

For more information regarding this log sort sale visit our web site: <http://www.dnr.wa.gov/programs-and-services/product-sales-and-leasing/timber-sales/timber-auction-packets>. If you have questions call Theresa Klepl at the Northwest Region Office at (360)856-3500 or Dave Richards at the Product Sales and Leasing Division Office in Olympia at (360)902-1365.

# TIMBER SALE MAP

**SALE NAME:** CICADA (Cicada Egg Roll RMZ Sorts)  
**AGREEMENT #:** 30-098543  
**TOWNSHIP(S):** T36R3E  
**TRUST(S):** State Forest Transfer (1)

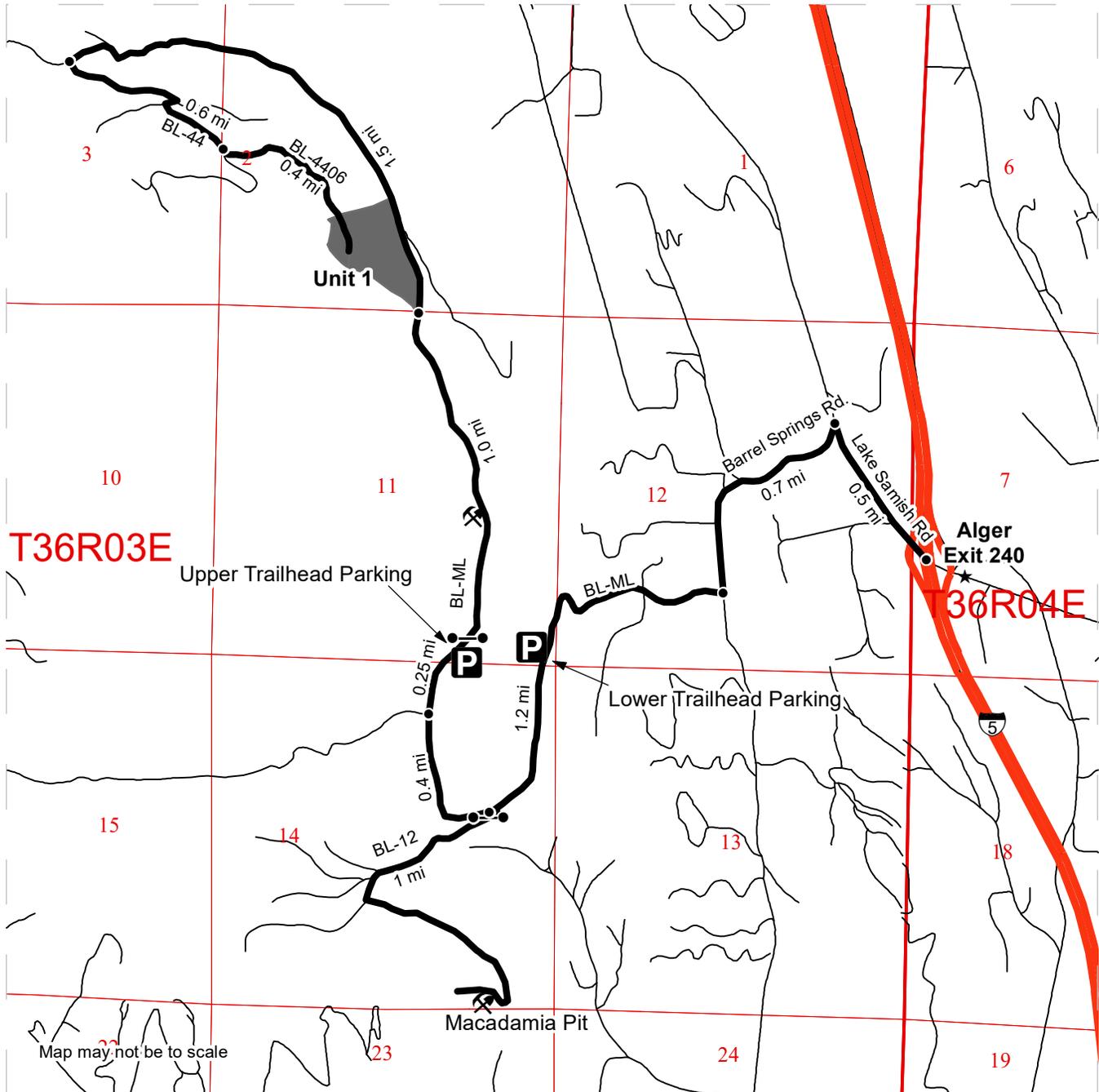
**REGION:** Northwest Region  
**COUNTY(S):** Skagit  
**ELEVATION RGE:** 1200-1600



# DRIVING MAP

**SALE NAME:** CICADA (Cicada Egg Roll RMZ Sorts)  
**AGREEMENT#:** 30-098543  
**TOWNSHIP(S):** T36R3E  
**TRUST(S):** State Forest Transfer (1)

**REGION:** Northwest Region  
**COUNTY(S):** Skagit  
**ELEVATION RGE:** 1200-1600



- Timber Sale Unit
- Haul Route
- Highway
- Distance Indicator
- Gate
- P Parking/ Trailhead
- Rock Pit
- Town

**DRIVING DIRECTIONS:**

**Unit 1:**  
 From I-5, drive North on Lake Samish Rd for 0.5 miles. Turn left onto Barrel Springs Rd and travel 0.7 miles. Turn right onto the BL-ML and travel 1.8 miles to the gate with the F-1 lock. Travel 1.0 miles to the southern corner of Unit 1. Continue on the BL-ML for 1.5 miles and turn left on the BL-44. Travel 0.6 miles and turn left on the BL-4406, Continue on the BL-4406 for 0.4 miles and begin road construction into the upper portion of Unit 1.

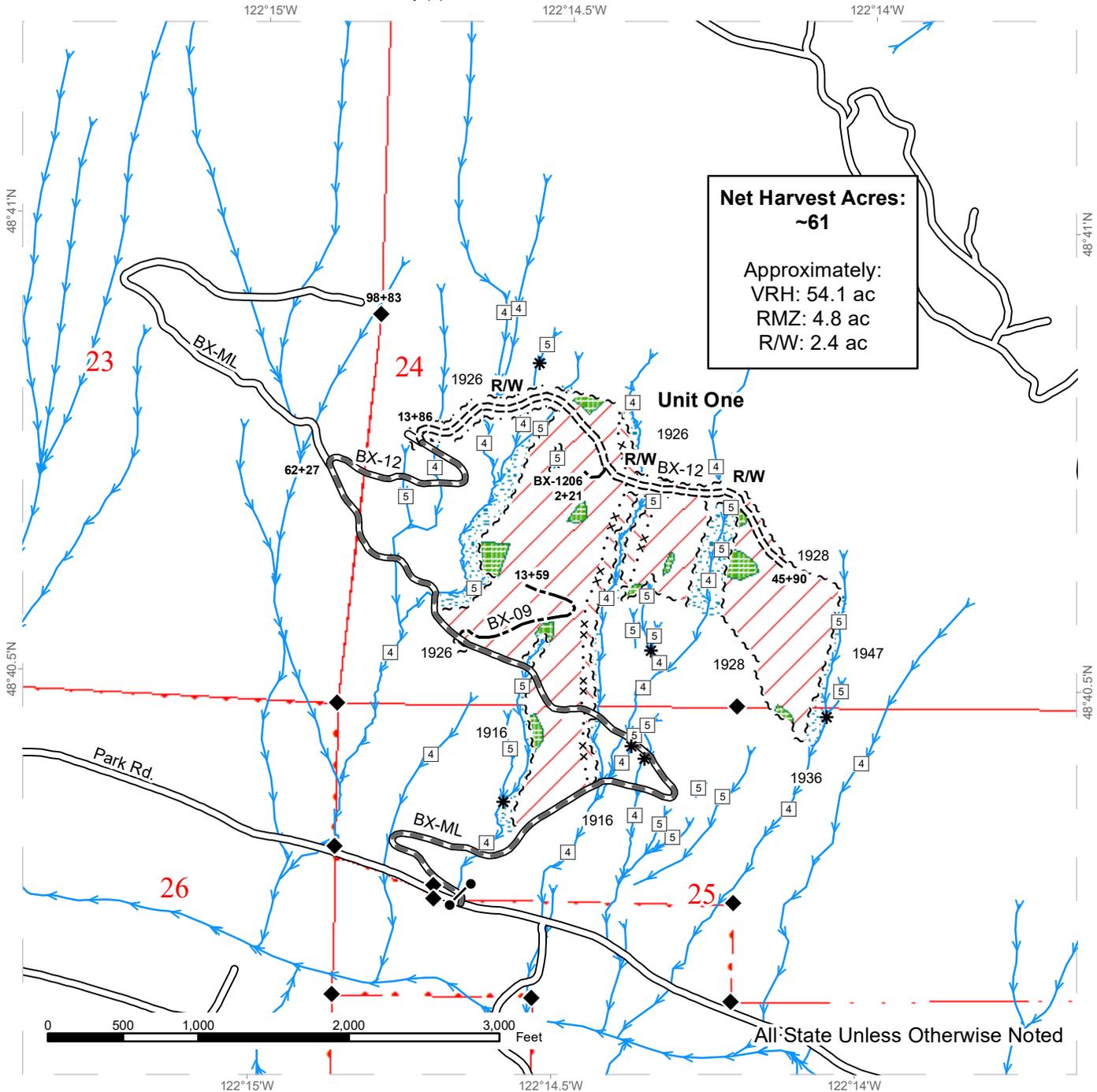
**Macadamia Pit:**  
 From Barrel Springs Rd, turn right onto the BL-ML and travel for 1.2 miles. Turn left onto the BL-12 and travel for 1 mile to reach the Macadamia pit



# TIMBER SALE MAP

**SALE NAME:** EGG ROLL (Cicada Egg Roll RMZ Sorts)  
**AGREEMENT #:** 98543  
**TOWNSHIP(S):** T37R4E  
**TRUST(S):** Common School and Indemnity (3)

**REGION:** Northwest Region  
**COUNTY(S):** Whatcom  
**ELEVATION RGE:** 560-1600

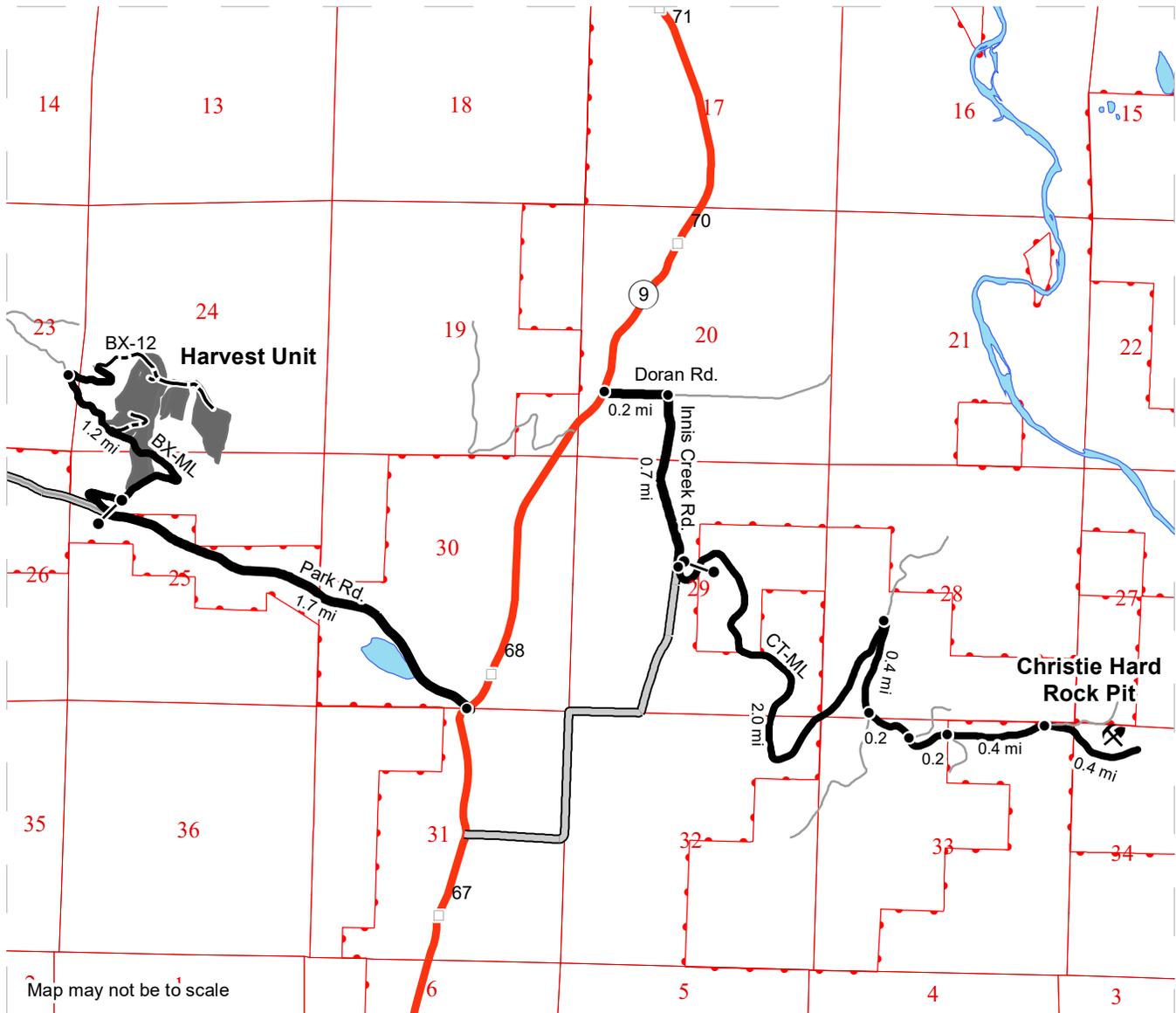


Variable Retention Harvest	Sale Boundary Tags	Streams
Conifer Release (RMZ)	Special Mgmt Area	Stream Type
Leave Tree Area	Right of Way Tags	Stream Type Break
Riparian Mgt Zone	Existing Roads	Survey Monument
DNR Managed Lands	Required Pre-Haul Maintenance	Gate (F1-3)
	Required Construction	
	Optional Construction	

# DRIVING MAP

**SALE NAME:** EGG ROLL (Cicada Egg Roll Sorts)  
**AGREEMENT#:** 98543  
**TOWNSHIP(S):** T37R4E, T37R5E  
**TRUST(S):** Common School and Indemnity (3)

**REGION:** Northwest Region  
**COUNTY(S):** Whatcom  
**ELEVATION RGE:** 560-1600



<ul style="list-style-type: none"> <li> Timber Sale Unit</li> <li> Haul Route</li> <li> Other Road</li> <li> New Construction</li> <li> County Road</li> <li> Highway</li> <li> Milepost Markers</li> <li> Distance Indicator</li> <li> Gate</li> <li> Rock Pit</li> </ul>	<p><b><u>DRIVING DIRECTIONS:</u></b></p> <p><b>To the Harvest Unit:</b>                  From the intersection of Highway 9 and Park Rd., head west on Park Rd. for 1.7 miles before reaching the BX-ML on the right. Continue through the gate and proceed for 1.2 miles before turning right onto the BX-12. Continue on the BX-12 for a quarter miles before reaching the point of new construction into the upper part of the harvest unit.</p> <p><b>To the Rock Pit:</b>                  From the intersection of Highway 9 and Doran Rd., head east on Doran Rd. for 0.2 mile and turn right onto Innis Creek Rd. Continue for 0.7 miles and veer left onto the CT-ML. Continue 750' and proceed through the gate (accessible with an F1-3). Continue on the CT-ML for 3.5 miles before reaching the Christie Hard Rock Pit.</p>
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**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

**LOG SALE AND PURCHASE CONTRACT**

**AGREEMENT NO. 30-099623**

**SALE NAME: CICADA EGG ROLL Sort 11**

**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-001.2 Definitions**

The following definitions apply throughout this contract;

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

**Contractor:** State-selected harvester responsible to perform all duties as required by the Harvesting Services Contract, including but not limited to timber harvesting, road construction, debris removal and piling, hauling and delivery of forest products for weighing and/or scaling, to the Purchasers of the timber sales Sorts.

**Delivery:** Occurs when logs or forest products meeting the sorting specifications arrive at the Purchasers destination, as described in the contract.

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

**Harvesting:** A general term, referring to the Contractor's various obligations under the Harvesting Services Contract.

Harvesting Services Contract: Contract between the Contractor and the State, which sets forth the procedures and obligations of the Contractor for completing the harvesting of timber, and the delivery of various log sorts to the State's purchasers, and the payment obligations of the State, The Harvesting Services Contract will include a Road Plan for any road construction or reconstruction, where applicable.

Log Sale and Purchase Contract: Purchase Agreement between the State and Purchaser(s) of particular log sorts from the timber sale.

Purchaser: The company or individual that has entered into a Log Sale Contract with the State for individual log sorts from the timber sale area. The Contractor must deliver the designated log sorts to this company or individual. Contractor will likely be delivering different log sorts to different purchasers under the Harvesting Services Contract.

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.

#### **G-010.2 Products Sold and Sale Area**

Purchaser was the successful bidder on March 25, 2020 and sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell and deliver to the Purchaser logs meeting the log sort specifications as described in the G-022.2 clause. Logs will be delivered from the CICADA EGG ROLL RMZ Sorts Timber Sale described as parts of Sections 2, and 11 all in Township 36 North, Range 3 East, Sections 24, and 25 all in Township 37 North, Range 4 East W.M., in Skagit, and Whatcom County.

#### **G-022.2 Sorting Specifications**

Purchaser shall accept and pay for delivery of log sorts by a state selected contractor to the designated Purchaser location that meets the following specifications:

<b>Agreement No.</b>	<b>Sort #</b>	<b>Description</b>	<b>Destination</b>
99623	11	BM Sawlog 8"+	

#### **G-024.2 Manufacturing Standards**

All forest products except poles, produced and sold under this contract will be manufactured to maximize the amount of logs meeting preferred log lengths and to achieve the average log length listed.

Agreement No.	Sort #	Scaling Rule
99623	11	WS

Average Log Length	Preferred Log Lengths
24	

"WS" indicates that west side scaling rules apply. Minimum trim is 8 inches per scaling segment for west side scaling rules. "ES" indicates that east side scaling rules apply. Minimum trim is 4 inches per scaling segment for east side scaling rules.

Poles produced under this contract will be manufactured to ANSI specifications (American National Standard Specifications and Dimensions for Wood Poles), in force at the time of signing this contract.

- a. Sweep will be limited to within the bole of the log as measured using a tape stretched between the centers of each end of the log.
- b. Logs approved by the state for peelers shall be chuckable with no more than a 2 inch diameter area of rot within a 5 inch diameter circle located at the center of either end of the log.
- c. Limbs and knots shall be cut flush, with no more than 15 percent of a log having limbs or knots over 2 inches in diameter extending more than 2 inches above the surface of the log.

#### **G-026.2 Log Delivery Destination**

Purchaser shall accept logs delivered to the destination as described in the G-022.2 clause. Purchaser may make a written request to the State for a change in log delivery destination or scaling or weighing location. If agreeable and in the best interest of the State, the State may approve the Purchaser's request. Written approval must be granted by the State prior to log delivery to a new destination or use of a new scaling or weighing facility.

Increased haul distance shall result in an increase in the P-028.2 log delivery payment rate in an amount to be calculated by the State. In no circumstance shall the payment rate for delivered logs be reduced as a result of a state approved delivery destination or scaling or weighing facility change.

Purchaser may refuse loads delivered to the wrong destination.

#### **G-027.2 Log Delivery Schedule and Conditions**

- a. Delivery hours - Purchaser agrees to accept logs from the Contractor at the Purchaser's delivery location during Purchaser's working hours or at least between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, except legal holidays unless otherwise agreed upon by the State.

- b. Improperly loaded trucks - It is understood and agreed that the Purchaser incurs no obligation to accept improperly or illegally loaded trucks in its facility. Any truck so loaded may be directed to vacate the yard and shall remain the responsibility of the harvesting contractor. The Purchaser shall notify the State within 24 hours of any load (s) rejected and specify the reasons why.
- c. Log Delivery Interruptions - Purchaser may schedule times in which delivery of logs will not be accepted. The Purchaser shall notify the Contract Administrator at least five (5) working days before the scheduled interruption or closure occurs. The duration of the log delivery interruption shall not exceed seven (7) consecutive working days or a total of ten (10) working days over the duration of the contract term. If Purchaser's scheduled delivery interruption exceeds contract requirements and causes the State harm, Purchaser will be in breach of contract and subject to liquidated damages as per the D-026.2 and D-027.2 clauses, unless Purchaser and the State have made a prior agreement in writing to mitigate potential harm to the State.
- d. Required Acceptance of Daily Load Deliveries and Notification - If the State is harmed by purchaser's refusal to accept up to 10 truck deliveries of any one sort per day, Purchaser will be in breach of contract and subject to damages as per the D-026.2 and D-027.2 clauses. A truck delivery is all the wood delivered including sorts on super trucks, mule trains and pups brought to the delivery point by a single truck. The Purchaser shall notify the Contract Administrator at least 48 hours in advance if:
  - 1. Purchaser intends to limit the number of truck deliveries accepted on any day to less than that listed above, or
  - 2. Purchaser intends to limit the number of truck deliveries accepted on any day to the number listed above.
- e. State Notification to Purchaser - The State will notify the Purchaser when it anticipates or schedules an interruption of deliveries and when it anticipates the number of truck deliveries on any day will exceed the number listed above.
- f. If payments are not received or, the State determines that the payment security has become unsatisfactory or, a demand is made against the payment security under the P-045.2 clause the State shall suspend deliveries until such time as the violation has been remedied. Any suspension of deliveries due to late payment or inadequate payment security will be considered a Log Delivery Interruption under (c) of this clause.

### **G-030.2 Contract Term and Expiration Date**

Purchaser agrees to accept and pay for forest products delivered through the period ending November 18, 2020.

**G-054.2 Early Contract Termination**

The State may terminate this contract in whole or in part by giving fifteen (15) days written notice to the Purchaser when it is in the best interests of the State. If this contract is so terminated, the State shall be liable only for the return of that portion of the initial deposit that is not required for payment, and the return of unapplied payments. The State shall not be liable for damages, whether direct or consequential.

**G-056.2 Force Majeure**

No Party shall be liable for any failure to perform its obligations, other than payments due, where such failure is as a result of Acts of Nature (including fire, flood, earthquake, storm, or other natural disaster), war, act of foreign enemies, hostilities (whether war is declared or not), terrorist activities, government sanction, fire, labor dispute, strike or lockout.

Any Party asserting Force Majeure as an excuse shall have the burden of proving that reasonable steps were taken (under the circumstances) to minimize delay or damages caused by foreseeable events, that all non-excused obligations were substantially fulfilled, and that the other Party was timely notified of the likelihood or actual occurrence which would justify such an assertion, so that other prudent precautions could be contemplated.

In the event of Force Majeure, the State reserves the right to terminate this agreement in accordance with clause G-054.2 'Early Contract Termination'.

**G-060.2 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 to be harvested or 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 VOLUME, WEIGHT, QUANTITY, OR QUALITY, of the forest products to be harvested. The descriptions of the forest products to be conveyed, are estimates only, made solely for administrative and identification purposes. The timing of forest product deliveries.
- d. Items contained in any other documents prepared for or by the State.

**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-070.2 Limitation on Damage**

In the event of a breach of any provision of this contract by the State, the liability of the State shall be limited to return of the unused initial deposit and unapplied payments to the Purchaser. The State shall not be liable for any damages, whether direct, incidental, or consequential.

**G-112.2 Title**

The State hereby warrants that State is the owner of said logs and has the right to sell same, free of liens, encumbrances, or claims, but subject to trade restrictions promulgated in WAC 240-15-015. Purchaser assumes title and all risk and responsibility for said logs upon delivery.

**G-116.2 Sustainable Forestry Initiative® (SFI) Certification**

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: BV-SFIS-US09000572.

**G-160.2 Agents**

The State's rights and duties will be exercised by the Region Manager at Sedro Woolley, 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 logs conveyed beyond the terms of this contract.

The Purchaser agrees to notify the State in writing of their authorized representative at the log delivery destination who will be readily available and who shall be authorized to receive, on behalf of the Purchaser any instructions or notices given by the State in regard to performance under this contract, and any limits to this person's authority.

**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-200.2 Notice**

Notices required to be given under the following clauses shall be in writing and shall be delivered to the State or Purchaser's authorized agent or sent by certified mail to the Purchaser's address of record, so that their receipt may be acknowledged.

G-026.2 Log Delivery Destination  
G-027.2 Log Delivery and Schedule Conditions  
G-210.2 Violation of Contract

All other notices required to be given under this contract shall be in writing and delivered to their respective authorized agent or mailed to the Party's post office address. Parties agree to notify the other of any change of mailing address.

**G-210.2 Violation of Contract**

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend delivery of further loads of forest products. If the violation is capable of being remedied, the Purchaser has five (5) days after receipt of suspension notice to remedy the violation. If the violation cannot be remedied (such as violation of WAC 240-15-015) or Purchaser fails to remedy the violation within five (5) days after receipt of a suspension notice, the State may terminate the rights of the Purchaser under this contract and collect damages as described in the damages clause in this contract.
- b. The State has the right to remedy the breach in the absence of any indicated attempt by the 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 thirty (30) days of receipt of billing.
- c. If Purchaser's violation is a result of a failure to make payment to the State when due, in addition to (a.) above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due. The State may secure payments from the security provided.

**G-240.2 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 five business days.

- c. Within five business days of receipt of the Region Manager's decision, the Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, the Deputy Supervisor - Uplands will hold a conference within 15 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-252.2 Forest Excise Tax**

Purchaser shall be responsible for payment of all forest excise taxes pursuant to chapter 84.33 RCW.

#### **G-253.2 Harvesting Cost Information**

The State agrees to supply all harvesting cost information to the Purchaser for their consideration in payment of forest excise taxes.

#### **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-330.2 Contract Review**

Purchaser may arrange with the Contract Administrator to review the provisions of this contract prior to the delivery of forest products.

### **Section P: Payments and Securities**

#### **P-010 Initial Deposit**

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

#### **P-028.2 Payment for Forest Products Delivered**

Purchaser agrees to pay the State for delivered forest products at the following rate:

\$0.00/MBF

\$250.00/MBF for incorrect species delivery\*

Purchaser agrees to increase the above delivered payment rate as approved by the State in the event the location of delivery is changed per the G-026.2 clause.

Purchaser will not be billed for any delivered logs that are scaled as containing metal.

\*When two or more log sorts from this project are delivered to the same destination, the species contained in them are not eligible for the species price reduction.

### **P-036.2 Missorts and Payment Reduction for Delivered Forest Products**

Forest Products delivered that do not meet the sorting specifications in G-022.2 are considered mis-sorts. Purchaser receiving mis-sort Forest Products is required to pay the State at the bid price under this contract.

However, when mis-sorted Forest Products amount to more than 8% of the total delivered sort volume, Purchaser may request approval for payment reduction for delivered volume exceeding the mis-sort threshold.

Requests for payment reduction must be submitted to the State in writing prior to contract expiration. Eligibility for mis-sort payment reduction is subject to State approval and shall be determined by the State's delivered product analysis. Forest Products determined by the State eligible for mis-sort price reduction are not eligible for any other price adjustments.

Payment reduction for Forest Products deemed mis-sorted will be calculated as follows:

$$\text{Payment Reduction} = (B \times M) \times R$$

Where:

B = Bid rate from P-028.2 clause

M = Mis-sorted volume exceeding threshold excluding utility

R = Reduction factor\*

0.2 for diameter mis-sort

0.3 for high quality mis-sort

\*Logs eligible for payment reduction based on multiple reduction factors will be calculated at the higher payment reduction factor.

Third-party scaling organization information is required to determine Scribner mbf for payment reduction purposes. Value will be derived from the applicable sort value as described in this contract.

Scale information for determining mis-sort payment reduction eligibility must be obtained from roll-out scale. Truck-ramp, sample scaling, and/or bundle scaling information is not acceptable for determining eligibility.

Purchaser's exclusive remedy for mis-sorts shall be the payment reduction described in this clause, notwithstanding other provisions in the Uniform Commercial Code

**P-037.2 Mismanufacture and Payment Reduction for Delivered Forest Products**

Forest Products delivered that do not meet preferred log length specifications or multiples or combinations of preferred lengths and Forest Products delivered not meeting manufacturing standards as described in clause G-024.2 are considered mis-manufactured. Purchaser receiving mis-manufactured Forest Products is required to pay the State at the bid price under this contract.

However, when mis-manufactured Forest Products amount to more than 8% of the total delivered sort volume, Purchaser may request approval for payment reduction for delivered volume exceeding the mis-manufacture threshold.

Requests for payment reduction must be submitted to the State in writing prior to contract expiration. Eligibility for mis-manufacture payment reduction is subject to State approval and shall be determined by the State's delivered product analysis. Forest Products determined by the State eligible for mis-manufacture price reductions are not eligible for any other price adjustments.

Payment reduction for Forest Products deemed mis-manufactured will be calculated as follows:

$$\text{Payment Reduction} = (B \times M) \times (0.2)$$

Where:

B = Bid rate from P-028.2 clause

M = Mis-manufactured volume exceeding threshold excluding utility

Third-party scaling organization information is required to determine Scribner mbf for payment reduction purposes. Value will be derived from the applicable sort value as described in this contract.

Scale information for determining mis-manufacture payment reduction eligibility must be obtained from roll-out scale. Truck-ramp, sample scaling, and/or bundle scaling information is not acceptable for determining eligibility.

Purchaser's exclusive remedy for mis-manufacture shall be the payment reduction described in this clause, notwithstanding other provisions in the Uniform Commercial Code.

**P-038.2 Average Log Length and Payment Reduction**

If the average log length for all logs delivered under this contract is less than the average log length specified in the table in clause G-024.2, The amount of allowable payment reduction shall be calculated by multiplying the payment rate in P-028.2 by the total volume delivered, and the difference between the average length of logs delivered and the average log length specified in G-024.2, times 1% as follows:

$$\text{Log Length Payment Reduction} = (B \times V \times L) \times (.01)$$

Where:

B = Bid rate from P-028.2 clause

V = total delivered log Volume

L = Length in feet below specified average (rounded to nearest 1/10th)

Average log length payment reductions calculated by the Purchaser must be approved by the State, prior to payment for the final billing period.

Third-party scaling organization information is required to determine Scribner mbf and Average log length for payment reduction purposes. Average log length is determined on a piece count basis. Value of log length price reduction will be derived from the applicable sort value as described in this contract.

Scale information for determining Average log length for payment reduction eligibility must be obtained from roll-out scale. Truck-ramp, sample scaling, and/or bundle scaling information is not acceptable for determining eligibility.

Purchaser's exclusive remedy for below average log lengths shall be the payment reduction described in this clause, notwithstanding other provisions in the Uniform Commercial Code.

#### **P-040.2 Weighing and Scaling Costs**

Purchaser agrees to pay for all weighing costs for logs delivered regardless if logs are purchased on a weight or scale basis. In addition, Purchaser agrees to pay for all scaling costs for logs delivered on a scale basis. Purchaser also agrees to pay for all costs associated with the transmission and reporting of scale or weight data.

#### **P-045.2 Guarantee of Payment**

Prior to the delivery of forest products and at a date determined by the State, Purchaser shall guarantee payment to the State for products delivered by posting with the State an approved payment security. If the Purchaser has purchased more than one sort, the payment securities may be consolidated for all the sorts. Acceptable payment security includes cash, certificate of deposit assignment, payment bond, savings account assignment, or irrevocable bank letter of credit.

The amount of payment security shall be determined by the State. The amount of payment security shall represent at least 30 days value of forest product deliveries. Payment security for products delivered will be used to guarantee payment to the State for late or non-payments.

If at any time the State determines that the security has become unsatisfactory or a demand is made against the payment security, the Purchaser agrees to increase the amount or replace the security with one acceptable to the state within 5 business days. Failure to increase the amount or replace the security is considered a breach of contract.

**P-050.2 Billing and Payment Procedure for Forest Products Delivered**

The State will compute and forward to Purchaser a billing statement of charges for forest products delivered during the billing period at the delivered rate shown in P-028.2 clause. After receipt of the billing statement, Purchaser's payment must be received by the Department of Natural Resources on or before the due date shown on the billing statement. Purchaser agrees to make payment, payable to the Department of Natural Resources. Failure to pay on time for forest products delivered is considered a breach of contract.

Included with the billing statement will be a summary report for the billing period compiled by the State or their log and load reporting service.

The State will adjust final billings to account for any State approved payment reductions.

**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.

**Section L: Log Definitions and Accountability****L-010.2 Forest Products Conveyed**

Forest products conveyed are logs or parts of logs delivered meeting the sorting criteria defined by clause G-022.2 and manufacturing standards defined by clause G-024.2 of this contract

**L-014.2 Sorts Delivered to Incorrect Destination**

Purchaser has agreed to purchase the sort as described in the G-022.2 clause. In the event a load from a different sort is delivered to Purchaser, Purchaser may reject the load. If Purchaser receives an incorrectly delivered load, they shall notify the State within 24 hours. If the Purchaser accepts the load, provisions in the P-035.2 or P-036.2 clause may apply.

**L-071.2 Log and Load Reporting Service**

This contract may at the States discretion, require the services of a State approved third party log and load reporting service. Purchaser shall ensure log volume measurement, weight, or scale and weight data for each load is received by the log and load reporting service within 1 business day of logs being measured or weighed.

If during the term of this contract, the State discontinues use of the Log and Load Reporting Service, the State will notify the Purchaser in writing, and will approve an alternative log and load reporting process.

**L-080 Scaling Rules**

Determination of volume and grade of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Westside log scaling and grading rules and Scribner Volume Table, revised July 1, 1972, contained in the Northwest Log Rules Eastside and Westside Log Scaling Handbook (developed and produced by the Northwest Log Rules Advisory Group) and in effect on the date of confirmation of this contract.

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

**L-110 State Approval of Log Scaling and Weighing Locations**

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

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

**Section D: Damages****D-010 Liquidated Damages**

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

**D-026.2 Damages for Delivery Interruptions and Load Non-Acceptance**

- a. Purchaser's failure to accept delivery of forest products due to an extended delivery interruption exceeding the limits as described in the G-027.2 (c) clause, results in substantial injury to the State. The Purchaser shall pay the State liquidated damages at a rate of \$1,000.00 per each day of breach, until breach is remedied.

- b. Unless Purchaser and the State have made a prior agreement in writing, Purchaser's failure to accept at least the number of delivered loads as described in the G-027.2 (d) clause, results in substantial injury to the State. The Purchaser shall pay the State liquidated damages at a rate of \$200 per each truck delivery not accepted, until breach is remedied.

#### **D-027.2 Failure to Accept Forest Products Sold**

Purchaser's failure to accept all or part of the forest products sold in this agreement prior to expiration or completion of the contract results in substantial injury to the State. Except for reasons other than 'Force Majeure' (G-056.2), either section a. or b. below will apply as determined by the State.

- a. When Purchaser's refusal to accept forest products does not prevent further harvesting operations, or forest products can be re-sold to another buyer acceptable to the State, Purchaser shall be liable for and pay State for actual damages plus costs, as determined by the State associated with the administration and re-sale of forest products not accepted by Purchaser under the terms of this contract.
- b. When Purchaser's refusal to accept forest products causes a stoppage of the State's harvesting operations and prevents the State from further harvest of the sale area, the actual damage to the State and associated costs are difficult to assess. The remaining value of all the forest products left in the sale area once the stoppage occurs is not readily ascertainable. Purchaser's failure to perform disrupts the State's management plans. Therefore, Purchaser agrees to pay the State as liquidated damages, a sum calculated using the following formula:

$$LD = (.35V - I) + C + A - P$$

Where:

- LD = Liquidated Damages  
V = The stumpage value remaining in the sale area at the date of work stoppage. This will be determined by multiplying the contract bid rate contained in the P-028.2 clause for all sorts originating in the sale area, by the State's estimate of the remaining volume, less the cost of harvesting and delivery associated with each sort.  
I = Initial Deposit  
C = Costs associated with required harvesting services and road construction services prior to work stoppage but not amortized or paid.  
A = Administrative fee = \$2,500.00  
P = Advance payments received exceeding the value of logs delivered under this contract.

The above formula reflects the Purchaser's forfeiture of the initial deposit in accordance with clause P-010 by deducting the initial deposit from the amount owed. In no event shall the liquidated damages be less than zero. Interest on the liquidated

damage is owed from the date of the work stoppage until final payment, calculated using the following formula:

$$\text{Interest} = r \times \text{LD} \times N$$

Where:

r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.

N = Number of days from work stoppage to time of payment

**D-030.2 Inadequate Log Accountability**

Failure to provide weighing and third party scaling information result in substantial injury to the State. The potential loss of accountability is not readily ascertainable. These contractual breaches result in an increase in the potential for the delivery of forest products for which the State receives inadequate payment and causes an increase in the State's administration costs associated with this contract. The actual costs of these breaches are difficult to assess.

For these reasons, Purchaser's payments for forest product delivery under this contract will be increased in the following amounts, as liquidated damages, to compensate the State for these breaches: \$250.00 each time a load weight is not provided as required by the contract, and \$250.00 each time load scale data is not determined and provided by a State approved third party scaling organization in accordance with this contract.

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

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

\_\_\_\_\_  
Purchaser

\_\_\_\_\_  
Tim Stapleton

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

Northwest 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 \_\_\_\_\_

**STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES**

**LOG SALE AND PURCHASE CONTRACT**

**AGREEMENT NO. 30-099624**

**SALE NAME: CICADA EGG ROLL Sort 12**

**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-001.2 Definitions**

The following definitions apply throughout this contract;

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

**Contractor:** State-selected harvester responsible to perform all duties as required by the Harvesting Services Contract, including but not limited to timber harvesting, road construction, debris removal and piling, hauling and delivery of forest products for weighing and/or scaling, to the Purchasers of the timber sales Sorts.

**Delivery:** Occurs when logs or forest products meeting the sorting specifications arrive at the Purchasers destination, as described in the contract.

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

**Harvesting:** A general term, referring to the Contractor's various obligations under the Harvesting Services Contract.

Harvesting Services Contract: Contract between the Contractor and the State, which sets forth the procedures and obligations of the Contractor for completing the harvesting of timber, and the delivery of various log sorts to the State's purchasers, and the payment obligations of the State, The Harvesting Services Contract will include a Road Plan for any road construction or reconstruction, where applicable.

Log Sale and Purchase Contract: Purchase Agreement between the State and Purchaser(s) of particular log sorts from the timber sale.

Purchaser: The company or individual that has entered into a Log Sale Contract with the State for individual log sorts from the timber sale area. The Contractor must deliver the designated log sorts to this company or individual. Contractor will likely be delivering different log sorts to different purchasers under the Harvesting Services Contract.

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.

#### **G-010.2 Products Sold and Sale Area**

Purchaser was the successful bidder on March 25, 2020 and sale was confirmed on \_\_\_\_\_. The State, as owner, agrees to sell and deliver to the Purchaser logs meeting the log sort specifications as described in the G-022.2 clause. Logs will be delivered from the CICADA EGG ROLL RMZ Sorts Timber Sale described as parts of Sections 2, and 11 all in Township 36 North, Range 3 East, Sections 24, and 25 all in Township 37 North, Range 4 East W.M., in Skagit, and Whatcom County.

#### **G-022.2 Sorting Specifications**

Purchaser shall accept and pay for delivery of log sorts by a state selected contractor to the designated Purchaser location that meets the following specifications:

<b>Agreement No.</b>	<b>Sort #</b>	<b>Description</b>	<b>Destination</b>
99624	12	CW Sawlog 8"+	

#### **G-024.2 Manufacturing Standards**

All forest products except poles, produced and sold under this contract will be manufactured to maximize the amount of logs meeting preferred log lengths and to achieve the average log length listed.

Agreement No.	Sort #	Scaling Rule
99624	12	WS

Average Log Length	Preferred Log Lengths
N/A	

"WS" indicates that west side scaling rules apply. Minimum trim is 8 inches per scaling segment for west side scaling rules. "ES" indicates that east side scaling rules apply. Minimum trim is 4 inches per scaling segment for east side scaling rules.

Poles produced under this contract will be manufactured to ANSI specifications (American National Standard Specifications and Dimensions for Wood Poles), in force at the time of signing this contract.

- a. Sweep will be limited to within the bole of the log as measured using a tape stretched between the centers of each end of the log.
- b. Logs approved by the state for peelers shall be chuckable with no more than a 2 inch diameter area of rot within a 5 inch diameter circle located at the center of either end of the log.
- c. Limbs and knots shall be cut flush, with no more than 15 percent of a log having limbs or knots over 2 inches in diameter extending more than 2 inches above the surface of the log.

#### **G-026.2 Log Delivery Destination**

Purchaser shall accept logs delivered to the destination as described in the G-022.2 clause. Purchaser may make a written request to the State for a change in log delivery destination or scaling or weighing location. If agreeable and in the best interest of the State, the State may approve the Purchaser's request. Written approval must be granted by the State prior to log delivery to a new destination or use of a new scaling or weighing facility.

Increased haul distance shall result in an increase in the P-028.2 log delivery payment rate in an amount to be calculated by the State. In no circumstance shall the payment rate for delivered logs be reduced as a result of a state approved delivery destination or scaling or weighing facility change.

Purchaser may refuse loads delivered to the wrong destination.

#### **G-027.2 Log Delivery Schedule and Conditions**

- a. Delivery hours - Purchaser agrees to accept logs from the Contractor at the Purchaser's delivery location during Purchaser's working hours or at least between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, except legal holidays unless otherwise agreed upon by the State.

- b. Improperly loaded trucks - It is understood and agreed that the Purchaser incurs no obligation to accept improperly or illegally loaded trucks in its facility. Any truck so loaded may be directed to vacate the yard and shall remain the responsibility of the harvesting contractor. The Purchaser shall notify the State within 24 hours of any load (s) rejected and specify the reasons why.
- c. Log Delivery Interruptions - Purchaser may schedule times in which delivery of logs will not be accepted. The Purchaser shall notify the Contract Administrator at least five (5) working days before the scheduled interruption or closure occurs. The duration of the log delivery interruption shall not exceed seven (7) consecutive working days or a total of ten (10) working days over the duration of the contract term. If Purchaser's scheduled delivery interruption exceeds contract requirements and causes the State harm, Purchaser will be in breach of contract and subject to liquidated damages as per the D-026.2 and D-027.2 clauses, unless Purchaser and the State have made a prior agreement in writing to mitigate potential harm to the State.
- d. Required Acceptance of Daily Load Deliveries and Notification - If the State is harmed by purchaser's refusal to accept up to 10 truck deliveries of any one sort per day, Purchaser will be in breach of contract and subject to damages as per the D-026.2 and D-027.2 clauses. A truck delivery is all the wood delivered including sorts on super trucks, mule trains and pups brought to the delivery point by a single truck. The Purchaser shall notify the Contract Administrator at least 48 hours in advance if:
  - 1. Purchaser intends to limit the number of truck deliveries accepted on any day to less than that listed above, or
  - 2. Purchaser intends to limit the number of truck deliveries accepted on any day to the number listed above.
- e. State Notification to Purchaser - The State will notify the Purchaser when it anticipates or schedules an interruption of deliveries and when it anticipates the number of truck deliveries on any day will exceed the number listed above.
- f. If payments are not received or, the State determines that the payment security has become unsatisfactory or, a demand is made against the payment security under the P-045.2 clause the State shall suspend deliveries until such time as the violation has been remedied. Any suspension of deliveries due to late payment or inadequate payment security will be considered a Log Delivery Interruption under (c) of this clause.

### **G-030.2 Contract Term and Expiration Date**

Purchaser agrees to accept and pay for forest products delivered through the period ending November 18, 2020.

**G-054.2 Early Contract Termination**

The State may terminate this contract in whole or in part by giving fifteen (15) days written notice to the Purchaser when it is in the best interests of the State. If this contract is so terminated, the State shall be liable only for the return of that portion of the initial deposit that is not required for payment, and the return of unapplied payments. The State shall not be liable for damages, whether direct or consequential.

**G-056.2 Force Majeure**

No Party shall be liable for any failure to perform its obligations, other than payments due, where such failure is as a result of Acts of Nature (including fire, flood, earthquake, storm, or other natural disaster), war, act of foreign enemies, hostilities (whether war is declared or not), terrorist activities, government sanction, fire, labor dispute, strike or lockout.

Any Party asserting Force Majeure as an excuse shall have the burden of proving that reasonable steps were taken (under the circumstances) to minimize delay or damages caused by foreseeable events, that all non-excused obligations were substantially fulfilled, and that the other Party was timely notified of the likelihood or actual occurrence which would justify such an assertion, so that other prudent precautions could be contemplated.

In the event of Force Majeure, the State reserves the right to terminate this agreement in accordance with clause G-054.2 'Early Contract Termination'.

**G-060.2 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 to be harvested or 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 VOLUME, WEIGHT, QUANTITY, OR QUALITY, of the forest products to be harvested. The descriptions of the forest products to be conveyed, are estimates only, made solely for administrative and identification purposes. The timing of forest product deliveries.
- d. Items contained in any other documents prepared for or by the State.

**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-070.2 Limitation on Damage**

In the event of a breach of any provision of this contract by the State, the liability of the State shall be limited to return of the unused initial deposit and unapplied payments to the Purchaser. The State shall not be liable for any damages, whether direct, incidental, or consequential.

**G-112.2 Title**

The State hereby warrants that State is the owner of said logs and has the right to sell same, free of liens, encumbrances, or claims, but subject to trade restrictions promulgated in WAC 240-15-015. Purchaser assumes title and all risk and responsibility for said logs upon delivery.

**G-116.2 Sustainable Forestry Initiative® (SFI) Certification**

Forest products purchased under this contract are certified as being in conformance with the Sustainable Forestry Initiative program Standard under certificate number: BV-SFIS-US09000572.

**G-160.2 Agents**

The State's rights and duties will be exercised by the Region Manager at Sedro Woolley, 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 logs conveyed beyond the terms of this contract.

The Purchaser agrees to notify the State in writing of their authorized representative at the log delivery destination who will be readily available and who shall be authorized to receive, on behalf of the Purchaser any instructions or notices given by the State in regard to performance under this contract, and any limits to this person's authority.

**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-200.2 Notice**

Notices required to be given under the following clauses shall be in writing and shall be delivered to the State or Purchaser's authorized agent or sent by certified mail to the Purchaser's address of record, so that their receipt may be acknowledged.

G-026.2 Log Delivery Destination  
G-027.2 Log Delivery and Schedule Conditions  
G-210.2 Violation of Contract

All other notices required to be given under this contract shall be in writing and delivered to their respective authorized agent or mailed to the Party's post office address. Parties agree to notify the other of any change of mailing address.

**G-210.2 Violation of Contract**

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend delivery of further loads of forest products. If the violation is capable of being remedied, the Purchaser has five (5) days after receipt of suspension notice to remedy the violation. If the violation cannot be remedied (such as violation of WAC 240-15-015) or Purchaser fails to remedy the violation within five (5) days after receipt of a suspension notice, the State may terminate the rights of the Purchaser under this contract and collect damages as described in the damages clause in this contract.
- b. The State has the right to remedy the breach in the absence of any indicated attempt by the 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 thirty (30) days of receipt of billing.
- c. If Purchaser's violation is a result of a failure to make payment to the State when due, in addition to (a.) above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due. The State may secure payments from the security provided.

**G-240.2 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 five business days.

- c. Within five business days of receipt of the Region Manager's decision, the Purchaser may make a written request for resolution to the Deputy Supervisor - Uplands of the Department of Natural Resources.
- d. Unless otherwise agreed, the Deputy Supervisor - Uplands will hold a conference within 15 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-252.2 Forest Excise Tax**

Purchaser shall be responsible for payment of all forest excise taxes pursuant to chapter 84.33 RCW.

#### **G-253.2 Harvesting Cost Information**

The State agrees to supply all harvesting cost information to the Purchaser for their consideration in payment of forest excise taxes.

#### **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-330.2 Contract Review**

Purchaser may arrange with the Contract Administrator to review the provisions of this contract prior to the delivery of forest products.

### **Section P: Payments and Securities**

#### **P-010 Initial Deposit**

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

#### **P-028.2 Payment for Forest Products Delivered**

Purchaser agrees to pay the State for delivered forest products at the following rate:

\$0.00/MBF

\$250.00/MBF for incorrect species delivery\*

Purchaser agrees to increase the above delivered payment rate as approved by the State in the event the location of delivery is changed per the G-026.2 clause.

Purchaser will not be billed for any delivered logs that are scaled as containing metal.

\*When two or more log sorts from this project are delivered to the same destination, the species contained in them are not eligible for the species price reduction.

### **P-036.2 Missorts and Payment Reduction for Delivered Forest Products**

Forest Products delivered that do not meet the sorting specifications in G-022.2 are considered mis-sorts. Purchaser receiving mis-sort Forest Products is required to pay the State at the bid price under this contract.

However, when mis-sorted Forest Products amount to more than 8% of the total delivered sort volume, Purchaser may request approval for payment reduction for delivered volume exceeding the mis-sort threshold.

Requests for payment reduction must be submitted to the State in writing prior to contract expiration. Eligibility for mis-sort payment reduction is subject to State approval and shall be determined by the State's delivered product analysis. Forest Products determined by the State eligible for mis-sort price reduction are not eligible for any other price adjustments.

Payment reduction for Forest Products deemed mis-sorted will be calculated as follows:

$$\text{Payment Reduction} = (B \times M) \times R$$

Where:

B = Bid rate from P-028.2 clause

M = Mis-sorted volume exceeding threshold excluding utility

R = Reduction factor\*

0.2 for diameter mis-sort

0.3 for high quality mis-sort

\*Logs eligible for payment reduction based on multiple reduction factors will be calculated at the higher payment reduction factor.

Third-party scaling organization information is required to determine Scribner mbf for payment reduction purposes. Value will be derived from the applicable sort value as described in this contract.

Scale information for determining mis-sort payment reduction eligibility must be obtained from roll-out scale. Truck-ramp, sample scaling, and/or bundle scaling information is not acceptable for determining eligibility.

Purchaser's exclusive remedy for mis-sorts shall be the payment reduction described in this clause, notwithstanding other provisions in the Uniform Commercial Code

**P-037.2 Mismanufacture and Payment Reduction for Delivered Forest Products**

Forest Products delivered that do not meet preferred log length specifications or multiples or combinations of preferred lengths and Forest Products delivered not meeting manufacturing standards as described in clause G-024.2 are considered mis-manufactured. Purchaser receiving mis-manufactured Forest Products is required to pay the State at the bid price under this contract.

However, when mis-manufactured Forest Products amount to more than 8% of the total delivered sort volume, Purchaser may request approval for payment reduction for delivered volume exceeding the mis-manufacture threshold.

Requests for payment reduction must be submitted to the State in writing prior to contract expiration. Eligibility for mis-manufacture payment reduction is subject to State approval and shall be determined by the State's delivered product analysis. Forest Products determined by the State eligible for mis-manufacture price reductions are not eligible for any other price adjustments.

Payment reduction for Forest Products deemed mis-manufactured will be calculated as follows:

$$\text{Payment Reduction} = (B \times M) \times (0.2)$$

Where:

B = Bid rate from P-028.2 clause

M = Mis-manufactured volume exceeding threshold excluding utility

Third-party scaling organization information is required to determine Scribner mbf for payment reduction purposes. Value will be derived from the applicable sort value as described in this contract.

Scale information for determining mis-manufacture payment reduction eligibility must be obtained from roll-out scale. Truck-ramp, sample scaling, and/or bundle scaling information is not acceptable for determining eligibility.

Purchaser's exclusive remedy for mis-manufacture shall be the payment reduction described in this clause, notwithstanding other provisions in the Uniform Commercial Code.

**P-038.2 Average Log Length and Payment Reduction**

If the average log length for all logs delivered under this contract is less than the average log length specified in the table in clause G-024.2, The amount of allowable payment reduction shall be calculated by multiplying the payment rate in P-028.2 by the total volume delivered, and the difference between the average length of logs delivered and the average log length specified in G-024.2, times 1% as follows:

$$\text{Log Length Payment Reduction} = (B \times V \times L) \times (.01)$$

Where:

B = Bid rate from P-028.2 clause

V = total delivered log Volume

L = Length in feet below specified average (rounded to nearest 1/10th)

Average log length payment reductions calculated by the Purchaser must be approved by the State, prior to payment for the final billing period.

Third-party scaling organization information is required to determine Scribner mbf and Average log length for payment reduction purposes. Average log length is determined on a piece count basis. Value of log length price reduction will be derived from the applicable sort value as described in this contract.

Scale information for determining Average log length for payment reduction eligibility must be obtained from roll-out scale. Truck-ramp, sample scaling, and/or bundle scaling information is not acceptable for determining eligibility.

Purchaser's exclusive remedy for below average log lengths shall be the payment reduction described in this clause, notwithstanding other provisions in the Uniform Commercial Code.

#### **P-040.2 Weighing and Scaling Costs**

Purchaser agrees to pay for all weighing costs for logs delivered regardless if logs are purchased on a weight or scale basis. In addition, Purchaser agrees to pay for all scaling costs for logs delivered on a scale basis. Purchaser also agrees to pay for all costs associated with the transmission and reporting of scale or weight data.

#### **P-045.2 Guarantee of Payment**

Prior to the delivery of forest products and at a date determined by the State, Purchaser shall guarantee payment to the State for products delivered by posting with the State an approved payment security. If the Purchaser has purchased more than one sort, the payment securities may be consolidated for all the sorts. Acceptable payment security includes cash, certificate of deposit assignment, payment bond, savings account assignment, or irrevocable bank letter of credit.

The amount of payment security shall be determined by the State. The amount of payment security shall represent at least 30 days value of forest product deliveries. Payment security for products delivered will be used to guarantee payment to the State for late or non-payments.

If at any time the State determines that the security has become unsatisfactory or a demand is made against the payment security, the Purchaser agrees to increase the amount or replace the security with one acceptable to the state within 5 business days. Failure to increase the amount or replace the security is considered a breach of contract.

**P-050.2 Billing and Payment Procedure for Forest Products Delivered**

The State will compute and forward to Purchaser a billing statement of charges for forest products delivered during the billing period at the delivered rate shown in P-028.2 clause. After receipt of the billing statement, Purchaser's payment must be received by the Department of Natural Resources on or before the due date shown on the billing statement. Purchaser agrees to make payment, payable to the Department of Natural Resources. Failure to pay on time for forest products delivered is considered a breach of contract.

Included with the billing statement will be a summary report for the billing period compiled by the State or their log and load reporting service.

The State will adjust final billings to account for any State approved payment reductions.

**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.

**Section L: Log Definitions and Accountability****L-010.2 Forest Products Conveyed**

Forest products conveyed are logs or parts of logs delivered meeting the sorting criteria defined by clause G-022.2 and manufacturing standards defined by clause G-024.2 of this contract

**L-014.2 Sorts Delivered to Incorrect Destination**

Purchaser has agreed to purchase the sort as described in the G-022.2 clause. In the event a load from a different sort is delivered to Purchaser, Purchaser may reject the load. If Purchaser receives an incorrectly delivered load, they shall notify the State within 24 hours. If the Purchaser accepts the load, provisions in the P-035.2 or P-036.2 clause may apply.

**L-071.2 Log and Load Reporting Service**

This contract may at the States discretion, require the services of a State approved third party log and load reporting service. Purchaser shall ensure log volume measurement, weight, or scale and weight data for each load is received by the log and load reporting service within 1 business day of logs being measured or weighed.

If during the term of this contract, the State discontinues use of the Log and Load Reporting Service, the State will notify the Purchaser in writing, and will approve an alternative log and load reporting process.

**L-080 Scaling Rules**

Determination of volume and grade of any forest products shall be conducted by a state approved third party scaling organization and in accordance with the Westside log scaling and grading rules and Scribner Volume Table, revised July 1, 1972, contained in the Northwest Log Rules Eastside and Westside Log Scaling Handbook (developed and produced by the Northwest Log Rules Advisory Group) and in effect on the date of confirmation of this contract.

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

**L-110 State Approval of Log Scaling and Weighing Locations**

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

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

**Section D: Damages****D-010 Liquidated Damages**

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

**D-026.2 Damages for Delivery Interruptions and Load Non-Acceptance**

- a. Purchaser's failure to accept delivery of forest products due to an extended delivery interruption exceeding the limits as described in the G-027.2 (c) clause, results in substantial injury to the State. The Purchaser shall pay the State liquidated damages at a rate of \$1,000.00 per each day of breach, until breach is remedied.

- b. Unless Purchaser and the State have made a prior agreement in writing, Purchaser's failure to accept at least the number of delivered loads as described in the G-027.2 (d) clause, results in substantial injury to the State. The Purchaser shall pay the State liquidated damages at a rate of \$200 per each truck delivery not accepted, until breach is remedied.

#### **D-027.2 Failure to Accept Forest Products Sold**

Purchaser's failure to accept all or part of the forest products sold in this agreement prior to expiration or completion of the contract results in substantial injury to the State. Except for reasons other than 'Force Majeure' (G-056.2), either section a. or b. below will apply as determined by the State.

- a. When Purchaser's refusal to accept forest products does not prevent further harvesting operations, or forest products can be re-sold to another buyer acceptable to the State, Purchaser shall be liable for and pay State for actual damages plus costs, as determined by the State associated with the administration and re-sale of forest products not accepted by Purchaser under the terms of this contract.
- b. When Purchaser's refusal to accept forest products causes a stoppage of the State's harvesting operations and prevents the State from further harvest of the sale area, the actual damage to the State and associated costs are difficult to assess. The remaining value of all the forest products left in the sale area once the stoppage occurs is not readily ascertainable. Purchaser's failure to perform disrupts the State's management plans. Therefore, Purchaser agrees to pay the State as liquidated damages, a sum calculated using the following formula:

$$LD = (.35V - I) + C + A - P$$

Where:

- LD = Liquidated Damages  
 V = The stumpage value remaining in the sale area at the date of work stoppage. This will be determined by multiplying the contract bid rate contained in the P-028.2 clause for all sorts originating in the sale area, by the State's estimate of the remaining volume, less the cost of harvesting and delivery associated with each sort.  
 I = Initial Deposit  
 C = Costs associated with required harvesting services and road construction services prior to work stoppage but not amortized or paid.  
 A = Administrative fee = \$2,500.00  
 P = Advance payments received exceeding the value of logs delivered under this contract.

The above formula reflects the Purchaser's forfeiture of the initial deposit in accordance with clause P-010 by deducting the initial deposit from the amount owed. In no event shall the liquidated damages be less than zero. Interest on the liquidated

damage is owed from the date of the work stoppage until final payment, calculated using the following formula:

Interest = r x LD x N

Where:

r = daily equivalent of an annual interest at current interest rate as established by WAC 332-100-030.

N = Number of days from work stoppage to time of payment

**D-030.2 Inadequate Log Accountability**

Failure to provide weighing and third party scaling information result in substantial injury to the State. The potential loss of accountability is not readily ascertainable. These contractual breaches result in an increase in the potential for the delivery of forest products for which the State receives inadequate payment and causes an increase in the State's administration costs associated with this contract. The actual costs of these breaches are difficult to assess.

For these reasons, Purchaser's payments for forest product delivery under this contract will be increased in the following amounts, as liquidated damages, to compensate the State for these breaches: \$250.00 each time a load weight is not provided as required by the contract, and \$250.00 each time load scale data is not determined and provided by a State approved third party scaling organization in accordance with this contract.

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

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

\_\_\_\_\_  
Purchaser

\_\_\_\_\_  
Tim Stapleton

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

Northwest 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 \_\_\_\_\_



**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)



## WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES

### FOREST EXCISE TAX ROAD SUMMARY SHEET

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(Revised 9/18)

## PRE-CRUISE NARRATIVE

Sale Name: <b>Cicada</b>	Region: <b>Northwest</b>
Agreement #: <b>30-098543</b>	District: Baker
Contact Forester: Zach Bastow Phone / Location: 360-854-8235	County(s): Choose a county, Skagit
Alternate Contact: Chris Hankey Phone / Location: <b>360-854-8310</b>	Other information: <a href="#">Click here to enter text.</a>

Type of Sale: Log Sort (Contract harvest)	
Harvest System: Ground based <a href="#">Click here to enter text.</a>	16%
Harvest System: Uphill Cable <a href="#">Click here to enter text.</a>	84%
Harvest System: Select harvest system <a href="#">Click here to enter text.</a>	<a href="#">Click here to enter percent sale acres.</a>

### UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit # Harvest R/W or RMZ WMZ	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZI/WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	Sec 2 T36N R03E	01	29	0	1.7	0		27.3	GPS (Garmin)
BL-4406 ROW	Sec 2 T36N R03E	01	1.9	0	0	0		1.9	Length x width
<b>TOTAL ACRES</b>			30.9	0	1.7	0		29.2	

### HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1	Harvest all timber bounded by white timber sale boundary tags and blue special management tags and the AL-ML; except for forest products bounded by yellow leave tree tags or trees marked with blue paint on bole and collar.		241 leave trees have been marked for retention in six leave tree areas. An additional 6 scattered trees have been individually marked for retention.
BL-4406	Harvest all timber bounded by orange right-of-way tags.	N/A	Acreage for this unit is associated with the

ROW			construction of BL-4406

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	Douglas-fir, Western hemlock, Western Red Cedar / 1,100 estimated MBF	From I-5, drive North on Lake Samish Rd for 0.5 miles. Turn left onto Barrel Springs Rd and travel 0.7 miles. Turn right onto the BL-ML and travel 1.8 miles to the gate locked with a F1-3 lock. Continue straight for 1.2 miles to bottom corner of unit 1. Continue straight for 1.5 miles on the BL-ML and turn left on the BL-44. Travel for 0.6 miles on the BL-44 and then turn left on the BL-4406. Continue for .2 miles and begin road construction to extend the BL-4406	Traverse and vicinity maps are included
BL-4406 ROW	Douglas-fir, Western hemlock, Western Red Cedar / 79 estimated MBF		
TOTAL MBF	1,179 estimated MBF		

**REMARKS:**

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<b>Prepared By:</b> <b>Date:</b>	<b>Title:</b>	<b>CC:</b>
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## PRE-CRUISE NARRATIVE

Sale Name: <b>Egg Roll</b>	Region: <b>Northwest</b>
Agreement #: <b>30-093615</b>	District: Baker
Contact Forester: Kyle Galloway Phone / Location: (360) 853-5100 / Deming	County(s): Choose a county, Whatcom
Alternate Contact: <a href="#">Click here to enter text.</a> Phone / Location: <a href="#">Click here to enter text.</a>	Other information: <a href="#">Click here to enter text.</a>

Type of Sale: Log Sort (Contract harvest)	
Harvest System: Uphill Cable (27.9 ac gross)	43%
Harvest System: Ground based (28.5 ac gross)	44%
Harvest System: Downhill Cable (8.2 ac gross)	13%

### UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #  Harvest R/W or RMZ WMZ	Legal Description <small>(Enter only one legal for each unit)</small> Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination  <small>(List method and error of closure if applicable)</small>
				RMZ/ WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres <small>(describe)</small>		
1A VRH	Sec 24 / T37N R04E	03	35.6	-	2.1	-	-	33.5	GPS (Garmin)
1A RMZ	Sec 24 / T37N R04E	03	3.8	-	-	-	-	3.8	GPS (Garmin)
1B VRH	Sec 24 / T37N R04E	03	6.2	-	0.3	-	-	5.9	GPS (Garmin)
1B RMZ	Sec 24 / T37N R04E	03	1.0	-	-	-	-	1	GPS (Garmin)
1C VRH	Sec 24 / T37N R04E	03	15.6	-	0.9	-	-	14.7	GPS (Garmin)
Total R/W	Sec 24 / T37N R04E	03	2.4	-	-	-	-	2.4	Combination
<b>TOTAL ACRES</b>			64.6	-	3.3	-	-	61.3	

**HARVEST PLAN AND SPECIAL CONDITIONS:**

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
1A VRH	Harvest all timber bounded by Timber Sale Boundary (TSB) tags, Special Management Area (SMA) tags, and BX-ML road; except for forest products bounded by Leave Tree Area (LTA) tags or trees marked with blue paint.	See "1A RMZ" below.	250 leave trees have been retained in five clumps. An additional 39 trees have been individually marked for retention. The total number of leave trees is 289.
1A RMZ	Harvest all timber that meets the harvest prescription located on or beyond the SMA tag line and bounded by TSB tags.	Harvest prescription: Harvest all hardwood that can be felled and yarded without falling into adjacent stream channel or causing excessive damage to residual conifer.	
1B VRH	Harvest all timber bounded by TSB tags and SMA tags; except for forest products bounded by LTA tags or trees marked with blue paint.	See "1B RMZ" below.	44 leave trees have been retained in two clumps. An additional five trees have been individually marked for retention. The total number of leave trees is 49.
1B RMZ	Harvest all timber that meets the harvest prescription located on or beyond the SMA tag line and bounded by TSB tags.	Harvest prescription: Harvest all hardwood that can be felled and yarded without falling into adjacent stream channel or causing excessive damage to residual conifer.	
1C VRH	Harvest all timber bounded by TSB tags and SMA tags; except for forest products bounded by LTA tags or trees marked with blue paint.		124 leave trees have been retained in three clumps. An additional eight trees have been individually marked for retention. The total number of leave trees is 132.
Total R/W	Harvest all timber bounded by Right Of Way tags.		Includes four separate R/W segments.

**OTHER PRE-CRUISE INFORMATION:**

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1 VRH	RA , DF / 900 mbf	Sale area is accessible from the BX-ML located on Park Rd. See driving map.	
1 RMZ	RA, DF / 20 mbf		
2 VRH	DF, RA / 250 mbf		
2 RMZ	DF, WH 5 mbf		
3 VRH	DF, WH / 500 mbf		
R/W	DF, WH / 80 mbf	Begins at the end of the existing portion of the BX-12 spur.	
TOTAL MBF	1755 mbf		

**REMARKS:**

The sale area is a naturally regenerated mix of conifer dominated forest and hardwood dominated forest. Inventory data suggests that the stand ages are roughly 90-100 years old, but older scattered remnants may be found. Conifer dominated areas vary between cedar groves and stands of tall, tight, clean DF. Hardwood areas consist of a mix of older alder 20-30" at dbh and shorter maple with many catfaces and cavities.

Harvest boundary traverse points are marked with blue and red ribbon and a small, metal tag labeling the traverse point. Road centerline is marked with orange ribbon and wooden stakes. TSB boundaries are marked with pink ribbon; SMA boundaries are highlighted with blue and pink ribbon; LTA boundaries are marked with yellow and pink ribbon.

R/W acres were calculated using length x 50' width except for areas with steep sides lopes where R/W width was expanded to 60'. Existing roads were deducted from the harvest area in GIS using ortho photos and lidar to determine the extent of the existing R/W.

<b>Prepared By: Kyle Galloway</b> <b>Date:</b>	<b>Title: Deming Unit Forester</b>	<b>CC:</b>
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# CRUISE NARRATIVE

<b>Sale Name:</b> Cicada Egg Roll	<b>Region:</b> Northwest
<b>Agree. #:</b> 30-098543	<b>District:</b> Baker
<b>Lead cruiser:</b> Matt Llobet	<b>Completion date:</b> 7-18-19
<b>Other cruisers on sale:</b> AL	

**Unit acreage specifications:**

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
Cicada U1	29.2	No	Combined 1.9 acres of ROW
Egg Roll U1A	35.1	No	Combined 1.6 acres of ROW
Egg Roll U1B	6.4	No	Combined 0.5 acres of ROW
Egg Roll U1C	14.7	Yes	

Egg Roll RMZ	4.8	Yes	
Egg Roll ROW	0.3	Yes	

**Unit cruise specifications:**

Unit #	Sample type (VP, FP, ITS, 100%)	Expansion factor (BAF, full/ half)	Sighting height (4.5 ft, 16 ft.)	Grid size (Plot spacing or % of area)	Plot ratio (cruise: count)	Total number of plots
Cicada U1	VP	54.4 BAF 40.0 BAF 62.5 BAF	4.5'	208' x 208'	Cruise All	31
Egg Roll U1 A	VP	54.4 BAF 40.0 BAF	4.5'	208' x 208'	Cruise All	36
Egg Roll U1B	VP	54.4 BAF 40.0 BAF	4.5'	208' x 208'	Cruise All	6
Egg Roll U1C	VP	62.5 BAF 46.9 BAF	4.5'	208' x 208'	Cruise All	15
Egg Roll RMZ	FP	.05	26.3'	1plot/acre	Cruise All	5
Egg Roll ROW	FP	.05	26.3'	1plot/acre	Cruise All	1
Total						94

**Sale/Cruise Description:**

<b>Minor species cruise intensity:</b>	A 46.9 and 40.0 BAF was used to capture a better sample on minors			
<b>Minimum cruise spec:</b>	Minimum DBH 7 inches, 10 Net Board feet Minimum Top Diameter 5 inches, or 40% of 16-foot form point			
<b>Avg ring count by sp:</b>	<b>DF=</b>	8	<b>WH =</b>	8
<b>Leave/take tree description:</b>	<p><b>Variable Retention Harvest:</b></p> <p><b>Cicada U1-</b> Harvest all timber bounded by White Timber Sale boundary tags and blue Special Management Tags and the AL-ML; except for forest products bounded by yellow Leave Tree Tags or trees marked with blue paint on the bole and collar.</p> <p><b>Egg Roll 1A-</b> Harvest all timber bounded by Timber Sale Boundary tags, Special Management Area tags, and BX-ML road; except for forest products bounded by Leave Tree Area tags or trees marked with blue paint.</p> <p><b>Egg Roll U1B-</b> Harvest all timber bounded by TSB tags and SMA tags; except for forest products bounded by LTA tags or trees marked with blue paint.</p> <p><b>Egg Roll U1C-</b> Harvest all timber bounded by TSB tags and SMA tags; except for forest products bounded by LTA tags or trees marked with blue paint.</p> <p><b>Egg Roll RMZ-</b> See Schedule B</p> <p><b>ROW-</b> Harvest all timber bounded by Orange Right-of-Way boundary tags.</p>			
<b>Other conditions:</b>				
<b>Sort Description:</b>	<p><b>HA-</b> Logs meeting the following criteria: Surface characteristics for a high Quality A sort will have sound tight knots not to exceed 1 ½" in diameter, numbering not more than an average of one per foot of log length. May include logs with not more than two larger knots. Knots and knot indicators ½" in diameter and smaller shall not be a determining factor. Logs will have a growth ring count of 6 or more rings per inch in the outer third top end of the log. (Min dia 8".)</p>			

	<p><b>HB-</b> Logs meeting the following criteria: Surface characteristics for a B sort will have sound tight knots not to exceed 1 ½” in diameter. May include logs with not more than two larger knots up to 2 ½” in diameter. Logs will have a growth ring count of 6 or more rings per inch in the outer third to end of the log. (Min dia 8”.)</p> <p><b>Poles-</b> Logs meeting pole specifications</p>
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**Field observations:**

All timber was graded in variable log lengths with the Scaling Bureaus Westside/Northwest log rules. The utility wood was given a board ft. volume. Cicada timber sale was cruised using the variable plot sample method. Cicada consists of 16% ground base harvesting and 84% cable harvesting, and ranges in elevation from 1200’- 1600’. Cicada has mild terrain, with a few areas of steeper slope, making for good operator ground. The timber type throughout Cicada is highly variable, ranging from uniform Douglas fir, to an open/scattered Hardwood/Western Red Cedar component. The species composition is Douglas fir at 52%, Western Hemlock at 18%, Western Red Cedar at 20%, and Red Alder at 8%. Egg Roll consists of mild to rolling terrain with good operator ground. The timber type is highly variable, ranging from large oversize conifer to an open/scattered Hardwood and Western Red Cedar component. The species composition is Douglas fir at 75%, Red Alder at 8%, and Big Leaf Maple at 9%. Throughout Cicada Egg Roll, 909mbf of high quality Douglas fir was cruised, with the majority of that volume coming off the Egg Roll side. Western Red Cedar and Douglas fir poles were observed throughout both side of the sale. The Douglas fir has an average diameter of 26 inches and an average bole height of 92 feet. The Western Hemlock has an average diameter of 17 inches and an average bole height of 63 feet. The Western Red Cedar has an average diameter of 20 inches and an average bole height of 54 feet. The Red Alder has an average diameter of 17 inches and an average bole height of 57 feet. Defect observed includes: forked, broken or multiple tops, spike knots, heart rot, crooks, root rot pockets, Fomes Pini and Phaeolus Schweinitzii.

**Prepared By:** Matt Llobet

**Title:** Forest Check Cruiser

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TC PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																			
T36N R03E S02 Ty0001 THRU T37N R04E S24 TyRW				Project:		EGGROLL												Page		1	
				Acres		90.50												Date		7/31/2019	
																		Time		4:21:32PM	
Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent of Net Board Foot Volume								Average Log				Logs Per /Acre
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99					
RC	D	3S		92	5.7	4,429	4,176	378	5	23	23	48	3	7	1	89	36	11	197	1.84	21.2
RC	D	4S		8	1.9	370	363	33	92	8			16	67	9	8	25	5	27	0.44	13.4
<b>RC Totals</b>				10	5.4	4,799	4,539	411	12	22	22	44	4	12	1	83	31	9	131	1.41	34.6
RA	D	2S		58	6.7	2,338	2,181	197			78	22	17	68		14	28	14	181	1.55	12.0
RA	D	3S		11	5.1	429	407	37		100			17	83			27	11	102	0.97	4.0
RA	D	4S		13	2.7	472	459	42	30	70			26	71	3		27	8	50	0.58	9.2
RA	D	UT		18		667	667	60	65	19	16		13	48	11	29	28	6	45	0.54	14.9
<b>RA Totals</b>				8	4.9	3,905	3,713	336	15	23	49	13	18	66	2	14	28	9	92	0.90	40.2
BM	D	2S		53	10.6	1,720	1,537	139			63	37	59	36		5	24	15	193	1.97	7.9
BM	D	3S		11	8.5	368	336	30	2	98			12	88			28	10	98	1.09	3.4
BM	D	4S		8	1.4	235	232	21	53	47			5	88		7	29	7	48	0.58	4.8
BM	D	UT		28	.0	779	779	71	40	19	18	23	37	34	14	15	25	8	58	0.83	13.5
<b>BM Totals</b>				6	7.0	3,102	2,885	261	15	20	39	26	43	46	4	7	26	10	97	1.10	29.7
DF	HB	2S		9	1.8	2,999	2,943	266			18	82				100	40	18	601	3.06	4.9
DF	D	2S		55	2.0	17,638	17,277	1,564			18	82	0	0	2	97	39	18	535	2.71	32.3
DF	D	3S		10	2.1	3,005	2,941	266	10	90			3	13	12	73	34	9	103	0.83	28.7
DF	D	4S		1	1.4	351	346	31	88	12			27	37	10	26	26	6	32	0.35	10.9
DF	D	UT		2		638	638	58	25	1	4	69	27	19	12	42	28	8	104	0.77	6.1
DF	HA	3P		9	2.0	3,029	2,968	269				100		2	8	89	38	27	1236	6.02	2.4
DF	HASM			12	1.1	3,775	3,732	338				100		3	2	95	39	20	633	3.29	5.9
DF	HA	2S		2		393	393	36			100				15	85	37	13	237	1.50	1.7
<b>DF Totals</b>				67	1.9	31,827	31,237	2,827	2	9	13	76	1	3	4	92	35	13	336	1.97	92.9
WH	D	2S		60	1.1	2,279	2,254	204			43	57			2	98	39	15	353	1.90	6.4
WH	D	3S		23	.4	868	864	78	24	76				1	12	87	37	8	88	0.72	9.8
WH	D	4S		6	1.2	257	254	23	97	3			13	4	27	57	31	5	36	0.38	7.1
WH	D	UT		11		382	382	35	24	2		75	28	43	23	6	22	7	78	0.80	4.9
<b>WH Totals</b>				8	.8	3,786	3,754	340	14	18	26	42	4	5	8	84	33	9	133	0.96	28.2
CW	D	2S		85	1.9	271	266	24			8	92				100	40	18	557	3.00	.5
CW	D	4S		15		44	44	4		100						100	40	9	135	1.03	.3
<b>CW Totals</b>				1	1.7	315	310	28		14	7	79				100	40	15	385	2.20	.8
<b>Totals</b>					2.7	47,734	46,438	4,203	6	13	19	62	6	12	4	79	32	11	205	1.50	226.3

TC PSTATS		PROJECT STATISTICS							PAGE	1	
		PROJECT EGGROLL							DATE	7/31/2019	
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt	
36N 37N	03E 04E	02 24	CICADA EGGROLL	0001 RW	THR	90.50	94	532	S	W	
			PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL			94	532	5.7						
CRUISE			94	532	5.7	10,672	5.0				
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
STAND SUMMARY											
		SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC
DOUG FIR		230	38.0	25.6	92	26.9	136.0	31,827	31,237	6,417	6,417
R ALDER		76	22.6	17.0	57	8.7	35.7	3,905	3,713	999	999
WR CEDAR		111	23.3	20.2	54	11.6	52.0	4,799	4,539	1,537	1,537
WHEMLOCK		42	16.0	16.8	63	6.0	24.7	3,786	3,754	902	902
BL MAPLE		70	17.6	19.2	52	8.1	35.5	3,102	2,885	843	843
COTWOOD		3	4	28.0	88	0.3	1.7	315	310	71	71
<b>TOTAL</b>		<b>532</b>	<b>117.9</b>	<b>21.1</b>	<b>68</b>	<b>62.2</b>	<b>285.7</b>	<b>47,734</b>	<b>46,438</b>	<b>10,769</b>	<b>10,769</b>
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL	68.1	COEFF		SAMPLE TREES - BF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		64.7	4.3	1,383	1,445	1,506					
R ALDER		52.9	6.1	187	199	211					
WR CEDAR		76.7	7.3	347	374	402					
WHEMLOCK		86.6	13.3	377	435	493					
BL MAPLE		57.1	7.0	207	223	238					
COTWOOD		60.0	41.5	532	910	1,288					
<b>TOTAL</b>		<b>106.8</b>	<b>4.6</b>	<b>765</b>	<b>803</b>	<b>840</b>	<b>456</b>	<b>233</b>	<b>114</b>		
CL	68.1	COEFF		TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		156.9	16.2	32	38	44					
R ALDER		156.7	16.1	19	23	26					
WR CEDAR		150.3	15.5	20	23	27					
WHEMLOCK		197.6	20.4	13	16	19					
BL MAPLE		184.1	19.0	14	18	21					
COTWOOD		581.5	59.9	0	0	1					
<b>TOTAL</b>		<b>62.3</b>	<b>6.4</b>	<b>110</b>	<b>118</b>	<b>125</b>	<b>155</b>	<b>79</b>	<b>39</b>		
CL	68.1	COEFF		BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		115.0	11.8	120	136	152					
R ALDER		143.7	14.8	30	36	41					
WR CEDAR		139.7	14.4	44	52	59					
WHEMLOCK		181.7	18.7	20	25	29					
BL MAPLE		171.3	17.7	29	36	42					
COTWOOD		553.8	57.1	1	2	3					
<b>TOTAL</b>		<b>48.8</b>	<b>5.0</b>	<b>271</b>	<b>286</b>	<b>300</b>	<b>95</b>	<b>48</b>	<b>24</b>		
CL	68.1	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR		119.2	12.3	27,401	31,237	35,073					
R ALDER		145.1	15.0	3,158	3,713	4,268					
WR CEDAR		166.6	17.2	3,760	4,539	5,318					

TC PSTATS		<b>PROJECT STATISTICS</b>							PAGE	2
		PROJECT			EGGROLL				DATE	7/31/2019
TWP	RGE	SC	TRACT	TYPE		ACRES	PLOTS	TREES	CuFt	BdFt
36N	03E	02	CICADA	0001	THR	90.50	94	532	S	W
37N	04E	24	EGGROLL		RW					
CL	68.1		COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	.00		VAR.	S.E.%	LOW	AVG	HIGH	5	7	10
WHEMLOCK			217.8	22.4	2,911	3,754	4,597			
BL MAPLE			182.4	18.8	2,343	2,885	3,427			
COTWOOD			555.5	57.2	132	310	487			
<b>TOTAL</b>			<i>73.0</i>	<i>7.5</i>	<i>42,945</i>	<i>46,438</i>	<i>49,930</i>	<i>213</i>	<i>109</i>	<i>53</i>

T36N R03E S02 T0001 T36N R03E S02 T0001  
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt  
 36N 03E 02 CICADA 0001 29.20 31 203 S W

Spp	S	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre						
									Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/Lf	
														5-7	8-11	12-15	16+	12-20	21-30		31-35					36-99
DF	HB	2S	7	1.2	1,801	1,780	52		46	54					100	40	16	388	2.16	4.6						
DF	DM	2S	73	1.8	18,944	18,612	543		16	84		1	0	1	98	39	18	584	3.03	31.9						
DF	DM	3S	13	1.5	3,467	3,417	100	5	95		1	15	9	74	35	9	108	0.87	31.7							
DF	DM	4S	1	2.7	324	315	9	90	10		42	58			22	6	28	0.36	11.2							
DF	DM	UT	2		375	375	11	47		53		53		47	35	6	80	0.47	4.7							
DF	HA	3P	2		529	529	15			100			45	55	34	24	862	4.89	.6							
DF	HA	SM	2		424	424	12			100				100	36	22	768	4.67	.6							
<b>DF</b>	<b>Totals</b>		52	1.6	25,863	25,451	743	2	13	15	70	1	4	3	92	35	13	299	1.84	85.2						
RC	DM	3S	96	4.8	10,072	9,586	280	6	19	25	50	4	8	1	87	36	12	205	1.83	46.8						
RC	DM	4S	4	1.8	406	399	12	95	5			25	55	20		23	5	25	0.37	15.8						
<b>RC</b>	<b>Totals</b>		20	4.7	10,478	9,985	292	10	19	24	48	5	10	2	84	33	10	159	1.56	62.6						
WH	DM	2S	63	.9	5,544	5,492	160			40	60			2	98	39	15	380	2.00	14.5						
WH	DM	3S	22	.5	1,924	1,914	56	21	79					4	96	37	8	92	0.72	20.9						
WH	DM	4S	2	4.8	207	197	6	87	13			26		45	29	27	6	33	0.34	6.0						
WH	DM	UT	13	.0	1,060	1,060	31	15	2	83		27	48	26		22	9	108	1.02	9.8						
<b>WH</b>	<b>Totals</b>		18	.8	8,735	8,663	253	8	18	25	48	4	6	6	84	34	10	169	1.14	51.1						
RA	DM	2S	42	6.9	1,692	1,575	46			100		27	73			26	13	157	1.45	10.0						
RA	DM	3S	14		533	533	16		100			29	71			26	10	100	0.93	5.3						
RA	DM	4S	20	1.6	770	758	22	39	61			36	64			26	8	48	0.55	15.9						
RA	DM	UT	24		864	864	25	59	29	12		5	60	9	26	28	6	46	0.51	18.6						
<b>RA</b>	<b>Totals</b>		8	3.4	3,860	3,730	109	22	33	45		24	68	2	6	27	9	75	0.75	49.9						
BM	DM	2S	81	4.1	620	595	17			40	60	75	25			23	17	248	2.22	2.4						
BM	DM	UT	19		134	134	4	16	37	47			100			27	9	96	1.10	1.4						
<b>BM</b>	<b>Totals</b>		1	3.3	754	729	21	3	7	42	49	61	39			25	14	192	1.76	3.8						
CW	DM	2S	77		468	468	14			100				100		40	17	460	2.49	1.0						
CW	DM	4S	23		137	137	4		100					100		40	9	135	1.03	1.0						
<b>CW</b>	<b>Totals</b>		1		605	605	18		23	77				100		40	13	297	1.76	2.0						
<b>Type Totals</b>				2.2	50,294	49,163	1,436	6	17	21	56	5	11	3	81	32	11	193	1.45	254.6						

T37N R04E S24 T001A T37N R04E S24 T001A  
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt  
 37N 04E 24 EGGROLL 001A 35.10 36 216 S W

Spp	Sp	So	Gr	%	Bd. Ft. per Acre			Total	Percent Net Board Foot Volume								Average Log			Logs Per /Acre						
									Net BdFt	Def%	Gross	Net	Net MBF	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/Lf	
														5-7	8-11	12-15	16+	12-20	21-30		31-35					36-99
DF	HB	2S	9	1.8	3,682	3,616	127		12	88					100	39	19	654	3.18	5.5						
DF	DM	2S	41	1.1	16,161	15,983	561		24	76		0	0	4	96	38	17	456	2.25	35.0						
DF	DM	3S	9	1.9	3,618	3,549	125	16	84			2	11	13	74	34	9	97	0.76	36.7						
DF	DM	4S	1	2.5	219	213	7	72	28			58	20	22		21	6	29	0.40	7.5						
DF	DM	UT	2		648	648	23	42	4	11	43	44	23	29	4	26	8	59	0.53	11.0						
DF	HA	3P	13	1.6	5,455	5,365	188				100		3	3	93	39	27	1277	6.17	4.2						
DF	HA	SM	22	1.3	8,391	8,280	291				100		3	2	94	38	20	628	3.29	13.2						
DF	HA	2S	3		1,013	1,013	36			100				15	85	37	13	237	1.50	4.3						
<b>DF</b>	<b>Totals</b>		77	1.3	39,187	38,668	1,357	3	8	14	76	1	3	5	91	35	13	329	1.91	117.4						
BM	DM	2S	57	12.3	2,984	2,617	92		58	42		72	25		3	22	15	183	1.86	14.3						
BM	DM	3S	5	12.9	286	249	9		100			16	84			27	11	95	1.04	2.6						
BM	DM	4S	5	.0	232	232	8	25	75					18		31	8	60	0.70	3.8						
BM	DM	UT	33		1,464	1,464	51	41	24	11	25	42	26	15	16	26	8	56	0.85	26.0						
<b>BM</b>	<b>Totals</b>		9	8.1	4,965	4,562	160	14	17	37	32	56	32	5	8	25	10	98	1.12	46.8						
RC	DM	3S	82	8.3	2,699	2,475	87	1	30	23	47		5	1	94	35	11	186	1.97	13.3						
RC	DM	4S	18	2.2	548	536	19	98	2			9	73	4	14	26	5	28	0.46	19.3						
<b>RC</b>	<b>Totals</b>		6	7.3	3,247	3,011	106	18	25	19	38	2	17	1	80	30	8	92	1.19	32.6						
RA	DM	2S	75	2.7	2,096	2,040	72		63	37		16	50		33	29	14	205	1.61	9.9						
RA	DM	3S	3	7.7	107	99	3		100				100			30	11	120	1.12	.8						
RA	DM	4S	3	.0	64	64	2	49	51			51	49			21	8	40	0.56	1.6						
RA	DM	UT	19		516	516	18	73	7	20		7	38	11	44	29	6	49	0.61	10.6						
<b>RA</b>	<b>Totals</b>		5	2.3	2,784	2,720	95	15	6	51	28	15	50	2	33	29	10	119	1.07	22.9						
WH	DM	2S	57	3.8	526	506	18		33	67				100		40	15	356	1.87	1.4						
WH	DM	3S	27		240	240	8	42	58				8	92		35	8	76	0.68	3.2						
WH	DM	4S	7		58	58	2	100				42		58		26	5	28	0.39	2.0						
WH	DM	UT	9		78	78	3	100				21		79		25	5	24	0.44	3.2						
<b>WH</b>	<b>Totals</b>		2	2.2	903	882	31	27	16	19	38	5	2	93		31	7	90	0.79	9.8						
CW	DM	2S	100	4.3	309	295	10		19	81				100		40	21	770	4.12	.4						
<b>CW</b>	<b>Totals</b>		1	4.3	309	295	10		19	81				100		40	21	770	4.12	.4						
<b>Type Totals</b>				2.4	51,395	50,139	1,760	6	10	18	66	7	9	4	80	31	11	218	1.56	229.9						



T37N R04E S24 T001C T37N R04E S24 T001C  
 Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt BdFt  
 37N 04E 24 EGGROLL 001C 14.70 15 73 S W

Spp	S T	So rt	Gr ad	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre		
					Def%	Gross	Net		Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf	
									5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99						
DF		HB	2S	12	1.0	4,911	4,862	71			12	88					100	40	20	754	3.89	6.4
DF		DM	2S	66	3.4	26,849	25,939	381			14	86			1	1	98	39	19	604	3.07	42.9
DF		DM	3S	7	4.9	2,724	2,591	38	4	96				5	11	14	70	35	10	112	0.96	23.1
DF		DM	4S	3		993	993	15	94	6				2	32	9	56	33	5	37	0.33	27.2
DF		HA	3P	6		2,682	2,682	39				100				24	76	38	27	1238	5.81	2.2
DF		HA	SM	6		1,998	1,998	29				100				100		40	20	668	3.10	3.0
<b>DF</b>	<b>Totals</b>			79	2.7	40,156	39,064	574	3	7	11	80	0	2	3	94		37	13	373	2.09	104.8
BM		DM	2S	37	9.0	2,234	2,032	30			90	10		10	77		13	30	14	204	2.15	9.9
BM		DM	3S	27	6.5	1,580	1,476	22	3	97				10	90			28	10	99	1.11	14.9
BM		DM	4S	16	2.2	894	874	13	71	29				8	92			28	7	43	0.52	20.4
BM		DM	UT	20		1,037	1,037	15	43		38	19		30	42	13	15	23	7	56	0.70	18.5
<b>BM</b>	<b>Totals</b>			11	5.7	5,744	5,419	80	21	31	41	7	14	76	3	8		27	9	85	0.99	63.7
WH		DM	2S	54		1,332	1,332	20			54	46				100		36	14	266	1.60	5.0
WH		DM	3S	20		480	480	7		100					56	44		34	9	94	0.86	5.1
WH		DM	4S	23		565	565	8	100					7	10		82	33	5	37	0.43	15.2
WH		DM	UT	3		60	60	1	100				100					17	5	20	0.29	3.0
<b>WH</b>	<b>Totals</b>			5		2,437	2,437	36	26	20	30	25	4	2	11	82		32	7	86	0.74	28.3
RA		DM	2S	46	18.9	1,080	875	13			100			21	44		35	30	13	141	1.53	6.2
RA		DM	3S	20	8.2	416	381	6		100					100			30	11	112	0.99	3.4
RA		DM	4S	17	3.7	320	308	5	46	54					100			30	7	47	0.55	6.5
RA		DM	UT	17		315	315	5	33		67			67	33			25	8	61	0.70	5.2
<b>RA</b>	<b>Totals</b>			4	11.8	2,130	1,880	28	13	29	58		21	62		16		29	9	88	0.95	21.3
RC		DM	3S	80	6.0	614	578	8		61	39				100			36	10	132	1.23	4.4
RC		DM	4S	20		139	139	2	16	84				16	84			22	8	38	0.74	3.7
<b>RC</b>	<b>Totals</b>			1	4.9	753	717	11	3	65	32		3	16		81		30	9	89	1.06	8.0
<b>Type Totals</b>					3.3	51,220	49,516	728	6	12	17	65	3	13	3	81		32	11	219	1.54	226.2

<b>T37N R04E S24 TRMZ</b>										<b>T37N R04E S24 TRMZ</b>				
<b>Twp</b>	<b>Rge</b>	<b>Sec</b>	<b>Tract</b>	<b>Type</b>	<b>Acres</b>	<b>Plots</b>	<b>Sample Trees</b>	<b>CuFt</b>	<b>BdFt</b>					
<b>37N</b>	<b>04E</b>	<b>24</b>	<b>EGGROLL</b>	<b>RMZ</b>	<b>4.80</b>	<b>5</b>	<b>11</b>	<b>S</b>	<b>W</b>					

S Twp	So Rge	Gr Sec	% Net BdFt	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre	
								Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft		CF/ Lf
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99					
RA	DM	2S	61	8.2	6,320	5,800	28		59	41		100				30	15	242	1.80	24.0
RA	DM	3S	19	10.4	1,920	1,720	8		100			100				30	11	108	1.00	16.0
RA	DM	4S	9	8.3	960	880	4	18	82			23	45	32		27	8	55	0.76	16.0
RA	DM	UT	11		1,000	1,000	5	100				16	20	16	48	28	5	36	0.55	28.0
<b>RA</b>	<b>Totals</b>		100	7.8	10,200	9,400	45	12	26	36	26	4	86	5	5	29	10	112	1.05	84.0
<b>Type</b>	<b>Totals</b>			7.8	10,200	9,400	45	12	26	36	26	4	86	5	5	29	10	112	1.05	84.0

T37N R04E S24 TRW		T37N R04E S24 TRW
Twp Rge Sec Tract Type Acres Plots Sample Trees CuFt		BdFt
37N 04E 24 EGGROLL RW .30 1 5 S		W

Spp	S T	So rt	Gr ad	%	Bd. Ft. per Acre			Total Net MBF	Percent Net Board Foot Volume								Average Log			Logs Per /Acre					
									Net BdFt	Def%	Gross	Net	Log Scale Dia.				Log Length				Ln Ft	Dia In	Bd Ft	CF/ Lf	
													5-7	8-11	12-15	16+	12-20	21-30	31-35						36-99
DF		DM	2S	43		21,200	21,200	6			21	79					100	38	18	530	2.66	40.0			
DF		HA	3P	57	7.5	29,200	27,000	8				100				100	40	28	1350	6.08	20.0				
<b>DF</b>	<b>Totals</b>			72	4.4	50,400	48,200	14			9	91				100	39	21	803	3.84	60.0				
RA		DM	2S	67	1.8	11,200	11,000	3				100		25	75		27	14	183	1.51	60.0				
RA		DM	UT	33		5,200	5,200	2	23	77				42	58		36	8	87	0.68	60.0				
<b>RA</b>	<b>Totals</b>			24	1.2	16,400	16,200	5	7	25	68		17	64	19		31	11	135	1.04	120.0				
WH		DM	3S	100	6.3	3,200	3,000	1			100				100		35	11	150	0.94	20.0				
<b>WH</b>	<b>Totals</b>			4	6.3	3,200	3,000	1			100				100		35	11	150	0.94	20.0				
<b>Type Totals</b>					3.7	70,000	67,400	20	2	10	23	65	4	15	4	76	34	14	337	1.99	200.0				

TC TSTATS		<b>STATISTICS</b>							PAGE	1	
		<b>PROJECT EGGROLL</b>							DATE	7/31/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt		
36N	03E	02	CICADA	0001	29.20	31	203	S	W		
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES					
TOTAL		31	203	6.5							
CRUISE		31	203	6.5	3,801	5.3					
DBH COUNT											
REFOREST											
COUNT											
BLANKS											
100 %											
<b>STAND SUMMARY</b>											
	SAMPLE TREES	TREES /ACRE	AVG DBH	BOLE LEN	REL DEN	BASAL AREA	GROSS BF/AC	NET BF/AC	GROSS CF/AC	NET CF/AC	
DOUG FIR	71	36.7	25.2	87	25.3	126.7	25,863	25,451	5,479	5,479	
WR CEDAR	72	37.7	22.0	62	21.3	99.9	10,478	9,985	3,184	3,184	
WHEMLOCK	27	24.9	19.0	74	11.3	49.2	8,735	8,663	1,971	1,971	
R ALDER	27	27.9	16.1	58	9.8	39.5	3,860	3,730	1,016	1,016	
BL MAPLE	4	1.9	24.3	62	1.2	6.1	754	729	164	164	
COTWOOD	2	1.0	25.1	88	0.7	3.5	605	605	144	144	
<b>TOTAL</b>	<b>203</b>	<b>130.2</b>	<b>21.4</b>	<b>71</b>	<b>70.2</b>	<b>324.8</b>	<b>50,294</b>	<b>49,163</b>	<b>11,957</b>	<b>11,957</b>	
CONFIDENCE LIMITS OF THE SAMPLE											
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR											
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	59.7	7.1		1,078	1,160	1,242					
WR CEDAR	65.3	7.7		403	437	471					
WHEMLOCK	65.6	12.9		479	549	620					
R ALDER	49.2	9.6		137	151	166					
BL MAPLE	33.9	19.4		341	423	504					
COTWOOD	3.6	3.3		575	595	615					
<b>TOTAL</b>	<b>89.2</b>	<b>6.3</b>		<b>627</b>	<b>669</b>	<b>711</b>	<b>318</b>	<b>162</b>	<b>80</b>		
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	138.7	24.9		28	37	46					
WR CEDAR	97.9	17.6		31	38	44					
WHEMLOCK	153.9	27.6		18	25	32					
R ALDER	167.1	30.0		20	28	36					
BL MAPLE	314.3	56.4		1	2	3					
COTWOOD	387.1	69.5		0	1	2					
<b>TOTAL</b>	<b>57.1</b>	<b>10.2</b>		<b>117</b>	<b>130</b>	<b>143</b>	<b>130</b>	<b>66</b>	<b>33</b>		
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	89.8	16.1		106	127	147					
WR CEDAR	97.9	17.6		82	100	117					
WHEMLOCK	125.0	22.4		38	49	60					
R ALDER	164.9	29.6		28	39	51					
BL MAPLE	316.8	56.9		3	6	10					
COTWOOD	387.1	69.5		1	4	6					
<b>TOTAL</b>	<b>35.7</b>	<b>6.4</b>		<b>304</b>	<b>325</b>	<b>346</b>	<b>51</b>	<b>26</b>	<b>13</b>		
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	85.4	15.3		21,549	25,451	29,353					
WR CEDAR	108.7	19.5		8,038	9,985	11,932					
WHEMLOCK	139.2	25.0		6,499	8,663	10,827					

TC TSTATS				<b>STATISTICS</b>				PAGE	2	
				PROJECT		EGGROLL		DATE	7/31/2019	
<b>TWP</b>	<b>RGE</b>	<b>SECT</b>	<b>TRACT</b>	<b>TYPE</b>	<b>ACRES</b>	<b>PLOTS</b>	<b>TREES</b>	<b>CuFt</b>	<b>BdFt</b>	
<b>36N</b>	<b>03E</b>	<b>02</b>	<b>CICADA</b>	<b>0001</b>	29.20	31	203	S	W	
CL:	68.1%	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
R ALDER		166.8	29.9	2,614	3,730	4,847				
BL MAPLE		325.1	58.3	304	729	1,154				
COTWOOD		387.1	69.5	185	605	1,026				
<b>TOTAL</b>		<b>43.7</b>	<b>7.8</b>	<b>45,306</b>	<b>49,163</b>	<b>53,020</b>	<b>76</b>	<b>39</b>	<b>19</b>	

TC TSTATS				STATISTICS				PAGE 1		
PROJECT				EGGROLL				DATE 7/31/2019		
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	04E	24	EGGROLL	001A	35.10	36	216	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	36	216	6.0							
CRUISE	36	216	6.0	4,238		5.1				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	110	45.2	25.6	98	31.9	161.0	39,187	38,668	7,784	7,784
BL MAPLE	46	29.6	19.3	49	13.6	59.9	4,965	4,562	1,325	1,325
WR CEDAR	35	25.3	18.2	44	10.7	45.6	3,247	3,011	1,167	1,167
R ALDER	19	14.9	17.4	51	5.9	24.8	2,784	2,720	705	705
WHEMLOCK	5	5.5	15.4	57	1.8	7.1	903	882	237	237
COTWOOD	1	.2	38.0	90	0.2	1.5	309	295	63	63
<b>TOTAL</b>	<i>216</i>	<i>120.7</i>	<i>21.3</i>	<i>67</i>	<i>64.9</i>	<i>299.9</i>	<i>51,395</i>	<i>50,139</i>	<i>11,282</i>	<i>11,282</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	SAMPLE TREES - BF				# OF TREES REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	67.5	6.4	1,365	1,459	1,553					
BL MAPLE	60.3	9.1	193	212	231					
WR CEDAR	98.0	16.5	223	267	311					
R ALDER	49.9	11.8	214	243	271					
WHEMLOCK	148.5	73.8	90	342	594					
COTWOOD										
<b>TOTAL</b>	<i>107.9</i>	<i>7.4</i>	<i>810</i>	<i>874</i>	<i>938</i>	<i>465</i>	<i>237</i>	<i>116</i>		
CL: 68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	155.4	25.9	34	45	57					
BL MAPLE	123.3	20.5	23	30	36					
WR CEDAR	154.7	25.8	19	25	32					
R ALDER	171.6	28.6	11	15	19					
WHEMLOCK	280.8	46.8	3	6	8					
COTWOOD	600.0	99.9	0	0	0					
<b>TOTAL</b>	<i>66.3</i>	<i>11.0</i>	<i>107</i>	<i>121</i>	<i>134</i>	<i>176</i>	<i>90</i>	<i>44</i>		
CL: 68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	130.9	21.8	126	161	196					
BL MAPLE	110.1	18.3	49	60	71					
WR CEDAR	108.5	18.1	37	46	54					
R ALDER	139.5	23.2	19	25	31					
WHEMLOCK	253.3	42.2	4	7	10					
COTWOOD	600.0	99.9	0	2	3					
<b>TOTAL</b>	<i>56.3</i>	<i>9.4</i>	<i>272</i>	<i>300</i>	<i>328</i>	<i>126</i>	<i>64</i>	<i>32</i>		
CL: 68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	132.1	22.0	30,164	38,668	47,171					
BL MAPLE	118.5	19.7	3,662	4,562	5,462					
WR CEDAR	126.6	21.1	2,376	3,011	3,646					
R ALDER	145.4	24.2	2,062	2,720	3,379					
WHEMLOCK	296.8	49.4	446	882	1,319					

TC TSTATS				<b>STATISTICS</b>				PAGE	2	
				PROJECT		EGGROLL		DATE	7/31/2019	
<b>TWP</b>	<b>RGE</b>	<b>SECT</b>	<b>TRACT</b>	<b>TYPE</b>	<b>ACRES</b>	<b>PLOTS</b>	<b>TREES</b>	<b>CuFt</b>	<b>BdFt</b>	
<b>37N</b>	<b>04E</b>	<b>24</b>	<b>EGGROLL</b>	<b>001A</b>	35.10	36	216	S	W	
CL:	68.1%	COEFF		NET BF/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	7	10	
COTWOOD		600.0	99.9	0	295	591				
<b>TOTAL</b>		<i>91.7</i>	<i>15.3</i>	<i>42,480</i>	<i>50,139</i>	<i>57,799</i>	<i>336</i>	<i>171</i>	<i>84</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		EGGROLL		DATE	7/31/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	04E	24	EGGROLL	001B	6.40	6	24	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL				6	24	4.0				
CRUISE				6	24	4.0	671	3.6		
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	9	10.6	37.6	123	13.3	81.6	22,540	21,537	4,187	4,187
R ALDER	10	51.2	16.7	55	19.1	78.2	9,030	8,441	2,204	2,204
WHEMLOCK	4	40.2	12.9	46	10.1	36.3	2,983	2,983	914	914
WR CEDAR	1	2.9	22.2	57	1.7	7.8	523	465	220	220
<b>TOTAL</b>	<b>24</b>	<b>104.9</b>	<b>18.9</b>	<b>59</b>	<b>46.9</b>	<b>203.9</b>	<b>35,076</b>	<b>33,426</b>	<b>7,524</b>	<b>7,525</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL:	68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		47.5	16.8	1,925	2,313	2,701				
R ALDER		62.6	20.8	161	203	245				
WHEMLOCK		105.6	60.3	42	105	168				
WR CEDAR										
<b>TOTAL</b>		<b>127.5</b>	<b>26.6</b>	<b>717</b>	<b>976</b>	<b>1,236</b>	<b>677</b>	<b>345</b>	<b>169</b>	
CL:	68.1 %	COEFF	<b>TREES/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		99.6	44.3	6	11	15				
R ALDER		82.1	36.6	32	51	70				
WHEMLOCK		120.6	53.7	19	40	62				
WR CEDAR		244.9	109.1	3	3	6				
<b>TOTAL</b>		<b>56.3</b>	<b>25.1</b>	<b>79</b>	<b>105</b>	<b>131</b>	<b>151</b>	<b>77</b>	<b>38</b>	
CL:	68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		91.9	40.9	48	82	115				
R ALDER		82.0	36.5	50	78	107				
WHEMLOCK		122.5	54.5	16	36	56				
WR CEDAR		244.9	109.1	8	8	16				
<b>TOTAL</b>		<b>46.8</b>	<b>20.8</b>	<b>161</b>	<b>204</b>	<b>246</b>	<b>104</b>	<b>53</b>	<b>26</b>	
CL:	68.1 %	COEFF	<b>NET BF/ACRE</b>				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10	
DOUG FIR		100.7	44.8	11,881	21,537	31,192				
R ALDER		92.6	41.2	4,961	8,441	11,921				
WHEMLOCK		147.1	65.5	1,029	2,983	4,938				
WR CEDAR		244.9	109.1	465	465	973				
<b>TOTAL</b>		<b>63.5</b>	<b>28.3</b>	<b>23,969</b>	<b>33,426</b>	<b>42,884</b>	<b>192</b>	<b>98</b>	<b>48</b>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT		EGGROLL		DATE	7/31/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	04E	24	EGGROLL	001C	14.70	15	73	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	15	73	4.9							
CRUISE	15	73	4.9	1,721	4.2					
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	39	48.2	24.9	86	32.6	162.5	40,156	39,064	8,032	8,033
BL MAPLE	20	34.2	18.5	58	14.8	63.6	5,744	5,419	1,698	1,698
WHEMLOCK	5	18.2	14.5	54	5.5	20.8	2,437	2,437	662	662
R ALDER	6	9.9	18.6	68	4.3	18.8	2,130	1,880	581	580
WR CEDAR	3	6.6	16.2	53	2.3	9.4	753	717	254	254
<b>TOTAL</b>	<b>73</b>	<b>117.1</b>	<b>20.8</b>	<b>69</b>	<b>60.4</b>	<b>275.0</b>	<b>51,220</b>	<b>49,516</b>	<b>11,227</b>	<b>11,227</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>				<b># OF TREES REQ.</b>		<b>INF. POP.</b>		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	56.2	9.1	1,548	1,703	1,858					
BL MAPLE	41.8	9.8	185	205	225					
WHEMLOCK	110.4	54.8	106	234	362					
R ALDER	36.2	16.1	168	200	232					
WR CEDAR	123.3	85.3	30	207	383					
<b>TOTAL</b>	<b>101.9</b>	<b>12.1</b>	<b>887</b>	<b>1,008</b>	<b>1,130</b>	<b>414</b>	<b>211</b>	<b>104</b>		
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>				<b># OF PLOTS REQ.</b>		<b>INF. POP.</b>		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	135.9	36.3	31	48	66					
BL MAPLE	128.5	34.3	22	34	46					
WHEMLOCK	181.5	48.5	9	18	27					
R ALDER	149.7	40.0	6	10	14					
WR CEDAR	234.0	62.5	2	7	11					
<b>TOTAL</b>	<b>50.6</b>	<b>13.5</b>	<b>101</b>	<b>117</b>	<b>133</b>	<b>110</b>	<b>56</b>	<b>27</b>		
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>				<b># OF PLOTS REQ.</b>		<b>INF. POP.</b>		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	55.9	14.9	138	163	187					
BL MAPLE	130.6	34.9	41	64	86					
WHEMLOCK	185.2	49.5	11	21	31					
R ALDER	158.1	42.2	11	19	27					
WR CEDAR	207.0	55.3	4	9	15					
<b>TOTAL</b>	<b>16.0</b>	<b>4.3</b>	<b>263</b>	<b>275</b>	<b>287</b>	<b>11</b>	<b>6</b>	<b>3</b>		
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>				<b># OF PLOTS REQ.</b>		<b>INF. POP.</b>		
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
DOUG FIR	62.8	16.8	32,511	39,064	45,616					
BL MAPLE	145.8	38.9	3,309	5,419	7,529					
WHEMLOCK	261.3	69.8	736	2,437	4,137					
R ALDER	171.0	45.7	1,021	1,880	2,738					
WR CEDAR	229.2	61.2	278	717	1,155					
<b>TOTAL</b>	<b>40.2</b>	<b>10.7</b>	<b>44,206</b>	<b>49,516</b>	<b>54,826</b>	<b>69</b>	<b>35</b>	<b>17</b>		

TC TSTATS				STATISTICS				PAGE 1		
PROJECT EGGROLL				DATE 7/31/2019						
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	04E	24	EGGROLL	RMZ	4.80	5	11	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
					TREES	TREES				
TOTAL	5	11	2.2							
CRUISE	5	11	2.2	211		5.2				
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
STAND SUMMARY										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
R ALDER	11	44.0	18.6	58	19.3	83.2	10,200	9,400	2,539	2,541
<b>TOTAL</b>	<i>11</i>	<i>44.0</i>	<i>18.6</i>	<i>58</i>	<i>19.3</i>	<i>83.2</i>	<i>10,200</i>	<i>9,400</i>	<i>2,539</i>	<i>2,541</i>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>					# OF TREES REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	50.3	15.9	180	214	248					
<b>TOTAL</b>	<i>50.3</i>	<i>15.9</i>	<i>180</i>	<i>214</i>	<i>248</i>	<i>111</i>	<i>57</i>	<i>28</i>		
CL: 68.1 %	COEFF	<b>TREES/ACRE</b>					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	49.8	24.7	33	44	55					
<b>TOTAL</b>	<i>49.8</i>	<i>24.7</i>	<i>33</i>	<i>44</i>	<i>55</i>	<i>122</i>	<i>62</i>	<i>31</i>		
CL: 68.1 %	COEFF	<b>BASAL AREA/ACRE</b>					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	51.7	25.7	62	83	105					
<b>TOTAL</b>	<i>51.7</i>	<i>25.7</i>	<i>62</i>	<i>83</i>	<i>105</i>	<i>132</i>	<i>67</i>	<i>33</i>		
CL: 68.1 %	COEFF	<b>NET BF/ACRE</b>					# OF PLOTS REQ.		INF. POP.	
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	7	10		
R ALDER	43.4	21.6	7,372	9,400	11,428					
<b>TOTAL</b>	<i>43.4</i>	<i>21.6</i>	<i>7,372</i>	<i>9,400</i>	<i>11,428</i>	<i>93</i>	<i>48</i>	<i>23</i>		

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	EGGROLL			DATE	7/31/2019	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
37N	04E	24	EGGROLL	RW	0.30	1	5	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL	1	5	5.0							
CRUISE	1	5	5.0		30		16.7			
DBH COUNT										
REFOREST										
COUNT										
BLANKS										
100 %										
<b>STAND SUMMARY</b>										
	SAMPLE	TREES	AVG	BOLE	REL	BASAL	GROSS	NET	GROSS	NET
	TREES	/ACRE	DBH	LEN	DEN	AREA	BF/AC	BF/AC	CF/AC	CF/AC
DOUG FIR	1	20.0	39.2	121	26.8	167.6	50,400	48,200	8,909	8,909
R ALDER	3	60.0	19.0	73	27.0	117.8	16,400	16,200	3,885	3,885
WHEMLOCK	1	20.0	15.0	36	6.3	24.5	3,200	3,000	660	660
<b>TOTAL</b>	<b>5</b>	<b>100.0</b>	<b>23.8</b>	<b>75</b>	<b>63.5</b>	<b>309.9</b>	<b>70,000</b>	<b>67,400</b>	<b>13,455</b>	<b>13,455</b>
CONFIDENCE LIMITS OF THE SAMPLE										
68.1 TIMES OUT OF 100 THE VOLUME WILL BE WITHIN THE SAMPLE ERROR										
CL: 68.1 %	COEFF	<b>SAMPLE TREES - BF</b>					# OF TREES REQ.			
SD: 1.0	VAR.%	S.E.%	LOW	AVG	HIGH	0				
DOUG FIR										
R ALDER	35.7	24.7	203	270	337					
WHEMLOCK										
<b>TOTAL</b>	<b>144.5</b>	<b>71.8</b>	<b>190</b>	<b>674</b>	<b>1,158</b>		<b>1,032</b>	<b>526</b>		<b>258</b>

**Species Summary - Trees, Logs, Tons, CCF, MBF**

T36N R03E S02 Ty0001	29.2
T37N R04E S24 Ty001A	35.1
T37N R04E S24 TyRW	.3

**Project EGGROLL**  
**Acres 90.50**

**Page No 1**  
**Date: 7/31/2019**  
**Time 4:21:33PM**

Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	3,440	8,404	16,552	168.81	69.11	2.03	5,808	5,808	2,880	2,827
WR CEDAR	2,106	3,128	3,268	66.05	44.46	1.45	1,391	1,391	434	411
WHEMLOCK	1,452	2,548	2,613	56.23	32.05	0.98	817	817	343	340
R ALDER	2,042	3,638	2,486	44.28	24.84	0.91	904	904	353	336
BL MAPLE	1,595	2,690	2,021	47.79	28.35	1.12	763	762	281	261
COTWOOD	36	73	157	175.91	87.96	2.20	64	64	29	28
<b>Totals</b>	10,672	20,480	27,097	91.32	47.59	1.53	9,746	9,746	4,320	4,203

Wood Type Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
C	6,998	14,079	22,433	114.53	56.93	1.72	8,015	8,015	3,657	3,577
H	3,673	6,401	4,664	47.11	27.04	1.01	1,731	1,730	663	625
<b>Totals</b>	10,672	20,480	27,097	91.32	47.59	1.53	9,746	9,746	4,320	4,203





**Log Stock Table - MBF**

T36N R03E S02 Ty0001  
THRU  
T37N R04E S24 TyRW

**Project: EGGROLL**  
**Acres 90.50**

**Page 3**  
**Date 7/31/2019**  
**Time 4:21:31PM**

Spp	S T	So Gr rt de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches												
								2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39	40+	
RA		DM UT	35	3		3	1.0		3											
RA		DM UT	36	3		3	1.0		1	2										
RA		DM UT	37	0		0	.1			0										
RA		DM UT	38	4		4	1.1		1	3										
RA		DM UT	40	10		10	3.0			6	1		4							
RA		Totals		353	4.9	336	8.0		25	27	36	41	94	70	44					
BM		DM 2S	18	9	14.7	8	3.0							5	3					
BM		DM 2S	20	86	13.4	74	28.4						8	21	23	18	4			
BM		DM 2S	28	4		4	1.6							4						
BM		DM 2S	30	49	6.4	46	17.7						13	29	4					
BM		DM 2S	40	7	8.0	7	2.5						4	3						
BM		DM 3S	19	1		1	.5					1								
BM		DM 3S	20	3	14.3	2	.8					2								
BM		DM 3S	21	1	11.1	1	.4					1								
BM		DM 3S	22	1		1	.2													
BM		DM 3S	30	28	8.4	25	9.7			1		25								
BM		DM 4S	20	1		1	.4													
BM		DM 4S	21	0		0	.2			0										
BM		DM 4S	28	2		2	.8			2										
BM		DM 4S	29	1		1	.2			1										
BM		DM 4S	30	16	1.9	15	5.9			1	6	9								
BM		DM 4S	40	1		1	.6				1									
BM		DM UT	12	17		17	6.6			1			2	2	13					
BM		DM UT	13	0		0	.2				0									
BM		DM UT	14	3		3	1.3			1					3					
BM		DM UT	17	2		2	.6			1		1								
BM		DM UT	18	0		0	.2				0									
BM		DM UT	19	1		1	.2					1								
BM		DM UT	20	2		2	1.0						2							
BM		DM UT	22	1		1	.3				1									
BM		DM UT	24	1		1	.5			1										
BM		DM UT	25	4		4	1.6				1			4						
BM		DM UT	27	1		1	.3			1										
BM		DM UT	28	3		3	1.3			3										
BM		DM UT	29	2		2	.9						2							
BM		DM UT	30	11		11	4.4			1		3	3	3	2					







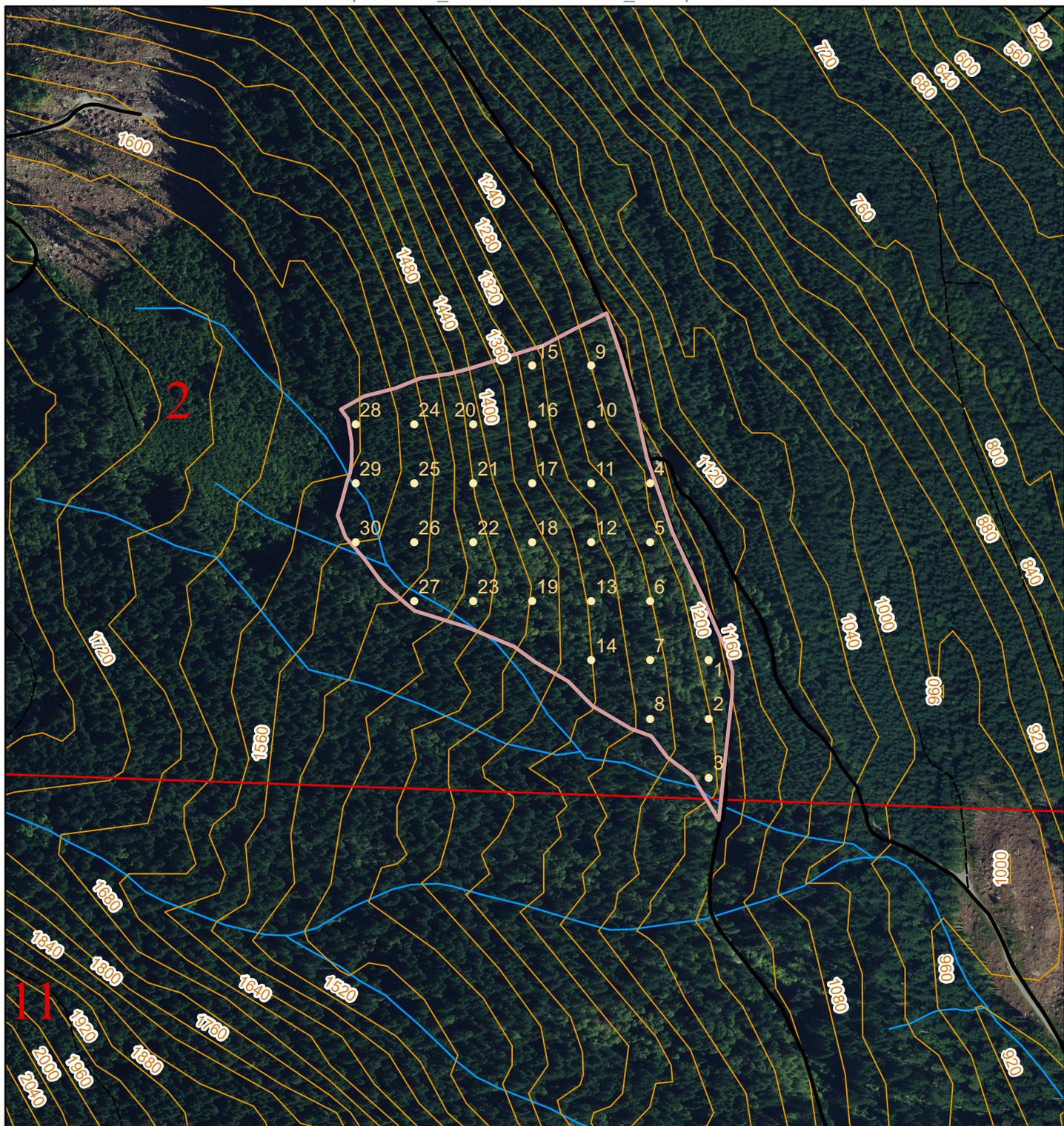
**Log Stock Table - MBF**

T36N R03E S02 Ty0001  
 THRU  
 T37N R04E S24 TyRW

**Project: EGGROLL**  
**Acres 90.50**

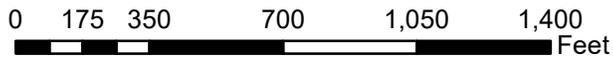
**Page 7**  
**Date 7/31/2019**  
**Time 4:21:31PM**

Spp	S T	So rt	Gr de	Log Len	Gross MBF	Def %	Net MBF	% Spc	Net Volume by Scaling Diameter in Inches										
									2-3	4-5	6-7	8-9	10-11	12-13	14-15	16-19	20-23	24-29	30-39
WH		DM	UT	32	8		8	2.4							8				
WH		DM	UT	37	2		2	.6		2									
WH		Totals			343		340	8.1		28	21	45	16	51	35	77	61	4	
CW		DM	2S	40	25	1.9	24	85.7						2	14		8		
CW		DM	4S	40	4		4	14.3			2		2						
CW		Totals			29	1.7	28	.7			2		2		2	14		8	
Total		All Species			4,320	2.7	4,203	100.0		137	121	242	288	357	460	834	906	681	177



**Cicada Timber Sale**

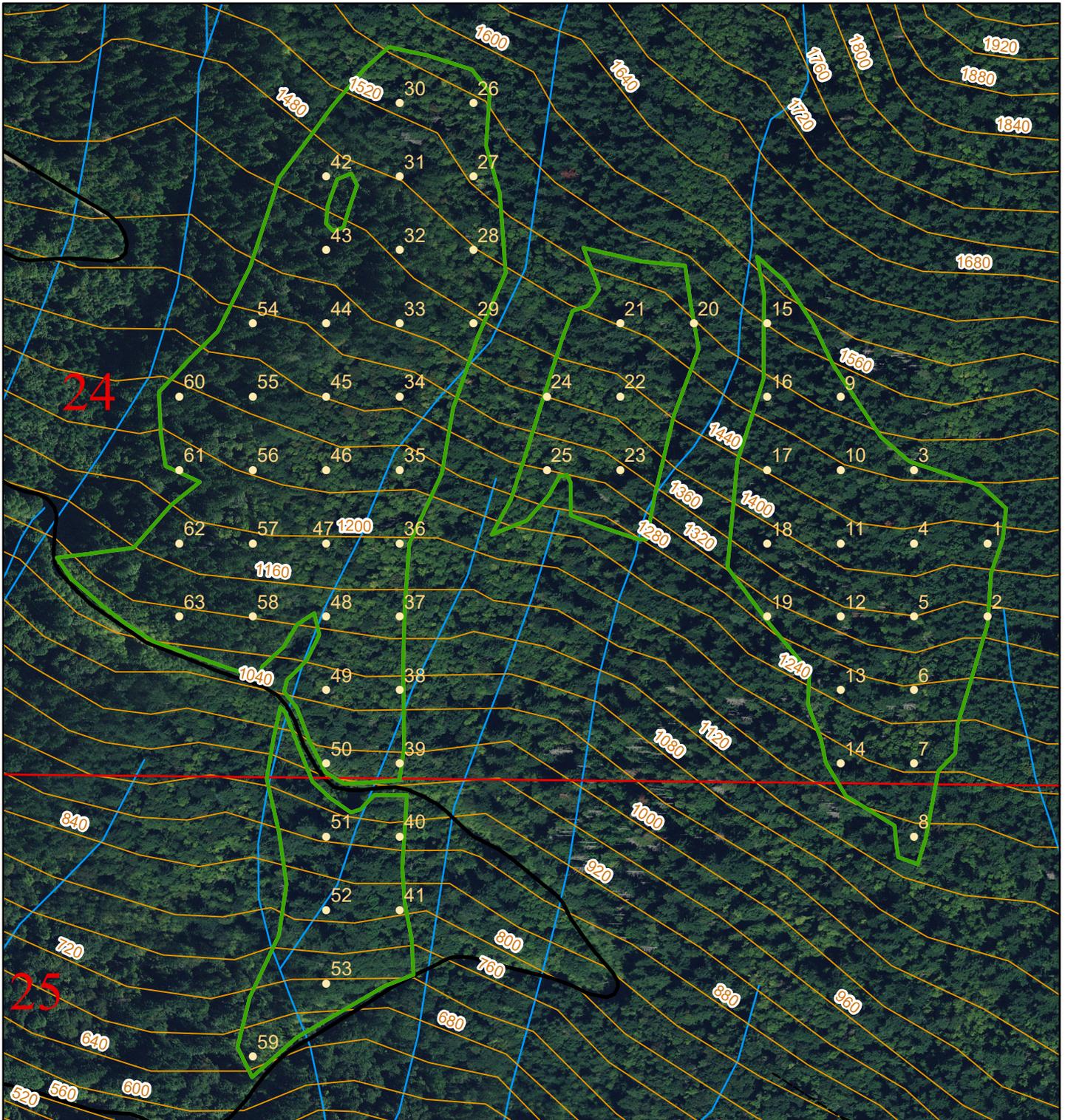
Layer:	cicada_recon_units selection	Township:	T36R03E
Poly Id:	1	Total Sample Points:	30
Acres:	29	Spacing Between Points:	Width: 208 Height: 208
Imagery:	2017 Orthophoto (1-ft Color) [HXIP]	Point Rotation Degrees:	0



Scale 1:6,000

**Legend**

- Sample Points
- Unit
- Public Land Survey Sections
- Contours 40-foot



**FMA POLYGON AND SAMPLE POINT INFORMATION**

FMA_NM:	EGG ROLL	Township:	T37R04E
FMA_ID:	310215	DNR Region:	NORTHWEST
Acres:	57	Total Sample Points:	63
County:	WHATCOM	Spacing Between Points:	Width: 208 Height: 208
Imagery:	2017 Orthophoto (1-ft Color) [HXIP]	Point Rotation Degrees:	0



**Legend**

- Sample Points
- FMA polys
- Public Land Survey Sections
- Contours 40-foot



# Forest Practices Application/Notification Notice of Decision

FPA/N No: 2817229  
 Effective Date: 11/4/2019  
 Expiration Date: 11/4/2022  
 Shut Down Zone: 656  
 EARR Tax Credit:  Eligible     Non-eligible  
 Reference: Cicada

### Decision

- Notification      Operations shall not begin before the effective date.
- Approved          This Forest Practices Application is subject to the conditions listed below.
- Disapproved      This Forest Practices Application is disapproved for the reasons listed below.
- Closed              Applicant has withdrawn FPA/N.

### FPA/N Classification

Class II     Class III     Class IVG     Class IVS

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

4 years     5 years

### Conditions on Approval / Reasons for Disapproval

Issued By: Dave Klingbiel *DK*      Region: Northwest

Title: Chuckanut Forest Practice Forester      Date: 11/4/2019

Copies to:  Landowner, Timber Owner and Operator.

Issued in person:  Landowner  Timber Owner  Operator By: *[Signature]*

**Appeal Information**

You have thirty (30) days to appeal this Decision and any related State Environmental Policy Act determinations to the Pollution Control Hearings Board in writing at the following addresses:

**Physical address: 1111 Israel Rd. SW, Ste 301, Tumwater, WA 98501**

**Mailing address: P.O. BOX 40903, OLYMPIA, WA 98504-0903**

Information regarding the Pollution Control Hearings Board can be found at: <http://www.eluho.wa.gov/>

At the same time you file an appeal with the Pollution Control Hearings Board, also send a copy of the appeal to the Department of Natural Resources' region office and the Office of the Attorney General at the following addresses:

Office of the Attorney General  
Natural Resources Division  
1125 Washington Street SE  
PO Box 40100  
Olympia, WA 98504-0100

And

Department Of Natural Resources  
Northwest Region  
919 N Township Street  
Sedro-Woolley, WA 98284

**Other Applicable Laws**

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

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

Use the "Notice of Transfer of Approved Forest Practices Application/Notification" form. This form is available at region offices and on the Forest Practices website: <http://www.dnr.wa.gov/businesspermits/forestpractices>. Notify DNR of new Operators within 48 hours.

**Continuing Forest Land 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 forest land 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 land 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 forest land obligation, the seller must pay the buyer's costs related to continuing forest land obligations, including all legal costs and reasonable attorneys' fees incurred by the buyer in enforcing the continuing forest land obligation against the seller.

Failure by the seller to send the required notice to the 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 forest land obligation prior to sale.

**DNR affidavit of mailing:**

On this day _____, I placed in the United States mail at _____ Sedro-Woolley _____, WA,
(date) (post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA # _____
_____ Braelyn Hamilton _____
(Printed name) (Signature)



# Forest Practices Application/Notification Notice of Decision

FPA/N No: 2817215  
 Effective Date: 10/15/2019  
 Expiration Date: 10/15/2022  
 Shut Down Zone: 656  
 EARR Tax Credit:  Eligible     Non-eligible  
 Reference: Egg Roll

**Decision**

- Notification      Operations shall not begin before the effective date.
- Approved            This Forest Practices Application is subject to the conditions listed below.
- Disapproved        This Forest Practices Application is disapproved for the reasons listed below.
- Closed                Applicant has withdrawn FPA/N.

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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: Dave Klingbiel

Region: Northwest

Title: Chuckanut Forest Practice Forester

Date: 10/15/2019

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Issued in person:  Landowner     Timber Owner     Operator

By:

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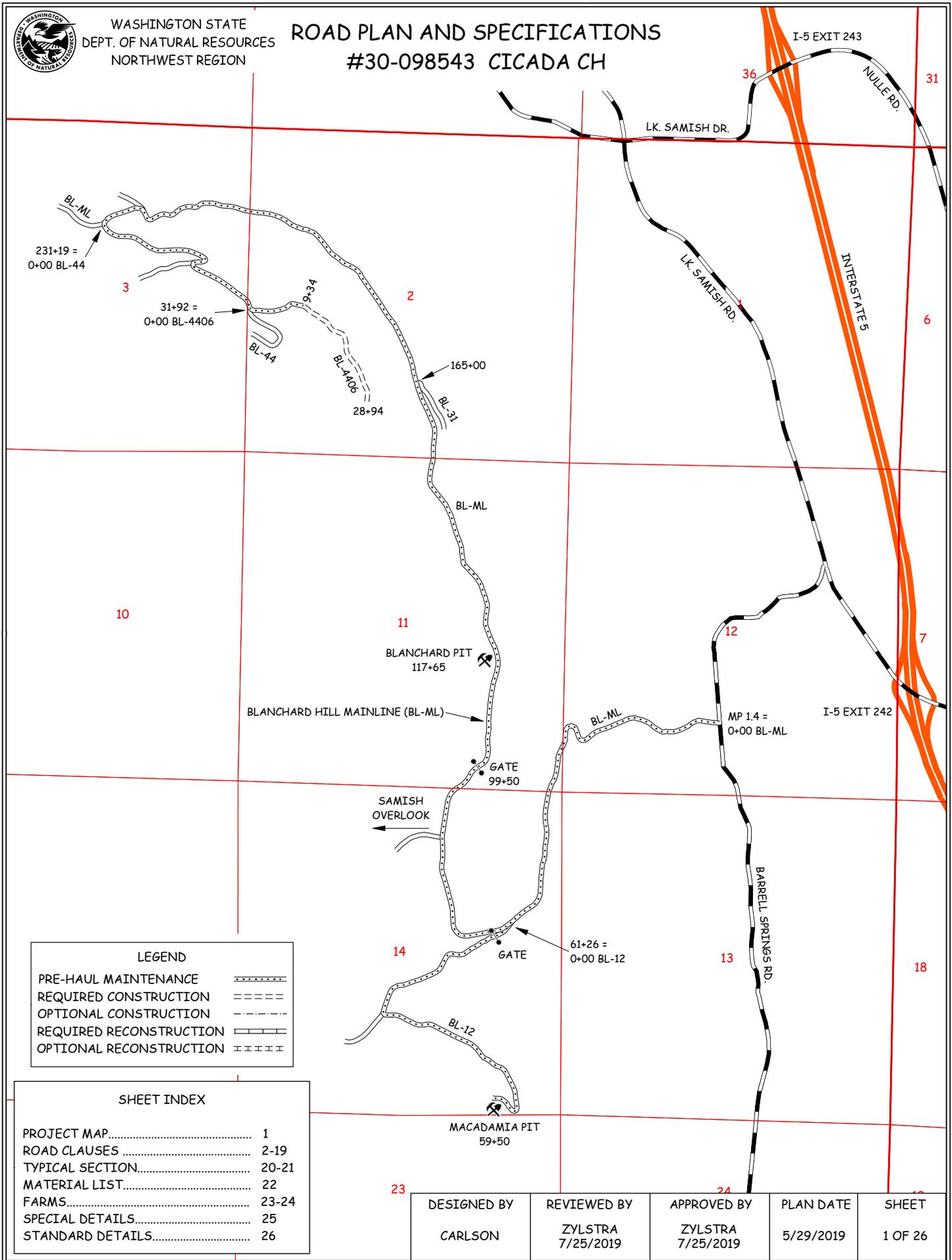
**DNR affidavit of mailing:**

On this day _____, I placed in the United States mail at _____ Sedro-Woolley _____, WA,
(date) (post office location)
postage paid, a true and accurate copy of this document. Notice of Decision FPA # _____
_____ Braelyn Hamilton _____
(Printed name) (Signature)



# ROAD PLAN AND SPECIFICATIONS

## #30-098543 CICADA CH



LEGEND	
PRE-HAUL MAINTENANCE	=====
REQUIRED CONSTRUCTION	-----
OPTIONAL CONSTRUCTION	- - - - -
REQUIRED RECONSTRUCTION	=====
OPTIONAL RECONSTRUCTION	=====

SHEET INDEX	
PROJECT MAP.....	1
ROAD CLAUSES .....	2-19
TYPICAL SECTION.....	20-21
MATERIAL LIST.....	22
FARMS.....	23-24
SPECIAL DETAILS.....	25
STANDARD DETAILS.....	26

DESIGNED BY	REVIEWED BY	APPROVED BY	PLAN DATE	SHEET
CARLSON	ZYLSTRA 7/25/2019	ZYLSTRA 7/25/2019	5/29/2019	1 OF 26

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

CICADA CH TIMBER SALE ROAD PLAN  
SKAGIT COUNTY  
BAKER DISTRICT  
NORTHWEST REGION

AGREEMENT NO.: 30-098543

STAFF ENGINEER: CARLSON

DATE: MAY 29, 2019

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>
BL-ML	0+00 to 231+19	Pre-Haul Maintenance
BL-12	0+00 to 59+50	Pre-Haul Maintenance
BL-44	0+00 to 31+92	Pre-Haul Maintenance
BL-4406	0+00 to 9+34	Pre-Haul Maintenance
BL-4406	9+34 to 28+94	Construction

**0-4 CONSTRUCTION**

Construction includes, but is not limited to clearing, grubbing, excavation and embankment to sub-grade, landing and turnout construction, culvert installation, and application of 3-inch-minus ballast rock.

**0-6 PRE-HAUL MAINTENANCE**

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
BL-ML	0+00 to 231+19	Brushing. Blading, shaping, and ditching the road prism.
BL-12	0+00 to 59+50	Brushing. Blading, shaping, and ditching the road prism.
BL-44	0+00 to 31+92	Brushing. Blading, shaping, and ditching the road prism.
BL-4406	0+00 to 9+34	Blading, shaping, and ditching the road prism.

**0-7 POST-HAUL MAINTENANCE**

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

**0-12 DEVELOP ROCK SOURCE**

Contractor may develop existing rock sources. Rock source development will involve clearing, stripping, drilling, shooting, and processing rock to generate riprap and 3-inch-minus ballast rock. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

**1-1 ROAD PLAN CHANGES**

If the Contractor 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, Contractor shall obtain approval from the State for the submitted plan.

**1-2 NON-COMPLIANCE WITH STATE ROAD PLAN**

Quantities established in this road plan are minimum acceptable values. Additional quantities required by the state due to non-compliance or the Contractor's choice of construction techniques will be at the Contractor's expense.

**1-3 ROAD DIMENSIONS**

Contractor shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan.

**1-4 ROAD TOLERANCES**

Contractor 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. Road Plan Clauses.
3. Typical Section Sheet.
4. Standard Lists.
5. Standard Details.

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**

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

**1-9 DAMAGED METALLIC COATING**

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

**1-18 REFERENCE POINT DAMAGE**

Contractor 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 Contractor resets all moved or damaged RPs.

**1-21 HAUL APPROVAL**

Contractor shall not use roads under this road plan for any hauling without written approval from the Contract Administrator.

**1-29 SEDIMENT RESTRICTION**

Contractor 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 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, Contractor shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Contractor shall protect the work from damage or deterioration.

**1-33 SNOW PLOWING RESTRICTION**

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

**1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS**

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

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

SECTION 2 – MAINTENANCE

**2-1 GENERAL ROAD MAINTENANCE**

Contractor 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 – CONTRACTOR MAINTENANCE**

Contractor shall perform maintenance on roads listed in Contract Clause C-050.1 CONTRACTOR ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

**2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER**

Contractor may be required to perform maintenance on roads listed in Contract Clause C-060.1 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Contractor shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

**2-5 MAINTENANCE GRADING – EXISTING ROAD**

On the following roads, Contractor shall use a grader to shape the existing surface before any hauling. Contractor shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
BL-ML	0+00 to 231+19	Prehaul blading, shaping, and ditching of the road prism.
BL-12	0+00 to 59+50	Prehaul blading, shaping, and ditching of the road prism.
BL-44	0+00 to 31+92	Prehaul blading, shaping, and ditching of the road prism.
BL-4406	0+00 to 9+34	Prehaul blading, shaping, and ditching of the road prism.

**SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL**

**3-1 BRUSHING**

On the following roads, Contractor shall cut vegetative material up to 6 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Contractor shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
BL-ML	0+00 to 231+19
BL-12	0+00 to 59+50
BL-44	0+00 to 31+92

### **3-5 CLEARING**

Contractor 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**

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

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 40%.
- Against standing trees.

### **3-10 GRUBBING**

Contractor shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Contractor 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 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, and stumps that are larger than one cubic foot in volume within the clearing limits as shown on the TYPICAL SECTION SHEET.

### **3-21 DISPOSAL COMPLETION**

Contractor shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Contractor shall complete all disposal of organic debris before the application of rock.

### **3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS**

Waste areas for organic debris are located within the cleared right-of-way or in natural openings as designated or at areas approved in writing by the Contract Administrator.

### **3-23 PROHIBITED DISPOSAL AREAS**

Contractor shall not place organic debris in the following areas:

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

### **3-24 BURYING ORGANIC DEBRIS RESTRICTED**

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

### **3-25 SCATTERING ORGANIC DEBRIS**

Contractor shall scatter organic debris outside of the clearing limits in natural openings unless otherwise detailed in this road plan.

## **SECTION 4 – EXCAVATION**

### **4-2 PIONEERING**

Pioneering may not extend past construction that will be completed during the current construction season. Pioneering may not extend more than 500 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions must be taken as pioneering progresses:

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

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

Contractor shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 50 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

**4-5 CUT SLOPE RATIO**

Contractor 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
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

**4-6 EMBANKMENT SLOPE RATIO**

Contractor 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**

Contractor 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.

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

**4-21 TURNOUTS**

Contractor shall construct turnouts intervisible with a maximum distance of 1,000 feet between turnouts unless otherwise shown on drawings. Locations may be adjusted to fit the final subgrade alignment and sight distances. Locations are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

#### **4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

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

#### **4-28 DITCH DRAINAGE**

Ditches must drain to cross-drain culverts or ditchouts.

#### **4-35 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**

Contractor may sidecast waste material on side slopes up to 50% if the waste material is compacted and free of organic debris. On side slopes greater than 60%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

#### **4-37 WASTE AREA LOCATION**

Contractor shall deposit waste material in areas identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

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

Contractor shall not deposit waste material in the following areas:

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

#### **4-55 ROAD SHAPING**

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

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

Contractor shall compact all embankment and waste material by routing equipment over the entire width of each lift.

**4-61 SUBGRADE COMPACTION**

Contractor shall compact constructed and reconstructed subgrades by routing equipment over the entire width.

SECTION 5 – DRAINAGE

**5-5 CULVERTS**

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

**5-12 UNUSED MATERIALS STATE PROPERTY**

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

**5-15 CULVERT INSTALLATION**

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

**5-17 CROSS DRAIN SKEW AND SLOPE**

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

**5-18 CULVERT DEPTH OF COVER**

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

**5-20 ENERGY DISSIPATERS**

Contractor shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, Energy dissipater installation is subject to approval by the Contract Administrator.

Rock used for energy dissipaters must light/loose riprap. Energy dissipaters must extend a minimum of 1 foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet. Rock must be set in place by machine. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. Rock type shall meet the specifications in Clause 6-50 LIGHT LOOSE RIP RAP.

**5-25 CATCH BASINS**

Contractor shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

**5-26 HEADWALLS FOR CROSS DRAIN CULVERTS**

Contractor shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Rock used for headwalls must weigh at least 50 pounds. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

**SECTION 6 – ROCK AND SURFACING**

**6-2 ROCK SOURCE ON STATE LAND**

Rock used in accordance with the quantities on the TYPICAL SECTION and MATERIALS LIST may be obtained from the following source on state land at no charge to the Contractor. Contractor 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 sources, a joint operating plan must be developed. All parties shall follow this plan.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Macadamia Pit	Sta. 55+95 of the BL-14	3-inch-minus ballast rock, Riprap

**6-5 ROCK FROM COMMERCIAL SOURCE**

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

**6-11 ROCK SOURCE DEVELOPMENT PLAN BY CONTRACTOR**

Contractor shall conduct rock source development and use at the following sources, in accordance with a written ROCK SOURCE DEVELOPMENT PLAN to be prepared by the Contractor. The plan is subject to written approval by the Contract Administrator before any rock source operations. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator.

<u>Source</u>
Macadamia Pit

Rock source development plans prepared by the Contractor must show the following information:

- Rock source location.
- Rock source overview showing access roads, development areas, stockpile locations, waste areas, and floor drainage.
- Rock source profiles showing development areas, bench locations including widths, and wall faces including heights.

## 6-12 ROCK SOURCE SPECIFICATIONS

Rock sources must be in accordance with the following:

- 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 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- 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.

## 6-23 ROCK GRADATION TYPES

Contractor shall provide rock in accordance with the types and amounts listed in the TYPICAL SECTION and MATERIALS 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. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

## 6-34 3-INCH MINUS BALLAST ROCK

Ballast rock must be 100% equal to, or smaller than, 3 inches in at least one dimension.

Rock may contain no more than 5 percent organic debris, dirt, and trash. All percentages are by weight.

**6-50 LIGHT LOOSE RIP RAP**

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

<u>At Least/Not More Than</u>	<u>Weight Range</u>
20% / 90%	300 lbs. to 1 ton
80% / --	50 lbs. to ½ ton
10% / 20%	50 lbs. max

**6-51 HEAVY LOOSE RIP RAP**

Rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects. Heavy loose riprap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>At Least/Not More Than</u>	<u>Weight Range</u>	<u>Size Range</u>
30% / 90%	1 ton to 3 ton	36" - 54"
70% / 90%	500 lbs. to 1 ½ ton	24" - 42"
10% / 30%	50 lbs. max	3" - 8"

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

Measurement of specified rock depths, are defined as the compacted depths using the compaction methods required in this road plan. Estimated quantities specified in the TYPICAL SECTION are loose yards. Contractor shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements, and are not subject to reduction.

**6-70 APPROVAL BEFORE ROCK APPLICATION**

Contractor shall obtain written approval from the Contract Administrator for culvert installation, ditch construction, ditch reconstruction, headwall construction, headwall reconstruction, subgrade shape, and compaction before rock application.

**6-71 ROCK APPLICATION**

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

**6-73 ROCK FOR WIDENED PORTIONS**

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

**6-75 OPTIONAL ROCK EXCEPTION**

On the following roads, Contractor may place less rock than shown on the TYPICAL SECTION, when approved in writing by the Contract Administrator.

If less rock is applied, Contractor shall submit a written plan, for approval, describing how these roads will be constructed, used, maintained, and treated post-haul. Contractor 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. On optional rock roads designated in the table below as Contractor’s Choice, Contractor may apply rock processed on grade in place of pit run rock.

<u>Road</u>	<u>Stations</u>	<u>Options</u>
BL-ML	9+34 to 28+94	Contractor’s choice of other competent rock as base course such as on-site discoverable rock or rock from Blanchard Pit.

**6-81 CHEMICAL TREATMENT FOR DUST ABATEMENT**

Contractor shall treat the following roads with Lignin Sulfonate for dust abatement. No other chemical may be used for dust abatement. The Lignin Sulfonate may not be used for any other purposes.

<u>Road</u>	<u>Stations</u>
BL-ML	0+00 to 99+50 (Gate)

**6-82 CHEMICAL RESTRICTION**

Contractor shall not allow chemicals used for dust abatement to enter any streams.

**6-83 LIGNIN SULFONATE APPLICATION RATE**

The “as supplied” liquid Lignin Sulfonate must be diluted with an adequate amount of water to obtain a 25% solids content for application. Contractor shall apply Lignin Sulfonate to the surface at a rate not less than 0.5 gallons per square yard (approximately 77.8 gallons per station).

**6-85 CHEMICAL DUST ABATEMENT EQUIPMENT**

Application equipment used to spread dust abatement chemicals must be capable of uniform application. A tanker truck with a “slash pan” or “plate” is not acceptable. Field dilution must be accomplished within the application vehicle.

**6-86 TIMING FOR CHEMICAL APPLICATION**

Contractor shall obtain prior written approval from the Contract Administrator for the timing of application for dust abatement chemicals. It is intended that dust abatement chemicals be applied during the summer season.

## SECTION 8 – EROSION CONTROL

### **8-2 PROTECTION FOR EXPOSED SOIL**

Contractor shall provide and evenly spread a 4-inch layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

### **8-15 REVEGETATION**

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

### **8-16 REVEGETATION SUPPLY**

The Contractor shall provide the required grass seed and fertilizer.

### **8-17 REVEGETATION TIMING**

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

### **8-18 PROTECTION FOR SEED**

Contractor shall provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of dispersed straw, jute matting, or clear plastic sheets. The protective cover requirement may be waived in writing by the Contract Administrator if Contractor is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

### **8-19 ASSURANCE FOR SEEDED AREA**

Contractor shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3-inch tall grass. Contractor shall reapply the grass seed and fertilizer in areas that have failed to germinate or have been damaged through any cause. Restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and fertilizer at no addition cost to the state.

**8-25 GRASS SEED**

Contractor shall evenly spread the seed mixture listed below on all exposed soil inside the grubbing limits at a rate of 50 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Creeping Red Fescue	50
Elf Perennial Rye Grass	25
Highland Colonial Bentgrass	15
White Clover	10
Inert and Other Crop	0.5

**8-27 FERTILIZER**

Contractor shall evenly spread the fertilizer listed below on all exposed soil inside the grubbing limits at a rate of 200 pounds per acre of exposed soil. Fertilizer must meet the following specifications:

<u>Chemical Component</u>	<u>% by Weight</u>
Nitrogen	16
Phosphorous	16
Potassium	16
Sulphur	3
Inerts	49

## SECTION 9 – POST-HAUL ROAD WORK

### **9-5 POST-HAUL MAINTENANCE**

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

### **9-10 LANDING DRAINAGE**

Contractor shall provide for drainage of the landing surface.

### **9-12 LANDING EMBANKMENT REMOVAL**

Contractor shall reduce or relocate the landing embankment. Place excavated material in a waste area approved in writing by the Contract Administrator.

## SECTION 10 MATERIALS

### **10-17 CORRUGATED PLASTIC CULVERT**

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

### **10-22 PLASTIC BAND**

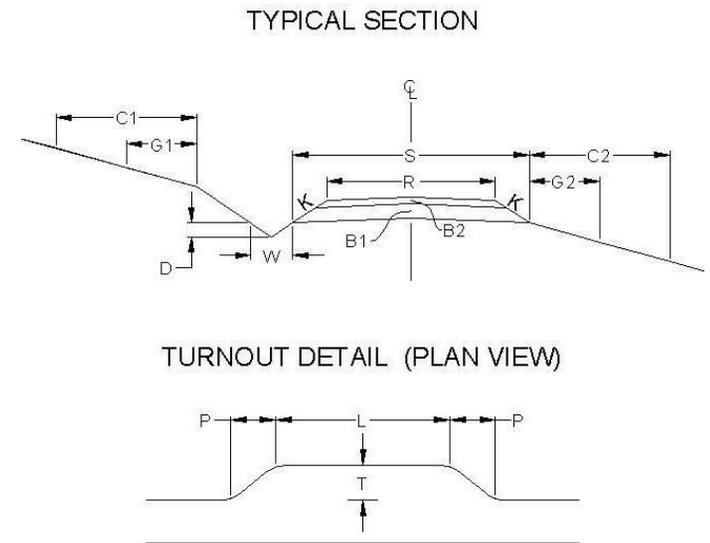
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used.

### **10-30 LIGNIN SULFONATE MATERIALS**

Lignin Sulfonate is the chemical residue produced as a by-product of the acid sulfite pulping process, and supplied as a water solution. The base solution may be ammonia, calcium, or sodium and must be water soluble to allow field dilution. Percent solids must be 50% as supplied. When requested by the Contract Administrator, certification must be provided that shows:

- Solids determination has been made in accordance with the modified Technical Association of the Pulp and Paper Industry Standard T629-M53 or by a specific gravity/percent solids verses temperature graph that correlates with the standard.
- The  $P_h$  of the delivered material is a 4.5 minimum as determined by AASHTO-T200.

ROAD #		BL-ML	BL-12	BL-44	BL-4406
REQUIRED / OPTIONAL		REQUIRED	REQUIRED	REQUIRED	REQUIRED
CONSTRUCT / RECONSTRUCT		PRE-HAUL	PRE-HAUL	PRE-HAUL	PRE-HAUL
TOLERANCE CLASS (A/B/C)		C	C	C	C
STATION / MP TO		0+00	0+00	0+00	0+00
STATION / MP		231+19	59+50	31+92	9+34
ROAD WIDTH	R	12	12	12	12
CROWN (INCHES @ C/L)		3	3	3	3
DITCH WIDTH	W	3	3	3	3
DITCH DEPTH	D	1	1	1	1
TURNOUT LENGTH	L	50	50	50	50
TURNOUT WIDTH	T	10	10	10	10
TURNOUT TAPER	P	25	25	25	25
GRUBBING	G1	--	--	--	--
	G2	--	--	--	--
CLEARING	C1	--	--	--	--
	C2	--	--	--	--
ROCK FILLSLOPE	K:1	--	--	--	--
❖ BALLAST DEPTH	B1	--	--	--	--
CUBIC YARDS / STATION		--	--	--	--
➤ TOTAL CY BALLAST		60	--	--	--
❖ SURFACING DEPTH	B2	--	--	--	--
CUBIC YARDS / STATION		--	--	--	--
➤ TOTAL CY SURFACING		--	--	--	--
➤ TOTAL CUBIC YARDS		60	--	--	--
SUBGRADE WIDTH	S	--	--	--	--
BRUSHCUT (Y/N)		Y	Y	Y	N
BLADE, SHAPE, & DITCH (Y/N)		Y	Y	Y	Y



### **SYMBOL NOTES**

- ❖ Specified Rock Depth is FINISHED COMPACTED DEPTH in inches.
- Specified Rock Quantity is LOOSE MEASURE (Truck Cubic Yards) needed to accomplish specified FINISHED COMPACTED DEPTH. Rock quantities include volume for turnouts, curve widening and landings.

TOTAL 3-INCH MINUS BALLAST ROCK = 2295 CUBIC YARDS  
TOTAL RIPRAP = 40 CUBIC YARDS

ROAD #		BL-4406					
REQUIRED / OPTIONAL		REQUIRED					
CONSTRUCT / RECONSTRUCT		CONSTRUCT					
TOLERANCE CLASS (A/B/C)		C					
STATION / MP TO		9+34					
STATION / MP		28+94					
ROAD WIDTH	R	12					
CROWN (INCHES @ C/L)		3					
DITCH WIDTH	W	3					
DITCH DEPTH	D	1					
TURNOUT LENGTH	L	50					
TURNOUT WIDTH	T	10					
TURNOUT TAPER	P	25					
GRUBBING	G1	5					
	G2	5					
CLEARING	C1	10					
	C2	10					
ROCK FILLSLOPE	K:1	1½					
❖ BALLAST DEPTH	B1	18					
CUBIC YARDS / STATION		114					
➤ TOTAL CY BALLAST		2235					
❖ SURFACING DEPTH	B2	--					
CUBIC YARDS / STATION		--					
➤ TOTAL CY SURFACING		--					
➤ TOTAL CUBIC YARDS		2235					
SUBGRADE WIDTH	S	16.5					
BRUSHCUT (Y/N)		N					
BLADE, SHAPE, & DITCH (Y/N)		N					

### MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE	TOLERANCE	REMARKS	
ROAD #	STATION	DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE				<u>Note:</u> Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:
													<u>Diameter</u> 18" 24" – 48" 54" – 96"
BL-ML	165+00	18	30	PD			2	3	L			Stockpile culverts, riprap, and specified 60 CY of 3-inch-minus ballast at junction with BL-31 road. Exact location to be determined by the Contract Administrator.	
BL-ML	165+00	18	30	PD			2	3	L				
BL-ML	165+00	18	30	PD			2	3	L				
BL-4406	10+26	24	40	PD			2	3	L	NT	C		
BL-4406	14+29	18	40	PD			2	3	L	NT	C		
BL-4406	22+95	18	30	PD			2	3	L	NT	C		
BL-4406	25+40	18	36	PD			2	3	L	NT	C		
BL-4406	26+74	18	30	PD			2	3	L	NT	C		

GM – Galvanized Metal    PS – Polyethylene Pipe Single Wall    PD – Polyethylene Pipe Dual Wall    AM – Aluminized Metal    C – Concrete    XX – PD or GM  
 H – Heavy Loose Riprap    L – Light Loose Riprap    SR – Shot Rock    NT – Native (Bank Run)    QS – Quarry Spalls

## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

### Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the construction materials. 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. Inslope or outslope as directed 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

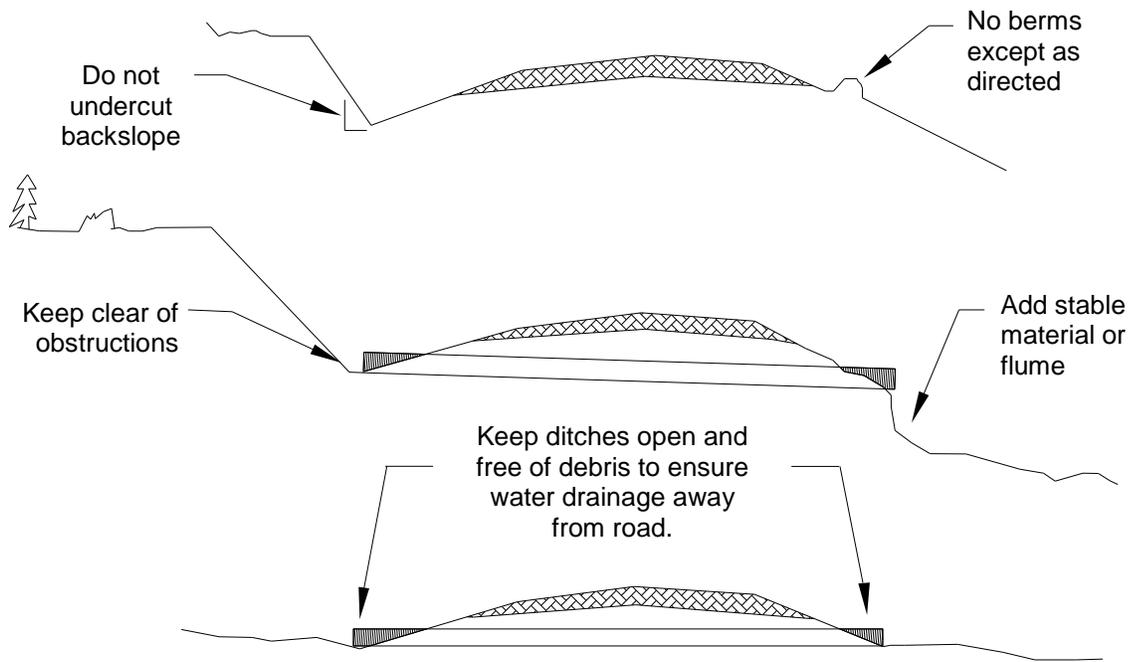
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

**Termination of Use or End of Season**

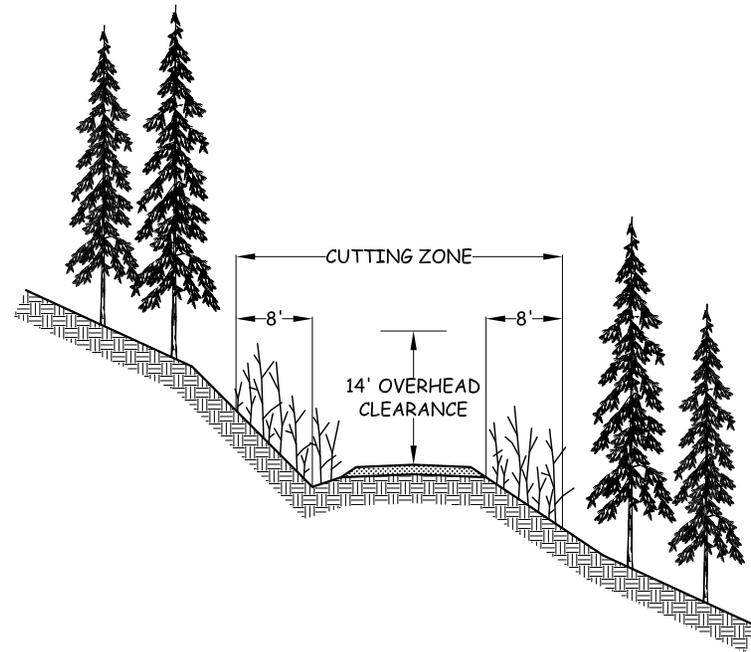
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

**Debris**

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



## ROAD BRUSHING DETAILS



### SPECIFICATIONS

BRUSH SHALL BE CUT ON THE ROAD SURFACE AND 8 ft. BACK FROM ROAD DITCH AND OUTSIDE EDGE OF RUNNING SURFACE.

ON THE INSIDE OF SWITCHBACKS AND TIGHT CURVES, BRUSH SHALL BE CUT BACK 16 ft. FOR VISIBILITY.

ON TRUCK TURNOUTS, BRUSH SHALL BE CUT 8 ft. BACK FROM OUTSIDE EDGE.

BRUSH SHALL BE CUT TO PROVIDE AN OVERHEAD CLEARANCE OF 14 ft. ABOVE THE ROAD RUNNING SURFACE.

BRUSH SHALL BE CUT TO WITHIN 6 in. OF THE GROUND.

SLASH SHALL BE REMOVED FROM CUT SLOPES ABOVE THE ROAD AND SCATTERED ON EMBANKMENT SLOPES.

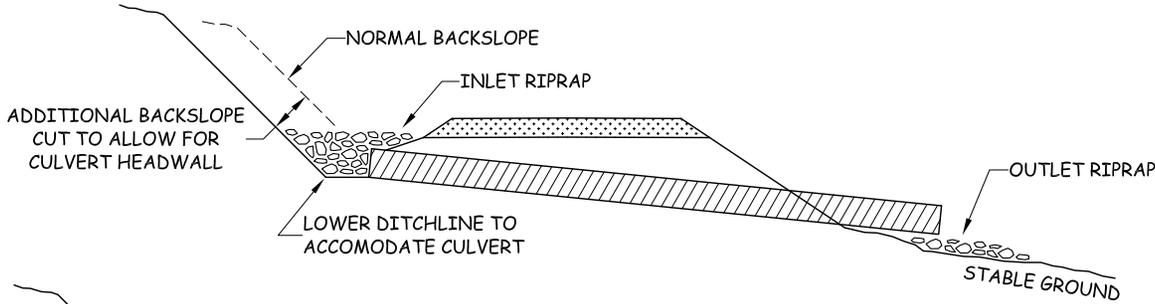
DITCHES SHALL BE CLEARED OF WOODY DEBRIS.

CULVERT INLETS AND OUTLETS SHALL BE CLEANED A MINIMUM DISTANCE OF TWO PIPE DIAMETERS AWAY.

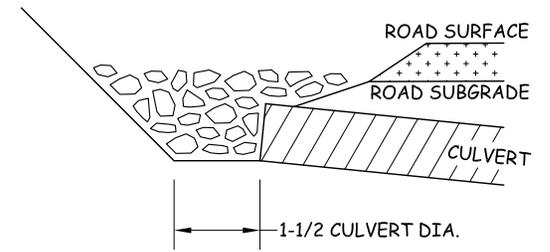
CONTRACT # 30-098543	PROJECT CICADA CH	SHEET 25 OF 26
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# CULVERT AND DRAINAGE SPECIFICATIONS

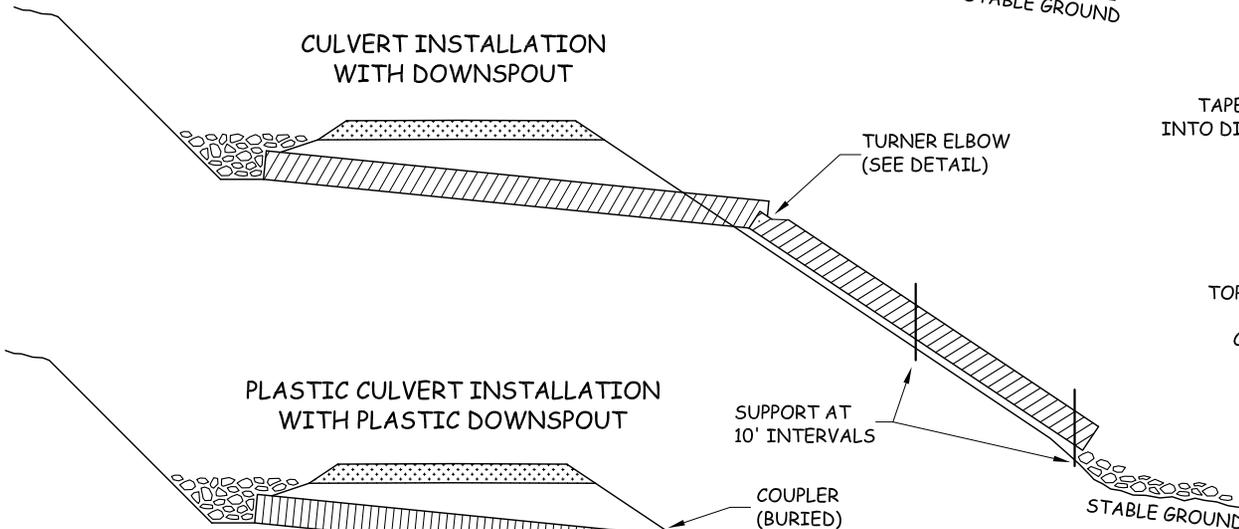
**CULVERT INSTALLATION (TYPICAL)**



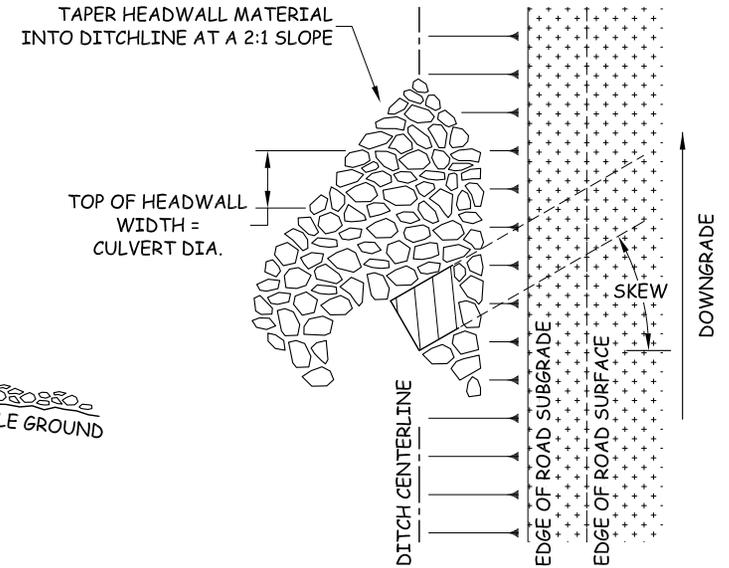
**CULVERT HEADWALL - SECTION VIEW**



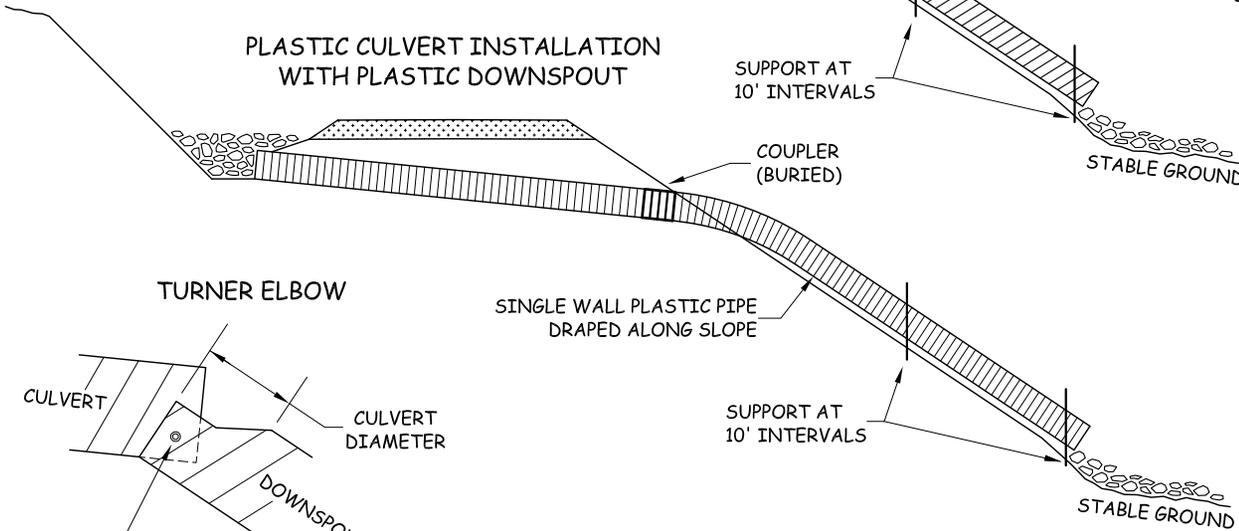
**CULVERT INSTALLATION WITH DOWNSPOUT**



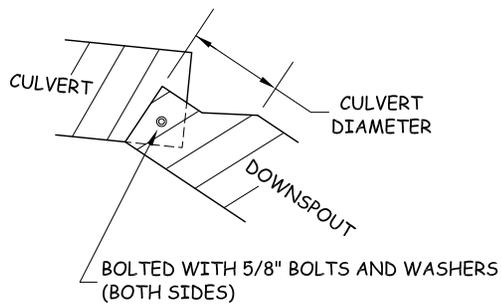
**CULVERT HEADWALL - PLAN VIEW**



**PLASTIC CULVERT INSTALLATION WITH PLASTIC DOWNSPOUT**



**TURNER ELBOW**



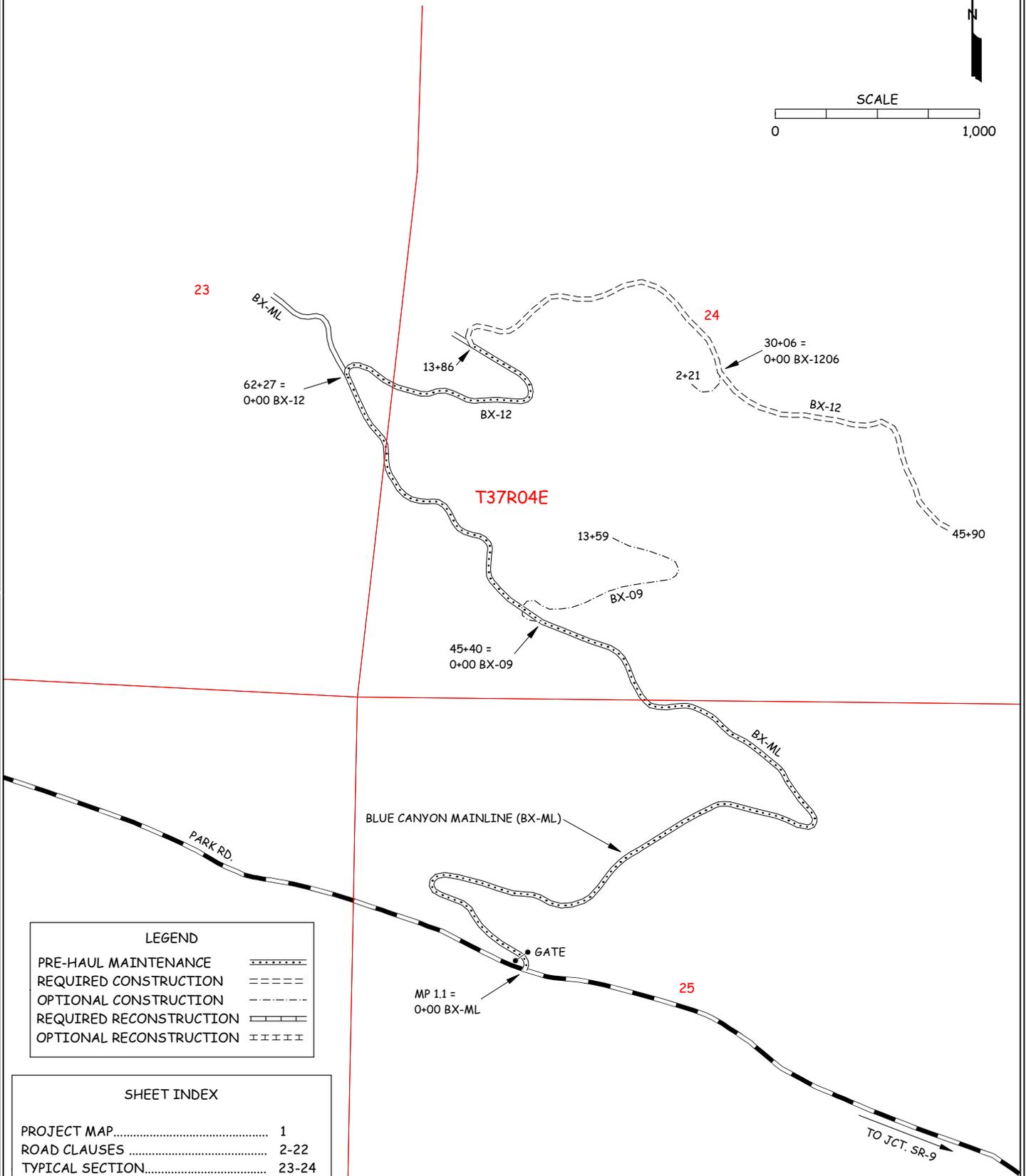
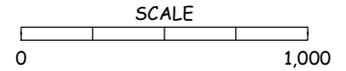
**HEADWALL NOTE:**  
 HEADWALL TO BE CONSTRUCTED OF IMPERVIOUS MATERIAL THAT WILL RESIST EROSION AND ARMORED WITH RIPRAP QUANTITY SPECIFIED IN ROAD PLAN.

CONTRACT #	PROJECT	SHEET
30-098543	CICADA CH	26 OF 26



# ROAD PLAN AND SPECIFICATIONS

## #30-093615 EGG ROLL CH



LEGEND	
PRE-HAUL MAINTENANCE	.....
REQUIRED CONSTRUCTION	-----
OPTIONAL CONSTRUCTION	.....
REQUIRED RECONSTRUCTION	-----
OPTIONAL RECONSTRUCTION	.....

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MATERIAL LIST.....	25-26
FARMS.....	27-28
STANDARD DETAILS.....	29-30
PIT VICINITY.....	31

DESIGNED BY	REVIEWED BY	APPROVED BY	PLAN DATE	SHEET
CARLSON	ZYLSTRA 8/9/2019	ZYLSTRA 8/9/2019	05/13/2019	1 OF 31

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

EGG ROLL CH TIMBER SALE ROAD PLAN  
WHATCOM COUNTY  
BAKER DISTRICT  
NORTHWEST REGION

AGREEMENT NO.: 30-093615

STAFF ENGINEER: CARLSON

DATE: MAY 12, 2019

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>
BX-ML	0+00 to 62+27	Pre-Haul Maintenance
BX-12	0+00 to 13+86	Pre-Haul Maintenance
BX-12	13+86 to 45+90	Construction

**0-3 OPTIONAL ROADS**

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
BX-09	0+00 to 13+59	Construction
BX-1206	0+00 to 2+21	Construction

**0-4 CONSTRUCTION**

Construction includes, but is not limited to clearing, grubbing, excavation and embankment to sub-grade, landing and turnout construction, culvert installation, and application of 3-inch-minus ballast rock.

**0-6 PRE-HAUL MAINTENANCE**

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
BX-ML	0+00 to 62+27	Brushing. Blading, shaping, and ditching the road prism. Culvert installation. Silt fence installation.
BX-12	0+00 to 13+86	Brushing. Blading, shaping, and ditching the road prism. Culvert replacement.
BX-1203	0+00 to 1+08	Brushing. Blading, shaping, and ditching the road prism.

**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**

Contractor shall develop an existing rock source. Rock source development will involve clearing, stripping, drilling, shooting, and processing rock to generate riprap and 3-inch-minus ballast rock. Work for developing rock sources is listed in Section 6 ROCK AND SURFACING.

SECTION 1 – GENERAL

**1-1 ROAD PLAN CHANGES**

If the Contractor 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, Contractor 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 Contractor's choice of construction season or techniques will be at the Contractor's expense. Unforeseen conditions include, but are not limited to, solid subsurface rock, subsurface springs, saturated ground, and unstable soils.

**1-3 ROAD DIMENSIONS**

Contractor shall perform road work in accordance with the dimensions shown on the TYPICAL SECTION SHEET and the specifications within this road plan.

**1-4 ROAD TOLERANCES**

Contractor 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. Road Plan Clauses.
3. Typical Section Sheet.
4. Standard Lists.
5. Standard Details.

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**

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

**1-9 DAMAGED METALLIC COATING**

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

**1-18 REFERENCE POINT DAMAGE**

Contractor 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 Contractor resets all moved or damaged RPs.

**1-21 HAUL APPROVAL**

Contractor shall not use roads under this road plan for any hauling without written approval from the Contract Administrator.

**1-29 SEDIMENT RESTRICTION**

Contractor 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 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, Contractor shall cease operations, or perform corrective maintenance or repairs, subject to specifications within this road plan. Before and during any suspension, Contractor shall protect the work from damage or deterioration.

**1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS**

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

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

SECTION 2 – MAINTENANCE

**2-1 GENERAL ROAD MAINTENANCE**

Contractor 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 – CONTRACTOR MAINTENANCE**

Contractor shall perform maintenance on roads listed in Contract Clause C-050.1 CONTRACTOR ROAD MAINTENANCE AND REPAIR in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

**2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER**

Contractor may be required to perform maintenance on roads listed in Contract Clause C-060.1 DESIGNATED ROAD MAINTAINER as directed by the Contract Administrator. Contractor shall maintain roads in accordance with FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS.

**2-5 MAINTENANCE GRADING – EXISTING ROAD**

On the following roads, Contractor shall use a grader to shape the existing surface before hauling. Contractor shall accomplish all grading using a motor grader with a minimum of 175 horsepower.

<u>Road</u>	<u>Stations</u>
BX-ML	0+00 to 62+27
BX-12	0+00 to 13+86

**2-6 CLEANING CULVERTS**

On the following roads, Contractor shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before hauling.

<u>Road</u>	<u>Stations</u>
BX-ML	0+00 to 62+27
BX-12	0+00 to 13+86

**2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS**

On the following roads, Contractor shall clean ditches, headwalls, and catchbasins. Work must be completed before application of rock and must be done in accordance with the TYPICAL SECTION. Pulling ditch material across the road or mixing in with the road surface is not allowed.

<u>Road</u>	<u>Stations</u>
BX-ML	0+00 to 62+27
BX-12	0+00 to 13+86

**SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL**

**3-1 BRUSHING**

On the following roads, Contractor shall cut vegetative material up to 6 inches in diameter, including limbs, as shown on the BRUSHING DETAIL. Brushing must be achieved by mechanical cutting of brush, trees, and branches. Root systems and stumps of cut vegetation may not be disturbed unless directed by the Contract Administrator. Contractor shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
BX-ML	0+00 to 62+27
BX-12	0+00 to 13+86

**3-5 CLEARING**

Contractor 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**

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

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 40%.
- Against standing trees.

**3-10 GRUBBING**

Contractor shall remove all stumps between the grubbing limits specified on the TYPICAL SECTION SHEET. Contractor 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**

Contractor shall remove organic debris from the road surface, ditchlines, and culvert inlets and outlets. Contractor shall complete all disposal of organic debris before the application of rock.

**3-22 DESIGNATED WASTE AREA FOR ORGANIC DEBRIS**

Waste areas for organic debris are located within the cleared right-of-way, in natural openings, or at areas approved in writing by the Contract Administrator.

**3-23 PROHIBITED DISPOSAL AREAS**

Contractor shall not place organic debris in the following areas:

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

**3-24 BURYING ORGANIC DEBRIS RESTRICTED**

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

**3-25 SCATTERING ORGANIC DEBRIS**

Contractor shall scatter organic debris outside of the clearing limits in natural openings unless otherwise detailed in this road plan.

**3-32 END HAULING ORGANIC DEBRIS**

On slopes greater than 60%, Contractor shall end haul or push organic debris to a waste area located by the Contract Administrator.

## SECTION 4 – EXCAVATION

### 4-2 PIONEERING

Pioneering may not extend past construction that will be completed during the current construction season. Pioneering may not extend more than 500 feet beyond completed construction unless approved in writing by the Contract Administrator. In addition, the following actions must be taken as pioneering progresses:

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

### 4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Contractor shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 15 percent adverse.
- Minimum curve radius is 50 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

### 4-4 SWITCHBACK STANDARDS

A switchback is defined as a curved segment of road between a beginning and end of the same curve, where the change of traffic travel direction is greater than 90 degrees.

Contractor shall follow these standards for switchbacks:

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

### 4-5 CUT SLOPE RATIO

Contractor 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
Fractured or loose rock	½:1	200
Hardpan or solid rock	¼:1	400

**4-6 EMBANKMENT SLOPE RATIO**

Contractor 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**

Contractor 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.

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

**4-12 FULL BENCH CONSTRUCTION**

Where side slopes exceed 60%, Contractor shall use full bench construction for the entire subgrade width. Contractor shall haul waste material to the location specified in Clause 4-37 WASTE AREA LOCATION.

**4-21 TURNOUTS**

Contractor shall construct turnouts intervisible with a maximum distance of 1,000 feet between turnouts unless otherwise shown on drawings. Locations may be adjusted to fit the final subgrade alignment and sight distances. Locations are subject to written approval by the Contract Administrator. Minimum dimensions are shown on the TYPICAL SECTION SHEET.

**4-25 DITCH CONSTRUCTION AND RECONSTRUCTION**

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

**4-28 DITCH DRAINAGE**

Ditches must drain to cross-drain culverts or ditchouts.

**4-35 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**

Contractor may sidecast waste material on side slopes up to 50% if the waste material is compacted and free of organic debris. On side slopes greater than 60%, all waste material must be end hauled or pushed to the designated embankment sites and waste areas identified in Clause 4-37 WASTE AREA LOCATION.

**4-37 WASTE AREA LOCATION**

Contractor shall deposit waste material in areas identified or approved by the Contract Administrator. The amount of material allowed in a waste area is at the discretion of the Contract Administrator.

**4-38 PROHIBITED WASTE DISPOSAL AREAS**

Contractor shall not deposit waste material in the following areas:

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

**4-55 ROAD SHAPING**

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

**4-60 FILL COMPACTION**

Contractor shall compact all embankment and waste material by routing equipment over the entire width of each lift.

**4-61 SUBGRADE COMPACTION**

Contractor shall compact constructed and reconstructed subgrades by routing equipment over the entire width.

SECTION 5 – DRAINAGE

**5-5 CULVERTS**

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

**5-7 USED CULVERT MATERIAL**

On the following roads, Contractor may install used culverts. All other roads must have new culverts installed. Contractor shall obtain approval from the Contract Administrator for the quality of the used culverts before installation. Culverts must meet the specifications in Clauses 10-15 through 10-24.

<u>Road</u>
BX-09
BX-1206

**5-12 UNUSED MATERIALS STATE PROPERTY**

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

**5-15 CULVERT INSTALLATION**

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

**5-16 APPROVAL FOR LARGER CULVERT INSTALLATION**

Contractor shall obtain written approval from the Contract Administrator for the installation of culverts 30 inches in diameter and over before backfilling.

**5-17 CROSS DRAIN SKEW AND SLOPE**

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

**5-18 CULVERT DEPTH OF COVER**

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

**5-20 ENERGY DISSIPATERS**

Contractor shall install energy dissipaters in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts, Energy dissipater installation is subject to approval by the Contract Administrator.

Rock used for energy dissipaters must light/loose riprap. Energy dissipaters must extend a minimum of 1 foot to each side of the culvert at the outlet and a minimum of 2 feet beyond the outlet. Rock must be set in place by machine. Placement must be by zero-drop-height method only. No placement by end dumping or dropping of rock is allowed. Rock type shall meet the specifications in Clause 6-50 LIGHT LOOSE RIP RAP.

**5-25 CATCH BASINS**

Contractor shall construct catch basins in accordance with CULVERT AND DRAINAGE SPECIFICATION DETAIL. Minimum dimensions of catch basins are 2 feet wide and 4 feet long.

**5-26 HEADWALLS FOR CROSS DRAIN CULVERTS**

Contractor shall construct headwalls in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL at all cross drain culverts. Rock used for headwalls must weigh at least 50 pounds. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets. Rock may not restrict the flow of water into culvert inlets or catch basins. No placement by end dumping or dropping of rock is allowed.

**5-27 ARMORING FOR STREAM CROSSING CULVERTS**

At stream crossing culverts, Contractor shall place riprap in conjunction with construction of the embankment. Rock must be placed on shoulders, slopes, and around culvert inlets and outlets as designated on the MATERIALS LIST or as directed by the Contract Administrator. 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.

SECTION 6 – ROCK AND SURFACING

**6-2 ROCK SOURCE ON STATE LAND**

Rock used in accordance with the quantities on the TYPICAL SECTION and MATERIALS LIST may be obtained from the following source on state land at no charge to the Contractor. Contractor 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 sources, a joint operating plan must be developed. All parties shall follow this plan.

<u>Source</u>	<u>Location</u>	<u>Rock Type</u>
Christie Pit	MP 3.4 of the CT-ML road	Riprap, 3-inch-minus ballast

**6-5 ROCK FROM COMMERCIAL SOURCE**

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

**6-11 ROCK SOURCE DEVELOPMENT PLAN BY CONTRACTOR**

Contractor shall conduct rock source development and use at the following sources, in accordance with a written ROCK SOURCE DEVELOPMENT PLAN to be prepared by the Contractor. The plan is subject to written approval by the Contract Administrator before any rock source operations. Upon completion of operations, the rock source must be left in the condition specified in the ROCK SOURCE DEVELOPMENT PLAN, and approved in writing by the Contract Administrator.

<u>Source</u>
Christie Pit

Rock source development plans prepared by the Contractor must show the following information:

- Rock source location.
- Rock source overview showing access roads, development areas, stockpile locations, waste areas, and floor drainage.
- Rock source profiles showing development areas, bench locations including widths, and wall faces including heights.

**6-12 ROCK SOURCE SPECIFICATIONS**

Rock sources must be in accordance with the following:

- 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 1.5 times the maximum length of the largest machine used.
- The surface of pit floors and benches must be uniform and free-draining at a minimum 2% outslope gradient.
- 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.

**6-23 ROCK GRADATION TYPES**

Contractor shall provide rock in accordance with the types and amounts listed in the TYPICAL SECTION and MATERIALS 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. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

**6-34 3-INCH MINUS BALLAST ROCK**

Ballast rock must be 100% equal to, or smaller than, 3 inches in at least one dimension.

Rock may contain no more than 5 percent organic debris, dirt, and trash. All percentages are by weight.

**6-50 LIGHT LOOSE RIP RAP**

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

<u>At Least/Not More Than</u>	<u>Weight Range</u>
20% / 90%	300 lbs. to 1 ton
80% / --	50 lbs. to ½ ton
10% / 20%	50 lbs. max

**6-51 HEAVY LOOSE RIP RAP**

Rip rap must consist of angular, hard, sound, and durable stone. It must be free from segregation, seams, cracks, and other defects. Heavy loose riprap must be free of rock fines, soil, organic debris or other extraneous material, and must meet the following requirements:

<u>At Least/Not More Than</u>	<u>Weight Range</u>	<u>Size Range</u>
30% / 90%	1 ton to 3 ton	36" - 54"
70% / 90%	500 lbs. to 1 ½ ton	24" - 42"
10% / 30%	50 lbs. max	3" - 8"

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

Measurement of specified rock depths, are defined as the compacted depths using the compaction methods required in this road plan. Estimated quantities specified in the TYPICAL SECTION are loose yards. Contractor shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements, and are not subject to reduction.

**6-70 APPROVAL BEFORE ROCK APPLICATION**

Contractor shall obtain written approval from the Contract Administrator for culvert installation, ditch construction, ditch reconstruction, headwall construction, headwall reconstruction, subgrade shape, and compaction before rock application.

**6-71 ROCK APPLICATION**

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

**6-73 ROCK FOR WIDENED PORTIONS**

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

SECTION 8 – EROSION CONTROL

**8-1 SEDIMENT CONTROL STRUCTURES**

On the following road, Contractor shall install silt fencing.

<u>Road</u>	<u>Stations</u>	<u>Comments</u>
BX-ML	23+60 to 25+25	Left side
BX-ML	31+35 to 33+10	Right side

**8-2 PROTECTION FOR EXPOSED SOIL**

Contractor shall provide and evenly spread a 4-inch layer of straw to all exposed soils within 50 feet of a stream or wetland. Soils must be covered before the first anticipated storm event. Soils may not sit exposed during any rain event.

**8-15 REVEGETATION**

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

**8-16 REVEGETATION SUPPLY**

The Contractor shall provide the required grass seed and fertilizer.

**8-17 REVEGETATION TIMING**

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

**8-18 PROTECTION FOR SEED**

Contractor shall provide a protective cover for seed if revegetation occurs between July 1 and March 31. The protective cover may consist of dispersed straw, jute matting, or clear plastic sheets. The protective cover requirement may be waived in writing by the Contract Administrator if Contractor is able to demonstrate a revegetation plan that will result in the establishment of a uniform dense crop (at least 50% coverage) of 3-inch tall grass by October 31.

**8-19 ASSURANCE FOR SEEDED AREA**

Contractor shall ensure the growth of a uniform and dense crop (at least 50% coverage) of 3-inch tall grass. Contractor shall reapply the grass seed and fertilizer in areas that have failed to germinate or have been damaged through any cause. Restore eroded or disturbed areas, clean up and properly dispose of eroded materials, and reapply the seed and fertilizer at no addition cost to the state.

**8-25 GRASS SEED**

Contractor shall evenly spread the seed mixture listed below on all exposed soil inside the grubbing limits at a rate of 50 pounds per acre of exposed soil. Grass seed must meet the following specifications:

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>
Creeping Red Fescue	50
Elf Perennial Rye Grass	25
Highland Colonial Bentgrass	15
White Clover	10
Inert and Other Crop	0.5

**8-28 FERTILIZER: LAKE WHATCOM WATERSHED**

Contractor shall evenly spread fertilizer on all exposed soil inside the grubbing limits at a rate of 200 pounds per acre of exposed soil. Fertilizer mix is a special phosphorous free “Whatcom Waters” mix designed for use within the Lake Whatcom watershed. This fertilizer is available at Whatcom Farmers’ Cooperative in Lynden (360-354-2418) and must meet the following specifications:

<u>Chemical Component</u>	<u>% by Weight</u>
Nitrogen*	16
Phosphorous	0
Potassium	8
Sulphur	8
Inerts	68

\* 4.67% Ammonical Nitrogen + 11.33% Urea Nitrogen

**SECTION 9 – POST-HAUL ROAD WORK**

**9-3 CULVERT MATERIAL REMOVED FROM STATE LAND**

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

**9-5 POST-HAUL MAINTENANCE**

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

<u>Road</u>	<u>Milepost</u>	<u>Additional Requirements</u>
CT-ML	0.0 to 3.4	Post-haul grading.

**9-10 LANDING DRAINAGE**

Contractor shall provide for drainage of the landing surface.

**9-12 LANDING EMBANKMENT REMOVAL**

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

**9-21 ROAD ABANDONMENT**

Contractor shall abandon the following before the termination of this contract.

<u>Road</u>	<u>Stations</u>
BX-09	0+00 to 13+26
BX-1206	0+00 to 2+21

**9-22 ABANDONMENT**

- Remove all ditch relief culverts. The resulting slopes must be 1:1 or flatter. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Remove all culverts in natural drainages. The resulting slopes must be 1½:1 or flatter. Strive to match the existing native stream bank gradient. The natural streambed width must be re-established. Place and compact the removed fill material in a location that will not erode into any Type 1 through 5 waters or wetlands.
- Transport all removed culverts off site. All removed culverts are the property of the Purchaser.
- Construct non-drivable waterbars at natural drainage points and at a spacing that will produce a vertical drop of no more than 20 feet between waterbars and with a maximum horizontal spacing of 400 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.
- Inslope or outslope the road as appropriate.
- Remove bridges and other structures.
- Pull back unstable fill that has potential of failing and entering any Type 1 through 5 waters or wetlands. Place and compact removed material in a stable location.
- Remove berms except as designed.
- Block the road by constructing an aggressive barrier of dense interlocked large woody debris (logs, stumps, root wads, etc.) so that four wheel highway vehicles cannot pass the point of abandonment. Typical barrier dimensions are 10 feet high by 20 feet deep, spanning the entire road prism from top of cutslope to toe of fillslope. Long term effectiveness is the primary objective. If necessary construct a vehicular turn-around near the point of abandonment.
- Apply grass seed to all exposed soils resulting from the abandonment work and in accordance with Section 8 EROSION CONTROL

## SECTION 10 MATERIALS

### 10-6 GEOTEXTILE FOR TEMPORARY SILT FENCE

Geotextiles must meet the following minimum requirements for strength and property qualities, and must be designed by the manufacturer to be used for filtration. Woven slit-film geotextiles are not allowed. Material must be free of defects, cuts, and tears.

	<u>ASTM Test</u>	<u>Requirements</u>
Type	--	Unsupported between posts
Apparent opening size	D 4751	No. 30 max., No. 100 min.
Water permittivity	D 4491	0.02 sec <sup>-1</sup>
Grab tensile strength	D 4632	180 lb in machine direction, 100lb in cross-machine direction
Grab tensile elongation	D 4632	30% max. at 180 lb or more
Ultraviolet stability	D 4355	70% retained after 500 hours of exposure

### 10-15 CORRUGATED STEEL CULVERT

Metallic coated steel culverts must meet AASHTO M-36 (ASTM A-760) specifications. Culverts must be galvanized (zinc coated meeting AASHTO M-218).

### 10-17 CORRUGATED PLASTIC CULVERT

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

### 10-20 FLUME AND DOWNSPOUT

Downspouts and flumes must meet the AASHTO specification designated for the culvert. Plastic downspouts and flumes must be Type C – corrugated single walled pipe

### 10-21 METAL BAND

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

### 10-22 PLASTIC BAND

Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used.

**10-23 RUBBER CULVERT GASKETS**

Rubber gaskets must be continuous closed cell, synthetic expanded rubber gaskets conforming to the requirements of ASTM D 1056. Rubber gaskets must be used with all corrugated metal pipe coupling bands.

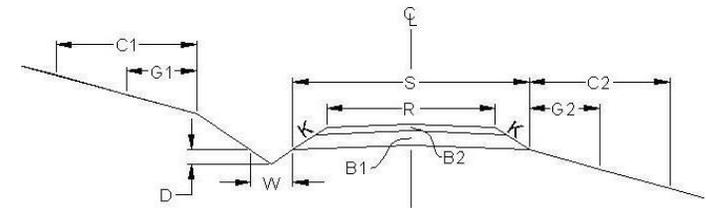
**10-24 GAUGE AND CORRUGATION**

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

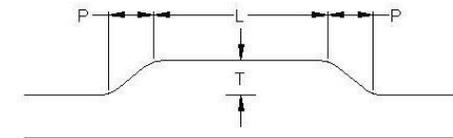
<u>Diameter</u>	<u>Gage</u>	<u>Corrugation</u>
18"	16 (0.064")	2 <sup>2</sup> / <sub>3</sub> " X 1/2"
24" to 48"	14 (0.079")	2 <sup>2</sup> / <sub>3</sub> " X 1/2"
54" to 96"	14 (0.079")	3" X 1"

ROAD #		BX-ML	BX-09	BX-12	BX-12
REQUIRED / OPTIONAL		REQUIRED	OPTIONAL	REQUIRED	REQUIRED
CONSTRUCT / RECONSTRUCT		PRE-HAUL	CONSTRUCT	PRE-HAUL	CONSTRUCT
TOLERANCE CLASS (A/B/C)		C	C	C	C
STATION / MP TO		0+00	0+00	0+00	13+86
STATION / MP		62+27	13+59	13+86	45+90
ROAD WIDTH	R	12	12	12	12
CROWN (INCHES @ C/L)		3	3	3	3
DITCH WIDTH	W	3	2	3	3
DITCH DEPTH	D	1	1	1	1
TURNOUT LENGTH	L	50	25	50	50
TURNOUT WIDTH	T	10	10	10	10
TURNOUT TAPER	P	25	25	25	25
GRUBBING	G1	--	5	--	5
	G2	--	5	--	5
CLEARING	C1	--	10	--	10
	C2	--	10	--	10
ROCK FILLSLOPE	K:1	1½	1½	1½	1½
❖ BALLAST DEPTH	B1	--	18	--	18
CUBIC YARDS / STATION		--	114	--	114
➤ TOTAL CY BALLAST		60	1550	190	3655
❖ SURFACING DEPTH	B2	--	--	--	--
CUBIC YARDS / STATION		--	--	--	--
➤ TOTAL CY SURFACING		--	--	--	--
➤ TOTAL CUBIC YARDS		60 A	1550	190 B	3655
SUBGRADE WIDTH	S	--	16.5	--	16.5
BRUSHCUT (Y/N)		Y	N	Y	N
BLADE, SHAPE, & DITCH (Y/N)		Y	N	Y	N

### TYPICAL SECTION



### TURNOUT DETAIL (PLAN VIEW)



### SYMBOL NOTES

- ❖ Specified Rock Depth is FINISHED COMPACTED DEPTH in inches.
- Specified Rock Quantity is LOOSE MEASURE (Truck Cubic Yards) needed to accomplish specified FINISHED COMPACTED DEPTH. Rock quantities include volume for turnouts, curve widening and landings.

**A** 20 CUBIC YARDS OVER EACH CULVERT INSTALLATION AND REMOVAL

**B** 20 CUBIC YARDS OVER EACH CULVERT INSTALLATION EXCEPT 150 CUBIC YARDS AT STA. 7+95 TO BUILD UP GRADE.

TOTAL 3-INCH MINUS BALLAST ROCK = 5705 CUBIC YARDS

TOTAL RIPRAP = 446 CUBIC YARDS

ROAD #		BX-1206						
REQUIRED / OPTIONAL		OPTIONAL						
CONSTRUCT / RECONSTRUCT		CONSTRUCT						
TOLERANCE CLASS (A/B/C)		C						
STATION / MP TO		0+00						
STATION / MP		2+21						
ROAD WIDTH	R	12						
CROWN (INCHES @ C/L)		3						
DITCH WIDTH	W	2						
DITCH DEPTH	D	1						
TURNOUT LENGTH	L	--						
TURNOUT WIDTH	T	--						
TURNOUT TAPER	P	--						
GRUBBING	G1	5						
	G2	5						
CLEARING	C1	10						
	C2	10						
ROCK FILLSLOPE	K:1	1½						
❖ BALLAST DEPTH	B1	18						
CUBIC YARDS / STATION		114						
➤ TOTAL CY BALLAST		250						
❖ SURFACING DEPTH	B2	--						
CUBIC YARDS / STATION		--						
➤ TOTAL CY SURFACING		--						
➤ TOTAL CUBIC YARDS		250						
SUBGRADE WIDTH	S	16.5						
BRUSHCUT (Y/N)		N						
BLADE, SHAPE, & DITCH (Y/N)		N						

## MATERIALS LIST

LOCATION		CULVERT			DWNST		RIPRAP			FILL TYPE	TOLERANCE	REMARKS	
ROAD #	STATION	DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE				Note: Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:
													Diameter
BX-ML	20+55	18	36	PD			2	3	L	NT	C		
BX-ML	46+05											Remove existing culvert for switchback construction	
BX-ML	46+80	18	40	PD			2	3	L	NT	C		
BX-09	4+13	18	20	PD	50	PS	2	3	L	NT	C		
BX-09	6+08	18	36	PD			2	3	L	NT	C		
BX-09	7+77	18	30	PD			2	3	L	NT	C		
BX-09	8+76	18	36	PD			2	3	L	NT	C		
BX-09	10+76	18	36	40			2	3	L	NT	C		
BX-09	12+11	18	36	PD			2	3	L	NT	C		
BX-12	5+05	24	40	PD			3	5	H/L	NT	C	Replace existing culvert in Type 5 Stream.	
BX-12	7+95	36	50	GM			10	30	H/L	NT	C	Replace existing culvert in Type 4 Stream. Riprap quantity is in addition to existing culvert riprap.	
BX-12	12+55	36	40	GM			10	20	H/L	NT	C	Replace existing culvert in Type 4 Stream. Riprap quantity is in addition to existing culvert riprap.	
BX-12	16+00	36	44	GM			20	30	H/L	NT	C	Type 4 Stream.	
BX-12	17+18	18	30	PD			2	3	L	NT	C		
BX-12	19+83	42	50	GM			35	50	H/L	NT	C	Type 4 Stream.	
BX-12	20+69	18	40	PD			2	3	L	NT	C		
BX-12	23+08	36	50	GM			15	25	H/L	NT	C	Type 4 Stream.	

GM – Galvanized Metal    PS – Polyethylene Pipe Single Wall    PD – Polyethylene Pipe Dual Wall    AM – Aluminized Metal    C – Concrete    XX – PD or GM  
 H – Heavy Loose Riprap    L – Light Loose Riprap    SR – Shot Rock    NT – Native (Bank Run)    QS – Quarry Spalls

## MATERIALS LIST

LOCATION		CULVERT			DWNSPT		RIPRAP			FILL TYPE	TOLERANCE	REMARKS		
ROAD #	STATION	DIAMETER	LENGTH	TYPE	LENGTH	TYPE	INLET	OUTLET	TYPE			Note: Galvanized metal culverts shall conform to the following specifications for gage and corrugation as a function of the diameter:		
												Diameter	Gage	Corrugation
BX-12	23+96	18	30	PD			2	3	L	NT	C			
BX-12	25+18	24	30	PD			3	5	H/L	NT	C	Type 5 Stream.		
BX-12	25+96	18	30	PD			2	3	L	NT	C			
BX-12	28+77	18	30	PD			2	3	L	NT	C			
BX-12	30+06	18	40	PD			2	3	L	NT	C			
BX-12	32+06	18	30	PD			2	3	L	NT	C			
BX-12	33+20	42	50	GM			15	25	H/L	NT	C	Type 4 Stream.		
BX-12	34+92	18	30	PD			2	3	L	NT	C			
BX-12	36+53	18	36	PD			2	3	L	NT	C			
BX-12	38+41	30	50	GM			15	25	H/L	NT	C	Type 4 Stream.		
BX-12	39+43	18	36	PD			2	3	L	NT	C			
BX-12	41+47	18	30	PD			2	3	L	NT	C			
BX-12	44+53	18	30	PD			2	3	L	NT	C			
BX-1206	1+62	18	30	PD			2	3	L	NT	C			

GM – Galvanized Metal    PS – Polyethylene Pipe Single Wall    PD – Polyethylene Pipe Dual Wall    AM – Aluminized Metal    C – Concrete    XX – PD or GM  
 H – Heavy Loose Riprap    L – Light Loose Riprap    SR – Shot Rock    NT – Native (Bank Run)    QS – Quarry Spalls

## FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

### Cuts and Fills

- Maintain slope lines to a stable gradient compatible with the construction materials. 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. Inslope or outslope as directed 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

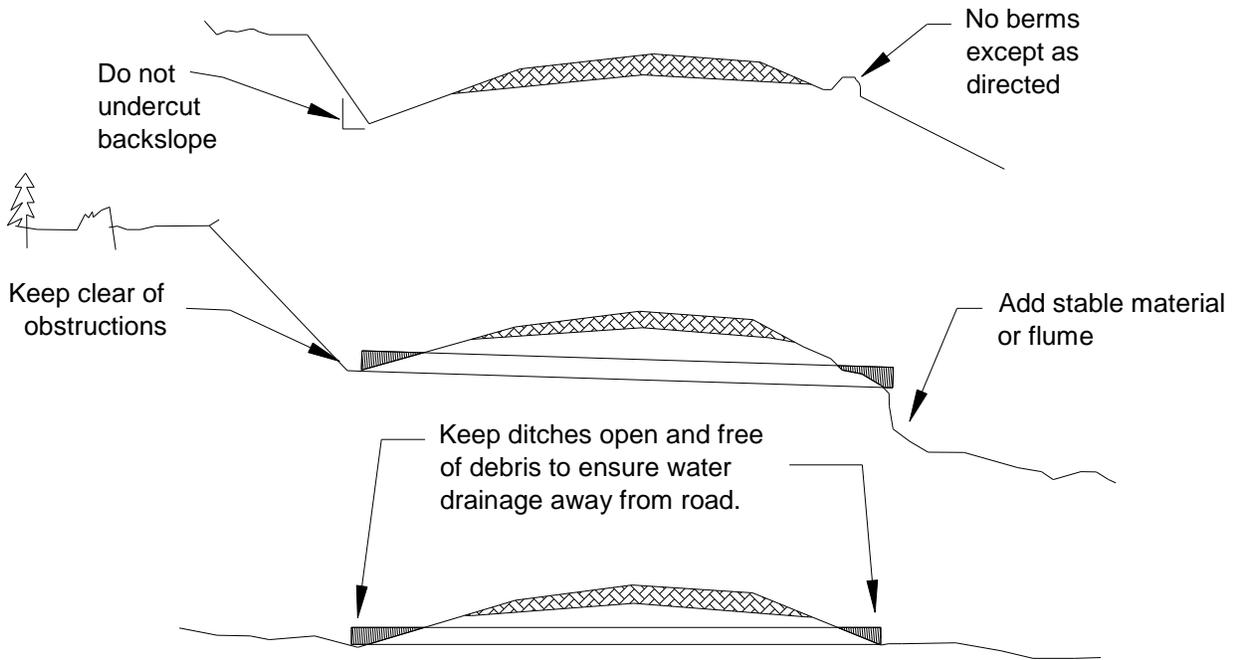
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

**Termination of Use or End of Season**

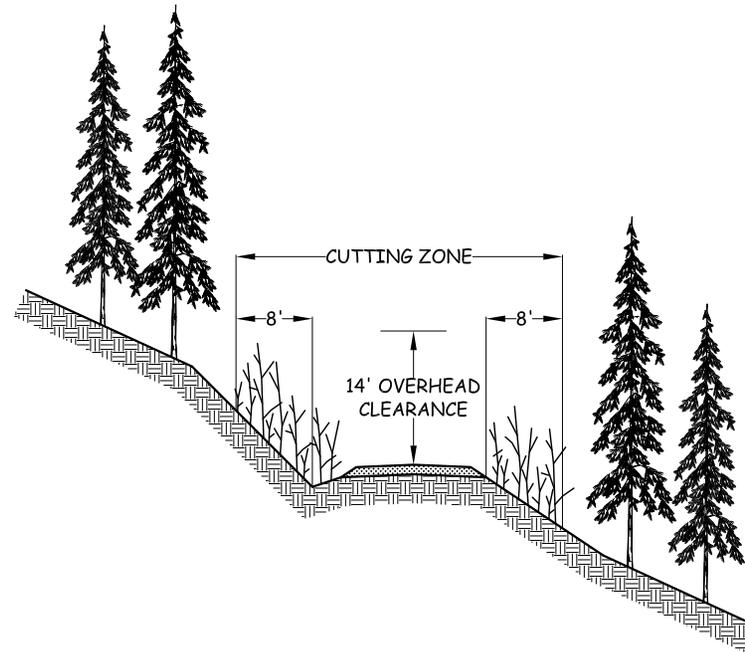
- At the conclusion of logging operations, ensure all conditions of these specifications have been met.

**Debris**

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



## ROAD BRUSHING DETAILS



### SPECIFICATIONS

BRUSH SHALL BE CUT ON THE ROAD SURFACE AND 8 ft. BACK FROM ROAD DITCH AND OUTSIDE EDGE OF RUNNING SURFACE.

ON THE INSIDE OF SWITCHBACKS AND TIGHT CURVES, BRUSH SHALL BE CUT BACK 16 ft. FOR VISIBILITY.

ON TRUCK TURNOUTS, BRUSH SHALL BE CUT 8 ft. BACK FROM OUTSIDE EDGE.

BRUSH SHALL BE CUT TO PROVIDE AN OVERHEAD CLEARANCE OF 14 ft. ABOVE THE ROAD RUNNING SURFACE.

BRUSH SHALL BE CUT TO WITHIN 6 in. OF THE GROUND.

SLASH SHALL BE REMOVED FROM CUT SLOPES ABOVE THE ROAD AND SCATTERED ON EMBANKMENT SLOPES.

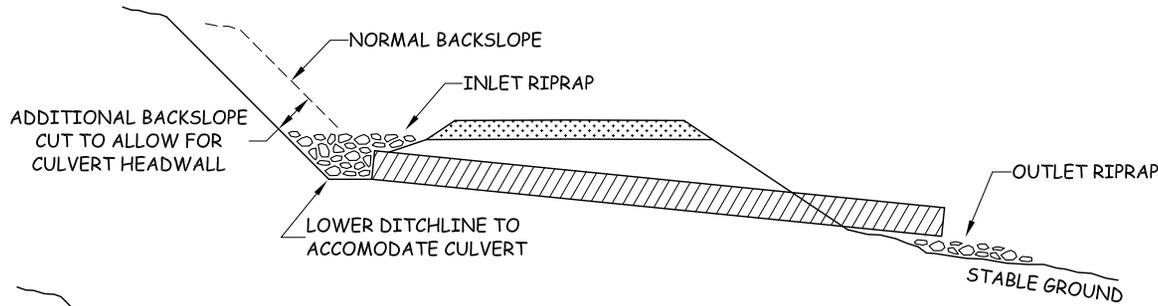
DITCHES SHALL BE CLEARED OF WOODY DEBRIS.

CULVERT INLETS AND OUTLETS SHALL BE CLEANED A MINIMUM DISTANCE OF TWO PIPE DIAMETERS AWAY.

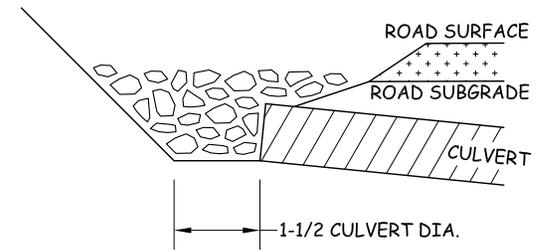
CONTRACT #	PROJECT	SHEET
30-093615	EGG ROLL CH	29 OF 31

# CULVERT AND DRAINAGE SPECIFICATIONS

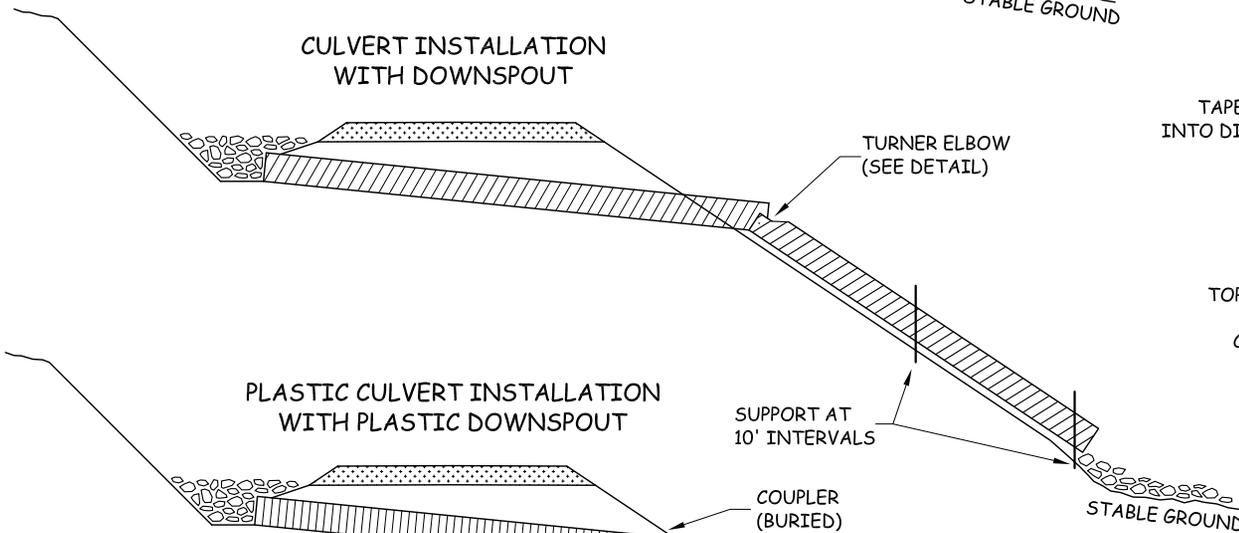
**CULVERT INSTALLATION (TYPICAL)**



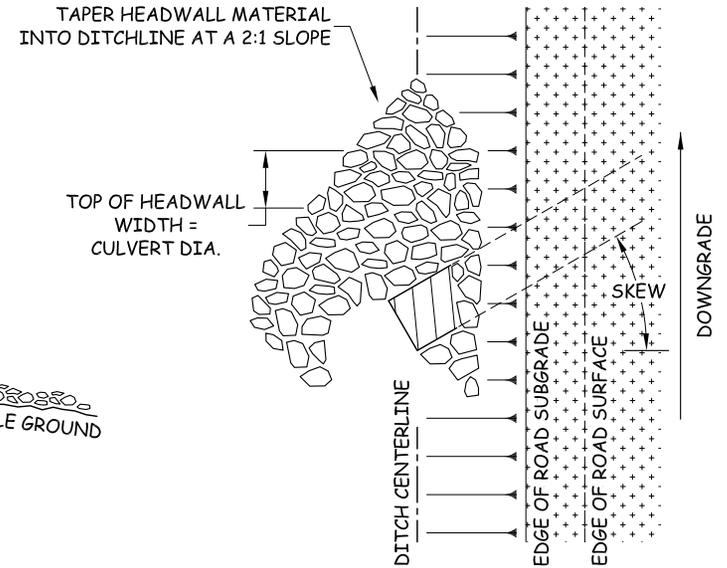
**CULVERT HEADWALL - SECTION VIEW**



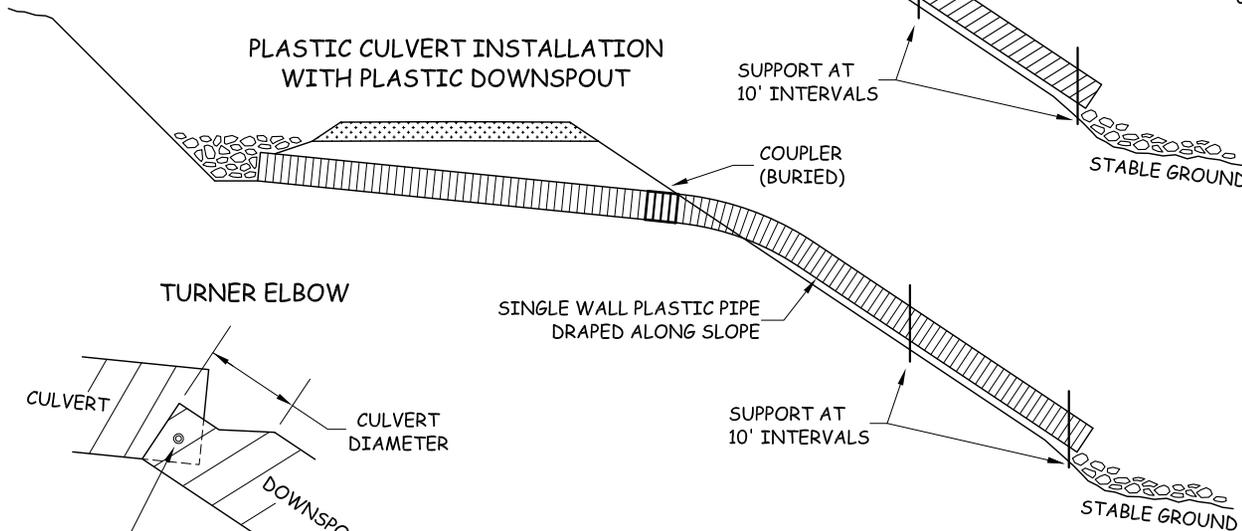
**CULVERT INSTALLATION WITH DOWNSPOUT**



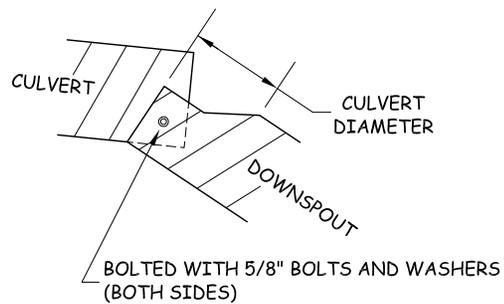
**CULVERT HEADWALL - PLAN VIEW**



**PLASTIC CULVERT INSTALLATION WITH PLASTIC DOWNSPOUT**



**TURNER ELBOW**

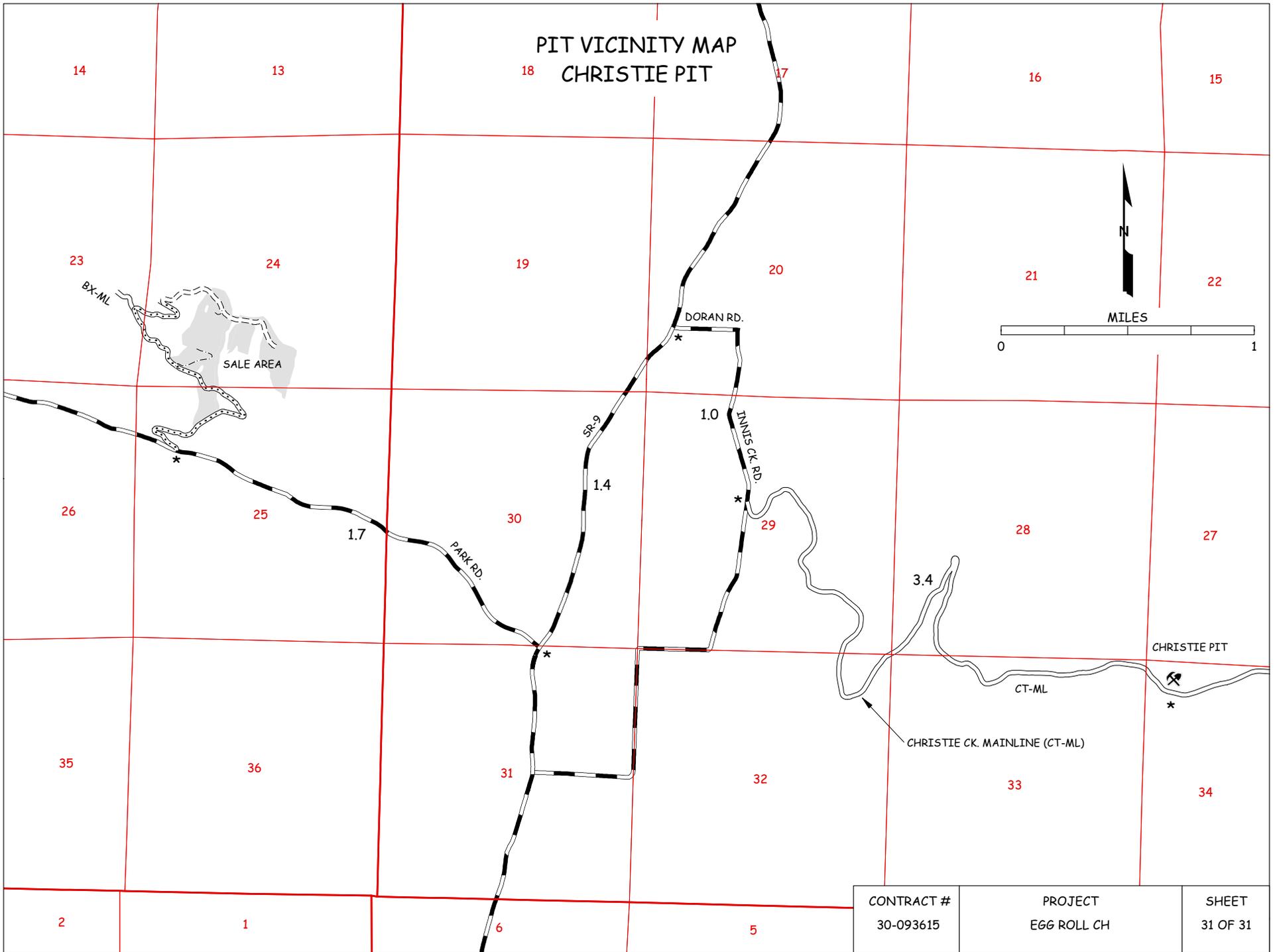


**HEADWALL NOTE:**

HEADWALL TO BE CONSTRUCTED OF IMPERVIOUS MATERIAL THAT WILL RESIST EROSION AND ARMORED WITH RIPRAP QUANTITY SPECIFIED IN ROAD PLAN.

CONTRACT #	PROJECT	SHEET
30-093615	EGG ROLL CH	30 OF 31

# PIT VICINITY MAP CHRISTIE PIT



CONTRACT # 30-093615	PROJECT EGG ROLL CH	SHEET 31 OF 31
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**ROAD COST SUMMARY**

CICADA CH Timber Sale #30-098543

**CONSTRUCTION SUMMARY**

ROAD #	STATIONING	TOTAL STATIONS	ROCK PRODUCTION COST	ROCK LOADING COST	ROCK HAUL COST	ROCK SPREADING COST	CONSTRUCTION COST	CULVERT COST	OTHER COST	TOTAL COST	COST/STA
BL-4406	9+34 to 28+94	25.11	\$15,645	\$5,021	\$32,883	\$4,621	\$12,460	\$2,168	\$3,753	\$76,551	\$3,049
									<b>TOTAL</b>	<b>\$76,551</b>	

CONSTRUCTION COSTS include, clearing and grubbing, excavation and embankment, drilling and shooting on grade, and endhaul.

OTHER COSTS include erosion control, grass seeding and fertilizer, and miscellaneous other requirements detailed in the road plan.

**PRE-HAUL MAINTENANCE SUMMARY**

ROAD #	STATIONING	TOTAL STATIONS	ROCK PRODUCTION COST	ROCK LOADING COST	ROCK HAUL COST	ROCK SPREADING COST	CULVERT COST	OTHER COST	PRE-HAUL GRADING AND BRUSHING	TOTAL COST	COST/STA
BL-ML	0+00 to 231+19	231.19	\$420	\$167	\$606	\$0	\$958	\$0	\$8,757	\$10,908	\$47
BL-12	0+00 to 59+50	59.50	\$0	\$0	\$0	\$0	\$0	\$0	\$2,254	\$2,254	\$38
BL-44	0+00 to 31+92	31.92	\$0	\$0	\$0	\$0	\$0	\$0	\$1,209	\$1,209	\$38
BL-4406	0+00 to 9+34	9.34	\$0	\$0	\$0	\$0	\$0	\$0	\$142	\$142	\$15
BL-ML (Lignin)	0+00 to 99+50	61.26	\$0	\$0	\$0	\$0	\$0	\$5,970	\$0	\$5,970	\$97
									<b>TOTAL</b>	<b>\$20,482</b>	

OTHER COSTS include cleaning culverts, ditches, headwalls, catch basins, culvert installation, and miscellaneous other requirements detailed in the road plan.

**ROAD COST SUMMARY**

CICADA CH Timber Sale #30-098543

**POST-HAUL MAINTENANCE SUMMARY**

<b>ROAD #</b>	<b>STATIONING</b>	<b>TOTAL STATIONS</b>	<b>POST-HAUL GRADING COST</b>	<b>OTHER COST</b>	<b>TOTAL COST</b>	<b>COST/STA</b>
BL-ML	0+00 to 231+19	231.19	\$2,627	\$0	\$2,627	\$11
BL-12	0+00 to 59+50	59.50	\$676	\$0	\$676	\$11
BL-44	0+00 to 31+92	31.92	\$363	\$0	\$363	\$11
BL-4406	0+00 to 9+34	9.34	\$106	\$0	\$106	\$11
BL-4406	9+34 to 28+94	25.11	\$285	\$0	\$285	\$11
				<b>TOTAL</b>	<b>\$4,058</b>	

OTHER COSTS include miscellaneous other requirements detailed in the road plan.

**NOTE: ALL MOBILIZATION COSTS HAVE BEEN AMORTIZED IN WITH OTHER COSTS.**

<b>TOTAL ROAD COST</b>	\$101,091	
<b>SALE VOLUME (MBF)</b>	1179	<b>PRE-CRUISE ESTIMATED VOLUME</b>
<b>ROAD COST/MBF</b>	\$86	

## ROAD COST SUMMARY

EGG ROLL CH Timber Sale #30-093615

### CONSTRUCTION SUMMARY

ROAD #	STATIONING	TOTAL STATIONS	ROCK PRODUCTION COST	ROCK LOADING COST	ROCK HAUL COST	ROCK SPREADING COST	CONSTRUCTION COST	CULVERT COST	OTHER COST	TOTAL COST	COST/STA
BX-09	0+00 to 13+59	13.59	\$10,850	\$5,115	\$19,158	\$4,497	\$7,177	\$2,575	\$435	\$49,808	\$3,665
BX-12	13+86 to 45+90	32.04	\$25,585	\$14,411	\$48,258	\$11,329	\$17,435	\$11,869	\$1,025	\$129,913	\$4,055
BX-1206	0+00 to 2+21	2.21	\$1,750	\$827	\$3,092	\$726	\$939	\$319	\$0	\$7,653	\$3,463
									<b>TOTAL</b>	<b>\$187,374</b>	

CONSTRUCTION COSTS include, clearing and grubbing, excavation and embankment, drilling and shooting on grade, and endhaul.

OTHER COSTS include erosion control, grass seeding and fertilizer, and miscellaneous other requirements detailed in the road plan.

### PRE-HAUL MAINTENANCE SUMMARY

ROAD #	STATIONING	TOTAL STATIONS	ROCK PRODUCTION COST	ROCK LOADING COST	ROCK HAUL COST	ROCK SPREADING COST	CULVERT COST	OTHER COST	PRE-HAUL GRADING AND BRUSHING	TOTAL COST	COST/STA
BX-ML	0+00 to 62+27	62.27	\$420	\$280	\$679	\$199	\$799	\$810	\$2,359	\$5,545	\$89
BX-12	0+00 to 13+86	13.86	\$1,330	\$1,314	\$3,250	\$763	\$3,223	\$2,349	\$525	\$12,752	\$920
									<b>TOTAL</b>	<b>\$18,298</b>	

OTHER COSTS include cleaning culverts, ditches, headwalls, catch basins, culvert installation, and miscellaneous other requirements detailed in the road plan.

**ROAD COST SUMMARY**

EGG ROLL CH Timber Sale #30-093615

**POST-HAUL MAINTENANCE SUMMARY**

ROAD #	STATIONING	TOTAL STATIONS	POST-HAUL GRADING COST	OTHER COST	TOTAL COST	COST/STA
BX-ML	0+00 to 62+27	62.27	\$708	\$0	\$708	\$11
BX-12	0+00 to 13+86	13.86	\$158	\$0	\$158	\$11
BX-12	13+86 to 45+90	32.04	\$364	\$0	\$364	\$11
				<b>TOTAL</b>	<b>\$1,229</b>	

OTHER COSTS include miscellaneous other requirements detailed in the road plan.

**ABANDONMENT SUMMARY**

ROAD #	STATIONING	TOTAL STATIONS	ABANDONMENT COST	OTHER COST	TOTAL COST	COST/STA
BX-09	0+00 to 13+59	13.59	\$1,577	\$0	\$1,577	\$116
BX-1206	0+00 to 2+21	2.21	\$263	\$0	\$263	\$119
				<b>TOTAL</b>	<b>\$1,840</b>	

OTHER COSTS include miscellaneous other requirements detailed in the road plan.

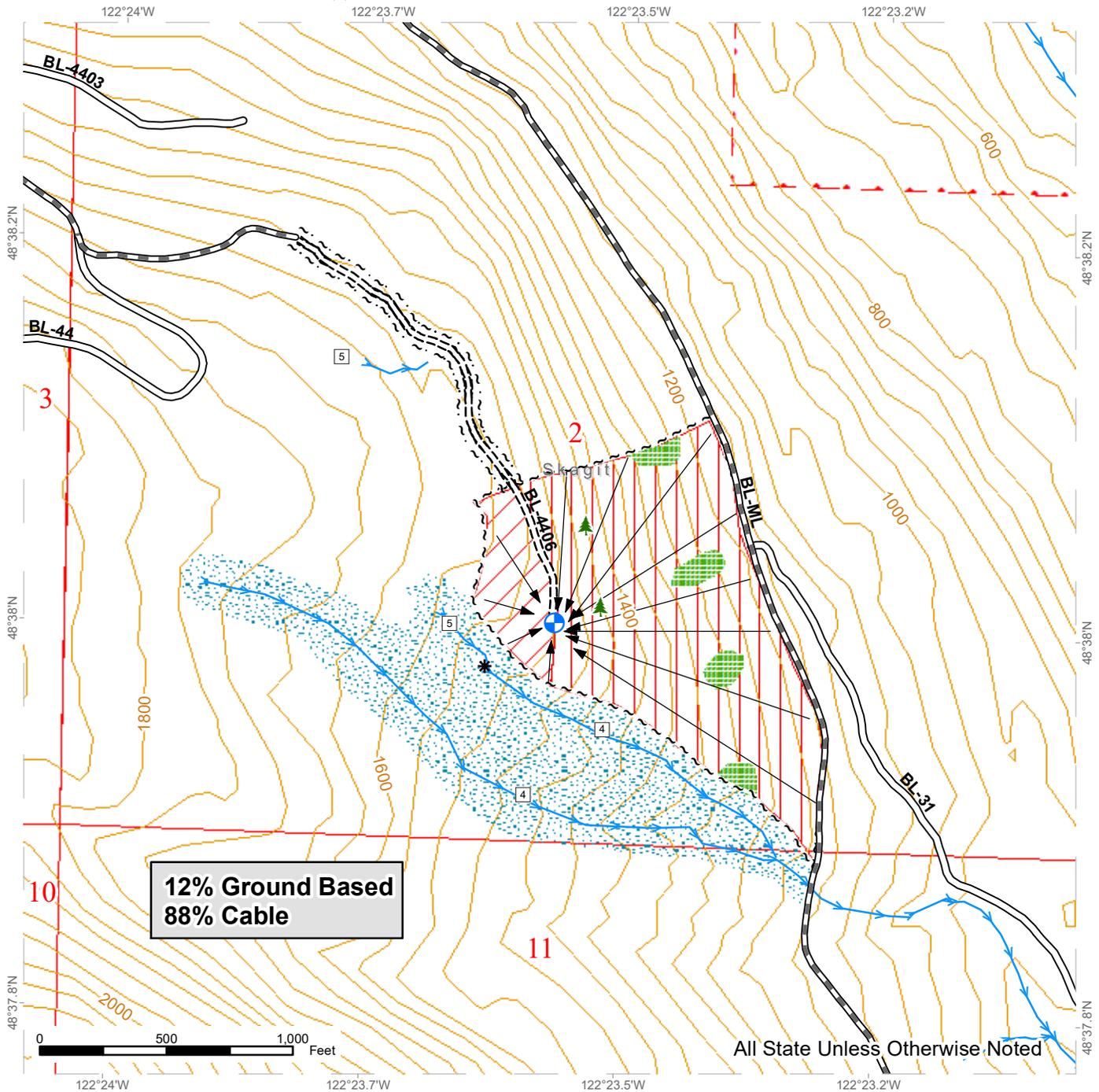
NOTE: ALL MOBILIZATION COSTS HAVE BEEN AMORTIZED IN WITH OTHER COSTS.

<b>TOTAL ROAD COST</b>	\$208,740	
<b>SALE VOLUME (MBF)</b>	1755	PRE-CRUISE ESTIMATED VOLUME
<b>ROAD COST/MBF</b>	\$119	

# LOGGING PLAN MAP

**SALE NAME:** CICADA (Cicada Egg Roll RMZ Sorts)  
**AGREEMENT#:** 30-098543  
**TOWNSHIP(S):** T36R3E  
**TRUST(S):** State Forest Transfer (1)

**REGION:** Northwest Region  
**COUNTY(S):** Skagit  
**ELEVATION RGE:** 1200-1600



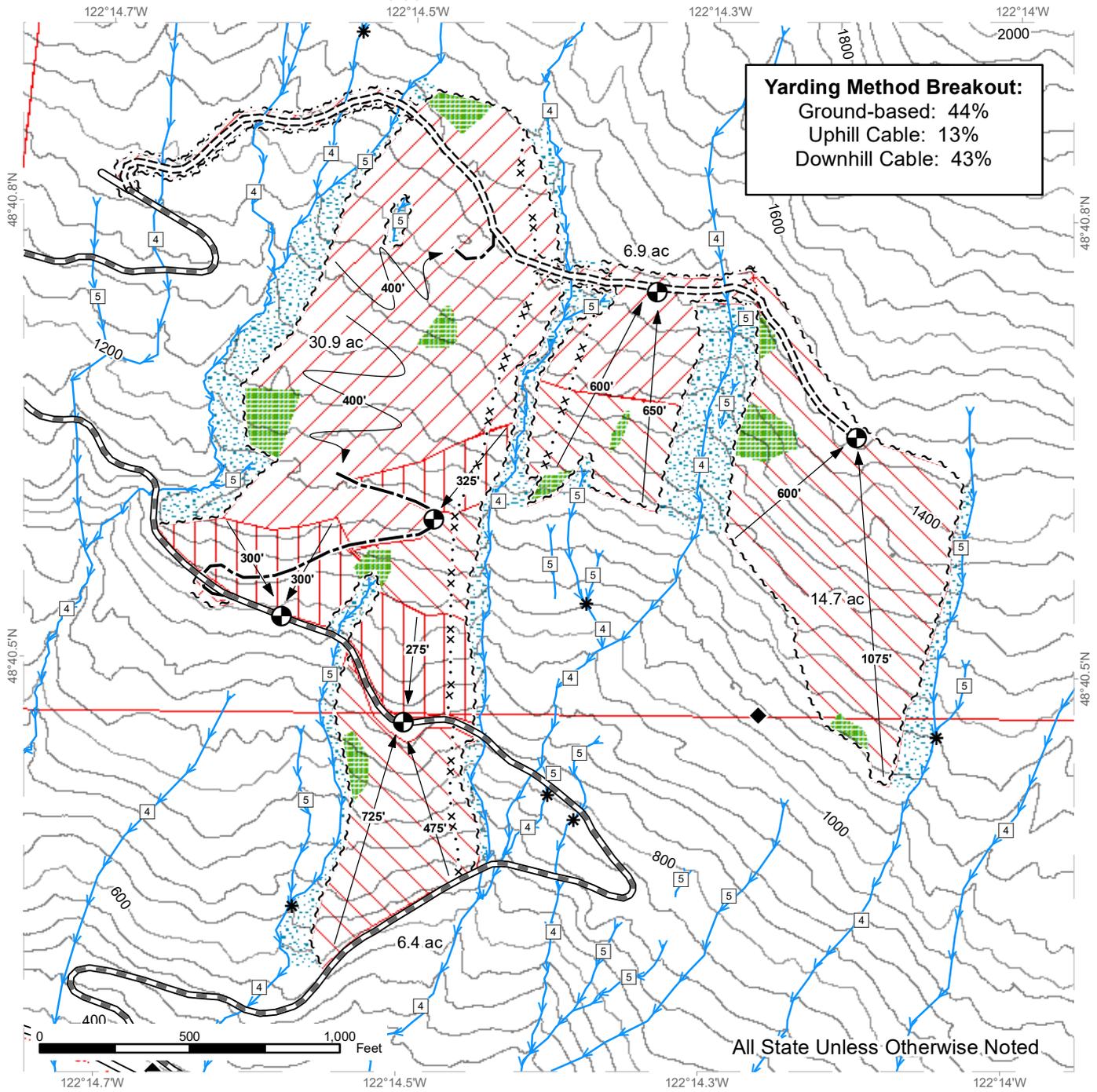
	Ground		Right of Way Tags		Streams
	Cable		Existing Roads		Stream Type
	Leave Tree Area		Required Pre-Haul Maintenance		Stream Type Break
	Riparian Mgt Zone		Required Construction		Landing - Proposed
	Ground Harvest		Leave Tree Area <1/4 acre		
	Cable Harvest				
	Sale Boundary Tags				



# LOGGING PLAN MAP

**SALE NAME:** EGG ROLL (Cicada Egg Roll RMZ Sorts)  
**AGREEMENT#:** 098543  
**TOWNSHIP(S):** T37R4E  
**TRUST(S):** Common School and Indemnity (3)

**REGION:** Northwest Region  
**COUNTY(S):** Whatcom  
**ELEVATION RGE:** 560-1600



	Ground-based Yarding		Sale Boundary Tags		Streams
	Uphill Cable		Special Mgmt Area		Stream Type
	Downhill Cable		Right of Way Tags		Stream Type Break
	Leave Tree Area		Existing Roads		Survey Monument
	Riparian Mgmt Zone		Required Pre-Haul Maintenance		
			Required Construction		
			Optional Construction		



1034496

EASEMENT

The grantor Robert W. DeHoff, 1000th St NW, husband and wife of Star Route, Acme, Washington for and in consideration of One Dollar (\$1.00) and other valuable consideration, in hand paid, receipt thereof is hereby acknowledged, grants and conveys to the Department of Natural Resources, State of Washington, grantee, its successors and assigns, permanent non-exclusive easement over and across the following described lands in Whatcom County, State of Washington, to wit:

Southeast one-quarter of the Northwest one-quarter (SE 1/4 NW 1/4) and the Northeast one-quarter southwest one-quarter of Section 29 Township 37 North, Range 5 East. W.M.

as shown on the plat marked Exhibit A, attached hereto and by this reference made a part hereof.

The rights granted hereinabove shall be subject to the following terms and conditions:

1. The easement is conveyed for the sole purpose of constructing and/or maintaining a road to provide access to and from lands presently owned or hereinafter acquired by the grantee, or controlled by the grantee, for land management and administration activities, including but not limited to valuable material removal operations.
2. The grantor reserves to itself, its successors and assigns, the right to use, at its own risk, the roadway in any manner which does not unreasonably interfere with the use of said road by the grantee, its assigns, successors, agents, contractors, employees, or licensees. Said road users will, however, contribute their pro rata share to the maintenance costs caused by their usage so that such maintenance will leave the road in as good a condition as existed at the time of commencement of said use.

IN WITNESS WHEREOF, the grantor has hereunto set its hand and seal this 5<sup>th</sup> day of February, 1967.

x Robert W. DeHoff (SEAL)  
 x Elizabeth M. DeHoff (SEAL)  
 \_\_\_\_\_ (SEAL)  
 \_\_\_\_\_ (SEAL)

Approved as to Form only  
5th day of May, 1961

JOHN J. O'CONNELL  
ATTORNEY GENERAL

By Charles B. Roe, Jr.  
Assistant Attorney General

On this day personally appeared before me Robert W. DeHoff, to me known to be the individual described in and who executed the within and foregoing instrument and acknowledged the same as their free and voluntary act and conveyance for the uses and purposes therein mentioned.

Given under my hand and official seal this 5<sup>th</sup> day of February, 1967.

Arnold R. Peterson  
 Notary Public in and for the State of  
 Washington, residing at \_\_\_\_\_



M-158  
5/1/61

91247





EASEMENT

THIS AGREEMENT, made and entered into this 7th day of February, 1973, by and between SCOTT PAPER COMPANY, a Pennsylvania corporation, herein called "Scott," and STATE OF WASHINGTON, acting by and through the Department of Natural resources, herein called "State," WITNESSETH:

I

A. Scott 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 Whatcom 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 "Exhibits B and C."

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

B. State, for and in consideration of the grant hereinabove made, hereby grants and conveys to Scott, 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 Whatcom 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 "Exhibits B and C."

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 purpose of reconstruction, use, and maintenance of said existing roads for the purpose of hauling forest products and other valuable materials from lands now owned or hereafter acquired by the parties hereto and to provide access to said lands for land management and administrative activities.

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 contractors, licensees, 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.

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, 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.

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



Affix Seal of Corporation

SCOTT PAPER COMPANY

OK  
JPT  
By Robert I. Thieme  
Vice President Title

Attest Clayton M. Olsen  
Assistant Secretary Title

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

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

W.F.D.  
2-16-73

Affix Seal of Commissioner  
of Public Lands

App. No. 34305  
srm

STATE OF WASHINGTON )  
                                  ) ss  
County of Snohomish )

On this 7th day of February, 1973, before me personally  
appeared ROBERT I. THIEME  
and CLAYTON M. OLSEN, to me known to be  
the Vice President and Assistant Secretary  
SCOTT PAPER COMPANY, respectively, of SCOTT PAPER COMPANY

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.



Arlene Hanson  
Notary Public in and for the State of  
Washington, residing at Everett.

STATE OF WASHINGTON )  
 ) ss  
COUNTY OF THURSTON )

On this 20<sup>th</sup> day of February, 1978, 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.



*Robert M. Wolff*

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

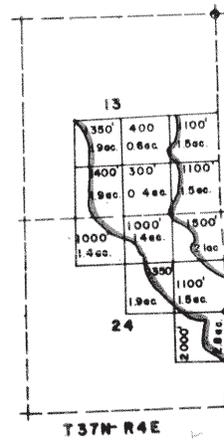
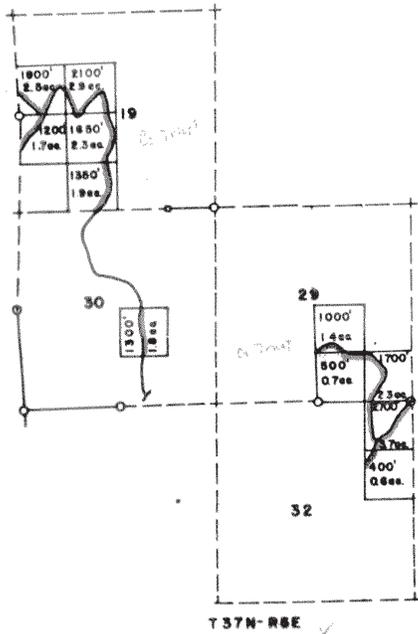
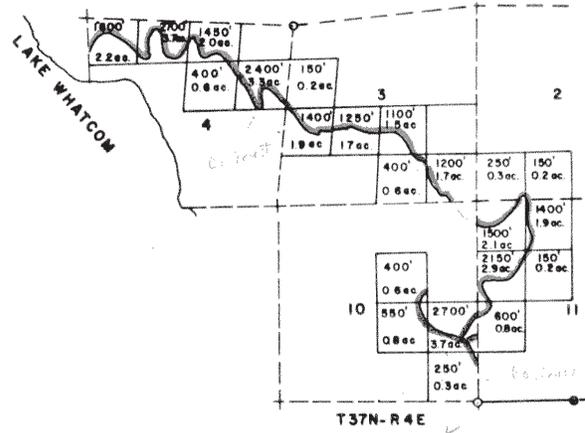
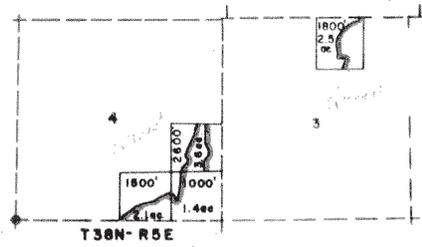
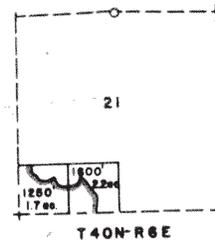
## EXHIBIT A

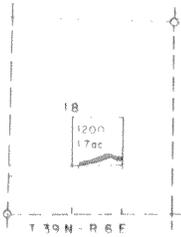
## SCOTT LAND

S $\frac{1}{2}$ SW $\frac{1}{4}$	Section 2, Township 37 North, Range 4 East, W.M.
N $\frac{1}{2}$ SW $\frac{1}{4}$ , NW $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 3, Township 37 North, Range 4 East, W.M.
N $\frac{1}{2}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ NE $\frac{1}{4}$	Section 4, Township 37 North, Range 4 East, W.M.
NW $\frac{1}{4}$ , NW $\frac{1}{2}$ SW $\frac{1}{4}$	Section 11, Township 37 North, Range 4 East, W.M.
S $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 35, Township 38 North, Range 4 East, W.M.
S $\frac{1}{2}$ SE $\frac{1}{4}$	Section 29, Township 37 North, Range 5 East, W.M.
NW $\frac{1}{2}$ SE $\frac{1}{4}$	Section 30, Township 37 North, Range 5 East, W.M.
NE $\frac{1}{2}$ NE $\frac{1}{4}$	Section 32, Township 37 North, Range 5 East, W.M.
NE $\frac{1}{2}$ SE $\frac{1}{4}$	Section 13, Township 39 North, Range 5 East, W.M.
S $\frac{1}{2}$ SE $\frac{1}{4}$ , NE $\frac{1}{2}$ SW $\frac{1}{4}$ , NW $\frac{1}{2}$ SE $\frac{1}{4}$	Section 26, Township 39 North, Range 5 East, W.M.
SE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 27, Township 39 North, Range 5 East, W.M.
N $\frac{1}{2}$ NW $\frac{1}{4}$	Section 36, Township 39 North, Range 5 East, W.M.
NW $\frac{1}{2}$ SE $\frac{1}{4}$	Section 18, Township 39 North, Range 6 East, W.M.

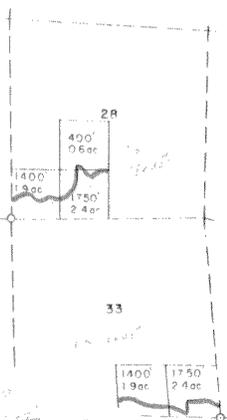
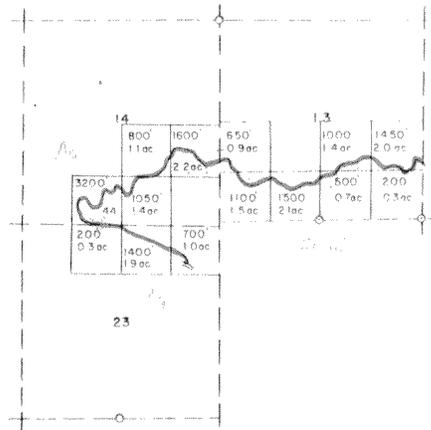
## STATE LAND

SW $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{2}$ SE $\frac{1}{4}$	Section 3, Township 37 North, Range 4 East, W.M.
SE $\frac{1}{2}$ NE $\frac{1}{4}$	Section 4, Township 37 North, Range 4 East, W.M.
SW $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$	Section 10, Township 37 North, Range 4 East, W.M.
SE $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$	Section 13, Township 37 North, Range 4 East, W.M.
NE $\frac{1}{4}$ , NE $\frac{1}{2}$ NW $\frac{1}{4}$ , NE $\frac{1}{2}$ SE $\frac{1}{4}$	Section 24, Township 37 North, Range 4 East, W.M.
E $\frac{1}{2}$ SW $\frac{1}{4}$ , SW $\frac{1}{2}$ SW $\frac{1}{4}$	Section 28, Township 38 North, Range 4 East, W.M.
S $\frac{1}{2}$ SE $\frac{1}{4}$	Section 33, Township 38 North, Range 4 East, W.M.
NE $\frac{1}{2}$ SW $\frac{1}{4}$ , NE $\frac{1}{2}$ SE $\frac{1}{4}$	Section 35, Township 38 North, Range 4 East, W.M.
W $\frac{1}{2}$ SW $\frac{1}{4}$ , NE $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{2}$ NW $\frac{1}{4}$ , NW $\frac{1}{2}$ SE $\frac{1}{4}$ , W $\frac{1}{2}$ NE $\frac{1}{4}$ , NE $\frac{1}{2}$ NE $\frac{1}{4}$	Section 36, Township 38 North, Range 4 East, W.M.
Gov. Lots 2 and 3, SE $\frac{1}{2}$ NW $\frac{1}{4}$ , E $\frac{1}{2}$ SE $\frac{1}{4}$	Section 19, Township 37 North, Range 5 East, W.M.
NW $\frac{1}{2}$ SE $\frac{1}{4}$	Section 29, Township 37 North, Range 5 East, W.M.
SE $\frac{1}{2}$ NE $\frac{1}{4}$	Section 32, Township 37 North, Range 5 East, W.M.
NW $\frac{1}{2}$ NE $\frac{1}{4}$	Section 3, Township 38 North, Range 5 East, W.M.
S $\frac{1}{2}$ SE $\frac{1}{4}$ , NE $\frac{1}{2}$ SE $\frac{1}{4}$	Section 4, Township 38 North, Range 5 East, W.M.
Gov. Lots 3 and 5, S $\frac{1}{2}$ SE $\frac{1}{4}$ , NW $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$	Section 13, Township 39 North, Range 5 East, W.M.
N $\frac{1}{2}$ SE $\frac{1}{4}$ , SW $\frac{1}{2}$ SE $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$	Section 14, Township 39 North, Range 5 East, W.M.
NE $\frac{1}{2}$ NE $\frac{1}{4}$ , NE $\frac{1}{2}$ NW $\frac{1}{4}$	Section 23, Township 39 North, Range 5 East, W.M.
NE $\frac{1}{2}$ NE $\frac{1}{4}$	Section 35, Township 39 North, Range 5 East, W.M.
Gov. Lot 2, SE $\frac{1}{2}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ NE $\frac{1}{4}$ , NE $\frac{1}{2}$ NE $\frac{1}{4}$	Section 36, Township 39 North, Range 5 East, W.M.
S $\frac{1}{2}$ SW $\frac{1}{4}$	Section 21, Township 40 North, Range 6 East, W.M.

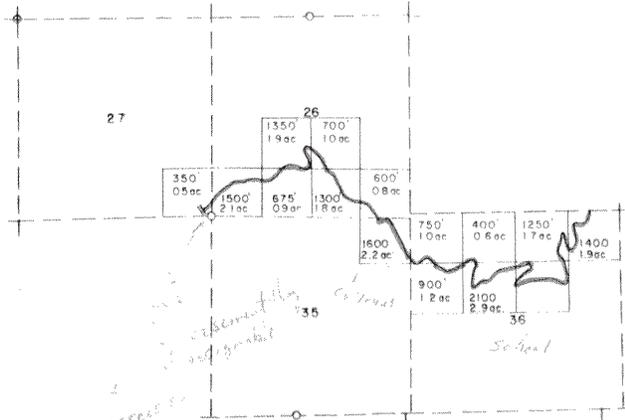
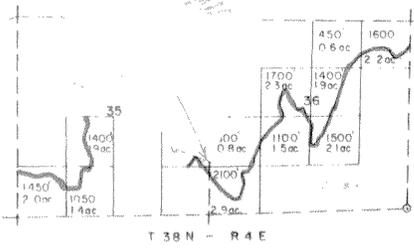




T 39 N - R 5 E W M



*Road is actually  
route of 1900'*



*Accession  
1129 are  
1930*

*1000' 1.4 ac  
1100' 1.5 ac  
1500' 2.1 ac  
500' 0.7 ac  
200' 0.3 ac*

RECEIVED FOR RECORD AT 11 15 MAR 5 1973  
AT REQUEST OF Department of Public Safety  
NELLA HANSEN, CO. AUDITOR WHATCOM CO. WASH.

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES  
BRIAN J. BOYLE, Commissioner of Public Lands  
Olympia, Washington 98504

E.#55-002385

EASEMENT

THIS AGREEMENT, made and entered into this 4th day of December, 1990, by and between GEORGIA PACIFIC CORPORATION, herein called "Georgia Pacific," and STATE OF WASHINGTON, acting by and through the Department of Natural Resources, herein called "State," WITNESSETH:

I

A. Georgia Pacific for and in consideration of Thirty Seven Thousand Nine Hundred Seventy-Six and no/100 Dollars (\$37,976.00) and the grant hereinafter made by State, hereby grants and conveys to State, its successors and assigns, a permanent easement upon, over, and along rights of way sixty (60) feet in width, over and across N $\frac{1}{2}$  NE $\frac{1}{4}$  Section 33, SW $\frac{1}{4}$  NW $\frac{1}{4}$ , SE $\frac{1}{4}$  SW $\frac{1}{4}$ , Section 35, Township 37 North, Range 5 East, W.M., in Whatcom County, 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 the grant hereinabove made, hereby grants and conveys to Georgia Pacific, its successors and assigns, a permanent easement upon, over, and along rights of way sixty (60) feet in width over and across SW $\frac{1}{4}$  Section 28, N $\frac{1}{2}$  NW $\frac{1}{4}$  Section 33, N $\frac{1}{2}$  N $\frac{1}{2}$  Section 34, S $\frac{1}{2}$  SE $\frac{1}{4}$  Section 27, Township 37 North, Range 5 East, W.M., in Whatcom County, Washington, being thirty (30) feet on each side of the centerline of a road or roads located approximately as shown in green and blue on the attached "Exhibit A."

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 purpose of construction, reconstruction, use and maintenance of a road or roads for the purpose of hauling forest products and other valuable materials from lands now owned or hereafter acquired by the parties hereto, and to provide access to said lands for land management and administrative activities.
2. State reserves to itself, its successors, assigns and permittees, the right to use, maintain, patrol, reconstruct and repair the road marked in blue on Exhibit A for any and all purposes; provided, that use for hauling of timber or other valuable materials shall be initiated by serving notice to Georgia Pacific acknowledging such use shall be predicated on the basis of sharing in the value of the road. Georgia Pacific agrees that upon receipt of this notice of intent, the parties shall mutually agree as to their respective percentage of the total use and the then replacement value of the roadway or other such facility.

DEC 27 1990

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FOR  
LO

BOYER  
GKSACK DANVIEW  
MISH CASCADE  
AGIT RIVERS SKYKO

State shall then pay, or cause to be paid, its share of the roadway or facility being considered. State shall also be responsible for the reconstruction of the facility if necessary to provide for its desired use. Thereafter, unless the parties hereto agree in writing to share the cost of replacement items based on each party's pro rata share of the total use thereof in advance of such replacement being made, said replacement shall be solely for the account of the party making the replacement.

Provided, however, thirty (30) days prior to any reconstruction, and/or betterment of said road by either party on lands of the other party, the initiating party will submit to the land owning party a written request for joint review of the proposed project, upon completion of which the initiating party will submit a complete and detailed plan of operations. Each party's operations, specified herein shall be conducted in accordance with the provisions of the approved plan of operations. Said parties shall provide the other party the right of examination of the right of way before any construction, reconstruction, or development is commenced.



3. 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 on its own lands, and to use said rights of way in a manner that will not unreasonably interfere with the rights granted herein.
4. Each party hereto may grant to third parties, upon such terms as it chooses, on its own lands, 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.
5. 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.
6. 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.

7. 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.
8. 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.
9. Each party hereto reserves to itself all timber now on or hereafter growing within the rights of way on its said lands.
10. Each party hereto shall require each of its Permittees, before using any of said roads on the lands of the other party hereto for commercial purposes, 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), Two Hundred Fifty Thousand Dollars (\$250,000.00) for injury to one person, Five Hundred Thousand Dollars (\$500,000.00) for any one occurrence, and Two Hundred Fifty Thousand Dollars (\$250,000.00) 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, 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; 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 in 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.

- 11. All obligations under this easement which involve the expenditure of funds by the State shall be subject to the availability of such appropriated funds.

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

GEORGIA PACIFIC CORPORATION

By [Signature] Title WVC  
OMK  
CFE  
Vice President

Attest [Signature] Title  
Assistant Secretary



Affix Seal of Corporation

STATE OF WASHINGTON  
DEPARTMENT OF NATURAL RESOURCES

[Signature]  
R. BRUCE MACKEY, Manager  
Division of Lands and Minerals



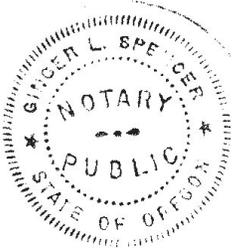
Affix Seal of Commissioner of Public Lands

Easement No. 55-002385  
12RIGHTAWA55002385.EAX

STATE OF OREGON )  
County of Multnomah )ss

On this 7th day of November, 19 90, personally appeared before me Dewey L. Mobley to me known to be the Vice President of 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 he was authorized to execute said instrument for said corporation and that the seal affixed is the corporate seal of the said corporation.

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



Ginger L. Spencer  
Notary Public in and for the State of Oregon, residing at \_\_\_\_\_.

My appointment expires 3/25/94.

STATE OF WASHINGTON )  
COUNTY OF Thurston )ss

On this 4th day of December, 19 90, personally appeared before me R. BRUCE MACKEY to me known to be the Lands and Minerals Division Manager of the Department of Natural Resources, State of Washington, who 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 first above written.

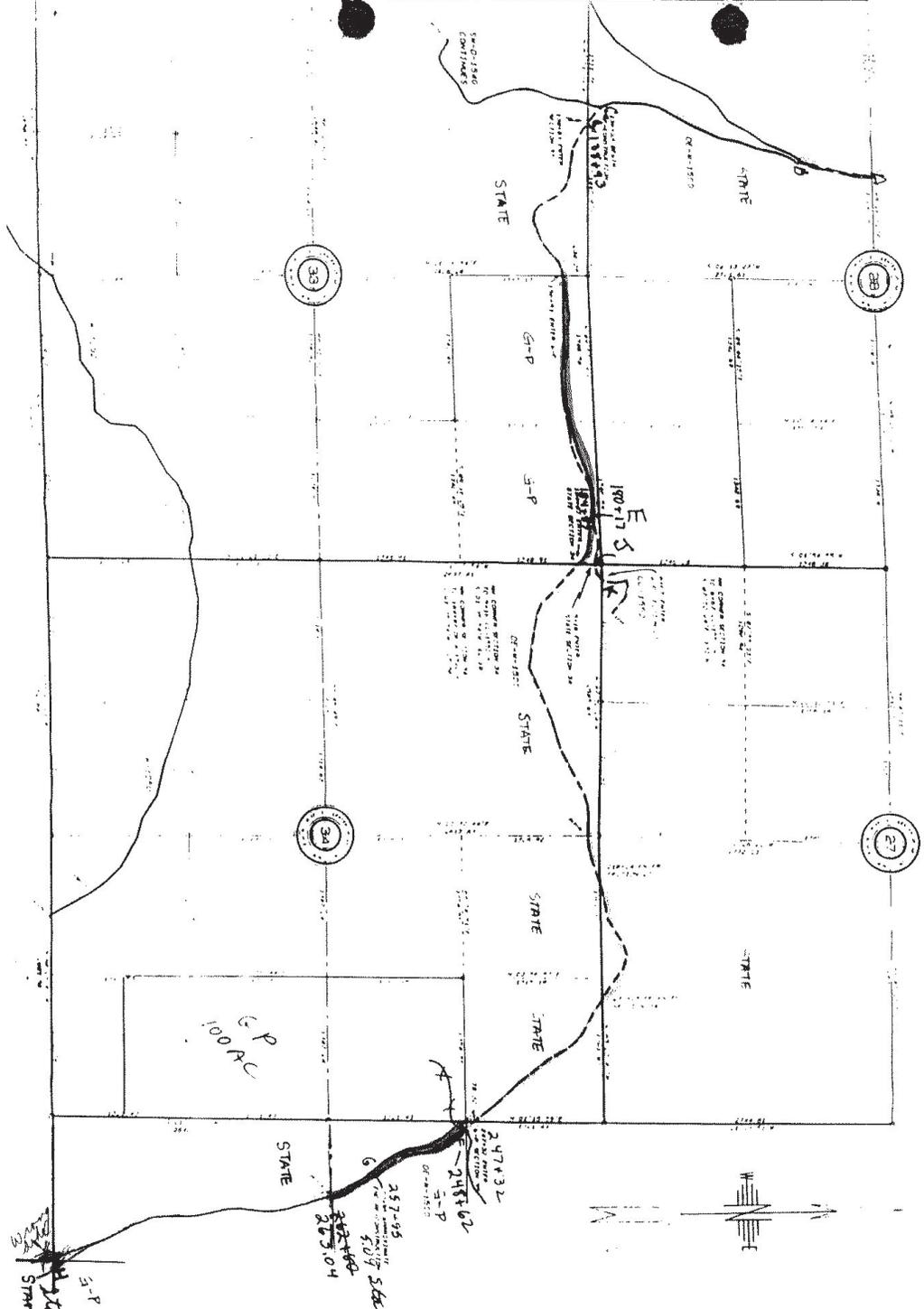


Julie M. Ambrester  
Notary Public in and for the State of Washington, residing at Olympia.

My appointment expires 1-3-93.

GEORGIA-PACIFIC CORPORATION

T 37N R5E



NEW CONSTRUCTION: GP-14-10  
 CENTERLINE ROAD DATA: R1E  
 State to G-P Cost Share  
 G-P to State Cost Share  
 State to G-P Non Cost Share  
 R1E CROSSER SW CORNER 58235

WHATCOM COUNTY  
 BELLINGHAM, WA  
 12/12/90 2:25 PM  
 REQUEST OF: /WAS  
 Shirley Forslof, AUDITOR  
 BY: MRT, DEPUTY  
 \$1.00 EASE

RECEIVED

JAN 22 1983

A G R E E M E N T

LANDS & MINERALS

W. W. WOODRUM  
FOREST PRODUCTS  
OF WASHINGTON

THIS AGREEMENT made and entered into this 13th day of December, 1965, by and between ANACORTES VENEER, INC., a corporation, hereinafter referred to as "Anacortes", and GEORGIA-PACIFIC CORPORATION, a corporation, hereinafter referred to as "Georgia-Pacific",

WITNESSETH:

WHEREAS, Anacortes now owns certain lands or now has the right to log timber from certain lands in Whatcom County, Washington, in Townships 37 N, Range 6 E.W.M., and 38 N, Range 5 and 6 E.W.M., and Section 35, Township 39 N, Range 6 E.W.M. in connection with which Anacortes has constructed logging roads on said lands and on other lands in said Townships together with a logging road across Sections 11, 12 and 13, Township 38 North, Range 5 East, W.M., and Sections 18, 19, 20 and 21, Township 38 North, Range 6 East, W.M., connecting with the County Road for the purpose of gaining access to said described lands, and

WHEREAS, Georgia-Pacific, or its wholly-owned subsidiary, Blue Mountain Logging Company, a corporation, owns certain lands or has the right to log the timber from certain lands in Whatcom County, Washington, in Townships 37 and 38 North, Range 5 and 6 East, W.M., and in Sections 31 and 32, Township 39 North, Range 6 East, W.M., in connection with which Georgia-Pacific and/or Blue Mountain Logging Company has constructed logging roads on said described lands and on other lands in said Townships for the purpose of gaining access to said described lands, and

WHEREAS, Blue Mountain Logging Company will, in due course after date hereof, transfer all its remaining interest to said properties and rights-of-way to Georgia-Pacific, and

VOL 39 PAGE 085

54-106

WHEREAS, it is to the mutual interest of both Anacortes and Georgia-Pacific to have the right to use such of the existing logging roads of the other in said described areas together with such roads which may hereafter be built therein; all as may be necessary or convenient for the protection, administration, management, and utilization of the resources belonging to said parties in said described areas, and

WHEREAS, Anacortes and Georgia-Pacific (including any interest of its wholly-owned subsidiary, Blue Mountain Logging Company) are presently contemplating the transfer of a right-of-way over the existing main line logging road located north of the Nooksack River in said Township 38, Range 5 and 6 East, W.M., to the United States Forest Service, retaining rights of use of said roadway by the parties hereto under said agreement as specified therein, and

WHEREAS, there have been several prior agreements between said corporations, or between individuals and corporations, of which the present above-named corporations are the successors in interest in respect to rights-of-way over said described lands hereinbefore referred to, and it is desirable to supersede all said prior agreements with this present agreement,

NOW, THEREFORE, it is hereby agreed between the parties hereto as follows:

1.

Georgia-Pacific hereby grants to Anacortes, its permittees, contractors, successors, and assigns for the purpose of protection, administration, management and utilization of resources from any lands in Townships 37 N, Range 6 E. W. M., and 38 N, Range 5 and 6 E. W. M., and Section 35, Township 39 N, Range 6 E. W. M., which Anacortes now owns, the following:

- (a) The right to use any and all logging roads belonging to or controlled by Georgia-Pacific now existing, or hereafter acquired or constructed by Georgia-Pacific, over or upon any of the lands located in Township 37 North, Range 5 and 6 East; in Sections 1, 12 and 13 in Township 38 North, Range 5 East; and in Township 38 North, Range 6 East, all in Whatcom County, Washington.
- (b) The right to go upon any lands set forth and described in Paragraph (a) above, and layout, construct, and use additional logging road or roads together with the right to construct bridges, all as may be necessary or convenient for said purposes.

## II.

Anacortes hereby grants to Georgia-Pacific its permittees, contractors, successors, and assigns for the purpose of protection, administration, management, and utilization of resources from lands in Townships 37 and 38 North, Range 6 East, W.M., which Georgia-Pacific now owns, and from lands Georgia-Pacific now owns in Sections 1, 12 and 13 in Township 38 North, Range 5 East, W.M., and Sections 31 and 32, Township 39 North, Range 6 East, W.M., or from lands it may hereafter own or acquire in Township 38 N, Range 6 E.W.M., lying south of the Middle Fork of the Nooksack River, the following:

- (a) The right to use any and all logging roads belonging to or controlled by Anacortes now existing or hereafter acquired or constructed by Anacortes over and upon any of the lands located in Townships 37 and 38 North, Range 6 East, and in Sections 11, 12 and 13, Township 38 North, Range 5 East, Whatcom County, Washington.
- (b) The right to go upon any lands set forth and described in Paragraph (a) above and layout, construct, and use additional logging road or roads together with the right to construct bridges, all as may be necessary or convenient for said purposes.

## III.

Anacortes and Georgia-Pacific (including the interest of its wholly-owned subsidiary, Blue Mountain Logging Company) are transferring, contemporaneous herewith, a right-of-way over the existing main line logging road located north of the Nooksack River in Sections 11, 12 and 13, in Township 38 N, Range 5 East, and Sections 18, 19, 20, and 21 in Township 38 North, Range 6 E.W.M. to the United States Forest Service under which agreement said parties are retaining

rights of use of said roadway as specified therein.

IV.

It is understood that the rights herein exchanged by Georgia-Pacific and Anacortes are not exclusive rights, but there shall be joint use thereof by both corporations and such rights may be exercised by their permittees or contractors with whom these corporations may contract for the logging, removal, or transportation of its timber, logs, or other resources.

V.

Ownership of any timber cut, either by Anacortes or Georgia-Pacific, or their permittees or contractors, during the course of construction of a road across the land of the other, shall remain with the land owner. Such timber shall be cut into logs of standard length and shall be decked horizontally along said road accessible to owner for removal.

VI.

While any logging road is being used solely by either party, or its permittees or contractors, such party shall provide for the maintenance and repair of such road at its own cost and expense. While the parties or their permittees or contractors are using any such roads jointly, each party shall do its pro rata share of the maintenance work or contribute its pro rata share of the cost of maintenance based on annual use and maintenance costs.

VII.

Anacortes and Georgia-Pacific each hereby assumes full responsibility for damage by fire or otherwise to any timber, premises, equipment, or adjoining property caused by its negligence or the negligence of its permittees or contractors during and on account of the construction or use of any easements, logging roads, etc. across the lands of the other, and agrees to indemnify and

save each other harmless from any and all loss, cost, and expense on account of such damage.

VIII.

This agreement shall supersede all previous agreements between the parties hereto or their subsidiaries, or their predecessors in interest, relating to said described lands, and all rights or obligations under said previous agreements are hereby fully released and terminated.

IX.

All rights of use hereunder shall be subject to reasonable regulations or controls imposed by either party hereto in respect to the use of its roads or rights-of-way granted hereunder. Such regulations or controls shall be those customarily adopted by the forest industry in the Puget Sound area in regard to traffic regulations, weight size, and load restrictions together with limitations of use during periods of severe fire danger.

X.

Each party to this agreement reserves the right to sell or dispose of, and receive the entire consideration for roads <sup>62</sup> or on rights of way obtained by it from third parties including the State <sup>see page 5</sup> located on its lands, subject to the other party's right of use which may be subject to reasonable size, load and traffic regulations and the duty to pay a pro-rata share of maintenance cost.

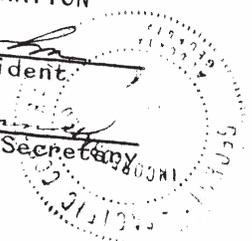
IN WITNESS WHEREOF, said corporations have caused this instrument to be executed by its proper officers and its corporate seal to be hereunto affixed the day and year first above written.

ANACORTES VENEER, INC.  
By [Signature]  
President

By [Signature]  
Secretary

GEORGIA-PACIFIC CORPORATION  
By [Signature]  
Vice President

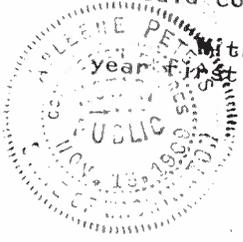
By [Signature]  
Assistant Secretary



10000000

STATE OF WASHINGTON )  
COUNTY OF SKAGIT ; ss

On this 9th day of December, 1965, before me the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared E. F. Jones and E. J. Eriks, to me known to be the Vice President and Secretary, respectively, of Anacortes Veneer, Inc., the corporation that executed the foregoing instrument, and acknowledged the 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 the said instrument and that the seal affixed is the corporate seal of said corporation.



Witness my hand and official seal hereto affixed the day and year first above written.

Arlene Peters  
Notary Public in and for the State  
of Washington, residing at Anacortes

STATE OF WASHINGTON )  
COUNTY OF WHATCOM ; ss

On this 13th day of December, 1965, before me, the undersigned, a Notary Public in and for the State of Washington, duly commissioned and sworn, personally appeared E. Ekholm and J. Allan Evans, to me known to be the Vice President and Assistant Secretary, respectively, of Georgia-Pacific Corporation, the corporation that executed the foregoing instrument, and acknowledged the 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 the said instrument and that the seal affixed is the corporate seal of said corporation.



Witness my hand and official seal hereto affixed the day and year first above written.

Gervyl K. Young  
Notary Public in and for the State  
of Washington, residing at Bellingham

Filed for record at 9:10 A.M. JAN 11 1966  
request of Georgia Pacific  
ISEN, CO. AUDITOR Whatcom Co. Wash

ARM DP REG MGR  
 RECORD PIO  
 FP ADMIN OFF MGR  
 FIRE SPEC SPA  
 RAGAD ACCT  
 INCC  
 GEOL  
 FACER  
 RMERS

ARM ST  
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 REFOR  
 SORS  
 SECTY  
 NRCA  
 REC  
 SAN JUAN  
 BAKER

GRANTEE

29NK-210

FEB 21 1995

FORESTRY ROAD EASEMENT

E# 55-002581

THIS AGREEMENT, made and entered into this 24<sup>th</sup> day of January, 1995, by and between JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY, hereinafter called GRANTOR, and State of Washington acting by and through the Department of Natural Resources hereinafter called GRANTEE.

WITNESSETH:

I.

GRANTOR, for valuable consideration, the sufficiency and receipt of which is hereby acknowledged, hereby grants and conveys to GRANTEE, its successors and assigns, a permanent non-exclusive Forestry Road Easement sixty (60) feet in width, being thirty (30) feet on each side of the centerline of a road located approximately as shown on the attached Exhibit A, B, and C (Easement Areas) which by this reference are incorporated herein, and crossing the following described land owned by GRANTOR in Whatcom County, Washington:

100772 EX 2/06/95 PAID \$1.750 40

Portions of N1/2 NE1/4 Section 33, NE1/4 SW1/4, E1/2 SE1/4, SE1/4 NE1/4 Section 34, SW1/4 NW1/4, Lot 3, Lot 6, Lot 7 and SE1/4 SW1/4 Section 35, all in Township 37 North, Range 5 East, W.M.

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

II.

Vol: 429 Page: 687  
 File No: 950203129

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

1. This Easement is conveyed for the purpose of construction and reconstruction, use and maintenance of the above described road for the purpose of moving specialized logging equipment, logging trucks or other equipment used for growing, harvesting, or managing timber on lands now owned by GRANTEE.
2. GRANTOR reserves for itself, its successors and assigns, the right at all times for any purpose, to cross and recross said road at any place on grade or otherwise, and to use said Easement Area in a manner that will not unreasonably interfere with the rights granted to the GRANTEE herein.
3. GRANTOR may grant to third parties, upon such terms as it chooses, any or all of the rights reserved by it herein; provided such use shall not unreasonably interfere with the rights granted to the GRANTEE.

WHATCOM COUNTY  
 BELLINGHAM, WA  
 02/03/95 3:59 PM  
 REQUEST OF: JOHN HANC  
 Shirley Forslof, AUDITOR  
 BY: PT, DEPUTY  
 \$15.00 EASE

4. The cost of road maintenance and resurfacing shall be allocated on the basis of respective uses of said road. When any party uses the 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 the 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 road, or any portion thereof, the parties hereto shall meet and establish necessary maintenance provisions. Such provision 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.

5. Each party using any portion of the 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 the 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. GRANTEE shall obey and comply with any laws and regulations concerning said road and exercise proper and prudent caution and care in the use thereof.
6. Unless the parties hereto agree in writing to share the cost of improvements in advance of such improvements being made, such improvements shall be solely for the account of the improver.
7. GRANTOR reserves to itself all timber now on or hereafter growing within the Easement Area.
8. The GRANTEE may permit its respective 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.

9. GRANTEE and each of its Permittees, before using any of said roads for commercial purposes, shall:
- A. Obtain and, during the term of such use, maintain a policy of liability insurance in form, substance and amount satisfactory to GRANTOR, insuring GRANTOR and said GRANTEE against liability arising out of its operations, including use of vehicles, and naming the GRANTEE and GRANTOR as co-insured.
  - B. Minimum amounts of insurance shall be:
    - (1) For log haulers, and other miscellaneous users operating heavy trucks (over one (1) ton):
      - (a) Five hundred thousand dollars (\$500,000) for injury to one person.
      - (b) One million dollars (\$1,000,000) for any one occurrence, and
      - (c) Five hundred thousand dollars (\$500,000) for 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:
      - (a) Two hundred fifty thousand dollars (\$250,000) for injury to one person.
      - (b) Five hundred thousand dollars (\$500,000) for any one occurrence, and
      - (c) Two hundred fifty thousand dollars (\$250,000) property damage for any one occurrence; or
    - (3) Such other limits as the parties hereto may agree upon in writing from time to time.
  - C. Deliver to each party hereto a certificate from the insurer of said GRANTEE or Permittee which certifies that coverage, in not less than the above specified 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.

- 10. Subject to paragraph 11 below GRANTEE agrees to defend, indemnify and save harmless GRANTOR and its successors and assigns of and from and against all causes of action, litigation, cost, loss, liability, damage and expense (including attorneys' fees) for injury or death to persons, whomsoever, and damage to or loss of property, to whomsoever belonging, including the respective contractors, agents, employees and representatives of GRANTOR, arising out of or in any way connected with the use of the road and Easement Area by the GRANTEE, its respective contractors, agents, employees or representatives.
- 11. Insofar as GRANTEE may be authorized to do so from time to time under the laws of the State of Washington, GRANTEE will protect, save and hold harmless GRANTOR from all claims, costs, damages or expenses arising out of the negligence of both GRANTOR and GRANTEE, any damages allowed shall be levied in proportion to the percentage of negligence attributable to each party.

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

JOHN HANCOCK MUTUAL LIFE  
INSURANCE COMPANY

STATE OF WASHINGTON

By: *James P. Masterson*

By: *L. Bruce Mackay*

Title: Manager, Forestry Operations

Title: *Div. Mgr.*

Date: January 24, 1995

Date: *12/27/94*

Attest: *Barry C. Jaulon*

Attest: *Mary T. [Signature]*

Title: Assistant Secretary

Title: *Administrative Assistant*

Reviewed by: \_\_\_\_\_  
Alan Cain  
Division Manager  
The Campbell Group, Inc.

THE COMMONWEALTH OF MASSACHUSETTS  
COUNTY OF SUFFOLK

On this 24th day of January, 1995, before me, the undersigned, a Notary Public in and for the said Commonwealth, residing therein, duly commissioned and sworn, personally appeared Daniel P. Christensen and Barry P. Sanborn, to me personally known who by me duly sworn, did say that they are Manager, Forestry Operations and Assistant Secretary of JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY, that the seal affixed to the foregoing instrument is the corporate seal of said corporation, and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors and as the free act and deed of said corporation, for the uses and purposes therein mentioned.

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

Marie C. O'Brien  
Notary Public in and for said Commonwealth

MARIE C. O'BRIEN, Notary Public  
MY COMMISSION EXPIRES AUGUST 9, 1996

My commission expires \_\_\_\_\_, 19\_\_\_\_.

STATE OF WASHINGTON  
COUNTY OF THURSTON

On this 27<sup>th</sup> day of December, 1994, before me, the undersigned, a Notary Public in and for the State of WASHINGTON, residing therein, duly commissioned and sworn, personally appeared R. BRUCE MACKAY, to me personally known who by me duly sworn, did say that he/she is the same individual who executed the attached Forestry Road Easement and that he/she are competent to execute said instrument and knowingly and willingly do so with the full intention of being legally bound thereby to the extent of all agreements and conditions therein pertaining to them.

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



Steve R. Cook  
Notary Public in and for said State

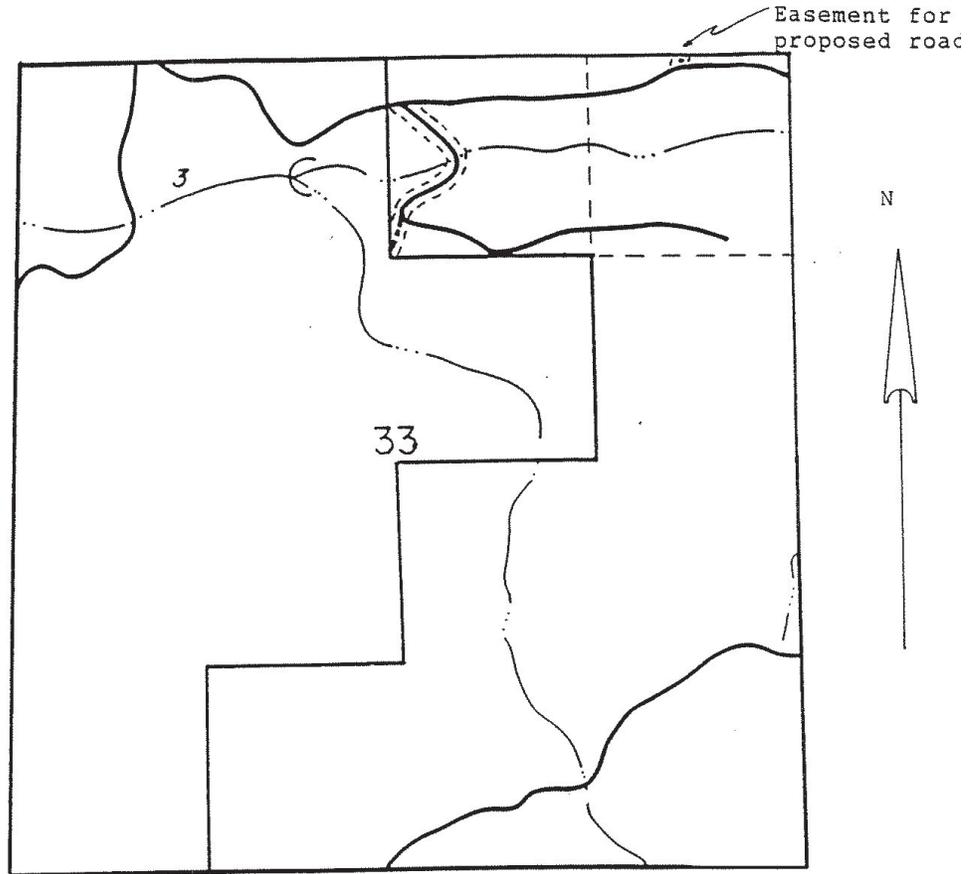
My commission expires Sept. 30, 1995.

# JOHN HANCOCK LIFE INSURANCE CO.

Exhibit MAP

COUNTY Whatcom LEGAL DESCR. Section 33, T. 37 N.,  
MAP DATE 10/19/94 R. 5 E., W.M.

Scale: 1" = 1,000'



## EXHIBIT A

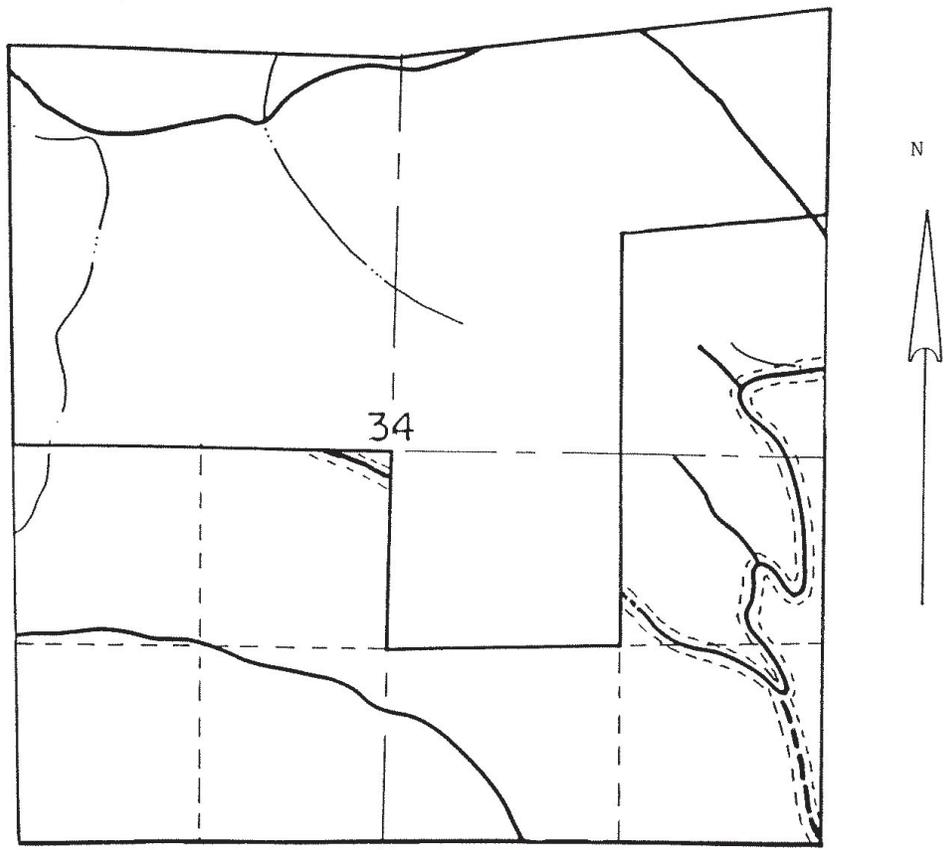
Existing Road      ~~~~~      Proposed Road      - - - - -  
60' Non-exclusive easement on existing road      ~~~~~  
60' Non-exclusive easement on proposed road      - - - - -

# JOHN HANCOCK LIFE INSURANCE CO.

Exhibit MAP

COUNTY Whatcom LEGAL DESCR. Section 34, T. 37 N.,  
MAP DATE 10/19/94 R. 5 E., W.M.

Scale: 1" = 1,000'



## EXHIBIT B

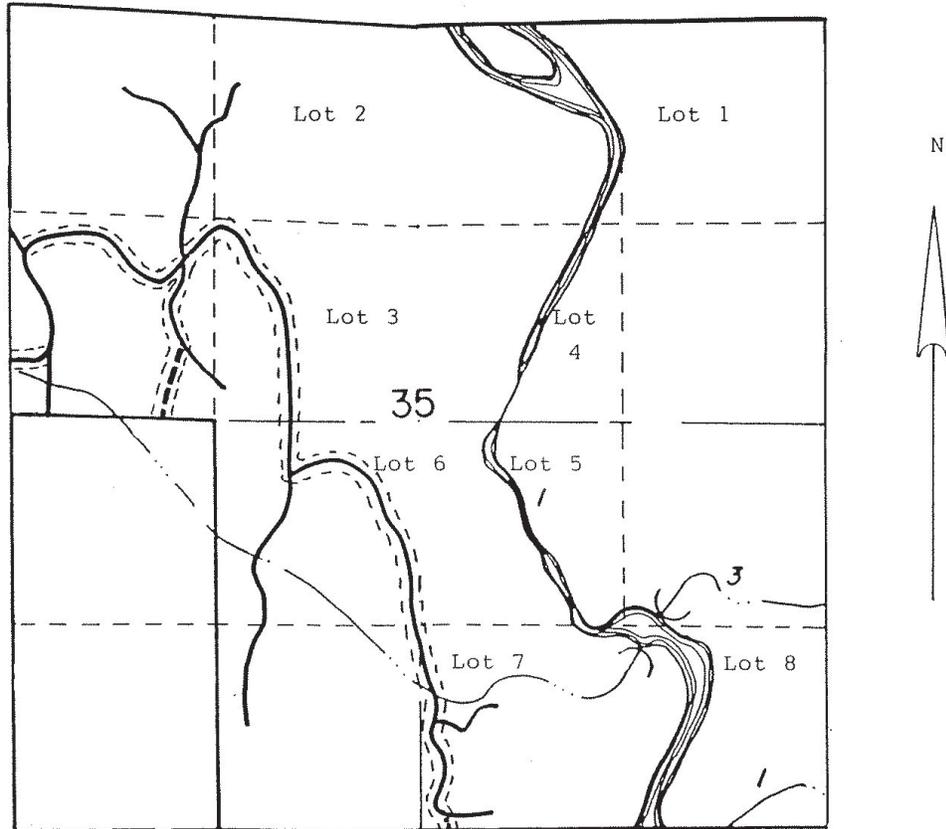
Existing Road      ~~~~~      Proposed Road      - - - - -  
60' Non-exclusive easement on existing road      ~~~~~  
60' Non-exclusive easement on proposed road      - - - - -

# JOHN HANCOCK LIFE INSURANCE CO.

Exhibit MAP

COUNTY Whatcom LEGAL DESCR. Section 35, T. 37 N.,  
MAP DATE \_\_\_\_\_ R. 5 E., W.M.

Scale: 1" = 1,000'



## EXHIBIT C

Existing Road  Proposed Road   
60' Non-exclusive easement on existing road   
60' Non-exclusive easement on proposed road 



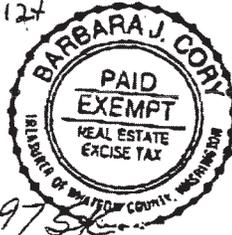
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 Page: 1 of 8  
 8/14/1997 2:48 PM  
 CASE \$15.00  
 Whatcom County, WA  
 Request of: FIRST AMERICAN TITLE INS CO

After recording return to:

The Campbell Group  
 327-C East Blackburn Street  
 Mount Vernon, WA 98273  
 71048-124

*Easement Only*  
 SKAGIT COUNTY WASHINGTON  
 Real Estate Excise Tax

50951



AUG 15 1997

Amount Paid &  
 Skagit Co. Treasurer  
 By *[Signature]* Deputy

81497 *[Signature]*

**FORESTRY ROAD EASEMENT**

THIS AGREEMENT, made and entered into this 24<sup>th</sup> day of July, 1997, by and between JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY hereinafter called GRANTOR, and Rayonier hereinafter called GRANTEE.

WITNESSETH:

I.

GRANTOR, for valuable consideration, the sufficiency and receipt of which is hereby acknowledged, hereby grants and conveys to GRANTEE, its successors and assigns, a permanent non-exclusive Forestry Road Easement Sixty (60) feet in width, being Thirty (30) feet on each side of the centerline of a road located approximately as shown on the attached Exhibit A, (Easement Area), which by this reference is incorporated herein, and crossing the following described land owned by GRANTOR in:

Portions of Section 33 and 34, Township 37 North, Range 5 East, W.M. Whatcom County, (Assessor's Parcel Numbers 370533-200076-0000 and 370534-473058-0000), and portions of Section 4 and 5, Township 36 North, Range 5 East, W.M., Skagit County (Assessor's Parcel Numbers 360504-1-001-0006 and 360505-1-001-0005).

Being a portion of the premises conveyed to GRANTOR by deed dated December 19, 1990, recorded in the Office of Auditor of Whatcom County, Washington on December 28, 1990 in Volume 178, Page 892 as Document 901228004.

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

Forestry Road Easement - Page 1

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II.

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

1. This Easement is conveyed for the purpose of construction, reconstruction, use and maintenance of the above described road for the purpose of moving specialized logging equipment, logging trucks or other equipment used for growing, harvesting, or managing timber on lands now owned by GRANTEE, as shown on the attached Exhibit A.
2. GRANTOR reserves for itself, its successors and assigns, the right at all times for any purpose, to cross and recross said road at any place on grade or otherwise, and to use said Easement Area in a manner that will not unreasonably interfere with the rights granted to the GRANTEE herein.
3. GRANTOR may grant to third parties, upon such terms as it chooses, any or all of the rights reserved by it herein; provided such use shall not unreasonably interfere with the rights granted to the GRANTEE.
4. The cost of road maintenance and resurfacing shall be allocated on the basis of respective uses of said road. When any party uses the 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 the 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 road, or any portion thereof, the parties hereto shall meet and establish necessary maintenance provisions. Such provision 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.

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Page: 2 of 8  
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Whateam County, WA  
Request of: FIRST AMERICAN TITLE INS CO

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- 5. Each party using any portion of the 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 the 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. GRANTEE shall obey and comply with any laws and regulations concerning said road and exercise proper and prudent caution and care in the use thereof.
- 6. Unless the parties hereto agree in writing to share the cost of improvements in advance of such improvements being made, such improvements shall be solely for the account of the improver.
- 7. GRANTOR reserves to itself all timber now on or hereafter growing within the Easement Area.
- 8. The GRANTEE may permit its respective 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 Permittee plans to use any portion of said road for purpose of hauling timber or other valuable materials, such party shall notify GRANTOR 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 the approximate volumes of forest products or valuable materials to be hauled and forthwith upon the completion of such use notify GRANTOR.
- 9. GRANTEE and each of its Permittees, before using any of said roads for commercial purposes, shall:
  - A. Obtain and, during the term of such use, maintain a policy of liability insurance in form, substance and amount satisfactory to GRANTOR, insuring GRANTOR and said GRANTEE against liability arising out of its operations, including use of vehicles, and naming the GRANTEE and GRANTOR as co-insured.
  - B. Minimum amounts of insurance shall be:
    - (1) For log haulers, and other miscellaneous users operating heavy trucks (over one (1) ton):
      - (a) \$500,000 (five hundred thousand dollars) for injury to one person.
      - (b) \$1,000,000 (one million dollars) for any one occurrence, and
      - (c) \$500,000 (five hundred thousand dollars) for property damage for any one occurrence;

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Forestry Road Easement - Page 3

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 Page: 3 of 8  
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 Whatcom County, MA

Request of: FIRST AMERICAN TITLE INS CO

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(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:

(a) \$250,000 (two hundred fifty thousand dollars) for injury to one person.

(b) \$500,000 (five hundred thousand dollars) for any one occurrence, and

(c) \$250,000 (two hundred fifty thousand dollars) property damage for any one occurrence; or

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

C. Deliver to each party hereto a certificate from the insurer of said GRANTEE or "Permittee" which certifies that coverage, in not less than the above specified 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.

10. GRANTEE may not assign its rights and obligations under this Easement without the prior written consent of GRANTOR; and any such permitted assignment shall provide that the assignee will assume all obligations of the GRANTEE from and after the effective date thereof. Consent to assign shall not be unreasonably withheld upon transfer of title of lands owned by GRANTEE.

11. GRANTEE agrees to defend, indemnify and save harmless GRANTOR and its successors and assigns of and from and against all causes of action, litigation, cost, loss, liability, damage and expense (including attorneys' fees) for injury or death to persons, whomsoever, and damage to or loss of property, to whomsoever belonging, including the respective contractors, agents, employees and representatives of GRANTOR, arising out of or in any way connected with the use of the road and Easement Area by the GRANTEE, its respective contractors, agents, employees or representatives.

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Forestry Road Easement - Page 4

BK 1696 PG 0614

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Page: 4 of 8  
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Whetson County, WA

Request of: FIRST AMERICAN TITLE INS CO

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- 12. If for a period of ten (10) years GRANTEE shall cease to use or preserve said road or any portion thereof for prospective future use, this Easement shall automatically terminate without notice and GRANTEE and its successors and assigns agree that they shall, at GRANTOR's option, quitclaim to GRANTOR, in form and substance satisfactory to GRANTOR, all of GRANTEE's right, title and interest as is granted by this Easement.

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

JOHN HANCOCK MUTUAL LIFE  
INSURANCE COMPANY  
By: Hancock Natural Resource Group, Inc.,  
its investment manager

By: John W. Davis

Title: Forest Operations Coordinator

Date: July 24, 1997

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

Reviewed by: Dan Stransky  
Dan Stransky  
North Cascade Area Manager

RAYONIER

Approved as to Legal Form

[Signature]

By: [Signature]

Title: Director Operations

Date: 7/18/97

Attest: \_\_\_\_\_

Title: \_\_\_\_\_

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Forestry Road Easement - Page 5

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Page: 5 of 8  
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Whatcom County, WA

Request of: FIRST AMERICAN TITLE INS CO

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THE STATE OF OREGON  
COUNTY OF MULTNOMAH

On this 24<sup>th</sup> day of July, 1997 before me, the undersigned, a Notary Public in and for the said State, duly commissioned and sworn, personally appeared JOHN W. DAVIS to me personally known, who by me duly sworn, did say that he is Forest Operations Coordinator of Hancock Natural Resource Group, Inc., and that the instrument was signed and sealed on behalf of said corporation in its capacity as the duly authorized investment manager of JOHN HANCOCK MUTUAL LIFE INSURANCE COMPANY, whose corporate seal is affixed to the foregoing instrument by authority of its Board of Directors and as and for its free act and deed.

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



*Carol C. Raggianti*  
Notary Public in and for Oregon  
My Commission Expires May 19, 1998

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Forestry Road Easement - Page 6

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Page: 8 of 8  
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EASE \$15.00  
Multnomah County, OR  
Request of: FIRST AMERICAN TITLE INS CO

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STATE OF WASHINGTON  
COUNTY OF SNOHOMISH

On this 18<sup>th</sup> day of July, 1997, before me, the undersigned, a Notary Public in and for the State of Washington, residing therein, duly commissioned and sworn, personally appeared Robert J. Cardano, to me personally known who by me duly sworn, did say that he/she is the same individual who executed the attached Forestry Road Easement and that he/she are competent to execute said instrument and knowingly and willingly do so with the full intention of being legally bound thereby to the extent of all agreements and conditions therein pertaining to them.

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



Nancy K. Wheeler  
Notary Public in and for said State

My commission expires 7/19, 1999.

9708150017

Forestry Road Easement - Page 7

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Page: 7 of 8  
8/14/1997 2:48 PM  
EASE \$15.00  
Whatcom County, WA

Request of: FIRST AMERICAN TITLE INS CO

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## HCP CHECKLIST

(Used to identify which HCP strategies are actually applied to this proposed management activity, i.e. those that affect the activity.)

Name of Proposed Activity: Cicada Agreement # 30-098543 FPA# \_\_\_\_\_ Planning Unit North Puget

Location (provide for activities other than timber sales) T R (E; W.M.) Sec \_\_\_\_\_

HCP strategy or component	Criteria for strategy application	Applicable planning units	Yes	No
<b>Riparian conservation</b>				
Potentially unstable slopes	Area of proposed activity includes potentially unstable landforms or proposal is modified to avoid potentially unstable landforms	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Rain-on-snow	Proposed activity is in the rain-on-snow zone of a subbasin where greater than 2/3 of DNR managed land must remain hydrologically mature	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Roads – General	Road construction or maintenance activities are proposed	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Roads – In RMZ	Proposed road or recreation trail construction in an RMZ	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Roads – In WMZ	Proposed road or recreation trail construction in a WMZ	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
RMZ – Managed	Proposed activity includes riparian forest restoration (RMZ thinning, riparian hardwood conversion, or riparian individual conifer release)	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
RMZ – Unmanaged	Proposed activity is adjacent to an unmanaged RMZ	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
WMZ – Managed	Proposed activity includes WMZ thinning	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WMZ – Unmanaged	Proposed activity is adjacent to an unmanaged WMZ	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Northern spotted owl conservation</b>				
Northern spotted owl	Proposed activity is in a NRF or dispersal/DFC management area or a timing restriction area; or adjacent to a 300-acre nest patch core area or a 200-acre buffer area	W O E	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Marbled murrelet conservation</b>				
Marbled murrelet	Different thresholds and strategies apply depending on Planning Unit	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Uncommon Habitats, Federally listed species and unlisted species conservation</b>				
Large, structurally unique trees	Proposed final harvest activity retains 2 upland large structurally unique trees, 3 additional upland green trees, and 3 snags, if available (if snags are unavailable, replace with upland green trees), for each acre of final harvest	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Balds	Proposed activity is on or adjacent to a bald	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Caves	Proposed activity is adjacent to a cave buffer	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cliffs	Proposed activity is on or adjacent to cliffs greater than 25 feet tall at an elevation of less than 5000 feet or cliffs greater than 150 feet tall	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mineral springs	Proposed activity is within 200 feet of a mineral spring	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Oak woodlands	Proposed activity is in or adjacent to oak woodlands	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Talus	Proposed activity area is within or adjacent to non-forested or forested talus fields or a buffer or requires road construction or rock mining through forested or non-forested talus	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bats	Area of proposed activity includes myotis bats communal roosts or maternity colonies	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
California wolverine	Proposed activity is within 0.5 miles of an active California wolverine den site located in a spotted owl NRF management area	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Common loon	Proposed activity is within 500 feet of a common loon nest	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Gray wolf	Proposed activity is within 8 miles of a class 1 gray wolf observation that occurred in the past 5 years	W O E	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Harlequin duck	Proposed activity is within 165 feet of a harlequin duck nest	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Northern goshawk	Proposed activity is within 0.55 miles of a northern goshawk nest site located in a NRF management area	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Oregon silverspot butterfly	Proposed activity is within 0.25 miles of an Oregon silverspot butterfly occurrence	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pacific fisher	Proposed activity is within 0.5 miles of an active Pacific fisher den site located in a northern spotted owl NRF management area	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pileated woodpecker	Area of proposed activity includes known pileated woodpecker nesting sites	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vaux's swift	Area of proposed activity includes Vaux's swift night roosts	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>

W=Westside HCP Planning Units

O=OESF

E=Eastside HCP Planning Units

**SIGNATURES**

Proponent: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Approved by:  Title: SLA Date: 10/4/19

This checklist is required for the following activities: 1) Timber harvest activities 2) Construction or expansion of footprint of a road, rock pit, recreation site, communication site, leasing site (for example: antenna, wind turbine, etc.), or right-of-way.

Checklist must be filed with the timber sale packet or sent to [implementation.monitoring@dnr.wa.gov](mailto:implementation.monitoring@dnr.wa.gov)

Revised 12/2013

# HCP CHECKLIST

(Used to identify which HCP strategies are actually applied to this proposed management activity, i.e. those that affect the activity.)

Name of Proposed Activity **Egg Roll** Agreement # **30-093615** FPA# \_\_\_\_\_ Planning Unit **North Puget**

Location (provide for activities other than timber sales) T \_\_\_\_\_ N R \_\_\_\_\_ (EW; W.M.) Sec \_\_\_\_\_

HCP strategy or component	Criteria for strategy application	Applicable planning units	Yes	No
<b>Riparian conservation</b>				
Potentially unstable slopes	Area of proposed activity includes potentially unstable landforms or proposal is modified to avoid potentially unstable landforms	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rain-on-snow	Proposed activity is in the rain-on-snow zone of a subbasin where greater than 2/3 of DNR managed land must remain hydrologically mature	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Roads – General	Road construction or maintenance activities are proposed	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Roads – In RMZ	Proposed road or recreation trail construction in an RMZ	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Roads – In WMZ	Proposed road or recreation trail construction in a WMZ	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
RMZ – Managed	Proposed activity includes riparian forest restoration (RMZ thinning, riparian hardwood conversion, or riparian individual conifer release)	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
RMZ – Unmanaged	Proposed activity is adjacent to an unmanaged RMZ	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
WMZ – Managed	Proposed activity includes WMZ thinning	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WMZ – Unmanaged	Proposed activity is adjacent to an unmanaged WMZ	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Northern spotted owl conservation</b>				
Northern spotted owl	Proposed activity is in a NRF or dispersal/DFC management area or a timing restriction area; or adjacent to a 300-acre nest patch core area or a 200-acre buffer area	W O E	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Marbled murrelet conservation</b>				
Marbled murrelet	Different thresholds and strategies apply depending on Planning Unit	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Uncommon Habitats, Federally listed species and unlisted species conservation</b>				
Large, structurally unique trees	Proposed final harvest activity retains 2 upland large structurally unique trees, 3 additional upland green trees, and 3 snags, if available (if snags are unavailable, replace with upland green trees), for each acre of final harvest	W O	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Balds	Proposed activity is on or adjacent to a bald	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Caves	Proposed activity is adjacent to a cave buffer	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cliffs	Proposed activity is on or adjacent to cliffs greater than 25 feet tall at an elevation of less than 5000 feet or cliffs greater than 150 feet tall	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mineral springs	Proposed activity is within 200 feet of a mineral spring	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Oak woodlands	Proposed activity is in or adjacent to oak woodlands	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Talus	Proposed activity area is within or adjacent to non-forested or forested talus fields or a buffer or requires road construction or rock mining through forested or non-forested talus	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Bats	Area of proposed activity includes myotis bats communal roosts or maternity colonies	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
California wolverine	Proposed activity is within 0.5 miles of an active California wolverine den site located in a spotted owl NRF management area	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Common loon	Proposed activity is within 500 feet of a common loon nest	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Gray wolf	Proposed activity is within 8 miles of a class 1 gray wolf observation that occurred in the past 5 years	W O E	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Harlequin duck	Proposed activity is within 165 feet of a harlequin duck nest	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Northern goshawk	Proposed activity is within 0.55 miles of a northern goshawk nest site located in a NRF management area	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Oregon silverspot butterfly	Proposed activity is within 0.25 miles of an Oregon silverspot butterfly occurrence	W O	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pacific fisher	Proposed activity is within 0.5 miles of an active Pacific fisher den site located in a northern spotted owl NRF management area	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Pileated woodpecker	Area of proposed activity includes known pileated woodpecker nesting sites	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Vaux's swift	Area of proposed activity includes Vaux's swift night roosts	W	<input type="checkbox"/>	<input checked="" type="checkbox"/>

W=Westside HCP Planning Units

O=OESF

E=Eastside HCP Planning Units

**SIGNATURES**

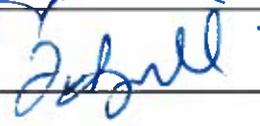
Proponent: Kyle Galloway



Title: Deming Unit Forester

Date: 07/16/2019

Approved by: Laurie Bergvall



Title: SLA

Date: 9/23/19

This checklist is required for the following activities: 1) Timber harvest activities 2) Construction or expansion of footprint of a road, rock pit, recreation site, communication site, leasing site (for example: antenna, wind turbine, etc.), or right-of-way.

Checklist must be filed with the timber sale packet or sent to [implementation\\_monitoring@dnr.wa.gov](mailto:implementation_monitoring@dnr.wa.gov)

Revised 12/2013