

Washington DNR Timber Sales Program

The documents for the Bee Keeper timber sale have been changed as follows:

Documents amended:

Brief Description	DATE	Initials
The Schedule A (Thinning Prescriptions) has been removed from the sale. There are no thinning operations associated with this sale.	3/4/2016	MR
<u>Clause H-140 Special Harvest Requirements and Clause H-141 Additional Harvest Requirements.</u> The following harvest requirement has been removed from the H-141 and placed into the H-140 Clause. "The No logging operations or hauling of forest products shall take place on any weekends, State recognized holidays, or from 7 p.m. to 7 a.m. on weekdays." The H-141 Special Harvest Requirements has been removed from the contract.	3/9/2016	MR

TIMBER NOTICE OF SALE

SALE NAME: BEE KEEPER

AGREEMENT NO: 30-092601

AUCTION: March 31, 2016 starting at 10:00 a.m., **COUNTY:** Clark
Pacific Cascade Region Office, Castle Rock, WA

SALE LOCATION: Sale located approximately 13 miles east of Woodland

**PRODUCTS SOLD
AND SALE AREA:**

All timber, except leave trees bounded by yellow Leave Tree Area tags, leave trees marked with blue paint, pre-existing stumps, and down timber greater than 36" in diameter bounded by the following: Timber Sale Boundary tags, pink flagging, reprod, the GM-3000, and private property marked with blazes, carsonite posts and pink flagging in Unit 1; and Timber Sale Boundary tags, pink flagging, Spur A, and private property marked with blazes, carsonite posts and pink flagging in Unit 2 on part(s) of Sections 6 all in Township 5 North, Range 3 East, Sections 1 and 12 all in Township 5 North, Range 2 East, W.M., containing 47 acres, more or less.

CERTIFICATION: This sale is certified under the Sustainable Forestry Initiative® program Standard (cert no: BV-SFIS-US09000572)

ESTIMATED SALE VOLUMES AND QUALITY:

Species	Avg DBH	Ring Count	Total MBF	MBF by Grade								
				1P	2P	3P	SM	1S	2S	3S	4S	UT
Douglas fir	22.1	7	1,747				89		1,267	319	67	5
Hemlock	17.5	7	291				21		179	67	21	3
Red alder	14.3		133						27	20	83	3
Maple	18.6		36					10	10	4	4	8
Sale Total			2,207									

MINIMUM BID: \$588,000.00 **BID METHOD:** Sealed Bids

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

EXPIRATION DATE: October 31, 2017 **ALLOCATION:** Export Restricted

BID DEPOSIT: \$58,800.00 or Bid Bond. Said deposit shall constitute an opening bid at the appraised price.

HARVEST METHOD: Forwarder, Track skidder and Shovel. The sale is estimated to be 100% ground based yarding. Ground based equipment is limited to slopes 40% or less and dry soil conditions. Ground Based Yarding will not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator. No logging operations or hauling of forest products shall take place on any weekends, State recognized holidays, or from 7 p.m. to 7 a.m. on weekdays.

ROADS: 24.48 stations of optional construction. 94.00 stations of required pre-haul maintenance. Rock used in accordance with the quantities in the ROCK LIST under this contract may be obtained at no cost to the Purchaser from the GM-1200 Pit located in Section 31, Township 06 North, Range 03 East, W.M. Rock for this sale may be obtained from any commercial pit at the Purchaser's expense. Rock Sources will be subject to written approval by the Contract Administrator before their use. See road plan for additional requirements on the NE Cedar Mist Rd stations 0+00 to 14+50. Dust abatement is

TIMBER NOTICE OF SALE

required on the Cedar Mist Road. Road construction will not be permitted from September 30 to May 1 unless authorized in writing by the Contract Administrator. The hauling of forest products will not be permitted from September 30 to June 1 unless authorized in writing by the Contract Administrator on the GM-1000, GM-1100, GM-1010, GM-1200, GM-3000, GM-3000C, GM-3000C4, GM 3000H1, and Spur A roads

ACREAGE DETERMINATION

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

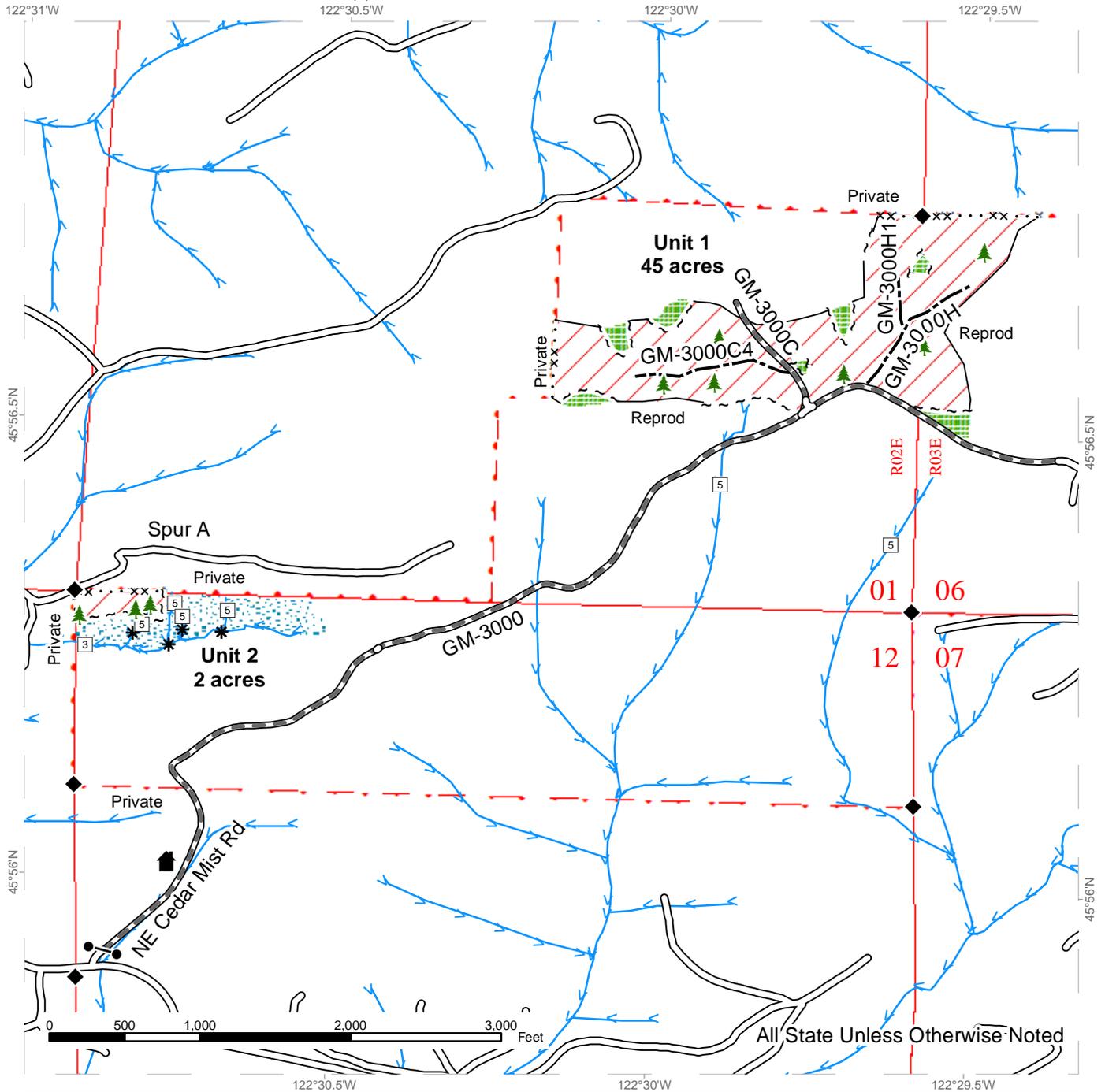
FEES: Purchaser is required to pay \$900.00 to Rashford Tree Farms and Investment Company within 30 days after the timber sale contract has been enacted for a road use permit. \$39,174.00 is due on day of sale. \$9.00 per MBF is due upon removal. These are in addition to the bid price.

SPECIAL REMARKS: This sale contains an estimated 665 mbf of higher quality DF and WH saw logs, derived from the cruise. See driving map for gate locations. Purchasers will need a PCP 1-1 gate key. Gate keys are available at the Pacific Cascade Region office. Dust abatement is required on the Cedar Mist Road. There is a 10 mph speed limit on the Cedar Mist Road from Station 0+00 to 14+50. Purchaser's responsible to identify any existing utilities and for all notification, including "call before you dig", and liabilities associated with the utilities and their rights-of-way.

TIMBER SALE MAP

SALE NAME: BEE KEEPER
AGREEMENT #: 92601
TOWNSHIP(S): T05R02E, T05R03E
TRUST(S): State Forest Transfer(1)

REGION: Pacific Cascade Region
COUNTY(S): CLARK
ELEVATION RGE: 658-1264

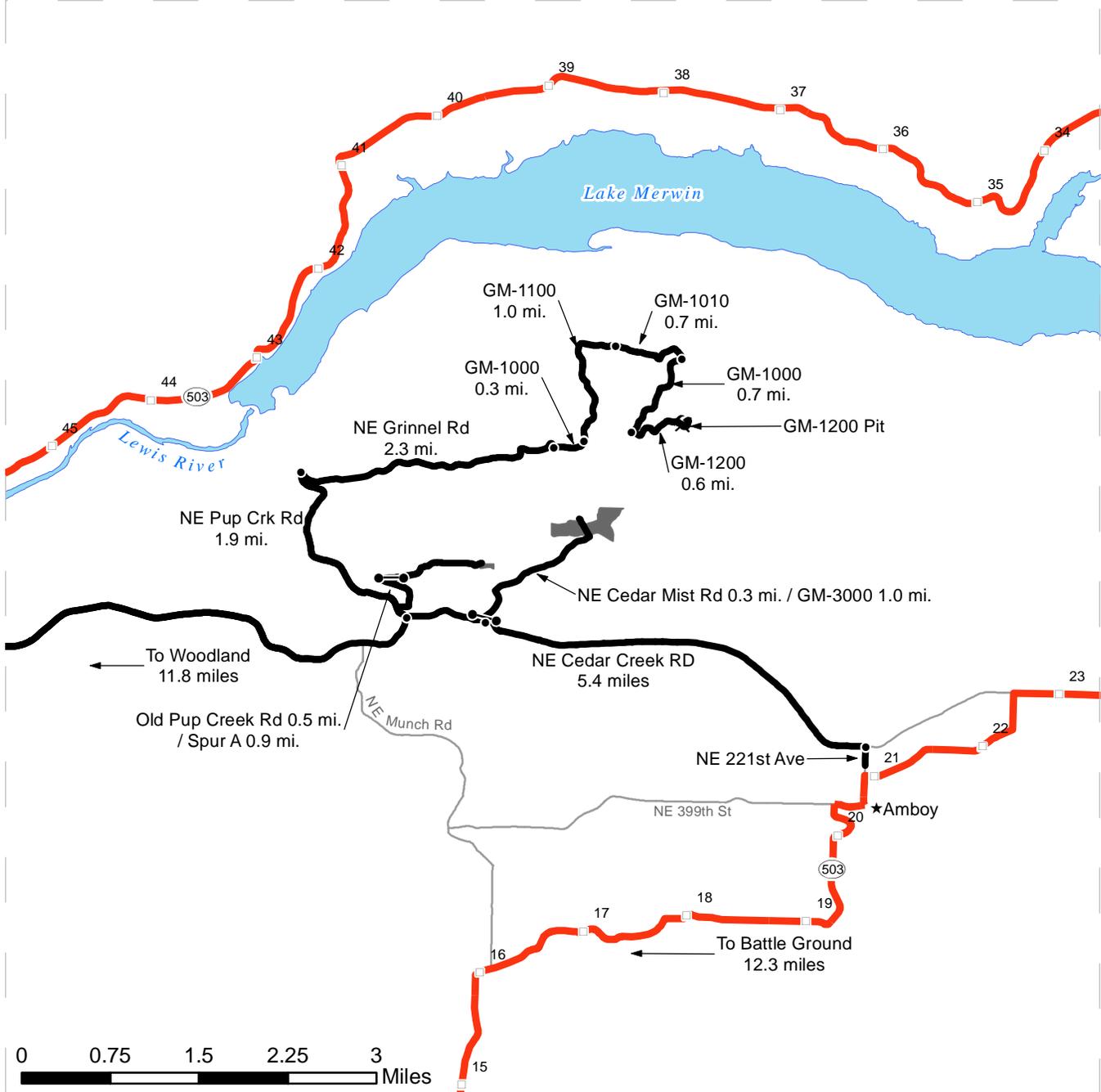


Variable Retention Harvest	Sale Boundary Tags	Streams
Leave Tree Area	Leave Tree Tags	Stream Type
Riparian Mgt Zone	Pink Flagging	Stream Type Break
Existing Roads	Reprod	Monumented Corners
Required Pre-Haul Maintenance	Property Line	Leave Trees
Optional Construction		Structure
		Gate (PCP 1-1)

DRIVING MAP

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REGION: Pacific Cascade Region
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	Timber Sale Unit
	Highways
	Haul Route
	Other Route
	Milepost Markers
	Distance Indicator
	Gate
	Existing Rock Pit

DRIVING DIRECTIONS:

From SR-503 (Milepost 54) turn south onto E CC Street and cross the Lewis River. Stay to the left onto NW Hayes/NE Cedar Creek and follow for 11.8 miles.

Unit 1: Stay on NW Cedar Creek RD and follow for 1.0 miles
 Turn left (north) onto NE Cedar Mist RD. In 0.3 miles NE Cedar Mist turns into the GM-3000. Follow for 1.0 miles to Unit 1.

Unit 2: Turn left (North) onto NE Pup Creek RD and follow for 0.1 miles.
 Turn right (east) onto Old Pup Creek RD and follow for 0.5 miles to gate. Continue past the gate, road turns to gravel and becomes Spur A. Follow for 0.9 miles to Unit 2.



**STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES**

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

Export Restricted Lump Sum AGREEMENT NO. 30-092601

SALE NAME: BEE KEEPER

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

Section G: General Terms

G-001 Definitions

The following definitions apply throughout this contract;

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

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

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

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

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

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

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

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

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

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

G-011 Right to Remove Forest Products and Contract Area

Purchaser was the successful bidder on March 31, 2016 and the sale was confirmed on _____. The State, as owner, agrees to sell to Purchaser, and Purchaser agrees to purchase as much of the following forest products as can be cut and removed during the term of this contract: All timber, except leave trees bounded by yellow Leave Tree Area tags, leave trees marked with blue paint, pre-existing stumps, and down timber greater than 36" in diameter bounded by the following: Timber Sale Boundary tags, pink flagging, reprod, the GM-3000, and private property marked with blazes, carsonite posts and pink flagging in Unit 1; and Timber Sale Boundary tags, pink flagging, Spur A, and private property marked with blazes, carsonite posts and pink flagging in Unit 2, located on approximately 47 acres on part(s) of Section 6 in Township 5 North, Range 3 East, Sections 1, and 12 all in Township 5 North, Range 2 East W.M. in Clark County(s) as designated on the sale area and as shown on the attached timber sale map.

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

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

G-020 Inspection By Purchaser

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

G-031 Contract Term

Purchaser shall complete all work required by this contract prior to October 31, 2017.

G-040 Contract Term Adjustment - No Payment

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

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

G-051 Contract Term Extension - Payment

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

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

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

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

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

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

- e. Payment of \$856.00 per acre per annum for the acres on which an operating release has not been issued sale area.
- f. In no event will the extension charge be less than \$200.00.
- g. Extension payments are non-refundable.

G-053 Surveys - Sensitive, Threatened, Endangered Species

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

G-060 Exclusion of Warranties

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

- a. The MERCHANTABILITY of the forest products. The use of the term "merchantable" in any document is not intended to vary the foregoing.
- b. The CONDITION of the forest products. The forest products will be conveyed "AS IS."
- c. The ACREAGE contained within any sale area. Any acreage descriptions appearing in the timber notice of sale, timber sale contract, or other documents are estimates only, provided solely for administrative and identification purposes.
- d. The VOLUME, QUALITY, OR GRADE of the forest products. The State neither warrants nor limits the amount of timber to be harvested. The descriptions of the forest products to be conveyed are estimates only, made solely for administrative and identification purposes.
- e. The CORRECTNESS OF ANY SOIL OR SURFACE CONDITIONS, PRE-SALE CONSTRUCTION APPRAISALS, INVESTIGATIONS, AND ALL OTHER PRE-BID DOCUMENTS PREPARED BY OR FOR THE STATE. These documents have been prepared for the State's appraisal purposes only.
- f. THAT THE SALE AREA IS FREE FROM THREATENED OR ENDANGERED SPECIES or their habitat. The State is not responsible for any interference with forestry operations that result from the presence of any

threatened or endangered species, or the presence of their habitat, within the sale area.

- g. THAT THE FORESTRY OPERATIONS to be performed under this contract WILL BE FREE FROM REGULATORY ACTIONS by governmental agencies. The State is not responsible for actions to enforce regulatory laws, such as the Washington Forest Practices Act (chapter 76.09 RCW), taken by the Department of Natural Resources or any other agency that may affect the operability of this timber sale.
- h. Items contained in any other documents prepared for or by the State.

G-062 Habitat Conservation Plan

The State has entered into a Habitat Conservation Plan (HCP) with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service (the Services) to address state trust land management issues relating to compliance with the Federal Endangered Species Act. The activities to be carried out under this contract are located within the State's HCP area and are subject to the terms and conditions of the HCP, and the Services' Incidental Take Permit Nos. 812521 and 1168 (collectively referred to as ITP), or as amended hereafter by the Services. The ITP authorizes the incidental take of certain federally listed threatened and endangered species, as specified in the ITP conditions. All HCP materials, including the ITP, are available for review at the State's Regional Offices and the administrative headquarters in Olympia, Washington.

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

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

G-063 Incidental Take Permit Notification Requirements

- a. Purchaser shall immediately notify the Contract Administrator of new locations of permit species covered by the Incidental Take Permits (ITP) that are discovered within the area covered by the State's Habitat Conservation Plan (HCP), including, but not limited to: locations of occupied murrelet habitat; spotted owl nest sites; wolves; grizzly bears; nests, communal roosts, or feeding concentrations of bald eagles; peregrine falcon nests; Columbian white-tailed deer; Aleutian Canada geese; Oregon silverspot butterflies; and additional stream reaches found to contain bull trout. Purchaser is required to

notify the Contract Administrator upon discovery of any fish species found in streams or bodies of water classified as non-fish bearing. In all circumstances, notification must occur within a 24 hour time period.

- b. Upon locating any live, dead, injured, or sick specimens of any permit species covered by the ITP, Purchaser shall immediately notify the Contract Administrator. Purchaser shall notify the Contract Administrator if there is any doubt as to the identification of a discovered permit species. Purchaser may be required to take certain actions to help the Contract Administrator safeguard the well-being of any live, injured or sick specimens of any permit species discovered, until the proper disposition of such specimens can be determined by the Contract Administrator. Any such requirements will be explained to Purchaser by the Contract Administrator during the Pre-Work Conference. In all circumstances, notification must occur within a 24 hour time period.
- c. Purchaser shall refer to a specific ITP number, PRT-812521 or ITP 1168 (copies which are located in the region office) in all correspondence and reports concerning permit activities.
- d. Provisions and requirements of the ITP shall be clearly presented and explained to Purchaser by Contract Administrator during the Pre-Work Conference as per contract clause G-330. All applicable provisions of the ITP and this schedule must be presented and clearly explained by Purchaser to all authorized officers, employees, contractors, or agents of Purchaser conducting authorized activities in the timber sale area. Any questions Purchaser may have about the ITP should be directed to the Contract Administrator.

G-064 Permits

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

G-065 Regulatory Disclaimer

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

G-066 Governmental Regulatory Actions

a. Risk

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

Purchaser shall remain responsible for payment of the total contract price notwithstanding the impracticability or frustration.

b. Sale Area

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

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

c. Adjustment of Price

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

G-070 Limitation on Damage

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

G-080 Scope of State Advice

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

G-091 Sale Area Adjustment

The Parties may agree to adjustments in the sale area boundary. The cumulative changes to the sale area during the term of the contract shall not exceed more than four percent of the original sale area. If the sale area is increased, the added forest products become a part of this contract. The State shall determine the volume added and shall calculate the increase to the total contract price using the rates set forth in clause G-101, G-102, or G-103. If the sale area is reduced, the State shall determine the volume to be reduced. The State shall calculate the reduction to the total contract price using the rates set forth in clause G-101, G-102, or G-103.

G-101 Forest Products Not Designated

Any forest products not designated for removal, which must be removed in the course of operations authorized by the State, shall be approved and designated by the Contract Administrator. Added forest products become a part of this contract and the Scribner log scale volume, as defined by the Northwest Log Rules Advisory Group, shall be determined by the Contract Administrator. Added forest products shall be paid for at the following contract payment rates per Mbf Scribner log scale.

The pricing schedule has not been set for the sale.

G-106 Adding Naturally Damaged Forest Products

Any forest products not designated for removal that are seriously damaged by disease, insects or wind, or that may contribute seriously to the spread of insect or disease damage may be added to this sale by the State's Contract Administrator. Additions must be in unlogged areas of the sale and added volume shall not exceed an amount equal to 10 percent of the original advertised volume. Added forest products become a part of this contract and shall be paid for at the rate set forth in clause G-101, G-102 or G-103.

G-111 Title and Risk of Loss

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

G-116 Sustainable Forestry Initiative® (SFI) Certification

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

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

G-120 Responsibility for Work

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

G-121 Exceptions

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

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

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

1. Failure of (a) required improvements or roads designated in clause C-050, or (b) required or optional construction completed to the point that authorization to haul has been issued;
2. Caused by a single event from forces beyond the control of Purchaser, its employees, agents, or invitees, including independent contractors; and
3. Includes, but is not limited to natural disasters such as earthquakes, volcanic eruptions, landslides, and floods.

The repair work identified by the State shall be promptly completed by Purchaser at an agreed price. The State may elect to accomplish repairs by means of State-provided resources. The State will bear the cost to repair damages caused by a third party. In all other cases, the Purchaser shall bear responsibility for the costs as described below.

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

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

G-140 Indemnity

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

G-150 Insurance

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

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

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

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

Before starting work, Purchaser shall furnish State of Washington, Department of Natural Resources with a certificate(s) of insurance, executed by a duly authorized

representative of each insurer, showing compliance with the insurance requirements specified in the contract. Insurance coverage shall be obtained by the Purchaser prior to operations commencing and continually maintained in full force until all contract obligations have been satisfied or an operating release has been signed by the State.

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

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

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

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

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

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

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

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

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

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

Business Auto Policy (BAP). Purchaser shall maintain business auto liability and, if necessary, commercial umbrella liability insurance with a limit not less than \$1,000,000.00 per accident. Such insurance shall cover liability arising out of "Any Auto". Business auto coverage shall be written on ISO form CA 00 01, or substitute liability form providing equivalent coverage. If necessary the policy shall be endorsed to provide contractual liability coverage and cover a "covered pollution cost or expense" as provided in the 1990 or later editions of CA 00 01. Purchaser waives all rights against State for the recovery of damages to the extent they are covered by business auto liability or commercial umbrella liability insurance.

G-160 Agents

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

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

G-170 Assignment and Delegation

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

G-180 Modifications

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

G-190 Contract Complete

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

G-200 Notice

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

G-210 Violation of Contract

G-220 State Suspends Operations

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

G-210 Violation of Contract

- a. If Purchaser violates any provision of this contract, the Contract Administrator, by written notice, may suspend those operations in violation. If the violation is capable of being remedied, Purchaser has 30 days after receipt of a suspension notice to remedy the violation. If the violation cannot be remedied (such as a violation of WAC 240-15-015) or Purchaser fails to remedy the violation within 30 days after receipt of a suspension notice, the State may terminate the rights of Purchaser under this contract and collect damages.
- b. If the contract expires pursuant to clause G-030 or G-031 without Purchaser having performed all its duties under this contract, Purchaser's right to operate is terminated and Purchaser shall not have the right to remedy the breach. This provision shall not relieve Purchaser of any payment obligations.
- c. The State has the right to remedy the breach in the absence of any indicated attempt by Purchaser or if Purchaser is unable, as determined by the State, to

remedy the breach. Any expense incurred by the State shall be charged to Purchaser and shall be paid within 30 days of receipt of billing.

- d. If Purchaser's violation is a result of a failure to make a payment when due, in addition to a. and b. above, interest shall accrue on the unpaid balance at 12 percent per annum, beginning the date payment was due.

G-220 State Suspends Operation

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

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

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

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

G-230 Unauthorized Activity

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

G-240 Dispute Resolution

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

- a. In the event of a dispute, Purchaser must make a written request to the Region Manager for resolution prior to seeking other relief.
- b. The Region Manager will issue a written decision on Purchaser's request within ten business days.

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

G-250 Compliance with All Laws

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

G-260 Venue

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

G-270 Equipment Left on State Land

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

G-280 Operating Release

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

G-310 Road Use Authorization

Purchaser is authorized to use the following State roads and roads for which the State has acquired easements and road use permits; GM-1000, GM-1100, GM-1010, GM-1200, GM-3000, GM-3000C, GM-3000C4, GM-3000H, GM-3000H1, Spur A. The State may authorize in writing the use of other roads subject to fees, restrictions, and prior rights.

G-330 Pre-work Conference

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

G-340 Preservation of Markers

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

G-360 Road Use Reservation

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

G-380 Road Easement and Road Use Permit Requirements

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

Road Use Permit between the STATE and Sierra Pacific dated 10/1/2015 and terminating on 10/31/2018.

Road Use Permit between the STATE and Rashford Tree Farms and Investment Company dated 03/01/2015 and terminating on 12/31/2018.

G-430 Open Fires

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

G-450 Encumbrances

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

Easement, including the terms and provisions thereof,
For: Land Use License
In Favor of: Bonneville Power Administration
Disclosed by Application No.: 50-092156

Granted: 1/1/2015
Expires: 12/31/2016

Section P: Payments and Securities

P-011 Initial Deposit

Purchaser paid DATA MISSING initial deposit, which will be maintained pursuant to RCW 79.15.100(3). If the operating authority on this contract expires without Purchaser's payment of the full amount specified in Clause P-020, the initial deposit will be immediately forfeited to the State, and will be offset against Purchaser's remaining balance due. Any excess initial deposit funds not needed to ensure full payment of the contract price, or not needed to complete any remaining obligations of the Purchaser existing after contract expiration, will be refunded to the Purchaser.

P-020 Payment for Forest Products

Purchaser agrees to pay the total, lump sum contract price of \$59,037.00. The total contract price consists of a \$0.00 contract bid price plus \$59,037.00 in fees. Fees collected shall be retained by the state unless the contract is adjusted via the G-066 clause. Purchaser shall be liable for the entire purchase price, and will not be entitled to any refunds or offsets unless expressly stated in this contract.

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

P-045 Guarantee of Payment

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

P-050 Billing Procedure

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

P-080 Payment Account Refund

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

P-090 Performance Security

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

P-100 Performance Security Reduction

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

Section H: Harvesting Operations

H-010 Cutting and Yarding Schedule

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

H-013 Reserve Tree Damage Definition

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

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

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

If the Contract Administrator determines that a reserve tree has been cut or damaged, the Purchaser shall provide a replacement reserve tree of like condition, size, and

species within the sale area, as approved by the Contract Administrator. Purchaser may be required to pay liquidated damages for Excessive Reserve Tree Damage as detailed in clause D-041.

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

H-016 Skid Trail Requirements

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

Purchaser shall comply with the following during the yarding operation:

- a. A skid trail will not exceed 14 feet in width, including rub trees.
- b. Skid trails shall not cover more than 10 percent of the total acreage on one unit.
- c. Location of the skid trails must be marked by Purchaser and approved by the Contract Administrator.
- d. Except for rub trees, skid trails shall be felled and yarded prior to the felling of adjacent timber.
- e. Rub trees shall be left standing until all timber tributary to the skid trail has been removed.
- f. Excessive soil damage is not permitted. Excessive soil damage is described in clause H-017.
- g. Purchaser will not have more than two skid trails open to active skidding at any one time. All other skid trails used for skidding timber will be closed.
- h. Once a skid trail is closed, Purchaser will not reopen a skid trail unless approved in writing by the Contract Administrator.
- i. Skid trails will be water barred at the time of completion of yarding, if required by the Contract Administrator.

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

H-017 Preventing Excessive Soil Disturbance

Operations may be suspended when soil rutting exceeds 8 inches as measured from the natural ground line. To reduce soil damage, the Contract Administrator may require water bars to be constructed, grass seed to be placed on exposed soils, or other

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

H-035 Fall Trees Into Sale Area

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

H-051 Branding and Painting

Purchaser shall provide a State of Washington registered log brand, acceptable to the State, unless the State agrees to furnish the brand. All purchased timber shall be branded in a manner that meets the requirements of WAC 240-15-030(2)(a)(i). All timber purchased under a contract designated as export restricted shall also be painted in a manner that meets the requirements of WAC 240-15-030(2)(a)(ii).

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

H-120 Harvesting Equipment

Forest products sold under this contract shall be harvested using ground based systems: shovel, forwarder, and tracked skidder unless authority to use other equipment is granted in writing by the State.

H-125 Log Suspension Requirements

Lead-end suspension is required for all yarding activities.

H-130 Hauling Schedule

The hauling of forest products will not be permitted on the GM-1000, GM-1100, GM-1010, GM-1200, GM-3000, GM-3000C, GM-3000C4, GM 3000H1, and Spur A roads from September 30 to June 1 unless authorized in writing by the Contract Administrator .

H-140 Special Harvest Requirements

Purchaser shall accomplish the following during the harvest operations:

The use of unmuffled “jake brakes” will not be permitted on site. Specific location: NE Cedar Mist RD stations 0+00 to 14+50.

Ground based yarding equipment will not be permitted on slopes over 40%.

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

No logging operations or hauling of forest products shall take place on any weekends, State recognized holidays, or from 7 p.m. to 7 a.m. on weekdays.

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

H-190 Completion of Settings

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

H-220 Protection of Residual or Adjacent Trees

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

H-230 Tops and Limbs Outside the Sale Boundary

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

H-250 Additional Falling Requirements

Within all units, all live stems of hardwood species greater than 2 inches DBH or over 10 feet tall, shall be felled. Areas of young or immature timber may be excluded from this requirement by the Contract Administrator.

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

Road construction and associated work provisions of the Road Plan for this sale, dated 6/16/2015 are hereby made a part of this contract.

C-050 Purchaser Road Maintenance and Repair

Purchaser shall perform work at their own expense on the GM-3000, GM-3000C, GM-3000C4, GM-3000H, GM-3000H1, and Spur A roads. All work shall be completed to the specifications detailed in the Road Plan.

C-060 Designated Road Maintainer

If required by the State, Purchaser shall perform maintenance and replacement work as directed by the Contract Administrator on the GM-1000, GM-1100, GM-1010, and GM-1200. Purchaser shall furnish a statement in a form satisfactory to the State showing the costs incurred while performing this work. Costs shall be based on the rates set forth in the State current Equipment Rate Schedule on file at the region and Olympia offices. The State shall reimburse Purchaser for said costs within 30 days of receipt and approval of the statement.

C-090 Landing Location

Landings shall be built 50 feet off the Spur A road.

C-130 Dust Abatement

Purchaser shall abate dust on the GM-3000 from station 0+00 to 14+50.

C-140 Water Bars

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

Section S: Site Preparation and Protection

S-001 Emergency Response Plan

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

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

S-010 Fire Hazardous Conditions

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

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

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

S-030 Landing Debris Clean Up

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

S-035 Logging Debris Clean Up

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

S-040 Noxious Weed Control

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

S-050 Cessation of Operations for Low Humidity

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

S-060 Pump Truck or Pump Trailer

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

S-070 Water Supply

Purchaser shall provide, during the "closed season", a water supply with a minimum capacity of 300 gallons for rapid filling of pump trucks or trailers at a location designated by the Contract Administrator.

S-100 Stream Cleanout

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

S-120 Stream Protection

No timber shall be felled into, across, or yarded through all typed streams.

S-130 Hazardous Materials**a. Hazardous Materials and Waste - Regulatory Compliance**

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

b. Hazardous Materials Spill Prevention

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

c. Hazardous Materials Spill Containment, Control and Cleanup

If safe to do so, Purchaser shall take immediate action to contain and control all hazardous material spills. Purchaser shall ensure that enough quick response spill kits capable of absorbing 4 to 6 gallons of oil, coolant, solvent or contaminated water are available on site to quickly address potential spills

from any piece of equipment at all times throughout active operations. If large quantities of bulk fuel/other hazardous materials are stored on site, Purchaser must be able to effectively control a container leak and contain & recover a hazmat spill equal to the largest single on site storage container volume. (HAZWOPER reg. 29CFR 1910.120 (j) (1) (vii)).

d. Hazardous Material Release Reporting

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

Appropriate Department of Ecology regional office (contact information below).

DNR Contract Administrator

ECY - Northwest Region:

1-425-649-7000

(Island, King, Kitsap, San Juan, Skagit, Snohomish, and Whatcom counties)

ECY - Southwest Region:

1-360-407-6300

(Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, and Wahkiakum counties)

ECY - Central Region:

1-509-575-2490

(Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, and Yakima counties)

ECY - Eastern Region:

1-509-329-3400

(Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, and Whitman counties)

S-131 Refuse Disposal

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

Section D: Damages

D-013 Liquidated Damages or Failure to Perform

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

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

D-041 Reserve Tree Excessive Damage

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

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

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

Purchaser

Eric Wisch
Pacific Cascade Region Manager

Date: _____
Address: _____

Date: _____

CORPORATE ACKNOWLEDGEMENT

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 (specifically required by the contract) prior to haul

EXCISE TAX EXEMPT ACTIVITIES

Temporary Optional Construction: **linear feet**
Optional roads to be constructed and then abandoned

Temporary Optional Reconstruction: **linear feet**
Optional roads to be reconstructed and then abandoned

New Abandonment: **linear feet**
Abandonment of roads constructed or reconstructed under the contract

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 6/13)

PRE-CRUISE NARRATIVE

Sale Name: Bee Keeper	Region: Pacific Cascade
Agreement #: 30-092601	District: Yacolt
Contact Forester: Whitney Butler Phone / Location: 360-669-3900	County(s): Clark
Alternate Contact: Matt Binder Phone / Location: 360-749-6374	Other information: Click here to enter text.

Type of Sale: Lump Sum	
Harvest System: Ground based Click here to enter text.	100
Harvest System: Select harvest system Click here to enter text.	Click here to enter percent sale acres.
Harvest System: Select harvest system Click here to enter text.	Click here to enter percent sale acres.

UNIT ACREAGES AND METHOD OF DETERMINATION:

Unit #	Legal Description (Enter only one legal for each unit) Sec/Twp/Rng	Grant or Trust	Gross Proposal Acres	Deductions from Gross Acres (No harvest acres)				Net Harvest Acres	Acreage Determination (List method and error of closure if applicable)
				RMZ/WMZ Acres	Leave Tree Acres	Existing Road Acres	Other Acres (describe)		
1	S1/T5N/R02E & S6/T5N/R03E	01	50	0	4	<1		45	GPS (Garmin)
2	S12/T5N/R02E	01	11	9	0	0		2	GPS (Garmin)
	Enter Sec / Twp / Rng								Choose an item.
	Enter Sec / Twp / Rng								Choose an item.
	Enter Sec / Twp / Rng								Choose an item.
	Enter Sec / Twp / Rng								Choose an item.
TOTAL ACRES			61	9	4	1		47	

HARVEST PLAN AND SPECIAL CONDITIONS:

Unit #	Harvest Prescription: (Leave, take, paint color, tags, flagging etc.)	Special Management areas:	Other conditions (# leave trees, etc.)
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1 VRH	Unit 1 is bound by white "Timber Sale Boundary" tags with pink flagging, reprod, and private property. Property line between State and private is marked with blazes, carsonite posts and pink flagging. Clumped leave trees are bounded with yellow "Leave Tree Area" tags with pink flagging. Individual leave trees are marked with a ring of blue paint.	Variable Retention Harvest	Leave Tree Total = 400. There are 59 leave trees painted blue.
2 VRH	Unit 2 is bound by white "Timber Sale Boundary" tags with pink flagging, reprod, and private property. Property line between State and private is marked with blazes, carsonite posts and pink flagging. Leave trees within the unit are marked with a ring of blue paint.	Variable Retention Harvest	Leave Tree Total = 20. All 20 leave trees are painted blue.

OTHER PRE-CRUISE INFORMATION:

Unit #	Primary,secondary Species / Estimated Volume (MBF)	Access information (Gates, locks, etc.)	Photos, traverse maps required
1	1456 MBF	Unit 1 is accessed via the GM-3000 located off Cedar Mist RD. Volume is based on estimate. There is a PCP 1-1 gate at the intersection of Cedar Mist and Cedar Creek RD.	
2	125 MBF	Unit 2 is accessed via the GM-3000 located off Cedar Mist RD. Volume is based on estimate. There is a PCP 1-1 gate at the intersection of Cedar Mist and Cedar Creek RD.	
TOTAL MBF	1581 MBF		

REMARKS:

To reach Unit 2 cruisers will have to walk in from the GM-3000 road west approximately 10 minutes to
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reach the unit.

Prepared By: Whitney Butler Date:	Title: Natural Resource Specialist 1	CC:
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Cruise Narrative

Sale Name: Bee Keeper	Region: Pacific Cascade
App. #: 30-092601	District: Yacolt
Lead Cruiser: Bryce Frank	Completion date: 10-19-2015
Other Cruisers: Calvin Bailey, Eric Carlson	

Unit acreage specifications:

Unit #	Cruised acres	Cruised acres agree with sale acres? Yes/No	If acres do not agree explain why.
1	45	Yes	
2	2	Yes	
Total	47	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 (Cru./Tally)	Total number of plots
1	VP	46.94	4.5 ft	180' x 180'	1:1	60
2	VP	46.94	4.5 ft	152' x 152'	1:1	4

Sale/Cruise Description:

Minor species cruise intensity:	Cruised on appropriate plots.						
Minimum cruise spec:	40% Of Form- Factor at 16 feet D.O.B or 5 inch Top, and merchantable top.						
Avg. ring count by sp:	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid black;">DF =</td> <td style="border: 1px solid black; text-align: center;">7</td> <td style="border: 1px solid black;">WH =</td> <td style="border: 1px solid black; text-align: center;">7</td> <td style="border: 1px solid black;">SS =</td> <td style="border: 1px solid black; text-align: center;">n/a</td> </tr> </table>	DF =	7	WH =	7	SS =	n/a
DF =	7	WH =	7	SS =	n/a		
Leave/take tree description:	Leave tree clumps are bounded with yellow "Leave Tree Area" tags and pink flagging, individual leave trees are marked with a single band of blue paint.						
Sort Description:	<p>HA – 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>HB – 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>R – Logs meeting the following criteria: Gross diameter of 12 inches or greater, excessive knots greater than 2 ½ inches with recovery less than 65% of the net scale.</p>						
Status Description:	<p>P – Logs classified as pole volume.</p> <p>D – Logs classified as merchantable standing dead.</p>						

Field observations:

Bee Keeper consists of 2 VRH units in total. Units 1 is 45 acres and Unit 2 consists of 2 acres. 100% of these units will be ground-based harvest.

Units 1 is located above the GM-3000 to the north and east, consisting of mainly Douglas-fir (DF) at 77% merchantable volume, followed by Western Hemlock (WH) at 14%. Medium sized Red Alder and Bigleaf Maple exist in small amounts. The DF is large in diameter at 22 inches and tall, with an average bole height of 93 ft. There is a significant amount of high quality B in both DF and WH. Defect is at 3.6% and is composed of spike knots at 38 ft, sweep, and split tops. This unit has an average per-acre net volume of 45,180 bdf and a total volume of 2,033 mbf.

Unit 2 is a small 2 acre unit located north of the GM-3000, it is vastly different consisting mainly of DF (small Red Alder was present but not picked up in the cruise). Average diameter is 28 inches and average bole length was very tall at 130 ft. Defect was similar to unit one but not as prevalent. There was also a significant amount of Special Mill at 13%. 173 mbf was present on this unit.

Access to unit 1 is adequate using the GM-3000 and 3000C. Access to unit 2 is currently limited due to a locked gate on Spur A off the Old Pup Creek Rd. It can still be accessed by foot either from the locked gate or by hiking north off the GM-3000.

Grants:01**Prepared by: Bryce Frank****Title: Timber Cruiser**

TC		PSPCSTGR		Species, Sort Grade - Board Foot Volumes (Project)																	
T05N R02E S01 Ty00U1 45.00 T05N R02E S01 Ty00U2 2.00				Project: BEEKEEPE Acres 47.00										Page 1 Date 10/19/2015 Time 9:00:00AM							
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					
DF	CU	CU			100.0	26											1	11		0.00	24.6
DF	HA	2S				137	137	6			100				100		40	13	240	1.45	.6
DF	HB	2S		26	1.8	9,874	9,696	456			34	66			100		40	16	407	2.17	23.8
DF	HB	3S		6	1.6	2,451	2,411	113		100				10	90		39	9	125	0.82	19.3
DF	D	SM		6	.7	1,903	1,890	89				100			100		40	21	749	3.32	2.5
DF	D	2S		46	4.5	17,941	17,137	805			24	76		1	1	2	39	17	462	2.59	37.1
DF	D	3S		11	1.9	4,406	4,323	203	22	78				1	7	17	36	9	98	0.75	44.1
DF	D	4S		4	1.0	1,435	1,421	67	90	10				29	27	15	26	6	31	0.31	46.4
DF	D	UT				116	116	5	40	60				63	17	20	18	7	31	0.49	3.7
DF	RO	3S		1	11.0	45	40	2			100				57	43	32	13	183	1.89	.2
DF Totals				79	3.0	38,333	37,170	1,747	6	16	20	57	2	2	4	92	31	11	184	1.36	202.3
WH	CU	CU															1	9		0.00	12.7
WH	HA	2S		2		159	159	7			100				100		40	12	200	1.18	.8
WH	HA	3S		3		158	158	7		100					100		40	9	120	0.76	1.3
WH	HB	2S		18	3.4	1,202	1,161	55			57	43			100		40	14	321	1.87	3.6
WH	HB	3S		8	1.8	450	442	21		100					100		40	10	133	0.74	3.3
WH	D	SM		7		456	456	21				100			100		40	21	763	3.47	.6
WH	D	2S		40	10.2	2,768	2,485	117			29	71		1		99	40	17	481	2.66	5.2
WH	D	3S		13	3.8	839	807	38	21	79				8	12	79	38	8	88	0.73	9.1
WH	D	4S		8	.7	458	455	21	97	3				6	15	45	32	5	34	0.30	13.3
WH	D	UT		1		60	60	3	77	23				23	77		25	6	35	0.31	1.7
WH Totals				13	5.6	6,550	6,184	291	11	20	25	44	1	3	5	91	28	9	120	1.03	51.7
RA	CU	CU															2	8		0.00	5.6
RA	D	UT		2		66	66	3	73	27				68	32		14	6	15	0.34	4.3
RA	D	2S		20	1.7	591	582	27			100			11	15	18	30	14	216	1.75	2.7
RA	D	3S		15	3.4	434	419	20		100						100	40	10	145	1.22	2.9
RA	D	4S		31	2.4	885	864	41		100					37	63	37	8	91	0.75	9.4
RA	D	4S		32	.5	905	900	42	100					15	14	18	30	5	39	0.39	23.2
RA Totals				6	1.8	2,881	2,831	133	33	46	21		9	8	21	63	27	7	59	0.64	48.1
BM	CU	CU			100.0	56											9	10		0.00	5.8
BM	D	UT		22		170	170	8	8	50		43		68	8	25	20	11	92	1.22	1.8
BM	D	1S		28	3.8	224	215	10			100			100			17	18	208	2.42	1.0
BM	D	2S		28	6.2	229	215	10			100			24		22	28	13	173	1.71	1.2
BM	D	3S		11		78	78	4			100				100		24	13	150	1.45	.5
BM	D	4S		6		47	47	2		100				100			18	8	30	0.50	1.6
BM	D	4S		5	12.4	42	37	2	100						42	58	26	7	39	0.72	1.0
BM Totals				2	9.9	847	763	36	7	17	38	38	56	14	9	20	16	11	59	0.94	12.9
Totals					3.4	48,611	46,948	2,207	8	18	21	52	3	3	5	89	29	10	149	1.19	315.1

TC PSTATS					PROJECT STATISTICS					PAGE	1	
					PROJECT BEEKEEPER					DATE	10/19/2015	
TWP	RGE	SC	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt		
05N	02E	01	BEEKEEPER	00U1	47.00		64	360	S	W		
05N	02E	01	BEEKEEPER	00U2								
					TREES	ESTIMATED	PERCENT					
					PER PLOT	TOTAL	SAMPLE					
					PLOTS	TREES	TREES	TREES				
TOTAL			64	360	5.6							
CRUISE			36	195	5.4	5,773		3.4				
DBH COUNT												
REFOREST												
COUNT			26	146	5.6							
BLANKS			2									
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			140	71.8	22.1	95	40.6	191.0	38,333	37,170	8,432	8,424
WHEMLOCK			25	21.0	17.5	84	8.4	35.2	6,550	6,184	1,467	1,467
R ALDER			22	25.7	14.3	57	7.5	28.5	2,881	2,831	832	831
BL MAPLE			8	4.4	18.6	53	1.9	8.2	847	763	210	196
TOTAL			<i>195</i>	<i>122.8</i>	<i>19.8</i>	<i>84</i>	<i>59.1</i>	<i>262.9</i>	<i>48,611</i>	<i>46,948</i>	<i>10,940</i>	<i>10,919</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	10	15			
DOUG FIR		71.2	6.1	868	924	980						
WHEMLOCK		87.3	17.8	552	671	791						
R ALDER		69.8	15.2	121	143	164						
BL MAPLE		59.9	22.6	196	253	309						
TOTAL		<i>84.5</i>	<i>6.1</i>	<i>728</i>	<i>775</i>	<i>822</i>	<i>285</i>	<i>71</i>	<i>32</i>			
CL	68.1	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		62.9	5.3	189	200	210						
WHEMLOCK		81.7	16.7	127	153	178						
R ALDER		56.5	12.3	37	42	47						
BL MAPLE		55.4	20.9	50	64	77						
TOTAL		<i>75.2</i>	<i>5.4</i>	<i>161</i>	<i>170</i>	<i>179</i>	<i>226</i>	<i>56</i>	<i>25</i>			
CL	68.1	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		84.8	10.6	64	72	79						
WHEMLOCK		216.0	27.0	15	21	27						
R ALDER		211.5	26.4	19	26	32						
BL MAPLE		275.0	34.3	3	4	6						
TOTAL		<i>49.9</i>	<i>6.2</i>	<i>115</i>	<i>123</i>	<i>130</i>	<i>99</i>	<i>25</i>	<i>11</i>			
CL	68.1	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		69.3	8.7	174	191	208						
WHEMLOCK		227.9	28.5	25	35	45						
R ALDER		196.1	24.5	21	28	35						
BL MAPLE		244.3	30.5	6	8	11						
TOTAL		<i>42.2</i>	<i>5.3</i>	<i>249</i>	<i>263</i>	<i>277</i>	<i>71</i>	<i>18</i>	<i>8</i>			
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.			
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15			
DOUG FIR		74.4	9.3	33,718	37,170	40,623						
WHEMLOCK		251.3	31.4	4,243	6,184	8,125						
R ALDER		189.3	23.6	2,161	2,831	3,500						
BL MAPLE		270.2	33.7	505	763	1,020						

PROJECT STATISTICS**PROJECT BEEKEEPE**

DATE 10/19/2015

TWP	RGE	SC	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt
05N	02E	01	BEEKEEPER	00U1	47.00	64	360	S	W
05N	02E	01	BEEKEEPER	00U2					
CL	68.1	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.00	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15
TOTAL		55.2	6.9	43,712	46,948	50,184	122	30	14
CL	68.1	COEFF	NET CUFT FT/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR		71.5	8.9	7,672	8,424	9,176			
WHEMLOCK		242.0	30.2	1,023	1,467	1,910			
R ALDER		192.1	24.0	632	831	1,031			
BL MAPLE		264.3	33.0	131	196	261			
TOTAL		49.8	6.2	10,239	10,919	11,598	99	25	11
CL	68.1	COEFF	V_BAR/ACRE				# OF PLOTS REQ.		INF. POP.
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15
DOUG FIR				177	195	213			
WHEMLOCK		170.4	21.3	121	176	231			
R ALDER		123.0	15.4	76	99	123			
BL MAPLE		238.5	29.8	61	93	124			
TOTAL		55.2	6.9	166	179	191	122	30	14

T TSPCSTGR		Species, Sort Grade - Board Foot Volumes (Type)										Page 1								
		Project: BEEKEEPE										Date 10/19/2015								
												Time 9:00:01AM								
T05N R02E S01 T00U1										T05N R02E S01 T00U1										
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt											
05N	02E	01	BEEKEEPER	00U1	45.00	60	183	S	W											
S Sp	So T	Gr rt	%	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	Dia	Bd		CF/ Lf
								5-7	8-11	12-15	16+	12-20	21-30	31-35	36-99	Ft	In	Ft		
DF	CU	CU		100.0	22											1	10		0.00	24.2
DF	HB	2S	23	2.0	8,212	8,049	362		41	59				100		40	15	376	2.06	21.4
DF	HB	3S	6	1.7	2,393	2,351	106	100					11	89		39	9	124	0.83	18.9
DF	DM	SM	5	.9	1,511	1,499	67			100				100		40	21	801	3.56	1.9
DF	DM	2S	49	4.5	18,012	17,206	774		23	77		1	1	2	96	39	17	463	2.60	37.2
DF	DM	3S	12	2.0	4,386	4,300	194	22	78			1	7	18	73	36	9	97	0.75	44.3
DF	DM	4S	4	.9	1,443	1,430	64	92	8			28	27	15	30	27	6	31	0.31	46.3
DF	DM	UT			110	110	5	44	56			59	18	22		19	7	32	0.49	3.4
DF	RO	3S	1		24	24	1		100				100			27	15	240	2.18	.1
DF	Totals		77	3.2	36,114	34,968	1,574	7	17	21	56	2	3	4	91	31	11	177	1.33	197.7
WH	CU	CU														1	9		0.00	13.3
WH	HA	2S	2		166	166	7		100					100		40	12	200	1.18	.8
WH	HA	3S	3		165	165	7	100						100		40	9	120	0.76	1.4
WH	HB	2S	18	3.4	1,255	1,213	55		57	43				100		40	14	321	1.87	3.8
WH	HB	3S	8	1.8	470	461	21	100						100		40	10	133	0.74	3.5
WH	DM	SM	7		476	476	21			100				100		40	21	763	3.47	.6
WH	DM	2S	40	10.2	2,891	2,596	117		29	71		1		99		40	17	481	2.66	5.4
WH	DM	3S	13	3.8	876	843	38	21	79				8	12	79	38	8	88	0.73	9.5
WH	DM	4S	8	.7	479	476	21	97	3			6	15	45	34	32	5	34	0.30	13.9
WH	DM	UT	1		62	62	3	77	23			23	77			25	6	35	0.31	1.8
WH	Totals		14	5.6	6,841	6,459	291	11	20	25	44	1	3	5	91	28	9	120	1.03	54.0
RA	CU	CU														2	8		0.00	5.8
RA	DM	UT	2		69	69	3	73	27			68	32			14	6	15	0.34	4.5
RA	DM	2S	20	1.7	618	608	27		100			11	15	18	56	30	14	216	1.75	2.8
RA	DM	3S	15	3.4	453	438	20	100						100		40	10	145	1.22	3.0
RA	DM	4S	31	2.4	925	903	41	100						37	63	37	8	91	0.75	9.9
RA	DM	4S	32	.5	945	940	42	100				15	14	18	53	30	5	39	0.39	24.2
RA	Totals		7	1.8	3,009	2,956	133	33	46	21		9	8	21	63	27	7	59	0.64	50.3
BM	CU	CU		100.0	59											9	10		0.00	6.0
BM	DM	UT	22		178	178	8	8	50	43		68	8	25		20	11	92	1.22	1.9
BM	DM	1S	28	3.8	234	225	10		100			100				17	18	208	2.42	1.1
BM	DM	2S	28	6.2	239	225	10		100			24		22	53	28	13	173	1.71	1.3
BM	DM	3S	11		82	82	4		100				100			24	13	150	1.45	.5
BM	DM	4S	6		49	49	2	100				100				18	8	30	0.50	1.6
BM	DM	4S	5	12.4	44	39	2	100					42	58		26	7	39	0.72	1.0
BM	Totals		2	9.9	885	797	36	7	17	38	38	56	14	9	20	16	11	59	0.94	13.5
Type Totals				3.6	46,849	45,180	2,033	9	19	22	50	3	3	6	88	29	10	143	1.16	315.5

T05N R02E S01 T00U2										T05N R02E S01 T00U2				
Twp	Rge	Sec	Tract	Type	Acres	Plots	Sample Trees	CuFt	BdFt					
05N	02E	01	BEEKEEPER	00U2	2.00	4	12	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		CU	CU		100.0	115												3	22		0.00	32.4
DF		HA	2S	3		3,218	3,218	6			100							40	13	240	1.45	13.4
DF		HB	2S	54	1.1	47,277	46,740	93			10	90						40	18	598	2.82	78.2
DF		HB	3S	4		3,759	3,759	8		100								40	9	133	0.67	28.4
DF		DM	SM	13		10,707	10,707	21				100						40	19	620	2.73	17.3
DF		DM	2S	18	4.4	16,322	15,602	31			31	69			11	89		39	16	444	2.25	35.1
DF		DM	3S	5		4,834	4,834	10	19	81			5			95		38	9	119	0.79	40.7
DF		DM	4S	2	3.3	1,264	1,222	2	46	54			76	24				17	7	26	0.36	47.2
DF		DM	UT			242	242	0		100			100					10	9	24	0.55	10.1
DF		RO	3S	1	22.2	518	403	1			100					100		36	12	140	1.72	2.9
DF	Totals			100	1.7	88,257	86,728	173	2	10	15	73	2	0	2	96		31	14	284	1.80	305.6
Type Totals					1.7	88,257	86,728	173	2	10	15	73	2	0	2	96		31	14	284	1.80	305.6

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BEEKEEPE			DATE	10/19/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
05N	02E	01	BEEKEEPER	00U1	45.00	60	333	S	W	
				TREES	ESTIMATED	PERCENT				
				PER PLOT	TOTAL	SAMPLE				
				PLOTS	TREES	TREES	TREES			
TOTAL		60	333	5.6						
CRUISE		34	183	5.4	5,622		3.3			
DBH COUNT										
REFOREST										
COUNT		24	131	5.5						
BLANKS		2								
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	128	71.6	21.8	93	39.7	185.4	36,114	34,968	8,046	8,039
WHEMLOCK	25	21.9	17.5	84	8.8	36.8	6,841	6,459	1,532	1,532
R ALDER	22	26.8	14.3	57	7.9	29.7	3,009	2,956	869	868
BL MAPLE	8	4.6	18.6	53	2.0	8.6	885	797	219	205
TOTAL	<i>183</i>	<i>124.9</i>	<i>19.6</i>	<i>82</i>	<i>58.9</i>	<i>260.5</i>	<i>46,849</i>	<i>45,180</i>	<i>10,666</i>	<i>10,645</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	10	15	
DOUG FIR	73.7	6.6		817	874	932				
WHEMLOCK	87.3	17.8		552	671	791				
R ALDER	69.8	15.2		121	143	164				
BL MAPLE	59.9	22.6		196	253	309				
TOTAL	<i>87.1</i>	<i>6.5</i>		<i>683</i>	<i>730</i>	<i>777</i>	<i>303</i>	<i>76</i>	<i>34</i>	
CL:	68.1 %	COEFF	SAMPLE TREES - CF				# OF TREES REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	65.1	5.8		181	192	203				
WHEMLOCK	81.7	16.7		127	153	178				
R ALDER	56.5	12.3		37	42	47				
BL MAPLE	55.4	20.9		50	64	77				
TOTAL	<i>77.5</i>	<i>5.8</i>		<i>153</i>	<i>163</i>	<i>172</i>	<i>240</i>	<i>60</i>	<i>27</i>	
CL:	68.1 %	COEFF	TREES/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	85.5	11.0		64	72	80				
WHEMLOCK	207.7	26.8		16	22	28				
R ALDER	203.3	26.2		20	27	34				
BL MAPLE	265.2	34.2		3	5	6				
TOTAL	<i>47.2</i>	<i>6.1</i>		<i>117</i>	<i>125</i>	<i>133</i>	<i>89</i>	<i>22</i>	<i>10</i>	
CL:	68.1 %	COEFF	BASAL AREA/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	71.8	9.3		168	185	203				
WHEMLOCK	219.3	28.3		26	37	47				
R ALDER	188.3	24.3		23	30	37				
BL MAPLE	235.3	30.4		6	9	11				
TOTAL	<i>42.5</i>	<i>5.5</i>		<i>246</i>	<i>261</i>	<i>275</i>	<i>72</i>	<i>18</i>	<i>8</i>	
CL:	68.1 %	COEFF	NET BF/ACRE				# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR	77.7	10.0		31,462	34,968	38,474				
WHEMLOCK	242.2	31.2		4,441	6,459	8,476				
R ALDER	181.7	23.4		2,264	2,956	3,649				
BL MAPLE	260.5	33.6		529	797	1,064				
TOTAL	<i>57.2</i>	<i>7.4</i>		<i>41,849</i>	<i>45,180</i>	<i>48,511</i>	<i>130</i>	<i>33</i>	<i>14</i>	

TC TSTATS				STATISTICS				PAGE	2	
				PROJECT	BEEKEEPE			DATE	10/19/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES		PLOTS	TREES	CuFt	BdFt
05N	02E	01	BEEKEEPER	00U1	45.00		60	333	S	W
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.	S.E.%	LOW	AVG	HIGH	5	10	15	
CL:	68.1 %	COEFF		NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		74.6	9.6	7,266	8,039	8,813				
WHEMLOCK		233.1	30.1	1,071	1,532	1,992				
R ALDER		184.4	23.8	662	868	1,075				
BL MAPLE		254.8	32.9	138	205	272				
TOTAL		<i>51.3</i>	<i>6.6</i>	<i>9,940</i>	<i>10,645</i>	<i>11,349</i>	<i>105</i>	<i>26</i>	<i>12</i>	
CL:	68.1 %	COEFF		V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.	
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				170	189	208				
WHEMLOCK		163.1	21.0	121	176	231				
R ALDER		116.5	15.0	76	99	123				
BL MAPLE		229.7	29.6	61	93	124				
TOTAL		<i>187.4</i>	<i>24.2</i>	<i>161</i>	<i>173</i>	<i>186</i>	<i>1,402</i>	<i>350</i>	<i>156</i>	

TC TSTATS				STATISTICS				PAGE	1	
				PROJECT	BEEKEEPER			DATE	10/19/2015	
TWP	RGE	SECT	TRACT	TYPE	ACRES	PLOTS	TREES	CuFt	BdFt	
05N	02E	01	BEEKEEPER	00U2	2.00	4	27	S	W	
		PLOTS	TREES	TREES PER PLOT	ESTIMATED TOTAL TREES	PERCENT SAMPLE TREES				
TOTAL		4	27	6.8						
CRUISE		2	12	6.0	151	7.9				
DBH COUNT REFOREST COUNT		2	15	7.5						
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		12	75.5	27.7	130	60.2	316.8	88,257	86,728	17,111
TOTAL		12	75.5	27.7	130	60.2	316.8	88,257	86,728	17,111
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	10	15	
DOUG FIR		40.5	12.2	1,275	1,452	1,629				
TOTAL		40.5	12.2	1,275	1,452	1,629	71	18	8	
CL:	68.1 %	COEFF	SAMPLE TREES - CF			# OF TREES REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		37.4	11.3	249	281	312				
TOTAL		37.4	11.3	249	281	312	61	15	7	
CL:	68.1 %	COEFF	TREES/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		36.8	21.0	60	76	91				
TOTAL		36.8	21.0	60	76	91	71	18	8	
CL:	68.1 %	COEFF	BASAL AREA/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		25.3	14.5	271	317	363				
TOTAL		25.3	14.5	271	317	363	33	8	4	
CL:	68.1 %	COEFF	NET BF/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		24.6	14.1	74,541	86,728	98,914				
TOTAL		24.6	14.1	74,541	86,728	98,914	32	8	4	
CL:	68.1 %	COEFF	NET CUFT FT/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR		25.9	14.8	14,558	17,085	19,611				
TOTAL		25.9	14.8	14,558	17,085	19,611	35	9	4	
CL:	68.1 %	COEFF	V-BAR/ACRE			# OF PLOTS REQ.		INF. POP.		
SD:	1.0	VAR.%	S.E.%	LOW	AVG	HIGH	5	10	15	
DOUG FIR				235	274	312				
TOTAL		239.2	136.7	235	274	312	2,989	747	332	

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

T05N R02E S01 Ty00U1	45.0
T05N R02E S01 Ty00U2	2.0

Project **BEEKEEPE**
Acres **47.00**

Page No **1**
Date: **10/19/2015**
Time **9:00:02AM**

Species	Total	Total	Total	Net Cubic Ft/		CF/	Total CCF		Total MBF	
	Trees	Logs	Tons	Tree	Log	LF	Gross	Net	Gross	Net
DOUG FIR	3,375	8,587	11,294	117.33	46.11	1.39	3,963	3,959	1,802	1,747
WHEMLOCK	986	1,833	2,206	69.91	37.60	1.04	689	689	308	291
R ALDER	1,208	2,093	1,075	32.36	18.67	0.64	391	391	135	133
BL MAPLE	205	337	261	45.01	27.41	1.25	99	92	40	36
Totals	5,773	12,849	14,837	88.89	39.94	1.23	5,142	5,132	2,285	2,207

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	4,361	10,420	13,500	106.61	44.61	1.33	4,652	4,649	2,110	2,038
H	1,413	2,429	1,337	34.19	19.88	0.71	490	483	175	169
Totals	5,773	12,849	14,837	88.89	39.94	1.23	5,142	5,132	2,285	2,207



WASHINGTON STATE DEPARTMENT OF
Natural Resources
 Peter Goldmark - Commissioner of Public Lands

**Forest Practices Application/Notification
 Notice of Decision**

FPA/N No: 2931118
 Effective Date: 12/16/2015
 Expiration Date: 12/16/2018
 Shut Down Zone: 602
 EARR Tax Credit: Eligible [] Non-eligible
 Reference: Bee Keeper
30-092601

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 approved FPA/N

FPA/N Classification

Class II Class III Class IVG Class IVS

Number of Years Granted on Multi-Year Request

3 yrs 4 yrs 5 yrs

Conditions on Approval / Reasons for Disapproval

No additional conditions.

Issued By: Scott Hancock Region: Pacific Cascade

Title: Forest Practices Forester Date: 12/16/2015

Copies to: Landowner, Timber Owner and Operator.

Issued in person: Landowner Timber Owner Operator By: Acqui Spahr

BEE KEEPER

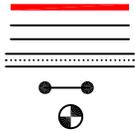
ROAD PLAN MAP

Map page 1 of 2



LEGEND

- Unit Boundary
- Existing Road
- Pre-haul Maintenance
- Existing Gate
- Landing

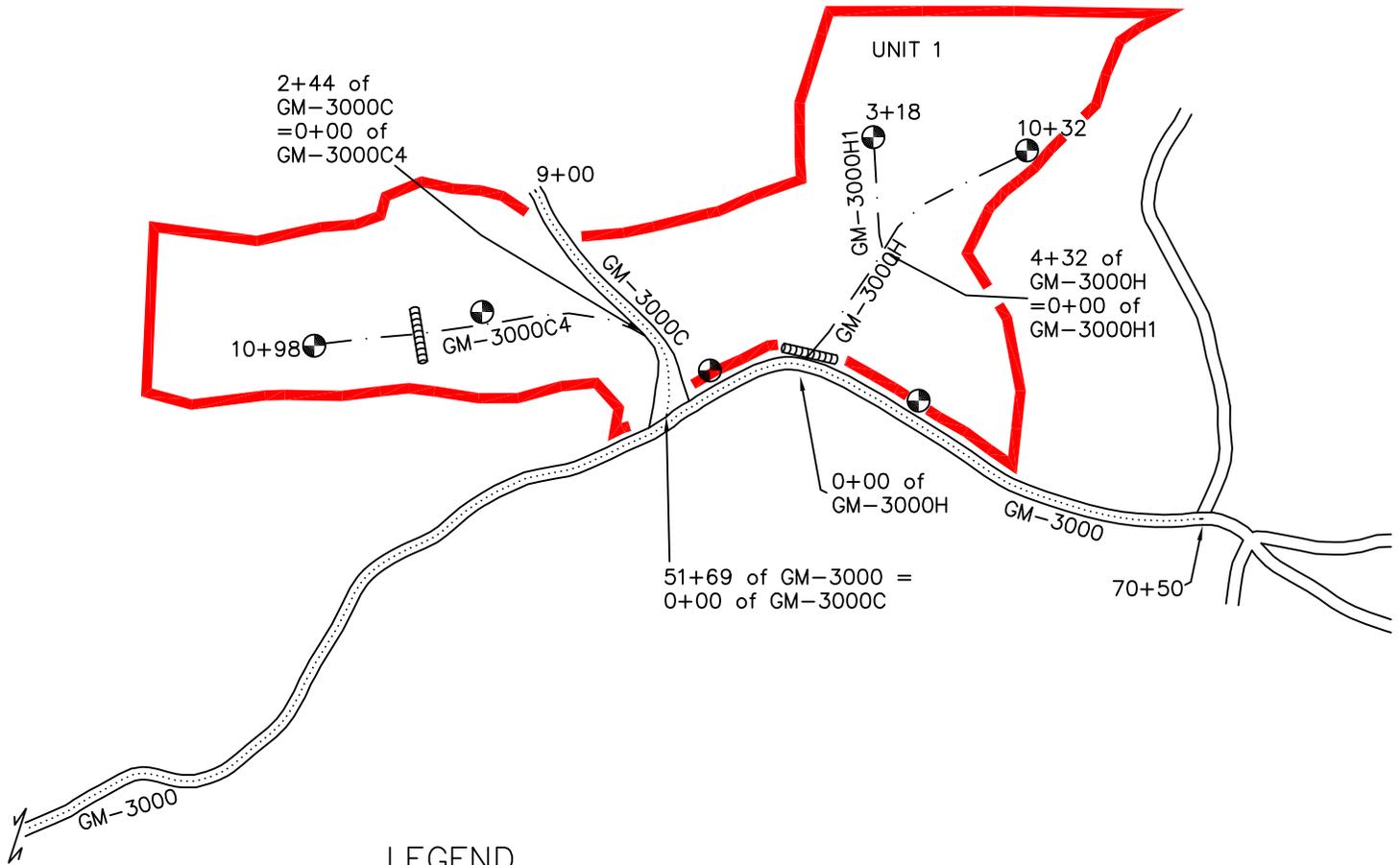


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BEE KEEPER

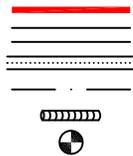
ROAD PLAN MAP

Map page 2 of 2



LEGEND

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



0 200 600
Scale = FEET

STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES

BEE KEEPER TIMBER SALE ROAD PLAN
CLARK COUNTY
YACOLT DISTRICT

AGREEMENT NO.: 30-092601

STAFF ENGINEER: SCOTT HANNA

DATE: JUNE 16, 2015

DRAWN & COMPILED BY: ALICIA COMPTON

SECTION 0 – SCOPE OF PROJECT

0-1 ROAD PLAN SCOPE

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

0-2 REQUIRED ROADS

The specified work on the following roads is required.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
NE Cedar Mist Rd	0+00 to 14+50	pre-haul maintenance
GM-3000	0+00 to 70+50	pre-haul maintenance
GM-3000C	0+00 to 9+00	pre-haul maintenance

0-3 OPTIONAL ROADS

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

<u>Road</u>	<u>Stations</u>	<u>Type</u>
GM-3000C4	0+00 to 10+98	construction
GM-3000H	0+00 to 10+32	construction
GM-3000H1	0+00 to 3+18	construction

0-4 CONSTRUCTION

Construction includes, but is not limited to the following: clearing; grubbing; right-of-way debris disposal; excavation and embankment to sub-grade; compaction of subgrade and embankment; landing and turnout construction; acquisition and installation of drainage structures; acquisition, manufacture, application and compaction of 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>
NE Cedar Mist Rd	0+00 to 14+50	Grade, shape, and compact existing surface; apply chemical treatment for dust abatement in accordance with Clauses 6-81 through 6-86.
GM-3000	0+00 to 70+50	Brush road in accordance with Clause 3-1; clean ditches; clean culvert inlets and outlets; desod, grade, shape, and compact existing surface; acquire, apply and compact rock.
GM-3000C	0+00 to 9+00	Clean ditches; clean culvert inlets and outlets; grade, shape, and compact existing surface.

SECTION 1 – GENERAL

1-1 ROAD PLAN CHANGES

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

1-2 UNFORESEEN CONDITIONS

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

1-3 ROAD DIMENSIONS

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

1-4 ROAD TOLERANCES

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

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

1-6 ORDER OF PRECEDENCE

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

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

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

1-8 REPAIR OR REPLACEMENT OF DAMAGED MATERIALS

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

1-9 DAMAGED METALLIC COATING

Any 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.

1-15 ROAD MARKING

All road work is marked as follows:

- Four-foot stakes with orange ribbon, orange paint and reference points for construction.

1-16 CONSTRUCTION STAKES SET BY STATE

Purchaser shall perform work on the following road(s) in accordance with the construction stakes and reference points set in the field for grade and alignment.

<u>Road</u>	<u>Stations</u>	<u>Type</u>
GM-3000C4	0+00 to 10+98	centerline
GM-3000H	0+00 to 10+32	centerline
GM-3000H1	0+00 to 3+18	centerline

1-18 REFERENCE POINT DAMAGE

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

1-21 HAUL APPROVAL

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

1-22 WORK NOTIFICATIONS

Purchaser shall notify the Contract Administrator a minimum of 7 calendar days before work begins.

1-23 ROAD WORK PHASE APPROVAL

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

- Subgrade construction
- Rock compaction

1-25 ACTIVITY TIMING RESTRICTION

The specified activities are not allowed during the listed closure period(s) unless authorized in writing by the Contract Administrator. Restrictions for hauling forest products are specified in Contract Clause H-130 HAULING SCHEDULE.

<u>Activity</u>	<u>Closure Period</u>
Construction	September 30 to May 1
Pre-haul Maintenance	September 30 to May 1

1-26 OPERATING DURING CLOSURE PERIOD

If permission is granted to operate during a closure period listed in Clause 1-25 ACTIVITY TIMING RESTRICTION or Contract Clause H-130 HAULING SCHEDULE, Purchaser shall provide a maintenance plan to include further protection of state resources. Purchaser shall obtain written approval from the Contract Administrator for the maintenance plan, and shall put preventative measures in place before operating during the closure period. Purchaser is required to maintain all haul roads at their own expense including those listed in Contract Clause C-060 DESIGNATED ROAD MAINTAINER.

1-29 SEDIMENT RESTRICTION

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

1-30 CLOSURE TO PREVENT DAMAGE

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

- Surface or base stability problems persist.
- Weather is such that satisfactory results cannot be obtained in an area of operations.
- When, in the opinion of the Contract Administrator excessive road damage or rutting may occur.

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

1-31 SPEED LIMITS

On the following road(s), speeds are limited to 10 mph.

<u>Road</u>	<u>Stations</u>
NE Cedar Mist Rd	0+00 to 14+50

1-33 SNOW PLOWING RESTRICTION

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

1-40 ROAD APPROACHES TO COUNTY ROADS AND STATE HIGHWAYS

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

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

1-43 ROAD WORK AROUND UTILITIES

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

<u>Road</u>	<u>Stations</u>	<u>Utility</u>
NE Cedar Mist Rd	0+00 to 14+50	Buried Gas Pipe

SECTION 2 – MAINTENANCE

2-1 GENERAL ROAD MAINTENANCE

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

2-2 ROAD MAINTENANCE – PURCHASER MAINTENANCE

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

2-3 ROAD MAINTENANCE – DESIGNATED MAINTAINER

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

2-4 PASSAGE OF LIGHT VEHICLES

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

<u>Road</u>	<u>Stations</u>
NE Cedar Mist Rd	0+00 to 14+50

2-5 MAINTENANCE GRADING – EXISTING ROAD

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

<u>Road</u>	<u>Stations</u>	<u>Requirements</u>
NE Cedar Mist Rd	0+00 to 14+50	Grade and shape surface in accordance with TYPICAL SECTION SHEET.
GM-3000	0+00 to 70+50	
GM-3000C	0+00 to 9+00	

2-6 CLEANING CULVERTS

On the following road(s), Purchaser shall clean the inlets and outlets of all culverts and shall obtain written approval from the Contract Administrator before any hauling.

<u>Road</u>	<u>Stations</u>
GM-3000	0+00 to 70+50
GM-3000C	0+00 to 9+00

2-7 CLEANING DITCHES, HEADWALLS, AND CATCH BASINS

On the following road(s), Purchaser shall clean ditches, headwalls, and catchbasins. Work must be completed before any hauling and must be done in accordance with the TYPICAL SECTION DETAIL and CULVERT AND DRAINAGE SPECIFICATION DETAIL. Pulling ditch material across the road or mixing in with the road surface is not allowed.

<u>Road</u>	<u>Stations</u>
GM-3000	0+00 to 70+50
GM-3000C	0+00 to 9+00

SECTION 3 – CLEARING, GRUBBING, AND DISPOSAL

3-1 BRUSHING

On the following road(s), Purchaser shall cut vegetative material up to 3 inches in diameter, including limbs, as shown on the ROAD 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. Purchaser shall remove brushing debris from the road surface, ditchlines, and culvert inlets and outlets.

<u>Road</u>	<u>Stations</u>
GM-3000	0+00 to 51+69

3-5 CLEARING

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

3-8 PROHIBITED DECKING AREAS

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

- Within the grubbing limits.
- Within 50 feet of any stream.
- In locations that interfere with the construction of the road prism.
- In locations that impede drainage.
- On slopes greater than 45%.
- Against standing trees unless approved by the Contract Administrator.

3-10 GRUBBING

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

3-12 STUMP PLACEMENT

Purchaser shall place grubbed stumps outside of the clearing limits or as directed by the Contract Administrator and in compliance with all other clauses in this road plan.

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 grubbing limits as shown on the TYPICAL SECTION SHEET.

3-21 DISPOSAL COMPLETION

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

3-23 PROHIBITED DISPOSAL AREAS

Purchaser shall not place organic debris in the following areas:

- Within 50 feet of a cross drain culvert.
- Within 100 feet of a live stream, or wetland.
- On road subgrades, or excavation and embankment slopes.
- On slopes greater than 45%.
- On locations where brush can fall into the ditch or onto the road surface.
- Against standing timber.

3-24 BURYING ORGANIC DEBRIS RESTRICTED

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

3-25 SCATTERING ORGANIC DEBRIS

Purchaser shall scatter organic debris outside of the grubbing limits or in natural openings on the downhill side of the road. Where natural openings are unavailable or restrictive, alternate debris disposal methods are subject to the written approval of 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.

4-3 ROAD GRADE AND ALIGNMENT STANDARDS

Purchaser shall follow these standards for road grade and alignment:

- Grade and alignment must have smooth continuity, without abrupt changes in direction.
- Maximum grades may not exceed 18 percent favorable and 12 percent adverse.
- Minimum curve radius is 60 feet at centerline.
- Maximum grade change for sag vertical curves is 5% in 100 feet.
- Maximum grade change for crest vertical curves is 4% in 100 feet.

4-5 CUT SLOPE RATIO

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

<u>Material Type</u>	<u>Excavation Slope Ratio</u>	<u>Excavation Slope Percent</u>
Common Earth (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

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

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

4-7 SHAPING CUT AND FILL SLOPE

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

4-8 CURVE WIDENING

The minimum widening placed on the inside of curves is:

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

4-9 EMBANKMENT WIDENING

The minimum embankment widening is:

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

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

4-21 TURNOUTS

Purchaser shall construct turnouts intervisible with a maximum distance of 500 feet between turnouts. 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.

4-22 TURNAROUNDS

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

4-25 DITCH CONSTRUCTION AND RECONSTRUCTION

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

4-27 DITCH WORK – MATERIAL USE PROHIBITED

Purchaser shall not pull ditch material across the road or mix in with the road surface. Excavated material must be scattered outside the grubbing limits.

4-28 DITCH DRAINAGE

Ditches must drain to cross-drain culverts or ditchouts.

4-29 DITCHOUTS

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

4-35 WASTE MATERIAL DEFINITION

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

4-36 DISPOSAL OF WASTE MATERIAL

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

4-37 WASTE AREA LOCATION

Purchaser shall deposit waste material in areas 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

Purchaser shall not deposit waste material in the following areas:

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

4-47 NATIVE MATERIAL

Native material consists of naturally occurring material that is free of organic debris, trash, and rocks greater than 6 inches in any dimension.

4-55 ROAD SHAPING

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

4-60 FILL COMPACTION

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

4-61 SUBGRADE COMPACTION

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

4-62 DRY WEATHER COMPACTION

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

4-63 EXISTING SURFACE COMPACTION

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

SECTION 5 – DRAINAGE

5-5 CULVERTS

Purchaser shall install culverts as part of this contract. Culverts must be installed concurrently with subgrade work and must be installed before subgrade compaction and rock application. Culvert locations and the minimum requirements for culvert length and diameter are designated on the CULVERT LIST. Culvert, downspout, and flume lengths may be adjusted to fit as-built conditions and may not terminate directly on unprotected soil. Culverts must be new material and meet the specifications in Clauses 10-17 and 10-22. Purchaser shall obtain approval from the Contract Administrator for the quality of used culverts before installation.

5-11 UNUSED MATERIALS STATE PROPERTY

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

5-15 CULVERT INSTALLATION

Culvert installation must be in accordance with the CULVERT AND DRAINAGE SPECIFICATION DETAIL 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.

5-25 CATCH BASINS

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

5-26 HEADWALLS FOR CROSS DRAIN CULVERTS

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

SECTION 6 – ROCK AND SURFACING

6-2 ROCK SOURCE ON STATE LAND

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

<u>Source</u>	<u>Location</u>
GM-1200 PIT	SE¼, Sec 31, T06N, R03E, W.M.

6-5 ROCK FROM COMMERCIAL SOURCE

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

<u>Possible Source</u>	<u>Location</u>
North Clark Construction (Courtney's Pit)	NW ¼, Sec 22, T05N, R03E, W.M.; Yacolt, WA

6-10 ROCK SOURCE DEVELOPMENT PLAN BY STATE

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

<u>Source</u>	<u>Rock Type</u>
GM-1200	3-inch Jaw Run, Select Pit Run

6-12 ROCK SOURCE SPECIFICATIONS

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

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

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

- All vehicle access to the top of the pit faces must be blocked as directed by Contract Administrator.

6-20 ROCK GRADATION TYPES

Purchaser shall provide rock in accordance with the types and amounts listed in the ROCK LIST. Rock must meet the following specifications for gradation and uniform quality when placed in hauling vehicles. The exact point of evaluation for conformance to specifications will be determined by the Contract Administrator.

6-28 1 ¼-INCH MINUS CRUSHED ROCK

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

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

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

6-34 3-INCH JAW RUN ROCK

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

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

6-41 SELECT PIT RUN ROCK

No more than 50 percent of the rock may be larger than 8 inches in any dimension and no rock may be larger than 12 inches in any dimension. Select Pit Run rock may not contain more than 5 percent by weight of organic debris, dirt, and trash. Rock may require processing to meet this specification.

6-55 ROCK APPLICATION MEASURED BY COMPACTED DEPTH

Measurement of specified rock depths, are defined as the compacted depth(s) using the compaction methods required in this road plan. Estimated quantities specified in the ROCK LIST are loose yards. Purchaser shall apply adequate amounts of rock to meet the specified rock depths. Specified rock depths are minimum requirements and are not subject to reduction.

6-56 ROCK MEASUREMENT BY TRUCK VOLUME

Measurement of 1¼-Inch minus crushed is on a cubic yard truck measure basis. Purchaser shall measure each truck box before rock hauling. An average of such volumes for each truck will be used to tally the volume hauled. The Contract Administrator may periodically require that a load be flattened off and its volume calculated. Purchaser shall maintain load tally sheets for each truck as shown on ROCK LIST and shall give them to the Contract Administrator on a weekly basis during rocking operations.

6-70 APPROVAL BEFORE ROCK APPLICATION

Purchaser shall obtain written approval from the Contract Administrator for subgrade approval before rock application.

6-71 ROCK APPLICATION

Purchaser shall apply rock in accordance with the specifications and quantities shown on the ROCK LIST. Rock must be spread, shaped, and compacted full width concurrent with rock hauling operations. The Contract Administrator will direct locations for rock that is to be applied as spot patching. Road surfaces must be compacted in accordance with the COMPACTION LIST by routing equipment over the entire width.

6-73 ROCK FOR WIDENED PORTIONS

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

6-75 OPTIONAL ROCK EXCEPTION

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

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

<u>Road</u>	<u>Stations</u>
GM-3000C4	0+00 to 10+98
GM-3000H	0+00 to 10+32
GM-3000H1	0+00 to 3+18

6-81 CHEMICAL TREATMENT FOR DUST ABATEMENT

Purchaser shall treat the following roads with Magnesium Chloride for dust abatement as directed by Contract Administrator. No other chemical may be used for dust abatement. The Magnesium Chloride may not be used for any other purposes.

<u>Road</u>	<u>Stations</u>
NE Cedar Mist Rd	0+00 to 14+50

6-82 CHEMICAL RESTRICTION

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

6-84 MAGNESIUM CHLORIDE APPLICATION RATE

Purchaser shall apply Magnesium Chloride to the surface at a rate not less than 0.5 gallons per square yard (approximately 66.7 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

Purchaser 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

8-1 SEDIMENT CONTROL STRUCTURES

Purchaser shall install sediment traps, silt fences, settling ponds or other methods as approved, in writing, by the Contract Administrator.

8-15 REVEGETATION

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

8-16 REVEGETATION SUPPLY

The Purchaser shall provide the grass seed.

8-17 REVEGETATION TIMING

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

8-18 PROTECTION FOR SEED

Purchaser shall provide a protective cover for seed on all exposed soils within 50 feet of streams or wetlands if revegetation occurs between July 1 and March 31. The protective cover may consist of straw. Seed must be covered before the first anticipated storm event. Seed may not be allowed to sit exposed during any rain event.

8-19 ASSURANCE FOR SEEDED AREA

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

8-25 GRASS SEED

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

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

<u>Kind and Variety of Seed in Mixture</u>	<u>% by Weight</u>	<u>Minimum % germination</u>
Perennial Rye	35-45	90
Red Fescue	30-40	90
Highland Bent	5-15	85
White Clover	10-20	90
Inert and Other Crop	0.5	

SECTION 9 – POST-HAUL ROAD WORK

9-3 CULVERT MATERIAL REMOVED FROM STATE LAND

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

9-5 POST-HAUL MAINTENANCE

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

9-10 LANDING DRAINAGE

Purchaser shall provide for drainage of the landing surface.

SECTION 10 MATERIALS

10-17 CORRUGATED PLASTIC CULVERT

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

10-22 PLASTIC BAND

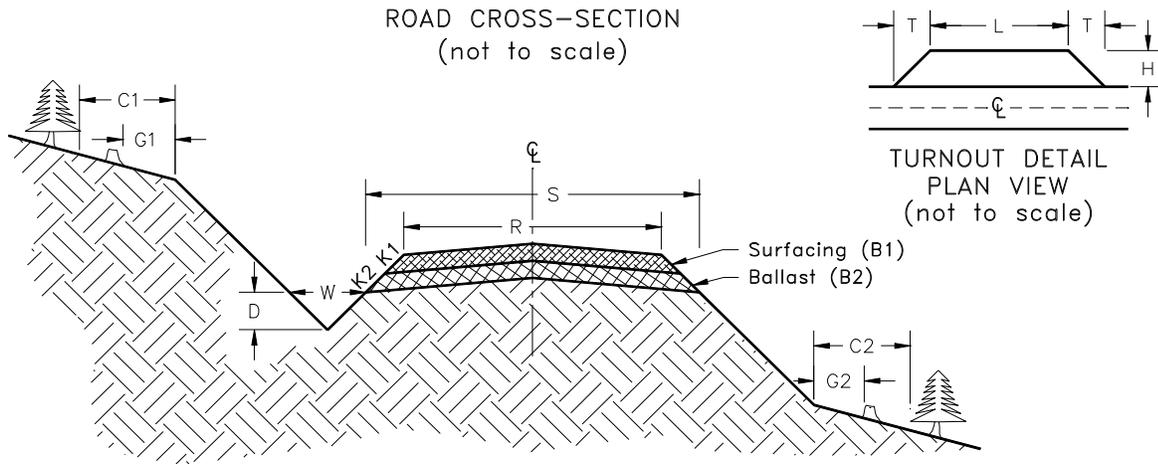
Plastic coupling and end bands must meet the AASHTO specification designated for the culvert. Only fittings supplied or recommended by the culvert manufacturer may be used. Couplings must be split coupling band. Split coupling bands must have a minimum of four corrugations, two on each side of the pipe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

10-31 MAGNESIUM CHLORIDE MATERIALS

Magnesium Chloride is the chemical residue produced as a by-product of the potash production or natural salt brine, and supplied as a water solution. Percent solids must be 28% magnesium by mass, as supplied.

TYPICAL SECTION SHEET

(Page 1 of 1)



Road Number	From Station	To Station	Tolerance Class	Subgrade Width (feet)	Road Width (feet)	Ditch		Crown in. @ CL (inches)	Grubbing Limits (feet)		Clearing Limits (feet)	
						Width (feet)	Depth (feet)		G1	G2	C1	C2
				S	R	W	D		G1	G2	C1	C2
NE Cedar Mist Rd	0+00	14+50	A	--	12	--	--	4	--	--	--	--
GM-3000	0+00	51+69	A	--	12	3	1	4	See Road Brushing Detail			
	51+69	70+50	A	--	12	3	1	4	--	--	--	--
GM-3000C	0+00	9+00	C	--	12	3	1	4	--	--	--	--
GM-3000C4	0+00	10+98	C	15	12	2	1	4	5	5	5	5
GM-3000H	0+00	10+32	C	15	12	2	1	4	5	5	5	5
GM-3000H1	0+00	3+18	C	15	12	2	1	4	5	5	5	5

ROCK LIST

1¼-INCH MINUS CRUSHED

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (inches)	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length (feet)	Width (feet)	Taper (feet)
			K1	B1					L	H	T
Spot Patching for NE Cedar Mist RD and GM-3000	As directed by Contract Administrator		1½:1	--	--	--	200	COMMERCIAL			

REQUIRED 1¼-INCH MINUS CRUSHED TOTAL **200** Cubic Yards

3-INCH JAW RUN

Road Number	From Station	To Station	Rock Slope	Compacted Rock Depth (inches)	C.Y./ Station	# of Stations	C.Y. Subtotal	Rock Source	Turnout		
									Length (feet)	Width (feet)	Taper (feet)
			K2	B2					L	H	T
GM-3000C4	0+00	10+98	1½:1	12	63	10.98	692	GM-1200 PIT			
Turnouts	As directed by Contract Administrator		1½:1	12	26	1	26		25	10	25
GM-3000H	0+00	10+32	1½:1	12	63	10.32	650				
Turnouts	As directed by Contract Administrator		1½:1	12	26	1	26		25	10	25
GM-3000H1	0+00	3+18	1½:1	12	63	3.18	200				
ALL ROADS	All Landings		1½:1	--	50	4	200				

OPTIONAL 3-INCH JAW RUN TOTAL **1,794** Cubic Yards

Note: Estimated quantities in the ROCK LIST are based on loose yards. A twenty-five percent compaction factor was used to estimate the minimum quantity. Additional quantities may be required to achieve the specify rock depth and shall be at the Purchaser's expense in accordance with Road Plan Clause 1-2 Unforeseen Conditions.

CULVERT ARMORING

Road Number	Station	Description	Rock Type	C.Y. Total	Rock Source
ALL ROADS	See CULVERT LIST	Culvert headwall and energy dissipators	SELECT PIT RUN	2	GM-1200 PIT

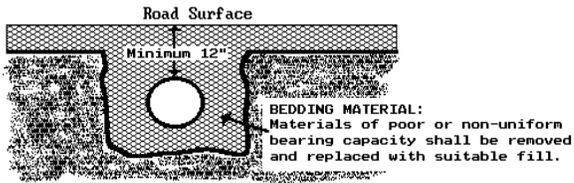
SELECT PIT RUN TOTAL **2** Cubic Yards

CULVERT LIST

Road Number	Location	Culvert		Length (ft)			Riprap (C.Y.)			Backfill Material	Placement Method	Const. Staked	Remarks
		Dia. (inches)	Gauge	Culvert	Downspt	Flume	Inlet	Outlet	Type				
			If Steel										
GM-3000C4	4+78	18		30	--	--	½	½	SPR	NT	Machine	--	Cross-drain installation
GM-3000H	0+00	18		40	--	--	½	½	SPR	NT	Machine	--	Cross-drain installation
As directed by C/A*		18		30									Additional culverts as needed.
		18		40									

*Purchaser shall provide the additional culverts to be installed as directed by Contract Administrator. Any required culverts or additional culverts not installed as part of this contract shall be stockpiled in a location as approved by the Contract Administrator.

CULVERT BACKFILL AND BASE PREPARATION
(For culverts less than 36")



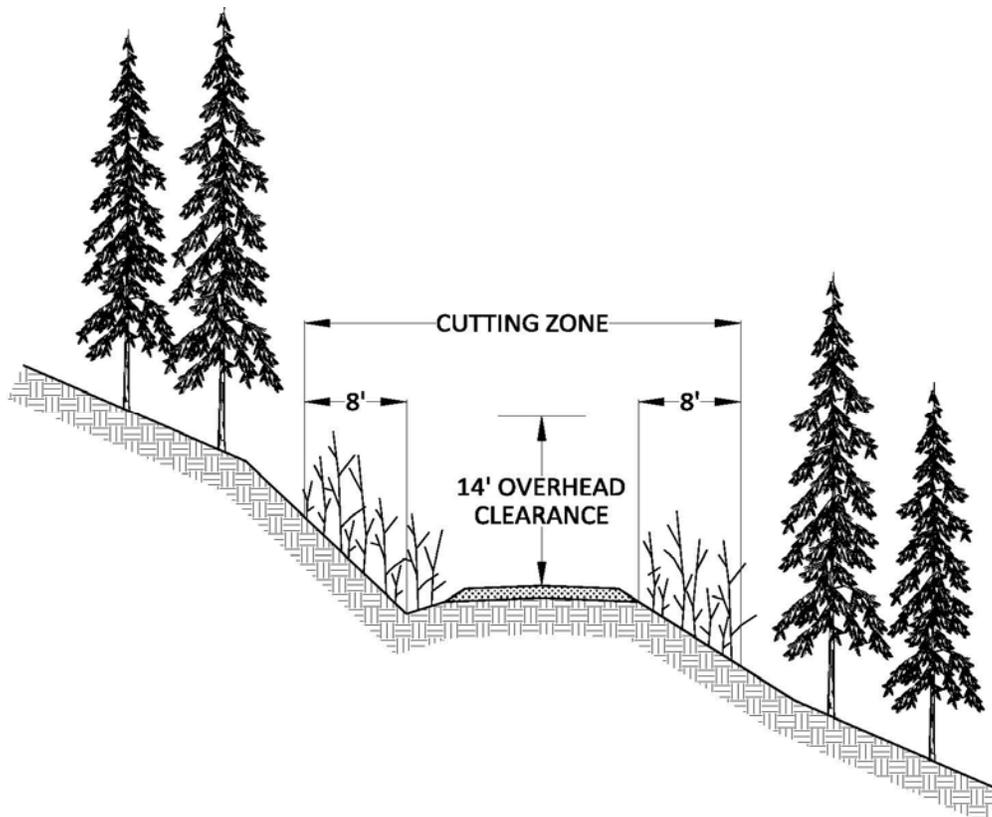
Key:

- SPR - Select Pit Run
- NT - Native (bank run)
- SL - Select Fill
- HL - Heavy Loose Riprap
- LL - Light Loose Riprap
- Flume - Half round pipe
- Downsput - Full round pipe

COMPACTION LIST

Road	From Station	To Station	Type	Max Depth Per Lift (inches)	Equipment Type	Equipment Weight (lbs)	Minimum Number of Passes	Maximum Operating Speed (mph)
NE Cedar Mist Rd	0+00	14+50	Pre-haul Surface/Spot Patch	--	Vibratory Smooth Drum	14000	4	3
GM-3000	0+00	70+50	Pre-haul Surface/Spot Patch	--	Vibratory Smooth Drum	14000	4	3
GM-3000C	0+00	9+00	Pre-haul Surface	--	Vibratory Smooth Drum	14000	4	3
GM-3000C4	0+00	10+98	Subgrade/Rock	12"	Vibratory Smooth Drum	14000	4	3
GM-3000H	0+00	10+32	Subgrade/Rock	12"	Vibratory Smooth Drum	14000	4	3
GM-3000H1	0+00	2+00	Subgrade/Rock	12"	Vibratory Smooth Drum	14000	4	3

ROAD BRUSHING DETAIL



SPECIFICATIONS:

Brush shall be cut on the road surface and 8 ft. back from the back of 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 or turnarounds, brush shall be cut 8 ft. back from outside edge of running surface.

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.

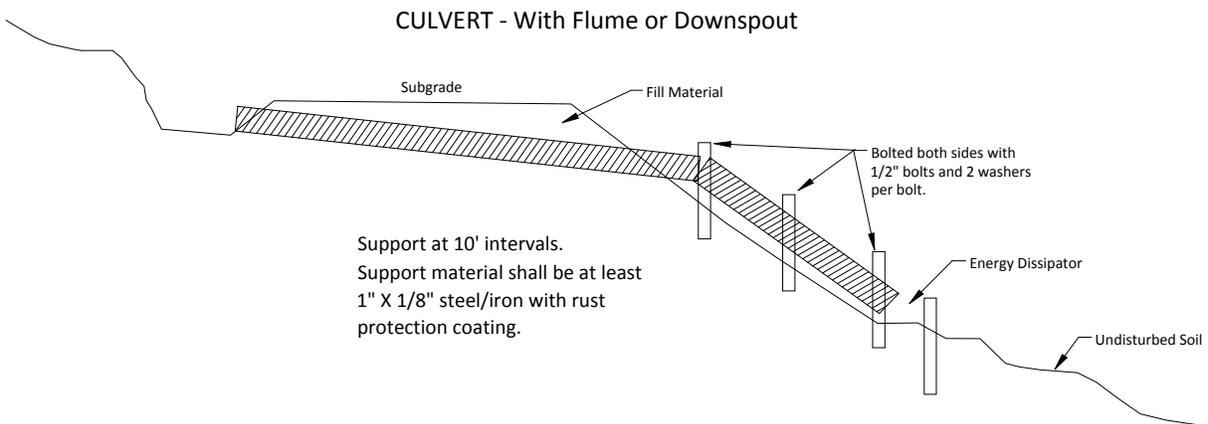
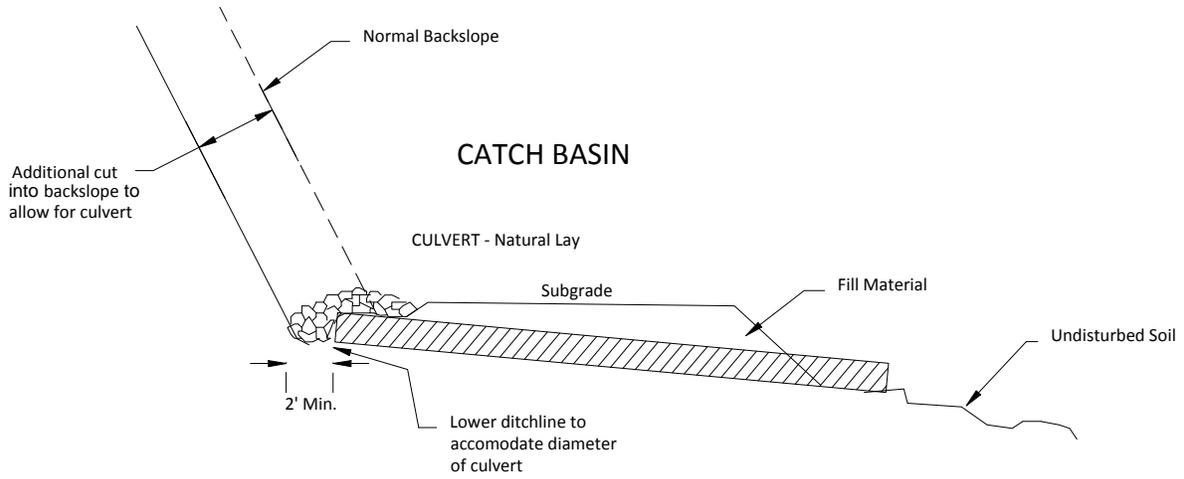
Slash shall be removed from cut slopes above the road and scattered on embankment slopes.

Ditches and road surfaces shall be cleared of woody debris.

Culvert inlets and outlets shall be cleaned a minimum distance of two pipe diameters away.

CULVERT AND DRAINAGE SPECIFICATION DETAIL

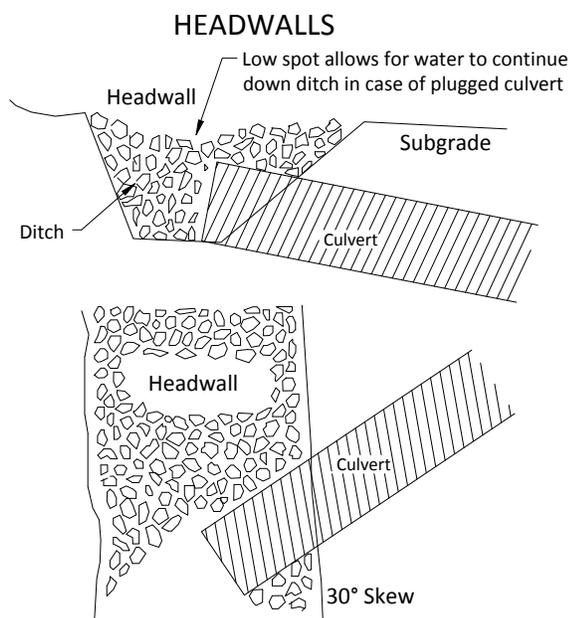
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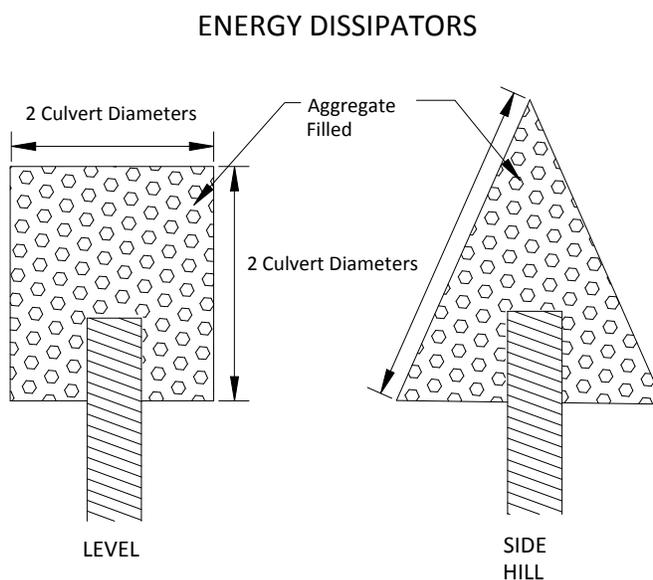
CULVERT AND DRAINAGE SPECIFICATION DETAIL

(Page 2 of 3)

Proper preparation of foundation and placement of bedding material shall precede the installation of all culvert pipe. This includes necessary leveling of the native trench bottom and compaction of required bedding material to form a uniform dense unyielding base. The backfill material shall be placed so that the pipe is uniformly supported along the barrel.



Headwalls to be constructed of material that will resist erosion.



Dissipator Specifications:
Depth: 1 culvert diameter
Aggregate: as specified in the CULVERT LIST.

CULVERT AND DRAINAGE SPECIFICATION DETAIL

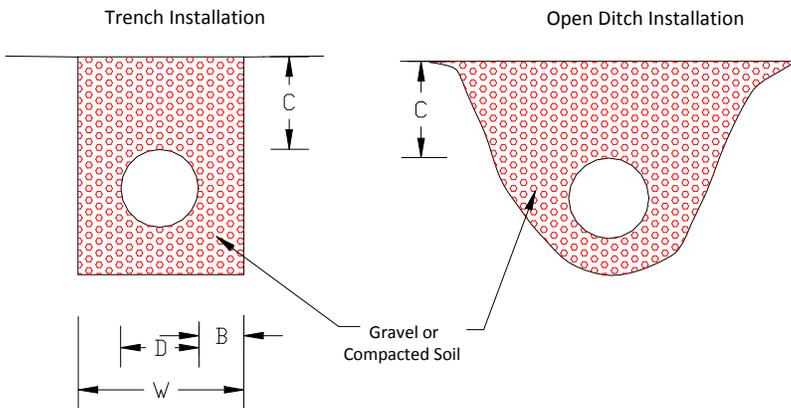
(Page 3 of 3)

POLYETHYLENE PIPE INSTALLATION

INSTALLATION REQUIREMENTS:

1. Crushed stone, gravel, or compacted soil backfill material shall be used as the bedding and envelope material around the culvert. The aggregate size shall not exceed 1/6 pipe diameter or 4" diameter, whichever is smaller.
2. The corrugated pipe shall be laid on grade, on a layer of bedding material as shown for the two types of installations. If native soil is used as the bedding and backfill material, it shall be well compacted in six inch layers under the haunches, around the sides and above the pipe to the recommended minimum height of cover.
3. Either crushed aggregate or flexible (asphalt) pavement may be laid as part of the minimum cover requirements.
4. Site conditions and availability of bedding materials often dictate the type of installation method used.
5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This minimum compaction can be achieved by either hand or mechanical tamping.

MINIMUM DIMENSIONS
Trench or Open Ditch Installation



Nominal Diameter	Minimum Thickness	Minimum Cover	Min. Trench Width
D	B	C	W
18"	6"	12"	36"
24"	6"	12"	42"
30"	6"	12"	48"
36"	6"	12"	54"

FOREST ACCESS ROAD MAINTENANCE SPECIFICATIONS

Cuts and Fills

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

Surface

- Grade, shape, and compact the road surface, turnouts, and shoulders to the original shape on the TYPICAL SECTION SHEET to provide a smooth, rut-free traveled surface and maintain surface water runoff in an even, un-concentrated manner.
- Blading shall not undercut the backslope.
- 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.

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

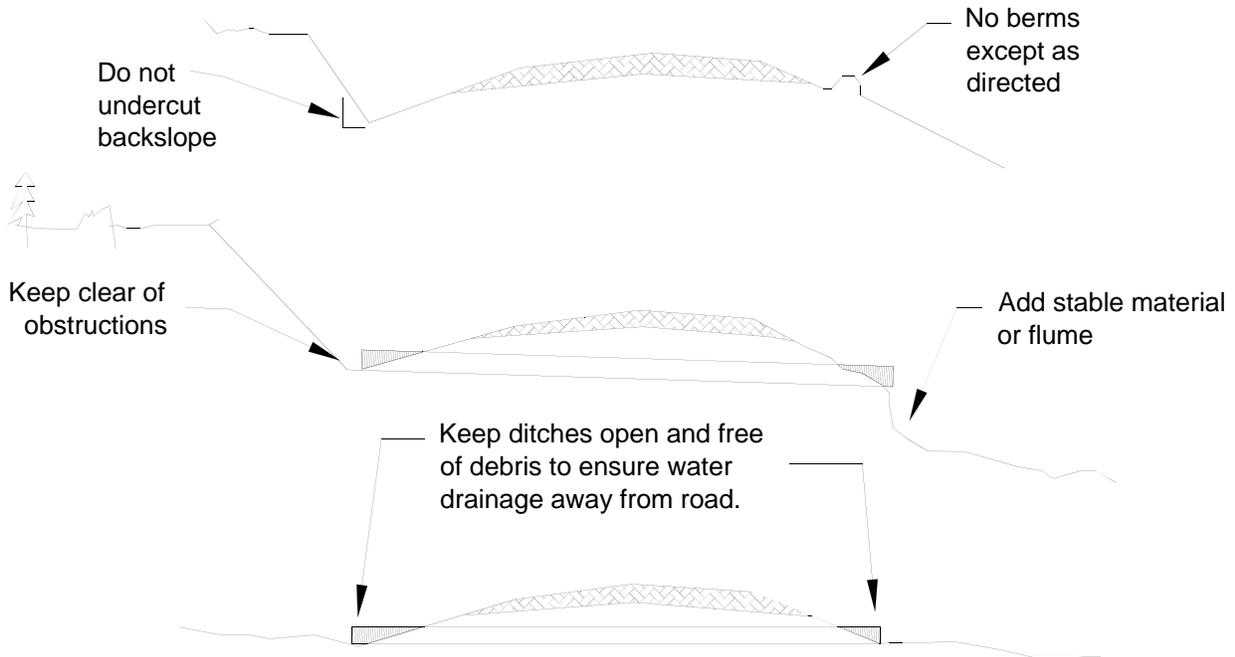
- Perform preventative maintenance work to safeguard against storm damage, such as blading to ensure correct runoff, ditch and culvert cleaning, and waterbar maintenance.

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.



STATE OF WASHINGTON
DEPARTMENT OF NATURAL RESOURCES
PACIFIC CASCADE REGION

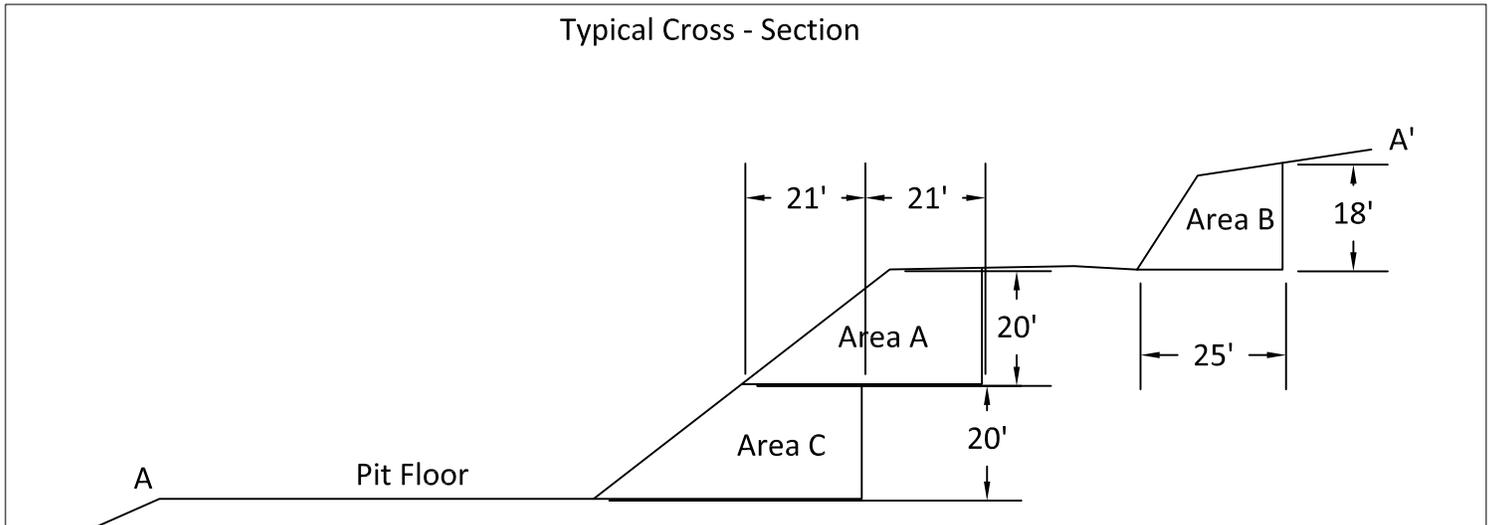
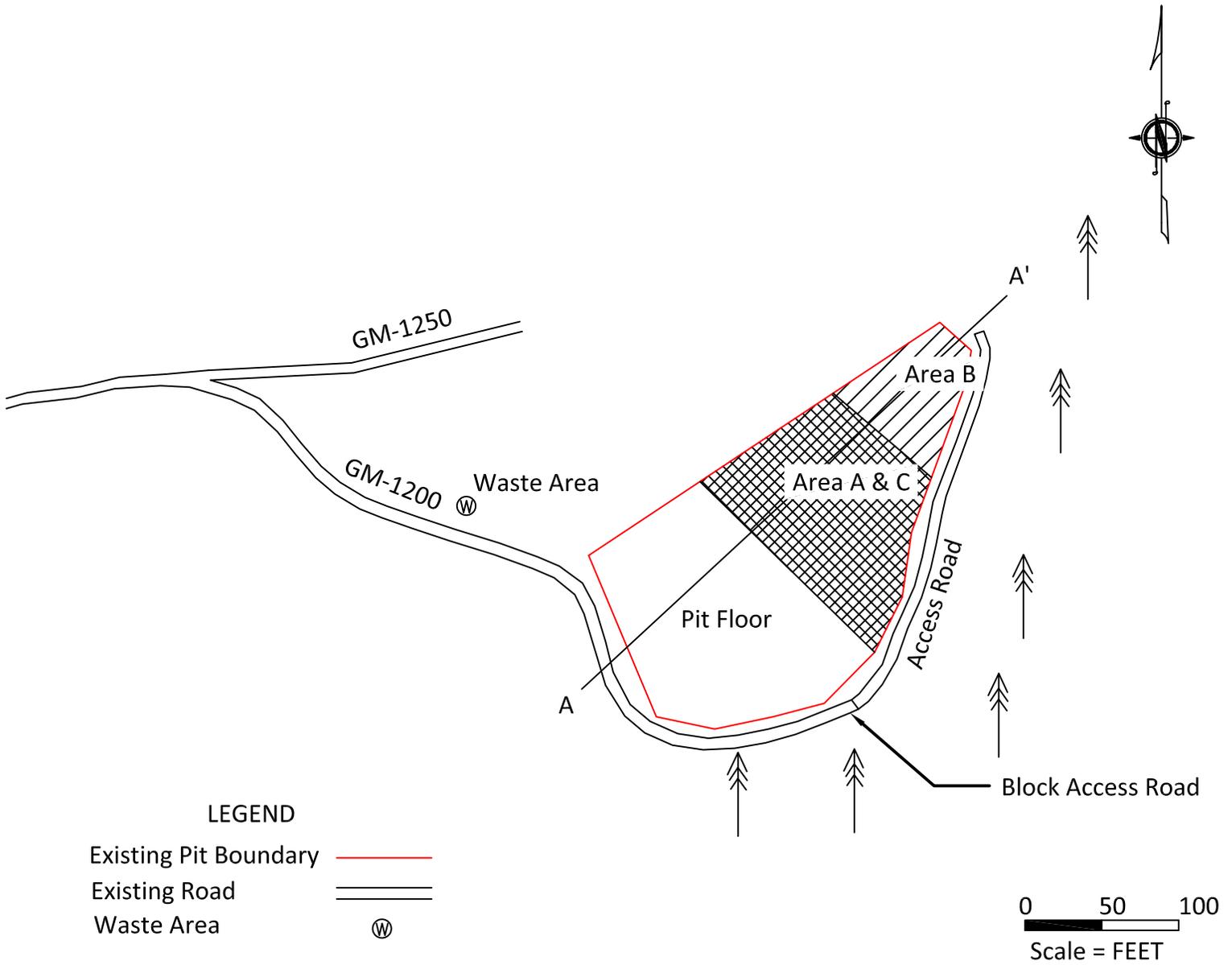
ROCK SOURCE DEVELOPMENT PLAN
GM-1200 PIT
SE¼, Section 31, Township 06 North, Range 03 East, W.M.
Page 1 of 3

1. Mining shall begin in Area A and B as indicated on the ROCK SOURCE DEVELOPMENT PLAN MAP. Once all material from Area A and B has been removed from the pit face, mining shall proceed in Area C.
2. All vegetation including stumps shall be cleared a minimum of 25 feet beyond the top of all working faces. Trees shall be cleared to a minimum of $\frac{3}{4}$ of the height of the tallest tree adjacent to the pit. The Contractor shall maintain a minimum of 15 foot wide area stripped to rock from the pit face at all times.
3. All overburden shall be end hauled, placed, and compacted at the Waste Area. The designated Waste Area is shown on the ROCK SOURCE DEVELOPMENT PLAN MAP. Waste Area compaction requirements are specified in the COMPACTION LIST.
4. Root wads and organic debris larger than one cubic foot in volume shall be separated from overburden material and piled in the designated Waste Area.
5. The Contractor shall submit an informational drilling and shooting plan to the Contract Administrator ten working days prior to any drilling.(Form #M-126PAC)
6. Drilling and rock extraction may begin when the Contract Administrator has approved, in writing, all of the clearing, grubbing and overburden removal.
7. Pit faces shall not exceed 20 feet in height. Faces with heights over 20 feet shall be sloped at $\frac{1}{4}$:1.
8. Working bench width shall be a minimum of 20 feet.
9. The pit floor shall have continuity of slope and be left in a smooth and neat condition, providing drainage at a minimum of 2 percent. All knobs, bumps, or extrusions shall be removed to the designated floor level by excavation or drill and shoot techniques. No sediment shall enter live water.

ROCK SOURCE DEVELOPMENT PLAN
GM-1200 PIT
SE¼, Section 31, Township 06 North, Range 03 East, W.M.
Page 2 of 3

10. Oversize material remaining in the pit at the conclusion of use shall not exceed 5 percent of the total volume mined during that operation. Oversize material is defined as rock fragments larger than two feet in any direction. At the conclusion of operations, all remaining oversize material shall be placed as directed by the Contract Administrator.
11. At the end of operations, pit faces and walls shall be scaled and cleared of loose and overhanging material; benches shall have safety berms constructed or access blocked to highway vehicles. Upon completion of operations in the pit, the area will be left in a condition that will not endanger public safety, damage property, or be hazardous to animal or human life.
12. All exposed soil in the Waste Area shall be grass seeded in accordance with Road Plan clause 8-15 through 8-25.
13. All operations shall be carried out in compliance with all regulations of:
 - a. Regulations and Standards Applicable to Metal and Nonmetal Mining and Milling Operations (30 CFR) U.S. Department of Labor, Mine Safety and Health Administration.
 - b. "Safety Standards for Construction Work" (296-155 WAC), Washington Department of Labor and Industries.
14. The Contractor shall submit an informational drilling and shooting report to the Contract Administrator after blasting has occurred. (Form #M-126PAC)
15. The pit area shall be worked and left in a condition that future operations may proceed in an orderly manner.
16. Upon completion of operations, the site shall be cleared of all temporary structures, equipment and rubbish, block access road with existing on site riprap at two locations as directed by the Contract Administrator, and shall be left in a neat and presentable condition.
17. At the completion of rock source operations, the Contractor shall obtain written approval of final rock source condition and compliance with the terms of this plan.

ROCK SOURCE DEVELOPMENT PLAN
 GM-1200 PIT
 SE¼, Section 31, Township 06 North, Range 03 East, W.M.
 Page 3 of 3



**DEPARTMENT OF NATURAL RESOURCES
ROAD DEVELOPMENT COST SUMMARY**

(Page 1 of 3)

REGION: PACIFIC CASCADE

DISTRICT: YACOLT

SALE/PROJECT NAME: BEE KEEPER

CONTRACT NUMBER:

30-092601

LEGAL DESCRIPTION: Sec 1, 12, T05N, R02E;Sec 4, 6, T05N, R03E

ROAD NUMBER:	GM-3000C4, GM-3000H, GM-3000H1	0	NE Cedar Mist Rd, GM-3000, GM-3000C
ROAD STANDARD:	Construction	Reconstruction	Pre-haul maintenance
NUMBER OF STATIONS:	24.48	0.00	94.00
CLEARING AND GRUBBING:	\$3,839	\$0	
EXCAVATION AND FILL:	\$6,807	\$0	
MISC. MAINTENANCE:			\$6,318
ROCK TOTALS (Cu. Yds.):			
Surfacing (1¼"-):	200	\$0	\$3,498
Ballast (3"-):	1794	\$42,087	
Select Pit Run:	2	\$57	
CULVERTS AND FLUMES:	\$2,207	\$0	
GENERAL EXPENSES:	\$4,950		\$1,080
MOBILIZATION:	\$2,977	\$0	\$2,977
TOTAL COSTS:	\$62,925	\$0	\$13,873
COST PER STATION:	\$2,570		\$148
ROAD ABANDONMENT COSTS:	\$0		
		TOTAL (All Roads) =	\$76,797
		SALE VOLUME MBF =	2,207
Compiled by:	S. Hanna	TOTAL COST PER MBF (All Roads) =	\$34.80
Date:	06/16/15		

CONSTRUCTION COSTS

(Page 2 of 3)

SALE NAME: BEE KEEPER

CONTRACT NUMBER: 30-092601

CLEARING AND GRUBBING:

Road	% Sideslope	MBF/ac	Disposal Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Subtotal
GM-3000C4	35	35	1.00	4.50	\$45	1.00	10.98	\$2,223.45
GM-3000H	25	35	1.00	2.66	\$45	1.00	10.32	\$1,235.30
GM-3000H1	20	35	1.00	2.66	\$45	1.00	3.18	\$380.65
CLEAR AND GRUB TOTAL :								\$3,839.40

EXCAVATION:

Road	% Sideslope	Exc. Type Factor	Production Factor	Cost/Station	Width Factor	Total Stations	Sub-Total
GM-3000C4	35	1.0	3.00	\$97	1.00	10.98	\$3,195.18
GM-3000H	30	1.0	2.50	\$97	1.00	10.32	\$2,502.60
GM-3000H1	30	1.0	2.50	\$97	1.00	3.18	\$771.15

SOIL EROSION CONTROL

Seed Quantity (lbs)	Cost (\$/lb)	Application Cost	Stations	Sub-Total
98	\$2.20	\$5.00	24.48	\$338.00

EXCAVATION TOTAL = \$6,806.93

BALLAST AND SURFACING :

Description	Rock Source	Landowner
Ballast (3"-)	GM-1200 Pit	DNR

R.T. Miles =	20.06
Ave. Speed =	17.12
Delay (Hrs.)=	0.17
Cost / Hour =	\$98.00
CY / Load =	9

* Haul Formula: (R.T.Miles/MPH+Delay)(\$/hr / Cy/load)

ROCK HAUL IS BASED ON A DNR ROCK SOURCE CALLED GMF-1200 PIT LOCATED OFF OF GMF-1200 road

Unit Costs	Ballast (3"-)	Select Pit Run
Drill & Shoot	\$3.25	\$3.00
Dig and load	\$1.00	\$1.00
Crushing	\$3.00	
Purchase Price		
Haul *	\$14.61	\$14.61
Spread	\$1.10	\$10.00
Compact	\$0.50	
Sales tax		
Total Unit Costs (\$/cy)	\$23.46	\$28.61

Cubic Yards	1,794	2
Sub-Total	\$42,087.24	\$57.22
ROCK TOTAL =		\$42,144.46

CULVERTS:

Description	Qty.	Dia (inches)	Length (feet)	Cost/ft*
X-Drain	2	18	30	\$15.17
X-Drain	2	18	40	\$16.21

* Cost accounts for all culvert materials and the estimated times to install. Material costs are based on prices for double wall corrugated plastic pipes.

CULVERT TOTAL = \$2,207.00
SUB-TOTAL = \$54,997.79

GENERAL EXPENSES:

Description	\$ per Move	# of Moves	Sub-total
Dump Trucks	110	15	\$1,650
Grader	440	1	\$440
Compactor	440	1	\$440
Excavator	495	1	\$495
Dozer D8)	440	1	\$440
Dozer (D5)	\$264	1	\$264
Brusher	\$225	1	\$225
Crusher	\$2,000	1	\$2,000
Total Mobilization =			\$5,954
Average Mobilization Costs =			\$2,977.00

Overhead & General Exp. Add **9%** **\$4,949.80**

MOBILIZATION SUBTOTAL = \$2,977.00

SHEET TOTAL = \$62,924.59

PRE-HAUL MAINTENANCE COSTS

(Page 3 of 3)

SALE NAME: BEE KEEPER

CONTRACT NUMBER: 30-092601

Total stations Pre-Haul Maintenance 94.00

MISC. MAINTENANCE ITEMS:

Description	Cost/Station	Total Stations	Sub-Total
ditch cleaning =	\$30.00	79.50	\$2,385.00
grading & compact =	\$12.38	79.50	\$984.21
culvert cleanout =	\$5.20	79.50	\$413.40
brushing =	\$22.73	51.69	\$1,174.91
seeding =	\$3.80	79.50	\$302.10
Chemical Application =	\$73.00	14.50	\$1,058.50
MISC TOTAL =			\$6,318.12

BALLAST AND SURFACING :

Description	Rock Source	Landowner
Surfacing (1 1/4"-)	Courtney's Pit	Commercial

R.T. Miles =	10.86
Ave. Speed =	37.93
Delay (Hrs.)=	0.05
Cost / Hour =	\$115.00
CY / Load =	18

* Haul Formula: (R.T.Miles/MPH+Delay)(\$/hr / Cy/load)

Rock haul and purchase prices are based on a commercial rock source called Courtney's Pit located off of 38909 NE Amboy Road, Yacolt.

UNIT COSTS	Surfacing (1 1/4" -)
Drill & Shoot	
Dig and load	
Crushing	
Purchase Price	\$12.90
Haul *	\$2.15
Spread	\$1.10
Compact	\$0.50
Sales Tax	\$0.84
Total Unit Costs (\$/cy)	
	\$17.49

Cubic Yards	200
Sub-Total	\$3,498.00

ROCK TOTAL = \$3,498.00

SUB-TOTAL = \$9,816.12

GENERAL EXPENSES:

Overhead & General Exp. Add	11%	\$1,079.77
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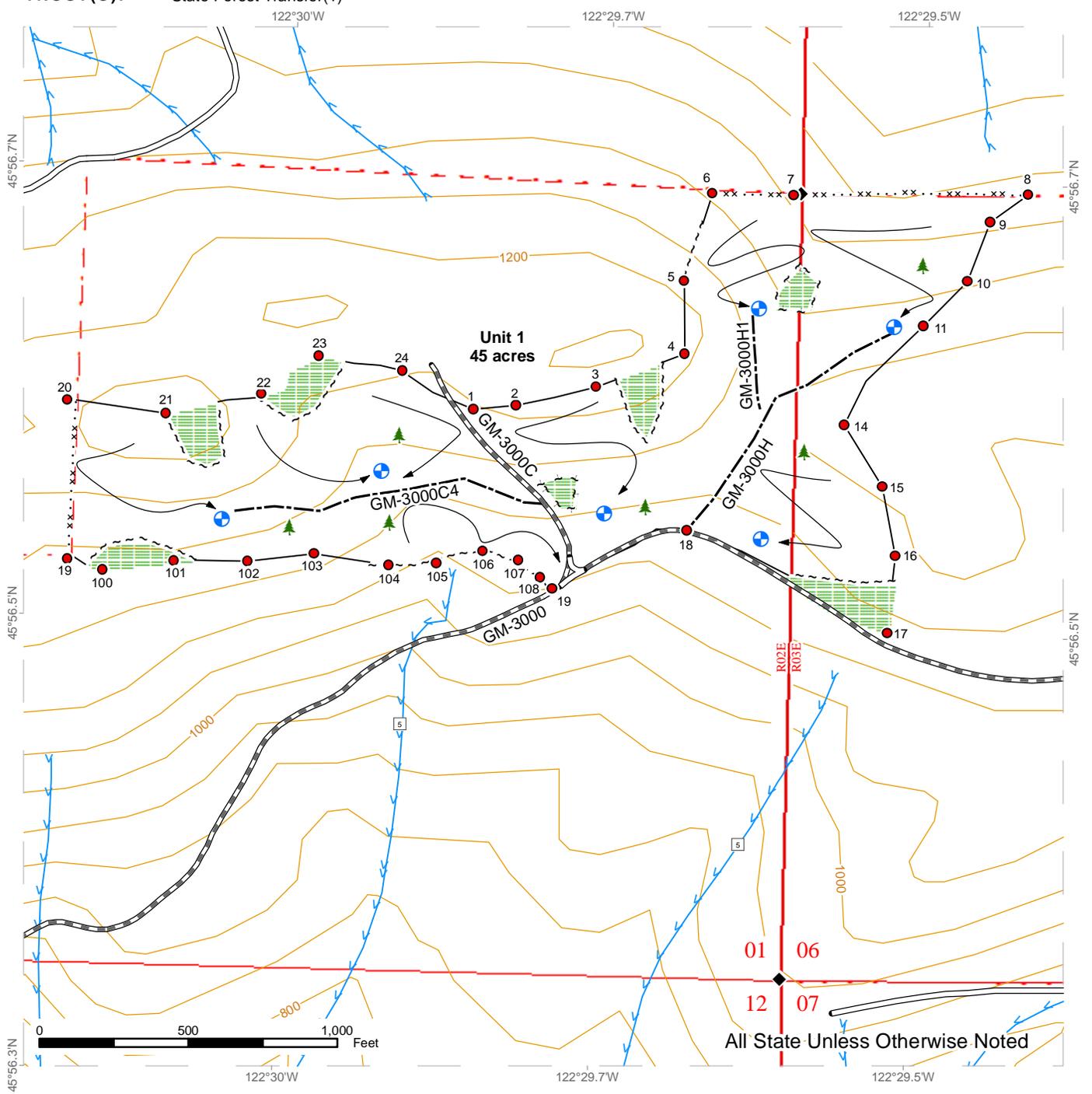
MOBILIZATION SUB-TOTAL = \$2,977.00

SHEET TOTAL =	\$13,872.90
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LOGGING PLAN MAP

SALE NAME: BEE KEEPER
AGREEMENT#: 92601
TOWNSHIP(S): T05R02E, T05R03E
TRUST(S): State Forest Transfer(1)

REGION: Pacific Cascade Region
COUNTY(S): CLARK
ELEVATION RGE: 658-1264



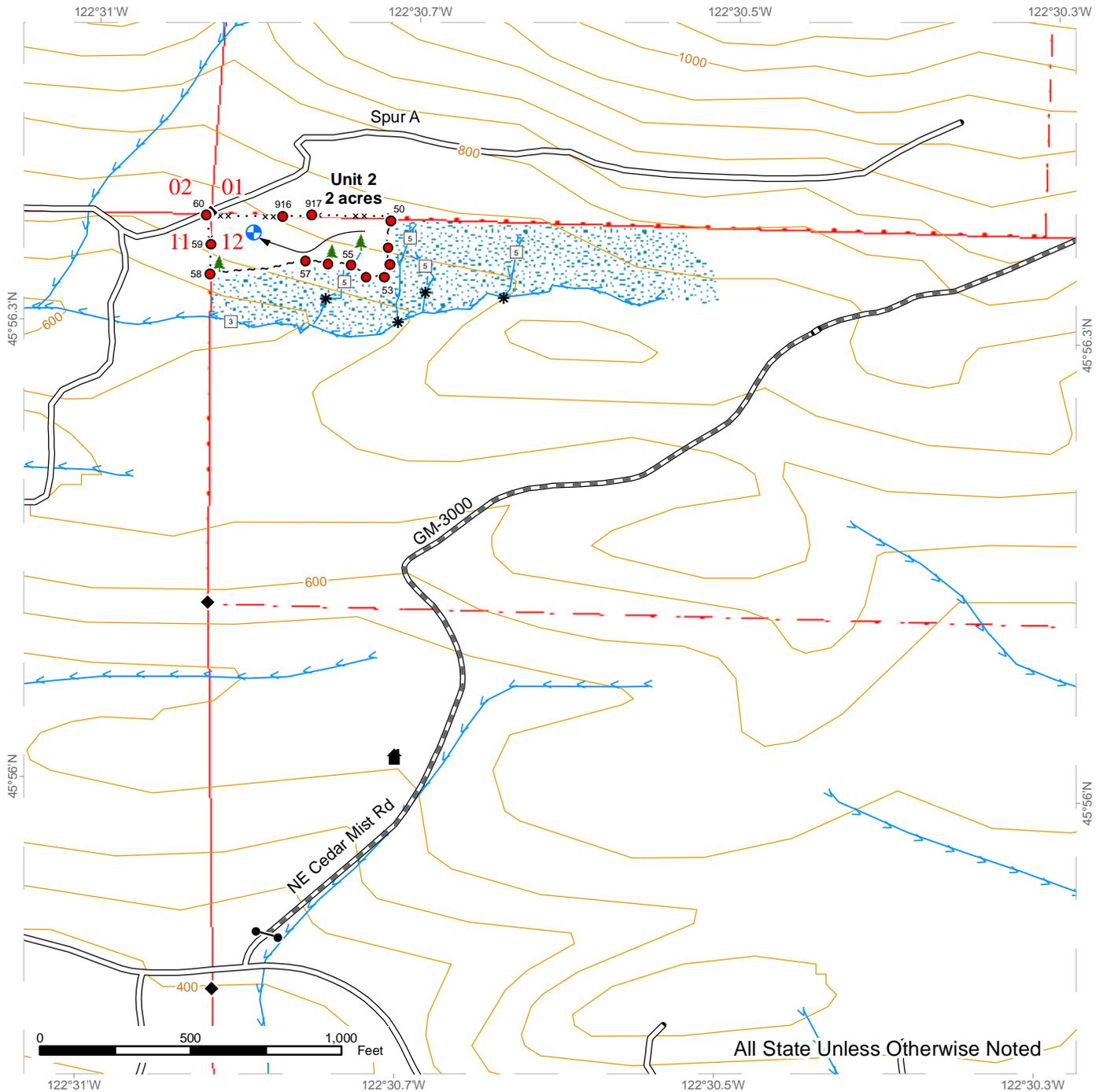
	Ground Harvest		Existing Roads		Monumented Corners
	Leave Tree Area		Required Pre-Haul Maintenance		Leave Trees
	Riparian Mgt Zone		Optional Construction		Landing - Proposed
	Sale Boundary Tags		Streams		
	Leave Tree Tags		Stream Type		
	Private/State Boundary		Stream Type Break		
	Reprod				

All State Unless Otherwise Noted

LOGGING PLAN MAP

SALE NAME: BEE KEEPER
AGREEMENT#: 92601
TOWNSHIP(S): T05R02E, T05R03E
TRUST(S): State Forest Transfer(1)

REGION: Pacific Cascade Region
COUNTY(S): CLARK
ELEVATION RGE: 658-1264



	Ground Harvest		Existing Roads		Monumented Corners
	Leave Tree Area		Required Pre-Haul Maintenance		Leave Trees
	Riparian Mgt Zone		Streams		Structure
	Sale Boundary Tags		Stream Type		Landing - Proposed
	Leave Tree Tags		Stream Type Break		Gate (PCP 1-1)
	Private/State Boundary				
	Reprod				